Teachers Retirement Association Fund

Actuarial Valuation and Review
as of July 1, 2004

The Segal Company
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December 10, 2004

Mr. Gary Austin
Teachers Retirement Association Fund
60 Empire Drive, Suite 400
St. Paul, Minnesota 55103 - 1855

Dear Mr. Austin:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2004. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2004 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.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

THE SEGAL COMPANY

By:

Leslie L. Thompson, FSA, MAAA, EA	*Wally Malles, ASA, MAAA, EA*	*Susan M. Hogarth*
Senior Vice President and Actuary	*Associate Actuary*	*Actuarial Associate*

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SECTION 1

VALUATION SUMMARY

SECTION 2

VALUATION RESULTS

SECTION 3

SUPPLEMENTAL INFORMATION

SECTION 4

REPORTING INFORMATION

SEGAL

Purpose

This report has been prepared by The Segal Company to present a valuation of the Teachers Retirement Association Fund as of July 1, 2004. 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 administered by the Legislative Commission on Pensions and Retirement;
- The characteristics of covered active members, inactive vested members, pensioners and beneficiaries as of July 1, 2004, provided by the Fund;
- The assets of the Fund as of June 30, 2004, 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, 2004 is 100.01% compared to 103.13% as of July 1, 2003. This ratio is a measure of funding status, and its history is a measure of funding progress, and is the ratio required to be reported under GASB 25.
- As indicated on page 4 of this report, the total unrecognized investment loss as of June 30, 2004 is $549,452,647. This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience. Earnings in excess of 8.50% will help temper possible increases in future contribution requirements.
- The statutory contribution rate under Chapter 354 is equal to 10.00% of payroll compared to the required contribution rate under Chapter 356 of 8.46% of payroll. Therefore the contribution sufficiency is 1.54% of payroll as of July 1, 2004.
- There were no changes in plan provisions, actuarial assumptions or actuarial cost methods since the prior valuation. This is the first year that The Segal Company prepared the actuarial valuation of the Fund.

Summary of Key Valuation Results

	2004	2003
Contributions (% of payroll) for plan year beginning July 1:		
Statutory – Chapter 354	10.00%	10.00%
Required – Chapter 356	8.46%	8.37%
Sufficiency/(Deficiency)	1.54%	1.63%
Funding elements for plan year beginning July 1:		
Normal cost	$258,898,450	$279,583,000
Market value of assets	16,984,605,405	15,907,892,000
Actuarial value of assets (AVA)	17,519,909,350	17,384,179,000
Actuarial accrued liability (AAL)	17,518,783,700	16,856,379,000
Unfunded/(Overfunded) actuarial accrued liability	-1,125,650	-527,800,000
Funded ratios:		
Accrued Benefit Funded Ratio	104.77%	107.95%
Current assets (AVA)	$17,519,909,350	$17,384,179,000
Current benefit obligations	16,721,495,421	16,103,696,000
Projected Benefit Funded Ratio	104.64%	104.97%
Current and expected future assets	$20,721,263,103	$20,214,690,000
Current and expected future benefit obligations (Present Value of Benefits)	19,802,891,699	19,258,017,000
GASB 25/27 for plan year beginning July 1:		
Annual required employer contributions	$94,679,310	$67,957,000
Accrued Liability Funded Ratio (AVA/AAL)	100.01%	103.13%
Covered actual payroll	$3,032,483,365	$2,952,887,000
Demographic data for plan year beginning July 1:		
Number of pensioners and beneficiaries	37,649	36,199
Number of vested terminated members	10,767	9,304
Number of other non-vested terminated members	18,223	19,256
Number of active members	72,008	71,916
Total projected payroll	$3,206,759,440	$3,163,007,000
Average annual payroll (projected dollars)	44,533	43,983

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 three valuations can be seen in this chart.

CHART 1

Member Population: 2002 – 2004

Year Ended June 30	Active Members	Vested Terminated Members*	Retired Members and Beneficiaries	Ratio of Non-Actives to Actives
2002	71,690	8,680	34,974	0.61
2003	71,916	9,304	36,199	0.63
2004	72,008	10,767	37,649	0.67

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

Active Members

Plan costs are affected by the age, years of service and projected payroll of active members. In this year's valuation, there were 72,008 active members with an average age of 43.2, average years of service of 11.7 years and average projected payroll of $44,533. The 71,916 active members in the prior valuation had an average age of 43.0, average service of 11.6 years and average projected payroll of $43,983.

Inactive Members

In this year's valuation, there were 10,767 members with a vested right to a deferred or immediate vested benefit.

In addition, there were 18,223 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, 2004

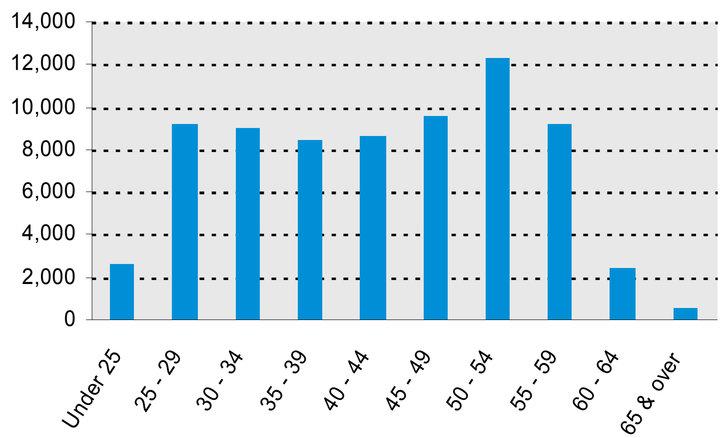
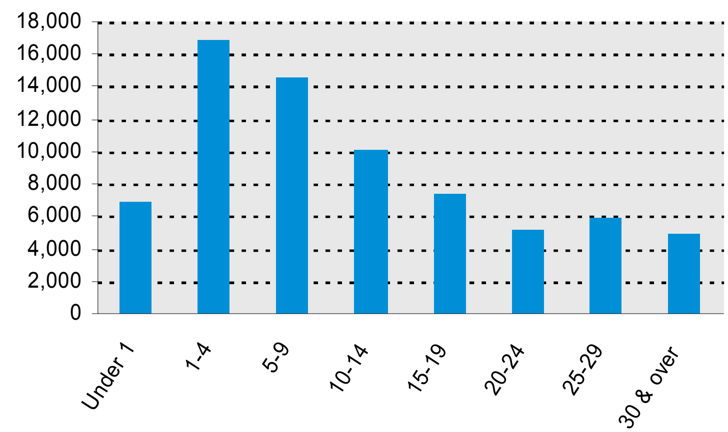


CHART 3

Distribution of Active Members by Years of Service as of June 30, 2004



Pensioners and Beneficiaries

As of June 30, 2004, 35,170 pensioners (including 589 disabled participants) and 2,479 beneficiaries were receiving total monthly benefits of $86,036,310. For comparison, in the previous valuation, there were 33,848 pensioners (including 558 disabled participants) and 2,351 beneficiaries receiving monthly benefits of $84,901,083.

