

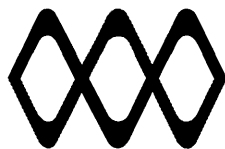
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**St. Paul Teachers' Retirement Fund
ACTUARIAL VALUATION REPORT**

July 1, 1998



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November 13, 1998

Legislative Commission on
Pensions and Retirement
55 State Office Building
St. Paul, Minnesota 55155

Re: *St. Paul Teachers' Retirement Fund*
July 1, 1998 Actuarial Valuation Report

Commission Members:

Pursuant the terms of our actuarial services contract, we have performed an actuarial valuation of the St. Paul Teachers' Retirement Fund as of July 1, 1998.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. We have relied on the basic employee data and asset figures as submitted by the St. Paul Teachers' Retirement Fund.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with the requirements of Section 356.215, Minnesota Statutes, and the requirements of the Standards of Actuarial Work, adopted by the Commission.

Respectfully submitted,

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Consulting Actuary

Lance M. Burma, F.S.A., M.A.A.A.
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Enclosure

St. Paul Teachers' Retirement Fund
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St. Paul Teachers' Retirement Fund
Report Highlights
(dollars in thousands)

	July 1, 1997 Valuation	Revised ⁽¹⁾ July 1, 1997 Valuation	July 1, 1998 Valuation
A. CONTRIBUTIONS % OF PAYROLL (Table 11)			
1. Statutory Contributions - Chapter 354A	19.24%	19.24%	17.59%
2. Required Contributions - Chapter 356	18.45%	20.35%	18.82%
3. Sufficiency / (Deficiency)	0.79%	(1.11%)	(1.23%)
B. FUNDING RATIOS			
1. Accrued Benefit Funding Ratio			
a. Current Assets (Table 1)	\$ 556,406	\$ 556,406	\$ 625,053
b. Current Benefit Obligations (Table 8)	708,052	755,529	809,945
c. Funding Ratio	78.58%	73.64%	77.17%
2. Accrued Liability Funding Ratio			
a. Current Assets (Table 1)	\$ 556,406	\$ 556,406	\$ 625,053
b. Actuarial Accrued Liability (Table 9)	757,589	805,066	861,584
c. Funding Ratio	73.44%	69.11%	72.55%
3. Projected Benefit Funding Ratio (Table 8)			
a. Current and Expected Future Assets	\$ 877,947	\$ 877,947	\$ 975,282
b. Current and Expected Future Benefit Obligations	892,866	940,343	1,010,085
c. Funding Ratio	98.33%	93.36%	96.55%
C. PLAN PARTICIPANTS			
1. Active Members			
a. Number (Table 3)	3,842	3,842	4,494
b. Projected Annual Earnings	\$ 160,200	\$ 160,200	\$ 178,365
c. Average Annual Earnings (Actual dollars)	\$ 41,697	\$ 41,697	\$ 39,690
d. Average Age	43.4	43.4	42.7
e. Average Service	11.7	11.7	10.3
f. Additional Members on Leave of Absence ⁽²⁾	179	179	159
2. Others			
a. Service Retirements (Table 4)	1,518	1,518	1,571
b. Disability Retirements (Table 5)	22	22	24
c. Survivors (Table 6)	180	180	194
d. Deferred Retirements (Table 7)	148	148	183
e. Terminated Other Non-Vested (Table 7)	783	783	839
f. Total	2,651	2,651	2,811

⁽¹⁾ For explanation of revision, see page 5 of this report.

⁽²⁾ Valued as deferred retirements, liability included with actives.

St. Paul Teachers' Retirement Fund *Commentary*

Purpose

The purpose of this valuation is to determine the financial status of the Plan. To achieve this purpose, an actuarial valuation is made at the beginning of each fiscal year as required by Section 356.215 of Minnesota Statutes.

Report Highlights

The financial status of the Plan can be measured by three different funding ratios:

The *Accrued Benefit Funding Ratio* is a measure of current funding status and, when viewed over a period of years, presents a view of the funding progress. It is based upon benefits which have been earned by service to the valuation date. As of July 1, 1998, the *Accrued Benefit Funding Ratio* is 77.17%.

The *Accrued Liability Funding Ratio* is also a measure of funding status and funding progress. It is based on the actuarial cost method that has historically been use by the State. For 1998 the *Accrued Liability Funding Ratio* is 72.55%.

The *Projected Benefit Funding Ratio* is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 96.55% shows that the current statutory contributions are insufficient in the long run.

Please see additional commentary on page 5 of this report regarding the comparable funding ratios determined as of July 1, 1997.

Asset Information (Tables 1 and 2)

Minnesota Statutes require that the asset value used for actuarial purposes recognize only one third of the unrealized gains and losses. This requirement exists because market values (which include all unrealized gains and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F.1 to F.6. It combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

The term "Actuarial Value of Assets" is used to indicate that the value was determined for use in this actuarial valuation. Since Minnesota Statutes refer to this value as "Current Assets", the latter phrase will be used in the remainder of this report.

The following table presents the components of Table 1, line A.4:

Other Assets
Table 1 Item A.4
(dollars in thousands)

	Market Value	Cost Value
Accounts Receivable		
Employer Contribution	\$ 1,029	\$ 1,029
Employee Contribution	120	120
State Amortization Aid	0	0
Interest	1,871	1,871
Dividends	432	432
Bond Sales	5,295	5,295
Net Gain on Bond Sales	6	6
Repaid Principal	0	0
Stock Sales	0	0
Net Gain on Stock Sales	0	0
Commission Recapture	3	3
Security Lending	14	14
Total Accounts Receivable	\$ 8,770	\$ 8,770
Fixed Assets	29	29
Total Other Assets	\$ 8,799	\$ 8,799

Actuarial Balance Sheet (Table 8)

An actuarial balance sheet provides a method for evaluating current and future levels of funding. The Current Benefit Obligation used to measure current funding level is calculated as follows:

For Active Members - salary and service are projected to retirement to determine benefits for each member and the ratio of credited service to total service establishes the portion of the projected benefit to be used in calculating the current funding level.

For Non-active Members - the discounted value of benefits, including augmentation in cases where benefits have not commenced.

Actuarial Cost Method (Table 9)

The approach used by the State of Minnesota to determine contribution sufficiency is the Entry Age Normal Actuarial Cost Method. The primary characteristic of this method is that it allocates costs as a level of percentage of payroll.

A comparison of this actuarial method (Table 9) to the actuarial balance sheet (Table 8) illustrates the two techniques for allocating liabilities of active Members to past and future. As noted in the prior section, the balance sheet allocates benefits and the corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

An Unfunded Actuarial Accrued Liability is computed under the Entry Age Normal Actuarial Cost Method by comparing the liabilities allocated to past service (Actuarial Accrued Liability) to the Current Assets. This amount, line B3, is funded over the remaining years to the amortization date by a series of payments that remain a constant percentage of payroll each year.

The payments will increase 5.0% each year because that is the assumed rate of increase in payroll. Although the payment schedule will be adequate to amortize the existing unfunded, the lower payments in the earlier years will not be sufficient to cover the interest on the unfunded liability. After a few years, the annual payment will cover the interest and also repay a portion of the unfunded.

