

December 2009

Public Employees Police & Fire Fund

Actuarial Valuation Report as of July 1, 2009

MERCER



MARSH MERCER KROLL
GUY CARPENTER OLIVER WYMAN

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Highlights

This report has been prepared by Mercer for the Public Employees Retirement Association of Minnesota to:

- Present the results of a valuation of the Public Employees Police & Fire Fund as of July 1, 2009.
- Review experience under the Plan for the year ended June 30, 2009.
- Provide reporting and disclosure information for governmental agencies and other interested parties.

Contributions

The following table summarizes important contribution information as described in the “Development of Costs” section.

Contributions	Actuarial Valuation as of	
	July 1, 2009	July 1, 2008
Statutory Contributions – Chapter 353E (% of Payroll)	23.50%	22.50%
Required Contributions – Chapter 356 (% of Payroll)	29.99%	28.41%
Sufficiency / (Deficiency)	(6.49%)	(5.91%)

The contribution deficiency increased from (5.91%) of payroll to (6.49%) of payroll. On a market value of asset basis, the contribution deficiency increased from (6.84%) of payroll to (15.63%) of payroll. The primary reasons for the increases are the less than expected return on assets and the impact of insufficient contributions. **Without a change in contribution rates, or favorable actuarial experience, the funded status will continue to deteriorate.**

The “Plan Assets” section provides detail on the plan assets used for the valuation including a development of the actuarial value of assets. The market value of assets earned (19.2%) for the plan year ending June 30, 2009. **Only 20% of the asset loss for the plan year just ended will be recognized in the July 1, 2009 actuarial value of assets. The remainder will be recognized over the next four years.** The actuarial value of assets earned 2.9% for the plan year ending June 30, 2009 as compared to the assumed rate of 8.5%.

Participant reconciliation and statistics are detailed in the “Participant Data” section. The “Actuarial Basis” section includes a summary of plan provisions and actuarial methods and assumptions used for the calculations in this report. The “Plan Accounting” section details the required accounting information for the Plan under GASB Statement No. 25 (as amended by GASB 50).

There were no changes in actuarial assumptions since the July 1, 2008 valuation. Changes in valuation methods and plan provisions are reflected in this report and summarized in the Actuarial Basis section.

Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in plan provisions, actuarial assumptions or valuation methods and procedures between the two valuations are described after the summary.

	Actuarial Valuation as of	
	July 1, 2009	July 1, 2008
Contributions (% of Payroll)		
Statutory – Chapter 353E	23.50%	22.50%
Required – Chapter 356	29.99%	28.41%
Sufficiency / (Deficiency)	(6.49%)	(5.91%)
Funding Ratios (dollars in thousands)		
Accrued Benefit Funding Ratio		
– Current assets (AVA)	\$ 5,239,855	\$ 5,233,015
– Current benefit obligations	6,107,112	5,755,664
– Funding ratio	85.80%	90.92%
Accrued Liability Funding Ratio		
– Current assets (AVA)	\$ 5,239,855	\$ 5,233,015
– Market value of assets (MVA)	4,001,046	5,110,823
– Actuarial accrued liability	6,296,274	5,918,061
– Funding ratio (AVA)	83.22%	88.42%
– Funding ratio (MVA)	63.55%	86.36%
Projected Benefit Funding Ratio		
– Current and expected future assets	\$ 7,105,933	\$ 6,963,714
– Current and expected future benefit obligations	7,986,149	7,617,313
– Funding ratio	88.98%	91.42%
Participant Data		
Active members		
– Number	11,035	10,961
– Projected annual earnings (000s)	\$ 786,887	\$ 746,743
– Average annual earnings (projected)	\$ 71,308	\$ 68,127
– Average age	39.6	39.3
– Average service	11.7	11.4
Service retirements	5,213	5,068
Survivors	1,380	1,279
Disability retirements	838	824
Deferred retirements	1,280	1,242
Terminated other non-vested	911	877
Total	20,657	20,251

Effects of Changes

The following changes in plan provisions and methods were recognized as of July 1, 2009:

Dissolution of Minnesota Post Retirement Investment Fund (Post Fund)

Since the Post Fund composite funding ratio was less than 80 percent as of June 30, 2008, the Post Fund was dissolved, and assets were transferred back to PERA and merged with the respective active member fund. The transfer of assets and liabilities occurred on June 30, 2009.

