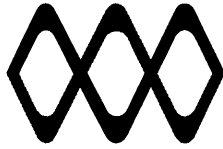


St. Paul Teachers' Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 1999



MILLIMAN & ROBERTSON, INC.

Actuaries & Consultants

Internationally WOODROW MILLIMAN

Suite 1850, 8500 Normandale Lake Boulevard, Minneapolis, Minnesota 55437-3830

Telephone: 612/897-5300

Fax: 612/897-5301

November 5, 1999

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

**Re: St. Paul Teachers' Retirement Fund
July 1, 1999 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, 1999.

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,

Thomas K. Custis, F.S.A., M.A.A.A.
Consulting Actuary

Lance M. Burma, F.S.A., M.A.A.A.
Consulting Actuary

Enclosure

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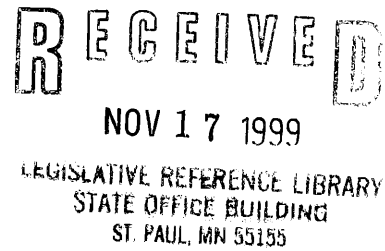
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St. Paul Teachers' Retirement Fund
Report Highlights
(dollars in thousands)

	July 1, 1998 Valuation	July 1, 1999 Valuation
A. CONTRIBUTIONS % OF PAYROLL (Table 11)		
1. Statutory Contributions - Chapter 354A	17.59%	17.52%
2. Required Contributions - Chapter 356	18.82%	18.09%
3. Sufficiency / (Deficiency)	(1.23%)	(0.57%)
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	\$ 625,053	\$ 704,233
b. Current Benefit Obligations (Table 8)	809,945	888,491
c. Funding Ratio	77.17%	79.26%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$ 625,053	\$ 704,233
b. Actuarial Accrued Liability (Table 9)	861,584	938,847
c. Funding Ratio	72.55%	75.01%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$ 975,282	\$ 1,058,827
b. Current and Expected Future Benefit Obligations	1,010,085	1,088,161
c. Funding Ratio	96.55%	97.30%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	4,494	4,378
b. Projected Annual Earnings	\$ 178,365	\$ 188,717
c. Average Annual Earnings (Actual dollars)	\$ 37,509	\$ 40,716
d. Average Age	42.7	42.9
e. Average Service	10.3	10.8
f. Additional Members on Leave of Absence*	159	237
2. Others		
a. Service Retirements (Table 4)	1,571	1,637
b. Disability Retirements (Table 5)	24	24
c. Survivors (Table 6)	194	199
d. Deferred Retirements (Table 7)	183	220
e. Terminated Other Non-Vested (Table 7)	839	1,108
f. Total	2,811	3,188

* 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, 1999, the *Accrued Benefit Funding Ratio* is 79.26%.

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 1999 the *Accrued Liability Funding Ratio* is 75.01%.

The *Projected Benefit Funding Ratio* is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 97.30% shows that the current statutory contributions are insufficient in the long run.

Please see additional commentary on page 1 of this report regarding the comparable funding ratios determined as of July 1, 1998.

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	\$ 1,524	\$ 1,524
Employee Contribution	114	114
State Amortization Aid	0	0
Interest	1,570	1,570
Dividends	43	43
Bond Sales	4,149	4,149
Net Gain on Bond Sales	0	0
Repaid Principal	(60)	(60)
Stock Sales	290	290
Net Gain on Stock Sales	0	0
Commission Recapture	0	0
Security Lending	10	10
Total Accounts Receivable	<u>\$ 7,640</u>	<u>\$ 7,640</u>
Fixed Assets	25	25
Total Other Assets	<u><u>\$ 7,665</u></u>	<u><u>\$ 7,665</u></u>

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 0.57% since the Statutory Contribution Rate is 17.52% compared to the Required Contribution Rate of 18.09%.

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

This valuation reflects the Actuarial Equivalent Factors as adopted by the Board of Directors during the 1999 fiscal year.