Sources of Actuarial Gains and Losses (Table 10)

The assumptions used in making the calculations using the Entry Age Normal Actuarial Cost Method are based on long-term expectations. Each year, the actual experience will deviate from the long-term expectation. For an analysis of the major components of the Actuarial Gain or Loss refer to Table 10.

Contribution Sufficiency (Table 11)

This report determines the adequacy of Statutory Contributions by comparing the Statutory Contributions to the Required Contributions.

The Required Contributions, set forth in Chapter 356, consist of:

Normal Costs based on the Entry Age Normal Actuarial Cost Method.

A Supplemental Contribution for amortizing any Unfunded Actuarial Accrued Liability.

An Allowance for Expenses.

Table 11 shows the Fund has a current year contribution deficiency of 1.23% since the Statutory Contribution Rate is 17.59% compared to the Required Contribution Rate of 18.82%.

Revision in 1997 Valuation Results (Report Highlights)

In our review of the valuation process during 1998, we noted two events which occurred during the calendar year 1997 which may have skewed the results of our July 1997 valuation of the retirement fund. The first is larger than expected retirements during 1997 due to a contractual change limiting post-retirement medical coverage for retirements occurring after January 1, 1998. The second is the Pension Uniformity Act as discussed in the next paragraph.

The Pension Uniformity legislation passed in 1997 made several substantive changes in the benefits for participants in this plan. These changes included the fundamental structural change in post-retirement benefit adjustments from the old "13th check" approach to the new "2% plus excess earnings" approach. From a valuation perspective, this encompassed two different changes: (1) retiree liabilities are valued at 8.5% interest plus a 2.0% COLA instead of the prior 7.5%; and (2) monthly benefit amounts in pay in June 1997 were to be adjusted for July 1997 payments by one-twelfth of the 12/31/96 13th check.

Our July 1, 1997 valuation used a data set which included the June 1997 monthly benefit amounts. Adjustments to be effective for July 1997 were not incorporated in the resulting liabilities and cost determinations shown therein. In examining this year's results, we believe it is important to isolate the effects of this change as an adjustment as of July 1997 as opposed to lumping them in the 1997-98 plan year experience.

Accordingly, the revised 1997 valuation results are shown on a separate column on page 1, and the liability increment associated with this one-time benefit adjustment is shown separately in Table 10.

Changes in Actuarial Assumption

All actuarial assumptions are the same as those used in the prior valuation. Table 12 contains a summary of all actuarial assumptions and methods.

Changes in Plan Provisions

No changes in plan provisions became effective during the 1998 fiscal year. Tables 13A and 13B contain summaries of current plan benefits.

TABLE 1

St. Paul Teachers' Retirement Fund
Accounting Balance Sheet

(dollars in thousands)

July 1, 1998

	Market Value	Cost Value
A. ASSETS		
1. Cash, Equivalents, Short-Term Securities	\$ 33,121	\$ 33,121
2. Investments		
a. Fixed Income	220,449	211,753
b. Equity	488,976	318,260
c. Real Estate	-	-
3. Equity in Minnesota Post-Retirement Investment Fund	-	-
4. Other Assets*	8,799	8,799
B. TOTAL ASSETS	<u>\$ 751,345</u>	<u>\$ 571,933</u>
C. AMOUNTS CURRENTLY PAYABLE	\$ 6,684	\$ 6,684
D. ASSETS AVAILABLE FOR BENEFITS		
1. Member Reserves	\$ 96,304	\$ 96,304
2. Employer Reserves	648,357	468,945
3. MPRIF Reserves	-	-
4. Non-MPRIF Reserves	-	-
5. Total Assets Available for Benefits	<u>\$ 744,661</u>	<u>\$ 565,249</u>
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	<u>\$ 751,345</u>	<u>\$ 571,933</u>
F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Cost Value of Assets Available for Benefits (D.5)		\$ 565,249
2. Market Value of Assets Available for Benefits (D.5)	\$ 744,661	
3. Cost Value of Assets Available for Benefits (D.5)	565,249	
4. Market over Cost (F.2 - F.3)	<u>\$ 179,412</u>	
5. 1/3 of Market over Cost (F.4 / 3)		<u>59,804</u>
6. Actuarial Value of Assets (F.1 + F.5)		<u>\$ 625,053</u>

*See "Asset Information" in the Commentary Section of this report.

TABLE 2

St. Paul Teachers' Retirement Fund
Change In Assets Available for Benefits
(dollars in thousands)

June 30, 1998

	Market Value	Cost Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$ 647,249	\$ 510,984
B. OPERATING REVENUES		
1. Member Contributions	\$ 11,057	\$ 11,057
2. Employer Contributions	21,702	21,702
3. Supplemental Contributions *	-	-
4. Investment Income	20,214	20,214
5. MPRIF Income	-	-
6. Investment Expenses	(2,339)	(2,339)
7. Net Realized Gain / (Loss)	42,294	42,294
8. Other	-	-
9. Net Change in Unrealized Gain / (Loss)	43,147	-
10. Total Operating Revenue	\$ 136,075	\$ 92,928
C. OPERATING EXPENSES		
1. Service Retirements	\$ 34,375	\$ 34,375
2. Disability Benefits	639	639
3. Survivor Benefits	2,838	2,838
4. Refunds	417	417
5. Administrative Expenses	394	394
6. Total Operating Expenses	\$ 38,663	\$ 38,663
D. OTHER CHANGES IN RESERVES	\$ -	\$ -
E. ASSETS AVAILABLE AT END OF PERIOD	\$ 744,661	\$ 565,249

*Included in Employer Contribution

TABLE 3
Total Plan

St. Paul Teachers Retirement Fund Association
Active Members as of June 30, 1998

Age	Participant Count								TOTAL
	YEARS OF SERVICE								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<20	-	-	-	-	-	-	-	-	-
20-24	112	43	-	-	-	-	-	-	155
25-29	190	347	21	-	-	-	-	-	558
30-34	127	253	128	20	-	-	-	-	528
35-39	98	176	130	94	4	-	-	-	502
40-44	128	137	105	114	81	14	-	-	579
45-49	105	148	140	116	91	111	42	-	753
50-54	70	94	87	88	66	85	228	44	762
55-59	23	42	35	50	49	48	104	91	442
60-64	22	24	4	26	22	22	32	30	182
65+	10	8	2	5	1	4	2	1	33
All	885	1,272	652	513	314	284	408	166	4,494