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, 2004

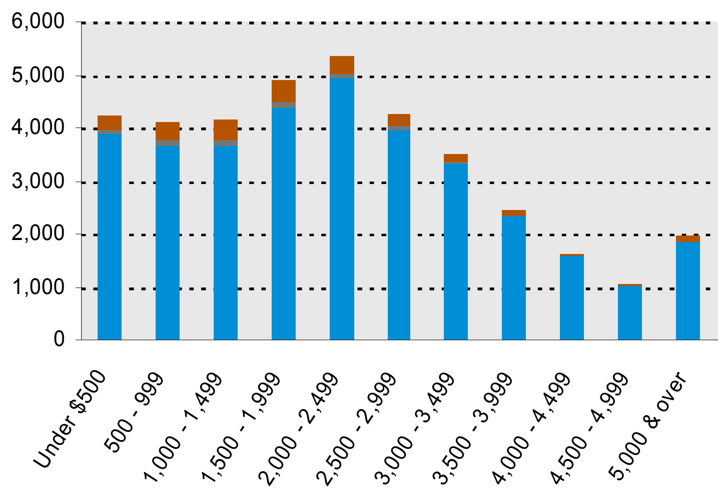
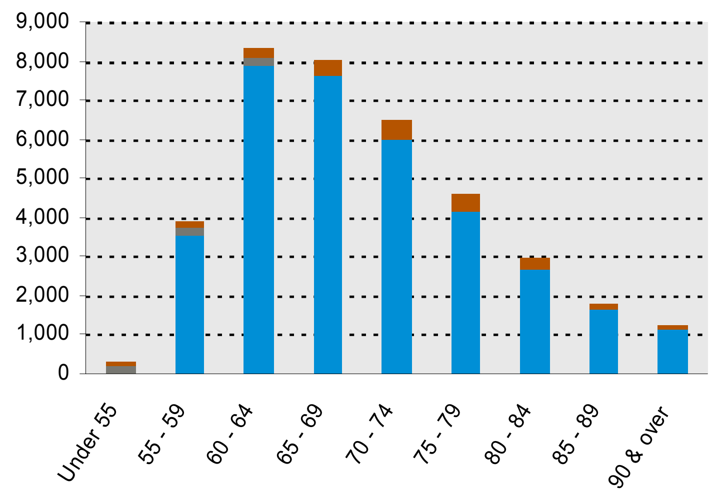


CHART 5

Distribution of Pensioners and Beneficiaries by Type and by Age as of June 30, 2004



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, 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, 2004

		Original Amount	% Not Recognized	
1.	Market value of assets available for benefits			$16,970,456,703
2.	Calculation of unrecognized return			
	(a) Year ended June 30, 2004	$499,642,191	80%	$399,713,753
	(b) Year ended June 30, 2003	-401,116,000	60%	-240,669,600
	(c) Year ended June 30, 2002	-1,150,511,000	40%	-460,204,400
	(d) Year ended June 30, 2001	-1,241,462,000	20%	-248,292,400
	(e) Total unrecognized return			-$549,452,647
3.	Actuarial value of assets: (1) – (2e) ("Current Assets")			$17,519,909,350

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.

The total loss is $578,325,968, including a loss of $594,157,408 from investments and a gain of $15,831,440 from all other sources. The net experience variation from individual sources other than investments was 0.1% of the actuarial accrued liability, which is under 1.0% of the actuarial accrued liability, including age/service retirements, disability, mortality (pre and post-retirement), withdrawal, and salary increases.

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

CHART 7

Actuarial Experience for Year Ended June 30, 2004

1.	Net gain/(loss) from investments	-$594,157,408
2.	Net gain/(loss) from other experience	15,831,440
3.	Net experience gain/(loss): (1) + (2)	-$578,325,968

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 on an actuarially sound basis and in accordance with the GASB funding 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 changes.

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 Ended June 30		
Category	**2004**	**2003**	**Change From Prior Year**
Active members in valuation:			
Number	72,008	71,916	0.1%
Average age	43.2	43.0	N/A
Average service	11.7	11.6	N/A
Total projected payroll	$3,206,759,440	$3,163,007,000	1.4%
Average projected payroll	44,533	43,983	1.3%
Total active vested members	55,704	55,164	1.0%
Vested terminated members	10,767	9,304	15.7%
Retired participants:			
Number in pay status	34,581	33,290	3.9%
Average age	69.9	68.1	N/A
Average monthly benefit	$2,315	$2,383	-2.9%
Disabled members:			
Number in pay status	589	558	5.6%
Average age	57.2	57.0	N/A
Average monthly benefit	$1,615	$1,627	-0.7%
Beneficiaries:			
Number in pay status	2,479	2,351	5.4%
Average age	73.5	72.8	N/A
Average monthly benefit	$2,022	$1,984	1.9%
Other non-vested terminated members	18,223	19,256	-5.4%

EXHIBIT B

Members in Active Service as of June 30, 2004
By Age, Years of Service, and Average Projected Payroll

		Years of Service							
Age	**Total**	**Under 1**	**1-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 & over**
Under 25	2,672	1,522	1,150	- -	- -	- -	- -	- -	- -
	$23,280	$17,288	$31,211	- -	- -	- -	- -	- -	- -
25 - 29	9,188	1,436	5,966	1,786	- -	- -	- -	- -	- -
	31,890	14,218	33,243	$41,578	- -	- -	- -	- -	- -
30 - 34	8,977	629	2,567	4,803	977	1	- -	- -	- -
	39,323	18,413	32,905	43,221	$50,472	$52,314	- -	- -	- -
35 - 39	8,494	615	1,625	2,426	3,255	573	- -	- -	- -
	43,164	13,494	32,106	43,034	51,965	56,924	- -	- -	- -
40 - 44	8,599	720	1,637	1,602	1,809	2,374	457	- -	- -
	45,100	14,056	30,513	42,898	51,498	58,226	$60,473	- -	- -
45 - 49	9,553	686	1,410	1,514	1,437	1,548	2,014	943	1
	47,428	11,486	28,231	42,368	50,736	57,599	59,707	$62,446	$43,855
50 - 54	12,323	526	1,190	1,328	1,500	1,501	1,431	3,196	1,651
	52,757	12,486	28,254	40,531	49,738	57,766	61,066	63,284	63,692
55 - 59	9,239	408	843	740	859	1,032	994	1,466	2,897
	55,016	12,373	34,055	38,988	48,951	57,207	61,320	64,415	65,314
60 - 64	2,398	237	355	260	247	302	300	322	375
	48,824	10,991	28,971	29,818	45,088	57,320	60,949	68,930	73,360
65 & over	565	164	173	59	38	29	26	21	55
	27,466	7,884	15,199	19,059	38,934	57,923	58,406	58,630	82,953
Total	72,008	6,943	16,916	14,518	10,122	7,360	5,222	5,948	4,979
	$44,533	$14,421	$31,678	$42,063	$50,761	$57,717	$60,518	$63,719	$65,573

