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Minneapolis Teachers' Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 2002



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November 20, 2002

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

Re: *Minneapolis Teachers' Retirement Fund*
July 1, 2002 Actuarial Valuation Report

Commission Members:

Pursuant the terms of our actuarial services contract, we have performed an actuarial valuation of the Minneapolis Teachers' Retirement Fund as of July 1, 2002.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. Although we have reviewed the data for reasonableness and consistency, we have relied on the basic employee data and asset figures as submitted by the Minneapolis 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 as adopted by the Commission on Pensions and Retirement.

We, Thomas K. Custis and Lance M. Burma, are actuaries for Milliman USA. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

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

Lance M. Burma, F.S.A., M.A.A.A.
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Minneapolis Teachers' Retirement Fund
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Minneapolis Teachers' Retirement Fund
Report Highlights
(dollars in thousands)

	July 1, 2001 Valuation	July 1, 2002 Valuation
A. CONTRIBUTIONS % OF PAYROLL (Table 11)		
1. Statutory Contributions - Chapter 354A	22.72%	22.53%
2. Required Contributions - Chapter 356	25.45%	29.05%
3. Sufficiency / (Deficiency)	(2.73%)	(6.52%)
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	\$ 1,061,983	\$ 1,027,883
b. Current Benefit Obligations (Table 8)	1,556,387	1,609,643
c. Funding Ratio	68.23%	63.86%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$ 1,061,983	\$ 1,027,883
b. Actuarial Accrued Liability (Table 9)	1,610,364	1,659,512
c. Funding Ratio	65.95%	61.94%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$ 1,677,911	\$ 1,619,764
b. Current and Expected Future Benefit Obligations	1,859,209	1,928,441
c. Funding Ratio	90.25%	83.99%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	5,813	5,720
b. Projected Annual Earnings	\$ 267,977	\$ 266,429
c. Average Annual Earnings (Actual dollars)	\$ 46,100	\$ 46,578
d. Average Age	42.6	42.5
e. Average Service	8.3	8.4
f. Additional Members on Leave of Absence *	64	58
2. Others		
a. Service Retirements (Table 4)	3,161	3,256
b. Disability Retirements (Table 5)	20	21
c. Survivors (Table 6)	263	268
d. Deferred Retirements (Table 7)	802	1,043
e. Terminated Other Non-Vested (Table 7)	2,250	2,620
f. Total	6,496	7,208

* Valued as deferred retirements, liability included with actives.

Minneapolis 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. This year's ratio is 63.86%. The corresponding ratio for the prior year was 68.23%.

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 used by the State. For 2002 the ratio is 61.94%, which is a decrease from the 2001 value of 65.95%.

The *Projected Benefit Funding Ratio* is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 83.99% shows that the current statutory contributions are insufficient in the long run.

Asset Information (Tables 1 and 2)

Effective with the July 1, 2000 valuation of the fund, Minnesota Statutes require that the asset value used for actuarial purposes spread differences between actual return (measured on a market-value basis) and expected return on assets over a five year period. The previous method required under Minnesota Statutes recognized one third of the unrealized gains and losses. An Asset Valuation Method 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 intent of the change to the current method is to employ a more effective asset smoothing technique which is market-value based and which eliminates artificial bias related to manager style. The effective date of this requirement is July 1, 2000 with full transition to be accomplished as of July 1, 2003.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F.1 to F.4. Actuarial Value of Assets is determined as:

Market Value of Assets at June 30, 2002, *less*

80% of the current year Unrecognized Asset Return at July 1, 2002 (the difference between actual net return on Market Value of Assets between June 30, 2001 and June 30,

2002 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2001 Actuarial Valuation); *less*

60% of the current year Unrecognized Asset Return at July 1, 2001 (the difference between actual net return on Market Value of Assets between June 30, 2000 and June 30, 2001 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2000 Actuarial Valuation); *less*

40% of the current year Unrecognized Asset Return at July 1, 2000 (the difference between actual net return on Market Value of Assets between June 30, 1999 and June 30, 2000 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 1999 Actuarial Valuation); *less*

10% of the Unrecognized Asset Return at July 1, 1999 (the difference between Market Value of Assets on June 30, 1999 and the Actuarial Value of Assets used in the July 1, 1999 Actuarial Valuation).

Since its adoption on July 1, 2000, the Asset Valuation Method has functioned effectively to smooth the significant variability in market value returns. It is prudent to note, however, that the deferral of recognition of the large market losses of the last two fiscal years means there has accumulated a significant negative return amount that will be recognized over the next few years. This means that in order for asset returns on a "Current Assets" basis to be at or near the assumed 8.5%, market value returns will need to be substantially above 8.5%; conversely, if market value returns are at or near the assumed 8.5%, returns measured on a "Current Assets" basis will be substantially lower, resulting in actuarial losses.

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.

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 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 A.6, 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 B.3, 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 since the Statutory Contribution Rate is 22.53% compared to the Required Contribution Rate of 29.05%.