	Average Annual Earnings								
	YEARS OF SERVICE								
Age	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	TOTAL
<20	-	-	-	-	-	-	-	-	-
20-24	7,771	29,069	-	-	-	-	-	-	13,680
25-29	8,879	30,129	36,298	-	-	-	-	-	23,126
30-34	9,845	32,826	37,332	46,103	-	-	-	-	28,894
35-39	7,089	33,009	40,377	48,009	45,025	-	-	-	32,761
40-44	5,485	30,103	42,610	48,074	55,168	57,716	-	-	34,641
45-49	6,015	33,034	44,362	48,744	53,544	57,882	59,583	-	41,415
50-54	5,050	36,582	44,391	52,042	55,677	58,827	60,875	59,661	49,099
55-59	7,239	38,757	40,523	50,562	57,277	61,826	62,030	61,701	53,350
60-64	5,290	29,283	40,509	51,622	53,373	58,778	64,052	63,531	48,056
65+	2,996	6,176	8,843	56,341	57,057	54,558	59,127	81,783	25,881
All	7,347	31,959	41,311	49,320	54,884	58,846	61,277	61,612	37,509

Total Annual Earnings (in Thousands)									
YEARS OF SERVICE									
<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>	
6,502	40,651	26,935	25,301	17,234	16,712	25,001	10,228	168,564	

TABLE 4
Total Plan

St. Paul Teachers Retirement Fund Association
Retired Members as of June 30, 1998

Age	Participant Count								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-	-
55-59	21	66	-	-	-	-	-	-	87
60-64	18	219	76	-	-	-	-	-	313
65-69	7	148	162	79	3	-	-	-	399
70-74	1	15	90	141	41	3	-	-	291
75-79	-	3	13	77	96	12	-	-	201
80-84	-	-	2	15	51	47	3	-	118
85+	-	-	-	-	5	89	41	27	162
All	47	451	343	312	196	151	44	27	1,571

	Average Annual Earnings								
	YEARS OF RETIREMENT								
Age	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
<50	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-	-
55-59	22,970	23,410	-	-	-	-	-	-	23,304
60-64	28,679	27,646	19,824	-	-	-	-	-	25,806
65-69	16,702	31,999	26,483	20,197	32,238	-	-	-	27,156
70-74	893	22,992	27,797	20,889	15,965	37,306	-	-	22,541
75-79	-	40,717	17,359	19,723	19,919	17,176	-	-	19,825
80-84	-	-	48,582	23,274	15,933	15,251	9,891	-	16,994
85+	-	-	-	-	15,411	13,145	13,038	11,467	12,908
All	23,753	28,387	25,135	20,541	18,128	14,601	12,823	11,467	22,649

Total Annual Annuity (in Thousands)									
YEARS OF RETIREMENT									
<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>	
1,116	12,803	8,621	6,409	3,553	2,205	564	310	35,581	

TABLE 5
Total Plan

St. Paul Teachers Retirement Fund Association
Disabled Members as of June 30, 1998

Age	Participant Count								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	-	2	-	-	-	-	-	-	2
50-54	-	5	1	-	-	-	-	-	6
55-59	-	4	1	-	-	1	-	-	6
60-64	-	6	-	2	-	-	-	-	8
65-69	-	1	-	-	-	1	-	-	2
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	-	18	2	2	-	2	-	-	24

	Average Annual Earnings								
	YEARS OF RETIREMENT								
Age	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
<50	-	2,631	-	-	-	-	-	-	2,631
50-54	-	33,077	40,561	-	-	-	-	-	34,324
55-59	-	20,440	6,207	-	-	12,333	-	-	16,716
60-64	-	31,361	-	32,389	-	-	-	-	31,618
65-69	-	33,048	-	-	-	17,524	-	-	25,286
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	-	26,312	23,384	32,389	-	14,928	-	-	25,626

Total Annual Annuity (in Thousands)								
YEARS OF RETIREMENT								
<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
-	474	47	65	-	30	-	-	615

TABLE 6
Total Plan

St. Paul Teachers Retirement Fund Association
Survivor Members as of June 30, 1998

Age	Participant Count								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	1	4	-	2	-	-	1	-	8
50-54	-	3	1	-	-	-	-	-	4
55-59	-	3	7	2	1	-	-	-	13
60-64	5	5	5	3	1	1	-	-	20
65-69	2	5	7	4	2	-	-	-	20
70-74	1	9	9	5	5	2	-	-	31
75-79	-	11	9	11	5	3	-	-	39
80-84	1	13	6	4	5	1	-	-	30
85+	2	4	8	3	6	2	3	1	29
All	12	57	52	34	25	9	4	1	194

	Average Annual Earnings								
	YEARS OF RETIREMENT								
Age	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
<50	19,441	3,429	-	17,747	-	-	3,350	-	9,000
50-54	-	25,066	13,676	-	-	-	-	-	22,219
55-59	-	25,203	13,420	14,448	7,645	-	-	-	15,853
60-64	14,854	18,829	21,594	16,249	10,964	7,893	-	-	17,199
65-69	22,021	33,152	18,371	22,731	11,767	-	-	-	22,643
70-74	15,388	21,972	18,318	22,313	9,062	9,341	-	-	17,857
75-79	-	20,035	10,493	13,066	12,788	10,066	-	-	14,171
80-84	16,379	14,896	15,974	9,803	10,772	17,311	-	-	13,875
85+	9,395	10,832	14,436	11,848	10,654	14,499	10,039	11,177	11,978
All	15,693	18,939	15,669	15,709	10,767	11,454	8,366	11,177	15,637

Total Annual Annuity (in Thousands)

YEARS OF RETIREMENT									TOTAL
<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
188	1,080	815	534	269	103	33	11		3,034

TABLE 7

St. Paul Teachers Retirement Fund Association
Reconciliation of Members

	Actives	Leave of Absence	Terminated	
			Deferred Retirement	Other Non-Vested
A. ON JUNE 30, 1997	3,842	179	148	783
B. ADDITIONS	992	65	55	192
C. DELETIONS				
1 Service Retirement	(69)	-	(8)	(1)
2 Disability	(6)	(1)	-	-
3 Death – Survivor	(1)	-	-	-
4 Death – Other	(1)	(1)	-	(1)
5 Terminated – Deferred	(35)	(19)	-	(1)
6 Terminated – Refund	(61)	(7)	(9)	(44)
7 Terminated - Other Non-Vested	(179)	(13)	-	-
8 Leave of Absence	(60)	-	(1)	(1)
9 Returned as Active	74	(44)	(2)	(27)
D. DATA ADJUSTMENTS	(2)	-	-	(61)
1 Vested	2,804			
2 Non-Vested	1,690			
E. TOTAL ON JUNE 30, 1998	4,494	159	183	839

	Recipients		
	Retirement Annuitants	Disabled	Survivors
A. ON JUNE 30, 1997	1,518	22	180
B. ADDITIONS	104	6	23
C. DELETIONS			
1 Service Retirement	-	(4)	-
2 Death	(51)	-	(9)
3 Annuity Expired	-	-	-
4 Returned as Active	-	-	-
D. DATA ADJUSTMENTS	-	-	-
E. TOTAL ON JUNE 30, 1998	1,571	24	194

TABLE 8

St. Paul Teachers' Retirement Fund
Actuarial Balance Sheet
(dollars in thousands)

