St. Paul Teachers' Retirement Fund Association

Actuarial Valuation and Review as of July 1, 2006

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November 8, 2006

Mr. Phillip Kapler St. Paul Teachers' Retirement Fund Association 1619 Dayton Avenue, Room 309 Saint Paul, MN 55104-6206

Dear Mr. Kapler:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2006. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2007 and analyzes the preceding year's experience.

The census information on which our calculations were based was prepared by the Fund and the financial information was provided 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, FCIA, MAAA, EABrad E. Ramirez, FSA, MAAA, EASenior Vice President and Chief ActuaryConsulting Actuary

Susan M. Hogarth, EA, MAAA Consulting Actuary

cc: Legislative Commission on Pensions and Retirement (3 copies) Minnesota Legislative Reference Library (6 copies) Minnesota Department of Finance (2 copies) Office of the State Auditor (2 copies)

SECTION 1

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SECTION 2

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SECTION 4

REPORTING INFORMATION

Purpose

This report has been prepared by The Segal Company to present a valuation of the St. Paul Teachers' Retirement Fund Association as of July 1, 2006. 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 Retirement Fund, as prescribed in the bylaws governing statutes and policies of the Fund;
- The characteristics of covered active members, inactive vested members, pensioners, survivors and beneficiaries as of July 1, 2006, provided by the Fund;
- > The assets of the Fund as of June 30, 2006, 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 actuarial accrued liability funded ratio based on the actuarial value of assets over the actuarial accrued liability as of July 1, 2006 is 69.11% compared to 69.65% as of July 1, 2005. This ratio is a measure of funding status, its history is a measure of funding progress, and is the ratio required to be reported under GASB 25.
- The statutory contribution rate under Chapter 354A is equal to 16.33% of payroll compared to the required contribution rate under Chapter 356 of 25.03% of payroll. Therefore, the contribution deficiency is 8.70% of payroll as of July 1, 2006, compared to the contribution deficiency as of July 1, 2005 of 7.29% of payroll. The required contribution rate determination assumes an amortization date for the Fund of June 30, 2021, due to the 2002 legislative assumption changes adding one year to the original amortization date of June 30, 2020, set by Section 356.215 of the Minnesota Statutes. Each year there is a contribution deficiency leads to an increased deficiency in all future years.
- > The required contribution rate under an amortization period of 30 years is 19.13% of payroll, thus reducing the contribution deficiency to 2.80% of payroll.
- > The active member population has been steadily decreasing from July 1, 2004 to July 1, 2006, and the inactive/pay status (non-actives) population has been steadily increasing. The ratio of non-actives to actives has increased to 0.97 for the year ended June 30, 2006.
- > There were no changes in actuarial assumptions or actuarial cost methods since the prior valuation.
- > There were only two changes in plan provisions since the prior valuation, which did not impact the results of the June 30, 2006 actuarial valuation. One change is the cap on the post-retirement benefit increases, such that the combination of the guaranteed 2.00% and excess rate of return factors cannot exceed 5.00%, effective July 1, 2010. The other change is the deferred augmentation rate for post June 30, 2006 hires, which is 2.50% for all years.

Summary of Key Valuation Results		
	2006	2005
Contributions (% of payroll) for plan year beginning July 1:		
Statutory – Chapter 354A	16.33%	16.49%
Required – Chapter 356	25.03%	23.78%
Sufficiency/(Deficiency)	-8.70%	-7.29%
Funding elements for plan year beginning July 1:		
Normal cost	\$21,575,645	\$21,035,503
Market value of assets	1,005,745,229	934,667,364
Actuarial value of assets (AVA)	938,919,005	905,292,514
Actuarial accrued liability (AAL)	1,358,619,906	1,299,831,584
Unfunded/(Overfunded) actuarial accrued liability	419,700,901	394,539,070
Funded ratios:		
Accrued Benefit Funded Ratio	71.90%	72.49%
Current assets (AVA)	\$938,919,005	\$905,292,514
Current benefit obligations	1,305,809,497	1,248,867,191
Projected Benefit Funded Ratio	84.22%	85.68%
Current and expected future assets	\$1,328,442,124	\$1,296,405,105
Current and expected future benefit obligations (Present Value of Benefits)	1,577,289,001	1,513,025,533
GASB 25/27 for plan year beginning July 1:		
Annual required employer contributions	\$40,373,190	\$34,723,512
Accrued Liability Funded Ratio (AVA/AAL)	69.11%	69.65%
Covered actual payroll	\$226,350,763	\$223,762,071
Demographic data for plan year beginning July 1:		
Number of pensioners, survivors and beneficiaries	2,624	2,505
Number of vested terminated members	1,447	1,368
Number of other non-vested terminated members	1,671	1,687
Number of active members	4,052	4,206
Number of members on leave of absence*	150	143
Total projected payroll**	\$234,213,344	\$227,818,794
Average annual compensation (projected dollars)**	55,739	52,384

* Members on leave of absence treated are active members.

** Calculated as covered actual payroll, projected one year with salary scale. Also, includes members on leave of absence.

A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, pensioners, survivors 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 five valuations can be seen in this chart.

CHART 1

Member Population: 2002 – 2006

Year Ended June 30			Pensioners, Survivors and Beneficiaries			
2002	4,306	815	2,136	0.69		
2003	4,331	858	2,248	0.72		
2004	4,568	1,261	2,361	0.79		
2005	4,349	1,368	2,505	0.89		
2006	4,202	1,447	2,624	0.97		

* For years after 2003, includes members on leave of absence.

** 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 4,202 active members (including 150 members on leave of absence) with an average age of 44.6, average years of service of 11.4 years and average projected compensation of \$55,739. The 4,349 active members (including 143 members on leave of absence) in the prior valuation had an average age of 44.1, average service of 10.9 years and average projected compensation of \$52,384.

Inactive Members

In this year's valuation, there were 1,447 members with a vested right to a deferred or immediate vested benefit.

In addition, there were 1,671 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, 2006

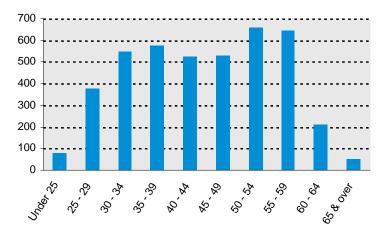
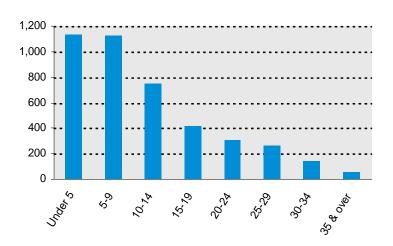


CHART 3

Distribution of Active Members by Years of Service as of June 30, 2006



Pensioners, Survivors and Beneficiaries

As of June 30, 2006, 2,344 pensioners (including 25 disabled participants) and 280 survivors and beneficiaries were receiving total monthly benefits of \$6,814,792. For comparison, in the previous valuation, there were 2,246 pensioners (including 32 disabled participants) and 259 survivors and beneficiaries receiving monthly benefits of \$6,426,473.