In conjunction with the dissolution, benefit recipients will receive future annual 2.5% cost-of-living adjustments (COLA) post-retirement.

The waiting period and proration schedule for the COLA paid in the fiscal year were also revised.

The Post Fund dissolution (other than the asset method change described below) and COLA changes did not have an impact on the valuation results.

Asset Method

For the purpose of determining the actuarial value of assets, the Post Fund asset loss for the fiscal year ending June 30, 2009 will be recognized incrementally over five years at 20% per year, similar to the smoothing of active fund assets. Prior to June 30, 2009, Post Fund asset gains and losses were not smoothed.

The change in the actuarial asset method for Post Fund assets reduced the required contribution by 3.60% of pay.

Certification

Mercer has prepared this report exclusively for Trustees of the Public Employees Police & Fire Fund and the Legislative Commission on Pension and Retirement (LCPR) for the following purposes:

- Present the results of a valuation of the Public Employees Police & Fire Fund as of July 1, 2009 as required by Minnesota Statutes Section 356.215 and the requirements of the Standards of Actuarial Work established by the Minnesota Legislative Commission on Pensions and Retirement
- Review plan experience for the year ended June 30, 2009
- Provide the Annual Required Contribution for the period beginning July 1, 2009
- Provide reporting and disclosure information for financial statements for governmental agencies pursuant to GASB Statements Numbers 25 (as amended by GASB 50) and 27.

This valuation report may not be relied upon for any other purpose or by any party other than the Trustees, the LCPR, or the Plan's auditors solely for the purpose of completing an audit related to the matters herein. Mercer is not responsible for the consequences of any unauthorized use.

A valuation report is a snapshot of a plan's estimated financial condition at a particular point in time; it does not predict a plan's future financial condition or its ability to pay benefits in the future.

Over time, a plan's total cost will depend on a number of factors, including the amount of benefits the plan pays, the number of people paid benefits, plan expenses and the amount earned on any assets invested to pay the benefits. These amounts and other variables are uncertain and unknowable at the valuation date, but are predicted to fall within a reasonable range of possibilities.

To prepare this report, *Actuarial Assumptions*, as described in the Actuarial Basis section, are used to select a single scenario from a range of possibilities. The results of that single scenario are included in this report. However, the future is uncertain and the plan's actual experience will differ from those assumptions; these differences may be significant or material. In addition, different assumptions or scenarios may also be within the reasonable range and results based on those assumptions would be different. Actuarial assumptions may also be changed from one valuation to the next because of changes in mandated requirements, plan experience, changes in expectations about the future and other factors. Due to the limited scope of our assignment, we did not perform, nor do we present, an analysis of the potential range of future possibilities and scenarios.

Because actual plan experience will differ from the assumptions, decisions about benefit changes, investment policy, funding amounts, benefit security and/or benefit-related issues should be made only after careful consideration of alternative future financial conditions and scenarios, and not solely on the basis of a valuation report or reports.

Data and plan provisions

To prepare this report, Mercer has used and relied on financial data submitted by the Fund as of June 30, 2009, as well as participant data supplied by the Fund as of June 30, 2009. We have reviewed the financial and participant data for internal consistency and general reasonableness, but we have not verified or audited any of the data or information provided. We have also used and relied on the plan documents, including amendments, supplied by the Fund. A summary of the plan provisions valued is presented in our report. The Fund is solely responsible for the accuracy, validity and comprehensiveness of this information. If the data or plan provisions supplied are not accurate and complete the valuation results may differ significantly from the results that would be obtained with accurate and complete information; this may require a later revision of this report.

Certification

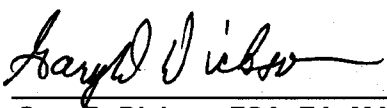

Actuarial Calculations, Methods and Assumptions

To the best of our knowledge and belief, this report is complete and accurate and all costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures, and in accordance with the requirements of Minnesota Statutes Section 356.215 and the requirements of the Standards of Actuarial Work established by the LCPR. The economic assumptions, including discount rates, are set in Minnesota Statutes, and the remaining assumptions are adopted by the Trustees and the LCPR. This valuation is based on assumptions, plan provisions, methods and other parameters as summarized in this report. If this information is inaccurate or incomplete or does not reflect current statutes, regulations or Board directives, the reader of this report should not rely on the valuation results and should notify Mercer promptly. In our opinion, this report fully and fairly discloses the actuarial position of the plan on an ongoing basis.

