December 2008

Public Employees Police & Fire Fund

Actuarial Valuation Report as of July 1, 2008

MERCER

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Contents

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, 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.

	Plan Year Ending	
Contributions	**June 30, 2009**	**June 30, 2008****
Statutory Contributions – Chapter 353 (% of Payroll)*	22.50%	20.50%
Required Contributions – Chapter 356 (% of Payroll)	28.41%	28.48%
Sufficiency / (Deficiency)	(5.91%)	(7.98%)

The contribution deficiency decreased from (7.98%) of pay to (5.91%) of pay. The primary reason for the improvement is the extension of the full funding date to July 1, 2038. However, even when taking into account the scheduled increases in member and employer contribution rates, a significant funding deficiency exists, which, without being addressed, will cause the funding status of this plan to deteriorate in the future.

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 (4.9%) for the plan year ending June 30, 2008 compared to an assumed rate of 8.5%. Only 20% of the non-MPRIF asset loss will be recognized in the actuarial value of assets. The remainder will be recognized over the next four years. The actuarial value of assets earned 3.6% for the plan year ending June 30, 2008 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).

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

* *Statutory contribution rates shown are blended to account for the increase in rates effective January 1.*
** *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****
Contributions *(% of Payroll)*		
Statutory – Chapter 353*	22.50%	20.50%
Required – Chapter 356	28.41%	28.48%
Sufficiency / (Deficiency)	(5.91%)	(7.98%)
Funding Ratios *(dollars in thousands)*		
Accrued Benefit Funding Ratio		
– Current assets (AVA)	$ 5,233,015	$ 5,198,922
– Current benefit obligations	5,755,664	5,502,218
– Funding ratio	90.92%	94.49%
Accrued Liability Funding Ratio		
– Current assets (AVA)	$ 5,233,015	$ 5,198,922
– Actuarial accrued liability	5,918,061	5,669,347
– Funding ratio	88.42%	91.70%
Projected Benefit Funding Ratio		
– Current and expected future assets	$ 6,963,714	$ 6,748,508
– Current and expected future benefit obligations	7,617,313	7,354,956
– Funding ratio	91.42%	91.75%
Participant Data		
Active members		
– Number	10,961	10,720
– Projected annual earnings *(000s)*	$ 746,743	$ 699,841
– Average annual earnings *(projected)*	$ 68,127	$ 65,284
– Average age	39.3	39.2
– Average service	11.4	11.3
Service retirements	5,068	4,938
Survivors	1,279	1,291
Disability retirements	824	803
Deferred retirements	1,242	1,200
Terminated other non-vested	877	814
Total	**20,251**	**19,766**

* *Statutory contribution rates shown are blended to account for the increase in rates effective January 1.*

** *Provided by the Segal Company.*

Effects of Changes

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

- The full funding date is reset to July 1, 2038
- Lower ultimate salary increase rates by 0.50% at all ages.
- Change payroll growth assumption from 6.0% to 4.5%.

The following changes in plan provisions were recognized as of July 1, 2008.

- The duty disability benefit increased from 60 percent of the high-five average salary to 60 percent of the high-five salary plus an additional three percent of the high-five for each year of service in excess of 20 years, retroactive to July 1, 2007.

These changes had the following impact on the valuation results:

- The assumption and method changes decreased the actuarial accrued liability by $47 million and the required contribution by 4.75% of payroll.
- The plan change increased the actuarial accrued liability by $28 million and the required contribution by .45% 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 Police & Fire 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

Stephen T. McElhaney, FSA, EA, MAAA
Principal

12/4/2008
Date

Bonita J. Wurst

Bonita J. Wurst, ASA, EA, MAAA
Principal

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 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, 2008 *(Dollars in Thousands)*

		Market Value
Assets in Trust		
▪ Cash, equivalents, short term securities	$	24,122
▪ Fixed income		700,779
▪ Equity		1,811,961
▪ Equity in MPRIF		2,186,173
▪ Other		421,506
Total assets in trust	**$**	**5,144,540**
Assets Receivable		9,679
Total Assets	**$**	**5,154,219**
Amounts Payable		(4,073)
Due to MPRIF for mortality losses		(39,323)
Net Assets	**$**	**5,110,823**
Net assets held in trust for pension benefits		
▪ MPRIF reserves		2,186,173
▪ Non-MPRIF reserves		2,924,650
Total assets available for benefits	**$**	**5,110,823**

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.