EXHIBIT C

Retired Participants as of June 30, 2004
By Age, Years Retired, and Average Annual Benefit

		Years Retired						
Age	**Total**	**Under 1**	**1 - 4**	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25 & Over**
Under 50	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -
50 - 54	23	8	15	- -	- -	- -	- -	- -
	$21,030	$20,491	$21,317	- -	- -	- -	- -	- -
55 - 59	3,551	995	2,299	257	- -	- -	- -	- -
	31,085	32,565	29,298	$41,343	- -	- -	- -	- -
60 - 64	7,872	436	4,211	3,199	24	2	- -	- -
	29,333	23,426	28,739	30,966	$25,327	$2,516	- -	- -
65 - 69	7,606	168	1,552	4,172	1,692	22	- -	- -
	24,246	16,086	18,183	26,399	25,366	19,743	- -	- -
70 - 74	5,979	20	211	1,734	3,171	838	4	1
	28,118	6,094	16,760	25,850	30,810	26,055	$23,996	$9,462
75 - 79	4,147	3	24	206	1,549	1,835	530	- -
	29,907	39,972	13,271	24,280	28,942	32,100	28,016	- -
80 - 84	2,644	2	4	26	193	1,197	1,065	157
	28,742	36,368	20,345	19,701	29,521	28,805	30,782	15,087
85 & Over	2,759	- -	- -	1	15	138	1,001	1,604
	24,116	- -	- -	1,054	13,965	28,026	27,387	21,848
Total	34,581	1,632	8,316	9,595	6,644	4,032	2,600	1,762
	$27,786	$28,062	$26,557	$28,156	$28,893	$29,644	$28,901	$21,239

EXHIBIT D

Disabled Members as of June 30, 2004
By Age, Years Disabled, and Average Annual Benefit

		Years Disabled						
Age	**Total**	**Under 1**	**1 - 4**	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25 & Over**
Under 50	53	2	28	15	8	- -	- -	- -
	$8,438	$10,349	$8,426	$9,325	$6,339	- -	- -	- -
50 - 54	103	10	51	31	10	1	- -	- -
	14,832	23,397	13,893	13,774	15,387	$4,345	- -	- -
55 - 59	205	16	92	66	21	8	2	- -
	20,581	22,634	19,567	21,518	20,335	13,647	$50,172	- -
60 - 64	194	3	61	81	33	12	4	- -
	23,027	20,921	18,663	27,883	22,591	16,947	14,637	- -
65 - 69	34	- -	12	11	6	3	1	1
	22,228	- -	14,607	30,566	30,987	14,182	10,785	$4,998
70 - 74	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -
75 - 79	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -
80 - 84	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -
85 & Over	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -
Total	589	31	244	204	78	24	7	1
	$19,384	$21,922	$16,633	$22,460	$20,039	$14,976	$24,240	$4,998

EXHIBIT E

Beneficiaries as of June 30, 2004
By Age, Years Since Death, and Average Annual Benefit

		Years of Service						
Age	**Total**	**Under 1**	**1 - 4**	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25 & Over**
Under 50	82	1	47	24	4	5	- -	1
	$14,866	$6,723	$15,384	$16,280	$9,685	$11,003	- -	$4,745
50 - 54	60	2	33	17	7	1	- -	- -
	17,012	19,574	17,163	16,901	18,084	1,295	- -	- -
55 - 59	152	6	78	48	18	2	- -	- -
	19,456	30,855	21,387	17,830	13,220	5,066	- -	- -
60 - 64	269	32	102	88	33	12	1	1
	22,524	33,331	22,580	22,107	15,943	16,908	$4,703	10,155
65 - 69	365	32	140	105	57	22	4	5
	21,992	21,963	22,181	23,112	21,771	18,100	13,404	19,851
70 - 74	496	42	162	138	84	47	18	5
	27,175	32,372	27,786	29,124	24,060	19,807	28,617	26,372
75 - 79	475	24	148	128	86	60	20	9
	25,637	23,392	24,053	24,457	31,579	24,670	24,443	26,788
80 - 84	317	21	65	90	64	39	28	10
	27,500	29,018	26,063	28,180	27,848	23,883	33,729	21,974
85 & Over	263	20	62	60	41	25	24	31
	24,718	21,160	26,001	25,515	20,511	27,560	26,474	24,818
Total	2,479	180	837	698	394	213	95	62
	$24,267	$27,522	$23,576	$24,531	$24,189	$22,062	$27,811	$23,810

EXHIBIT F
Reconciliation of Member Data

		Active Members	Vested Terminated Members	Other Non-Vested Terminated Members	Retired Participants	Disableds	Beneficiaries	Total
A.	Number as of June 30, 2003	71,916	9,304	19,256	33,290	558	2,351	136,675
B.	Additions	5,471	2,593	3,501	1,922	0	235	13,722
C.	Deletions:							
	1. Retirements	-1,606	-210	-76	0	-30	0	-1,922
	2. Disability	0	0	0	0	0	0	0
	3. Died with beneficiary	-20	-5	-2	-206	-2	0	-235
	4. Died without beneficiary	-3	0	0	-508	-12	-2	-525
	5. Terminated - deferred	-1,731	0	-862	0	0	0	-2,593
	6. Terminated – other non-vested	-3,442	-56	0	0	0	0	-3,498
	7. Refunds	-382	-148	-2,725	0	0	0	-3,255
	8. Rehired as active	1,808	-739	-1,069	0	0	0	0
	9. Transfers to other fund	-3	0	0	0	0	0	-3
	10. Expired benefits	0	0	0	-7	0	-73	-80
D.	Data adjustments	0	28	200	90	75	-32	361
E.	Number as of June 30, 2004	72,008	10,767	18,223	34,581	589	2,479	138,647

