

December 2008

# **Public Employees Retirement Fund**

Actuarial Valuation Report as of July 1, 2008

## **MERCER**



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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 Retirement Fund as of July 1, 2008.
- Review experience under the Plan for the year ended June 30, 2008.
- 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	Plan Year Ending	
	June 30, 2009	June 30, 2008 <sup>*</sup>
Statutory Contributions – Chapter 353 (% of Payroll)	12.63%	12.26%
Required Contributions – Chapter 356 (% of Payroll)	14.22%	13.32%
Sufficiency / (Deficiency)	(1.59%)	(1.06%)

The contribution deficiency increased from (1.06%) of payroll to (1.59%) of payroll. The primary reason for the increase is the less than expected asset return. Without a change in contribution rates, or favorable actuarial experience, the funded status will continue to deteriorate. In addition, as of the date of this report, the assets have experienced significant losses as a result of the turmoil in the financial marketplace this fall. If not reversed, losses will further increase the deficiency.

On the other hand, we would also note that absent any additional losses, the plan has sufficient assets to pay benefits for many years into the future.

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 (4.90%) for the plan year ending June 30, 2008 compared to an assumption of 8.50%. Only 20% of the non-MPRIF asset loss is recognized this year in the actuarial value of assets. The remainder will be recognized over the next four years. The actuarial value of assets earned 2.6% for the plan year ending June 30, 2008 as compared to the assumed rate of 8.50%.

Participant reconciliation and statistics are detailed in the “Membership 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 valuation methods since the July 1, 2007 valuation. Changes in actuarial assumptions and plan provisions are reflected in this report and summarized in the Actuarial Basis section.

<sup>\*</sup> Provided by The Segal Company.

## 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, 2008	July 1, 2007*
<b>Contributions (% of Payroll)</b>		
Statutory – Chapter 353	12.63%	12.26%
Required – Chapter 356	14.22%	13.32%
Sufficiency / (Deficiency)	(1.59%)	(1.06%)
<b>Funding Ratios (dollars in thousands)</b>		
Accrued Benefit Funding Ratio		
– Current assets (AVA)	\$ 13,048,970	\$ 12,985,324
– Current benefit obligations	16,838,233	16,619,017
– Funding ratio	77.50%	78.14%
Accrued Liability Funding Ratio		
– Current assets (AVA)	\$ 13,048,970	\$ 12,985,324
– Actuarial accrued liability	17,729,847	17,705,627
– Funding ratio	73.60%	73.34%
Projected Benefit Funding Ratio		
– Current and expected future assets	\$ 19,480,976	\$ 19,949,849
– Current and expected future benefit obligations	21,308,992	20,884,998
– Funding ratio	91.42%	95.52%
<b>Participant Data</b>		
Active members		
– Number	143,562	146,226
– Projected annual earnings (000s)	\$ 4,952,751	\$ 4,957,790
– Average annual earnings (projected)	\$ 34,499	\$ 33,905
– Average age	46.5	46.2
– Average service	10.4	10.1
Service retirements	54,727	52,554
Survivors	6,979	6,894
Disability retirements	2,046	1,988
Deferred retirements	42,043	39,722
Terminated other non-vested	116,634	109,599
<b>Total</b>	<b>365,991</b>	<b>356,983</b>

\* Provided by The Segal Company.

## Effects of Changes

The following changes in assumptions were recognized as of July 1, 2008:

- Lower ultimate salary increase rates by 1.0% at all ages.
- Change the select period for salary increases from 10 years with an adjustment of  $.30\% \times (10 - T)$  to 5 years with an adjustment of  $.60\% \times (5 - T)$ .
- Change payroll growth assumption from 6.0% to 4.5%.
- Reduce retirement rates at ages 55 to 61 and 63 to 64 for Rule of 90 retirements, and revise rates at ages 61 and 62 for all other retirements.

These assumption changes had the following impact on the valuation results:

- \$355 million decrease in actuarial accrued liability.
- A decrease in the required contribution of .52% of payroll.

The basis for determining benefit increases for benefit recipients was revised since the last valuation as of July 1, 2007. See the Summary of Plan Provisions for detail. This change in plan provisions had no impact on the results in this valuation.

## Certification

We have prepared an actuarial valuation of the Public Employees Retirement Fund as of July 1, 2008 for the plan year ending June 30, 2009. This report reflects the provisions of the Plan effective July 1, 2008. To the best of our knowledge, this actuarial valuation was performed in accordance with the requirements of Minnesota Statutes, Section 356.215 and the requirements of the Standards of Actuarial Work established by the Minnesota Legislative Commission on Pensions and Retirement.

This report has been prepared exclusively for the Public Employees Retirement Association of Minnesota and the Legislative Commission on Pensions and Retirement to determine the annual required contribution and present accounting results required under GASB Nos. 25 (as amended by GASB 50) and 27. Mercer is not responsible for consequences arising from the use of any elements of this report for any other than their intended purpose. Determinations for other purposes may be significantly different from the results shown in this report.

A valuation report is a snapshot of a plan's estimated financial condition at a particular point in time; it is neither a prediction of a pension plan's future financial condition nor a prediction of a pension plan's 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 it pays, the number of people to whom it pays them, and the amount earned on any assets invested to pay the benefits. These amounts and others 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 within, are used to select a single scenario from the 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 valuation to valuation based on experience, changes in expectations about the future, and other factors.

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

We used and relied on financial data submitted by the Fund without further audit. We have also used and relied on participant data supplied by the Fund; this data would customarily not be verified by the Fund's actuary. We have reviewed the participant data for internal consistency and have no reason to doubt its substantial accuracy. The Fund is solely responsible for the validity and completeness of this information.

## Contributions

All costs, liabilities and other factors for the Fund were determined in accordance with generally accepted actuarial principles and procedures, in accordance with the provisions of current federal and state statutes and regulations issued thereunder. The economic assumptions are set in Minnesota Statutes, and the remaining assumptions are adopted by the Legislative Commission on Pensions and Retirement. We believe that these assumptions are reasonable. This report fully and fairly discloses the actuarial position of the Fund on an ongoing basis.

## Certification

### Professional Qualifications

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report. 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.

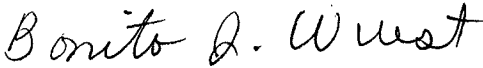
The information contained in this document (including any attachments) is not intended by Mercer to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.



Stephen T. McElhaney, FSA, EA, MAAA  
Principal

12/4/2008

Date



Bonita J. Wurst, ASA, EA, MAAA  
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12/4/2008

Date

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## 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 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, 2008 *(Dollars in Thousands)*

	Market Value
<b>Assets in Trust</b>	
▪ Cash, equivalents, short term securities	\$ 53,149
▪ Fixed income	1,598,410
▪ Equity	4,133,457
▪ Equity in MPRIF	5,973,626
▪ Other	972,223
<b>Total assets in trust</b>	<b>\$ 12,730,865</b>
Assets Receivable	13,675
Due from MPRIF (for Mortality Gain)	41,757
<b>Total Assets</b>	<b>\$ 12,786,297</b>
Amounts Payable	(16,114)
<b>Net Assets</b>	<b>\$ 12,770,183</b>
<b>Net assets held in trust for pension benefits</b>	
▪ MPRIF reserves	5,973,626
▪ Non-MPRIF reserves	6,796,557
<b>Total assets available for benefits</b>	<b>\$ 12,770,183</b>

## 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, 2007 to June 30, 2008.

<b>Change in Assets</b> (dollars in thousands)	<b>Non-MPRIF Assets</b>	<b>MPRIF Reserve</b>	<b>Market Value</b>
1. Fund balance at market value at July 1, 2007	\$ 7,111,653	\$ 6,606,806	\$ 13,718,459
2. Contributions			
a. Member	280,007	0	280,007
b. Employer	303,304	0	303,304
c. Other sources	0	0	0
d. Total contributions	583,311	0	583,311
3. Investment income			
a. Interest and dividends	(331,037)	(319,264)	(650,301)
b. Investment expenses	(10,094)	(9,010)	(19,104)
c. Net subtotal	(341,131)	(328,274)	(669,405)
4. Other	3,755	0	3,755
<b>5. Total income</b> (2.d. + 3.c. + 4.)	<b>\$ 245,935</b>	<b>\$ (328,274)</b>	<b>\$ (82,339)</b>
6. Benefits Paid			
a. Annuity benefits	(33,412)	(790,960)	(824,372)
b. Refunds	(28,772)	0	(28,772)
c. Total benefits paid	(62,184)	(790,960)	(853,144)
7. Expenses			
a. Other	(3,245)	0	(3,245)
b. Administrative	(9,548)	0	(9,548)
c. Total Expenses	(12,793)	0	(12,793)
<b>8. Total disbursements</b> (6.c. + 7.c.)	<b>\$ (74,977)</b>	<b>\$ (790,960)</b>	<b>\$ (865,937)</b>
9. Other changes in reserves			
a. Annuities awarded	(527,811)	527,811	0
b. MPRIF mortality gain	41,757	(41,757)	0
c. Change in assumptions	0	0	0
d. Total other changes	(486,054)	486,054	0
<b>10. Fund balance at market value at June 30, 2008</b> (1. + 5. + 8. + 9.d.)	<b>\$ 6,796,557</b>	<b>\$ 5,973,626</b>	<b>\$ 12,770,183</b>