Changes in Actuarial Assumption

This report reflects the new assumptions which became effective July 1, 2002. These revised assumptions were developed from the recently completed experience study and have been approved by the Commission. Effective with this July 1, 2002 valuation, the following assumptions have been changed:

Assumption	Prior	Revised
Salary increases	Merit table that ranges from 7.5% at age 20 down to 5.0% at age 70.	Ten year select and ultimate table. During the select period, $0.4\% \times (10 - T)$ where T is completed years of service is added to the ultimate rate. Ultimate table ranges from 6.5% at ages 20 to 45 down to 5.0% at age 60 and over.
Male Pre-Retirement Mortality	1983 GAM (Male - 6)	1983 GAM (Male - 12)
Female Pre-Retirement Mortality	1983 GAM (Female - 4)	1983 GAM (Female - 10)
Male Post-Retirement Mortality	1983 GAM (Male - 4)	1983 GAM (Male - 4)
Female Post-Retirement Mortality	1983 GAM (Female - 2)	1983 GAM (Female - 1)
Retirement Age	Graded rates. Different sets of rates apply to Basic and Coordinated Members.	Graded rates. Different sets of rates apply to Basic and Coordinated Members. Revised rates are generally higher before age 60 and lower thereafter.
Separation Decrement	Graded rates.	Select and ultimate table. Ultimate rates are generally higher than prior rates.
Disability Decrement	Graded rates.	Graded rates. Revised rates are higher than prior rates.
Form of Annuity Selected - Male	80% married 15% elect 50% J&S option 20% elect 75% J&S option 40% elect 100% J&S option	80% married 15% elect 50% J&S option 20% elect 75% J&S option 40% elect 100% J&S option
Form of Annuity Selected - Female	60% married 15% elect 50% J&S option 5% elect 75% J&S option 10% elect 100% J&S option	60% married 15% elect 50% J&S option 5% elect 75% J&S option 15% elect 100% J&S option
Combined Service Annuity Load Factor	None assumed.	4.0% load on liabilities for active Members and 30% load on liabilities for former Members.

The revised assumptions have had a significantly adverse impact on the Accrued Benefit, Accrued Liability, and Projected Benefit funding ratio as well as on the Sufficiency Measure.

All other 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

Effective with this July 1, 2002 valuation, the following plan provisions have been added or amended:

Effective July 1, 2002, 174 charter school teachers are no longer covered by this fund. Active charter school teachers retain their rights to benefits earned in this fund through June 30, 2002 as if they were former Members with a termination of employment on June 30, 2002. Effective July 1, 2002, these 174 charter school Members are transferred to the Minnesota Teachers Retirement Association. This plan change slightly improved the funding ratios and the Sufficiency Measure.

Supplemental Administrative Expense Assessment. An administrative expense assessment otherwise payable under law will not be assessed if the administrative expenses of the Fund do not exceed the July 1, 2001 administrative expense amount adjusted for inflation. This plan change has had no effect on the funding ratios and the Sufficiency Measure for the current fiscal year.

All other plan provisions are the same as those used in the prior actuarial valuation of the Fund. Tables 13A and 13B contain summaries of current plan benefits.

Other

While not a formal change in provisions, a change in the expected amount of state aid has occurred with the Fund. Since the Duluth Teachers Retirement Fund Accrued Liability Funding Ratio exceeded the Teachers Retirement Fund Accrued Liability Funding Ratio as of July 1, 2001, the state aid normally provided to Duluth shall be reallocated to the other first class city teachers funds. This results in an increase in the amount of state aid for this Fund.

Minneapolis Teachers' Retirement Fund
Accounting Balance Sheet
(dollars in thousands)

July 1, 2002

	Market Value	Cost Value
A. ASSETS		
1. Cash, Equivalents, Short-Term Securities	\$ 100,276	\$ 100,265
2. Investments		
a. Fixed Income	289,864	294,598
b. Equity	398,303	443,184
c. Real Estate	3,214	4,336
3. Equity in Minnesota Post-Retirement Investment Fund	-	-
4. Other Assets	18,301	22,596
B. TOTAL ASSETS	<u>\$ 809,958</u>	<u>\$ 864,979</u>
C. AMOUNTS CURRENTLY PAYABLE	\$ 39,469	\$ 39,469
D. ASSETS AVAILABLE FOR BENEFITS		
1. Member Reserves	\$ 254,859	\$ 254,859
2. Employer Reserves	515,630	570,651
3. MPRIF Reserves	-	-
4. Non-MPRIF Reserves	-	-
5. Total Assets Available for Benefits	<u>\$ 770,489</u>	<u>\$ 825,510</u>
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	<u>\$ 809,958</u>	<u>\$ 864,979</u>
F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Market Value of Assets Available for Benefits (D.5)	\$ 770,489	
2. Unrecognized Asset Returns		
a. June 30, 2002	\$ (187,993)	
b. June 30, 2001	(217,974)	
c. June 30, 2000	44,266	
d. June 30, 1999	60,783	
3. UAR Adjustment: $.80 * 2(a) + .60 * 2(b) + .40 * 2(c) + .1 * 2(d)$		(257,394)
4. Actuarial Value of Assets (F.1 - F.3)		<u>\$ 1,027,883</u>

Minneapolis Teachers' Retirement Fund
Change In Assets Available for Benefits
(dollars in thousands)

June 30, 2002

	Market Value	Cost Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$ 932,398	\$ 922,891
B. OPERATING REVENUES		
1. Member Contributions	\$ 17,715	\$ 17,715
2. Employer Contributions	21,745	21,745
3. Supplemental Contributions *	20,360	20,360
4. Investment Income	32,038	32,038
5. MPRIF Income	-	-
6. Net Realized Gain / (Loss)	(74,344)	(74,344)
7. Other	-	-
8. Net Change in Unrealized Gain / (Loss)	(64,528)	-
9. Total Operating Revenue	\$ (47,014)	\$ 17,514
C. OPERATING EXPENSES		
1. Service Retirements	\$ 100,873	\$ 100,873
2. Disability Benefits	1,271	1,271
3. Survivor Benefits	6,633	6,633
4. Refunds	1,334	1,334
5. Administrative Expenses	711	711
6. Investment Expenses	4,073	4,073
7. Total Operating Expenses	\$ 114,895	\$ 114,895
D. CHANGE IN ACCOUNTING METHOD	\$ -	\$ -
E. ASSETS AVAILABLE AT END OF PERIOD	\$ 770,489	\$ 825,510
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN		
1. Average Balance		
(a) Assets Available at Beginning of Period	932,398	
(b) Assets Available at End of Period	770,489	
(c) Average Balance $\{[(a) + (b) - \text{Net Investment Income}] / 2\}$	\$ 906,897	
{Net Investment Income: B.4+B.5+B.6+B.7+B.8-C.6}		
2. Expected Return: $.085 * F.1$	77,086	
3. Actual Return	(110,907)	
4. Current Year UAR: $F.3 - F.2$	(187,993)	

* Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

TABLE 3
TOTAL

Minneapolis Teachers' Retirement Fund
Active Members as of June 30, 2002

Age	Years of Service								ALL
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25	118	46	0	0	0	0	0	0	164
25-29	227	490	42	0	0	0	0	0	759
30-34	118	363	283	19	0	0	0	0	783
35-39	76	201	225	131	13	0	0	0	646
40-44	120	181	182	173	122	8	0	0	786
45-49	63	215	194	167	113	38	12	0	802
50-54	35	133	169	192	116	75	84	30	834
55-59	25	88	117	103	104	52	68	89	646
60-64	18	30	39	36	41	33	12	22	231
65+	8	10	13	13	7	4	2	12	69
ALL	808	1,757	1,264	834	516	210	178	153	5,720

AVERAGE ANNUAL EARNINGS

Age	Years of Service								ALL
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25	9,725	16,026	0	0	0	0	0	0	11,492
25-29	12,992	29,465	38,593	0	0	0	0	0	25,043
30-34	18,097	33,830	40,950	46,173	0	0	0	0	34,332
35-39	18,345	37,724	45,468	50,819	56,632	0	0	0	41,177
40-44	15,904	35,185	48,177	54,707	57,096	66,185	0	0	43,263
45-49	14,923	38,542	46,830	59,182	60,725	62,018	62,254	0	47,582
50-54	19,667	37,414	49,486	58,939	65,342	62,587	71,366	76,781	55,055
55-59	16,694	36,958	48,946	59,138	62,847	67,769	67,502	74,281	56,887
60-64	17,888	37,128	43,443	58,038	61,943	68,839	74,401	71,308	54,080
65+	1,875	20,128	39,129	51,021	63,623	78,833	76,792	56,942	43,273
ALL	14,750	33,715	45,559	56,406	61,366	65,196	69,541	72,984	42,776

PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE

Age	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
All	11,918	59,237	57,587	47,043	31,665	13,691	12,378	11,167	244,679

TABLE 4
TOTAL

Minneapolis Teachers' Retirement Fund
Service Retirements as of June 30, 2002

<u>Age</u>	<u>Years Retired</u>							<u>ALL</u>
	<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+</u>	
<50	0	0	0	0	0	0	0	0
50-54	6	52	0	1	0	0	0	59
55-59	33	333	80	1	0	0	0	447
60-64	22	315	265	37	0	0	0	639
65-69	7	146	265	120	17	2	0	557
70-74	0	34	146	230	93	28	1	532
75-79	2	6	25	127	146	91	12	409
80-84	0	1	2	23	91	142	25	284
85+.	0	0	0	2	21	90	243	356
ALL	70	887	783	541	368	353	281	3,283

AVERAGE ANNUAL BENEFIT

<u>Age</u>	<u>Years Retired</u>							<u>ALL</u>
	<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+</u>	
<50	0	0	0	0	0	0	0	0
50-54	42,301	34,956	0	15,514	0	0	0	35,373
55-59	18,766	37,821	38,565	17,951	0	0	0	36,503
60-64	13,362	26,481	38,085	26,938	0	0	0	30,868
65-69	12,607	22,154	34,601	41,675	18,981	18,296	0	32,051
70-74	0	28,751	27,014	36,474	36,999	24,785	16,007	32,823
75-79	5,760	24,104	31,838	34,563	29,446	37,601	9,721	32,223
80-84	0	10,720	21,467	36,489	26,908	29,527	19,621	28,257
85+	0	0	0	23,204	30,955	25,033	18,867	21,163
ALL	18,097	30,576	34,649	36,406	30,330	30,023	18,533	31,124

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS RETIRED

<u>Age</u>	<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+</u>	<u>ALL</u>
All	1,267	27,121	27,130	19,695	11,161	10,598	5,208	102,180

TABLE 5
TOTAL

Minneapolis Teachers' Retirement Fund
Disability Retirements as of June 30, 2002

Age	Years Disabled							ALL
	<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+</u>	
<50	1	2	0	0	0	0	0	3
50-54	0	3	2	0	0	0	0	5
55-59	0	2	5	1	1	0	0	9
60-64	0	1	2	1	0	0	0	4
65-69	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	1	8	9	2	1	0	0	21

AVERAGE ANNUAL BENEFIT

Age	Years Disabled							ALL
	<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+</u>	
<50	16,352	2,077	0	0	0	0	0	6,835
50-54	0	25,845	46,046	0	0	0	0	33,925
55-59	0	52,302	59,288	49,097	35,754	0	0	53,988
60-64	0	7,318	24,785	31,797	0	0	0	22,171
65-69	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	16,352	24,201	48,678	40,447	35,754	0	0	36,415

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS DISABLED

Age	Years Disabled							ALL
	<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+</u>	
All	16	194	438	81	36	0	0	765

TABLE 6
TOTAL

Minneapolis Teachers' Retirement Fund
Survivors as of June 30, 2002

Age	Years Since Death							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	2	30	20	9	1	3	0	65
50-54	0	1	3	3	0	0	0	7
55-59	2	1	2	0	0	0	0	5
60-64	1	7	7	0	0	0	0	15
65-69	3	5	12	3	1	0	1	25
70-74	4	14	12	5	7	4	1	47
75-79	2	12	13	6	2	3	2	40
80-84	1	7	5	1	1	4	2	21
85+	4	4	10	8	4	8	5	43
ALL	19	81	84	35	16	22	11	268