No other changes in plan provisions became effective during the 1999 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, 1999

	Market Value	Cost Value
A. ASSETS		
1. Cash, Equivalents, Short-Term Securities	\$ 61,915	\$ 61,915
2. Investments		
a. Fixed Income	205,614	201,415
b. Equity	516,582	374,198
c. Real Estate	-	-
d. Cash Overlay	11,065	11,065
3. Equity in Minnesota Post-Retirement Investment Fund	-	-
4. Other Assets*	7,665	7,665
B. TOTAL ASSETS	<u>\$ 802,841</u>	<u>\$ 656,258</u>
C. AMOUNTS CURRENTLY PAYABLE	\$ 886	\$ 886
D. ASSETS AVAILABLE FOR BENEFITS		
1. Member Reserves	\$ 101,379	\$ 101,379
2. Employer Reserves	700,576	553,993
3. MPRIF Reserves	-	-
4. Non-MPRIF Reserves	-	-
5. Total Assets Available for Benefits	<u>\$ 801,955</u>	<u>\$ 655,372</u>
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	<u>\$ 802,841</u>	<u>\$ 656,258</u>
F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Cost Value of Assets Available for Benefits (D.5)		\$ 655,372
2. Market Value of Assets Available for Benefits (D.5)	\$ 801,955	
3. Cost Value of Assets Available for Benefits (D.5)	655,372	
4. Market over Cost (F.2 - F.3)	<u>\$ 146,583</u>	
5. 1/3 of Market over Cost (F.4 / 3)		<u>48,861</u>
6. Actuarial Value of Assets (F.1 + F.5)		<u>\$ 704,233</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, 1999

	Market Value	Cost Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$ 744,661	\$ 565,249
B. OPERATING REVENUES		
1. Member Contributions	\$ 11,649	\$ 11,649
2. Employer Contributions	17,115	17,115
3. Supplemental Contributions	3,951	3,951
4. Investment Income	17,004	17,004
5. MPRIF Income	-	-
6. Investment Expenses	(2,140)	(2,140)
7. Net Realized Gain / (Loss)	85,379	85,379
8. Other	-	-
9. Net Change in Unrealized Gain / (Loss)	(32,829)	-
10. Total Operating Revenue	\$ 100,129	\$ 132,958
C. OPERATING EXPENSES		
1. Service Retirements	\$ 37,748	\$ 37,748
2. Disability Benefits	753	753
3. Survivor Benefits	3,224	3,224
4. Refunds	693	693
5. Administrative Expenses	417	417
6. Total Operating Expenses	\$ 42,835	\$ 42,835
D. OTHER CHANGES IN RESERVES	\$ -	\$ -
E. ASSETS AVAILABLE AT END OF PERIOD	\$ 801,955	\$ 655,372

TABLE 3
Total Plan

St. Paul Teachers Retirement Fund Association
Active Members as of June 30, 1999

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	76	60	-	-	-	-	-	-	136
25-29	103	412	38	-	-	-	-	-	553
30-34	73	273	155	14	-	-	-	-	515
35-39	67	186	136	116	5	1	-	-	511
40-44	61	159	118	103	57	15	-	-	513
45-49	63	136	126	138	84	106	19	-	672
50-54	43	104	102	88	56	102	215	64	774
55-59	23	54	31	72	51	54	87	111	483
60-64	16	21	8	20	17	26	32	27	167
65+	23	11	1	8	3	7	1	-	54
All	548	1,416	715	559	273	311	354	202	4,378