## Plan Assets

### Actuarial Asset Value *(Dollars in Thousands)*

	<b>June 30, 2008</b>		
1. Market value of assets available for benefits			\$ 12,770,183
2. Determination of average balance			
a. Non-MPRIF assets available at July 1, 2007			7,111,653
b. Non-MPRIF assets available at June 30, 2008 (before MPRIIF mortality adjustment)			6,754,800
c. Net investment income for fiscal year ending June 30, 2008			(337,376)
d. Average balance $[a. + b. - c.] / 2$			7,101,914
3. Expected return $[8.5\% * 2.d.]$			603,663
4. Actual return			(337,376)
5. Current year asset gain/(loss) $[4. - 3.]$			(941,039)
6. Unrecognized asset returns			
	<b>Original Amount</b>	<b>% Not Recognized</b>	
a. Year ended June 30, 2008	\$ (941,039)	80%	\$ (752,831)
b. Year ended June 30, 2007	604,970	60%	362,982
c. Year ended June 30, 2006	211,694	40%	84,678
d. Year ended June 30, 2005	131,918	20%	26,384
e. Total unrecognized return			\$ (278,787)
7. Actuarial value at June 30, 2008 $(1. - 6.e.)$			\$ 13,048,970

## Membership Data

### Distribution of Active Participants (Total)

Age	Years of Service as of June 30, 2008									Total
	0- 4	5 - 9	10 - 14	15 - 19	20 – 24	25 - 29	30 - 34	35 – 39	40+	
0 – 19	881	1								882
Avg. Earnings	9,107	32,718								9,126
20 – 24	4,693	77								4,770
Avg. Earnings	16,304	21,448								16,387
25 – 29	8,273	1,734	46							10,053
Avg. Earnings	23,546	32,421	31,397							25,113
30 – 35	5,880	3,509	935	18						10,342
Avg. Earnings	26,118	38,626	41,013	36,712						31,727
35 – 39	6,017	3,727	2,612	657	31					13,044
Avg. Earnings	23,252	37,877	45,765	45,367	44,836					33,104
40 – 44	6,713	4,665	3,101	2,016	947	41				17,483
Avg. Earnings	20,968	31,360	41,579	49,997	48,049	49,173				32,277
45 – 49	6,364	5,986	4,590	2,942	2,518	1,224	104			23,728
Avg. Earnings	20,566	28,541	35,592	45,014	52,232	49,566	48,144			33,493
50 – 54	4,616	4,713	4,735	4,060	3,005	2,244	1,465	94		24,932
Avg. Earnings	22,332	29,259	32,891	39,303	48,662	54,959	52,184	51,259		36,384
55 – 59	3,146	3,429	3,202	3,644	3,178	2,090	2,047	626	20	21,382
Avg. Earnings	22,513	29,949	32,568	37,318	44,062	53,303	59,009	55,557	42,633	38,427
60 – 64	1,839	1,786	1,490	1,856	1,998	1,349	847	460	76	11,701
Avg. Earnings	17,711	28,287	32,169	36,708	41,107	45,964	54,142	60,481	58,200	36,013
65 - 69	854	764	453	422	385	233	142	73	29	3,355
Avg. Earnings	11,922	15,684	27,039	33,144	36,312	39,729	44,689	53,371	62,238	25,626
70 – 74	361	383	174	92	88	45	31	24	7	1,205
Avg. Earnings	8,432	12,097	20,014	29,493	26,555	31,209	31,302	35,407	42,671	16,376
75+	210	229	126	46	34	13	15	10	2	685
Avg. Earnings	7,163	9,933	15,817	20,049	25,559	31,495	25,391	46,839	59,438	13,052
Total	49,847	31,003	21,464	15,753	12,184	7,239	4,651	1,287	134	143,562*
Avg. Earnings	21,379	31,095	36,215	40,945	46,289	51,180	55,000	56,435	55,958	32,895

\* Difference from number of active members as shown on page 22 is that privatized members who are no longer accruing active service under the Public Employees Retirement Fund are not included on this page.

## Membership Data

### Distribution of Active Participants (Basic)

Age	Years of Service as of June 30, 2008									Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	
0 - 19										0
Avg. Earnings										
20 - 24										0
Avg. Earnings										
25 - 29										0
Avg. Earnings										
30 - 35										0
Avg. Earnings										
35 - 39										0
Avg. Earnings										
40 - 44										0
Avg. Earnings										
45 - 49										0
Avg. Earnings										
50 - 54										0
Avg. Earnings										
55 - 59								1	2	3
Avg. Earnings								34,167	57,963	59,031
60 - 64									17	17
Avg. Earnings									46,187	46,187
65 - 69									9	9
Avg. Earnings									51,477	51,477
70 - 74									4	4
Avg. Earnings									47,971	47,971
75+									2	2
Avg. Earnings									59,438	59,438
Total								1	34	35
Avg. Earnings	0	0	0	0	0	0	0	34,167	49,269	48,838

## Membership Data

### Distribution of Active Participants (Coordinated)

Age	Years of Service as of June 30, 2008									Total
	0- 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	
0 – 19	881	1								882
Avg. Earnings	9,909	32,718								9,126
20 – 24	4,693	77								4,770
Avg. Earnings	16,304	21,448								16,837
25 – 29	8,273	1,734	46							10,053
Avg. Earnings	23,546	32,421	31,397							25,113
30 – 35	5,880	3,509	935	18						10,342
Avg. Earnings	26,118	38,626	41,013	36,712						31,727
35 – 39	6,017	3,727	2,612	657	31					13,044
Avg. Earnings	23,252	37,877	45,765	45,367	44,836					33,104
40 – 44	6,713	4,665	3,101	2,016	947	41				17,483
Avg. Earnings	20,968	31,360	41,579	49,997	48,049	49,173				32,277
45 – 49	6,364	5,986	4,590	2,942	2,518	1,224	104			23,728
Avg. Earnings	20,566	28,541	35,592	45,014	52,232	49,566	48,144			33,493
50 – 54	4,616	4,713	4,735	4,060	3,005	2,244	1,465	94		24,932
Avg. Earnings	22,332	29,259	32,891	39,303	48,662	54,959	52,184	51,259		36,384
55 – 59	3,146	3,429	3,202	3,644	3,178	2,090	2,047	625	18	21,379
Avg. Earnings	22,513	29,949	32,568	37,318	44,062	53,303	59,009	55,591	40,930	38,425
60 – 64	1,839	1,786	1,490	1,856	1,998	1,349	847	460	59	11,684
Avg. Earnings	17,711	28,287	32,169	36,708	41,107	45,964	54,142	60,481	61,661	35,999
65 - 69	854	764	453	422	385	233	142	73	20	3,346
Avg. Earnings	11,922	18,684	27,039	33,144	36,312	39,729	44,689	53,371	67,081	25,556
70 – 74	361	383	174	92	88	45	31	24	3	1,201
Avg. Earnings	8,432	12,097	20,014	29,493	26,555	31,209	31,302	35,407	35,605	16,271
75+	210	229	126	46	34	13	15	10		683
Avg. Earnings	7,163	9,933	15,817	20,049	25,559	31,495	25,391	46,839		12,916
Total	49,847	31,003	21,464	15,753	12,184	7,239	4,651	1,286	100	143,527
Avg. Earnings	21,379	31,095	36,215	40,945	46,289	51,180	55,000	56,435	58,232	32,891

# Membership Data

## Distribution of Service Retirements (Total)

Age	Years Since Retirement as of June 30, 2008							Total
	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 +	
<45			1	1				2
Avg. Benefit			37,712	6,321				22,017
45 - 50								0
Avg. Benefit								
50 - 54	30	45	1					76
Avg. Benefit	12,590	10,026	19,280					11,160
55 - 59	709	2,344	80					3,133
Avg. Benefit	14,375	10,390	15,284					11,417
60 - 64	973	4,644	2,800	34	1			8,452
Avg. Benefit	13,945	12,130	10,887	30,908	19,752			12,004
65 - 69	577	5,001	4,991	2,173	13			12,755
Avg. Benefit	12,354	10,146	11,236	12,831	31,585			11,151
70 - 74	104	979	4,476	4,006	1,207	9		10,781
Avg. Benefit	5,594	7,174	10,028	15,279	16,215	41,378		12,396
75 - 79	36	346	830	3,965	2,686	729		8,592
Avg. Benefit	6,194	4,492	6,939	13,528	16,356	23,519		14,229
80 - 84	14	115	268	678	2,832	2,156	109	6,172
Avg. Benefit	3,704	4,682	4,382	12,153	13,653	22,074	41,635	16,332
85 - 89	3	27	66	150	414	1,955	683	3,298
Avg. Benefit	4,376	2,529	3,966	8,021	10,793	16,798	20,495	16,026
90+		5	5	11	46	229	1,170	1,466
Avg. Benefit		10,623	1,834	5,422	5,385	11,611	16,247	15,032
<b>Total</b>	<b>2,446</b>	<b>13,506</b>	<b>13,518</b>	<b>11,018</b>	<b>7,199</b>	<b>5,078</b>	<b>1,962</b>	<b>54,727</b>
<b>Avg. Benefit</b>	<b>13,139</b>	<b>10,448</b>	<b>10,351</b>	<b>13,913</b>	<b>14,907</b>	<b>19,813</b>	<b>19,136</b>	<b>13,009*</b>

\* Difference from number of retired members as shown on page 22 is that multiple payees of members (ex-spouse, child support, etc.) are excluded from this exhibit.