July 1, 1998

A. CURRENT ASSETS (Table 1; Line F.6)				\$	625,053
B. EXPECTED FUTURE ASSETS					
1. Present Value of Expected Future Statutory Supplemental Contributions				\$	201,728
2. Present Value of Future Normal Costs					148,501
3. Total Expected Future Assets					<u>350,229</u>
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				\$	<u>975,282</u>
D. CURRENT BENEFIT OBLIGATIONS					
		Non-Vested	Vested		Total
1. Benefit Recipients					
a. Retirement Annuities			\$ 399,694	\$	399,694
b. Disability Benefits			6,479		6,479
c. Surviving Spouse and Child Benefits			28,583		28,583
2. Deferred Retirements			4,224		4,224
3. Former Members Without Vested Rights			253		253
4. Active Members					
a. Retirement Annuities *	\$	9,899	327,205		337,104
b. Disability Benefits		14,195	-		14,195
c. Surviving Spouse and Child Benefits		4,168	-		4,168
d. Deferred Retirements		2,426	10,596		13,022
e. Refund Liability Due to Death or Withdrawal		-	2,223		2,223
5. Total Current Benefit Obligations	\$	30,688	\$ 779,257	\$	<u>809,945</u>
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				\$	<u>200,140</u>
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				\$	<u>1,010,085</u>
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D.5 - A)				\$	184,892
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F - C)				\$	34,803

* Includes members on leave of absence.

TABLE 9

St. Paul Teachers' Retirement Fund
Determination of Unfunded Actuarial Accrued Liability (UAAL) and
Supplemental Contribution Rate

(dollars in thousands)

July 1, 1998

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Benefits	\$ 514,379	\$ 112,740	\$ 401,639
b. Disability Benefits	23,411	9,588	13,823
c. Surviving Spouse and Child Benefits	6,875	2,569	4,306
d. Deferred Retirements	21,313	14,667	6,646
e. Refund Liability Due to Death or Withdrawal	4,874	8,937	(4,063)
f. Total	<u>\$ 570,852</u>	<u>\$ 148,501</u>	<u>\$ 422,351</u>
2. Deferred Retirements	\$ 4,224		\$ 4,224
3. Former Members Without Vested Rights	253		253
4. Annuitants in MPRIF	-		-
5. Annuitants Not in MPRIF	434,756		434,756
6. Total	<u><u>\$ 1,010,085</u></u>	<u><u>\$ 148,501</u></u>	<u><u>\$ 861,584</u></u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. Actuarial Accrued Liability (A.6)			\$ 861,584
2. Current Assets (Table 1; Line F.6)			625,053
3. Unfunded Actuarial Accrued Liability (B.1 - B.2)			<u><u>\$ 236,531</u></u>
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of June 30, 2020			2,699,942
2. Supplemental Contribution Rate (B.3 / C.1)			<u><u>8.76%</u></u>

TABLE 10

St. Paul Teachers' Retirement Fund
Changes in Unfunded Actuarial Accrued Liability (UAAL)
(dollars in thousands)

June 30, 1998

A. UAAL AT BEGINNING OF YEAR	
1. July 1, 1997 Actuarial Valuation Report	\$ 201,183
2. Adjustment	47,477
3. Adjusted UAAL at Beginning of Year	\$ 248,660
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$ 16,642
2. Contributions	(32,759)
3. Interest	21,158
4. Total	<u>\$ 5,041</u>
C. EXPECTED UAAL AT END OF YEAR (A.3 + B.4)	\$ 253,701
D. INCREASE / (DECREASE) DUE TO ACTUARIAL LOSSES / (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Age and Service Retirements *	\$ -
2. Disability Retirements *	-
3. Death-in-Service Benefits *	-
4. Withdrawal *	-
5. Salary Increases	(1,482)
6. Contribution Income *	-
7. Investment Income **	(6,626)
8. Mortality of Annuitants	(9,843)
9. Other Items	781
10. Total	<u>\$ (17,170)</u>
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C + D.10)	\$ 236,531
F. CHANGE IN UAAL DUE TO PLAN AMENDMENTS	-
G. CHANGE IN UAAL DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	-
H. UAAL AT END OF YEAR (E + F + G)	<u>\$ 236,531</u>

* Included in Item D.9.

** Includes a gross investment gain (\$27,507) offset by amounts used to provide next year's cost of living adjustments to retirees totaling \$20,881

TABLE 11

St. Paul Teachers' Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 1998

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	6.20%	\$ 11,057
2. Employer Contributions	9.26%	16,522
3. Supplemental Contribution		
a. 1996 Legislation	0.54%	967
b. 1997 Legislation	1.58%	2,827
4. Administrative Expense Assessment	0.01%	18
5. Total	17.59%	\$ 31,391
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	7.42%	\$ 13,233
b. Disability Benefits	0.66%	1,170
c. Surviving Spouse and Child Benefits	0.16%	293
d. Deferred Retirements	0.95%	1,696
e. Refund Liability Due to Death or Withdrawal	0.64%	1,136
f. Total	9.83%	\$ 17,528
2. Supplemental Contribution Amortization	8.76%	15,626
3. Allowance for Administrative Expenses	0.23%	414
4. Total	18.82%	\$ 33,568
C. CONTRIBUTION SUFFICIENCY / (DEFICIENCY) (A.5 - B.4)	(1.23%)	(2,177)
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:	\$	178,365

St. Paul Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

<i>Interest:</i>	Pre-Retirement: 8.50% per annum Post-Retirement: 8.50% per annum
<i>Salary Increases:</i>	Total reported pay for prior fiscal year increased through the salary increase assumption to current fiscal year. Graded rates are shown in the rate table.
<i>Mortality:</i>	<p><u>Pre-Retirement:</u></p> <p>Male: 1983 Group Annuity Mortality Table male rates set back 5 years.</p> <p>Female: 1983 Group Annuity Mortality Table female rates set back 3 years.</p> <p><u>Post-Retirement:</u></p> <p>Male: 1983 Group Annuity Mortality Table male rates set back 3 years.</p> <p>Female: 1983 Group Annuity Mortality Table female rates set back 1 years.</p> <p><u>Post-Disability:</u></p> <p>Male: 1987 Railroad Retirement Board Mortality for Disabled Annuitants</p> <p>Female: 1987 Railroad Retirement Board Mortality for Disabled Annuitants</p>
<i>Retirement Age:</i>	<p><u>Active Members:</u></p> <p>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.</p> <p><u>Deferred Members:</u></p> <p>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.</p> <p><u>Other Non-Vested Members:</u></p> <p>Return of contributions is assumed to occur immediately.</p>
<i>Separation:</i>	Graded rates shown in the rate table.
<i>Disability:</i>	Graded rates shown in the rate table.