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	6,948	28,484	-	-	-	-	-	-	16,449
25-29	6,098	30,620	36,456	-	-	-	-	-	26,454
30-34	5,463	33,028	38,402	47,559	-	-	-	-	31,133
35-39	6,031	34,376	40,728	50,438	51,107	36,079	-	-	36,163
40-44	5,185	32,596	44,224	49,487	55,812	57,084	-	-	38,698
45-49	6,787	32,966	47,393	50,391	53,694	60,940	63,014	-	44,648
50-54	6,775	37,955	46,479	52,449	57,599	61,298	62,876	61,394	52,352
55-59	4,690	37,666	47,952	54,484	57,994	65,589	64,276	64,176	55,417
60-64	5,237	32,608	30,442	49,525	58,516	60,065	64,557	66,404	50,406
65+	2,197	17,235	47,484	51,135	50,651	57,862	60,310	-	24,333
All	5,906	32,667	42,776	50,994	55,960	61,456	63,372	63,592	40,716

Total Annual Earnings (in Thousands)

YEARS OF SERVICE									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>		
3,236	46,257	30,585	28,506	15,277	19,113	22,434	12,846		178,253

TABLE 4
Total Plan

St. Paul Teachers Retirement Fund Association
Retired Members as of June 30, 1999

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	-	1	-	-	-	-	-	-	1
55-59	38	60	2	-	-	-	-	-	100
60-64	29	225	78	-	-	-	-	-	332
65-69	6	149	177	58	2	1	-	-	393
70-74	-	20	89	155	35	3	-	-	302
75-79	1	4	17	87	94	13	-	-	216
80-84	-	1	4	22	56	42	3	-	128
85+	-	-	-	2	7	87	45	24	165
All	74	460	367	324	194	146	48	24	1,637

Age	Average Annual Annuity								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	-	2,751	-	-	-	-	-	-	2,751
55-59	28,842	21,495	13,236	-	-	-	-	-	24,122
60-64	30,170	28,228	22,293	-	-	-	-	-	27,003
65-69	41,435	32,913	27,055	20,813	30,823	40,192	-	-	28,627
70-74	-	30,064	30,619	24,125	16,879	40,679	-	-	25,757
75-79	11,634	25,792	26,813	21,572	21,948	21,504	-	-	22,176
80-84	-	36,221	42,808	20,452	19,117	17,877	12,269	-	19,653
85+	-	-	-	21,553	16,134	14,676	17,725	17,502	16,064
All	30,151	28,888	26,992	22,581	20,098	16,914	17,384	17,502	24,658

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>	
2,231	13,288	9,906	7,316	3,899	2,469	834	420	40,365	

TABLE 5
Total Plan

St. Paul Teachers Retirement Fund Association
Disabled Members as of June 30, 1999

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	-	2	2	-	-	-	-	-	4
55-59	2	7	-	-	-	1	-	-	10
60-64	-	6	-	1	-	-	-	-	7
65-69	-	1	-	-	-	-	-	-	1
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	2	18	2	1	-	1	-	-	24

Age	Average Annual Annuity								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	-	2,821	-	-	-	-	-	-	2,821
50-54	-	27,387	40,848	-	-	-	-	-	34,117
55-59	36,538	34,779	-	-	-	13,651	-	-	33,018
60-64	-	32,971	-	37,166	-	-	-	-	33,570
65-69	-	9,859	-	-	-	-	-	-	9,859
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	36,538	28,420	40,848	37,166	-	13,651	-	-	29,881

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>
73	512	82	37	-	14	-	-	717

TABLE 6
Total Plan

St. Paul Teachers Retirement Fund Association
Survivor Members as of June 30, 1999

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	2	-	-	-	1	-	4
50-54	-	2	1	1	-	-	-	-	4
55-59	1	3	7	2	-	-	-	-	13
60-64	1	9	4	2	2	1	-	-	19
65-69	2	8	4	4	2	-	-	-	20
70-74	2	8	11	9	4	1	-	-	35
75-79	4	10	8	8	7	1	1	-	39
80-84	2	13	5	5	7	3	-	-	35
85+	-	6	8	6	6	2	1	1	30
All	12	60	50	37	28	8	3	1	199