## Membership Data

### Distribution of Service Retirements (Basic)

Age	Years Since Retirement as of June 30, 2008							Total
	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 +	
<45			1					1
Avg. Benefit			37,712					37,712
45 - 49								0
Avg. Benefit								0
50 - 54								0
Avg. Benefit								
55 - 59		13	13					26
Avg. Benefit		35,988	40,884					38,436
60 - 64	3	53	233	21	1			311
Avg. Benefit	37,385	32,473	38,250	40,238	19,752			37,332
65 - 69	6	85	310	392	11			804
Avg. Benefit	47,214	29,313	34,928	41,001	33,066			37,361
70 - 74		17	210	672	363	8		1,270
Avg. Benefit		34,388	27,115	41,338	38,679	43,914		38,149
75 - 79		4	31	488	683	368		1,574
Avg. Benefit		24,269	31,087	33,807	35,636	39,890		35,945
80 - 84		2	9	84	588	948	101	1,732
Avg. Benefit		19,891	26,240	35,291	27,895	37,532	43,507	34,421
85 - 89			1	11	58	753	461	1,284
Avg. Benefit			12,145	32,008	32,358	29,186	26,102	28,233
90+					2	69	732	803
Avg. Benefit					7,793	24,518	21,353	21,591
<b>Total</b>	<b>9</b>	<b>174</b>	<b>808</b>	<b>1,668</b>	<b>1,706</b>	<b>2,146</b>	<b>1,294</b>	<b>7,805</b>
<b>Avg. Benefit</b>	<b>43,938</b>	<b>31,046</b>	<b>33,682</b>	<b>38,675</b>	<b>33,445</b>	<b>34,613</b>	<b>24,774</b>	<b>33,430</b>



## Membership Data

### Distribution of Service Retirements (Coordinated)

Age	Years Since Retirement as of June 30, 2008							Total
	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 +	
<45				1				1
Avg. Benefit				6,321				6,321
45 - 49								0
Avg. Benefit								0
50 - 54	30	45	1					76
Avg. Benefit	12,590	10,026	19,290					11,160
55 - 59	709	2,331	67					3,107
Avg. Benefit	14,375	10,248	10,317					11,191
60 - 64	970	4,591	2,567	13				8,141
Avg. Benefit	13,873	11,895	8,403	15,836				11,036
65 - 69	571	4,916	4,681	1,781	2			11,951
Avg. Benefit	11,988	9,814	9,667	6,631	23,443			9,388
70 - 74	104	962	4,266	3,334	844	1		9,511
Avg. Benefit	5,594	6,693	9,187	10,027	6,554	21,086		8,957
75 - 79	36	342	799	3,477	2,003	361		7,018
Avg. Benefit	6,194	4,261	6,003	10,682	9,782	6,830		9,358
80 - 84	14	113	259	594	2,244	1,208	8	4,440
Avg. Benefit	3,704	4,413	3,622	8,881	9,922	9,944	17,991	9,276
85 - 89	3	27	65	139	356	1,202	222	2,014
Avg. Benefit	4,376	2,529	3,840	6,122	7,279	9,038	8,853	8,243
90+		5	5	11	44	160	438	663
Avg. Benefit		10,623	1,834	5,422	5,276	6,045	7,713	7,088
<b>Total</b>	<b>2,437</b>	<b>13,332</b>	<b>12,710</b>	<b>9,350</b>	<b>5,493</b>	<b>2,932</b>	<b>668</b>	<b>46,922</b>
<b>Avg. Benefit</b>	<b>13,025</b>	<b>10,179</b>	<b>8,868</b>	<b>9,495</b>	<b>9,150</b>	<b>8,980</b>	<b>8,215</b>	<b>9,612</b>

## Membership Data

### Distribution of Survivors (Total)

Age	Years Since Death as of June 30, 2008							Total
	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 +	
<45	14	74	40	25	12	7		<b>172</b>
Avg. Benefit	6,826	8,124	6,231	5,642	8,462	9,915		<b>7,314</b>
45 - 49	10	35	27	14	6			<b>92</b>
Avg. Benefit	7,317	8,827	8,399	8,549	18,053			<b>9,096</b>
50 - 54	28	93	48	28	8	3		<b>208</b>
Avg. Benefit	8,534	10,015	6,489	8,953	12,540	10,812		<b>8,967</b>
55 - 59	33	140	95	33	19	2	5	<b>327</b>
Avg. Benefit	8,732	10,513	10,293	11,827	17,842	23,127	19,373	<b>11,040</b>
60 - 64	37	171	118	57	31	12	5	<b>431</b>
Avg. Benefit	11,510	11,130	11,094	12,775	19,220	18,217	18,141	<b>12,231</b>
65 - 69	38	182	189	104	77	21	20	<b>631</b>
Avg. Benefit	10,846	11,215	11,720	14,798	16,739	18,809	20,469	<b>13,155</b>
70 - 74	54	201	249	154	108	58	34	<b>858</b>
Avg. Benefit	13,943	14,371	14,310	16,290	13,932	21,451	19,301	<b>15,289</b>
75 - 79	66	252	287	217	183	97	61	<b>1,163</b>
Avg. Benefit	17,686	15,031	18,481	16,898	14,919	22,484	15,678	<b>17,019</b>
80 - 84	74	301	310	279	204	132	116	<b>1,416</b>
Avg. Benefit	16,837	15,627	18,960	19,129	16,237	17,308	15,012	<b>17,304</b>
85 - 89	44	202	201	186	157	108	152	<b>1,050</b>
Avg. Benefit	16,019	15,422	14,465	15,411	15,119	16,823	13,479	<b>15,080</b>
90+	11	64	88	99	94	84	191	<b>631</b>
Avg. Benefit	17,665	15,456	14,490	12,452	11,965	11,999	9,944	<b>12,240</b>
<b>Total</b>	<b>409</b>	<b>1,715</b>	<b>1,652</b>	<b>1,196</b>	<b>899</b>	<b>524</b>	<b>584</b>	<b>6,979</b>
<b>Avg. Benefit</b>	<b>13,690</b>	<b>13,261</b>	<b>14,659</b>	<b>15,703</b>	<b>15,105</b>	<b>17,741</b>	<b>13,526</b>	<b>14,632</b>

## Membership Data

### Distribution of Survivors (Basic)

Age	Years Since Death as of June 30, 2008							Total
	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 +	
<45			1	2	2	2		7
Avg. Benefit			30,844	5,670	17,292	24,934		18,091
45 - 49			2		1			3
Avg. Benefit			7,408		33,224			16,013
50 - 54	2		2	2	1	1		8
Avg. Benefit	12,063		5,181	11,321	33,377	25,801		14,538
55 - 59	1	4	7	4	7	2	3	28
Avg. Benefit	52,732	11,930	13,106	25,303	31,911	23,127	20,210	22,274
60 - 64	2	16	14	6	17	5	4	64
Avg. Benefit	14,108	26,330	29,817	27,283	27,901	29,601	22,133	27,211
65 - 69	9	35	38	22	32	11	20	167
Avg. Benefit	17,923	24,002	25,846	32,510	28,865	29,391	20,469	26,079
70 - 74	14	63	72	46	25	33	34	287
Avg. Benefit	36,040	26,606	29,663	31,643	28,225	31,202	19,301	28,444
75 - 79	25	83	121	92	73	53	59	506
Avg. Benefit	32,734	28,986	31,698	28,189	25,333	34,743	16,093	28,247
80 - 84	31	122	141	144	106	76	102	722
Avg. Benefit	24,095	27,152	30,051	28,497	21,970	24,889	16,220	25,312
85 - 89	21	99	104	90	95	61	138	608
Avg. Benefit	24,986	21,564	21,687	23,226	19,375	23,351	14,040	20,079
90+	5	37	52	60	70	63	171	458
Avg. Benefit	31,584	20,367	19,673	14,981	13,752	13,487	10,484	14,058
<b>Total</b>	<b>110</b>	<b>459</b>	<b>554</b>	<b>468</b>	<b>429</b>	<b>307</b>	<b>531</b>	<b>2,858</b>
<b>Avg. Benefit</b>	<b>27,444</b>	<b>25,255</b>	<b>27,137</b>	<b>25,974</b>	<b>21,934</b>	<b>24,853</b>	<b>14,216</b>	<b>23,229</b>

## Membership Data

### Distribution of Survivors (Coordinated)

Age	Years Since Death as of June 30, 2008							Total
	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 +	
<45	14	74	39	23	10	5		<b>165</b>
Avg. Benefit	6,826	8,124	5,600	5,640	6,695	3,908		<b>6,857</b>
45 - 49	10	35	25	14	5			<b>89</b>
Avg. Benefit	7,317	8,827	8,478	8,549	15,018			<b>8,863</b>
50 - 54	26	93	46	26	7	2		<b>200</b>
Avg. Benefit	8,263	10,015	6,546	8,771	9,563	3,317		<b>8,745</b>
55 - 59	32	136	88	29	12		2	<b>299</b>
Avg. Benefit	7,357	10,471	10,069	9,968	9,635		18,117	<b>9,988</b>
60 - 64	35	155	104	51	14	7	1	<b>367</b>
Avg. Benefit	11,361	9,561	8,574	11,069	8,678	10,086	2,170	<b>9,619</b>
65 - 69	29	147	151	82	45	10		<b>464</b>
Avg. Benefit	8,650	8,170	8,165	10,046	8,116	7,169		<b>8,503</b>
70 - 74	40	138	177	108	83	25		<b>571</b>
Avg. Benefit	6,209	8,786	8,065	9,750	9,627	8,581		<b>8,677</b>
75 - 79	41	169	166	125	110	44	2	<b>657</b>
Avg. Benefit	8,511	8,178	8,847	8,587	8,008	7,717	3,452	<b>8,372</b>
80 - 84	43	179	169	135	98	56	14	<b>694</b>
Avg. Benefit	11,605	7,773	9,707	9,137	10,035	7,019	6,208	<b>8,974</b>
85 - 89	23	103	97	96	62	47	14	<b>442</b>
Avg. Benefit	7,831	9,519	6,724	8,085	8,599	8,349	7,954	<b>8,203</b>
90+	6	27	36	39	24	21	20	<b>173</b>
Avg. Benefit	6,065	8,725	7,004	8,561	6,753	7,537	5,328	<b>7,427</b>
<b>Total</b>	<b>299</b>	<b>1,256</b>	<b>1,098</b>	<b>728</b>	<b>470</b>	<b>217</b>	<b>53</b>	<b>4,121</b>
<b>Avg. Benefit</b>	<b>8,630</b>	<b>8,878</b>	<b>8,363</b>	<b>9,100</b>	<b>8,872</b>	<b>7,679</b>	<b>6,607</b>	<b>8,669</b>

