Public Employees Police and Fire Fund

Actuarial Valuation and Review
as of July 1, 2007

SEGAL

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November 28, 2007

Ms. Mary Most Vanek
Public Employees Retirement Association of Minnesota
Public Employees Police and Fire Fund
60 Empire Drive, Suite 200
St. Paul, Minnesota 55103-2088

Dear Ms. Most Vanek:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2007. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2008 and analyzes the preceding year's experience.

The census and financial information on which our calculations were based was prepared by the Fund. That assistance is gratefully acknowledged. The actuarial calculations were completed under our supervision.

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions used in the valuation are consistent with those in the statute, and reasonably represent the experience of the plan.

Sincerely,

THE SEGAL COMPANY

By:

Thomas D. Levy, FSA, MAAA, EA	*Andre Latia, FSA, MAAA, EA*	*Susan M. Hogarth, MAAA, EA*
Senior Vice President and Chief Actuary	*Senior Vice President and Consulting Actuary*	*Consulting Actuary*

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Minnesota Department of Finance (2 copies)

SECTION 1

VALUATION SUMMARY

SECTION 2

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Purpose

This report has been prepared by The Segal Company to present a valuation of the Public Employees Retirement Association of Minnesota (Public Employees Police and Fire Fund) as of July 1, 2007. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- Section 356.215 of the Minnesota Statutes;
- The benefit provisions of the Fund as administered by the PERA;
- The data as provided and confirmed by the PERA staff;
- The characteristics of covered active members, inactive vested members, pensioners and beneficiaries as of July 1, 2007, provided by the Fund;
- The assets of the Fund as of June 30, 2007, provided by the Fund;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- The statutory contribution rate under Chapter 353 is equal to 20.50% of payroll compared to the required contribution rate under Chapter 356 of 28.48% of payroll. Therefore, the contribution deficiency is 7.98% of payroll or $56,021,028. Each year there is a contribution deficiency leads to an increased deficiency in all future years. The FY2007 shortfall increased the required rate for FY2008 (and each succeeding year through FY 2020) by 0.69% of payroll.
- The member and employer statutory contribution rates (as a percentage of salary) will change as shown in the schedule below:

Date of Increase	Member	Employer
Current	7.8%	11.7%
January 2008	8.6%	12.9%
January 2009	9.4%	14.1%

  The effective dates of the rate increases are January 1st of each year. However, benefits are valued as of the July 1st valuation date prior to each corresponding increase date.

- The report shows that the statutory funding rate is significantly less than the required rate. In the absence of exceptionally favorable future experience, this difference is expected to increase over time. We strongly recommend that this shortfall be addressed promptly, so that the funded position does not continue to deteriorate.
- There were no changes in actuarial assumptions since the prior valuation.
- The only change in actuarial cost methods since the prior valuation was a modification to the asset valuation method, effective with the July 1, 2007 valuation. Assets allocated to the Minnesota Post Retirement Investment Fund (MPRIF) must equal the Market Value of Assets on the valuation date. This change resulted in a decrease to the Actuarial Value of Assets and increase to the Unfunded Actuarial Accrued Liability of $183,785,405. The Supplemental Contribution increased by $16,936,158, which directly impacted the Contribution Deficiency, resulting in total deficiency of 7.98% of payroll.

- There were several changes to the plan provisions effective July 1, 2007. They are summarized as follows:
  - Duty disability benefit is paid at a fixed percentage of 60.00% of Average Salary 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.
  - Regular disability benefit is paid at a fixed percentage of 45.00% of Average Salary 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.
  - Total and permanent disability levels for duty or regular disabilities are defined. Benefits are calculated as 3.00% of Average Salary for each year of Allowable Service, with a minimum of 60.00% of Average Salary for duty disability and 45.00% of Average Salary for regular disability.
  - Automatic survivor benefits are available if the member is deemed to be totally and permanently duty disabled.
  - Death-in-the-line-of duty surviving spouse benefits are increased to 60.00% of salary averaged over the last six months. In addition, 10.00% of salary to each dependent child continues, the family benefit minimum (including spouse's benefit) is increased to 60.00% of salary and the family benefit maximum is increased to 80.00% of salary.
  - Non-duty death surviving spouse benefits require the member to have at least three years of Allowable Service at death, and there is no minimum marriage requirement.
- These plan provision changes have resulted in a decrease to the Unfunded Actuarial Accrued Liability (UAAL) of $24,849,657, hence decreasing the Supplemental Contribution by $2,309,476 and decreasing the Contribution Deficiency by 0.47% of payroll.
- The actuarial accrued liability funded ratio based on the actuarial value of assets under the new asset valuation method as of July 1, 2007 is 91.70% compared to 95.39% as of July 1, 2006. The funded ratio based on this calculation under the old asset valuation method would have decreased to 94.94% as of July 1, 2007, hence the decrease in the funded ratio from 94.94% to 91.70% is entirely attributable to the asset valuation method change. This ratio is a measure of funding status, and its history is a measure of funding progress.

Summary of Key Valuation Results

	2007*	2006
Contributions (% of payroll) for plan year beginning July 1:		
Statutory – Chapter 353**	20.50%	18.50%
Required – Chapter 356	28.48%	25.57%
Sufficiency/(Deficiency)	-7.98%	-7.07%
Funding elements for plan year beginning July 1:		
Normal cost	$155,328,501	$149,097,708
Market value of assets	5,529,662,776	5,167,417,402
Actuarial value of assets (AVA)	5,198,921,940	5,017,950,719
Actuarial accrued liability (AAL)	5,669,346,646	5,260,564,020
Unfunded/(Overfunded) actuarial accrued liability	470,424,706	242,613,301
Funded ratios:		
Accrued Benefit Funded Ratio	94.49%	98.45%
Current assets (AVA)	$5,198,921,940	$5,017,950,719
Current benefit obligations	5,502,218,179	5,097,120,530
Projected Benefit Funded Ratio	91.75%	92.06%
Current and expected future assets	$6,748,507,799	$6,334,536,420
Current and expected future benefit obligations (Present Value of Benefits)	7,354,956,440	6,880,802,208
GASB 25/27 for plan year beginning July 1:		
Annual required employer contributions	$116,324,659	$107,680,788
Accrued Liability Funded Ratio (AVA/AAL)	91.70%	95.39%
Covered actual payroll	$648,342,219	$618,435,042
Demographic data for plan year beginning July 1:		
Number of pensioners and beneficiaries	7,032	6,801
Number of vested terminated members	1,200	999
Number of other non-vested terminated members	814	757
Number of active members	10,720	10,591
Total projected payroll***	$699,841,244	$668,088,065
Average projected compensation	65,284	63,081

** The 2007 results reflect a change in the Asset Valuation Method, with MPRIF Reserves equal to Market Value.*
*** The statutory contribution rate as of July 1, 2007 is shown as a blended rate of ½ of the current rate and ½ of the rate increase effective January 1, 2008.*
**** Calculated as covered actual payroll, projected one year with salary scale.*

A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, pensioners and beneficiaries.