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

CHART 4

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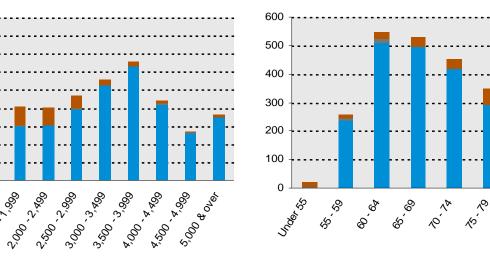
Survivor/Beneficiary Disability

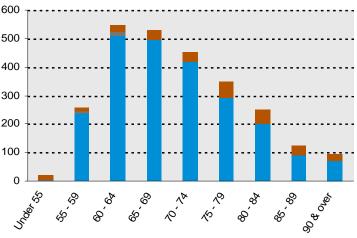
Service

Distribution of Pensioners, Survivors and Beneficiaries by Type and by Monthly Amount as of June 30, 2006

CHART 5

Distribution of Pensioners, Survivors and Beneficiaries by Type and by Age as of June 30, 2006





B. FINANCIAL INFORMATION

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the 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.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 6

Determination of Actuarial Value of Assets for Year Ended June 30, 2006

1.	Market value of assets available for benefits			\$1,005,745,229
		Original Amount	% Not Recognized	
2.	Calculation of unrecognized return			
	(a) Year ended June 30, 2006	\$36,135,488	80%	\$28,908,390
	(b) Year ended June 30, 2005	26,860,009	60%	16,116,005
	(c) Year ended June 30, 2004	82,512,072	40%	33,004,829
	(d) Year ended June 30, 2003	-56,015,000	20%	-11,203,000
	(e) Total unrecognized return			\$66,826,224
i.	Actuarial value of assets: (1) - (2e)			
	("Current Assets")			<u>\$938,919,005</u>
1.	Actuarial value as a percent of market value			93.36%

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 plan year ended June 30, 2006, the total loss is \$7,221,713, of which a gain of \$1,180,976 is from investments and a loss of \$8,402,689 is from all other sources. The net experience variation from individual sources other than investments was 0.6% of the actuarial accrued liability, which is less than 1.0% of the actuarial accrued liability and includes age/service retirements, disability mortality (pre and post-retirement), withdrawal, and salary increases.

CHART 7

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

Actuarial Experience for Year Ended June 30, 2006

1.	Net gain/(loss) from investments	\$1,180,976
2.	Net gain/(loss) from other experience	<u>-8,402,689</u>
3.	Net experience gain/(loss): $(1) + (2)$	-\$7,221,713

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 within the range of the GASB reporting requirements. Section 4, Exhibit III presents a schedule of this information for 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

	Year End	Year Ended June 30				
Category	2006	2005	– Change From Prior Year			
Active members in valuation*:						
Number	4,202	4,349	-3.4%			
Average age	44.6	44.1	N/A			
Average service	11.4	10.9	N/A			
Total projected payroll	\$234,213,344	\$227,818,794	2.8%			
Average projected compensation	55,739	52,384	6.4%			
Total active vested members	3,415	3,439	-0.7%			
Vested terminated members	1,447	1,368	5.8%			
Retired participants/Alternate payees:						
Number in pay status	2,319	2,214	4.7%			
Average age	70.5	70.3	N/A			
Average monthly benefit	\$2,657	\$2,620	1.4%			
Disabled members:						
Number in pay status	25	32	-21.9%			
Average age	58.7	59.4	N/A			
Average monthly benefit	\$2,525	\$2,723	-7.3%			
Other non-vested terminated members	1,671	1,687	-0.9%			
Survivors/Beneficiaries:						
Number in pay status	280	259	8.1%			
Average age	75.2	74.8	N/A			
Average monthly benefit	\$2,104	\$2,082	1.1%			

* For 2005, includes 143 members on leave of absence, and for 2006, includes 150 members on leave of absence.

EXHIBIT B-1

Members in Active Service as of June 30, 2006 By Age, Years of Service, and Average Projected Compensation - Total

	Years of Service											
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & ove			
Under 25	80	80										
	\$18,464	\$18,464										
25 - 29	377	301	76									
	38,159	35,975	\$46,809									
30 - 34	550	183	341	26								
	45,864	36,550	49,989	\$57,322								
35 - 39	575	141	225	194	15							
	52,852	39,262	52,232	61,856	\$73,455							
40 - 44	526	108	136	151	103	28						
	59,468	36,077	59,064	63,347	73,369	\$79,604						
45 - 49	528	101	119	129	87	73	19					
	59,996	34,440	54,706	68,031	67,343	76,687	\$76,663					
50 - 54	660	86	124	118	101	102	105	23	1			
	62,822	33,823	52,410	64,873	67,489	71,519	79,165	\$83,296	\$60,665			
55 - 59	643	86	79	92	80	65	110	103	28			
	66,122	28,458	54,172	67,218	68,778	76,558	75,838	82,054	83,331			
60 - 64	214	30	20	33	32	34	26	19	20			
	63,632	18,237	51,255	69,007	70,293	68,615	72,487	82,598	86,577			
65 & over	49	19	9	2	3	5	4	2	5			
	44,488	13,816	32,256	20,472	86,998	62,216	92,767	84,436	94,829			
Total	4,202	1,135	1,129	745	421	307	264	147	54			
	\$55,739	\$33,542	\$52,252	\$64,415	\$69,707	\$74,079	\$77,147	\$82,351	\$85,178			

EXHIBIT B-2

Members in Active Service as of June 30, 2006 By Age, Years of Service, and Average Projected Compensation - Basic

	Years of Service											
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over			
Under 25												
25 - 29												
30 - 34												
35 - 39												
40 - 44												
45 - 49												
50 - 54	46				1	6	25	13	1			
	\$77,316				\$37,792	\$73,177	\$77,378	\$83,428	\$60,665			
55 - 59	134					4	33	73	24			
	81,935					71,896	81,051	82,232	83,923			
60 - 64	32						5	11	16			
	80,642						74,702	79,536	83,258			
65 & over	4								4			
	98,951								98,951			
Total	216				1	10	63	97	45			
	\$81,075				\$37,792	\$72,664	\$79,090	\$82,086	\$84,506			

EXHIBIT B-3

Members in Active Service as of June 30, 2006 By Age, Years of Service, and Average Projected Compensation - Coordinated

	Years of Service											
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over			
Under 25	80	80										
	\$18,464	\$18,464										
25 - 29	377	301	76									
	38,159	35,975	\$46,809									
30 - 34	550	183	341	26								
	45,864	36,550	49,989	\$57,322								
35 - 39	575	141	225	194	15							
	52,852	39,262	52,232	61,856	\$73,455							
40 - 44	526	108	136	151	103	28						
	59,468	36,077	59,064	63,347	73,369	\$79,604						
45 - 49	528	101	119	129	87	73	19					
	59,996	34,440	54,706	68,031	67,343	76,687	\$76,663					
50 - 54	614	86	124	118	100	96	80	10				
	61,736	33,823	52,410	64,873	67,786	71,416	79,723	\$83,124				
55 - 59	509	86	79	92	80	61	77	30	4			
	61,959	28,458	54,172	67,218	68,778	76,864	73,604	81,621	\$79,781			
60 - 64	182	30	20	33	32	34	21	8	4			
	60,641	18,237	51,255	69,007	70,293	68,615	71,959	86,809	99,849			
65 & over	45	19	9	2	3	5	4	2	1			
	39,647	13,816	32,256	20,472	86,998	62,216	92,767	84,436	78,340			
Total	3,986	1,135	1,129	745	420	297	201	50	9			
	\$54,366	\$33,542	\$52,252	\$64,415	\$69,783	\$74,127	\$76,538	\$82,864	\$88,540			

EXHIBIT C-1

Retired Participants and Alternate Payees as of June 30, 2006 By Age, Years Retired and Average Annual Benefit - Total