## Membership Data

### Distribution of Disability Retirements (Total)

Age	Years Disabled as of June 30, 2008							Total
	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 +	
<45	8	35	25	1				69
Avg. Benefit	7,260	5,699	4,334	4,400				5,367
45 - 49	11	82	49	23	7			172
Avg. Benefit	9,463	8,292	6,593	6,001	5,052			7,445
50 - 54	32	153	123	56	19			383
Avg. Benefit	12,700	10,508	8,064	8,478	7,262			9,448
55 - 59	58	291	200	66	27	7		649
Avg. Benefit	11,521	11,250	9,959	10,137	8,835	4,208		10,587
60 - 64	40	293	255	127	26	10	1	752
Avg. Benefit	10,319	11,356	12,102	13,084	9,728	8,945	11,685	11,758
65 - 69	1	8	8	4				21
Avg. Benefit	2,629	7,487	4,152	1,934				4,927
70 - 74								
Avg. Benefit								
75 - 79								
Avg. Benefit								
80 - 84								
Avg. Benefit								
85 - 89								
Avg. Benefit								
90+								
Avg. Benefit								
<b>Total</b>	<b>150</b>	<b>862</b>	<b>660</b>	<b>277</b>	<b>79</b>	<b>17</b>	<b>1</b>	<b>2,046</b>
<b>Avg. Benefit</b>	<b>11,015</b>	<b>10,613</b>	<b>9,901</b>	<b>10,670</b>	<b>8,415</b>	<b>6,994</b>	<b>11,685</b>	<b>10,306</b>

## Membership Data

### Distribution of Disability Retirements (Basic)

Age	Years Disabled as of June 30, 2008							Total
	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 +	
<45								
Avg. Benefit								
45 – 49								
Avg. Benefit								
50 – 54								
Avg. Benefit								
55 - 59								
Avg. Benefit								
60 – 64		1	3	6	1	1	1	13
Avg. Benefit		1,572	55,813	48,868	8,518	25,105	11,685	39,040
65 – 69		1						1
Avg. Benefit		36,780						36,780
70 – 74								
Avg. Benefit								
75 – 79								
Avg. Benefit								
80 – 84								
Avg. Benefit								
85 – 89								
Avg. Benefit								
90+								
Avg. Benefit								
<b>Total</b>		<b>2</b>	<b>3</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>14</b>
<b>Avg. Benefit</b>		<b>19,176</b>	<b>55,813</b>	<b>48,868</b>	<b>8,518</b>	<b>25,105</b>	<b>11,685</b>	<b>38,879</b>

## Membership Data

### Distribution of Disability Retirements (Coordinated)

Age	Years Disabled as of June 30, 2008						Total
	<1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	
<45	8	35	25	1			69
Avg. Benefit	7,260	5,699	4,334	4,400			5,367
45 - 49	11	82	49	23	7		172
Avg. Benefit	9,463	8,292	6,593	6,001	5,052		7,445
50 - 54	32	153	123	56	19		383
Avg. Benefit	12,700	10,508	8,064	8,478	7,262		9,448
55 - 59	58	291	200	66	27	7	649
Avg. Benefit	11,521	11,250	9,959	10,137	8,835	4,208	10,587
60 - 64	40	292	252	121	25	9	739
Avg. Benefit	10,319	11,389	11,581	11,310	9,776	7,149	11,278
65 - 69	1	7	8	4			20
Avg. Benefit	2,629	3,303	4,152	1,934			3,335
70 - 74							
Avg. Benefit							
75 - 79							
Avg. Benefit							
80 - 84							
Avg. Benefit							
85 - 89							
Avg. Benefit							
90+							
Avg. Benefit							
<b>Total</b>	<b>150</b>	<b>860</b>	<b>657</b>	<b>271</b>	<b>78</b>	<b>16</b>	<b>2,032</b>
<b>Avg. Benefit</b>	<b>11,015</b>	<b>10,593</b>	<b>9,691</b>	<b>9,824</b>	<b>8,414</b>	<b>5,862</b>	<b>10,109</b>

## Membership Data

### Reconciliation of Members\*

	Actives	Terminated		Recipients			Total
		Deferred Retirement	Other Non-vested	Service Retirements	Disability Retirements	Survivors	
<b>Members on 7/1/2007</b>	<b>146,226</b>	<b>39,722</b>	<b>109,599</b>	<b>52,554</b>	<b>1,988</b>	<b>6,894</b>	<b>356,983</b>
New entrants	15,720	0	0	0	0	0	15,720
Return to active	2,204	(854)	(1,348)	0	(2)	0	0
Terminated non-vested	(8,311)	0	10,574	0	0	0	2,263
Service retirements	(2,506)	(1,180)	(9)	3,801	(127)	0	(21)
Terminated deferred	(5,244)	4,838	0	0	0	0	(406)
Terminated refund	(2,407)	(43)	(1,727)	0	0	0	(4,177)
Deaths	(187)	(138)	(286)	(1,498)	(68)	(367)	(2,544)
New beneficiary	0	0	0	0	0	493	493
Disabled	(217)	(39)	0	0	260	0	4
Benefits expired	0	0	0	0	0	0	0
Data correction	(40)	2	2	(2)	(5)	(41)	(84)
Net change	(988)	2,586	7,206	2,301	58	85	11,248
<b>Members on 6/30/2008</b>	<b>145,238</b>	<b>42,308</b>	<b>116,805</b>	<b>54,855</b>	<b>2,046</b>	<b>6,979</b>	<b>368,231</b>

\* Provided by PERA and checked for reasonableness.



## Development of Costs

### Actuarial Valuation Balance Sheet (Dollars in Thousands)

The actuarial balance sheet is based on the fundamental equation that at any given time the present value of benefits to be paid in the future must be equal to the assets on hand plus the present value of future contributions to be received. The total rate of contribution is determined as that amount which will make the total present and potential assets balance with the total present value of future benefits. The members' rate of contribution is fixed at the current schedule. The Employer's rate of contribution is the balance required to cover the remainder of the funding requirements.

The contributions made in excess of amounts required for current benefit payments are accumulated as a reserve to help meet benefit payments in later years. It is this reserve system which permits the establishment of a level rate of contribution each year.

				June 30, 2008
A. Actuarial Value of Assets				\$ 13,048,970
B. Present value of expected future assets				
1. Present value of expected future statutory supplemental contributions				\$ 3,726,270
2. Present value of future normal cost contributions				2,705,736
3. Total present value of future contributions (1. + 2.)				\$ 6,432,006
C. Total current and expected future assets				\$ 19,480,976
	<u>Non-Vested</u>	<u>Vested</u>		<u>Total</u>
D. Current benefit obligations				
1. Benefit recipients				
a. Service requirements	\$ 0	\$ 6,689,381	\$	6,689,381
b. Disability	0	257,608		257,608
c. Survivors	0	797,585		797,585
2. Deferred retirements with augmentation	0	2,009,116		2,009,116
3. Former members without vested rights	0	73,156		73,156
4. Active Members	95,935	6,915,452		7,011,387
5. Total Current Benefit Obligations	\$ 95,935	\$ 16,742,298	\$	16,838,233
E. Expected Future Benefit Obligations				4,470,759
F. Total Current and Expected Future Benefit Obligations				\$ 21,308,992
G. Unfunded Current Benefit Obligations (D.5. - A.)				\$ 3,789,263
H. Unfunded Current and Future Benefit Obligations (F. - C.)				\$ 1,828,016

## Development of Costs

### Determination of Unfunded Actuarial Accrued Liability and Supplemental Contribution Rate *(Dollars in Thousands)*

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
<b>A. Determination of Actuarial Accrued Liability (AAL)</b>			
1. Active Members			
a. Retirement annuities	\$ 9,278,549	\$ 1,878,805	\$ 7,399,744
b. Disability benefits	407,614	133,066	274,548
c. Survivor's benefits	126,449	43,331	83,118
d. Deferred retirements	733,403	587,812	145,591
e. Total	\$ 10,546,015	\$ 2,643,014	\$ 7,903,001
2. Deferred retirements with future augmentation	2,009,116	0	2,009,116
3. Former members without vested rights	73,156	0	73,156
4. Annuitants in MPRIF	7,407,745	0	7,407,745
5. Recipients not in MPRIF	336,829	0	336,829
6. Total	\$ 20,372,861	\$ 2,643,014	\$ 17,729,847
<b>B. Determination of Unfunded Actuarial Accrued Liability (UAAL)</b>			
1. Actuarial accrued liability			\$ 17,729,847
2. Current assets			13,048,970
3. Unfunded actuarial accrued liability			\$ 4,680,877
<b>C. Determination of Supplemental Contribution Rate</b>			
1. Present value of future payrolls through the amortization date of July 1, 2031			\$ 74,376,642
2. Supplemental contribution rate <i>(B.3. / C.1.)</i>			6.29%

## Development of Costs

### Changes in Unfunded Actuarial Accrued Liability (UAAL) (Dollars in Thousands)

	Year Ending June 30, 2008
A. Unfunded actuarial accrued liability at beginning of year	\$ 4,720,303
B. Changes due to interest requirements and current rate of funding	
1. Normal cost and actual administrative expenses	\$ 394,908
2. Contributions	(583,311)
3. Interest on A., B.1. and B.2.	393,219
4. Total (B.1. + B.2. + B.3.)	\$ 204,816
C. Expected unfunded actuarial accrued liability at end of year (A. + B.4.)	\$ 4,925,119
D. Increase (decrease) due to actuarial losses (gains) because of experience deviations from expected	
1. Salary increases	\$ (26,366)
2. Investment return	758,806
3. MPRIF Mortality	(41,757)
4. Mortality of other benefit recipients	584
5. Other items*	(580,869)
6. Total	\$ 110,398
E. Unfunded actuarial accrued liability at end of year before plan amendments and changes in actuarial assumptions (C. + D.6.)	\$ 5,035,517
F. Change in unfunded actuarial accrued liability due to changes in plan provisions	\$ 0
G. Change in unfunded actuarial accrued liability due to changes in actuarial assumptions	\$ (354,640)
H. Unfunded actuarial accrued liability at end of year (E. + F. + G.)	\$ 4,680,877

\* Approximately \$565 million of the liability gain is attributable to differences in the way The Segal Company's and Mercer's valuation systems apply the actuarial cost method.