EXHIBIT G

Statement of Change in Net Plan Assets for Year Ended June 30, 2004

				Non-MPRIF Assets	MPRIF Reserve	Market Value
A.	Assets available at beginning of period			$6,194,385,000	$9,713,507,000	$15,907,892,000
B.	Additions:					
	1.	Member contributions		$159,139,548	$0	$159,139,548
	2.	Employer contributions		151,028,911	0	151,028,911
	3.	Contributions from other sources		3,365,997	0	3,365,997
	4.	MPRIF income		0	764,298,463	764,298,463
	5.	Net investment income:				
		(a)	Interest and dividends	$638,195,977	$0	$638,195,977
		(b)	Net appreciation/(depreciation)	379,467,046	0	379,467,046
		(c)	Investment expenses	-8,806,476	0	-8,806,476
		(d)	Net subtotal	$1,008,856,547	$0	$1,008,856,547
	6.	Other		3,900,006	0	3,900,006
	7.	Total additions		$1,326,291,009	$764,298,463	$2,090,589,472
C.	Operating expenses:					
	1.	Service retirements		$0	$982,474,587	$982,474,587
	2.	Disability benefits		11,734,673	0	11,734,673
	3.	Survivor benefits		1,189,666	13,011,545	14,201,211
	4.	Refunds		6,861,708	0	6,861,708
	5.	Administrative expenses		12,179,212	0	12,179,212
	6.	Other		573,378	0	573,378
	7.	Total operating expenses		$32,538,637	$995,486,132	$1,028,024,769
D.	Other changes in reserves:					
	1.	Annuities awarded		-$596,486,708	$596,486,708	$0
	2.	Mortality gain/(loss)		-14,148,702	14,148,702	0
	3.	Change in MPRIF assumptions		0	0	0
	4.	Total other changes		-$610,635,410	$610,635,410	$0
E.	Assets available at end of period			$6,877,501,962	$10,092,954,741	$16,970,456,703

EXHIBIT G (Continued)

Statement of Change in Net Plan Assets for Year Ended June 30, 2004

	Non-MPRIF Assets	MPRIF Reserve	Market Value
F. Determination of current year unrecognized asset return			
1. Average balance:			
(a) Non-MPRIF Assets available at BOY: (A)			$6,194,385,000
(b) Non-MPRIF Assets available at EOY*: (E)			6,891,650,644
(c) Average balance [(a) + (b) – Net Investment Income] / 2 Net Investment Income: (B.5.(d)) + (B.6)			6,036,639,556
2. Expected return: 8.50% x (F.1. (c)):			513,114,362
3. Actual return: (B.5.(d)) + (B.6)			1,012,756,553
4. Current year unrecognized asset return: (F.3) – (F.2)			$499,642,191

**Before adjustment for MPRIF mortality gain (loss) and new MPRIF assumptions.*

EXHIBIT H

Statement of Plan Net Assets for Year Ended June 30, 2004

	Market Value	Cost Value
Assets in trust		
Cash, equivalents, short-term securities	$212,315,663	$212,315,663
Fixed income	1,438,133,775	1,499,348,241
Equity	5,238,279,026	5,267,896,654
Real estate	0	0
Equity in Minnesota Post-Retirement Investment Fund*	10,092,954,741	10,092,954,741
Invested securities lending collateral	1,693,375,126	1,693,375,126
Other assets	11,973,539	11,973,539
Total assets in trust	$18,687,031,870	$18,777,863,964
Assets receivable	$6,738,235	$6,738,235
Liabilities		
Invested securities lending collateral	-$1,693,375,126	-$1,693,375,126
Other	-29,938,277	-29,938,277
Total liabilities	-$1,723,313,403	-$1,723,313,403
Net assets held in trust for pension benefits		
MPRIF reserves	$10,092,954,741	$10,092,954,741
Member reserves:	1,632,995,023	1,632,995,023
Other non-MPRIF reserves	5,244,506,939	5,335,339,032
Total assets available for benefits	$16,970,456,703	$17,061,288,796
Net Assets at Market/Cost Value	$16,970,456,703	$17,061,288,796

* *The number shown is the full MPRIF reserve amount. The actual MPRIF market value of $8,218,301,690 is not used for funding purposes because this deficiency is accounted for separately and is expected to be recovered from future excess earnings on MPRI funds.*

EXHIBIT I

Development of the Fund Through June 30, 2004

Year Ended June 30	Employer Contributions and Other Sources	Employee Contributions	Net Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2002	- -	- -	- -	- -	- -	$17,378,994,000
2003	$150,971,000	$155,577,000	$696,917,000	$13,158,000	$985,122,000	17,384,179,000
2004	154,394,908	159,139,548	849,647,285	12,179,212	1,015,272,179	17,519,909,350

** 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, 2004

1. Unfunded/(Overfunded) actuarial accrued liability at beginning of year		-$527,800,000
2. Normal cost at beginning of year, including expenses		291,762,212
3. Total contributions		310,168,459
4. Interest		
(a) For whole year on (1) + (2)	-$20,063,212	
(b) For half year on (3)	-13,182,159	
(c) Total interest: (4a) – (4b)		-33,245,371
5. Expected unfunded/(overfunded) actuarial accrued liability: (1) + (2) – (3) + (4)		-$579,451,618
6. Changes due to (gain)/loss from:		
(a) Investments	$594,157,408	
(b) Demographics*	-15,831,440	
(c) Total changes due to (gain)/loss		$578,325,968
7. Unfunded/(Overfunded) actuarial accrued liability at end of year		-$1,125,650

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

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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 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

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

1.	Pensioners as of the valuation date (including 2,479 beneficiaries in pay status)		37,649
2.	Members inactive during year ended June 30, 2004 with vested rights		10,767
3.	Members active during the year ended June 30, 2004		72,008
	Fully vested	55,704	
	Not vested	16,304	
4.	Other non-vested terminated members as of June 30, 2004		18,223

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. Determination of Actuarial Accrued Liability			
1. Active members:			
(a) Retirement benefits	$8,290,002,419	$1,816,905,486	$6,473,096,933
(b) Disability benefits	154,070,194	55,494,488	98,575,706
(c) Death benefits	71,258,561	23,372,427	47,886,134
(d) Withdrawal benefits	579,517,886	388,335,598	191,182,288
(e) Total	$9,094,849,060	$2,284,107,999	$6,810,741,061
2. Vested terminated members	$416,486,946	- -	$416,486,946
3. Other non-vested terminated members	42,573,517	- -	42,573,517
4. Annuitants in MPRIF	10,092,954,741	- -	10,092,954,741
5. Annuitants not in MPRIF	156,027,435	- -	156,027,435
6. Total	$19,802,891,699	$2,284,107,999	$17,518,783,700
B. Determination of Unfunded Actuarial Accrued Liability			
1. Actuarial Accrued Liability			$17,518,783,700
2. Actuarial Value of Assets			17,519,909,350
3. Unfunded Actuarial Accrued Liability: (1) – (2)			-$1,125,650
C. Determination of Supplemental Contribution Rate			
1. Present value of future payrolls through the amortization date of June 30, 2034			$59,561,412,597
2. Supplemental contribution rate: (B.3) / (C.1)			0.00%