This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, C, D, E and F.

A historical perspective of how the member population has changed over the past several valuations can be seen in this chart.

CHART 1

Member Population: 2002 – 2007

Year Ended June 30	Active Members	Vested Terminated Members*	Pensioners and Beneficiaries	Ratio of Non-Actives to Actives
2002	9,940	637	5,971	0.66
2003	9,948	758	6,208	0.70
2004	10,055	878	6,632	0.75
2005	10,235	927	6,615	0.74
2006	10,591	999	6,801	0.74
2007	10,720	1,200	7,032	0.77

* *Excludes terminated members due a refund of employee contributions.*

Active Members
Plan costs are affected by the age, years of service and payroll of active members. In this year's valuation, there were 10,720 active members with an average age of 39.2, average years of service of 11.3 years and average projected compensation of $65,284. The 10,591 active members in the prior valuation had an average age of 39.3, average service of 11.3 years and average projected compensation of $63,081.

Inactive Members
In this year's valuation, there were 1,200 members with a vested right to a deferred or immediate vested benefit.

In addition there were 814 other non-vested terminated members entitled to a return of their employee contributions.

These graphs show a distribution of active members by age and by years of service.

CHART 2

Distribution of Active Members by Age as of June 30, 2007

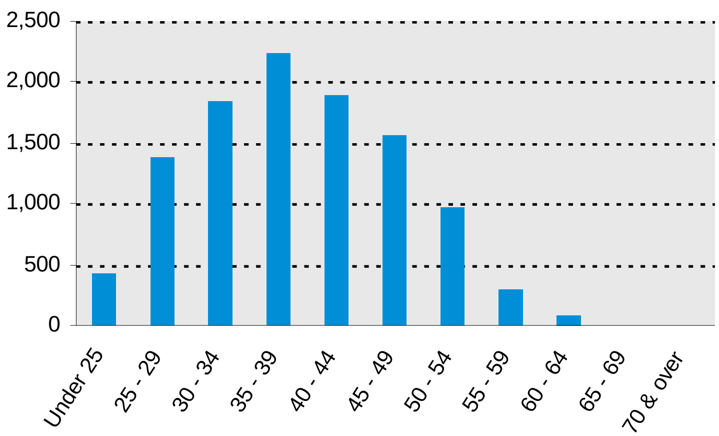
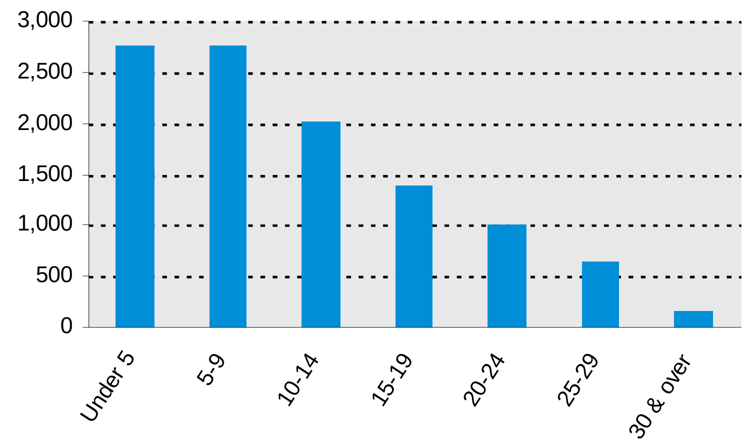


CHART 3

Distribution of Active Members by Years of Service as of June 30, 2007



Pensioners and Beneficiaries
As of June 30, 2007, 5,741 pensioners (4,938 retired and 803 disableds) and 1,291 beneficiaries were receiving monthly benefits of $23,594,095. For comparison, in the previous valuation, there were 5,521 pensioners (4,756 retired and 765 disableds) and 1,280 beneficiaries receiving monthly benefits of $22,162,718.

These graphs show a distribution of the current pensioners and beneficiaries based on their monthly amount and age, by type of pension.

CHART 4

Distribution of Pensioners and Beneficiaries by Type and by Monthly Amount as of June 30, 2007

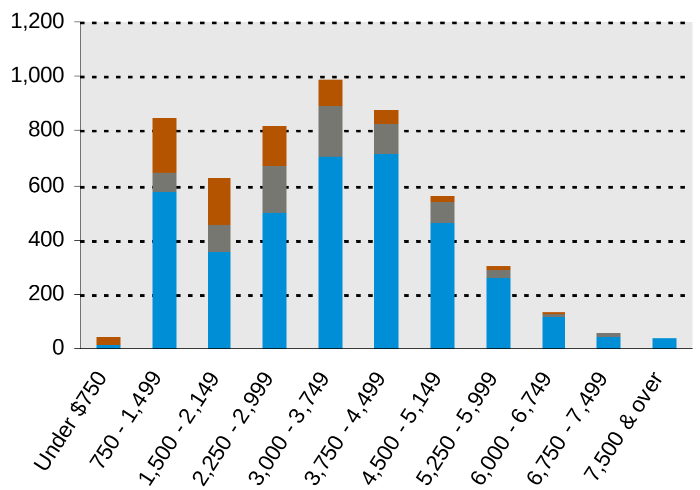
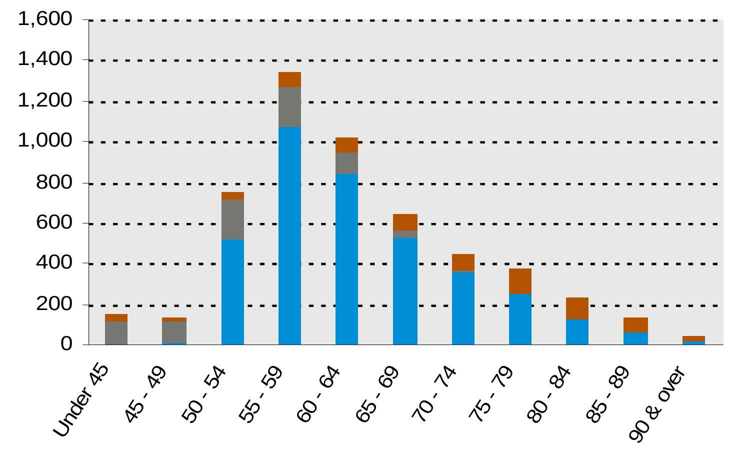


CHART 5

Distribution of Pensioners and Beneficiaries by Type and by Age as of June 30, 2007



Survivor
Disability
Service

B. FINANCIAL INFORMATION

It is desirable to have level and predictable plan costs from one year to the next. For this reason, Minnesota Statutes require an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Both the actuarial value and market value of assets are representations of the Fund's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Fund's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

Effective with the July 1, 2007 valuation, the Asset Valuation Method was changed such that assets allocated to the Minnesota Post Retirement Investment Fund (MPRIF) must equal the Market Value of Assets on the valuation date. The next page summarizes the determination of the Actuarial Value of Assets for the Year ended June 30, 2007, before and after this method change.