AVERAGE ANNUAL BENEFIT

Age	Years Since Death							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	23,972	13,759	20,622	7,601	33,744	6,774	0	15,317
50-54	0	7,227	14,613	37,046	0	0	0	23,172
55-59	29,364	65,185	23,681	0	0	0	0	34,255
60-64	11,206	19,636	16,167	0	0	0	0	17,455
65-69	39,693	47,460	42,983	51,944	12,995	0	17,276	42,331
70-74	28,391	25,235	40,561	30,473	40,092	24,907	19,136	32,029
75-79	35,719	19,467	31,022	29,307	16,217	21,110	13,616	25,179
80-84	22,787	25,296	28,526	34,718	28,127	22,837	20,450	25,599
85+	33,856	21,753	28,439	20,021	19,171	17,496	13,692	22,142
ALL	30,535	21,122	29,162	24,528	29,039	18,845	15,728	24,819

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH

Age	<1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	580	1,711	2,450	858	465	415	173	6,651

Minneapolis Employees Retirement Fund
Reconciliation of Members

	<u>Actives</u>	<u>Terminated</u>		
		<u>Leave of Absence</u>	<u>Deferred Retirement</u>	<u>Other Non-Vested</u>
A. ON JUNE 30, 2001	5,813	64	802	2,250
B. ADDITIONS	872	4	116	489
C. DELETIONS				
1. Service Retirement	(153)	(5)	(39)	(7)
2. Disability	(1)	(2)	0	0
3. Death - Survivor	0	0	0	0
4. Death - Other	(7)	0	0	(102)
5. Terminated - Deferred	(116)	0	0	0
6. Terminated - Refund	(94)	(3)	(8)	(54)
7. Terminated - Other Non-Vested	(493)	0	0	0
8. Returned as active	79	0	(24)	(55)
9. Transferred to another fund	(174)	0	174	0
D. DATA ADJUSTMENTS	(6)	0	22	99
	<u>3,903</u>	<u>58</u>	<u>1,043</u>	<u>2,620</u>
1. Vested	1,817	0	0	0
2. Non-Vested	5,720	58	1,043	2,620
E. TOTAL ON JUNE 30, 2002				

	<u>Recipients</u>			
	<u>Retirement Annuitants</u>	<u>Disabled</u>	<u>Survivors</u>	<u>Other Beneficiary</u>
A. ON JUNE 30, 2001	3,137	20	263	24
B. ADDITIONS	204	3	23	0
C. DELETIONS				
1. Service Retirement	0	0	0	0
2. Death	(101)	0	(7)	(1)
3. Annuity Expired	0	0	(7)	0
4. Returned as Active	0	0	0	0
D. DATA ADJUSTMENTS	16	(2)	(4)	4
	<u>3,256</u>	<u>21</u>	<u>268</u>	<u>27</u>
E. TOTAL ON JUNE 30, 2002				

Minneapolis Teachers' Retirement Fund
Actuarial Balance Sheet
(dollars in thousands)

July 1, 2002

A. CURRENT ASSETS (Table 1; Line F.6)				\$ 1,027,883
B. EXPECTED FUTURE ASSETS				
1. Present Value of Expected Future Statutory Supplemental Contributions				\$ 322,952
2. Present Value of Future Normal Costs				268,929
3. Total Expected Future Assets				<u>591,881</u>
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				<u>\$ 1,619,764</u>
D. CURRENT BENEFIT OBLIGATIONS				
		<u>Non-Vested</u>	<u>Vested</u>	<u>Total</u>
1. Benefit Recipients				
a. Retirement Annuities			\$ 1,071,159	\$ 1,071,159
b. Disability Benefits			7,217	7,217
c. Surviving Spouse and Child Benefits			61,091	61,091
2. Deferred Retirements			42,740	42,740
3. Former Members Without Vested Rights			2,944	2,944
4. Active Members				
a. Retirement Annuities *	\$	4,551	391,154	395,705
b. Disability Benefits		4,182	-	4,182
c. Surviving Spouse and Child Benefits		2,925	-	2,925
d. Deferred Retirements		720	17,217	17,937
e. Refund Liability Due to Death or Withdrawal		-	3,743	3,743
5. Total Current Benefit Obligations	\$	12,378	\$ 1,597,265	<u>\$ 1,609,643</u>
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				<u>\$ 318,798</u>
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				<u>\$ 1,928,441</u>
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D.5 - A)				\$ 581,760
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F - C)				\$ 308,677

* Includes members on leave of absence.

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

July 1, 2002

	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 *	\$ 687,929	\$ 222,955	\$ 464,974
b. Disability Benefits	7,570	3,844	3,726
c. Surviving Spouse and Child Benefits	5,822	2,853	2,969
d. Deferred Retirements	33,701	27,554	6,147
e. Refund Liability Due to Death or Withdrawal	8,268	11,723	(3,455)
f. Total	<u>\$ 743,290</u>	<u>\$ 268,929</u>	<u>\$ 474,361</u>
2. Deferred Retirements	\$ 42,740		\$ 42,740
3. Former Members Without Vested Rights	2,944		2,944
4. Annuitants in MPRIF	-		-
5. Annuitants Not in MPRIF	1,139,467		1,139,467
6. Total	<u>\$ 1,928,441</u>	<u>\$ 268,929</u>	<u>\$ 1,659,512</u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. Actuarial Accrued Liability (A.6)			\$ 1,659,512
2. Current Assets (Table 1; Line F.6)			1,027,883
3. Unfunded Actuarial Accrued Liability (B.1 - B.2)			<u>\$ 631,629</u>
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of June 30, 2020			3,523,613
2. Supplemental Contribution Rate (B.3 / C.1)			<u>17.93%</u>

* Includes members on leave of absence.