Professional qualifications

We are available to answer any questions on the material in this report or to provide explanations or further details as appropriate. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report. In addition, Mr. Dickson meets the requirements of "approved actuary" under Minnesota Statutes, Section 356.215, Subdivision 1, Paragraph (c). We are not aware of any direct or material indirect financial interest or relationship, including investments or other services that could create a conflict of interest, that would impair the objectivity of our work.

The information contained in this document (including any attachments) is not intended by Mercer to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

	<u>12/3/2009</u>
Gary D. Dickson FSA, EA, MAAA Principal	Date
	<u>12/3/2009</u>
Bonita J. Wurst, ASA, EA, MAAA Principal	Date
Mercer 333 South 7th Street, Suite 1600 Minneapolis, MN 55402-2427 612 642 8600	

Supplemental Information

The remainder of the report includes information supporting the results presented in the previous sections.

- **Plan assets** presents information about the plan's assets as reported by the Public Employees Retirement Association of Minnesota and the Minnesota State Board of Investments. The assets represent the portion of total fund liabilities that has been funded.
- **Membership data** presents and describes the membership data used in the valuation.
- **Development of costs** shows the liabilities for plan benefits and the derivation of the contribution amount.
- **Actuarial basis** describes the plan provisions, as well as the methods and assumptions used to value the plan. The valuation is based on the premise that the plan is ongoing.
- **Plan accounting under GASB 25 (as amended by GASB 50)** shows the disclosures required by GASB Statement No. 25 as amended by GASB Statement No. 50.
- **Glossary** defines the terms used in this report.

Plan Assets

Statement of Plan Net Assets for Year Ended June 30, 2009 *(Dollars in Thousands)*

	Market Value
<hr/>	
Assets in Trust	
▪ Cash, equivalents, short term securities	\$ 89,733
▪ Fixed income	861,334
▪ Equity	2,399,281
▪ SBI Alternative	606,604
Total assets in trust	\$ 3,956,952
Assets Receivable	48,567
Amounts Payable	(4,473)
Net assets held in trust for pension benefits	\$ 4,001,046

Plan Assets

Reconciliation of Plan Assets

The following exhibit shows the revenue, expenses and resulting assets of the Fund as reported by the Public Employees Retirement Association and the Minnesota State Board of Investment, for the Plan's Fiscal Year July 1, 2008 to June 30, 2009.

Change in Assets (<i>Dollars in Thousands</i>)	Non-MPRIF Assets	MPRIF Reserve	Market Value
1. Fund balance at market value at July 1, 2008	\$ 2,924,650	\$ 2,186,173	\$ 5,110,823
2. Contributions			
a. Member	67,701	0	67,701
b. Employer	101,548	0	101,548
c. Other sources	0	0	0
d. Total contributions	<u>169,249</u>	<u>0</u>	<u>169,249</u>
3. Investment income			
a. Interest and dividends	(530,266)	(431,545)	(961,811)
b. Investment expenses	(3,282)	(2,352)	(5,634)
c. Net subtotal	<u>(533,548)</u>	<u>(433,897)</u>	<u>(967,445)</u>
4. Other	701	0	701
5. Total additions (2.d. + 3.c. + 4.)	\$ (363,598)	\$ (433,897)	\$ (797,495)
6. Benefits paid			
a. Annuity benefits	(50,045)	(260,054)	(310,099)
b. Refunds	(1,237)	0	(1,237)
c. Total benefits paid	<u>(51,282)</u>	<u>(260,054)</u>	<u>(311,336)</u>
7. Expenses			
a. Other	(199)	0	(199)
b. Administrative	(747)	0	(747)
c. Total expenses	<u>(946)</u>	<u>0</u>	<u>(946)</u>
8. Total distributions (6.c. + 7.c.)	\$ (52,228)	\$ (260,054)	\$ (312,282)
9. Other changes in reserves			
a. Annuities awarded	(64,140)	64,140	0
b. Transfer between reserves	1,517,039	(1,517,039)	0
c. Mortality gain/(loss) not transferred	39,323	(39,323)	0
d. Change in assumptions	0	0	0
e. Total other changes	<u>1,492,222</u>	<u>(1,492,222)</u>	<u>0</u>
10. Fund balance at market value at June 30, 2009 (1. + 5. + 8. + 9.e.)	\$ 4,001,046	\$ 0	\$ 4,001,046