The chart shows the determination of the actuarial value of assets as of the valuation date, before the asset valuation method change.

CHART 6A

Determination of Actuarial Value of Assets for Year Ended June 30, 2007 – Before Asset Valuation Method Change

		Original Amount	% Not Recognized	
1.	Market value of assets available for benefits			$5,713,448,181
2.	Calculation of unrecognized return			
	(a) Year ended June 30, 2007	$270,763,427	80%	$216,610,741
	(b) Year ended June 30, 2006	93,192,478	60%	55,915,487
	(c) Year ended June 30, 2005	54,936,569	40%	21,974,628
	(d) Year ended June 30, 2004	181,199,900	20%	36,239,980
	(e) Total unrecognized return			$330,740,836
3.	Actuarial value of assets (“Current Assets”): (1) – (2e)			$5,382,707,345
4.	Actuarial value as percent of market value			94.2%

The chart shows the determination of the actuarial value of assets as of the valuation date, after the asset valuation method change.

CHART 6B

Determination of Actuarial Value of Assets for Year Ended June 30, 2007 – After Asset Valuation Method Change

		Original Amount	% Not Recognized	
1.	Market value of assets available for benefits			$5,529,662,776
2.	Calculation of unrecognized return			
	(a) Year ended June 30, 2007	$270,763,427	80%	$216,610,741
	(b) Year ended June 30, 2006	93,192,478	60%	55,915,487
	(c) Year ended June 30, 2005	54,936,569	40%	21,974,628
	(d) Year ended June 30, 2004	181,199,900	20%	36,239,980
	(e) Total unrecognized return			$330,740,836
3.	Actuarial value of assets (“Current Assets”): (1) – (2e)			$5,198,921,940
4.	Actuarial value as percent of market value			94.0%

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

For the year ended June 30, 2007, the total loss is $17,207,239, including a gain of $93,809,595 from investments and a loss of $111,016,834 from all other sources. The net experience variation from individual sources other than investments was 1.96% of the total actuarial accrued liability, which includes disability, mortality (pre and post-retirement), withdrawal and salary increases, but was primarily due to a significant increase in retirements during the year.

This chart provides a summary of the actuarial experience during the past year.

CHART 7

Actuarial Experience for Year Ended June 30, 2007

1.	Net gain from investments	$93,809,595
2.	Net (loss) from other experience	-111,016,834
3.	Net experience (loss): (1) + (2)	-$17,207,239

D. INFORMATION REQUIRED BY THE GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

Critical information to GASB is the historical comparison of the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded in accordance with GASB actuarially required contributions. Section 4, Exhibit III presents a schedule of this information of the Fund.

The other critical piece of information regarding the Fund's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the plan as calculated under GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

GASB requires that the actuarial value of assets be used to determine the funded ratio, as shown in Section 4, Exhibit IV.

EXHIBIT A
Table of Plan Coverage

Category	Year Ended June 30 2007	2006	Change From Prior Year
Active members in valuation:			
Number	10,720	10,591	1.2%
Average age	39.2	39.3	N/A
Average service	11.3	11.3	N/A
Total projected payroll*	$699,841,244	$668,088,065	4.8%
Average projected compensation	$65,284	$63,081	3.5%
Total active vested members	8,888	8,836	0.6%
Vested terminated members	1,200	999	20.1%
Retired participants:			
Number in pay status	4,938	4,756	3.8%
Average age	66.1	66.0	N/A
Average monthly benefit	$3,662	$3,567	2.7%
Disabled members:			
Number in pay status	803	765	5.0%
Average age	54.5	54.0	N/A
Average monthly benefit	$3,487	$3,414	2.1%
Beneficiaries:			
Number in pay status	1,291	1,280	0.9%
Average age	74.5	74.4	N/A
Average monthly benefit	$2,107	$2,024	4.1%
Other non-vested terminated members	814	757	7.5%

** Calculated as covered actual payroll, projected one year with salary scale.*

EXHIBIT B
Members in Active Service as of June 30, 2007
By Age, Years of Service, and Average Projected Compensation

		Years of Service						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	432	431	1	--	--	--	--	--
	$39,129	$39,052	$72,307	--	--	--	--	--
25 - 29	1,386	1,065	321	--	--	--	--	--
	52,929	49,582	64,036	--	--	--	--	--
30 - 34	1,849	589	1,026	233	1	--	--	--
	61,503	49,908	66,360	$69,392	$69,525	--	--	--
35 - 39	2,229	331	784	914	199	1	--	--
	65,997	48,944	64,489	71,494	74,992	$77,408	--	--
40 - 44	1,891	162	333	537	631	228	--	--
	70,101	47,489	63,567	71,311	76,801	74,318	--	--
45 - 49	1,569	86	152	218	384	487	241	1
	73,853	48,393	64,061	70,209	75,798	79,188	$78,534	$73,692
50 - 54	967	51	81	68	138	217	323	89
	75,063	47,769	62,480	66,712	73,740	78,164	81,424	79,938
55 - 59	304	30	34	30	28	58	68	56
	71,444	40,711	66,729	59,710	72,155	74,234	81,471	81,634
60 - 64	85	10	16	3	13	18	15	10
	63,975	38,391	67,380	44,752	56,453	72,477	69,055	76,727
65 - 69	6	1	2	2	1	--	--	--
	77,044	131,708	52,041	66,465	93,549	--	--	--
70 & Over	2	--	1	--	1	--	--	--
	55,806	--	61,248	--	50,363	--	--	--
Total	10,720	2,756	2,751	2,005	1,396	1,009	647	156
	$65,284	$47,627	$64,977	$70,677	$75,669	$77,461	$80,066	$80,301

EXHIBIT C
Retired Participants as of June 30, 2007
By Age, Years Retired and Average Annual Benefit