Minneapolis Teachers' Retirement Fund
Changes in Unfunded Actuarial Accrued Liability (UAAL)
(dollars in thousands)

June 30, 2002

A. UAAL AT BEGINNING OF YEAR	\$ 548,381
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$ 28,199
2. Contributions	(59,820)
3. Interest	46,467
4. Total	<u>\$ 14,846</u>
C. EXPECTED UAAL AT END OF YEAR (A + B.4)	\$ 563,227
D. INCREASE / (DECREASE) DUE TO ACTUARIAL LOSSES / (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Age and Service Retirements (b)	\$ -
2. Disability Retirements (b)	-
3. Death-in-Service Benefits (a)	-
4. Withdrawal (b)	-
5. Salary Increases	(17,097)
6. Contribution Income (b)	-
7. Investment Income (c)	71,199
8. Mortality of Annuitants	(5,007)
9. Other Items	8,686
10. Total	<u>\$ 57,781</u>
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C + D.5)	\$ 621,008
F. CHANGE IN UAAL DUE TO PLAN AMENDMENTS	(319)
G. CHANGE IN UAAL DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	<u>10,940</u>
H. UAAL AT END OF YEAR (E + F + G)	<u><u>\$ 631,629</u></u>

(a) Included in Item D.8.

(b) Included in Item D.9.

(c) Includes a gross investment loss of \$71,199 increased by \$0 used to provide next year's cost of living adjustment to annuitants.

Minneapolis Teachers' Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 2002

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	5.90%	\$ 15,714
2. Employer Contributions	8.67%	23,102
3. Supplemental Contribution *		
a. 1993 Legislation	1.88%	5,000
b. 1996 Legislation	1.08%	2,865
c. 1997 Legislation	5.00%	13,314
4. Administrative Expense Assessment		0
5. Total	22.53%	\$ 59,995
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	9.07%	\$ 24,163
b. Disability Benefits	0.16%	426
c. Surviving Spouse and Child Benefits	0.11%	286
d. Deferred Retirements	1.06%	2,830
e. Refund Liability Due to Death or Withdrawal	0.45%	1,186
f. Total	10.85%	\$ 28,891
2. Supplemental Contribution Amortization	17.93%	47,771
3. Allowance for Administrative Expenses	0.27%	719
4. Total	29.05%	\$ 77,381
C. CONTRIBUTION SUFFICIENCY / (DEFICIENCY) (A.3 - B.5)	(6.52%)	(17,386)
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 266,429

* Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

Minneapolis Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

(Please note that these are new assumptions effective July 1, 2002.)

Interest:	Pre-Retirement: 8.50% per annum Post-Retirement: 8.50% per annum
Salary Increases:	Reported salary for prior fiscal year, with new hires annualized, increased to current fiscal year and annually for each future year according to the ultimate rate table below. During a 10-year select period, $0.4\% \times (10-T)$ where T is completed years of service is added to the ultimate rate.
Mortality:	<p><u>Pre-Retirement:</u></p> <p>Male: 1983 Group Annuity Mortality Table male rates set back 12 years.</p> <p>Female: 1983 Group Annuity Mortality Table female rates set back 10 years.</p> <p><u>Post-Retirement:</u></p> <p>Male: 1983 Group Annuity Mortality Table male rates set back 4 years.</p> <p>Female: 1983 Group Annuity Mortality Table female rates set back 1 years.</p> <p><u>Post-Disability:</u></p> <p>Male: 1977 Railroad Retirement Board Mortality for Disabled Annuitants</p> <p>Female: 1977 Railroad Retirement Board Mortality for Disabled Annuitants</p>
Retirement Age:	<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>

Other Non-Vested Members:

Return of contributions is assumed to occur immediately.

Separation: Select and ultimate rates are based on recent plan experience. Ultimate rates after the third year are shown in the rate table. Select rates are as follows:

First Year	30%
Second Year	15%
Third Year	10%*

*Ultimate rate is used if greater than 10%

Disability: Graded rates shown in the rate table.

Allowance for Combined Service Annuity: 4.0% load on liabilities for active Members and 30% load for former Members.

Administrative Expenses: Prior year administrative expenses (excluding investment expenses) expressed as a percentage of prior year payroll.

Return of Contributions: All employees withdrawing after becoming eligible for a deferred benefit were assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.

Family Composition: 80% of male Members and 60% of female Members are assumed to be married. Female is assumed to be three years younger than male.

Social Security: N/A

Benefit Increases After Retirement: 2.0% per annum

Special Consideration: Additional post retirement benefit increase is accounted for by increasing the reserve value for all service retirements, disability retirements and survivors eligible for the increase by an amount that equals the excess of the five year time weighted total rate of return over the assumed interest rate of 8.50% multiplied by the quantity of one minus the rate of contribution deficiency.

Optional Benefit Forms: Married Members are assumed to elect the following forms of benefit:

Males:	25% elect life annuity option
	15% elect 50% J&S option
	20% elect 75% J&S option
	40% elect 100% J&S option

	<p>Females: 65% elect life annuity option 15% elect 50% J&S option 5% elect 75% J&S option 15% 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>	Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less of a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during that fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year). Transition rules apply between July 1, 2000 and July 1, 2003, when the method is fully in effect.
<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.
<i>Missing Data:</i>	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:
	<p>Date of Birth: Average age of participant group based on prior years valuation report. Assumed date for 07/01/2002 is July 1, 1959.</p> <p>Date of Hire: Current valuation date minus years of service.</p> <p>Years of Service: Years of service on last year's valuation plus one year.</p> <p>Sex: Male.</p> <p>Deferred Benefit: Calculated. Service at termination is calculated assuming termination on the valuation date in which the participant is first reported in vested status. Salary at</p>

assumed termination date if not available.