Age	Average Annual Annuity								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	-	9,625	2,193	-	-	-	3,350	-	4,340
50-54	-	27,130	14,663	18,604	-	-	-	-	21,882
55-59	16,405	25,838	14,388	15,490	-	-	-	-	17,355
60-64	41,599	16,098	23,005	23,302	9,975	9,639	-	-	18,668
65-69	19,383	30,681	24,265	22,023	15,008	-	-	-	24,969
70-74	21,551	18,791	21,645	20,678	12,226	7,806	-	-	19,267
75-79	17,445	25,878	10,875	16,357	13,326	13,868	9,329	-	16,997
80-84	19,011	18,696	17,063	13,830	13,061	14,921	-	-	16,335
85+	-	12,701	18,040	13,755	12,828	16,794	11,131	21,226	14,866
All	20,640	21,002	17,272	17,647	12,877	13,708	7,937	21,226	17,787

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>
248	1,260	864	653	361	110	24	21	3,540

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, 1998	4,494	159	183	839
B. ADDITIONS	618	132	55	403
C. DELETIONS				
1 Service Retirement	(73)	(2)	(6)	-
2 Disability	(1)	(1)	(1)	-
3 Death – Survivor	(3)	-	-	-
4 Death – Other	(3)	-	-	-
5 Terminated – Deferred	(38)	(17)	-	-
6 Terminated – Refund	(111)	(1)	(11)	(103)
7 Terminated - Other Non-Vested	(398)	(5)	-	-
8 Leave of Absence	(131)	-	-	(1)
9 Returned as Active	66	(37)	(5)	(24)
D. DATA ADJUSTMENTS	(42)	9	5	(6)
1 Vested	2,881			
2 Non-Vested	1,497			
E. TOTAL ON JUNE 30, 1999	4,378	237	220	1,108

	Recipients		
	Retirement Annuitants	Disabled	Survivors
A. ON JUNE 30, 1998	1,571	24	194
B. ADDITIONS	110	4	12
C. DELETIONS			
1 Service Retirement	-	(4)	-
2 Death	(44)	-	(5)
3 Annuity Expired	-	-	-
4 Returned as Active	-	-	-
D. DATA ADJUSTMENTS	-	-	(2)
E. TOTAL ON JUNE 30, 1999	1,637	24	199

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

July 1, 1999

A. CURRENT ASSETS (Table 1; Line F.6)				\$	704,233
B. EXPECTED FUTURE ASSETS					
1. Present Value of Expected Future Statutory Supplemental Contributions				\$	205,280
2. Present Value of Future Normal Costs					149,314
3. Total Expected Future Assets			-		<u>354,594</u>
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				\$	<u>1,058,827</u>
D. CURRENT BENEFIT OBLIGATIONS					
		Non-Vested	Vested		Total
1. Benefit Recipients					
a. Retirement Annuities			\$ 467,017	\$	467,017
b. Disability Benefits			7,806		7,806
c. Surviving Spouse and Child Benefits			34,105		34,105
2. Deferred Retirements			4,634		4,634
3. Former Members Without Vested Rights			696		696
4. Active Members					
a. Retirement Annuities *	\$	7,798	333,211		341,009
b. Disability Benefits		14,342	-		14,342
c. Surviving Spouse and Child Benefits		4,023	-		4,023
d. Deferred Retirements		1,415	10,651		12,066
e. Refund Liability Due to Death or Withdrawal		-	2,793		2,793
5. Total Current Benefit Obligations	\$	27,578	\$ 860,913	\$	<u>888,491</u>
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				\$	<u>199,670</u>
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				\$	<u>1,088,161</u>
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D.5 - A)				\$	184,258
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F - C)				\$	29,334

* Includes members on leave of absence.