Change in Assets *(dollars in thousands)*	**Non-MPRIF Assets**	**MPRIF Reserve**	**Market Value**
1. Fund balance at market value at July 1, 2007	$ 3,170,762	$ 2,358,901	$ 5,529,663
2. Contributions			
a. Member	58,259	0	58,259
b. Employer	87,023	0	87,023
c. Other sources	0	0	0
d. Total contributions	145,282	0	145,282
3. Investment income			
a. Interest and dividends	(145,700)	(113,206)	(258,906)
b. Investment expenses	(4,409)	(3,258)	(7,667)
c. Net subtotal	(150,109)	(116,464)	(266,573)
4. Other	1,028	0	1,028
5. Total income *(2.d. + 3.c. + 4.)*	**$ (3,799)**	**$ (116,464)**	**$ (120,263)**
6. Benefits paid			
a. Annuity benefits	(48,363)	(247,631)	(295,994)
b. Refunds	(1,496)	0	(1,496)
c. Total benefits paid	(49,859)	(247,631)	(297,490)
7. Expenses			
a. Other	(342)	0	(342)
b. Administrative	(745)	0	(745)
c. Total expenses	(1,087)	0	(1,087)
8. Total disbursements *(6.c. + 7.c.)*	**$ (50,946)**	**$ (247,631)**	**$ (298,577)**
9. Other changes in reserves			
a. Annuities awarded	(152,044)	152,044	0
b. MPRIF mortality loss	(39,323)	39,323	0
c. Change in assumptions	0	0	0
d. Total other changes	(191,367)	191,367	0
10. Fund balance at market value at June 30, 2008 *(1. + 5. + 8. + 9.d.)*	**$ 2,924,650**	**$ 2,186,173**	**$ 5,110,823**

Plan Assets

Actuarial Asset Value *(Dollars in Thousands)*

				June 30, 2008
1. Market value of assets available for benefits			$	5,110,823
2. Determination of average balance				
a. Non-MPRIF assets available at July 1, 2007				3,170,762
b. Non-MPRIF assets available at June 30, 2008 (before MPRIF mortality adjustment)				2,963,973
c. Net investment income for fiscal year ending June 30, 2008				(149,081)
d. Average balance *[a. + b. – c.] / 2*				3,141,908
3. Expected return *[8.5% * 2.d.]*				267,062
4. Actual return				(149,081)
5. Current year unrecognized asset return *(4. – 3.)*				(416,143)
6. Unrecognized asset recognized asset returns				
	Original Amount	**% Not Recognized**		
a. Year ended June 30, 2008	$ (416,143)	80%	$	(332,914)
b. Year ended June 30, 2007	270,763	60%		162,458
c. Year ended June 30, 2006	93,192	40%		37,277
d. Year ended June 30, 2005	54,937	20%		10,987
e. Total unrecognized return			$	(122,192)
7. Actuarial value at June 30, 2008 *(1. – 6.e.)*			**$**	**5,233,015**

Membership Data

Distribution of Active Participants

	Years of Service as of June 30, 2008									
Age	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	40 – 39	40 +	Total
Under 20	6									**6**
Avg. Earnings	24,880									**24,880**
20 – 24	360									**360**
Avg. Earnings	39,423									**39,423**
25 – 29	1,094	307	1							**1,402**
Avg. Earnings	48,482	60,984	57,015							**51,226**
30 – 34	573	921	273							**1,767**
Avg. Earnings	50,433	63,283	66,580							**59,625**
35 – 39	325	673	1,024	187						**2,209**
Avg. Earnings	48,805	62,277	68,529	71,830						**64,002**
40 – 44	160	340	588	647	253					**1,988**
Avg. Earnings	48,306	61,700	69,348	73,701	77,108					**68,751**
45 – 49	78	149	283	382	570	208				**1,670**
Avg. Earnings	50,845	63,385	67,950	73,198	76,016	80,000				**72,198**
50 – 54	39	62	112	139	250	347	102			**1,051**
Avg. Earnings	38,910	64,091	65,839	72,298	75,956	79,836	80,923			**74,083**
55 – 59	19	41	49	37	74	86	80	9		**395**
Avg. Earnings	51,072	63,581	60,493	68,268	73,580	77,890	76,793	70,697		**70,892**
60 – 64	5	18	9	8	18	16	16	7	1	**98**
Avg. Earnings	39,524	70,381	50,193	66,196	67,346	74,508	79,039	88,577	67,025	**69,407**
65 – 69		6	1	4		1				**12**
Avg. Earnings		57,717	56,976	66,272		18,900				**57,272**
70 – 75		1		1						**2**
Avg. Earnings		102,407		47,580						**74,994**
75+		1								**1**
Avg. Earnings		53,878								**53,878**
Total	**2,659**	**2,519**	**2,340**	**1,405**	**1,165**	**658**	**198**	**16**	**1**	**10,961**
Avg. Earnings	**47,587**	**62,600**	**68,060**	**72,951**	**75,951**	**79,412**	**79,102**	**78,519**	**67,025**	**64,200**