Plan Assets

Actuarial Asset Value (Dollars in Thousands)

	June 30, 2009		
1. Market value of assets available for benefits			\$ 4,001,046
2. Determination of average balance			
a. Total assets available at July 1, 2008			5,110,823
b. Total assets available at June 30, 2009			4,001,046
c. Net investment income for fiscal year ending June 30, 2009			(966,744)
d. Average balance $[a. + b. - c.] / 2$			5,039,307
3. Expected return $[8.5\% \times 2.d.]$			428,341
4. Actual return			(966,744)
5. Current year unrecognized asset return			(1,395,085)
6. Unrecognized asset recognized asset returns*			
	Original Amount	% Not Recognized	
a. Year ended June 30, 2009	\$ (1,395,085)	80%	\$ (1,116,068)
b. Year ended June 30, 2008	(416,143)	60%	(249,685)
c. Year ended June 30, 2007	270,763	40%	108,305
d. Year ended June 30, 2006	93,192	20%	18,639
e. Total unrecognized return			\$ (1,238,809)
7. Actuarial value at June 30, 2009 (1. - 6.e.)			\$ 5,239,855

* Prior to the year ended June 30, 2009, unrecognized asset returns do not include Post Fund gains or losses.

Membership Data

Distribution of Active Participants

Age	Years of Service as of June 30, 2009										Total	
	<3	3 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+		
<25	349	39										388
Avg. Earnings	35,842	51,262										37,392
25 - 29	667	507	307									1,481
Avg. Earnings	44,544	58,259	62,575									52,977
30 - 34	278	309	932	282								1,801
Avg. Earnings	46,640	57,370	65,390	69,303								61,732
35 - 39	172	171	601	1,057	173							2,174
Avg. Earnings	43,941	54,517	65,347	71,370	76,481							66,616
40 - 44	78	79	328	606	692	235						2,018
Avg. Earnings	40,129	55,169	64,380	71,024	76,873	81,675						71,375
45 - 49	38	37	140	280	405	584	190	1				1,675
Avg. Earnings	41,220	56,026	64,477	71,643	76,777	80,165	82,252	60,204				75,418
50 - 54	22	21	62	103	148	248	319	110				1,033
Avg. Earnings	43,153	46,148	68,437	69,452	74,330	78,978	84,042	84,329				77,433
55 - 59	8	10	32	63	32	82	71	62	5			365
Avg. Earnings	33,159	58,251	63,259	65,839	70,148	76,393	83,288	82,769	71,262			73,782
60 - 64	1	3	16	6	10	16	16	14	6			88
Avg. Earnings	58,122	42,498	68,578	71,480	63,650	67,072	76,971	84,315	87,728			72,269
65 - 69	1		3	1	1		1				1	8
Avg. Earnings	441		43,407	28,693	57,652		21,957				69,852	38,602
70+			1	2	1							4
Avg. Earnings			28,971	83,566	49,157							61,315
Total	1,614	1,176	2,422	2,400	1,462	1,165	597	187	11	1	1	11,035
Avg. Earnings	42,573	56,715	64,862	70,837	76,273	79,772	83,089	83,682	80,244	69,852	69,852	66,440

In each cell, the top number is the count of active participants for the age/service combination and the bottom number is average annual earnings.

Membership Data

Distribution of Service Retirements*

Age	Years Retired as of June 30, 2009							Total
	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25+	
<45								0
Avg. Benefit								N/A
50 – 54								0
Avg. Benefit								N/A
50 – 54	86	350						436
Avg. Benefit	50,050	43,240						44,583
55 – 59	80	464	521					1,065
Avg. Benefit	53,153	48,342	43,924					46,542
60 – 64	31	147	665	328	1			1,172
Avg. Benefit	36,879	41,106	46,982	44,090	31,905			45,155
65 – 69	7	27	167	550	126			877
Avg. Benefit	25,795	28,407	37,433	54,243	46,530			48,912
70 – 74		6	36	240	343	5		630
Avg. Benefit		43,407	26,488	51,390	49,212	36,488		48,587
75 – 79		1	4	85	258	124		472
Avg. Benefit		34,107	18,639	50,611	48,329	48,356		48,465
80 – 84		1	1	28	216	61	50	357
Avg. Benefit		1,219	19,496	52,927	47,947	44,056	51,679	47,985
85 – 89				3	62	28	52	145
Avg. Benefit				35,386	47,873	39,646	34,076	41,078
90+				4	35	4	16	59
Avg. Benefit				40,149	48,373	32,583	29,480	41,681
Total	204	996	1,394	1,238	1,041	222	118	5,213
Avg. Benefit	48,433	44,849	44,065	50,630	48,285	45,524	40,912	46,778

In each cell, the top number is the count of retired participants for the age/service combination and the bottom number is the average annual benefit amount.