	Years Retired										
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over	
Under 45											
45 - 49											
50 - 54											
55 - 59	239	239									
	\$33,204	\$33,204									
60 - 64	509	314	193	2							
	29,909	31,551	\$27,454	\$8,971							
65 - 69	496	133	271	91	1						
	31,845	26,395	33,814	33,636	\$59,859						
70 - 74	417	22	131	195	66	2	1				
	34,208	16,489	32,850	38,893	27,873	\$60,868	\$53,081				
75 - 79	292	5	14	100	117	55		1			
	36,032	11,100	31,527	45,219	33,678	27,337		\$58,626			
80 - 84	202	2	2	13	69	97	19				
	30,581	24,553	24,872	44,180	32,727	28,965	22,967				
85 - 89	89		1	1	9	42	35	1			
	27,964		51,924	69,075	34,320	25,572	27,113	35,979			
90 & Over	75	3				1	33	34	3	1	
	20,601	18,762				26,346	22,283	19,148	\$20,386	\$14,901	
Total	2,319	718	612	402	262	197	88	36	3	1	
	\$31,890	\$30,470	\$31,550	\$39,374	\$32,087	\$28,098	\$24,701	\$20,712	\$20,386	\$14,901	

EXHIBIT C-2

Retired Participants and Alternate Payees as of June 30, 2006 By Age, Years Retired and Average Annual Benefit - Basic

					Years F	Retired				
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 45										
45 - 49										
50 - 54										
55 - 59	175	175								
	\$39,382	\$39,382								
60 - 64	358	203	154	1						
	35,360	38,743	\$31,059	\$11,010						
65 - 69	340	46	215	78	1					
	40,134	48,095	39,223	37,695	\$59,859					
70 - 74	323	3	81	171	65	2	1			
	40,276	53,688	44,255	42,417	28,235	\$60,868	\$53,081			
75 - 79	256		6	81	113	55		1		
	39,368		54,464	52,686	34,705	27,337		\$58,626		
80 - 84	187		1	11	63	93	19			
	31,987		35,682	47,263	34,942	29,983	22,967			
85 - 89	87		1	1	7	42	35	1		
	28,537		51,924	69,075	43,247	25,572	27,113	35,979		
90 & Over	73	2				1	32	34	3	1
	21,031	24,984				26,346	22,870	19,148	\$20,386	\$14,901
Total	1,799	429	458	343	249	193	87	36	3	1
	\$36,844	\$40,047	\$37,588	\$43,910	\$33,417	\$28,570	\$24,945	\$20,712	\$20,386	\$14,901

EXHIBIT C-3

Retired Participants and Alternate Payees as of June 30, 2006 By Age, Years Retired and Average Annual Benefit - Coordinated

					Years F	Retired				
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 -39	40 & over
Under 45										
45 - 49										
50 - 54										
55 - 59	64	64								
	\$16,313	\$16,313								
60 - 64	151	111	39	1						
	16,986	18,399	\$13,222	\$6,932						
65 - 69	156	87	56	13						
	13,779	14,922	13,045	9,287						
70 - 74	94	19	50	24	1					
	13,358	10,615	14,375	13,787	\$4,318					
75 - 79	36	5	8	19	4					
	12,306	11,100	14,325	13,385	4,650					
80 - 84	15	2	1	2	6	4				
	13,045	24,553	14,062	27,223	9,473	\$5,305				
85 - 89	2				2					
	3,072				3,072					
90 & Over	2	1					1			
	4,898	6,320					\$3,475			
Total	520	289	154	59	13	4	1			
	\$14,747	\$16,253	\$13,595	\$13,005	\$6,608	\$5,305	\$3,475			

EXHIBIT D-1

Disabled Members as of June 30, 2006 By Age, Years Disabled and Average Annual Benefit – Total

					Years D	isabled				
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 45	1		1							
	\$2,437		\$2,437							
45 - 49	2	1		1						
	13,481	\$21,946		\$5,015						
50 - 54	2	2								
	16,013	16,013								
55 - 59	7	5	1	1						
	45,717	42,850	55,306	50,460						
60 - 64	13	3	6	3			1			
	28,925	17,044	36,965	28,345			\$18,069			
65 - 69										
70 - 74										
75 - 79										
80 - 84										
85 - 89										
90 & Over										
Total	25	11	8	5			1			
	\$30,299	\$29,032	\$34,942	\$28,102			\$18,069			

EXHIBIT D-2

Disabled Members as of June 30, 2006 By Age, Years Disabled and Average Annual Benefit – Basic

					Years D	isabled				
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 45										
45 - 49										
50 - 54										
55 - 59	7	5	1	1						
	\$45,717	\$42,850	\$55,306	\$50,460						
60 - 64	8		5	2			1			
	36,329		40,952	33,904			\$18,069			
65 - 69										
70 - 74										
75 - 79										
80 - 84										
85 - 89										
90 & Over										
Total	15	5	6	3			1			
10101	\$40,710	\$42,850	\$43,344	\$39,422			\$18,069			

EXHIBIT D-3

Disabled Members as of June 30, 2006 By Age, Years Disabled and Average Annual Benefit - Coordinated

					Years D	isabled				
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 45	1		1							
	\$2,437		\$2,437							
45 - 49	2	1		1						
	13,481	\$21,946		\$5,015						
50 - 54	2	2								
	16,013	16,013								
55 - 59										
60 - 64	5	3	1	1						
	17,078	17,044	17,031	17,228						
65 - 69										
70 - 74										
75 - 79										
80 - 84										
85 - 89										
90 & Over										
Total	10	6	2	2						
	\$14,681	\$17,517	\$9,734	\$11,121						

EXHIBIT E-1

Survivors and Beneficiaries as of June 30, 2006 By Age, Years Since Death and Average Annual Benefit - Total

				Ye	ars Since De	eath			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
Under 45	7	4	2	1					
	\$8,074	\$12,957	\$1,031	\$2,625					
45 - 59									
50 - 54	7	3	3						1
	9,728	13,048	8,534						\$3,350
55 - 59	13	3	2	5	2	1			
	22,607	13,463	26,286	27,775	\$21,967	\$18,128			
60 - 64	24	7	5	5	5	2			
	24,698	28,534	28,732	21,583	21,662	16,568			
65 - 69	33	2	8	13	6		4		
	33,018	31,075	37,438	36,580	30,912		\$16,730		
70 - 74	31		4	7	14	6			
	32,394		38,769	44,467	28,192	23,867			
75 - 79	57		1	2	17	27	6	4	
	26,066		30,706	13,744	25,082	28,260	18,810	\$31,324	
80 - 84	48		1	2	11	22	10	2	
	25,679		53,572	6,802	36,566	23,669	20,863	16,927	
85 - 90	34				2	11	14	7	
	22,888				31,984	24,818	21,667	19,697	
90 & Over	26	2	2			1	10	11	
	17,945	15,889	2,028			23,335	17,577	21,057	
Total	280	21	28	35	57	70	44	24	1
	\$25,244	\$20,239	\$27,386	\$30,780	\$28,509	\$25,351	\$19,716	\$22,028	\$3,350

EXHIBIT E-2

Survivors and Beneficiaries as of June 30, 2006 By Age, Years Since Death and Average Annual Benefit – Basic