Membership Data

Distribution of Service Retirements

	Years Retired as of June 30, 2008							
Age	<1	1 – 4	5– 9	10 – 14	15 – 19	20 – 24	25+	Total
<50								**0**
Avg. Benefit								
50 - 54	108	365						**473**
Avg. Benefit	46,595	43,048						**43,858**
55 - 59	83	463	519	1				**1,066**
Avg. Benefit	42,928	47,537	42,478	37,809				**44,706**
60 – 64	13	135	660	266				**1,074**
Avg. Benefit	35,319	39,451	46,632	43,829				**44,898**
65 – 69	1	30	179	575	75			**860**
Avg. Benefit	48,783	23,382	40,111	53,534	40,121			**48,513**
70 – 74	1	6	49	266	264	4		**590**
Avg. Benefit	44,014	37,620	26,270	52,060	46,124	35,257		**46,987**
75 – 79		2	6	140	188	128		**464**
Avg. Benefit		17,648	27,265	47,200	45,938	48,661		**46,707**
80 – 84				101	140	59	39	**339**
Avg. Benefit				49,373	45,318	38,856	44,871	**45,350**
85 – 89				19	54	28	48	**149**
Avg. Benefit				47,363	46,832	38,003	32,922	**40,759**
90+				11	22	3	17	**53**
Avg. Benefit				45,807	47,256	39,833	31,814	**41,582**
Total	**206**	**1,001**	**1,413**	**1,379**	**743**	**222**	**104**	**5,068***
Avg. Benefit	**44,404**	**43,967**	**43,492**	**50,272**	**45,404**	**44,350**	**37,221**	**45,657**

* *Difference from number of retirees shown on page 15 is due to multiple payees of one member (ex-spouse, child support, etc.).*

Membership Data

Distribution of Survivors

	Years Since Death as of June 30, 2008							
Age	**<1**	**1 – 4**	**5– 9**	**10 – 14**	**15 – 19**	**20 – 24**	**25+**	**Total**
<45	4	23	9	8	2			**46**
Avg. Benefit	33,998	38,597	34,758	32,805	21,995			**35,717**
45 - 49	5	7	2	1	2	3		**20**
Avg. Benefit	40,075	32,383	37,687	55,530	48,691	27,912		**36,954**
50 - 54	4	19	10	10	6	2		**51**
Avg. Benefit	24,583	30,279	29,899	37,858	37,831	24,037		**31,888**
55 - 59	4	18	15	8	12	6	2	**65**
Avg. Benefit	35,014	28,543	27,341	44,133	35,075	32,882	26,893	**32,138**
60 – 64	9	31	29	25	12	7	6	**119**
Avg. Benefit	23,712	26,817	30,278	35,221	27,061	26,188	28,642	**29,271**
65 – 69	8	20	38	28	15	4	6	**119**
Avg. Benefit	24,178	29,614	30,532	28,152	30,044	34,518	29,368	**29,404**
70 – 74	6	34	30	37	16	8	10	**141**
Avg. Benefit	25,899	30,479	27,826	28,321	31,026	32,577	28,650	**29,205**
75 – 79	8	46	39	58	39	10	16	**216**
Avg. Benefit	20,967	31,694	23,612	25,847	26,070	29,759	19,771	**26,279**
80 – 84	7	42	44	74	38	17	21	**243**
Avg. Benefit	24,468	19,118	24,842	23,674	26,680	24,752	18,055	**23,181**
85 – 89	5	28	24	52	23	16	15	**163**
Avg. Benefit	25,702	22,901	18,077	23,189	24,835	23,276	16,019	**22,045**
90+	1	5	17	28	21	11	13	**96**
Avg. Benefit	11,725	17,117	20,308	24,587	21,872	18,492	12,441	**20,369**
Total	**61**	**273**	**257**	**329**	**186**	**84**	**89**	**1,279***
Avg. Benefit	**26,496**	**28,026**	**26,317**	**27,087**	**27,538**	**26,254**	**20,066**	**26,627**