* Difference from number of retirees shown on page 14 is due to the exclusion of multiple payees of members (ex-spouse, child support, etc.).

Membership Data

Distribution of Survivors

Age	Years Since Death as of June 30, 2009							Total
	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25+	
<45	8	55	36	13	4	1		117
Avg. Benefit	19,433	15,162	15,092	17,128	11,814	24,373		15,615
45 - 49	3	13	3	2	2	1		24
Avg. Benefit	39,950	29,894	24,640	45,703	39,378	38,204		32,948
50 - 54		18	13	9	7	3		50
Avg. Benefit		30,031	27,836	40,991	39,282	23,868		32,358
55 - 59	4	16	13	4	12	8	3	60
Avg. Benefit	34,674	28,024	28,161	31,205	35,980	35,168	25,230	31,113
60 - 64	6	38	26	20	24	6	7	127
Avg. Benefit	31,341	26,423	30,462	35,465	32,450	22,605	31,441	30,141
65 - 69	7	32	37	24	21	4	8	133
Avg. Benefit	21,440	30,234	29,997	29,521	31,266	36,670	31,572	30,014
70 - 74	10	29	35	21	25	8	10	138
Avg. Benefit	35,911	32,716	25,645	27,732	30,218	36,297	27,386	29,765
75 - 79	7	38	35	43	54	9	15	201
Avg. Benefit	23,328	30,236	23,685	25,533	29,016	32,242	20,169	26,860
80 - 84	9	42	48	45	57	17	21	239
Avg. Benefit	27,556	23,377	26,386	22,415	27,244	28,391	20,647	24,997
85 - 89	6	33	26	41	48	15	18	187
Avg. Benefit	21,444	21,796	22,247	18,427	26,886	22,445	18,521	22,152
90+	1	7	11	26	31	15	13	104
Avg. Benefit	27,781	17,401	16,298	22,309	25,237	19,462	11,270	20,478
Total	61	321	283	248	285	87	95	1,380*
Avg. Benefit	27,525	25,245	24,728	25,202	28,829	27,467	21,455	25,851

In each cell, the top number is the count of survivors for the age/years since death combination and the bottom number is the average annual benefit amount.

* Difference from number of survivors shown on page 14 is due to the inclusion of multiple survivors of members.

Membership Data

Distribution of Disability Retirements

Age	Years Disabled as of June 30, 2009							Total
	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25+	
<45	4	46	30	7	1			88
Avg. Benefit	30,924	34,001	28,985	32,134	37,376			32,041
45 - 49	2	36	35	23	2			98
Avg. Benefit	35,643	37,249	33,145	35,454	32,496			35,232
50 - 54	5	58	73	22	6	3	1	168
Avg. Benefit	35,355	46,604	36,498	40,039	38,460	33,599	15,810	40,312
55 - 59	3	38	113	40	5	1		200
Avg. Benefit	33,382	43,171	48,548	45,847	43,412	37,020		46,573
60 - 64		16	82	82	10			190
Avg. Benefit		31,970	53,192	56,017	47,110			52,304
65 - 69		2	13	44	15			74
Avg. Benefit		44,850	34,887	52,115	45,329			47,517
70 - 74			2	11	5			18
Avg. Benefit			25,670	45,571	54,208			45,759
75 - 79				2				2
Avg. Benefit				25,565				25,565
80 - 84								0
Avg. Benefit								N/A
85 - 89								0
Avg. Benefit								N/A
90+								0
Avg. Benefit								N/A
Total	14	196	348	231	44	4	1	838
Avg. Benefit	33,707	40,050	43,237	48,459	44,824	34,455	15,810	43,781

In each cell, the top number is the count of disabled participants for the age/years since disability combination and the bottom number is the average annual benefit amount.