		Years Retired							
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over
Under 45	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
50 - 54	493	489	--	2	2	--	--	--	--
	$41,545	$41,611	--	$30,241	$36,781	--	--	--	--
55 - 59	1,077	537	508	7	14	9	2	--	--
	43,132	45,374	$41,131	37,505	37,348	$36,614	$38,567	--	--
60 - 64	1,027	130	659	179	30	15	10	4	--
	43,361	35,404	46,398	39,708	40,729	36,300	38,724	$22,949	--
65 - 69	807	41	201	398	137	15	10	5	--
	46,970	25,439	43,693	53,133	41,661	41,096	40,835	40,116	--
70 - 74	561	4	74	172	212	74	19	6	--
	45,463	43,876	34,910	53,093	44,528	43,440	40,385	31,970	--
75 - 79	468	2	5	84	108	187	73	7	2
	45,274	9,859	38,880	45,089	44,918	46,760	44,767	37,377	$30,820
80 - 84	328	--	--	6	62	99	113	40	8
	42,470	--	--	63,821	40,020	42,464	43,625	41,553	33,804
85 - 89	127	--	--	--	5	40	49	26	7
	39,346	--	--	--	45,687	36,191	40,536	39,683	43,266
90 & Over	50	--	--	--	--	1	22	11	16
	40,255	--	--	--	--	24,336	42,508	40,147	38,226
Total	4,938	1,203	1,447	848	570	440	298	99	33
	$43,946	$42,024	$43,560	$49,387	$43,029	$43,466	$42,816	$39,205	$37,774

EXHIBIT D
Disabled Members as of June 30, 2007
By Age, Years Disabled and Average Annual Benefit

		Years Disabled							
Age	**Total**	**Under 5**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35 & Over**
Under 45	74	44	23	7	--	--	--	--	--
	$30,641	$31,874	$28,696	$29,285	--	--	--	--	--
45 - 49	135	70	51	10	4	--	--	--	--
	32,173	33,092	30,170	35,391	$33,576	--	--	--	--
50 - 54	170	86	56	16	8	4	--	--	--
	40,559	43,692	36,844	38,467	39,947	$34,802	--	--	--
55 - 59	222	57	134	31	--	--	--	--	--
	46,259	45,287	46,859	45,452	--	--	--	--	--
60 - 64	144	16	79	49	--	--	--	--	--
	50,501	42,356	50,728	52,794	--	--	--	--	--
65 - 69	51	1	12	38	--	--	--	--	--
	45,841	24,835	42,428	47,471	--	--	--	--	--
70 - 74	6	--	2	4	--	--	--	--	--
	32,527	--	25,196	36,193	--	--	--	--	--
75 - 79	1	--	--	1	--	--	--	--	--
	26,081	--	--	26,081	--	--	--	--	--
80 - 84	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
85 - 89	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
90 & Over	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
Total	803	274	357	156	12	4	--	--	--
	$41,851	$39,271	$42,319	$45,801	$37,823	$34,802	--	--	--

EXHIBIT E
Beneficiaries as of June 30, 2007
By Age, Years Since Death and Average Annual Benefit

		Years Since Death							
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over
Under 45	22	14	2	4	2	--	--	--	--
	$22,766	$20,474	$29,233	$28,206	$21,459	--	--	--	--
45 - 49	46	23	10	6	6	1	--	--	--
	26,300	24,322	24,063	25,412	40,023	$17,156	--	--	--
50 - 54	44	21	7	8	3	3	2	--	--
	30,381	28,548	28,194	35,714	44,887	24,725	$22,676	--	--
55 - 59	82	25	18	14	8	11	4	1	1
	30,311	28,679	25,113	43,979	27,386	31,883	26,113	$11,930	$14,587
60 - 64	113	34	32	12	14	9	6	4	2
	27,856	26,705	26,963	33,128	27,878	28,961	28,341	24,673	29,875
65 - 69	116	22	41	14	15	13	6	1	4
	29,620	29,279	32,974	31,402	27,740	27,475	23,236	21,173	16,589
70 - 74	149	38	29	26	17	11	14	6	8
	28,449	32,129	24,802	30,403	33,064	26,613	25,609	23,065	19,567
75 - 79	237	58	49	42	22	18	22	13	13
	25,301	28,613	23,793	24,518	28,979	24,886	25,497	18,577	19,479
80 - 84	231	50	35	37	30	24	21	15	19
	22,158	20,011	23,019	23,935	24,745	21,553	24,747	19,155	18,944
85 - 89	160	29	28	21	18	22	19	12	11
	20,486	21,234	16,753	23,046	21,734	22,009	21,213	19,663	17,686
90 & Over	91	6	13	17	12	11	6	9	17
	20,597	17,137	20,769	24,058	20,071	21,186	19,771	21,307	18,135
Total	1,291	320	264	201	147	123	100	61	75
	$25,269	$25,982	$24,974	$27,874	$27,328	$24,676	$24,201	$20,110	$18,843

EXHIBIT F

Reconciliation of Member Data

	Active Members	Vested Terminated Members	Other Non-Vested Terminated Members	Disableds	Retired Participants	Beneficiaries	Total
A. Number as of July 1, 2006	10,591	999	757	765	4,756	1,280	19,148
B. Data Adjustments*	-1	-5	5	--	--	--	-1
C. Additions	666	272	96	60	294	74	1,462
D. Deletions:							
1. Terminated – Nonvested	-84	-2	-26	--	--	--	-112
2. Terminated – Vested	-143	--	--	--	--	--	-143
3. Retirements	-247	-33	--	-6	--	--	-286
4. Disability	-54	-4	--	--	--	--	-58
5. Death	-8	-1	--	-13	-110	-63	-195
6. Return to Active	--	-26	-18	-2	--	--	-46
7. Other Deletions	--	--	--	-1	-2	--	-3
E. Number as of June 30, 2007	10,720	1,200	814	803	4,938	1,291	19,766

**Adjustments made by PERA to the 2006 data subsequent to the 2006 actuarial valuation.*

EXHIBIT G

Summary Statement of Income and Expenses on a Market Value Basis for Year Ended June 30, 2007