## Development of Costs

### Determination of Contribution Sufficiency/(Deficiency) – Total *(Dollars in Thousands)*

	Percent of Payroll	Dollar Amount
A. Statutory contributions – Chapter 353		
1. Employee contributions	6.00%	\$ 297,220
2. Employer contributions	6.63%	328,211
3. Total	12.63%	\$ 625,431
B. Required contributions – Chapter 356		
1. Normal cost		
a. Retirement benefits	5.74%	\$ 284,095
b. Disability benefits	0.37%	18,318
c. Survivors	0.12%	6,002
d. Deferred retirement benefits	1.51%	74,696
e. Total	7.74%	\$ 383,111
2. Supplemental contribution amortization by July 1, 2031 of Unfunded Actuarial Accrued Liability		
a. Due to unfunded MPRIF liability	1.93%	\$ 95,588
b. Due to unfunded non-MPRIF liability	4.36%	215,940
c. Total supplemental contribution amortization	6.29%	\$ 311,528
3. Allowance for expenses	0.19%	\$ 9,410
4. Total	14.22%	\$ 704,049
C. Contribution Sufficiency/(Deficiency) <i>(A.3. – B.4.)</i>	(1.59%)	\$ (78,618)

Note: Projected annual payroll for fiscal year beginning on the valuation date: \$4,952,751.

## Development of Costs

### Determination of Contribution Sufficiency/(Deficiency) – Basic *(Dollars in Thousands)*

	Percent of Payroll	Dollar Amount
A. Statutory contributions – Chapter 353		
1. Employee contributions	9.10%	\$ 162
2. Employer contributions	11.78%	209
3. Total	20.88%	\$ 371
B. Required contributions – Chapter 356		
1. Normal cost		
a. Retirement benefits	5.96%	\$ 106
b. Disability benefits	0.34%	6
c. Survivors	0.22%	4
d. Deferred retirement benefits	1.86%	33
e. Total	8.38%	\$ 149

Note: Projected annual payroll for fiscal year beginning on the valuation date: \$1,778.

## Development of Costs

### Determination of Contribution Sufficiency/(Deficiency) – Coordinated *(Dollars in Thousands)*

	Percent of Payroll	Dollar Amount
A. Statutory contributions – Chapter 353		
1. Employee contributions	6.00%	\$ 297,058
2. Employer contributions	6.63%	328,002
3. Total	12.63%	\$ 625,060
B. Required contributions – Chapter 356		
1. Normal cost		
a. Retirement benefits	5.74%	\$ 283,989
b. Disability benefits	0.37%	18,312
c. Survivors	0.12%	5,998
d. Deferred retirement benefits	1.51%	74,663
e. Total	7.74%	\$ 382,962

Note: Projected annual payroll for fiscal year beginning on the valuation date: \$4,950,973.

## Actuarial Basis

### Actuarial Cost Method

Liabilities and contributions in this report are computed using the Individual Entry Age Normal Cost Method. This method is prescribed by Minnesota Statutes.

The objective under this method is to fund each participants' benefits under the Plan as payments which are level as a percentage of salary, starting at original participation date (or employment date), and continuing until the assumed retirement termination, disability or death.

At the time the funding method is introduced, there will be a liability which represents the contributions which would have been accumulated if this method of funding had always been used. The difference between this liability and the assets (if any) which are held in the fund is the unfunded liability which is typically funded over a chosen period in accordance with the amortization schedule.

A detailed description of the calculation follows:

The normal costs for each active participant under the assumed retirement age is determined by applying to earnings the level percentage of salary which, if contributed each year from date of entry into the Plan until the assumed retirement (termination, disability or death) date, is sufficient to provide the full value of the benefits expected to be payable.

- The present value of present value of future normal costs is the total of the discounted values of all active participants' normal cost, assuming these to be paid in each case from the valuation date until retirement (termination, disability or death) date.
- The present value of projected benefits is calculated as the value of all benefit payments expected to be paid to the Plan's current participants, including active and retired members, beneficiaries, and terminated members with vested rights.
- The accrued liability is the excess of the present value of projected benefits over the present value of future normal cost.
- The unfunded liability is the excess of the accrued liability over the assets of the fund, and represents that part of the accrued liability which has not been funded by accumulated past contributions.

## Actuarial Basis

### Asset Valuation Method

**MPRIF Reserve:** Market Value

**Non-MPRIF Assets:** The assets are valued based on a five-year moving average of expected and market values (five-year average actuarial value) determined as follows:

- At the end of each plan year, an average asset value is calculated as the average of the market asset value at the beginning and end of the fiscal year net of investment income for the fiscal year;
- The investment gain or (loss) is taken as the excess of actual investment income over the expected investment income based on the average asset value as calculated above;
- The investment gain or (loss) so determined is recognized over five years at 20% per year;
- The asset value is the sum of the expected asset value plus the scheduled recognition of investment gains or (losses) during the current and the preceding four plan years.

### Payment on the Unfunded Actuarial Accrued Liability

A level percentage of payroll each year to the statutory amortization date of July 1, 2031 assuming payroll increases of 4.5% per annum (6.0% last year). If there is a negative Unfunded Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percentage of payroll.



## Actuarial Basis

### Summary of Actuarial Assumptions

The following assumptions were used in valuing the liabilities and benefits under the plan.

<i>Investment return:</i>	6.0% compounded annually post-retirement. 8.5% compounded annually pre-retirement.	
<i>Benefit increases after retirement</i>	Payment of benefit increases after retirement accounted for by using a 6.0% post-retirement assumption.	
<i>Salary increases</i>	Reported salary for prior fiscal year, with new hires annualized, increased to current fiscal year and annually for each future year according to the ultimate rates in the rate table. During a 5-year select period, $0.60\% \times (5-T)$ where T is completed years of service is added to the ultimate rate.	
<i>Mortality</i>		
<i>Healthy Pre-retirement</i>	1983 Group Annuity Mortality for males set back eight years 1983 Group Annuity Mortality for females set back seven years	
<i>Healthy Post-retirement</i>	1983 Group Annuity Mortality for males set back one year 1983 Group Annuity Mortality for females set back one year	
<i>Disabled</i>	1965 RRB rates through age 54. For ages 55 to 64, graded rates between 1965 RRB rates and the Healthy Post-Retirement Mortality. For ages 65 and later, the Healthy Post-Retirement Mortality.	
<i>Retirement</i>	Graded rates beginning at age 55 as shown in rate table. Members who have attained the highest assumed retirement age are assumed to retire in one year.	
	Retirement	
	<u>Age</u>	<u>Rule of 90 Eligible</u> <u>Other</u>
	55	30%      7%
	56	25%      7%
	57	25%      7%
	58	25%      7%
	59	25%      9%
	60	25%      9%
	61	30%      15%
	62	40%      22%
	63	30%      20%
	64	30%      20%
	65	40%      40%
	66	25%      25%
	67	25%      25%
	68	25%      25%
	69	25%      25%
	70	25%      25%
	71	100%      100%

## Actuarial Basis

### Summary of Actuarial Assumptions (continued)

<i>Withdrawal</i>	Select and ultimate rates based on recent plan experience. Ultimate rates after the third year are shown in the rate table. Select rates are as follows:		
	First Year	40.00%	
	Second Year	15.00%	
	Third Year	10.00%	
<i>Disability</i>	Rates are shown in rate table.		
<i>Allowance for Combined Service Annuity</i>	Liabilities for active members are increased by 0.80% and liabilities for former members are increased by 60.00% to account for the effect of some participants having eligibility for a Combined Service Annuity.		
<i>Administrative expenses</i>	Prior year administrative expenses expressed as a percentage of prior year payroll.		
<i>Refund of contributions</i>	All employees withdrawing after becoming eligible for a deferred benefit are assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.		
<i>Percentage married</i>	85% of male Members and 65% of female Members are assumed to be married.		
<i>Age of spouse</i>	Females are assumed to be four years younger than males.		
<i>Eligible children</i>	Members are assumed to have no children.		
<i>Form of payment</i>	Married members assumed to elect subsidized joint and survivor form of annuity as follows:		
		<u>Males</u>	<u>Females</u>
	25% J&S option	10%	5%
	50% J&S option	20%	5%
	75% J&S option	10%	5%
	100% J&S option	30%	15%
<i>Changes in actuarial assumptions</i>	The following assumption changes were recognized as of July 1, 2008:		
	<ul style="list-style-type: none"><li>▪ Lower ultimate salary increase rates by 1.00% at all ages.</li><li>▪ Change the select period for salary increases from 10 years with an adjustment of .30% x (10 – T) to 5 years with an adjustment of .60% x (5 – T).</li><li>▪ Change payroll growth assumption from 6.0% to 4.5%.</li><li>▪ Reduce retirement rates at ages 55 to 61 and 63 to 64 for Rule of 90 retirements.</li><li>▪ Revise retirement rates at ages 61 and 62 for non-Rule of 90 retirements.</li></ul>		