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

July 1, 1999

	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	\$ 516,720	\$ 112,715	\$ 404,005
b. Disability Benefits	24,101	9,982	14,119
c. Surviving Spouse and Child Benefits	6,723	2,538	4,185
d. Deferred Retirements	20,266	13,914	6,352
e. Refund Liability Due to Death or Withdrawal	6,093	10,165	(4,072)
f. Total	<u>\$ 573,903</u>	<u>\$ 149,314</u>	<u>\$ 424,589</u>
2. Deferred Retirements	\$ 4,634		\$ 4,634
3. Former Members Without Vested Rights	696		696
4. Annuitants in MPRIF	-		-
5. Annuitants Not in MPRIF	508,928		508,928
6. Total	<u><u>\$ 1,088,161</u></u>	<u><u>\$ 149,314</u></u>	<u><u>\$ 938,847</u></u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. Actuarial Accrued Liability (A.6)			\$ 938,847
2. Current Assets (Table 1; Line F.6)			704,233
3. Unfunded Actuarial Accrued Liability (B.1 - B.2)			<u><u>\$ 234,614</u></u>
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of June 30, 2020			2,763,799
2. Supplemental Contribution Rate (B.3 / C.1)			<u><u>8.49%</u></u>

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

June 30, 1999

A. UAAL AT BEGINNING OF YEAR	\$ 236,531
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$ 17,942
2. Contributions	(32,715)
3. Interest	20,240
4. Total	<u>\$ 5,467</u>
C. EXPECTED UAAL AT END OF YEAR (A. + B.4)	\$ 241,998
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	10,702
6. Contribution Income *	-
7. Investment Income **	4,194
8. Mortality of Annuitants	(3,990)
9. Other Items ***	(13,910)
10. Total	<u>\$ (3,004)</u>
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C + D.10)	\$ 238,994
F. CHANGE IN UAAL DUE TO PLAN AMENDMENTS	(4,380)
G. CHANGE IN UAAL DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	<u>-</u>
H. UAAL AT END OF YEAR (E + F + G)	<u><u>\$ 234,614</u></u>

* Included in Item D.9.

** Includes a gross investment gain (\$36,601) offset by amounts used to provide next year's cost of living adjustments to retirees totaling \$40,795

*** Includes correction in valuation of benefit formula gain of (\$5,729)

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

July 1, 1999

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	6.12%	\$ 11,557
2. Employer Contributions	9.16%	17,294
3. Supplemental Contribution		
a. 1996 Legislation	0.74%	1,400
b. 1997 Legislation	1.50%	2,827
4. Administrative Expense Assessment	0.00%	-
5. Total	17.52%	\$ 33,078
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	7.05%	\$ 13,313
b. Disability Benefits	0.64%	1,207
c. Surviving Spouse and Child Benefits	0.15%	289
d. Deferred Retirements	0.85%	1,604
e. Refund Liability Due to Death or Withdrawal	0.68%	1,279
f. Total	9.37%	\$ 17,692
2. Supplemental Contribution Amortization	8.49%	16,020
3. Allowance for Administrative Expenses	0.23%	438
4. Total	18.09%	\$ 34,150
C. CONTRIBUTION SUFFICIENCY / (DEFICIENCY) (A.5 - B.4)		
	(0.57%)	(1,072)
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:	\$	188,717

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>	<u>Pre-Retirement:</u>	
	Male:	1983 Group Annuity Mortality Table male rates set back 5 years.
	Female:	1983 Group Annuity Mortality Table female rates set back 3 years.
	<u>Post-Retirement:</u>	
	Male:	1983 Group Annuity Mortality Table male rates set back 3 years.
	Female:	1983 Group Annuity Mortality Table female rates set back 1 years.
	<u>Post-Disability:</u>	
	Male:	1987 Railroad Retirement Board Mortality for Disabled Annuitants
	Female:	1987 Railroad Retirement Board Mortality for Disabled Annuitants
<i>Retirement Age:</i>	<u>Active Members:</u>	
	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.	
	<u>Deferred Members:</u>	
	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.	
	<u>Other Non-Vested Members:</u>	
	Return of contributions is assumed to occur immediately.	
<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.