EXHIBIT II
Actuarial Balance Sheet

A. Current Assets			$17,519,909,350
B. Expected Future Assets			
1. Present Value of Expected Future Statutory Supplemental Contributions			$917,245,754
2. Present Value of Future Normal Costs			2,284,107,999
3. Total Expected Future Assets			$3,201,353,753
C. Total Current and Expected Future Assets			$20,721,263,103
D. Current Benefit Obligations	**Non-Vested**	**Vested**	**Total**
1. Benefit recipients:			
(a) Retirement annuities	- -	$9,625,271,362	$9,625,271,362
(b) Disability benefits	- -	143,652,771	143,652,771
(c) Beneficiaries	- -	480,058,043	480,058,043
2. Vested terminated members	- -	416,486,946	416,486,946
3. Other non-vested terminated members	- -	42,573,517	42,573,517
4. Active members:			
(a) Retirement benefits	$32,233,629	5,500,651,937	5,532,885,566
(b) Disability benefits	1,025,185	92,081,392	93,106,577
(c) Death benefits	561,379	44,299,288	44,860,667
(d) Withdrawal benefits	14,032,815	328,567,157	342,599,972
5. Total Current Benefit Obligations	$47,853,008	$16,673,642,413	$16,721,495,421
E. Expected Future Benefit Obligations			3,081,396,278
F. Total Current and Expected Future Benefit Obligations - Present Value of Benefits: (D.5 + E)			$19,802,891,699
G. Current Unfunded Actuarial Liability (D.5 - A)			-$798,413,929
H. Current and Future Unfunded Actuarial Liability (F - C)			-$918,371,404

EXHIBIT III

Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended June 30	Actuarially Required Contribution Rate (a)	Actual Covered Payroll (b)	Actual Member Contributions (c)	Annual Required Contributions [(a) x (b)] – (c)	Actual Employer Contributions [(1)]	Percentage Contributed
1991	13.11%	$1,943,375,000	$89,313,000	$165,463,000	$159,439,000	96.36%
1992	13.04	1,989,624,000	91,506,000	167,941,000	162,370,000	96.68
1993	13.13	2,065,881,000	94,709,000	176,541,000	168,071,000	95.20
1994	12.75	2,150,300,000	100,803,000	173,360,000	171,855,000	99.13
1995	14.73	2,204,693,000	143,536,000	181,215,000	179,672,000	99.15
1996	14.30	2,268,390,000	148,051,000	176,329,000	184,495,000	104.63
1997	12.78	2,359,011,000	154,161,000	147,321,000	191,670,000	130.10
1998 [(2)]	9.55	2,422,957,000	124,096,000	107,296,000	151,323,000	141.03
1999 [(2)]	8.39	2,625,254,000	132,040,000	88,219,000	130,526,000	147.96
2000 [(2)]	8.36	2,704,575,000	138,696,000	87,406,000	134,419,000	153.79
2001 [(2), (3)]	7.92	2,812,000,000	145,075,000	77,635,000	139,799,000	180.07
2002 [(2)]	7.85	2,873,771,000	152,331,000	73,260,000	142,222,000	194.13
2003 [(2), (4)]	7.57	2,952,887,000	155,577,000	67,957,000	149,481,000	219.96
2004 [(2)]	8.37	3,032,483,365	159,139,548	94,679,310	151,028,911	159.52
2005[(2)]	8.46					

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

(2) *Actuarially Required Contributions calculated according to parameters of GASB 25 using a 30-year amortization of the negative unfunded actuarial accrued liability.*

(3) *Actuarially Required Contribution Rate prior to change in Actuarial Assumptions and Asset Valuation Method is 7.31%.*

(4) *Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 8.11%.*

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	$5,614,924,000	$7,213,720,000	$1,598,796,000	77.84%	$1,943,375,000	82.27%
07/01/1992	6,324,733,000	7,662,522,000	1,337,789,000	82.54	1,989,624,000	67.24
07/01/1993	7,045,937,000	8,266,059,000	1,220,122,000	85.24	2,065,881,000	59.06
07/01/1994	7,611,936,000	9,115,266,000	1,503,330,000	83.51	2,150,300,000	69.91
07/01/1995	8,348,124,000	9,717,623,000	1,369,499,000	85.91	2,204,693,000	62.12
07/01/1996	9,541,221,000	10,366,168,000	824,947,000	92.04	2,268,390,000	36.37
07/01/1997	11,103,759,000	10,963,637,000	-140,122,000	101.28	2,359,011,000	-5.94
07/01/1998	12,727,546,000	12,046,312,000	-681,234,000	105.66	2,422,957,000	-28.12
07/01/1999	14,011,247,000	13,259,569,000	-751,678,000	105.67	2,625,254,000	-28.63
07/01/2000	15,573,151,000	14,802,441,000	-770,710,000	105.21	2,704,575,000	-28.50
07/01/2001	16,834,024,000	15,903,984,000	-930,040,000	105.85	2,812,000,000	-33.07
07/01/2002	17,378,994,000	16,503,099,000	-875,895,000	105.31	2,873,771,000	-30.48
07/01/2003	17,384,179,000	16,856,379,000	-527,800,000	103.13	2,952,887,000	-17.87
07/01/2004	17,519,909,350	17,518,783,700	-1,125,650	100.01	3,032,483,365	-0.04

Exhibit V
Determination of Contribution Sufficiency

		July 1, 2004	
A. Statutory Contributions – Chapter 354		**Percent of Payroll**	**Dollar Amount**
1.	Employee contributions	5.00%	$160,337,972
2.	Employer contributions	5.00	160,337,972
3.	Total	10.00%	$320,675,944
B. Required Contributions – Chapter 356		**Percent of Payroll**	**Dollar Amount**
1.	Normal Cost:		
	(a) Retirement	6.58%	$211,001,637
	(b) Disability	0.18	5,890,642
	(c) Death	0.08	2,574,346
	(d) Withdrawal	1.23	39,431,825
	(e) Total	8.07%	$258,898,450
2.	Supplemental contribution amortization	0.00%	$0
3.	Allowance for administrative expenses	0.39%	12,506,362
4.	Total	8.46%	$271,404,812
C. Contribution Sufficiency / (Deficiency): (A.3) – (B.4)		1.54%	$49,271,132
Projected annual payroll for fiscal year beginning on the valuation date			$3,206,759,440

EXHIBIT VI

Supplementary Information Required by the GASB

Valuation date	July 1, 2004
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll, assuming payroll increases of 5.00% per annum
Remaining amortization period	30 years remaining as of July 1, 2004
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	6.00% per annum
Projected salary increases	Select and ultimate rates by age, with ultimate rates of 5.00% - 6.00%
Plan membership:	
Pensioners and beneficiaries receiving benefits	37,649
Terminated vested members entitled to, but not yet receiving benefits	10,767
Other terminated non-vested members	18,223
Active members	72,008
Total	138,647

EXHIBIT VII

Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

Healthy Pre-Retirement:

Male:	1983 Group Annuity Mortality Table for males set back 12 years
Female:	1983 Group Annuity Mortality Table for females set back 10 years

Healthy Post-Retirement:

Male:	1983 Group Annuity Mortality Table for males set back 6 years
Female:	1983 Group Annuity Mortality Table for females set back 3 years

Disabled:

Male:	1965 Railroad Retirement Board (RRB) rates through age 54. For ages 55 to 64, graded rates between 1965 RRB rates and the Healthy Post-Retirement mortality table. For ages 65 and later, the Healthy Post-Retirement mortality table.
Female:	1965 Railroad Retirement Board (RRB) rates through age 54. For ages 55 to 64, graded rates between 1965 RRB rates and the Healthy Post-Retirement mortality table. For ages 65 and later, the Healthy Post-Retirement mortality table.