## Actuarial Basis

### Summary of Actuarial Assumptions *(continued)*

#### Summary of Rates

Age	Rate (%)						Salary Increase
	Pre-Retirement Mortality		Ultimate Withdrawal		Disability		
	Male	Female	Male	Female	Male	Female	
20	0.03%	0.01%	8.40%	8.40%	0.01%	0.01%	5.40%
25	0.03	0.02	6.90	6.90	0.01	0.01	5.40
30	0.04	0.02	5.40	5.40	0.02	0.02	5.20
35	0.05	0.03	3.90	4.20	0.05	0.04	5.00
40	0.07	0.04	3.00	3.50	0.09	0.06	4.80
45	0.10	0.06	2.50	3.00	0.14	0.09	4.60
50	0.15	0.08	2.00	2.50	0.23	0.16	4.40
55	0.28	0.14	0.00	0.00	0.49	0.26	4.20
60	0.48	0.21	0.00	0.00	0.82	0.46	4.00
65	0.71	0.35	0.00	0.00	0.00	0.00	4.00
70	1.11	0.58	0.00	0.00	0.00	0.00	4.00

## Actuarial Basis

### Summary of Plan Provisions – Basic

This summary of provisions reflects the interpretation of applicable Statutes for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

<i>Plan year</i>	July 1 through June 30
<i>Eligibility</i>	A public employee who is not covered under the Social Security Act. General exceptions are employees covered by other public funds, certain part-time employees and full-time students under age 23.
<i>Contributions</i>	Shown as a percent of salary:
<i>Member</i>	9.10% of salary
<i>Employer</i>	9.10% of total salary. Additional 2.68% is repealed at full funding
<i>Allowable service</i>	Service during which member contributions were made. May also include certain leave of absence and military service. Does not include pro-rated service credit for part-time employment for post December 31, 2001 hires.
<i>Salary</i>	Includes amounts deducted for deferred compensation or supplemental retirement plans, net income from fees and sick leave payments funded by the employer. Excludes unused annual leave and sick leave payments, severance payments, Workers' Compensation benefits and employer-paid flexible spending accounts, cafeteria plans, healthcare expense accounts, day-care expenses, fringe benefits and the cost of insurance coverage.
<i>Average Salary</i>	Average of the five highest successive years of annual salary. Average salary is based on all Allowable Service if less than five years.
<b>Retirement</b>	
<u>Normal retirement benefit</u>	
<i>Age/Service requirements</i>	Age 65 and three years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.
<i>Amount</i>	2.70% of Average Salary for each year of Allowable Service.
<u>Early retirement benefit</u>	
<i>Age/Service requirements</i>	(a.) Age 55 and three years of Allowable Service. (b.) Any age with 30 years of Allowable Service. (c.) Rule of 90: Age plus Allowable Service totals 90.

## Actuarial Basis

### Summary of Plan Provisions – Basic (continued)

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#### *Retirement (continued)*

##### Early retirement benefit (continued)

###### *Amount*

The greater of (a) or (b):

- (a.) 2.20% of Average Salary for each of the first ten years of Allowable Service and 2.70% of Average Salary for each subsequent year with reduction of 0.25% for each month the Member is under age 65 at time of retirement or under age 62 if 30 years of Allowable Service. No reduction if age plus years of Allowable Service totals 90.
- (b.) 2.70% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3.00% per year and actuarial reduction for each month the Member is under age 65.

###### Form of payment

Life annuity with return on death of any balance of contributions over aggregate monthly payments. Actuarially equivalent options are:

25%, 50%, 75% or 100% Joint and Survivor with bounce back feature without additional reduction (option canceled if Member is pre-deceased by beneficiary).

###### Benefit increases

The inflation-based benefit increase provided by the Minnesota Post Retirement Investment Fund (Post Fund) to benefit recipients is equal to 100 percent of CPI-W, but not to exceed 2.5 percent. An additional benefit increase may be provided to any individuals who have lost purchasing power compared to the value of the benefit they initially received when their benefit first commenced. This additional benefit increase can only be paid if the Post Fund composite funding ratio is at least 90 percent, if the rate of return earned on Post Fund assets exceeds 8.5 percent for the year, and if the inflation rate certified for the year is less than 2.5 percent. If the Post Fund has a funding ratio of 100 percent or more, an additional inflation component will be paid when CPI-W inflation exceeds 2.5 percent. An overall cap of 5.0 percent annually on benefit recipient adjustments is effective June 30, 2010.

A benefit recipient who has been receiving a benefit for at least 12 full months as of June 30 will receive a full increase. Members receiving benefits for at least one full month but less than 12 full months will receive a partial increase.

Members retired under laws in effect before July 1, 1973 receive an additional lump sum payment each year. In 1989, this lump sum payment is the greater of \$25 times each full year of Allowable Service or the difference between \$400 times each full year of Allowable Service and the sum of benefits paid from any Minnesota public pension plan plus cash payments from the Social Security Administration for the preceding fiscal year July 1, 1988 through June 30, 1989. In each following year, the lump sum payment will increase by the same percentage increase that is applied to regular annuities paid from MPRIF. Effective January 1, 2002, annual lump sum payment is divided by 12 and paid as a monthly life annuity in the annuity form elected.

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## Actuarial Basis

### Summary of Plan Provisions – Basic (continued)

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<b>Disability</b>	
<u>Disability benefit</u>	
Age/service requirement	Total and permanent disability before normal retirement age with three years of Allowable Service
Amount	<p>Normal Retirement benefit based on Allowable Service and Average Salary at disability without reduction for commencement before Normal Retirement Age. Supplemental benefit of \$25 per month payable to the later of the normal retirement age or the five-year anniversary of commencement of disability. The disability benefit is reduced to that amount which, when added to Workers' Compensation, does not exceed the salary the disabled Member received as of the date of the disability or the salary currently payable for the same employment position substantially similar to the one the person held as of the date of the disability, whichever is greater.</p> <p>If a member becomes disabled prior to July 1, 1997 but did not commence their benefit before July 1, 1997, the benefit payable is calculated under the laws in effect at the time the Member became disabled and an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.</p> <p>Payments stop earlier if disability ceases. If death occurs prior to age 65, or within five years of disability, the surviving spouse can receive a refund or a survivor benefit. Dependent children are entitled to dependent child benefits subject to the 70.00% family maximum. Payments revert to a retirement annuity at normal retirement age. Benefits may be reduced on resumption of partial employment.</p>
Form of payment	Same as for retirement.
Benefit increases	Adjusted by PERA to provide same increase as MPRIF
<u>Retirement after disability</u>	
Age/service requirement	Normal retirement age
Amount	Any optional annuity continues. Otherwise, the larger of the disability benefit paid before normal retirement age or the normal retirement benefit available at normal retirement age, or an actuarially equivalent optional annuity.
Benefit increases	Same as for retirement.

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## Actuarial Basis

### Summary of Plan Provisions – Basic *(continued)*

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#### Death

##### Surviving spouse benefit

<i>Age/service requirement</i>	Active Member with 18 months of Allowable Service or Member receiving a disability benefit.
<i>Amount</i>	50.00% of salary averaged over last six months. Family benefit is maximum of 70.00% and minimum of 50.00% of average salary. Benefit paid until spouse's death but no payments while spouse is remarried prior to July 1, 1991.  If a member becomes deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefit as of July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.  Surviving spouse optional annuity may be elected in lieu of this benefit.
<i>Benefit increases</i>	Same as for retirement.

##### Surviving dependent children's benefit

<i>Age/service requirement</i>	Active Member with 18 months of Allowable Service or Member receiving a disability benefit.
<i>Amount</i>	10.00% of salary averaged over last six months for each child. Family benefit minimum (including spouse's benefit) of 50.00% of salary and maximum of 70.00% of average salary. Benefits paid until child marries, dies, or attains age 18 (age 22 if full-time student).  If a member becomes deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefit before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.
<i>Benefit increases</i>	Same as for retirement.

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## Actuarial Basis

### Summary of Plan Provisions – Basic (continued)

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#### Death (continued)

##### Surviving spouse optional annuity

<i>Age/service requirement</i>	Member or former Member who dies before retirement benefits commence and other survivor annuity is waived by spouse.
<i>Amount</i>	Survivor's payment of the 100% joint and survivor benefit the Member could have elected if terminated or an actuarial equivalent term certain annuity. If commencement is prior to age 65 (age 62 if 30 years of service), the benefit is reduced the same as early retirement with half the applicable reduction factor used from age 55 to the actual commencement age. If no surviving spouse, then an actuarial equivalent dependent child benefit is paid to age 20 or for five years if longer.  If a member becomes deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefit as of July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.
<i>Benefit increases</i>	Adjusted by PERA to provide same increase as MPRIF.

##### Refund of contributions with interest

<i>Age/service requirement</i>	Member dies before receiving any retirement benefits and survivor benefits are not payable.
<i>Amount</i>	The excess of the Member's contributions with 6.00% interest over any disability or survivor benefits paid.

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#### Termination

##### Refund of contributions

<i>Age/service requirement</i>	Termination of public service.
<i>Amount</i>	Member's contributions with 5.00% interest compounded annually if termination occurred before May 16, 1989 and 6.00% interest if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund if three or more years of Allowable Service.

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## Actuarial Basis

### Summary of Plan Provisions – Basic (continued)

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#### Termination (continued)

##### Deferred benefit

Age/service requirement

Three years of Allowable Service.

Amount

Benefit computed under law in effect at termination and increased by the following percentage:

- (a.) 0.00% before July 1, 1971;
- (b.) 5.00% from July 1, 1971 to January 1, 1981;
- (c.) 3.00% thereafter until January 1 of the year following attainment of age 55; and
- (d.) 5.00% thereafter until the annuity begins.