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 \$45,369 for 1998/1999 terminations and is decreased by 6.5% for each year that actual termination precedes July 1, 1999.

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>
06/30/00	800	600
06/30/01	850	800
06/30/02	950	800
06/30/03+	1,050	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

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, 1999

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	-	-	-	-	-	3	-	-	3
45-49	-	-	-	3	15	58	16	-	92
50-54	-	-	-	1	7	62	201	58	329
55-59	-	-	-	-	4	30	80	107	221
60-64	-	-	-	-	1	11	29	26	67
65+	-	-	-	-	-	3	1	-	4
All	-	-	-	4	27	167	327	191	716

	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	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	58,553	-	-	58,553
45-49	-	-	-	35,313	48,009	61,282	64,141	-	58,769
50-54	-	-	-	23,099	54,546	59,383	62,561	61,908	61,557
55-59	-	-	-	-	59,204	65,313	63,814	64,289	64,164
60-64	-	-	-	-	57,917	58,977	64,489	66,819	64,390
65+	-	-	-	-	-	58,753	60,310	-	59,143
All	-	-	-	32,260	51,730	61,055	63,109	63,910	62,242

Total Annual Earnings (in Thousands)

YEARS OF SERVICE									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>		
-	-	-	129	1,397	10,196	20,637	12,207		44,565

TABLE 4A

Basic Plan

St. Paul Teachers Retirement Fund Association

Retired Members as of June 30, 1999

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	30	48	1	-	-	-	-	-	79
60-64	21	189	70	-	-	-	-	-	280
65-69	6	117	160	56	2	1	-	-	342
70-74	-	12	72	150	35	3	-	-	272
75-79	-	4	14	82	93	13	-	-	206
80-84	-	1	4	20	53	42	3	-	123
85+	-	-	-	2	6	87	45	24	164
All	57	371	321	310	189	146	48	24	1,466

Age	Average Annual Annuity								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	33,547	24,358	6,655	-	-	-	-	-	27,623
60-64	38,149	31,245	23,953	-	-	-	-	-	29,939
65-69	41,435	38,676	29,025	21,452	30,823	40,192	-	-	31,348
70-74	-	41,405	35,548	24,739	16,879	40,679	-	-	27,500
75-79	-	25,792	30,590	22,640	22,088	21,504	-	-	22,921
80-84	-	36,221	42,808	22,265	19,765	17,877	12,269	-	20,227
85+	-	-	-	21,553	18,576	14,676	17,725	17,502	16,153
All	36,073	32,980	29,552	23,410	20,453	16,914	17,384	17,502	26,347

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>
2,056	12,236	9,486	7,257	3,866	2,469	834	420	38,625

TABLE 5A
Basic Plan

St. Paul Teachers Retirement Fund Association
Disabled Members as of June 30, 1999

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	-	1	2	-	-	-	-	-	3
55-59	2	5	-	-	-	1	-	-	8
60-64	-	4	-	1	-	-	-	-	5
65-69	-	-	-	-	-	-	-	-	-
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	2	10	2	1	-	1	-	-	16

	Average Annual Annuity								
	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	-	41,877	40,848	-	-	-	-	-	41,191
55-59	36,538	43,302	-	-	-	13,651	-	-	37,905
60-64	-	44,471	-	37,166	-	-	-	-	43,010
65-69	-	-	-	-	-	-	-	-	-
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	36,538	43,627	40,848	37,166	-	13,651	-	-	40,116

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>	
73	436	82	37	-	14	-	-	642	

TABLE 6A

Basic Plan

St. Paul Teachers Retirement Fund Association
Survivor Members as of June 30, 1999