* *Excludes multiple survivors of members when family maximum benefit is reached.*

Membership Data

Distribution of Disability Retirements

	Years Disabled as of June 30, 2008							
Age	**<1**	**1 – 4**	**5– 9**	**10 – 14**	**15 – 19**	**20 – 24**	**25+**	**Total**
<45	10	55	26	11	1			**103**
Avg. Benefit	38,423	31,504	28,259	29,884	36,464			**31,232**
45 - 49	7	37	42	10	4			**100**
Avg. Benefit	43,243	35,545	33,672	37,245	35,503			**35,466**
50 - 54	7	68	66	20	4	4		**169**
Avg. Benefit	49,678	44,582	37,194	40,167	37,199	30,545		**40,879**
55 - 59	2	54	113	34	3	1		**207**
Avg. Benefit	28,280	45,275	48,286	45,935	34,828	36,117		**46,667**
60 – 64	1	19	82	64	5			**171**
Avg. Benefit	1,811	40,203	51,117	56,450	45,268			**51,470**
65 – 69		2	14	42	4			**62**
Avg. Benefit		23,237	38,763	51,966	38,074			**47,162**
70 – 74			3	7				**10**
Avg. Benefit			26,101	42,356				**37,479**
75 – 79				2				**2**
Avg. Benefit				24,941				**24,941**
80 – 84								**0**
Avg. Benefit								
85 – 89								**0**
Avg. Benefit								
90+								**0**
Avg. Benefit								
Total	**27**	**235**	**346**	**190**	**21**	**5**	**0**	**824**
Avg. Benefit	**40,483**	**39,772**	**42,999**	**48,463**	**38,590**	**31,659**		**43,061**

Membership Data

Reconciliation of Members*

		Terminated		Recipients			
	Actives	Deferred Retirement	Other Non-vested	Service Retirements	Disability Retirements	Survivors	Total
Members on 7/1/2007	**10,720**	**1,200**	**814**	**4,938**	**803**	**1,291**	**19,766**
New entrants	641	0	0	0	0	0	**641**
Return to active	50	(33)	(17)	0	0	0	**0**
Terminated non-vested	(65)	0	106	0	0	0	**41**
Service retirements	(193)	(44)	0	250	(7)	0	**6**
Terminated deferred	(124)	135	0	0	0	0	**11**
Terminated refund	(25)	0	(27)	0	0	0	**(52)**
Deaths	(7)	(4)	(2)	(109)	(11)	(71)	**(204)**
New beneficiary	0	0	0	0	0	73	**73**
Disabled	(36)	(8)	0	0	41	0	**(3)**
Benefits expired	0	0	0	0	0	0	**0**
Data correction	0	(4)	5	0	(2)	(2)	**(3)**
Net change	241	42	65	141	21	0	**510**
Members on 6/30/2008	**10,961**	**1,242**	**879**	**5,079**	**824**	**1,291**	**20,276**

* *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 of compensation. The Employer's rate of contribution is the balance required to cover the total rate of contribution.

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

	Non-Vested	Vested	June 30, 2008 Total
A. Actuarial Value of Assets			$ 5,233,015
B. Expected future assets			
1. Present value of expected future statutory supplemental contributions			$ 31,448
2. Present value of future normal cost contributions			1,699,251
3. Total expected future assets *(1. + 2.)*			$ 1,730,699
C. Total current and expected future assets *(A. + B.3.)*			$ 6,963,714
D. Current benefit obligations			
1. Benefit recipients			
a. Service requirements	$ 0	$ 2,518,179	$ 2,518,179
b. Disability	0	418,520	418,520
c. Survivors	0	313,500	313,500
2. Deferred retirements with augmentation	0	261,671	261,671
3. Former members without vested rights	0	1,221	1,221
4. Active Members	30,726	2,211,847	2,242,573
5. Total Current Benefit Obligations	$ 30,726	$ 5,724,938	$ 5,755,664
E. Expected Future Benefit Obligations			1,861,649
F. Total Current and Expected Future Benefit Obligations			$ 7,617,313
G. Current Unfunded Benefit Obligations *(D.5. − A.)*			$ 522,649
H. Current and Future Unfunded Benefit Obligations *(F. − C.)*			$ 653,599