	Non-MPRIF Assets	MPRIF Reserve	Market Value
A. Assets available at beginning of year (BOY)	$2,786,904,842	$2,380,512,560	$5,167,417,402
B. Operating revenues:			
1. Member contributions	$50,688,297	--	$50,688,297
2. Employer contributions	74,707,123	--	74,707,123
3. MPRIF income	--	$199,767,198	199,767,198
4. Net investment income			
(a) Interest and dividends	$88,244,899	--	$88,244,899
(b) Net appreciation/(depreciation)	418,749,200	--	418,749,200
(c) Securities lending income	1,952,877	--	1,952,877
(d) Investment expenses	-7,683,305	--	-7,683,305
(e) Net subtotal	$501,263,671	--	$501,263,671
5. Other	1,671,234	--	1,671,234
6. Total additions	$628,330,325	$199,767,198	$828,097,523
C. Operating expenses:			
1. Benefits	$46,483,792	$233,783,076	$280,266,868
2. Refunds	873,878	--	873,878
3. Administrative expenses	678,383	--	678,383
4. Other	247,615	--	247,615
5. Total operating expenses	$48,283,668	$233,783,076	$282,066,744
D. Other changes in reserves:			
1. Annuities awarded	-$188,063,134	$188,063,134	--
2. Mortality gain/(loss)	-8,126,208	8,126,208	--
3. Change in MPRIF Asset Valuation Method	--	-183,785,405	-183,785,405
4. Total other changes	-$196,189,342	$12,403,937	-$183,785,405
E. Assets available at end of year (EOY)	$3,170,762,157	$2,358,900,619	$5,529,662,776
F. Determination of current year unrecognized asset return (UAR)			
1. Average balance:			
(a) Non-MPRIF Assets available at BOY: (A)			$2,786,904,842
(b) Non-MPRIF Assets available at EOY*: (E) – (D.2)			3,178,888,365
(c) Average balance: [(F.1(a)) + (F.1(b)) – (B.4(e)) – (B.5)]/2			2,731,429,151
2. Expected return: 8.50% x (F.1(c))			232,171,478
3. Actual return: (B.4(e)) + (B.5)			502,934,905
4. Current year UAR: (F.3) – (F.2)			$270,763,427

** Before adjustment for MPRIF Mortality Gain / Loss.*

EXHIBIT H

Table of Financial Information for Year Ended June 30, 2007

	Market Value	Cost Value
Assets in trust		
Cash, equivalents, short-term securities	$40,783,604	$40,783,604
Fixed income	701,251,286	727,969,083
Equity	2,082,084,852	1,887,989,601
Equity in MPRIF*	2,358,900,619	2,358,900,619
Invested securities lending collateral	873,405,417	873,405,417
SBI alternative	341,220,180	298,819,481
Total assets in trust	$6,397,645,958	$6,187,867,805
Assets receivable	$16,434,858	$16,434,858
Total assets	$6,414,080,816	$6,204,302,663
Amounts currently payable		
Securities lending collateral	-$873,405,417	-$873,405,417
Other	-11,012,623	-11,012,623
Total amounts currently payable	-$884,418,040	-$884,418,040
Assets available for benefits		
MPRIF reserves	$2,358,900,619	$2,358,900,619
Member reserves	404,433,893	404,433,893
Other non-MPRIF reserves	2,766,328,264	2,556,550,111
Total assets available for benefits	$5,529,662,776	$5,319,884,623
Net Assets at Market/Cost Value	$5,529,662,776	$5,319,884,623

**The Cost Value of the Equity in the MPRIF is stated as Market Value in the MPRIF. The actual liability of the MPRIF Reserve is $2,542,686,024.*

EXHIBIT I

Actuarial Value of Assets Calculation History Through June 30, 2007

Year Ended June 30	Employer Contributions	Member Contributions	Net Investment Return*	Change in Asset Method	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2002	$90,664,000	$33,801,000	$285,708,000	--	$647,000	$212,405,000	$4,707,255,000
2003	50,917,000	34,751,000	147,435,000	--	675,000	226,077,000	4,713,606,000
2004	52,769,621	36,312,917	182,944,236	--	712,122	238,086,158	4,746,834,494
2005	55,801,917	37,873,145	227,317,742	--	703,408	252,162,814	4,814,961,076
2006	63,602,774	42,969,988	362,592,302	--	706,534	265,468,887	5,017,950,719
2007	74,707,123	50,688,297	521,180,335	-$183,785,405	678,383	281,140,746	5,198,921,940

* *Net Investment Return on an Actuarial Value of Assets basis and net of investment fees.*

EXHIBIT J

Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2007

1. Unfunded/(Overfunded) actuarial accrued liability at beginning of year		$242,613,301
2. Normal cost at beginning of year		149,097,708
3. Total contributions		125,395,420
4. Interest		27,966,130
5. Expected unfunded/(overfunded) actuarial accrued liability (1) + (2) - (3) + (4)		$294,281,719
6. Changes due to (gain)/loss from:		
(a) Investments	-$93,809,595	
(b) MPRIF mortality	8,126,208	
(c) Salary increases	-45,220,100	
(d) Other demographics*	148,110,726	
(e) Total changes due to (gain)/loss		$17,207,239
7. Changes due to plan provision change		-$24,849,657
8. Changes due to change in asset valuation method		$183,785,405
9. Unfunded/(Overfunded) actuarial accrued liability at end of year		$470,424,706

** Includes (gain)/loss due to age/service retirements, disability, mortality (pre and post-retirement) and withdrawal.*

EXHIBIT K
Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or Actuarial Assumptions: The estimates on which the cost of the Fund is calculated including:

(a) Investment return — the rate of investment yield that the Fund will earn over the long-term future;

(b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;

(c) Retirement rates — the rate or probability of retirement at a given age;

(d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Normal Cost: The amount of contributions required to fund the benefit allocated to the current year of service.

Actuarial Accrued Liability For Actives: The equivalent of the accumulated normal costs allocated to the years before the valuation date.

Actuarial Accrued Liability For Pensioners: The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded Actuarial Accrued Liability: The extent to which the actuarial accrued liability of the Fund exceeds the assets of the Fund. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the Unfunded Actuarial Accrued Liability:	Payments made over a period of years equal in value to the Fund's unfunded actuarial accrued liability.
Investment Return:	The rate of earnings of the Fund from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.
Accrued Benefit Funded Ratio:	A current year funded status that measures the percent of benefits covered by Current Assets. This ratio is based on benefits earned to the valuation date (accrued service) and includes future salary increases to retirement. The liability for these benefits is defined as the Current Benefit Obligations. The Accrued Benefit Funded Ratio is calculated as the Actuarial Value of Assets (Current Assets) divided by the Current Benefit Obligations.
Projected Benefit Funded Ratio:	A projected funded status that measures contribution sufficiency/deficiency, which is based on a present value of all plan benefits for the lifetime of all plan members. The liability for these benefits is defined as the Current and Expected Future Benefit Obligations, or Present Value of Benefits. The Current and Expected Future Assets are determined as the sum of the Actuarial Value of Assets (Current Assets), the Present Value of Expected Future Statutory Supplemental Contributions and the Present Value of Future Normal Costs. The Projected Benefit Funded Ratio is calculated as the Current and Expected Future Assets divided by the Current and Expected Future Benefit Obligations. If the ratio is equal to or more than 100%, there is a contribution sufficiency, and if it is less than 100% there is a contribution deficiency.