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	-	1	-	-	-	-	1	-	2
50-54	-	2	1	1	-	-	-	-	4
55-59	1	3	7	2	-	-	-	-	13
60-64	1	8	4	2	2	1	-	-	18
65-69	2	8	3	4	2	-	-	-	19
70-74	2	8	11	9	4	1	-	-	35
75-79	4	10	8	8	7	1	1	-	39
80-84	2	13	5	5	7	3	-	-	35
85+	-	6	8	6	6	2	1	1	30
All	12	59	47	37	28	8	3	1	195

	Average Annual Annuity								
	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	-	9,625	-	-	-	-	3,350	-	6,487
50-54	-	27,130	14,663	18,604	-	-	-	-	21,882
55-59	16,405	25,838	14,388	15,490	-	-	-	-	17,355
60-64	41,599	17,372	23,005	23,302	9,975	9,639	-	-	19,377
65-69	19,383	30,681	31,580	22,023	15,008	-	-	-	26,161
70-74	21,551	18,791	21,645	20,678	12,226	7,806	-	-	19,267
75-79	17,445	25,878	10,875	16,357	13,326	13,868	9,329	-	16,997
80-84	19,011	18,696	17,063	13,830	13,061	14,921	-	-	16,335
85+	-	12,701	18,040	13,755	12,828	16,794	11,131	21,226	14,866
All	20,640	21,257	18,231	17,647	12,877	13,708	7,937	21,226	18,087

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>
248	1,254	857	653	361	110	24	21	3,527

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

July 1, 1999

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	8.00%	\$ 3,768
2. Employer Contributions	11.64%	5,483
3. Supplemental Contribution		
a. 1996 Legislation	0.74%	349
b. 1997 Legislation	1.50%	707
4. Administrative Expense Assessment	0.00%	-
5. Total	21.88%	\$ 10,307
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	7.96%	\$ 3,748
b. Disability Benefits	0.95%	447
c. Surviving Spouse and Child Benefits	0.17%	79
d. Deferred Retirements	1.31%	617
e. Refund Liability Due to Death or Withdrawal	1.45%	682
f. Total	11.84%	\$ 5,573
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 47,103

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.
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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

<i>Disability Benefit:</i>	-
<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.

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>	<p>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.</p> <p>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).</p>

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, 1999

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	76	60	-	-	-	-	-	-	136
25-29	103	412	38	-	-	-	-	-	553
30-34	73	273	155	14	-	-	-	-	515
35-39	67	186	136	116	5	1	-	-	511
40-44	61	159	118	103	57	12	-	-	510
45-49	63	136	126	135	69	48	3	-	580
50-54	43	104	102	87	49	40	14	6	445
55-59	23	54	31	72	47	24	7	4	262
60-64	16	21	8	20	16	15	3	1	100
65+	23	11	1	8	3	4	-	-	50
All	548	1,416	715	555	246	144	27	11	3,662

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	6,948	28,484	-	-	-	-	-	-	16,449
25-29	6,098	30,620	36,456	-	-	-	-	-	26,454
30-34	5,463	33,028	38,402	47,559	-	-	-	-	31,133
35-39	6,031	34,368	40,728	50,438	51,107	36,079	-	-	36,160
40-44	5,185	32,596	44,224	49,487	55,812	56,717	-	-	38,581
45-49	6,787	32,852	47,393	50,718	54,930	60,527	57,002	-	42,380
50-54	6,775	37,955	46,479	52,266	58,035	60,650	67,396	56,424	45,120
55-59	4,691	37,666	47,952	53,849	57,891	65,934	60,946	61,148	47,634
60-64	5,237	29,088	30,442	49,525	58,554	60,862	65,224	55,608	40,297
65+	2,197	17,235	47,484	51,135	50,650	57,193	-	-	21,548
All	5,906	32,603	42,776	50,963	56,425	60,917	64,328	58,068	36,401

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>	
3,236	46,166	30,585	28,285	13,880	8,772	1,737	639	133,300	

St. Paul Teachers Retirement Fund Association
Retired Members as of June 30, 1999