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
A. Determination of Actuarial Accrued Liability (AAL)			
1. Active Members			
a. Retirement annuities	$ 3,417,949	$ 1,250,258	$ 2,167,691
b. Disability benefits	435,701	267,234	168,467
c. Survivor's benefits	103,980	62,738	41,242
d. Deferred retirements	146,592	119,022	27,570
e. Total	$ 4,104,222	$ 1,699,252	$ 2,404,970
2. Deferred retirements with future augmentation	261,671	0	261,671
3. Former members without vested rights	1,221	0	1,221
4. Annuitants in MPRIF	2,697,406	0	2,697,406
5. Recipients not in MPRIF	552,793	0	552,793
6. Total	$ 7,617,313	$ 1,699,252	$ 5,918,061
B. Determination of Unfunded Actuarial Accrued Liability (UAAL)			
1. Actuarial accrued liability			$ 5,918,061
2. Current assets			5,233,015
3. Unfunded actuarial accrued liability			$ 685,046
C. Determination of Supplemental Contribution Rate			
1. Present value of future payrolls through the amortization date of July 1, 2038			$ 13,103,118
2. Supplemental contribution rate *(B.3. / C.1.)*			5.23%

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	$	470,425
B. Changes due to interest requirements and current rate of funding		
1. Normal cost and actual administrative expenses	$	156,074
2. Contributions		(145,282)
3. Interest on A., B.1. and B.2.		40,445
4. Total *(B.1. + B.2.+ B.3.)*	$	51,237
C. Expected unfunded actuarial accrued liability at end of year *(A. + B.4.)*		521,662
D. Increase (decrease) due to actuarial losses (gains) because of experience deviations from expected		
1. Salary increases	$	(28,253)
2. Investment return		249,139
3. MPRIF Mortality		39,323
4. Mortality of other benefit recipients		1,899
5. Other items*		(79,796)
6. Total	$	182,312
E. Unfunded actuarial accrued liability at end of year before plan amendments and changes in actuarial assumptions *(C. + D.6.)*	$	703,974
F. Change in unfunded actuarial accrued liability due to changes in plan provisions	$	28,204
G. Change in unfunded actuarial accrued liability due to changes in actuarial assumptions	$	(47,132)
H. Unfunded actuarial accrued liability at end of year *(E. + F. + G.)*	$	685,046

* *Approximately $50 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) *(Dollars in Thousands)*

	Percent of Payroll		Dollar Amount
A. Statutory contributions – Chapter 353*			
1. Employee contributions	9.00%	$	67,207
2. Employer contributions	13.50%		100,810
3. Total	22.50%	$	168,017
B. Required contributions – Chapter 356			
1. Normal cost			
a. Retirement benefits	16.93%	$	126,430
b. Disability benefits	3.75%		28,027
c. Survivors	0.89%		6,611
d. Deferred retirement benefits	1.50%		11,205
e. Total	23.07%	$	172,273
2. Supplemental contribution amortization by July 1, 2038 of Unfunded Actuarial Accrued Liability			
a. Due to unfunded MPRIF liability	3.90%	$	29,123
b. Due to unfunded non-MPRIF liability	1.33%		9,932
c. Total supplemental contribution amortization	5.23%	$	39,055
3. Allowance for expenses	0.11%	$	821
4. Total	28.41%	$	212,149
C. Contribution Sufficiency/(Deficiency) *(A.3. – B.4.)*	(5.91%)	$	(44,132)

Note: Projected annual payroll for fiscal year beginning on the valuation date: $746,743.

* *Statutory contribution rates shown are blended to account for the increase in rates effective January 1.*

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, 2038 (July 1, 2020 last year) assuming payroll increases of 4.50% per annum (6.00% 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.