EXHIBIT IA

Summary of Actuarial Valuation Data

The valuation was made with respect to the following data supplied to us:

1.	Pensioners as of the valuation date (including 1,291 beneficiaries in pay status)		7,032
2.	Members inactive during year ended June 30, 2007 with vested rights		1,200
3.	Members active during the year ended June 30, 2007		10,720
	Fully vested	8,888	
	Not vested	1,832	
4.	Other non-vested terminated members as of June 30, 2007		814

EXHIBIT IB

Summary of Actuarial Valuation Results (Before Asset Valuation Method Change)

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
A. Determination of Actuarial Accrued Liability			
1. Active members:			
(a) Retirement benefits	$3,336,661,055	$1,274,152,670	$2,062,508,385
(b) Disability benefits	441,119,438	236,173,617	204,945,821
(c) Death benefits	92,866,827	53,866,532	39,000,295
(d) Withdrawal benefits	150,403,235	121,416,975	29,986,260
(e) Total	$4,021,050,555	$1,685,609,794	$2,335,440,761
2. Vested terminated members	$268,553,654	--	$268,553,654
3. Other non-vested terminated members	1,220,762	--	1,220,762
4. Annuitants in MPRIF	2,542,686,024	--	2,542,686,024
5. Annuitants not in MPRIF	521,445,445	--	521,445,445
6. Total	$7,354,956,440	$1,685,609,794	$5,669,346,646
B. Determination of Unfunded Actuarial Accrued Liability			
1. Actuarial Accrued Liability			$5,669,346,646
2. Actuarial Value of Assets			5,382,707,345
3. Unfunded Actuarial Accrued Liability: (B.1) – (B.2)			$286,639,301
C. Determination of Supplemental Contribution Rate			
1. Present value of future payrolls through the amortization date of June 30, 2020			$7,599,102,540
2. Supplemental contribution rate: (B.3) / (C.1)			3.77%
D. Determination of GASB Amortization Rate			
1. Present value of future payrolls through the amortization date of June 30, 2020			$7,205,693,992
2. Supplemental contribution rate: (B.3) / (D.1)			3.98%

EXHIBIT IC

Summary of Actuarial Valuation Results (After Asset Valuation Method Change)

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
E. Determination of Actuarial Accrued Liability			
1. Active members:			
(a) Retirement benefits	$3,336,661,055	$1,274,152,670	$2,062,508,385
(b) Disability benefits	441,119,438	236,173,617	204,945,821
(c) Death benefits	92,866,827	53,866,532	39,000,295
(d) Withdrawal benefits	150,403,235	121,416,975	29,986,260
(e) Total	$4,021,050,555	$1,685,609,794	$2,335,440,761
2. Vested terminated members	$268,553,654	--	$268,553,654
3. Other non-vested terminated members	1,220,762	--	1,220,762
4. Annuitants in MPRIF	2,542,686,024	--	2,542,686,024
5. Annuitants not in MPRIF	521,445,445	--	521,445,445
6. Total	$7,354,956,440	$1,685,609,794	$5,669,346,646
F. Determination of Unfunded Actuarial Accrued Liability			
1. Actuarial Accrued Liability			$5,669,346,646
2. Actuarial Value of Assets			5,198,921,940
3. Unfunded Actuarial Accrued Liability: (B.1) – (B.2)			$470,424,706
G. Determination of Supplemental Contribution Rate			
1. Present value of future payrolls through the amortization date of June 30, 2020			$7,599,102,540
2. Supplemental contribution rate: (B.3) / (C.1)			6.19%
H. Determination of GASB Amortization Rate			
1. Present value of future payrolls through the amortization date of June 30, 2020			$7,205,693,992
2. Supplemental contribution rate: (B.3) / (D.1)			6.53%

EXHIBIT II
Actuarial Balance Sheet

A. Current Assets				$5,198,921,940
B. Expected Future Assets				
1. Present Value of Expected Future Statutory Supplemental Contributions				-$136,023,935
2. Present Value of Future Normal Costs				1,685,609,794
3. Total Expected Future Assets				$1,549,585,859
C. Total Current and Expected Future Assets				$6,748,507,799
D. Current Benefit Obligations		**Non-Vested**	**Vested**	**Total**
1. Benefit recipients:				
(a) Retirement annuities		--	$2,367,095,576	$2,367,095,576
(b) Disability benefits		--	396,523,505	396,523,505
(c) Beneficiaries		--	300,512,388	300,512,388
2. Vested terminated members		--	268,553,654	268,553,654
3. Other non-vested terminated members		--	1,220,762	1,220,762
4. Active members		$25,110,468	2,143,201,826	2,168,312,294
5. Total Current Benefit Obligations		$25,110,468	$5,477,107,711	$5,502,218,179
E. Expected Future Benefit Obligations				1,852,738,261
F. Total Current and Expected Future Benefit Obligations - Present Value of Benefits: (D.5 + E)				$7,354,956,440
G. Current Unfunded Actuarial Liability (D.5 - A)				$303,296,239
H. Current and Future Unfunded Actuarial Liability (F - C)				$606,448,641

EXHIBIT III

Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended June 30	Actuarially Required Contribution Rate[1] (a)	Actual Covered Payroll (b)	Actual Member Contributions (c)	Annual Required Employer Contributions [(a) x (b)] – (c) = (d)	Actual Employer Contributions[2] (e)	Percentage Contributed (e) / (d)
1991	17.56%	$238,230,000	$17,636,000	$24,197,000	$26,440,000	109.27%
1992	17.54%	239,158,000	19,217,000	22,731,000	28,766,000	126.55%
1993	18.60%	253,666,000	20,406,000	26,776,000	30,434,000	113.66%
1994	17.45%	277,566,000	21,806,000	26,629,000	32,536,000	122.18%
1995	17.28%	293,919,000	22,356,000	28,433,000	33,548,000	117.99%
1996	16.49%	316,189,000	24,065,000	28,075,000	36,066,000	128.46%
1997	15.11%	346,319,000	26,354,000	25,975,000	39,508,000	152.10%
1998	15.69%[3]	375,131,000	28,552,000	30,306,000	42,786,000	141.18%
1999	12.32%[3]	352,066,000	30,897,000	12,478,000	46,280,000	370.89%
2000	12.87%[3]	392,796,000	31,214,000	19,339,000	53,178,000	274.98%
2001	12.21%[3], [4], [5]	500,839,000	31,341,000	29,811,000	52,960,000	177.65%
2002	12.61%	522,153,000	33,801,000	32,042,000	90,664,000	282.95%
2003	12.52%[3], [5], [6]	560,503,000	34,751,000	35,424,000	50,917,000	143.74%
2004	19.47%[3], [5], [7]	551,266,068	36,312,917	71,018,586	52,769,621	74.30%
2005	21.99%[3]	580,723,080	37,873,145	89,827,860	55,801,917	62.12%
2006	24.36%[3]	618,435,042	42,969,988	107,680,788	63,602,774	59.07%
2007	25.76%[3], [8]	648,342,219	50,688,297	116,324,659	74,707,123	64.22%
2008	28.82%[3], [9]					