				Yea	ars Since De	ath			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
Under 45	2	2							
	\$11,524	\$11,524							
45 - 49									
50 - 54	4	1	2						1
	9,497	21,253	\$6,692						\$3,350
55 - 59	9		2	4	2	1			
	26,822		26,286	\$31,691	\$21,967	\$18,128			
60 - 64	20	5	3	5	5	2			
	27,771	35,542	42,783	21,583	21,662	16,568			
65 - 69	30		7	13	6		4		
	33,405		39,174	36,580	30,912		\$16,730		
70 - 74	29		4	7	12	6			
	33,552		38,769	44,467	30,290	23,867			
75 - 79	57		1	2	17	27	6	4	
	26,066		30,706	13,744	25,082	28,260	18,810	\$31,324	
80 - 84	46		1		11	22	10	2	
	26,500		53,572		36,566	23,669	20,863	16,927	
85 - 89	34				2	11	14	7	
	22,888				31,984	24,818	21,667	19,697	
90 & Over	22					1	10	11	
	19,579					23,335	17,577	21,057	
Total	253	8	20	31	55	70	44	24	1
	\$26,667	\$27,751	\$35,394	\$33,838	\$28,978	\$25,351	\$19,716	\$22,028	\$3,350

EXHIBIT E-3

Survivors and Beneficiaries as of June 30, 2006 By Age, Years Since Death and Average Annual Benefit - Coordinated

				Yea	ars Since Dea	ath			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
Under 45	5	2	2	1					
	\$6,693	\$14,390	\$1,031	\$2,625					
45 - 49									
50 - 54	3	2	1						
	10,037	8,946	12,219						
55 - 59	4	3		1					
	13,126	13,463		12,112					
60 - 64	4	2	2						
	9,334	11,014	7,655						
65 - 69	3	2	1						
	29,146	31,075	25,288						
70 - 74	2				2				
	15,605				\$15,605				
75 - 79									
80 - 84	2			2					
	6,802			6,802					
85 - 90									
90 & Over	4	2	2						
	8,958	15,889	2,028						
Total	27	13	8	4	2				
	\$11,907	\$15,617	\$7,367	\$7,085	\$15,605				

EXHIBIT F

Reconciliation of Member Data

	Active Members	Leave of Absence	Vested Terminated Members	Other Non-Vested Terminated Members	Retired Participants	Disableds	Survivors and Beneficiaries	Alternate Payees	Total
A. Number as of June 30, 2005	4,206	143	1,368	1,687	2,208	32	259	6	9,909
B. Additions	276	94	173	347	152	2	22	3	1,069
C. Deletions:									
1. Retirements	-113	-3	-27	-2					-145
2. Disability			-1						-1
3. Died with beneficiary	-1				-20	-1			-22
4. Died without beneficiary	-3		-3		-25	-1	-7		-39
5. Terminated - deferred	-81	-21		-59					-161
6. Terminated – other non-vested	-242	-3	-1						-246
7. Refunds	- 37	-3	-41	-148					-229
8. Rehired as active	139	-57	-21	-61					
9. Leave of absence	-92			-1					-93
10. Expired benefits									
11. Resigned Non-vested						-6			-6
12. Write-offs				-91					-91
D. Data adjustments	<u></u>	<u></u>	<u></u>	<u>-14</u>	<u>-13</u>	<u>-1</u>	<u>6</u>	<u>8</u>	<u>-1</u>
E. Total as of June 30, 2006	4,052	150	1,447	1,671	2,302	25	280	17	9,944

EXHIBIT G

Change in Assets Available for Benefits for Year Ended June 30, 2006

		Market Value	Cost Value
A. Asse	ts available at beginning of period	\$934,667,364	\$711,175,543
. Oper	rating revenues		
1.	Member contributions	\$13,453,021	\$13,453,021
2.	Employer contributions	19,815,130	19,815,130
3.	Supplemental contributions	4,199,761	4,199,761
4.	Investment income	13,832,841	13,832,841
5.	Investment expenses	-4,609,937	-4,609,937
6.	Net realized gain/(loss)	63,253,164	63,253,164
7.	Other	-	-
8.	Net change in unrealized gain/(loss)	41,291,820	<u> </u>
9.	Total operating revenues	\$151,235,800	\$109,943,980
C. Oper	rating expenses:		
1.	Service retirements	\$70,677,567	\$70,677,567
2.	Disability benefits	870,563	870,563
3.	Survivor benefits	6,872,092	6,872,092
4.	Refunds	1,146,861	1,146,861
5.	Administrative expenses	590,852	590,852
6.	Total operating expenses	\$80,157,935	\$80,157,935
D. Char	nge in accounting method	-	-
E. Asse	ts available at end of period	\$1,005,745,229	\$740,961,588
F. Dete	rmination of current year gross asset return		
1.	Average balance:		
	(a) Assets available at BOY: (A)		\$934,667,364
	(b) Assets available at EOY: (E)		1,005,745,229
	(c) Average balance $[(a) + (b) - Net Investment Income] / 2$		913,322,353
	[Net Investment Income: $(B.4) + (B.5) + (B.6) + (B.7) + (B.8)$]		
2.	Expected return: 8.50% x (F.1)		\$77,632,400
3.	Actual return: $(B.4) + (B.5) + (B.6) + (B.7) + (B.8)$		113,767,888
4.	Current year gross asset return: $(F.3) - (F.2)$		\$36,135,488

EXHIBIT H

Accounting Balance Sheet for Year Ended June 30, 2006

	Market Value	Cost Value
Assets		
Cash, equivalents, short-term securities	\$13,179,150	\$13,179,150
Investments:		
Fixed income	\$175,656,761	\$147,036,240
Equity	722,247,123	500,650,606
Real estate	90,093,741	76,261,030
Alternative	4,066,386	3,332,494
Other assets*	6,422,930	6,422,930
Total assets	\$1,011,666,091	\$746,882,450
Amounts currently payable	\$5,920,862	\$5,920,862
Assets available for benefits		
Member reserves	\$130,078,518	\$130,078,518
Employer reserves	875,666,711	<u>610,883,070</u>
Total assets available for benefits	\$1,005,745,229	\$740,961,588
Total amounts currently payable and assets available for benefits	<u>\$1,011,666,091</u>	<u>\$746,882,450</u>
Net assets at Market/Cost value	<u>\$1,011,666,091</u>	<u>\$746,882,450</u>
* Other Assets:		
Accounts Receivable:		
Employer contribution	\$1,500,866	
Employee contribution	96,629	
Interest receivable	802,965	
Dividend receivable	191,381	
Sale of securities	3,804,481_	

\$6,396,322 <u>26,608</u>

\$6,422,930

5	
Total accounts receivab	le
Fixed assets	

Total other assets

EXHIBIT I

Development of the Fund Through June 30, 2006

Year Ended June 30	Employer Contributions	Employee Contributions	Supplemental Contributions	Net Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2002							\$899,572,000
2003	\$19,186,000	\$14,222,000	\$4,184,000	\$26,429,000	\$499,000	\$64,334,000	\$898,760,000
2004**	19,578,315	14,307,616	4,192,761	31,417,083	515,715	68,880,328	\$898,859,732
2005**	19,635,230	13,586,719	4,197,761	43,082,139	558,573	73,510,494	\$905,292,514
2006	19,815,130	13,453,021	4,199,761	76,316,514	590,852	79,567,083	\$938,919,005

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

** The Employer and Supplemental contributions for the years ended June 30, 2004 and June 30, 2005 have been reclassified to reflect appropriate funds.