Members active with a public employer the day prior to the privatization of the employer become vested immediately and receive enhanced augmentation. Amount is payable at a normal or early retirement. Augmentation occurs at the rate of 4.0% compounded annually through the year the Member turns age 55 and 6.0% thereafter until the annuity begins. If privatization occurred prior to January 1, 2007 (or January 1, 2008 for Hutchinson Area Health Care), augmentation occurs at the rate of 5.5% compounded annually through the year the Member turns age 55 and 7.5% thereafter until the annuity begins.

If a member terminated employment prior to July 1, 1997 but was not eligible to commence their pension before July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.

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#### Changes in Plan Provisions

##### Revised Minnesota Post Retirement Investment Fund Benefit Increase

The inflation-based benefit increase provided by the Minnesota Post Retirement Investment Fund (Post Fund) to benefit recipients is equal to 100 percent of CPI-W, but not to exceed 2.5 percent. An additional benefit increase may be provided to any individuals who have lost purchasing power compared to the value of the benefit they initially received when their benefit first commenced. This additional benefit increase can only be paid if the Post Fund composite funding ratio is at least 90 percent, if the rate of return earned on Post Fund assets exceeds 8.5 percent for the year, and if the inflation rate certified for the year is less than 2.5 percent. If the Post Fund has a funding ratio of 100 percent or more, an additional inflation component will be paid when CPI-W inflation exceeds 2.5 percent. An overall cap of 5.0 percent annually on benefit recipient adjustments is effective June 30, 2010.

##### Potential Dissolution of Minnesota Post Fund

If the Post Fund composite funding ratio is less than 80 percent in any one year, or less than 85 percent in two consecutive years, the Post Fund must be dissolved, and assets will be transferred back to the applicable plan and be merged with the active member assets for that plan. If the Post Fund is dissolved, notwithstanding any other law, the benefit recipients will receive an annual 2.5 percent increase in lieu of any other benefit increase.

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## Actuarial Basis

### Summary of Plan Provisions – Coordinated

This summary of provisions reflects the interpretation of applicable Statutes for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

<i>Plan year</i>	July 1 through June 30														
<i>Eligibility</i>	A public employee who is covered under the Social Security Act. General exceptions are employees covered by other public funds, certain part-time employees and full-time students under age 23. City managers and persons holding elective office may choose to become Members.														
<i>Contributions</i>	Shown as a percent of salary: <table><tr><td><u>Date of Increase</u></td><td><u>Member</u></td><td><u>Employer</u></td></tr><tr><td>Current</td><td>6.00%</td><td>6.50%</td></tr><tr><td>January 2009</td><td>6.00%</td><td>6.75%</td></tr><tr><td>January 2010</td><td>6.00%</td><td>7.00%</td></tr></table> In addition, the 2009 and/or 2010 rate increases will not be implemented if the July 1, 2009 actuarial valuations result in full funding or a contribution sufficiency has occurred.			<u>Date of Increase</u>	<u>Member</u>	<u>Employer</u>	Current	6.00%	6.50%	January 2009	6.00%	6.75%	January 2010	6.00%	7.00%
<u>Date of Increase</u>	<u>Member</u>	<u>Employer</u>													
Current	6.00%	6.50%													
January 2009	6.00%	6.75%													
January 2010	6.00%	7.00%													
<i>Allowable service</i>	Service during which member contributions are deducted. May also include certain leave of absence and military service. Does not include pro-rated service credit for part-time employment for post December 31, 2001 hires.														
<i>Salary</i>	Includes amounts deducted for deferred compensation or supplemental retirement plans, net income from fees and sick leave payments funded by the employer. Excludes unused annual leave and sick leave payments, severance payments, Workers' Compensation benefits and employer-paid flexible spending accounts, cafeteria plans, healthcare expense accounts, day-care expenses, fringe benefits and the cost of insurance coverage.														
<i>Average Salary</i>	Average of the five highest successive years of annual salary. Average salary is based on all Allowable Service if less than five years.														
<b>Retirement</b>															
<u>Normal retirement benefit</u>															
<i>Age/service requirements</i>	First hired before July 1, 1989: (a.) Age 65 and three years of Allowable Service. (b.) Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.														
<i>Amount</i>	1.70% of Average Salary for each year of Allowable Service.														

## Actuarial Basis

### Summary of Plan Provisions – Coordinated (continued)

#### **Retirement (continued)**

##### Normal retirement benefit (continued)

- |                                 |  |
|---------------------------------|--|
| <i>Age/service requirements</i> | First hired after June 30, 1989:<br>(a.) The greater of age 65 or the age eligible for full Social Security retirement benefits but no later than age 66 and three years of Allowable Service.<br>(b.) Proportionate Retirement Annuity is available at normal retirement age and one year of Allowable Service. |
| <i>Amount</i>                   | 1.70% of Average Salary for each year of Allowable Service.  |

##### Early retirement benefit

- |                                 |   |
|---------------------------------|---|
| <i>Age/service requirements</i> | First hired before July 1, 1989:<br>(a.) Age 55 with three years of Allowable Service.<br>(b.) Any age with 30 years of Allowable Service.<br>(c.) Rule of 90: Age plus Allowable Service totals 90.<br>First hired after June 30, 1989:<br>(a.) Age 55 with three years of Allowable Service.  |
| <i>Amount</i>                   | First hired before July 1, 1989:<br>The greater of (a) or (b):<br>(a.) 1.20% of Average Salary for each of the first ten years of Allowable Service and 1.70% of Average Salary for each subsequent year with reduction of 0.25% for each month the Member is under age 65 at time of retirement or under age 62 if 30 years of Allowable Service. No reduction if age plus years of Allowable Service totals 90.<br>(b.) 1.70% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3.00% per year and actuarial reduction for each month the Member is under age 65.<br>First hired after June 30, 1989:<br>(a.) 1.70% of Average Salary for each year of Allowable Service assuming augmentation to normal retirement age at 3.00% per year and actuarial reduction for each month the Member is under normal retirement age. |

##### Form of payment

Life annuity with return on death of any balance of contributions over aggregate monthly payments. Actuarially equivalent options are: 25%, 50%, 75% or 100% Joint and Survivor with bounce back feature without additional reduction (option canceled if Member is pre-deceased by beneficiary).

## Actuarial Basis

### Summary of Plan Provisions – Coordinated *(continued)*

#### *Retirement (continued)*

##### Benefit increases

The inflation-based benefit increase provided by the Minnesota Post Retirement Investment Fund (Post Fund) to benefit recipients is equal to 100 percent of CPI-W, but not to exceed 2.5 percent. An additional benefit increase may be provided to any individuals who have lost purchasing power compared to the value of the benefit they initially received when their benefit first commenced. This additional benefit increase can only be paid if the Post Fund composite funding ratio is at least 90 percent, if the rate of return earned on Post Fund assets exceeds 8.5 percent for the year, and if the inflation rate certified for the year is less than 2.5 percent. If the Post Fund has a funding ratio of 100 percent or more, an additional inflation component will be paid when CPI-W inflation exceeds 2.5 percent. An overall cap of 5.0 percent annually on benefit recipient adjustments is effective June 30, 2010.

A benefit recipient who has been receiving a benefit for at least 12 full months as of June 30 will receive a full increase. Members receiving benefits for at least one full month but less than 12 full months will receive a partial increase.

Members retired under laws in effect before July 1, 1973 receive an additional lump sum payment each year. In 1989, this lump sum payment is \$25 times each full year of Allowable Service. In each following year, the lump sum payment will increase by the same percentage increase that is applied to regular annuities paid from MPRIF.

#### *Disability*

##### Disability benefit

##### *Age/service requirement*

Total and permanent disability before normal retirement age with three years of Allowable Service

##### *Amount*

Normal Retirement benefit based on Allowable Service and Average Salary at disability without reduction for commencement before normal retirement age. The disability benefit is reduced to that amount which, when added to Workers' Compensation, does not exceed the salary the disabled Member received as of the date of the disability or the salary currently payable for the same employment position substantially similar to the one the person held as of the date of the disability, whichever is greater.

If a Member becomes disabled prior to July 1, 1997 but did not commence their benefit before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.

Payments stop if disability ceases or death occurs. Payments change to a retirement annuity at normal retirement age. Benefits may be reduced on resumption of partial employment.

##### *Form of payment*

Same as for retirement.

##### *Benefit increases*

Adjusted by PERA to provide same increase as MPRIF.

## Actuarial Basis

### Summary of Plan Provisions – Coordinated (continued)

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#### **Disability (continued)**

##### Retirement after disability

<i>Age/service requirement</i>	Normal retirement age
<i>Amount</i>	Any optional annuity continues. Otherwise, the larger of the disability benefit paid before normal retirement age or the normal retirement benefit available at normal retirement age, or an actuarially equivalent optional annuity.
<i>Benefit increases</i>	Same as for retirement.

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#### **Death**

##### Surviving spouse optional annuity

<i>Age/service requirement</i>	Member or former Member who dies before retirement or disability benefits commence
<i>Amount</i>	Survivor's payment of the 100% joint and survivor benefit the Member could have elected if terminated or an actuarial equivalent term certain annuity. If commencement is prior to age 65 (age 62 if 30 years of service), the benefit is reduced the same as early retirement with half the applicable reduction factor used from age 55 to the actual commencement age. If no surviving spouse, then an actuarial equivalent dependent child benefit is paid to age 20 or for five years if longer.  If a member becomes deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefit before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.
<i>Benefit increases</i>	Adjusted by PERA to provide same increase as MPRIF.

##### Refund of contributions

<i>Age/service requirement</i>	Member dies before receiving any retirement benefits and survivor benefits are not payable.
<i>Amount</i>	The excess of the Member's contributions with 6.00% interest over any disability or survivor benefits paid.