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	-	1	-	-	-	-	-	-	1
55-59	8	12	1	-	-	-	-	-	21
60-64	8	36	8	-	-	-	-	-	52
65-69	-	32	17	2	-	-	-	-	51
70-74	-	8	17	5	-	-	-	-	30
75-79	1	-	3	5	1	-	-	-	10
80-84	-	-	-	2	3	-	-	-	5
85+	-	-	-	-	1	-	-	-	1
All	17	89	46	14	5	-	-	-	171

Age	Average Annual Annuity								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	-	2,751	-	-	-	-	-	-	2,751
55-59	11,198	10,043	19,818	-	-	-	-	-	10,949
60-64	9,225	12,393	7,771	-	-	-	-	-	11,194
65-69	-	11,841	8,512	2,921	-	-	-	-	10,381
70-74	-	13,052	9,745	5,712	-	-	-	-	9,955
75-79	11,634	-	9,188	4,055	8,904	-	-	-	6,838
80-84	-	-	-	2,326	7,658	-	-	-	5,526
85+	-	-	-	-	1,484	-	-	-	1,484
All	10,295	11,829	9,129	4,238	6,673	-	-	-	10,178

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>
175	1,053	420	59	33	-	-	-	1,740

TABLE 5B
Coordinated Plan

St. Paul Teachers Retirement Fund Association
Disabled Members as of June 30, 1999

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	-	2	-	-	-	-	-	-	2
60-64	-	2	-	-	-	-	-	-	2
65-69	-	1	-	-	-	-	-	-	1
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	-	8	-	-	-	-	-	-	8

	Average Annual Annuity								
	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	-	2,821	-	-	-	-	-	-	2,821
50-54	-	12,896	-	-	-	-	-	-	12,896
55-59	-	13,471	-	-	-	-	-	-	13,471
60-64	-	9,971	-	-	-	-	-	-	9,971
65-69	-	9,859	-	-	-	-	-	-	9,859
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	-	9,410	-	-	-	-	-	-	9,410

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>	
-	75	-	-	-	-	-	-	-	75

TABLE 6B
Coordinated Plan

St. Paul Teachers Retirement Fund Association
Survivor Members as of June 30, 1999

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	-	-	-	-	-	-	-	-	-
55-59	-	-	-	-	-	-	-	-	-
60-64	-	1	-	-	-	-	-	-	1
65-69	-	-	1	-	-	-	-	-	1
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	-	1	3	-	-	-	-	-	4

	Average Annual Annuity								
	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	-	-	2,193	-	-	-	-	-	2,193
50-54	-	-	-	-	-	-	-	-	-
55-59	-	-	-	-	-	-	-	-	-
60-64	-	5,909	-	-	-	-	-	-	5,909
65-69	-	-	2,319	-	-	-	-	-	2,319
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	-	5,909	2,235	-	-	-	-	-	3,154

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>	
-	6	7	-	-	-	-	-	-	13

COORDINATED

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

July 1, 1999

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	5.50%	\$ 7,789
2. Employer Contributions	8.34%	11,811
3. Supplemental Contribution		
a. 1996 Legislation	0.74%	1,051
b. 1997 Legislation	1.50%	2,120
4. Administrative Expense Assessment	0.00%	-
5. Total	16.08%	\$ 22,771
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	6.75%	\$ 9,565
b. Disability Benefits	0.54%	760
c. Surviving Spouse and Child Benefits	0.15%	210
d. Deferred Retirements	0.70%	987
e. Refund Liability Due to Death or Withdrawal	0.42%	597
f. Total	8.56%	\$ 12,119
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 141,614

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.

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.

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.

Amount is payable as a normal or early retirement benefit.

TABLE 13B
(cont)
COORDINATED

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.

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

July 1, 1999

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%
07/01/99	704,233	938,847	234,614	75.01%	178,254	131.62%

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

July 1, 1999

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%
1999	18.82%	178,254	11,649	21,899	21,066	96.19%

*Includes contributions from other sources (if applicable)