TABLE 12
(cont)

<i>Administrative Expenses:</i>	Prior year administrative expenses (excluding investment expenses) expressed as a percentage of prior year payroll.
<i>Return of Contributions:</i>	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.
<i>Family Composition:</i>	85% of male Members and 60% of female Members are assumed to be married. Female is assumed to be four years younger than male. Married members are assumed to have two children.
<i>Social Security:</i>	N/A
<i>Benefit Increases After Retirement:</i>	2.0% per annum
<i>Special Consideration:</i>	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.
<i>Optional Benefit Forms:</i>	<p>Married Members are assumed to elect the following forms of benefit:</p> <p>Males: 35% elect life annuity option 15% elect 50% J&S option 50% elect 100% J&S option</p> <p>Females: 80% elect life annuity option 10% elect 50% J&S option 10% elect 100% J&S option</p>
<i>Actuarial Cost Method:</i>	Entry Age Normal Actuarial Cost Method with normal costs expressed as a level percentage of earnings. Under this method Actuarial Gains (Losses) reduce (increase) the Unfunded Actuarial Accrued Liability.
<i>Asset Valuation Method:</i>	Cost Value plus one-third of Unrealized Gains or Losses.
<i>Payment on the Unfunded Actuarial Accrued Liability:</i>	The Unfunded Actuarial Accrued Liability is amortized as level percentage of payroll each year to the statutory amortization date assuming payroll increases of 5.00% per annum.

TABLE 12
(cont)

Missing Data:

The submitted participant data has been reviewed for reasonableness and constancy with data submitted for prior valuations. We have not audited this data, and the results of this valuation may change based on the accuracy of the underlying data. In cases where submitted data was missing or incomplete, the following assumptions were applied:

Date of Birth:	Average age of participant group based on prior years valuation report.
Date of Hire:	Current valuation date minus years of service.
Years of Service:	Years of service on last year's valuation plus one year.
Sex:	Male.
Deferred Benefit:	Calculated. Salary at termination is estimated based on termination date. Estimated salary is \$40,000 for 1997/1998 terminations and is decreased by 6.5% for each year that actual termination precedes July 1, 1998.

Supplemental Contributions: The St. Paul School District and the State of Minnesota are scheduled to make the following supplemental contributions to the plan:

1996 Legislation:

Supplemental contributions according to the following schedule (thousands of dollars):

<u>Year</u>	<u>State</u>	<u>School</u>
06/30/99	567	400
06/30/00	630	600
06/30/01	693	800
06/30/02+	756	800

1997 Legislation:

Annual supplemental contributions of \$2,827,000 made on October 1.

TABLE 12
(cont)

St. Paul Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

Separations Expressed as the Number of Occurrences per 10,000:

<u>Age</u>	<u>Withdrawal</u>		<u>Disability</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20	2,000	2,000	4	4
21	2,000	2,000	4	4
22	2,000	2,000	4	4
23	1,800	1,800	5	5
24	1,600	1,600	5	5
25	1,400	1,400	5	5
26	1,200	1,200	5	5
27	1,000	1,000	5	5
28	850	850	5	5
29	750	750	5	5
30	690	690	6	6
31	630	630	6	6
32	570	570	6	6
33	530	530	6	6
34	490	490	6	6
35	450	450	6	6
36	420	420	7	7
37	400	400	7	7
38	380	380	8	8
39	360	360	8	8
40	340	340	8	8
41	320	320	9	9
42	300	300	9	9
43	280	280	10	10
44	260	260	10	10
45	240	240	11	11
46	220	220	12	12
47	200	200	13	13
48	180	180	14	14
49	160	160	16	16
50	140	140	17	17
51	120	120	19	19
52	100	100	22	22
53	80	80	26	26
54	60	60	30	30

TABLE 12
(cont)

St. Paul Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

Separations Expressed as the Number of Occurrences per 10,000:

<u>Age</u>	<u>Withdrawal</u>		<u>Disability</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
55	50	50	36	36
56	40	40	41	41
57	30	30	47	47
58	20	20	52	52
59	10	10	58	58
60	0	0	63	63
61	0	0	69	69
62	0	0	76	76
63	0	0	84	84
64	0	0	93	93
65	0	0	93	93
66	0	0	93	93
67	0	0	93	93
68	0	0	93	93
69	0	0	93	93
70	0	0	93	93

TABLE 12
(cont)

St. Paul Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

Deaths Expressed as the Number of Occurrences per 10,000:

<u>Age</u>	Pre-Retirement Mortality		Post-Retirement Mortality		Post-Disability Mortality	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20	3	2	3	2	271	271
21	3	2	4	2	271	271
22	3	2	4	2	271	271
23	4	2	4	2	272	272
24	4	2	4	2	272	272
25	4	2	4	2	272	272
26	4	2	4	3	272	272
27	4	2	4	3	272	272
28	4	3	5	3	272	272
29	4	3	5	3	272	272
30	5	3	5	3	272	272
31	5	3	5	3	272	272
32	5	3	6	4	272	272
33	5	3	6	4	272	272
34	6	4	6	4	273	273
35	6	4	7	4	273	273
36	6	4	7	5	273	273
37	7	4	8	5	273	273
38	7	5	9	5	273	273
39	8	5	9	6	273	273
40	9	5	10	6	273	273
41	9	6	10	7	273	273
42	10	6	11	7	273	273
43	10	7	12	8	274	274
44	11	7	14	8	274	274
45	12	8	15	9	274	274
46	14	8	17	10	275	275
47	15	9	19	11	276	276
48	17	10	22	12	279	279
49	19	11	25	14	283	283
50	22	12	28	15	289	289
51	25	14	31	16	298	298
52	28	15	35	18	310	310
53	31	16	39	19	327	327
54	35	18	43	21	348	348

TABLE 12
(cont)

St. Paul Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

Separations Expressed as the Number of Occurrences per 10,000:

<u>Age</u>	Pre-Retirement Mortality		Post-Retirement Mortality		Post-Disability Mortality	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
55	39	19	48	23	371	371
56	43	21	52	25	395	395
57	48	23	57	28	417	417
58	52	25	61	31	437	437
59	57	28	66	34	455	455
60	61	31	71	38	473	473
61	66	34	77	42	494	494
62	71	38	84	47	516	516
63	77	42	92	52	541	541
64	84	47	101	58	569	569
65	92	52	111	64	598	598
66	101	58	124	71	628	628
67	111	64	139	78	658	658
68	124	71	156	87	687	687
69	139	78	176	98	716	716

TABLE 12
(cont)

St. Paul Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

Retirements Expressed as the Number of Occurrences per 10,000:

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
<55	4,000	0	4,000	0
55	4,000	1,000	4,000	500
56	4,000	1,000	4,000	500
57	4,000	1,000	4,000	500
58	4,000	1,000	4,000	500
59	4,000	1,000	4,000	500
60	4,000	1,000	4,000	500
61	4,000	1,000	4,000	500
62	4,000	4,000	4,000	2,000
63	4,000	4,000	4,000	2,000
64	4,000	4,000	4,000	2,000
65	4,000	4,000	4,000	2,000
66	5,000	5,000	4,000	4,000
67	5,000	5,000	4,000	4,000
68	5,000	5,000	4,000	4,000
69	5,000	5,000	4,000	4,000
70	5,000	5,000	4,000	4,000
71	8,000	8,000	8,000	8,000
72	8,000	8,000	8,000	8,000
73	8,000	8,000	8,000	8,000
74	8,000	8,000	8,000	8,000
75	8,000	8,000	8,000	8,000
76	8,000	8,000	8,000	8,000
77	8,000	8,000	8,000	8,000
78	8,000	8,000	8,000	8,000
79	8,000	8,000	8,000	8,000
80 or more	10,000	10,000	10,000	10,000