Estimated salary begins at \$15,000 for 1993 termination date and increases according to the salary assumption thereafter. Current level is \$25,860.

Supplemental Contributions: The City of Minneapolis, the Minneapolis School District, and the State of Minnesota are scheduled to make the following supplemental contributions to the plan:

1993 Legislation:

Supplemental contributions of \$5,000,000 annually are assumed to be made until the amortization date of June 30, 2020.

1996 Legislation:

Supplemental contributions of \$1,015,000 annually are assumed to be made until the amortization date of June 30, 2020 plus additional supplemental contributions according to the following schedule:

<u>Year</u>	<u>Amount</u>
June 30, 2003	1,850,000
June 30, 2004 - 2020	2,000,000

1997 Legislation:

Supplemental contributions of \$13,314,000 annually are assumed to be made beginning July 1, 2002 and continuing until the amortization date of June 30, 2020.

TABLE 12
(Continued)

Minneapolis 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>Age</u>	<u>Withdrawal</u>	<u>Disability</u>
20	1,300	0	45	225	6
21	1,250	0	46	210	6
22	1,200	0	47	195	6
23	1,150	0	48	180	6
24	1,100	0	49	165	6
25	1,050	0	50	150	10
26	1,000	0	51	135	10
27	950	0	52	120	10
28	900	0	53	105	10
29	850	0	54	90	10
30	800	0	55	75	15
31	750	0	56	60	15
32	700	0	57	45	15
33	650	0	58	30	15
34	600	0	59	15	15
35	550	1	60	0	21
36	500	1	61	0	21
37	450	1	62	0	21
38	400	1	63	0	0
39	350	1	64	0	0
40	300	3	65	0	0
41	285	3	66	0	0
42	270	3	67	0	0
43	255	3	68	0	0
44	240	3	69	0	0

TABLE 12
(Continued)

Minneapolis Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

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

<u>Age</u>	<u>Pre-Retirement Mortality</u>		<u>Post-Retirement Mortality</u>		<u>Post-Disability Mortality</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20	3	1	3	2	271	271
21	3	1	3	2	271	271
22	3	1	4	2	271	271
23	3	1	4	2	272	272
24	3	1	4	2	272	272
25	3	1	4	2	272	272
26	3	1	4	3	272	272
27	3	2	4	3	272	272
28	3	2	4	3	272	272
29	3	2	5	3	272	272
30	4	2	5	3	272	272
31	4	2	5	3	272	272
32	4	2	5	4	272	272
33	4	2	6	4	272	272
34	4	2	6	4	273	273
35	4	3	6	4	273	273
36	4	3	7	5	273	273
37	5	3	7	5	273	273
38	5	3	8	5	273	273
39	5	3	9	6	273	273
40	5	3	9	6	273	273
41	6	4	10	7	273	273
42	6	4	10	7	273	273
43	6	4	11	8	274	274
44	7	4	12	8	274	274

TABLE 12
(Continued)

Minneapolis Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

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

<u>Age</u>	<u>Pre-Retirement Mortality</u>		<u>Post-Retirement Mortality</u>		<u>Post-Disability Mortality</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
45	7	5	14	9	274	274
46	8	5	15	10	275	275
47	9	5	17	11	276	276
48	9	6	19	12	279	279
49	10	6	22	14	283	283
50	10	7	25	15	289	289
51	11	7	28	16	297	297
52	12	8	31	18	310	310
53	14	8	35	19	327	327
54	15	9	39	21	348	348
55	17	10	43	23	371	371
56	19	11	48	25	395	395
57	22	12	52	28	417	417
58	25	14	57	31	437	437
59	28	15	61	34	455	455
60	31	16	66	38	473	473
61	35	18	71	42	494	494
62	39	19	77	47	516	516
63	43	21	84	52	541	541
64	48	23	92	58	569	569
65	52	25	101	64	598	598
66	57	28	111	71	628	628
67	61	31	123	78	658	658
68	66	34	139	87	687	687
69	71	38	156	97	716	716
70	77	42	176	109	746	746

TABLE 12
(Continued)

Minneapolis Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

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

Age	Basic Members Eligible for 30 and Out Provision	Basic Members Not Eligible for 30 and Out Provision	Coordinated Members Eligible for Rule of 90 Provision	Coordinated Members Not Eligible for Rule of 90 Provision
55 or less	4,000	500	4,000	500
56	4,000	500	4,000	500
57	4,000	500	4,000	500
58	4,000	500	4,000	500
59	4,000	500	2,000	800
60	2,500	2,500	2,000	800
61	2,500	2,500	2,000	800
62	2,500	2,500	3,000	1,500
63	2,500	2,500	3,000	1,500
64	2,500	2,500	3,000	1,500
65	4,000	4,000	4,500	4,500
66	4,000	4,000	4,500	4,500
67	4,000	4,000	4,500	4,500
68	4,000	4,000	4,500	4,500
69	4,000	4,000	4,500	4,500
70	6,000	6,000	6,000	6,000
71	6,000	6,000	6,000	6,000
72	6,000	6,000	6,000	6,000
73	6,000	6,000	6,000	6,000
74	6,000	6,000	6,000	6,000
75	6,000	6,000	6,000	6,000
76	6,000	6,000	6,000	6,000
77	6,000	6,000	6,000	6,000
78	6,000	6,000	6,000	6,000
79	6,000	6,000	6,000	6,000
80 or more	10,000	10,000	10,000	10,000

TABLE 12
(Continued)