Investment return:	6.0% compounded annually post-retirement 8.5% compounded annually pre-retirement
Benefit increases after retirement	Payment of benefit increases after retirement accounted for by using a 6.00% post-retirement assumption.
Salary increases	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 rate table below.
Mortality	
Healthy pre-retirement	1983 Group Annuity Mortality for males set back six years 1983 Group Annuity Mortality for females set back six years
Healthy post-retirement	1983 Group Annuity Mortality for males set back one year 1983 Group Annuity Mortality for females set back one year
Disabled	1965 RRB rates up to age 40. For ages 41 to 59, graded rates between 1965 RRB and the Healthy Post-Retirement Mortality Table. For ages 60 and later, the Healthy Post-Retirement Mortality Table.
Retirement	Age related table as follows: Ages: 50-54 10% 55 30% 56-59 20% 60-61 25% 62-64 35% 65-69 50% 70 & Over 100%
Withdrawal	Select and Ultimate rates based on plan experience. Ultimate rates after the third year are shown in the rate table. Select rates are 3.50% per year on each of the first three years
Disability	Rates are shown in rate table.
Allowance for Combined Service Annuity	Liabilities for former members are increased by 30.00% to account for the effect of some participants having eligibility for a Combined Service Annuity.
Expenses	Prior year administrative expenses expressed as percentage of prior year payroll.
Refund of contributions	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.
Percentage married	85% of male members and 65% of female members are assumed to be married.
Age of spouse	Female members are assumed to be four years younger than males.
Eligible children	Members are assumed to have no children.

Actuarial Basis

Summary of Actuarial Assumptions *(continued)*

Form of payment	Married members assumed to elect subsidized joint and survivor form of annuity as follows: Males / Females 50% J&S option: 40.00% / 15.00% 100% J&S option: 45.00% / 15.00%
Changes in actuarial assumptions	The following changes were recognized as of July 1, 2008: ▪ The full funding date is reset to July 1, 2038. ▪ Lower ultimate salary increase rates by 0.50% at all ages. ▪ Change payroll growth assumption from 6.0% to 4.5%.

Actuarial Basis

Summary of Actuarial Assumptions *(continued)*

Summary of Rates

	Rate (%)				
	Pre-Retirement Mortality		Ultimate Withdrawal	Disability	Ultimate Salary Increase
Age	**Males**	**Females**			
20	0.03%	0.01%	6.01%	0.11%	11.00%
25	0.04	0.02	3.24	0.13	9.00
30	0.04	0.02	1.90	0.16	7.50
35	0.06	0.03	1.46	0.19	6.50
40	0.08	0.04	1.26	0.29	5.50
45	0.11	0.06	0.91	0.54	5.00
50	0.19	0.09	0.50	1.04	4.75
55	0.35	0.15	0.11	2.03	4.75
60	0.57	0.23	0.00	0.00	4.75
65	0.84	0.38	0.00	0.00	4.75
70	1.39	0.64	0.00	0.00	4.75

Actuarial Basis

Summary of Plan Provisions

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.

Eligibility	All full-time and certain part-time, police officers and fire fighters, who are not contributing to any other local retirement fund.		
Contributions	Shown as a percent of salary:		
		<u>Member</u>	<u>Employer</u>
	Current	8.6%	12.9%
	January 2009	9.4%	14.1%
Allowable service	Police and Fire service during which member contributions were made. May also include certain leaves of absence and military service.		
Salary	Includes amounts deducted for deferred compensation or supplemental retirement plans, net income from fees and sick leave payments funded by the employer. Excludes lump sum annual leave payments and sick leave payments and Worker's Compensation benefits.		
Average salary	Average of the five highest successive years of salary. Average Salary is based on all Allowable Service if less than five years.		
Retirement			
<u>Normal retirement benefit</u>			
Age/service requirements	Age 55 and three years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.		
Amount	3.0% of Average Salary for each year of Allowable Service.		
<u>Early retirement</u>			
Age/service requirements	Age 50 and three years of Allowable Service.		
Amount	Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date and 0.10% (0.20% for members enrolled in the plan after June 30, 2007) reduction for each month the member is under age 55.		
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.		

Actuarial Basis

Summary of Plan Provisions *(continued)*

***Retirement** (continued)*	
Benefit increases (continued)	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. Benefit recipients receiving benefits for at least one full month but less than 12 full months will receive a partial increase. Members retired under law 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 the 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.
Disability	
Duty disability benefit	
Age/service requirement	Physically or mentally unable to perform duties as a police officer or fire fighter as a direct result of an act of duty. Members age 55 or older with 20 or more years of Allowable Service are not eligible to apply for disability benefits.
Amount	60.00%, plus an additional 3.00% for each year of service in excess of 20 years, of Average Salary paid until Normal Retirement Age, or for 60 months, whichever is later. The retirement benefit is then recalculated but is never lower than the disability benefit. If a member became disabled prior to July 1, 1997 but did not commence their benefit before July 1, 1997, the benefit is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in post-retirement interest rates from 5.00% to 6.00%.