EXHIBIT J

Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2006

1. Unfunded/(Overfunded) actuarial accrued liability at beginning of year		\$394,539,070
2. Normal cost at beginning of year, including expenses		21,626,355
3. Total contributions		37,467,912
4. Interest		
(a) For whole year on $(1) + (2)$	\$35,374,061	
(b) For half year on (3)	<u>1,592,386</u>	
(c) Total interest: $(4a) - (4b)$		<u>33,781,675</u>
5. Expected unfunded/(overfunded) actuarial accrued liability: $(1) + (2) - (3) + (4(c))$		\$412,479,188
6. Changes due to (gain)/loss from:		
(a) Investments	-\$1,180,976	
(b) Demographics*	8,402,689	
(c) Total changes due to (gain)/loss		<u>\$7,221,713</u>
7. Unfunded/(Overfunded) actuarial accrued liability at end of year		<u>\$419,700,901</u>

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

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: Investment return — the rate of investment yield that the Fund will earn over (a) the long-term future; Mortality rates — the death rates of employees and pensioners; life (b) expectancy is based on these rates; <u>Retirement rates</u> — the rate or probability of retirement at a given age; (c) (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** The single sum value of lifetime benefits to existing pensioners. This sum takes For Pensioners: 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 often 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 I

Summary of Actuarial Valuation Results

Th	e valuation was made with respect to the following data supplied to us:		
1.	Pensioners as of the valuation date (including 280 survivors and beneficiaries in pay status)		2,624
2.	Members inactive during year ended June 30, 2006 with vested rights		1,447
3.	Members active during the year ended June 30, 2006*		4,202
	Fully vested	3,415	
	Not vested	787	
4.	Other non-vested terminated members as of June 30, 2006		1,671
14			

* Includes 150 members on leave of absence.

EXHIBIT I (continued)

Summary of Actuarial Valuation Results

			Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability	
A.	Dete	ermination of Actuarial Accrued Liability				
	1.	Active members:				
		(a) Retirement benefits	\$636,760,322	\$185,753,820	\$451,006,502	
		(b) Disability benefits	12,549,007	5,609,675	6,939,332	
		(c) Death benefits	12,335,609	5,178,299	7,157,310	
		(d) Withdrawal benefits	25,764,692	22,127,301	3,637,391	
		(e) Total	\$687,409,630	\$218,669,095	\$468,740,535	
	2.	Vested terminated members	\$40,496,860	-	\$40,496,860	
	3.	Other non-vested terminated members	2,177,543	-	2,177,543	
	4.	Annuitants	847,204,968	<u> </u>	847,204,968	
	5.	Total	\$1,577,289,001	\$218,669,095	\$1,358,619,906	
B.	Dete	ermination of Unfunded Actuarial Accrued Liability				
	1.	Actuarial Accrued Liability			\$1,358,619,906	
	2.	Actuarial Value of Assets			<u>938,919,005</u>	
	3.	Unfunded Actuarial Accrued Liability: (B.1) – (B.2)			\$419,700,901	
C.	Dete	ermination of Supplemental Contribution Rate (Statutory Amortiza	tion Date)			
	1.	Present value of future payrolls through the amortization date of June 30, 2021	l		\$2,699,486,598	
	2.	Supplemental contribution rate: (B.3) / (C.1)			15.55%	
D.	Determination of Supplemental Contribution Rate (Amortization period of 30 years)					
	1.	Present value of future payrolls through the amortization date of June 30, 2036	-		\$4,350,211,870	
	2.	Supplemental contribution rate: (B.3) / (D.1)			9.65%	

EXHIBIT II

Actuarial Balance Sheet

A.	Current Assets			\$938,919,005
В.	Expected Future Assets			
	1. Present Value of Expected Future Statutory Supplemental Contributions			\$170,854,024
	2. Present Value of Future Normal Costs			218,669,095
	3. Total Expected Future Assets			\$389,523,119
C.	Total Current and Expected Future Assets			\$1,328,442,124
D.	Current Benefit Obligations	Non-Vested	Vested	Total
	1. Benefit recipients:			
	(a) Retirement annuities	-	\$781,897,483	\$781,897,483
	(b) Disability benefits	-	6,841,892	6,841,892
	(c) Beneficiaries	-	58,465,593	58,465,593
	2. Vested terminated members	-	40,496,860	40,496,860
	3. Other non-vested terminated members	-	2,177,543	2,177,543
	4. Active members:			
	(a) Retirement benefits	\$2,126,721	\$385,579,239	\$387,705,960
	(b) Disability benefits	79,276	6,952,406	7,031,682
	(c) Death benefits	73,440	6,729,476	6,802,916
	(d) Withdrawal benefits	<u>589,737</u>	13,799,831	14,389,568
	5. Total Current Benefit Obligations	\$2,869,174	\$1,302,940,323	\$1,305,809,497
E.	Expected Future Benefit Obligations			<u>\$271,479,504</u>
F.	Total Current and Expected Future Benefit Obligations - Present Value of Benefits: $(D.5 + E)$			\$1,577,289,001
G.	Current Unfunded Actuarial Liability (D.5 - A)			\$366,890,492
H.	Current and Future Unfunded Actuarial Liability (F - C)			\$248,846,877

EXHIBIT III

Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended June 30	Actuarially Required Contribution Rate (Prior Year) (a)	Actual Covered Payroll (b)	Actual Member Contributions (c)	Annual Required Contributions [(a) x (b)] – (c) = (d)	Actual Employer Contributions ⁽¹⁾ (e)	Percentage Contributed (e) / (d)
1991	18.86%	\$110,131,000	\$7,518,000	\$13,253,000	\$10,255,000	77.38%
1992	18.87	115,274,000	7,821,000	13,931,000	10,489,000	75.29
1993	19.74	122,930,000	8,202,000	16,064,000	10,839,000	67.47
1994	18.68	129,308,000	9,100,000	15,055,000	11,736,000	77.95
1995	18.63	139,175,000	8,788,000	17,140,000	13,084,000	76.34
1996	17.96	145,677,000	9,093,000	17,071,000	15,101,000	88.46
1997	16.97	151,363,000	9,484,000	16,202,000	16,043,000	99.02
1998	20.35	168,564,000	11,057,000	23,246,000	21,702,000	93.36
1999	18.82	178,254,000	11,649,000	21,898,000	21,066,000	96.20
2000	18.09	187,950,000	13,184,000	20,816,000	22,622,000	108.68
2001	16.57	202,915,000	13,170,000	20,453,000	23,569,000	115.23
2002	15.81	201,456,000	14,468,000	17,382,000	24,216,000	139.32
2003 ⁽²⁾	18.56	205,655,000	14,222,000	23,948,000	23,370,000	97.59
2004 ⁽³⁾	20.36	221,685,475	14,307,616	30,827,547	23,771,076	77.11
2005 ⁽³⁾	21.59	223,762,071	13,586,719	34,723,512	23,832,991	68.64
2006	23.78	226,350,763	13,453,021	40,373,190	24,014,891	59.48

(1) Includes contributions from other sources (if applicable).

(2) Actuarially Required Contribution Rate prior to change in Actuarial Assumptions and Plan Provisions is 16.19%.

(3) Actual Covered Payroll is based on actual contributions received.