TABLE 12
(cont)

St. Paul Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

Annual Salary Increases

<u>Age</u>	<u>Male</u>	<u>Female</u>
<22	7.25%	7.25%
23	7.25	7.25
24	7.20	7.20
25	7.15	7.15
26	7.10	7.10
27	7.05	7.05
28	7.00	7.00
29	6.95	6.95
30	6.90	6.90
31	6.85	6.85
32	6.80	6.80
33	6.75	6.75
34	6.70	6.70
35	6.65	6.65
36	6.60	6.60
37	6.55	6.55
38	6.50	6.50
39	6.40	6.40
40	6.30	6.30
41	6.20	6.20
42	6.10	6.10
43	6.00	6.00
44	5.90	5.90
45	5.80	5.80
46	5.70	5.70
47	5.65	5.65
48	5.60	5.60
49	5.55	5.55
50	5.50	5.50
51	5.45	5.45
52	5.40	5.40
53	5.35	5.35
54	5.30	5.30
55	5.25	5.25

TABLE 3A
Basic Plan

St. Paul Teachers Retirement Fund Association
Active Members as of June 30, 1998

Age	Participant Count								TOTAL
	YEARS OF SERVICE								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<20	-	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-
40-44	-	-	-	2	2	9	-	-	13
45-49	-	-	-	6	17	78	39	-	140
50-54	-	-	-	1	10	65	215	42	333
55-59	-	-	-	1	3	34	95	87	220
60-64	-	-	-	-	4	14	30	30	78
65+	-	-	-	-	-	1	2	1	4
All	-	-	-	10	36	201	381	160	788

Age	Average Annual Earnings								TOTAL
	YEARS OF SERVICE								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<20	-	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-
40-44	-	-	-	27,412	57,359	58,554	-	-	53,579
45-49	-	-	-	32,010	48,382	58,467	59,152	-	56,299
50-54	-	-	-	59,811	56,200	58,052	60,773	59,798	59,979
55-59	-	-	-	42,041	57,567	62,415	62,396	62,054	62,105
60-64	-	-	-	-	48,781	58,904	63,813	63,531	62,053
65+	-	-	-	-	-	56,086	59,127	81,783	64,031
All	-	-	-	34,874	51,862	59,023	61,242	61,862	60,039

Total Annual Earnings (in Thousands)									
YEARS OF SERVICE									
<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>	
-	-	-	349	1,867	11,864	23,333	9,898	47,311	

TABLE 4A
Basic Plan

St. Paul Teachers Retirement Fund Association
Retired Members as of June 30, 1998

Age	Participant Count								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-	-
55-59	16	54	-	-	-	-	-	-	70
60-64	13	187	70	-	-	-	-	-	270
65-69	2	121	145	77	3	-	-	-	348
70-74	-	12	77	136	41	3	-	-	269
75-79	-	3	9	73	93	12	-	-	190
80-84	-	-	2	15	48	47	3	-	115
85+	-	-	-	-	5	89	41	27	162
All	31	377	303	301	190	151	44	27	1,424

Age	Average Annual Earnings								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-	-
55-59	26,203	26,298	-	-	-	-	-	-	26,276
60-64	37,388	30,047	20,863	-	-	-	-	-	28,020
65-69	47,463	36,421	28,642	20,678	32,238	-	-	-	29,724
70-74	-	24,252	31,124	21,485	15,965	37,306	-	-	23,703
75-79	-	40,717	23,403	20,648	20,175	17,176	-	-	20,645
80-84	-	-	48,582	23,274	16,799	15,251	9,891	-	17,383
85+	-	-	-	-	15,411	13,145	13,038	11,467	12,908
All	32,265	31,457	27,451	21,165	18,479	14,601	12,823	11,467	23,973

Total Annual Annuity (in Thousands)									
YEARS OF RETIREMENT									
<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>	
1,000	11,859	8,318	6,371	3,511	2,205	564	310	34,137	

TABLE 5A
Basic Plan

St. Paul Teachers Retirement Fund Association
Disabled Members as of June 30, 1998

Participant Count									
	YEARS OF RETIREMENT								
Age	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
<50	-	-	-	-	-	-	-	-	-
50-54	-	4	1	-	-	-	-	-	5
55-59	-	1	1	-	-	1	-	-	3
60-64	-	4	-	2	-	-	-	-	6
65-69	-	1	-	-	-	1	-	-	2
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	-	10	2	2	-	2	-	-	16

Age	Average Annual Earnings								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	-	-	-	-	-	-	-	-	-
50-54	-	38,341	40,561	-	-	-	-	-	38,785
55-59	-	42,716	6,207	-	-	12,333	-	-	20,419
60-64	-	42,182	-	32,389	-	-	-	-	38,917
65-69	-	33,048	-	-	-	17,524	-	-	25,286
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	-	39,785	23,384	32,389	-	14,928	-	-	33,704

Total Annual Annuity (in Thousands)									
YEARS OF RETIREMENT									
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
	-	398	47	65	-	30	-	-	539

TABLE 6A
Basic Plan

St. Paul Teachers Retirement Fund Association
Survivor Members as of June 30, 1998

Age	Participant Count								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	1	1	-	2	-	-	1	-	5
50-54	-	3	1	-	-	-	-	-	4
55-59	-	3	7	2	1	-	-	-	13
60-64	5	4	5	3	1	1	-	-	19
65-69	2	5	6	4	2	-	-	-	19
70-74	1	9	9	5	4	2	-	-	30
75-79	-	11	9	11	5	3	-	-	39
80-84	1	13	6	4	5	1	-	-	30
85+	2	4	8	3	6	2	3	1	29
All	12	53	51	34	24	9	4	1	188

Age	Average Annual Earnings								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	19,441	9,625	-	17,747	-	-	3,350	-	13,582
50-54	-	25,066	13,676	-	-	-	-	-	22,219
55-59	-	25,203	13,420	14,448	7,645	-	-	-	15,853
60-64	14,854	22,159	21,594	16,249	10,964	7,893	-	-	17,815
65-69	22,021	33,152	21,073	22,731	11,767	-	-	-	23,721
70-74	15,388	21,972	18,318	22,313	11,328	9,341	-	-	18,452
75-79	-	20,035	10,493	13,066	12,788	10,066	-	-	14,171
80-84	16,379	14,896	15,974	9,803	10,772	17,311	-	-	13,875
85+	9,395	10,832	14,436	11,848	10,654	14,499	10,039	11,177	11,978
All	15,693	20,188	15,934	15,709	11,216	11,454	8,366	11,177	16,074

Total Annual Annuity (in Thousands)									
YEARS OF RETIREMENT									
<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>	
188	1,070	813	534	269	103	33	11	3,022	

St. Paul Teachers' Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 1998

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	8.00%	\$ 3,990
2. Employer Contributions	11.64%	5,806
3. Supplemental Contribution		
a. 1996 Legislation	0.54%	269
b. 1997 Legislation	1.58%	788
4. Administrative Expense Assessment	0.01%	5
5. Total	21.77%	\$ 10,858
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	8.19%	\$ 4,087
b. Disability Benefits	0.97%	483
c. Surviving Spouse and Child Benefits	0.18%	89
d. Deferred Retirements	1.45%	725
e. Refund Liability Due to Death or Withdrawal	1.32%	660
f. Total	12.11%	\$ 6,044
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 49,876

**St. Paul Teachers' Retirement Fund
Summary of Plan Provisions**

GENERAL

<i>Eligibility:</i>	A teacher who is employed in a public school district 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.
<i>Contributions:</i>	Member: 8.00% of Salary. Employer: 11.64% of Salary.
<i>Allowable Service:</i>	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.
<i>Salary:</i>	Total compensation. Excludes lump sum payments for unused vacation leave or unused sick leave at separation.
<i>Average Salary:</i>	Average of the 5 highest years of Salary during the last 10 years while making contributions or while disabled.