Actuarial Basis

Summary of Plan Provisions *(continued)*

Disability *(continued)*	
Regular disability benefit	
Age/service requirement	Physically or mentally unable to perform duties as a police officer or fire fighter with one year of Allowable Service. Members age 55 or older with 15 or more years of Allowable Service are not eligible to apply for disability benefits.
Amount	45.00% of Average Salary, paid until Normal Retirement Age, or for 60 months, whichever is later. The retirement benefit is then recalculated but is never lower than the disability benefit. Benefits for total and permanent regular disability are calculated as 3.00% of Average Salary for each year of Allowable Service, with a minimum of 45.00% of Average Salary. If a member became 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 post-retirement interest rates from 5.00% to 6.00%.
Benefit increases	Adjusted by PERA to provide same increase as MPRIF.
Retirement benefit	
Age/service requirement	Upon cessation of disability benefits.
Amount	Any optional annuity continues. Otherwise, the larger of the disability benefit paid before age 65 or the normal retirement benefit available at age 65, or an actuarially equivalent optional annuity.
Form of payment	Same as for retirement.
Benefit increases	Same as for retirement.

Actuarial Basis

Summary of Plan Provisions *(continued)*

Death	
Regular disability surviving spouse benefit	
Age/service requirement	Regular disabled member with surviving spouse, with at least three years of Allowable Service at death.
Amount	50.00% of salary averaged over last six months. 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 benefits 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%.
Benefit increases	Adjusted by PERA to provide same increase as MPRIF.
Regular disability surviving dependent children's benefit	
Age/service requirement	Regular disabled member with dependent child.
Amount	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 salary. Benefits paid until child marries, dies, or attains age 18 (age 23 if full-time student). If a member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits 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%.
Duty disability surviving spouse benefit	
Age/service requirement	Active member who is totally and permanently disabled who dies before age 55 or within five years of the effective date of the disability benefit, whichever is later.
Amount	60.00% of salary averaged over last six months. Benefits paid until spouse's death but no payments while spouse is remarried prior to July 1, 1991. If a member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits 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%.
Benefit increases	Adjusted by PERA to provide same increase as MPRIF.

Actuarial Basis

Summary of Plan Provisions *(continued)*

Death *(continued)*	
Duty disability surviving dependent children's benefit	
Age/service requirement	Regular disabled member with dependent child.
Amount	10.00% of salary averaged over last six months for each child. Family benefit minimum (including spouse's benefit) of 60.00% of salary and maximum of 80.00% of salary. Benefits paid until child marries, dies, or attains age 18 (age 23 if full-time student). If a member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits 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%.
Surviving spouse optional annuity	
Age/service requirement	Active or Disabled member dies before age 55. Benefits commence when member would have been age 55 or as early as age 50 if qualified for early retirement, benefits commence immediately if member had 30 years of service.
Amount	Survivor's payment of the 100% joint and survivor benefit the member could have elected if terminated. Alternatively, spouse may elect refund of deceased's contributions with interest if there are no dependent children. If a member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits 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%.
Benefit increases	Adjusted by PERA to provide same increase as MPRIF.
Termination	
Refund of contributions	
Age/service requirement	Termination of public service.
Amount	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.
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: 0.00% before July 1, 1971; 5.00% from July 1, 1971 to January 1, 1981; 3.00% thereafter until January of the year following attainment of age 55; and 5.00% (2.50% if hired after June 30, 2006) thereafter until the annuity begins. Amount is payable at normal or early retirement.

Actuarial Basis

Summary of Plan Provisions *(continued)*

***Termination** (continued)*	
<u>*Deferred benefit (continued)*</u>	
Amount (continued)	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%.
Changes in Plan Provisions	<u>Duty Disability Benefit</u> The duty disability benefit increased from 60 percent of the high-five average salary to 60 percent of the high-five salary plus an additional three percent of the high-five for each year of service in excess of 20 years, retroactive to July 1, 2007. <u>Revised Minnesota Post Retirement Investment Fund Benefit Increase</u> 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. <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, not withstanding any other law, the benefit recipients will receive an annual 2.5 percent increase in lieu of any other benefit increase. By November 30 following the dissolution of the Post Fund, the executive directors of the applicable plans must propose legislation needed to revise statutes to conform to the dissolved Post Fund.