(1) Actuarially Required Contributions determined for years ended 1995, 1996, and 1997 did not comply with the parameters of the GASB Statement No. 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 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%.

EXHIBIT IV

Supplementary Information Required by the GASB – Schedule of Funding Progress

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	$839,560,000	$794,295,000	-$45,265,000	105.70%	$238,230,000	-19.00%
07/01/1992	979,981,000	888,826,000	-91,155,000	110.26%	239,158,000	-38.11%
07/01/1993	1,118,342,000	1,009,226,000	-109,116,000	110.81%	253,666,000	-43.02%
07/01/1994	1,234,961,000	1,099,221,000	-135,740,000	112.35%	277,566,000	-48.90%
07/01/1995	1,385,901,000	1,196,795,000	-189,106,000	115.80%	293,919,000	-64.34%
07/01/1996	1,633,010,000	1,334,202,000	-298,808,000	122.40%	316,189,000	-94.50%
07/01/1997	1,974,635,000	1,556,483,000	-418,152,000	126.87%	346,319,000	-120.74%
07/01/1998	2,337,313,000	1,741,344,000	-595,969,000	134.22%	375,131,000	-158.87%
07/01/1999	3,679,551,000	3,004,637,000	-674,914,000	122.46%	352,066,000	-191.70%
07/01/2000	4,145,351,000	3,383,187,000	-762,164,000	122.53%	392,796,000	-194.04%
07/01/2001	4,472,041,000(1)	3,712,360,000	-759,681,000	120.46%	500,839,000	-151.68%
07/01/2002	4,672,679,000(1)	3,886,311,000	-786,368,000	120.23%	522,153,000	-150.60%
07/01/2003	4,683,115,000(1)	4,390,953,000	-292,162,000	106.65%	560,503,000	-52.12%
07/01/2004	4,746,834,494	4,692,190,387	-54,644,107	101.16%	551,266,068	-9.91%
07/01/2005	4,814,961,076	4,956,339,899	141,378,823	97.15%	580,723,080	24.35%
07/01/2006	5,017,950,719	5,260,564,020	242,613,301	95.39%	618,435,042	39.23%
07/01/2007	5,198,921,940	5,669,346,646	470,424,706	91.70%	648,342,219	72.56%

(1) *Excludes amounts receivable from municipalities with positive amortizable bases.*

EXHIBIT VA

Determination of Contribution Sufficiency (Before Asset Valuation Method Change)

		July 1, 2007	
A.	**Statutory Contributions* – Chapter 353**	**Percent of Payroll**	**Dollar Amount**
1.	Member Contributions	8.20%	$57,386,982
2.	Employer Contributions	12.30%	86,080,473
3.	Total	20.50%	$143,467,455
B.	**Required Contributions – Chapter 356**		
1.	Normal Cost:		
	(a) Retirement benefits	16.79%	$117,516,403
	(b) Disability benefits	3.18%	22,272,592
	(c) Death	0.73%	5,090,494
	(d) Withdrawal benefits	1.49%	10,449,012
	(e) Total	22.19%	$155,328,501
2.	Amortization of Supplemental Contribution UAAL	3.77%	26,384,015
3.	Allowance for Administrative Expenses	0.10%	699,841
4.	Total	26.06%	$182,412,357
C.	**Contribution Sufficiency (Deficiency) (A.3 – B.4)**	-5.56%	-$38,944,902
	Projected annual payroll for fiscal year beginning on the valuation date**		$699,841,244

* *The statutory contribution rates as of July 1, 2007 are shown as a blended rate of ½ of the current rate and ½ of the rate increase effective January 1, 2008.*

** *Calculated as covered actual payroll, projected one year with salary scale.*

EXHIBIT VB

Determination of Contribution Sufficiency (After Asset Valuation Method Change)

	July 1, 2007	
A. Statutory Contributions* – Chapter 353	**Percent of Payroll**	**Dollar Amount**
1. Member Contributions	8.20%	$57,386,982
2. Employer Contributions	12.30%	86,080,473
3. Total	20.50%	$143,467,455
B. Required Contributions – Chapter 356		
1. Normal Cost:		
(a) Retirement benefits	16.79%	$117,516,403
(b) Disability benefits	3.18%	22,272,592
(c) Death	0.73%	5,090,494
(d) Withdrawal benefits	1.49%	10,449,012
(e) Total	22.19%	$155,328,501
2. Amortization of Supplemental Contribution UAAL		
(a) Before asset valuation method change	3.77%	26,384,015
(b) Cost impact due to asset valuation method change	2.42%	16,936,158
3. Allowance for Administrative Expenses	0.10%	699,841
4. Total	28.48%	$199,348,515
C. Contribution Sufficiency (Deficiency) (A.3 – B.4)	-7.98%	-$55,881,060
Projected annual payroll for fiscal year beginning on the valuation date**		$699,841,244

* *The statutory contribution rates as of July 1, 2007 are shown as a blended rate of ½ of the current rate and ½ of the rate increase effective January 1, 2008.*

** *Calculated as covered actual payroll, projected one year with salary scale.*

EXHIBIT VI

Supplementary Information Required by the GASB

Valuation date	July 1, 2007
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll, assuming payroll increases at 5.00% per annum
Remaining amortization period	13 years remaining as of July 1, 2007
Asset valuation method	MPRIF Reserve: Market Value
	Non-MPRIF Assets: Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during that fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year).
Actuarial assumptions:	
Investment rate of return:	
Pre-retirement	8.50% per annum
Post-retirement	8.50% per annum (payment of earnings on retired reserves or excess of 6.00% accounted for by 6.00% post-retirement assumption)
Plan membership:	
Pensioners and beneficiaries receiving benefits	7,032
Terminated vested members entitled to, but not yet receiving benefits	1,200
Other non-vested terminated members	814
Active members	10,720
Total	19,766