RETIREMENT***Normal Retirement Benefit:***

<i>Eligibility:</i>	Age 65 and 5 years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and 1 year of Allowable Service.
<i>Amount:</i>	2.50% of Average Salary for each year of Allowable Service.

Early Retirement Benefit:

<i>Eligibility:</i>	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 5 years of Allowable Service.
---------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

TABLE 13A
(cont)
BASIC

<i>Amount:</i>	<p>The greater of:</p> <p>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 (age 60 if 25 years of Allowable Service). No reduction if age plus years of Allowable Service totals 90.</p> <p>or</p> <p>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.</p>
<i>Form of Payment:</i>	Life annuity.
<i>Benefit Increases:</i>	<p>Benefits are increased 2.0% 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.</p> <p>In addition, if the time weighted rate of return over the last 5 years exceeds 8.5%, 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.</p>

DISABILITY

Disability Benefit:

<i>Eligibility:</i>	Totally and permanently disabled before the age of 65 with 5 years of St. Paul service.
<i>Amount:</i>	<p>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.</p> <p>Payments are recomputed as a retirement at age 65. Payments stop if disability ceases or death occurs.</p>
<i>Form of Payment:</i>	Life annuity.
<i>Benefit Increases:</i>	Same as for retirement.

TABLE 13A
(cont)
BASIC

Retirement After Disability:

<i>Eligibility:</i>	Age 65 with continued disability.
<i>Amount:</i>	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.
<i>Form of Payment:</i>	Life annuity.
<i>Benefit Increases:</i>	Same as for retirement.

DEATH

Family Benefits:

<i>Eligibility:</i>	Active Member with 3 years of St. Paul service.
<i>Amount:</i>	Benefit of 15% of B.A. salary to spouse plus 25% of B.A. salary to each eligible child (maximum of 2). 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:

<i>Eligibility:</i>	Active or retired Member with 5 years of St. Paul service. A surviving spouse must have been married to the Member for 3 years at the time of his death or retirement, whichever occurs first.
<i>Amount:</i>	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.
<i>Benefit Increases:</i>	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:

Eligibility: 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 with 6.00% interest (unless the Member was disabled) over total benefits paid.

TERMINATION

Deferred Annuity:

Eligibility: 5 years of Allowable Service.

Amount: Benefit computed under law in effect at termination and increased following annual percentage:

3.00% until January 1 of the year following the attainment of 55, and

5.00% thereafter until the annuity begins.

Amount is payable as a normal or early retirement benefit.

Refund of Contributions:

Eligibility: 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.

TABLE 3B
Coordinated Plan

St. Paul Teachers Retirement Fund Association
Active Members as of June 30, 1998

Age	Participant Count								TOTAL
	YEARS OF SERVICE								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<20	-	-	-	-	-	-	-	-	-
20-24	112	43	-	-	-	-	-	-	155
25-29	190	347	21	-	-	-	-	-	558
30-34	127	253	128	20	-	-	-	-	528
35-39	98	176	130	94	4	-	-	-	502
40-44	128	137	105	112	79	5	-	-	566
45-49	105	148	140	110	74	33	3	-	613
50-54	70	94	87	87	56	20	13	2	429
55-59	23	42	35	49	46	14	9	4	222
60-64	22	24	4	26	18	8	2	-	104
65+	10	8	2	5	1	3	-	-	29
All	885	1,272	652	503	278	83	27	6	3,706

	Average Annual Earnings								
	YEARS OF SERVICE								
Age	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
<20	-	-	-	-	-	-	-	-	-
20-24	7,771	29,069	-	-	-	-	-	-	13,680
25-29	8,879	30,129	36,298	-	-	-	-	-	23,126
30-34	9,845	32,826	37,332	46,103	-	-	-	-	28,894
35-39	7,089	33,009	40,377	48,009	45,025	-	-	-	32,761
40-44	5,485	30,103	42,610	48,443	55,113	56,209	-	-	34,206
45-49	6,015	33,034	44,362	49,657	54,729	56,501	65,187	-	38,016
50-54	5,050	36,582	44,391	51,953	55,584	61,345	62,564	56,791	40,654
55-59	7,239	38,757	40,523	50,736	57,258	60,394	58,169	54,023	44,674
60-64	5,290	29,283	40,509	51,622	54,394	58,556	67,629	-	37,559
65+	2,996	6,176	8,843	56,341	57,057	54,049	-	-	20,619
All	7,347	31,959	41,311	49,608	55,276	58,416	61,766	54,945	32,718

Total Annual Earnings (in Thousands)									
YEARS OF SERVICE									
<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>	
6,502	40,651	26,935	24,953	15,367	4,849	1,668	330	121,253	

TABLE 4B
Coordinated Plan

St. Paul Teachers Retirement Fund Association
Retired Members as of June 30, 1998

Age	Participant Count								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-	-
55-59	5	12	-	-	-	-	-	-	17
60-64	5	32	6	-	-	-	-	-	43
65-69	5	27	17	2	-	-	-	-	51
70-74	1	3	13	5	-	-	-	-	22
75-79	-	-	4	4	3	-	-	-	11
80-84	-	-	-	-	3	-	-	-	3
85+	-	-	-	-	-	-	-	-	-
All	16	74	40	11	6	-	-	-	147

Age	Average Annual Earnings								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-	-
55-59	12,623	10,416	-	-	-	-	-	-	11,065
60-64	6,034	13,613	7,703	-	-	-	-	-	11,907
65-69	4,398	12,183	8,072	1,697	-	-	-	-	9,638
70-74	893	17,951	8,093	4,683	-	-	-	-	8,335
75-79	-	-	3,762	2,840	11,964	-	-	-	5,664
80-84	-	-	-	-	2,084	-	-	-	2,084
85+	-	-	-	-	-	-	-	-	-
All	7,261	12,749	7,593	3,470	7,024	-	-	-	9,820

Total Annual Annuity (in Thousands)

YEARS OF RETIREMENT									TOTAL
<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
116	943	304	38	42	-	-	-		1,444

TABLE 5B
Coordinated Plan

St. Paul Teachers Retirement Fund Association
Disabled Members as of June 30, 1998