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	\$326,357,000	\$495,740,000	\$169,383,000	65.83%	\$110,131,000	153.80%
07/01/1992	355,998,000	533,865,000	177,867,000	66.68	115,274,000	154.30
07/01/1993	393,168,000	571,059,000	177,891,000	68.85	122,930,000	144.71
07/01/1994	407,275,000	596,441,000	189,166,000	68.28	129,308,000	146.29
07/01/1995	445,733,000	633,070,000	187,337,000	70.41	139,175,000	134.61
07/01/1996	494,931,000	664,072,000	169,141,000	74.53	145,677,000	116.11
07/01/1997	556,406,000	805,066,000	248,660,000	69.11	151,363,000	164.28
07/01/1998	625,053,000	861,584,000	236,531,000	72.55	168,564,000	140.32
07/01/1999	704,233,000	938,847,000	234,614,000	75.01	178,254,000	131.62
07/01/2000	801,823,000	998,253,000	196,430,000	80.32	187,950,000	104.51
07/01/2001	869,045,000	1,060,931,000	191,886,000	81.91	202,915,000	94.56
07/01/2002	899,572,000	1,141,300,000	241,728,000	78.82	201,456,000	119.99
07/01/2003	898,760,000	1,189,361,000	290,601,000	75.57	205,655,000	141.31
07/01/2004	898,859,732	1,251,460,084	352,600,352	71.82	221,685,475	159.05
07/01/2005	905,292,514	1,299,831,584	394,539,070	69.65	223,762,071	176.32
07/01/2006	938,919,005	1,358,619,906	419,700,901	69.11	226,350,763	185.42

EXHIBIT V

Determination of Contribution Sufficiency – Total

	July 1, 2006			
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount		
1. Employee contributions	5.69%	\$13,319,540		
2. Employer contributions	8.59	20,111,296		
3. Supplemental contributions				
(a) 1996 Legislation	0.79	1,850,000		
(b) 1997 Legislation	1.26	2,953,000		
4. Administrative expense assessment		<u> </u>		
5. Total	<u>16.33%</u>	<u>\$38,233,836</u>		
B. Required Contributions – Chapter 356				
I. Normal Cost:				
(a) Retirement	7.94%	\$18,606,388		
(b) Disability	0.23	530,127		
(c) Death	0.21	482,343		
(d) Withdrawal	<u>0.84</u>	1,956,787		
(e) Total	<u>9.22%</u>	<u>\$21,575,645</u>		
2. Supplemental contribution amortization	15.55%	\$36,420,175		
3. Allowance for administrative expenses	0.26	<u>608,955</u>		
4. Total	<u>25.03%</u>	<u>\$58,604,775</u>		
C. Contribution Sufficiency / (Deficiency): (A.5) – (B.4)	-8.70%	-\$20,370,939		
Projected annual payroll for fiscal year beginning on the valuation date		\$234,213,344		

EXHIBIT VI

Determination of Contribution Sufficiency – Basic

	July 1, 2006			
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount		
. Employee contributions	8.00%	\$1,400,978		
. Employer contributions	11.64	2,038,423		
. Supplemental contributions				
(a) 1996 Legislation	0.79	138,347		
(b) 1997 Legislation	1.26	220,654		
. Administrative expense assessment	<u> </u>			
. Total	<u>21.69%</u>	\$3,798,402		
 Required Contributions – Chapter 356 				
 B. Required Contributions – Chapter 356 Normal Cost: 				
-	10.27%			
. Normal Cost:		\$1,797,932		
. Normal Cost: (a) Retirement	10.27%	\$1,797,932 63,953		
. Normal Cost: (a) Retirement (b) Disability	10.27% 0.37	\$1,797,932 63,953 48,535		
 Normal Cost: (a) Retirement (b) Disability (c) Death 	10.27% 0.37 0.28	\$1,797,932 63,953 48,535 <u>262,709</u> <u>\$2,173,129</u>		
 Normal Cost: (a) Retirement (b) Disability (c) Death (d) Withdrawal 	10.27% 0.37 0.28 <u>1.50</u>	\$1,797,932 63,953 48,535 <u>262,709</u>		

EXHIBIT VII

Determination of Contribution Sufficiency – Coordinated

	July 1, 2006			
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount		
. Employee contributions	5.50%	\$11,918,562		
. Employer contributions	8.34	18,072,873		
. Supplemental contributions				
(a) 1996 Legislation	0.79	1,711,939		
(b) 1997 Legislation	1.26	2,730,434		
. Administrative expense assessment	<u> </u>			
. Total	<u>15.89%</u>	<u>\$34,433,808</u>		
Required Contributions – Chapter 356				
Required Contributions – Chapter 356 Normal Cost: (a) Retirement	7.76%	\$16,808,456		
. Normal Cost:	7.76% 0.22	\$16,808,456 466,174		
. Normal Cost: (a) Retirement				
. Normal Cost: (a) Retirement (b) Disability	0.22	466,174		
 Normal Cost: (a) Retirement (b) Disability (c) Death 	0.22 0.20	466,174 433,808		
 Normal Cost: (a) Retirement (b) Disability (c) Death (d) Withdrawal 	0.22 0.20 <u>0.78</u>	466,174 433,808 <u>1,694,078</u>		

EXHIBIT VIII

Supplementary Information Required by the GASB

Valuation date	July 1, 2006				
Actuarial cost method	Entry Age Normal				
Amortization method	Level percentage of payroll, assuming payroll increases of 5.00% per annum				
Remaining amortization period	15 years remaining as of July 1, 2006				
Asset valuation method	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				
Projected salary increases	Select and ultimate rates by age, with ultimate rates of 5.00% - 6.90%				
Plan membership:					
Pensioners, survivors and beneficiaries receiving benefits	2,624				
Terminated vested members entitled to, but not yet receiving benefits	1,447				
Other terminated non-vested members	1,671				
Active members	4,202				
Total	9,944				

EXHIBIT IX

Actuarial Assumptions and Actuarial Cost Method

ortality Rates:		
Healthy Pre-Retirement:		
	Male:	1983 Group Annuity Mortality Table for males set back 7 years
	Female:	1983 Group Annuity Mortality Table for females set back 5 years
Healthy Post-Retirement:		
	Male:	1983 Group Annuity Mortality Table for males set back 3 years
	Female:	1983 Group Annuity Mortality Table for females set back 1 year
Disability:		
	Male:	1977 Railroad Retirement Board Mortality Table for Disabled Lives
	Female:	1977 Railroad Retirement Board Mortality Table for Disabled Lives

Shown below for selected ages:

Summary of Rates:

				Rate (%)		
		Pre-Retirement Mortality		Post-Retirement Mortality			Post-Disability
Age	Male	Female	Male	Female	Withdrawal	Disability	Mortality
20	0.03	0.02	0.03	0.02	6.00	0.02	2.71
25	0.04	0.02	0.04	0.02	4.50	0.02	2.72
30	0.04	0.03	0.05	0.03	3.00	0.03	2.72
35	0.05	0.03	0.07	0.04	2.25	0.03	2.73
40	0.07	0.05	0.10	0.06	1.50	0.04	2.73
45	0.10	0.07	0.15	0.09	1.25	0.06	2.74
50	0.17	0.10	0.28	0.15	1.00	0.12	2.89
55	0.31	0.16	0.48	0.23	0.50	0.24	3.71
60	0.52	0.25	0.71	0.38	0.00	0.48	4.73
65	0.77	0.42	1.11	0.64	0.00	0.00	5.98

Summary of Retirement Rates:	Shown below for selected age:

Reporting Information for the St. Paul Teachers' Retirement Fund Association

SECTION 4:

		Rate (%)					
Age	Basic Members Eligible for Rule of 90 Provision	Basic Members Not Eligible for Rule of 90 Provision	Coordinated Members Eligible for Rule of 90 Provision	Coordinated Members Not Eligible for Rule of 90 Provision			
54 & under	40.00	0.00	40.00	0.00			
55	40.00	10.00	40.00	5.00			
60	40.00	10.00	40.00	5.00			
65	40.00	40.00	40.00	20.00			
70	50.00	50.00	40.00	40.00			
75	80.00	80.00	80.00	80.00			
80 & over	100.00	100.00	100.00	100.00			
Withdrawal Rates	thir Firs		ased on recent plan experience table. Select rates are as fol				

Third year: 6%

Salary Increases:	fiscal year and annu	rior fiscal year, with new hires annualized, increased to current lly for each future year according to the ultimate rate table year select period, 0.30% x (10-T) where T is completed years e ultimate rate.			
	Age	Ultimate Rate of Annual Salary Increases			
	Less than 22	6.90%			
	25	6.75			
	30	6.50			
	35	6.25			
	40	6.00			
	45	5.75			
	50	5.50			
	55	5.25			
	60 & Over	5.00			
Retirement Age:					
Active Members: Deferred Members:	Active members are assumed to retire according to the graded rates shown in the rate table. Rates are applied beginning at the participant's first early retirement age.				
	Basic members are assumed to retire at age 60. Coordinated members are assumed to retire at age 63. If over the assumed retirement age, one year from valuation date.				
Other Non-Vested					
Members:	Return of contribution	ons is assumed to occur immedia	itely.		

Unknown Data for Members:	With data submitted results of this valuated	cipant data has been reviewed for reasonableness and consistency I for prior valuations. We have not audited this data, and the tion may change based on the accuracy of the underlying data. In ted data was missing or incomplete, the following assumptions
	Date of Birth:	July 1, 1961 (vested terminated members) July 1, 1935 (pensioners, survivors and beneficiaries)
	Deferred Benefit:	Calculate estimate using service at termination date. Salary at termination is estimated based on assumed termination date if not available.
Percent Married:		ers and 60% of female members are assumed to be married. re assumed to have two children.
Age of Spouse:	Female four years y	ounger than male.
Net Investment Return:		
Pre-Retirement:	8.50% per annum	
Post-Retirement:	8.50% per annum	
Administrative Expenses:	Prior year administr percentage of prior	ative expenses (excluding investment expenses) expressed as a year payroll.
Allowance for Combined Service Annuity:	7.00% load on liabil members.	lities for active members and 30.00% load on liabilities for former
Return of Contributions:		drawing after becoming eligible for a deferred benefit were larger of their contributions accumulated with interest or the value hefit.

Special Consideration:	Additional post retirement benefit increase is accounted for by increasing the reserve value for all service retirements, disability retirements and survivors eligible for the increase by an amount that equals the excess of the five year time weighted total rate of return over the assumed interest rate of 8.50% multiplied by the quantity of one minus the rate of contribution deficiency.				
Benefit Increases After Retirement (COLA):	2.00% per annum.				
Optional Benefit Forms:	Married members assumed	to elect the follo	wing forms of benefit:		
		Males	Females		
	Life Annuity Option	45%	80%		
	50% J&S Option	10%	10%		
	100% J&S Option	45%	10%		
Asset Valuation Method:	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).				
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.				
Payment on the Unfunded Actuarial Accrued Liability:	The Unfunded Actuarial A each year to the statutory a annum.				

Supplemental Contributions:		chool District and lemental contribut	the State of Minnesota are scheduled to make the ions to the plan.
1996 Legislation:	Supplemental contributions according to the following schedule:		
	Year	State	School
	06/30/03+	\$1,050,000	\$800,000
1997 Legislation:	Annual supple	mental contributio	ns of \$2,953,000 made on October 1.
Changes in Actuarial Assumptions and Cost Methods:	There have bee the prior valuat	Ū.	e to the actuarial assumptions or cost methods since

EXHIBIT X

Summary of Plan Provisions - Basic

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

Plan Year:	July 1 through June 30 A teacher who is employed in a public school district, other than a charter school, located in the corporate limits of the City of St. Paul and who is not covered by the Social Security Act. Also includes employees of the St. Paul Teachers Retirement Fund.	
Eligibility:		
Contributions:	Member: 8.00% of Salary.	
	Employer: 11.64% of Salary.	
Allowable Service:	All periods of service for which salary deductions were made and service during sabbatical leave. After June 30, 1974, St. Paul service for part-time teachers is granted on a proportional basis using actual duty days vs. the agreed number of annual duty days. Years of service credited prior to May 31, 1976 are not recomputed.	
Salary:	Total compensation. Excludes lump-sum payments for unused vacation leave or unused sick leave at separation.	
Average Salary:	Average of the five highest years of Salary during the last ten years while making contributions or while disabled.	

tirement:	
<u>Normal Retirement Benefit</u> : Age/Service Requirement:	Age 65 and five years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.
Amount:	2.50% of Average Salary for each year of Allowable Service.
Early Retirement Benefit:	
Age/Service Requirement:	An unreduced benefit is available upon the attainment of age 60 and 25 years of Allowable Service, or Rule of 90 (Age plus Allowable Service totals 90).
	A reduced benefit is available upon the attainment of age 55 and five years of Allowable Service.
Amount:	 The greater of (a) or (b): (a) 2.00% of Average Salary for each year of Allowable Service not to exceed 40 years with reduction of 0.25% for each month the member is under age 65 (ag 60 if 25 years of Allowable Service). No reduction if age plus years of Allowable Service totals 90.
	(b) 2.50% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3.00% per year and actuarial reduction for each month the member is under age 65.
Form of Payment:	Life annuity.
Benefit Increases:	Benefits are increased 2.00% annually beginning on the January 1 following fiscal year end if the member has been receiving benefits for at least 12 months at fiscal ye end.
	Beneficiaries are entitled to the increase the member would have received. In addition, if the time weighted rate of return over the last five years exceeds 8.50% the Board of Trustees will increase benefits by the excess rate of return multiplied by the quantity of one minus the rate of contribution deficiency. The combination of th guaranteed 2.00% and excess rate of return factors cannot exceed 5.00% effective Ju 1, 2010.

SECTION 4:	Reporting Information for the St. Paul Teachers' Retirement Fund Association
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Totally and permanently disabled before the age of 65 with five years of St. Paul service.
An annuity of 75% of the annual contract salary for the last full year of service reduced by any Social Security and Workers' Compensation benefits.
Payments are recomputed as a retirement at age 65. Payments stop if disability ceases or death occurs.
Life annuity.
Same as for retirement.
Age 65 with continued disability.
Normal Retirement Benefit based on Average Salary and Allowable Service as if member had continued in his latest position during the period of his disability.
Life annuity.
Same as for retirement.
Active member with three years of St. Paul service.
Benefit of 15% of B.A. salary to spouse plus 25% of B.A. salary to each eligible child (maximum of two). B.A. salary is the maximum salary payable to a teacher holding a B.A. degree.