Summary of Rates: Shown below for selected ages:

	Rate (%)								
	Pre-Retirement Mortality		Withdrawal		Disability		Retirement		
Age	Male	Female	Male	Female	Male	Female	Rule of 90 Eligible	Other	Salary Increases
20	0.03	0.01	3.70	4.50	0.00	0.00	0.00	0.00	6.00%
25	0.03	0.01	3.20	4.50	0.00	0.00	0.00	0.00	6.00
30	0.04	0.02	2.70	4.50	0.00	0.00	0.00	0.00	6.00
35	0.04	0.03	2.50	3.90	0.01	0.01	0.00	0.00	6.00
40	0.05	0.03	2.35	2.75	0.03	0.03	0.00	0.00	5.70
45	0.07	0.05	2.10	2.10	0.05	0.05	0.00	0.00	5.20
50	0.10	0.07	1.85	1.85	0.11	0.10	0.00	0.00	5.00
55	0.17	0.10	0.00	0.00	0.22	0.16	50.00	9.00	5.00
60	0.31	0.16	0.00	0.00	0.33	0.25	50.00	12.00	5.30
65	0.52	0.25	0.00	0.00	0.00	0.00	50.00	50.00	5.70
70	0.77	0.42	0.00	0.00	0.00	0.00	35.00	35.00	5.70
71	0.84	0.47	0.00	0.00	0.00	0.00	100.00	100.00	5.70

Withdrawal Rates: Select and ultimate rates were based on recent plan experience as of June 30, 2000. Ultimate rates after the third year are shown in the rate table. Select rates are as follows:

	First Year	Second Year	Third Year
Male:	45.00%	12.00%	6.00%
Female:	40.00%	10.00%	8.00%

Salary Increases:	Reported salary for prior fiscal year, with new hires annualized, increased according to the ultimate table shown in the rate table to current fiscal year and annually for each future year. During a ten-year select period, 0.30 x (10-T) where T is completed years of service is added to the ultimate rate.
Retirement Age:	Graded rates beginning at age 55 as shown in rate table. Members who have attained the highest assumed retirement age will retire in one year.
Percent Married:	85% of male members and 65% of female members are assumed to be married. Assume members have no children.
Age of Spouse:	Females three years younger than males.
Net Investment Return:	
Pre-Retirement:	8.50% per annum
Post-Retirement:	6.00% per annum
Administrative Expenses:	Prior year administrative expenses expressed as percentage of prior year payroll.
Allowance for Combined Service Annuity:	Liabilities for active members are increased by 1.40% and liabilities for former members are increased by 4.00% to account for the effect of some Participants having eligibility for a Combined Service Annuity.
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.
Interest on Member Contributions:	Members and former members who are eligible for the money purchase annuity are assumed to receive interest credits equal to the Pre-Retirement interest rate. All other members and former members receive the interest crediting rate as specified in statutes.

Special Consideration:	Married members assumed to elect subsidized joint and survivor form of annuity as follows: Males: 15% elect 50% J&S option 25% elect 75% J&S option 55% elect 100% J&S option Females: 20% elect 50% J&S option 10% elect 75% J&S option 30% elect 100% J&S option
Benefit Increases After Retirement:	Payment of earnings on retired reserves in excess of 6.00% accounted for by 6.00% post-retirement assumptions.
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:	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 5.00% 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.

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

EXHIBIT VIII

Summary of Plan Provisions - Basic

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
Eligibility:	A public school or MNSCU teacher who is not covered by the Social Security Act, except for teachers employed by Minneapolis, St. Paul, or Duluth public schools or by the University of Minnesota. Effective July 1, 2002, charter school teachers employed by Minneapolis, St. Paul, or Duluth public schools are covered by this fund. No MNSCU teacher is a Member if that person elected coverage under Chapter 354B.
Contributions:	Member: 9.00% of Salary. Employer: 9.00% of Salary.
Allowable Service:	A day of credit is earned if five hours are taught that day. A year is earned if 170 days of service are credited. Credit may also be provided for certain leaves if contributions are paid into the fund.
Salary:	Compensation used for contribution purposes excluding lump sum annual or sick leave payments, severance payments, any payments made in lieu of employer paid fringe benefits or expenses, and employer contributions to a Section 457 deferred compensation plan.
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:

Age/Service Requirement:

(a) Age 65 and three years of Allowable Service.

(b) Age 62 and 30 years of Allowable Service.

Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.

Early Retirement:

Age/Service Requirement:

(a) Age 55 and three years of Allowable Service.

(b) Any age with 30 years of Allowable Service.

(c) Rule of 90: Age plus Allowable Service totals 90.

Amount:

The greater of (a), (b) or (c):

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

(b) 2.70% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3.00% per year and actuarial reduction for each month the member is under age 65.

(c) For eligible members, money purchase annuity equal to the actuarial equivalent of 220.00% of the member's accumulated deductions plus interest thereon.

Form of Payment:

Life annuity. Actuarially equivalent options are:

(a) 50%, 75% or 100% Joint and Survivor with bounce back feature without additional reduction.

(b) 15-year Certain and Life.

(c) Guaranteed Refund.

Benefit Increases:

Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF). A member who has been receiving a benefit for a least 12 full months as of June 30 will receive a full increase. Members receiving benefits for at least one full month but less than 12 full months will receive a partial pro rata increase.

Members retired under laws in effect before July 1, 1973 receive an additional lump-sum payment from TRA each year. In 1989, this lump-sum payment was 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 increases by the same percentage increase that is applied to regular annuities paid from MPRIF. Effective January 1, 2002 the annual lump-sum payment is divided by 12 and paid as a monthly life annuity in the annuity from elected.