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	$ 839,560	$ 794,295	$ (45,265)	105.70%	$ 238,230	(19.00%)
07/01/1992	979,981	888,826	(91,155)	110.26%	239,158	(38.11%)
07/01/1993	1,118,342	1,009,226	(109,116)	110.81%	253,666	(43.02%)
07/01/1994	1,234,961	1,099,221	(135,740)	112.35%	277,566	(48.90%)
07/01/1995	1,385,901	1,196,795	(189,106)	115.80%	293,919	(64.34%)
07/01/1996	1,633,010	1,334,202	(298,808)	122.40%	316,189	(94.50%)
07/01/1997	1,974,635	1,556,483	(418,152)	126.87%	346,319	(120.74%)
07/01/1998	2,337,313	1,741,344	(595,969)	134.22%	375,131	(158.87%)
07/01/1999	3,679,551	3,004,637	(674,914)	122.46%	352,066	(191.70%)
07/01/2000[1]	4,145,351	3,383,187	(762,164)	122.53%	392,796	(194.04%)
07/01/2001[1]	4,472,041	3,712,360	(759,681)	120.46%	500,839	(151.68%)
07/01/2002[1]	4,672,679	3,886,311	(786,368)	120.23%	522,153	(150.60%)
07/01/2003[1]	4,683,115	4,390,953	(292,162)	106.65%	560,503	(52.12%)
07/01/2004	4,746,834	4,692,190	(54,644)	101.16%	551,266	(9.91%)
07/01/2005	4,814,961	4,956,340	141,379	97.15%	580,723	24.35%
07/01/2006	5,017,951	5,260,564	242,613	95.39%	618,435	39.23%
07/01/2007	5,198,922	5,669,347	470,425	91.70%	648,342	72.56%
07/01/2008	5,233,015	5,918,061	685,046	88.42%	703,701	97.35%

* *Information prior to 2008 provided by the Segal Company.*

[1] *Excludes amounts receivable from municipalities with positive amortizable bases.*

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[1] (a)	Actual Covered Payroll (b)	Actual Member Contributions (c)	Annual Required Contributions [(a)x(b)] – (c) = (d)	Actual Employer Contributions[2] (e)	Percentage Contributed (e) / (d)
1991	17.56%	$ 238,230	$ 17,636	$ 24,197	$ 26,440	109.27%
1992	17.54%	239,158	19,217	22,731	28,766	126.55%
1993	18.60%	253,666	20,406	26,776	30,434	113.66%
1994	17.45%	277,566	21,806	26,629	32,536	122.18%
1995	17.28%	293,919	22,356	28,433	33,548	117.99%
1996	16.49%	316,189	24,065	28,075	36,066	128.46%
1997	15.11%	346,319	26,354	25,975	39,508	152.10%
1998[3]	15.69%	375,131	28,552	30,306	42,786	141.18%
1999[3]	12.32%	352,066	30,897	12,478	46,280	370.89%
2000[3]	12.87%	392,796	31,214	19,339	53,178	274.98%
2001[3, 4, 5]	12.21%	500,839	31,341	29,811	52,960	177.65%
2002	12.61%	522,153	33,801	32,042	90,664	282.95%
2003[3, 5, 6]	12.52%	560,503	34,751	35,424	50,917	143.74%
2004[3, 5, 7]	19.47%	551,266	36,313	71,019	52,770	74.30%
2005[3]	21.99%	580,723	37,873	89,828	55,802	62.12%
2006[3]	24.36%	618,435	42,970	107,681	63,603	59.07%
2007[3, 8]	25.76%	648,342	50,688	116,325	74,707	64.22%
2008[3, 9]	28.82%	703,701	58,259	144,548	87,023	60.20%
2009[3, 10]	28.41%					

** Information prior to 2008 provided by the Segal Company.*

[1] *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.*
[2] *Includes contributions from other sources (if applicable).*
[3] *Actuarially Required Contributions Rate calculated according to parameters of GASB 25 with no assumption for growth of covered population.*
[4] *Actuarially Required Contribution Rate prior to change in Asset Valuation Method is 11.41%.*
[5] *Excludes amounts receivable from municipalities with positive amortizable bases.*
[6] *Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 12.33%*
[7] *Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 15.36%.*
[8] *Actuarially Required Contribution Rate prior to change in Plan Provisions is 25.77%.*
[9] *Actuarially Required Contribution Rate prior to change in Plan Provisions is 26.75% and prior to change in Asset Valuation Method including new Plan Provisions is 26.27%.*
[10] *Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 32.75% and prior to change in Plan Provisions is 27.96%.*

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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