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#### **Termination**

##### Refund of contributions

<i>Age/service requirement</i>	Termination of public service.
<i>Amount</i>	Member's contributions with 5.00% interest compounded annually if termination occurred before May 16, 1989 and 6.00% interest if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund if three or more years of Allowable Service.

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## Actuarial Basis

### Summary of Plan Provisions – Coordinated (continued)

#### Termination (continued)

##### Deferred benefit

Age/service requirement

Three years of Allowable Service.

Amount

Benefit computed under law in effect at termination and increased by the following percentage compounded annually:

- (a.) 0.00% before July 1, 1971;
- (b.) 5.00% from July 1, 1971 to January 1, 1981;
- (c.) 3.00% thereafter until January 1 of the year following attainment of age 55; and
- (d.) 5.00% hereafter until the annuity begins (2.50% if hired after June 30, 2006).

Members active with a public employer the day prior to the privatization of the employer become vested immediately and receive enhanced augmentation. Amount is payable at a normal or early retirement. Augmentation occurs at the rate of 4.0% compounded annually through the year the Member turns age 55 and 6.0% thereafter until the annuity begins. If privatization occurred prior to January 1, 2007 (or January 1, 2008 for Hutchinson Area Health Care), augmentation occurs at the rate of 5.5% compounded annually through the year the Member turns age 55 and 7.5% thereafter until the annuity begins.

If a member terminated employment prior to July 1, 1997 but was not eligible to commence their pension before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997 and an actuarial increase shall be made for the change in the post-retirement interest rates from 5.00% to 6.00%.

#### Changes in Plan Provisions

##### Revised Minnesota Post Retirement Investment Fund Benefit Increase

The inflation-based benefit increase provided by the Minnesota Post Retirement Investment Fund (Post Fund) to benefit recipients is equal to 100 percent of CPI-W, but not to exceed 2.5 percent. An additional benefit increase may be provided to any individuals who have lost purchasing power compared to the value of the benefit they initially received when their benefit first commenced. This additional benefit increase can only be paid if the Post Fund composite funding ratio is at least 90 percent, if the rate of return earned on Post Fund assets exceeds 8.5 percent for the year, and if the inflation rate certified for the year is less than 2.5 percent. If the Post Fund has a funding ratio of 100 percent or more, an additional inflation component will be paid when CPI-W inflation exceeds 2.5 percent. An overall cap of 5.0 percent annually on benefit recipient adjustments is effective June 30, 2010.

## Actuarial Basis

### Summary of Plan Provisions – Coordinated (continued)

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<i>Changes in Plan Provisions (continued)</i>	<u>Potential Dissolution of Minnesota Post Fund</u> If the Post Fund composite funding ratio is less than 80 percent in any one year, or less than 85 percent in two consecutive years, the Post Fund must be dissolved, and assets will be transferred back to the applicable plan and be merged with the active member assets for that plan. If the Post Fund is dissolved, notwithstanding any other law, the benefit recipients will receive an annual 2.5 percent increase in lieu of any other benefit increase.
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## Plan Accounting Under GASB 25 (as amended by GASB 50)

Provided below is information required under GASB Statement No. 25 as amended by GASB Statement No. 50 – Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans as amended by GASB Statement No. 50.

### Schedule of Funding Progress\* (Dollars in Thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded (Overfunded) AAL (UAAL) (b) – (a)	Funded Ratio (a)/(b)	Actual Covered Payroll (Previous FY) (c)	UAAL as a Percentage of Covered Payroll (b) – (a) (c)
07/01/1991	\$ 3,570,304	\$ 4,988,671	\$ 1,418,367	71.57%	\$ 2,124,409	66.77%
07/01/1992	3,978,110	5,439,953	1,461,843	73.13%	2,299,532	63.57%
07/01/1993	4,374,459	5,784,318	1,409,859	75.63%	2,403,558	58.66%
07/01/1994	4,747,128	6,223,622	1,476,494	76.28%	2,557,522	57.73%
07/01/1995	5,138,461	6,622,069	1,483,608	77.60%	2,679,069	55.38%
07/01/1996	5,786,398	7,270,073	1,483,675	79.59%	2,814,126	52.72%
07/01/1997	6,658,410	8,049,666	1,391,256	82.72%	2,979,260	46.70%
07/01/1998	7,636,668	8,769,303	1,132,635	87.08%	3,271,737	34.62%
07/01/1999	8,489,177	9,443,678	954,501	89.89%	3,302,808	28.90%
07/01/2000	9,609,367	11,133,682	1,524,315	86.31%	3,437,954	44.34%
07/01/2001	10,527,270	12,105,337	1,578,067	86.96%	3,466,587	45.52%
07/01/2002	11,017,414	12,958,105	1,940,691	85.02%	3,809,864	50.94%
07/01/2003	11,195,902	13,776,198	2,580,296	81.27%	4,387,649	58.81%
07/01/2004	11,477,961	14,959,465	3,481,504	76.73%	3,968,034	87.74%
07/01/2005	11,843,936	15,892,555	4,048,619	74.53%	4,096,138	98.84%
07/01/2006	12,495,207	16,737,757	4,242,550	74.65%	4,247,109	99.89%
07/01/2007	12,985,324	17,705,627	4,720,303	73.34%	4,448,954	106.10%
07/01/2008	13,048,970	17,729,847	4,680,877	73.60%	4,722,432	99.12%

\* Information prior to 2008 provided by The Segal Company.



## Plan Accounting Under GASB 25 (as amended by GASB 50)

### Schedule of Contributions from the Employer and Other Contributing Entities\* (Dollars in Thousands)

The GASB Statement No. 25 (as amended by GASB 50) required and actual contributions are as follows:

Plan Year Ended June 30	Actuarially Required Contribution Rate <sup>1</sup> (a)	Actual Covered Payroll (b)	Actual Member Contributions (c)	Annual Required Contributions [(a)x(b)] – (c) =(d)	Actual Employer Contributions <sup>2</sup> (e)	Percentage Contributed (e)/d
1991	10.04%	\$ 2,124,409	\$ 94,413	\$ 118,878	\$ 101,907	85.72%
1992	9.44%	2,299,532	101,655	115,421	109,203	94.61%
1993	9.95%	2,403,558	106,359	132,795	113,183	85.23%
1994	9.58%	2,557,522	112,940	132,071	119,390	90.40%
1995	9.76%	2,679,069	115,986	145,491	123,984	85.22%
1996	9.61%	2,814,126	121,525	148,913	129,738	87.12%
1997	9.75%	2,979,260	128,234	162,244	136,686	84.25%
1998 <sup>3</sup>	9.62%	3,271,737	140,385	174,356	151,499	86.89%
1999 <sup>3</sup>	9.63%	3,302,808	158,475	159,585	173,370	108.64%
2000 <sup>3</sup>	9.22%	3,437,954	171,073	145,906	186,637	127.92%
2001 <sup>3, 4</sup>	11.84%	3,466,587	173,380	237,064	188,208	79.39%
2002 <sup>3</sup>	11.85%	3,809,864	191,422	260,047	206,982	79.59%
2003 <sup>3, 5</sup>	11.52%	4,387,649	205,963	299,4944	221,689	74.02%
2004 <sup>3</sup>	12.25%	3,968,034	215,697	270,388	225,745	83.49%
2005 <sup>3</sup>	12.72%	4,096,138	216,701	304,328	232,963	76.55%
2006 <sup>3</sup>	13.26%	4,247,109	235,901	327,265	255,531	78.08%
2007 <sup>3</sup>	13.41%	4,448,954	260,907	335,697	283,419	84.43%
2008 <sup>6</sup>	13.86% <sup>7</sup>	4,722,432	280,007	374,522	303,304	80.98%
2009 <sup>3, 8</sup>	14.22%					

\* Information prior to 2008 provided by The Segal Company.

<sup>1</sup> Actuarially Required Contributions determined for years ended 1995, 1996 and 1997 did not comply with the parameters of GASB 25 since a one percent growth in covered population is assumed in the amortization calculation.

<sup>2</sup> Includes contributions from other sources (if applicable)

<sup>3</sup> Actuarially Required Contributions Rate calculated according to parameters of GASB 25 with no assumption for growth of covered population.

<sup>4</sup> Actuarially Required Contribution Rate prior to change in Actuarial Assumptions and Actuarial Valuation Method is 11.41%.

<sup>5</sup> Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 11.86%.

<sup>6</sup> Actuarially Required Contribution Rate prior to change in Asset Valuation Method is 13.22%.

<sup>7</sup> Actuarially Required Contribution Rate provided by The Segal Company.

<sup>8</sup> Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 14.74%.

## Glossary

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method. The goal of an asset valuation method is to produce a relatively stable asset value thereby reducing year-to-year volatility in contribution requirements.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Annual Pension Cost.** A measure of the periodic cost of an employer’s participation in a defined benefit pension plan.

**Annual Required Contributions (ARC).** The employer’s periodic required contributions to a defined benefit pension plan, calculated in accordance with the parameters of GASB 25 (as amended by GASB 50) or GASB 27.

**ASA.** Associate of the Society of Actuaries.

**Current Benefit Obligations.** The present value of benefits earned to the valuation date, based on current service and including future salary increases to retirement.

**FSA.** Fellow of the Society of Actuaries.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use.

**Present Value.** Sometimes called “actuarial present value,” the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Statement No. 25 of the Governmental Accounting Standards Board (GASB 25).** The accounting standard governing the financial reporting for defined benefit pension plans and note disclosures for defined contribution plans.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer’s accounting for pensions.

**Statement No. 50 of the Governmental Accounting Standards Board (GASB 50).** The accounting standard amending both GASB 25 and GASB 27 to require a schedule of funding progress under the Entry Age Normal method for plans that use the aggregate funding method to determine the Annual Required Contribution.

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