Minneapolis Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

Annual Salary Increases

Ultimate Rate of Annual Salary Increases		Ultimate Rate of Annual Salary Increases	
Age		Age	
<22	6.50%	45	6.50%
23	6.50	46	6.40
24	6.50	47	6.30
		48	6.20
25	6.50	49	6.10
26	6.50		
27	6.50	50	6.00
28	6.50	51	5.90
29	6.50	52	5.80
		53	5.70
30	6.50	54	5.60
31	6.50		
32	6.50	55	5.50
33	6.50	56	5.40
34	6.50	57	5.30
		58	5.20
35	6.50	59	5.10
36	6.50		
37	6.50	60 & Over	5.00
38	6.50		
39	6.50		
40	6.50		
41	6.50		
42	6.50		
43	6.50		
44	6.50		

**TABLE 3A
BASIC**

**Minneapolis Teachers' Retirement Fund
Active Members as of June 30, 2002**

<u>Age</u>	<u>Years of Service</u>								<u>ALL</u>
	<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>	
<25	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0
45-49	0	0	1	3	3	6	12	0	25
50-54	0	0	4	4	20	27	83	30	168
55-59	0	0	2	4	18	34	65	89	212
60-64	0	0	1	4	9	14	12	21	61
65+	0	0	0	0	1	3	2	12	18
ALL	0	0	8	15	51	84	174	152	484

AVERAGE ANNUAL EARNINGS

<u>Age</u>	<u>Years of Service</u>								<u>ALL</u>
	<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>	
<25	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0
45-49	0	0	7,588	63,265	43,846	53,164	62,254	0	55,798
50-54	0	0	69,362	61,377	64,724	65,324	71,541	76,781	70,372
55-59	0	0	56,932	75,779	62,207	69,382	66,874	74,281	70,064
60-64	0	0	62,522	62,549	67,406	68,740	74,401	71,505	70,101
65+	0	0	0	0	65,746	81,693	76,792	56,942	63,762
ALL	0	0	57,678	65,908	63,101	67,252	69,415	73,022	69,204

PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE

<u>Age</u>	<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>ALL</u>
All	0	0	461	989	3,218	5,649	12,078	11,099	33,495

TABLE 4A
BASIC

Minneapolis Teachers' Retirement Fund
Service Retirements as of June 30, 2002

<u>Age</u>	<u>Years Retired</u>							<u>ALL</u>
	<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+</u>	
<50	0	0	0	0	0	0	0	0
50-54	6	52	0	1	0	0	0	59
55-59	30	317	74	1	0	0	0	422
60-64	13	270	254	37	0	0	0	574
65-69	5	115	251	119	17	2	0	509
70-74	0	27	133	225	93	28	1	507
75-79	1	5	23	124	146	91	12	402
80-84	0	1	1	23	91	142	25	283
85+	0	0	0	2	21	90	243	356
ALL	55	787	736	532	368	353	281	3,112

AVERAGE ANNUAL BENEFIT

<u>Age</u>	<u>Years Retired</u>							<u>ALL</u>
	<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+</u>	
<50	0	0	0	0	0	0	0	0
50-54	42,301	34,956	0	15,514	0	0	0	35,373
55-59	19,134	39,258	41,083	17,951	0	0	0	38,097
60-64	17,206	29,204	39,313	26,938	0	0	0	33,259
65-69	13,723	25,782	35,955	41,985	18,981	18,296	0	34,211
70-74	0	33,089	28,718	37,219	36,999	24,785	16,007	34,000
75-79	3,573	27,766	34,074	35,178	29,446	37,601	9,721	32,651
80-84	0	10,720	40,070	36,489	26,908	29,527	19,621	28,347
85+	0	0	0	23,204	30,955	25,033	18,867	21,163
ALL	20,430	33,234	36,268	36,933	30,330	30,023	18,533	32,323

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS RETIRED

<u>Age</u>	<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+</u>	<u>ALL</u>
All	1,124	26,155	26,693	19,648	11,161	10,598	5,208	100,588

TABLE 5A
BASIC

Minneapolis Teachers' Retirement Fund
Disability Retirements as of June 30, 2002

<u>Age</u>	<u>Years Disabled</u>							<u>ALL</u>
	<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+</u>	
<50	0	1	0	0	0	0	0	1
50-54	0	1	2	0	0	0	0	3
55-59	0	2	5	1	1	0	0	9
60-64	0	1	1	1	0	0	0	3
65-69	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	0	5	8	2	1	0	0	16

AVERAGE ANNUAL BENEFIT

<u>Age</u>	<u>Years Disabled</u>							<u>ALL</u>
	<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+</u>	
<50	0	1,757	0	0	0	0	0	1,757
50-54	0	59,011	46,046	0	0	0	0	50,368
55-59	0	52,302	59,288	49,097	35,754	0	0	53,988
60-64	0	7,318	40,465	31,797	0	0	0	26,527
65-69	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	0	34,538	53,624	40,447	35,754	0	0	44,896

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS DISABLED

<u>Age</u>	<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+</u>	<u>ALL</u>
All	0	173	429	81	36	0	0	718

TABLE 6A
BASIC

Minneapolis Teachers' Retirement Fund
Survivors as of June 30, 2002

Age	Years Since Death							ALL
	<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+</u>	
<50	2	30	20	9	1	3	0	65
50-54	0	1	3	3	0	0	0	7
55-59	2	1	2	0	0	0	0	5
60-64	1	7	7	0	0	0	0	15
65-69	3	5	12	3	1	0	1	25
70-74	4	14	12	5	7	4	1	47
75-79	2	12	13	6	2	3	2	40
80-84	1	7	5	1	1	4	2	21
85+	4	4	10	8	4	8	5	43
ALL	19	81	84	35	16	22	11	268