	Spouse's benefits cease upon death or when the spouse elects to receive survivor's benefits. Such election does not affect benefits paid to children but total benefits may not exceed 90% of the member's final salary. Children's benefits cease upon marriage or age 18 (22 if full time student).
Survivor's Benefits:	
Age/Service Requirement:	Active or retired member with five years of St. Paul service. A surviving spouse must have been married to the member for three years at the time of his death or retirement, whichever occurs first.
Amount:	Survivor's payment of the 100% joint and survivor benefit earned by the member to the date of his death or his retirement, whichever occurs first.
Benefit Increases:	Same as for a retired person if payments have been made over one year. The allocation is based on the years of Allowable Service of the person on whose behalf the annuity is paid and the years receiving the payment.
Refund of Contributions:	
Age/Service Requirement:	Death of a member or former member when Family Benefits and Survivor's Benefits are not payable.
Amount:	The excess of the member's contributions.
Withdrawal:	
<u>Deferred Annuity</u> :	
Age/Service Requirement:	Five years of Allowable Service.
Amount:	Benefit computed under law in effect at termination and increased by the following annual percentage:
	 (a) 3.00% until January 1 of the year following the attainment of 55, and (b) 5.00% thereafter until the annuity begins.
	Amount is payable as a normal or early retirement benefit.

Refund of Contributions: <i>Age/Service Requirement:</i>	Termination of teaching service. Vested terminated members of 55 years of age or older are not eligible for a refund of contributions.
Amount:	Member's contributions with 5.00% interest if termination occurred before May 16, 1989 and 6.00% interest if termination occurred after May 16, 1989. A deferred annuity may be elected in lieu of a refund.

EXHIBIT XI

Summary of Plan Provisions - Coordinated

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

Plan Year:	July 1 through June 30 A teacher who is employed in a public school district, other than a charter school, located in the corporate limits of the City of St. Paul and who is covered by the Social Security Act. Also includes employees of the St. Paul Teachers Retirement Fund.	
Eligibility:		
Contributions:	Member: 5.50% of Salary.	
	Employer: 8.34% of Salary.	
Allowable Service:	All periods of service for which salary deductions were made and service during sabbatical leave. After June 30, 1974, St. Paul service for part-time teachers is granted on a proportional basis using actual duty days vs. the agreed number of annual duty days. Years of service credited prior to May 31, 1976 are not recomputed.	
Salary:	Total compensation. Excludes lump-sum payments for unused vacation leave or unused sick leave at separation.	
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 Requirement:	First hired before July 1, 1989:	
	 (a) Age 65 and three years of Allowable Service. (b) Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service. 	
	First hired after July 1, 1989:	
	 (a) The greater of age 65 or the age eligible for full Social Security retirement benefits (but not greater than age 66) and three years of Allowable Service. (b) Proportionate Retirement Annuity is available at Normal Retirement Age and one year of Allowable Service. 	
Amount:	1.70% of Average Salary for each year of Allowable Service.	
Early Retirement Benefit:		
Age/Service Requirement:	Age 55 and three years of Allowable Service. Any age with 30 years of Allowable Service. Rule of 90: Age plus Allowable Service totals 90.	
Amount:	First hired before July 1, 1989:	
	 The greater of (a) or (b): (a) 1.20% of Average Salary for each of the first ten years of Allowable Service plus 1.70% of Average Salary for each subsequent year of Allowable Service with reduction of 0.25% for each month the member is under age 65 (age 62 if 30 years of Allowable Service). No reduction if age plus years of Allowable Service totals 90. 	
	(b) 1.70% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3.00% per year and actuarial reduction for each month the member is under age 65.	

	First hired after July 1, 1989:
	1.70% of Average Salary for each year of Allowable Service assuming augmentation to Normal Retirement Age at 3.00% per year and actuarial reduction for each month the member is under Normal Retirement Age.
Form of Payment:	Life annuity. Actuarial equivalent options are:
	(a) Guaranteed refund,
	(b) 15 year certain and life, and
	(c) 50% or 100% joint and survivor with bounce back feature without additional reduction.
Benefit Increases:	Benefits are increased 2.00% annually beginning on the January 1 following fiscal year end if the member has been receiving benefits for at least 12 months at fiscal year end. Beneficiaries are entitled to the increase the member would have received.
	In addition, if the time weighted rate of return over the last five years exceeds 8.50%, the Board of Trustees will increase benefits by the excess rate of return multiplied by the quantity of one minus the rate of contribution deficiency. The combination of the guaranteed 2.00% and excess rate of return factors cannot exceed 5.00% effective July 1, 2010.
Disability:	
Age/Service Requirement:	Totally and permanently disabled before Normal Retirement Age with three years of Allowable Service. Also, at least two of the years of Allowable Service must have been uninterrupted.
Amount:	Normal Retirement Benefit based on Allowable Service and Average Salary at disability without reduction for commencement before Normal Retirement Age. Benefit is reduced by Workers' Compensation.

	Payments are recomputed as a retirement benefit at the Normal Retirement Age. Payments stop if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment.
Form of Payment:	Same as for retirement.
Benefit Increases:	Same as for retirement.
<u>Retirement After Disability:</u> Age/Service Requirement:	Normal Retirement Age with continued disability.
Amount:	Any optional annuity continues, otherwise the larger of the disability benefit paid before Normal Retirement Age or the normal retirement benefit available at the Normal Retirement Age, or an actuarially equivalent optional annuity.
Benefit Increases:	Same as for retirement.
Death: Surviving Spouse Annuity:	
Age/Service Requirement:	Any active member who dies with three years of Allowable Service prior to retirement or disability benefits commence.
	Any former member who dies before retirement or disability benefits commence.
Amount:	Survivor's payment of the 100% joint and survivor benefit the member could have elected if terminated.
	Upon the death of any vested active member, the benefit is calculated using 50.00% of otherwise applicable early retirement reduction from the member's age 55 to the member's benefit commencement age.
	If a former member had attained age 55 prior to death and had earned at least three years of Allowable Service prior to separation of service, benefits will commence immediately, reduced for early commencement from Normal Retirement Age. If a former member had earned at least 30 years of Allowable Service prior to separation

SECTION 4: Reporting Information for the St. Paul Teachers' Retirement Fund Association

	of service, benefit will commence immediately, reduced for early commencement from age 62. If a former member dies prior to age 55, benefits are deferred to age 55.
Benefit Increases:	Same as for a retired person if payments have been made over one year. The allocation is based on the years of Allowable Service of the person on whose behalf the annuity is paid and the years receiving the payment.
Refund of Contributions:	
Age/Service Requirement:	Member or former member dies before receiving any disability or retirement benefits and Survivor's Benefits are not payable.
Amount:	Member's contributions with 5.00% interest if death occurred before May 16, 1989 and 6.00% interest if death occurred after May 16, 1989.
Withdrawal:	
<u>Deferred Annuity</u> :	
Age/Service Requirement:	Three years of Allowable Service.
Amount:	For members hired before July 1, 2006, the benefit is computed under law in effect a termination and increased by the following annual percentage:
	 (a) 3.00% until January 1 of the year following the attainment of 55, and (b) 5.00% thereafter until the annuity begins.
	For members hired after June 30, 2006, the benefit is computed under law in effect a termination and increased by 2.50% for all years.
	Amount is payable as a normal or early retirement benefit.
Refund of Contributions:	
Age/Service Requirement:	Termination of teaching service.
Amount:	Member's contributions with 5.00% interest if termination occurred before May 16, 1989 and 6.00% interest if termination occurred after May 16, 1989. A deferred annuity may be elected in lieu of a refund.

SECTION 4: Reporting Information for the St. Paul Teachers' Retirement Fund Association

Changes in Plan Provisions:	The only changes in plan provisions since the prior valuation are the cap on the post-
	retirement benefit increases effective July 1, 2010, and the deferred augmentation rate
	for post June 30, 2006 hires of 2.50% for all years. These changes did not impact the
	results of the June 30, 2006 actuarial valuation.