Participant Count									
	YEARS OF RETIREMENT								
Age	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
<50	-	2	-	-	-	-	-	-	2
50-54	-	1	-	-	-	-	-	-	1
55-59	-	3	-	-	-	-	-	-	3
60-64	-	2	-	-	-	-	-	-	2
65-69	-	-	-	-	-	-	-	-	-
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	-	8	-	-	-	-	-	-	8

	Average Annual Earnings								
	YEARS OF RETIREMENT								
Age	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
<50	-	2,631	-	-	-	-	-	-	2,631
50-54	-	12,022	-	-	-	-	-	-	12,022
55-59	-	13,014	-	-	-	-	-	-	13,014
60-64	-	9,720	-	-	-	-	-	-	9,720
65-69	-	-	-	-	-	-	-	-	-
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	-	9,471	-	-	-	-	-	-	9,471

Total Annual Annuity (in Thousands)									
YEARS OF RETIREMENT									
<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>	
-	76	-	-	-	-	-	-	76	

TABLE 6B
Coordinated Plan

St. Paul Teachers Retirement Fund Association
Survivor Members as of June 30, 1998

	Participant Count								
	YEARS OF RETIREMENT								
Age	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
<50	-	3	-	-	-	-	-	-	3
50-54	-	-	-	-	-	-	-	-	-
55-59	-	-	-	-	-	-	-	-	-
60-64	-	1	-	-	-	-	-	-	1
65-69	-	-	1	-	-	-	-	-	1
70-74	-	-	-	-	1	-	-	-	1
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	-	4	1	-	1	-	-	-	6

	Average Annual Earnings								
	YEARS OF RETIREMENT								
Age	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
<50	-	1,364	-	-	-	-	-	-	1,364
50-54	-	-	-	-	-	-	-	-	-
55-59	-	-	-	-	-	-	-	-	-
60-64	-	5,508	-	-	-	-	-	-	5,508
65-69	-	-	2,163	-	-	-	-	-	2,163
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	-	2,400	2,163	-	-	-	-	-	1,960

Total Annual Annuity (in Thousands)

YEARS OF RETIREMENT									TOTAL
<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>		
-	10	2	-	-	-	-	-	-	12

St. Paul Teachers' Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 1998

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	5.50%	\$ 7,067
2. Employer Contributions	8.34%	10,716
3. Supplemental Contribution		
a. 1996 Legislation	0.54%	698
b. 1997 Legislation	1.58%	2,039
4. Administrative Expense Assessment	0.01%	13
5. Total	15.97%	\$ 20,533
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	7.12%	\$ 9,146
b. Disability Benefits	0.53%	687
c. Surviving Spouse and Child Benefits	0.16%	204
d. Deferred Retirements	0.76%	971
e. Refund Liability Due to Death or Withdrawal	0.37%	476
f. Total	8.94%	\$ 11,484
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 128,489

St. Paul Teachers' Retirement Fund
Summary of Plan Provisions

GENERAL

<i>Eligibility:</i>	A teacher who is employed in a public school district 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.
<i>Contributions:</i>	Member: 5.50% of Salary. Employer: 8.34% of Salary.
<i>Allowable Service:</i>	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.
<i>Salary:</i>	Total compensation. Excludes lump sum payments for unused vacation leave or unused sick leave at separation.
<i>Average Salary:</i>	Average of the 5 highest successive years of Salary. Average Salary is based on all Allowable Service is less than 5 years

RETIREMENT

Normal Retirement Benefit:

<i>Eligibility:</i>	
First hired before July 1, 1989:	Age 65 and 3 years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and 1 year of Allowable Service.
First hired after July 1, 1989:	The greater of age 65 or the age eligible for full Social Security retirement benefits (but not greater than age 66) and 3 years of Allowable Service. Proportionate Retirement Annuity is available at normal retirement age and 1 year of Allowable Service.
<i>Amount:</i>	1.70% of Average Salary for each year of Allowable Service.

TABLE 13B
(cont)
COORDINATED

Early Retirement Benefit:

Eligibility:

Age 55 and 3 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:

1.20% of Average Salary for each of the first 10 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.

or

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:

- Guaranteed refund,
- 15 year certain and life, and
- 50% or 100% joint and survivor with bounce back feature without additional reduction.

Benefit Increases:

Benefits are increased 2.0% 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 5 years exceeds 8.5%, 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.

DISABILITY

Disability Benefit:

Eligibility: Totally and permanently disabled before normal retirement age with 3 years of Allowable Service. Also, at least 2 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.

Retirement After Disability:

Eligibility: 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:

Eligibility: Any active Member who dies with 3 years of Allowable Service prior to retirement or disability benefits commence.

Any former Member who dies before retirement or disability benefits commence.

TABLE 13B
(cont)
COORDINATED

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% 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 3 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 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:

Eligibility: 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.

TERMINATION

Deferred Annuity:

Eligibility: 3 years of Allowable Service.

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

3.00% until January 1 of the year following the attainment of 55, and

5.00% thereafter until the annuity begins.

TABLE 13B
(cont)
COORDINATED

Amount is payable as a normal or early retirement benefit.

Refund of Contributions:

Eligibility:

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.

TABLE 14

St. Paul Teachers' Retirement Fund
Schedule of Funding Progress
(dollars in thousands)

July 1, 1998

Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (B)	Unfunded AAL (UAAL) (B)-(A)	Funded Ratio (A)/(B)	Actual Covered Payroll (Previous FY) (C)	UAAL as % of Covered Payroll ((B)-(A))/(C)
07/01/91	\$ 326,357	\$ 495,740	\$ 169,383	65.83%	\$ 110,131	153.80%
07/01/92	355,998	533,865	177,867	66.68%	115,274	154.30%
07/01/93	393,168	571,059	177,891	68.85%	122,930	144.71%
07/01/94	407,275	596,441	189,166	68.28%	129,308	146.29%
07/01/95	445,733	633,070	187,337	70.41%	139,175	134.61%
07/01/96	494,931	664,072	169,141	74.53%	145,677	116.11%
07/01/97	556,406	805,066	248,660	69.11%	151,363	164.28%
07/01/98	625,053	861,584	236,531	72.55%	168,564	140.32%

St. Paul Teachers' Retirement Fund
Schedule of Employer Contributions
(dollars in thousands)

July 1, 1998

Year Ended June 30	Actuarially Required Contribution Rate (A)	Actual Covered Payroll (B)	Actual Member Contributions (C)	Annual Required Contributions [(A)*(B)]-(C)	Actual Employer Contributions*	Percentage Contributed
1991	18.86%	\$ 110,131	\$ 7,518	\$ 13,253	\$ 10,255	77.38%
1992	18.87%	115,274	7,821	13,931	10,489	75.29%
1993	19.74%	122,930	8,202	16,064	10,839	67.47%
1994	18.68%	129,308	9,100	15,055	11,736	77.96%
1995	18.63%	139,175	8,788	17,140	13,084	76.33%
1996	17.96%	145,677	9,093	17,071	15,101	88.46%
1997	16.97%	151,363	9,484	16,202	16,043	99.02%
1998	20.35%	168,564	11,057	23,246	21,702	93.36%

*Includes contributions from other sources (if applicable)