EXHIBIT VII

Actuarial Assumptions and Actuarial Cost Method

Net Investment Return:

Pre-Retirement:	8.50% per annum
Post-Retirement:	8.50% per annum (payment of earnings on retired reserves in excess of 6.00% accounted for by 6.00% post-retirement assumption)

Benefit Increases After Retirement: Payment of earnings on retired reserves in excess of 6.00% accounted for by 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 Rates:

Healthy Pre-Retirement:	Male:	1983 Group Annuity Mortality Table for males set back six years.
	Female:	1983 Group Annuity Mortality Table for females set back six years.
Healthy Post-Retirement:	Male:	1983 Group Annuity Mortality Table for males set back one year.
	Female:	1983 Group Annuity Mortality Table for females set back one year.
Disabled:	Male:	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.
	Female:	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 Rates:	Rates as shown in table.
Withdrawal Rates:	Select and ultimate rates based on plan experience through June 30, 2002. Ultimate rates after the third year are shown in the rate table. Select rates are as follows: First Year 3.50% Second Year 3.50% Third Year 3.50%
Disability Rates:	Rates as shown in the rate table.
Allowance for Combined Service Annuity:	Liabilities for active members are increased by 0.00% and 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 expenses expressed as percentage of prior year payroll.
Return of Contributions:	All employees withdrawing after becoming eligible for a deferred benefit were assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.
Percent Married:	85% of male members and 65% of female members are assumed to be married.
Age of Spouse:	Females are assumed to be four years younger than males.
Eligible Children:	Assume members have no children.
Special Consideration:	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%

Actuarial Cost Method:	Entry Age Normal Cost Method. Entry Age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are expressed as a level percentage of payroll, with Normal Cost determined as if the current benefit accrual rate had always been in effect.
Asset Valuation Method:	MPRIF Reserve: Market Value Non-MPRIF Assets: Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during the fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year).
Payment on the Unfunded Actuarial Accrued Liability:	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.0% per annum. If there is a negative Unfunded Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percentage of payroll. For GASB compliance, assumed payroll increases of 5.00% per annum is used for this calculation in determining the actuarially required contribution rate.

Summary of Rates: Shown below for selected ages:

	Rates - (%)					
	Death					
Age	**Male**	**Female**	**Withdrawal**	**Disability**	**Retirement**	**Ultimate Rate of Salary Increases**
20	0.03%	0.01%	6.01%	0.11%	0.00	11.50%
25	0.04	0.02	3.24	0.13	0.00	9.50
30	0.04	0.02	1.90	0.16	0.00	8.00
35	0.06	0.03	1.46	0.19	0.00	7.00
40	0.08	0.04	1.26	0.29	0.00	6.00
45	0.11	0.06	0.91	0.54	0.00	5.50
50	0.19	0.09	0.50	1.04	10.00	5.25
55	0.35	0.15	0.11	2.03	30.00	5.25
60	0.57	0.23	0.00	0.00	25.00	5.25
65	0.84	0.38	0.00	0.00	50.00	5.25
70	1.39	0.64	0.00	0.00	100.00	5.25

Changes in Actuarial Assumptions and Actuarial Cost Methods: There have been no changes made to the actuarial assumptions since the prior valuation.

The only change in actuarial cost methods since the last valuation was a modification to the asset valuation method, effective with the July 1, 2007 valuation. Assets allocated to the Minnesota Post Retirement Investment Fund (MPRIF) must equal the Market Value of Assets as of the valuation date.

EXHIBIT VIII

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.

General:

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:

Date of Increase	Member	Employer
Current	7.8%	11.7%
January 2008	8.6%	12.9%
January 2009	9.4%	14.1%

Allowable Service: Police and fire service during which member contributions were deducted. 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 and sick leave payments and Workers' 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:

Normal Retirement Benefit:	
Age/Service Requirement:	Age 55 and three years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.
Amount:	3.00% of Average Salary for each year of Allowable Service.
Early Retirement Benefit:	
Age/Service Requirement:	Age 50 and three years of Allowable Service.
Amount:	Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date and a 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.

Benefit Increases:	Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF). 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.

[*] *Effective July 1, 1999. From July 1, 1996 through June 30, 1999, the reduction is 0.2% for each month the Member is under age 55. Prior to July 1, 1996, an actuarial reduction is used assuming augmentation of the normal benefit to age 55 at 3% per year.*

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% 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 duty disability are calculated as 3.00% of Average Salary for each year of Allowable Service, with a minimum of 60.00% 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%.

Regular Disability Benefits:

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 Benefits:	
Age/Service Requirement:	Upon cessation of disability benefits.
Amount:	Any optional annuity continues. Otherwise, the larger of the disability benefit paid or the normal retirement benefit available at Normal Retirement Age, or an actuarially equivalent optional annuity.
Form of Payment:	Same as for retirement.
Benefit Increases:	Same as for retirement.

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 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.
Regular Disability Surviving Dependent Child 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 or 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. Benefit 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.
Duty Disability Surviving Dependent Child Benefit:	
Age/Service Requirement:	Active or 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%.

<u>Surviving Spouse Optional Annuity</u>:	
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 except that 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:

<u>Refund of Contributions</u>:	
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.
<u>Deferred Annuity</u>:	
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; and 3.00% thereafter until January of the year following attainment of age 55 and 5.00% thereafter until the annuity begins. Amount is payable at normal or early retirement.

	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:	There were several changes to the plan provisions effective July 1, 2007, and are summarized as follows:

- Duty disability benefit is paid at a fixed percentage of 60.00% of Average Salary 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.
- Regular disability benefit is paid at a fixed percentage of 45.00% of Average Salary 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.
- Total and permanent disability level for duty or regular disabilities are defined. Benefits are calculated as 3.00% of Average Salary for each year of Allowable Service, with a minimum of 60.00% of Average Salary for duty disability and 45.00% of Average Salary for regular disability.
- Automatic survivor benefits are available if the person is deemed to be totally and permanently duty disabled.
- Death in-the-line-of-duty surviving spouse benefits are increased to 60.00% of salary averaged over last six months. In addition, 10.00% to each dependent child continues, the family benefit minimum (including spouse's benefit) is increased to 60.00% of salary and the family benefit maximum is increased to 80.00% of salary.
- Non-duty death surviving spouse benefits requires member to have at least three years of Allowable Service at death, and there is no minimum marriage requirement.