Members who terminate service after June 30, 1997 and whose benefits commence during the period July 2, 1997 through July 1, 2002 shall receive a percentage of the July 1, 1997 permanent increase as follows:

July 2, 1997 – July 1, 1998	50%
July 2, 1998 – July 1, 1999	40%
July 2, 1999 – July 1, 2000	30%
July 2, 2000 – July 1, 2001	20%
July 2, 2001 – July 1, 2002	10%

Disability:

Age/Service Requirement:

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

Amount:	Normal Retirement Benefit based on Allowable Service and Average Salary at disability without reduction for commencement before Normal Retirement Age unless an optional annuity plan is selected. Supplemental benefit of $25 per month. A member who became disabled before July 1, 1997 whose benefit does not commence until after June 30, 1997 shall receive an actuarially equivalent increase to reflect the change from 5.00% to 6.00% in the post-retirement interest assumption. Payments stop at normal retirement age or the five year anniversary of the effective date of the disability benefit, whichever is later. Payments stop earlier if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment. If death occurs before retirement status, the surviving spouse and dependent children are eligible for survivor benefits.
Form of Payment:	Same as for retirement.
Benefit Increases:	Adjusted by TRA to provide same increase as MPRIF. Members who become disabled after June 30, 1997 and whose benefits commence during the period July 1, 1997 through July 1, 2002 shall receive a percentage of the July 1, 1997 permanent increase as follows:

July 2, 1997 – July 1, 1998	50%
July 2, 1998 – July 1, 1999	40%
July 2, 1999 – July 1, 2000	30%
July 2, 2000 – July 1, 2001	20%
July 2, 2001 – July 1, 2002	10%

<u>Retirement After Disability</u>:

Age/Service Requirement:	Normal Retirement Age or the five year anniversary of the effective date of the disability benefit, whichever is later.

Amount:	Any optional annuity continues. Otherwise, the larger of the disability benefit paid before Normal Retirement Age or the normal retirement benefit available at Normal Retirement Age, or an actuarially equivalent optional annuity.
Benefit Increases:	Same as for retirement.

Death:

Surviving Spouse Benefit:

Age/Service Requirement:	Active member with 18 months of Allowable Service or member receiving a disability benefit.
Amount:	50% of salary for the last full fiscal year preceding death. Maximum family benefit is $1,000 per month. Benefits paid until spouse's death. Surviving spouse optional annuity or refund of contributions may be elected in lieu of this benefit.

Surviving Dependent Child Benefit:

Age/Service Requirement:	Active member with 18 months of Allowable Service or member receiving a disability benefit.
Amount:	10% of salary for the last full fiscal year preceding death. Family benefit minimum (including spouse's benefit) of 50% of salary and maximum $1,000 per month. Benefits paid until child marries, dies, or attains age 18 (age 22 if full-time student).

Surviving Spouse Optional Annuity:

Age/Service Requirement:	Member or former member with three years of Allowable Service who dies before retirement or disability benefits commence.
Amount:	Survivor's payment of the 100% Joint and Survivor benefit or an actuarial equivalent term certain annuity. If commencement is prior to age 65 (age 62 if 30 years of service), the benefit is reduced same as early retirement with half the applicable reduction factor used from age 55 to the actual commencement age. If no surviving spouse, then an actuarial equivalent dependent child benefit is paid to age 20 or for five years if longer.

	A survivor of a member who terminated service before July 1, 1997 whose benefit does not commence until after June 30, 1997 shall receive an actuarially equivalent increase to reflect the change from 5.00% to 6.00% in the post-retirement interest assumption.
Benefit Increases:	Adjusted by TRA to provide same increase as MPRIF except surviving spouse optional annuity benefit increases which are paid from MPRIF. Survivors of members who terminate service and die after June 30, 1997 and whose benefits commence during the period July 2, 1997 through July 1, 2002 shall receive a percentage of the July 1, 1997 permanent increase as follows:

July 2, 1997 – July 1, 1998	50%
July 2, 1998 – July 1, 1999	40%
July 2, 1999 – July 1, 2000	30%
July 2, 2000 – July 1, 2001	20%
July 2, 2001 – July 1, 2002	10%

Refund of Contributions:

Age/Service Requirement:	Member dies before receiving any retirement benefits and survivor benefits are not elected.
Amount:	The excess of the member's contributions over any disability benefits paid plus 5.00% interest compounded annually if death occurred before May 16, 1989 and 6.00% interest compounded annually if death occurred on or after May 16, 1989.

Withdrawal:

Refund of Contributions:

Age/Service Requirement:	Thirty days following termination of teaching service.
Amount:	Member's contributions with 5.00% interest compounded annually if termination occurred before May 16, 1989 and 6.00% interest compounded annually if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund.

<u>*Deferred Annuity*</u>:

Age/Service Requirement: Vested at date of termination. Current requirement is three years of Allowable Service.

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

(a) 0.00% before July 1, 1971;

(b) 5.00% from July 1, 1971 to January 1, 1981;

(c) 3.00% thereafter until January 1 of the year following attainment of age 55; and

(d) 5.00% thereafter until the annuity begins.
Amount is payable as a normal or early retirement.

A member who terminated service before July 1, 1997 whose benefit does not commence until after June 30, 1997 shall receive an actuarially equivalent increase to reflect the change from 5.00% to 6.00% in the post-retirement interest assumption; or

For eligible former members, money purchase annuity equal to the actuarial equivalent of 220.00% of the former member's accumulated deductions plus interest thereon.

Members who terminate service after June 30, 1997 and whose benefits commence during the period July 2, 1997 through July 1, 2002 shall receive a percentage of the July 1, 1997 permanent increase as follows:

July 2, 1997 – July 1, 1998	50%
July 2, 1998 – July 1, 1999	40%
July 2, 1999 – July 1, 2000	30%
July 2, 2000 – July 1, 2001	20%
July 2, 2001 – July 1, 2002	10%

Changes in Plan Provisions: There have been no changes made to the plan provisions since the prior valuation.

EXHIBIT IX

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
Eligibility:	A public school or MNSCU teacher who is covered by the Social Security Act, except for teachers employed by Minneapolis, St. Paul, or Duluth public schools or by the University of Minnesota. Effective July 1, 2002, charter school teachers employed by Minneapolis, St. Paul, or Duluth public schools are covered by this fund. No MNSCU teacher will become a new Member unless that person elects coverage under Chapter 354.
Contributions:	Member: 5.00% of Salary. Employer: 5.00% of Salary.
Allowable Service:	A day of credit is earned if five hours are taught that day. A year is earned if 170 days of service are credited. Credit may also be provided for certain leaves if contributions are paid into the fund.
Salary:	Compensation used for contribution purposes excluding lump sum annual or sick leave payments, severance payments, any payments made in lieu of employer paid fringe benefits or expenses, and employer contributions to a Section 457 deferred compensation plan.
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:

Age/Service Requirement:

First hired before July 1, 1989:

(a) Age 65 and three years of Allowable Service.

(b) Age 62 and 30 years of Allowable Service.

Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.

First hired after June 30, 1989:

The greater of (a) or (b):

(a) Age 65.

(b) The age eligible for full Social Security retirement benefits (but not to exceed age 66) and three years of Allowable Service.

Proportionate Retirement Annuity is available at normal retirement age and one year of Allowable Service.

Early Retirement:

Age/Service Requirement:

First hired before July 1, 1989:

(a) Age 55 and three years of Allowable Service.

(b) Any age with 30 years of Allowable Service.

(c) Rule of 90: Age plus Allowable Service totals 90.

First hired after June 30, 1989:

(a) Age 55 with three years of Allowable Service.

Amount:

First hired before July 1, 1989:

The greater of (a), (b) or (c):

(a) 1.20% of Average Salary for each of the first ten years of Allowable Service and 1.70% of Average Salary for each subsequent year with reduction of 0.25% for each month the member is under age 65 at time of retirement (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.

(c) For eligible members, money purchase annuity equal to the actuarial equivalent of 220.00% of the member's accumulated deductions plus interest thereon.

First hired after June 30, 1989:

1.70% of Average Salary for each year of Allowable Service assuming augmentation to age eligible for full Social Security retirement benefits at 3.00% per year and actuarial reduction for each month the member is under the full Social Security benefit retirement age but not to exceed age 66.

Form of Payment: Life annuity. Actuarially equivalent options are:

(a) 50%, 75% or 100% Joint and Survivor with bounce back feature without additional reduction.

(b) 15-year Certain and Life.

(c) Guaranteed Refund.

Benefit Increases: Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF). A member who has been receiving a benefit for a least 12 full months as of the previous June 30 will receive a full increase. Members receiving benefits for at least one full month but less than 12 full months will receive a partial pro rata increase.

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

Members who terminate service after June 30, 1997 and whose benefits commence during the period July 2, 1997 through July 1, 2002 shall receive a percentage of the July 1, 1997 permanent increase as follows:

July 2, 1997 – July 1, 1998	50%
July 2, 1998 – July 1, 1999	40%
July 2, 1999 – July 1, 2000	30%
July 2, 2000 – July 1, 2001	20%
July 2, 2001 – July 1, 2002	10%

Disability:

Age/Service Requirement: Total and permanent disability before Normal Retirement Age with three years of Allowable Service.

Amount: Normal Retirement Benefit based on Allowable Service and Average Salary at disability without reduction for commencement before Normal Retirement Age unless an optional annuity plan is selected.

Payments stop at Normal Retirement Age or the five year anniversary of the effective date of the disability benefit, whichever is later. Payments stop earlier if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment.

A member who became disabled before July 1, 1997 whose benefit does not commence until after June 30, 1997 shall receive an actuarially equivalent increase to reflect the change from 5.00% to 6.00% in the post-retirement interest assumption.

Form of Payment: Same as for retirement.

Benefit Increases:	Adjusted by TRA to provide same increase as MPRIF.
	Members who become disabled after June 30, 1997 and whose benefits commence during the period July 1, 1997 through July 1, 2002 shall receive a percentage of the July 1, 1997 permanent increase as follows:

July 2, 1997 – July 1, 1998	50%
July 2, 1998 – July 1, 1999	40%
July 2, 1999 – July 1, 2000	30%
July 2, 2000 – July 1, 2001	20%
July 2, 2001 – July 1, 2002	10%

Retirement After Disability:

Age/Service Requirement:	Normal Retirement Age or the five year anniversary of the effective date of the disability benefit, whichever is later.
Amount:	Any optional annuity continues. Otherwise, the larger of the disability benefit paid before Normal Retirement Age or the normal retirement benefit available at Normal Retirement Age, or an actuarially equivalent optional annuity.
Benefit Increases:	Same as for retirement.

Death:

Surviving Spouse Optional Annuity:

Age/Service Requirement:	Member or former member with three years of Allowable Service who dies before retirement benefits commence.
Amount:	Survivor's payment of the 100% Joint and Survivor benefit or an actuarial equivalent term certain annuity. If commencement is prior to age 65 (age 62 if 30 years of service), the benefit is reduced same as early retirement with half the applicable reduction factor used from age 55 to the actual commencement age. If no surviving spouse, then an actuarial equivalent dependent child benefit is paid to age 20 or for five years if longer.

A survivor of a member who terminated service before July 1, 1997 whose benefit does not commence until after June 30, 1997 shall receive an actuarially equivalent increase to reflect the change from 5.00% to 6.00% in the post-retirement interest assumption.

Benefit Increases: Same as for normal retirement.

Survivors of members who terminate service and die after June 30, 1997 and whose benefits commence during the period July 2, 1997 through July 1, 2002 shall receive a percentage of the July 1, 1997 permanent increase as follows:

July 2, 1997 – July 1, 1998	50%
July 2, 1998 – July 1, 1999	40%
July 2, 1999 – July 1, 2000	30%
July 2, 2000 – July 1, 2001	20%
July 2, 2001 – July 1, 2002	10%

Refund of Contributions:

Age/Service Requirement: Member dies before receiving any retirement benefits and the surviving spouse optional annuity is not elected.

Amount: The excess of the member's contributions over any disability benefits paid plus 5.00% interest compounded annually if death occurred before May 16, 1989 and 6.00% interest compounded annually if death occurred on or after May 16, 1989.

Withdrawal:

Refund of Contributions:

Age/Service Requirement: Thirty days following termination of teaching service.

Amount: Member's contributions with 5.00% interest compounded annually if termination occurred before May 16, 1989 and 6.00% interest compounded annually if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund.

<u>Deferred Annuity</u>:

Age/Service Requirement: Vested at date of termination. Current requirement is three years of Allowable Service.

Amount: The greater of benefit computed under law in effect at termination and increased by the following percentage compounded annually:

(a) 0.00% before July 1, 1971;

(b) 5.00% from July 1, 1971 to January 1, 1981;

(c) 3.00% thereafter until January 1 of the year following attainment of age 55; and

(d) 5.00% thereafter until the annuity begins.

Amount is payable as a normal or early retirement.

A member who terminated service before July 1, 1997 whose benefit does not commence until after June 30, 1997 shall receive an actuarially equivalent increase to reflect the change from 5.00% to 6.00% in the post-retirement interest assumption; or

For eligible former members, money purchase annuity equal to the actuarial equivalent of 220% of the former member's accumulated deductions plus interest thereon.

Members who terminate service after June 30, 1997 and whose benefits commence during the period July 2, 1997 through July 1, 2002 shall receive a percentage of the July 1, 1997 permanent increase as follows:

July 2, 1997 – July 1, 1998	50%
July 2, 1998 – July 1, 1999	40%
July 2, 1999 – July 1, 2000	30%
July 2, 2000 – July 1, 2001	20%
July 2, 2001 – July 1, 2002	10%

Changes in Plan Provisions: There have been no changes made to the plan provisions since the prior valuation.