AVERAGE ANNUAL BENEFIT

Age	Years Since Death							ALL
	<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+</u>	
<50	23,972	13,759	20,622	7,601	33,744	6,774	0	15,317
50-54	0	7,227	14,613	37,046	0	0	0	23,172
55-59	29,364	65,185	23,681	0	0	0	0	34,255
60-64	11,206	19,636	16,167	0	0	0	0	17,455
65-69	39,693	47,460	42,983	51,944	12,995	0	17,276	42,331
70-74	28,391	25,235	40,561	30,473	40,092	24,907	19,136	32,029
75-79	35,719	19,467	31,022	29,307	16,217	21,110	13,616	25,179
80-84	22,787	25,296	28,526	34,718	28,127	22,837	20,450	25,599
85+	33,856	21,753	28,439	20,021	19,171	17,496	13,692	22,142
ALL	30,535	21,122	29,162	24,528	29,039	18,845	15,728	24,819

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH

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+</u>	<u>ALL</u>
All	580	1,711	2,450	858	465	415	173	6,651

TABLE 11A
BASIC

Minneapolis Teachers' Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 2002

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	8.50%	\$ 3,005
2. Employer Contributions	12.14%	4,292
3. Supplemental Contribution *		
a. 1993 Legislation	1.88%	665
b. 1996 Legislation	1.08%	382
c. 1997 Legislation	5.00%	1,768
4. Administrative Expense Assessment	0.00%	0
5. Total	28.60%	\$ 10,112
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	13.11%	\$ 4,634
b. Disability Benefits	0.38%	136
c. Surviving Spouse and Child Benefits	0.14%	48
d. Deferred Retirements	2.31%	817
e. Refund Liability Due to Death or Withdrawal	0.86%	303
f. Total	16.80%	\$ 5,938
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 35,353

* Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

Minneapolis Teachers' Retirement Fund
Summary of Plan Provisions

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

GENERAL

<i>Eligibility:</i>	A teacher who is employed by the Board of Education of Special School District No. 1, other than a charter school, and who is not covered by the Social Security Act. Certain part-time licensed employees are covered as well as employees of the Minneapolis Teachers Retirement Fund.
<i>Contributions:</i>	Member: 8.50% of Salary. Employer: 12.14% of Salary.
<i>Teaching Service:</i>	A year is earned during a calendar year if the Member is employed in a covered position and employee contributions are deducted. Certain part-time service and military service is also included.
<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 consecutive years of Salary.

RETIREMENT

Normal Retirement Benefit:

<i>Eligibility:</i>	Age 60. Any age with 30 years of Teaching Service.
<i>Amount:</i>	2.50% of Average Salary for each year of Teaching Service.

Early Retirement Benefit:

<i>Eligibility:</i>	Age 55 with less than 30 years of Teaching Service.
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<i>Amount:</i>	<p>The greater of:</p> <p>2.25% of Average Salary for each year of Teaching Service with reduction of 0.25% for each month the Member is under age first eligible for a normal retirement benefit.</p> <p>or</p> <p>2.50% of Average Salary for each year of Teaching Service assuming augmentation to the age first eligible for a normal retirement benefit at 3.00% per year and actuarial reduction for each month the Member is under the age first eligible for a normal retirement benefit.</p> <p>An alternative benefit is available to Members who are at least age 50 and have 7 years of Teaching Service. The benefit is based on the accumulation of the 6.5% "city deposits" to the Retirement Fund. Other benefits are also provided under this alternative depending on the Member's age and Teaching Service.</p>
<i>Form of Payment:</i>	<p>Life annuity.</p> <p>Actuarially equivalent options are:</p> <ul style="list-style-type: none">• 10 or 15 year certain and life• 50%, 75% or 100% joint and Survivor with bounce back feature without additional reduction (option is canceled if Member is predeceased by beneficiary).
<i>Benefit Increases:</i>	<p>Benefits are increased 2.0% annually beginning on the January 1 or July 1 if the Member has been receiving benefits for at least 12 months. Beneficiaries are entitled to the same 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> <p>Members retired under laws in effect before May 1, 1974 and before any adjustment under Laws 1987, Chapter 372, receive an additional lump sum payment each year. In 1989, this lump sum payment is the greater of \$25 times each full year of Teaching Service and the sum of the benefits paid from any Minnesota public pension plan plus</p>

cash payments from the Social Security Administration for the preceding fiscal year July 1, 1988 through June 30, 1989. In each following year the lump sum will increase by the same increase that is applied to regular annuities. Effective January 1, 2002, annual lump sum payment is divided by 12 and paid as monthly life annuity in the annuity form elected.

DISABILITY

Disability Benefit:

Eligibility: Total and permanent disability with 3 years of Teaching Service.

Amount: An annuity based on the continued accumulation of Member and city contributions at the current rate for a period of 15 years (but not beyond age 65) plus an additional benefit equal to the smaller of 100% of the annuity provided by city contributions only or \$150 per month. A Member with 20 years of Teaching Service also receives an additional \$7.50 per month.

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.

DEATH

A choice of Benefit A, Benefit B, or Benefit C.

Benefit A:

Eligibility: Death before retirement.

Amount: The accumulation of Member and city contributions plus 5% interest if death occurred before May 16, 1989, or 6% interest if death occurred on or after May 16, 1989. Paid as a life annuity, 15 year certain and life, or lump sum. If an annuity is chosen the beneficiary also receives additional benefits.

Benefit B:

Eligibility: An active Member with 7 years of Teaching Service. A former Member age 60 with 7 years of Teaching Service who dies before retirement or disability benefits begin.

Amount: The actuarial equivalent of any benefits the Member could have received if he had resigned on the date of death. Paid to the beneficiary in the form of a life annuity or a 15 year certain and life annuity.

Benefit C:

Eligibility: An active Member who dies and leaves surviving children.

Amount: A monthly benefit of \$248.30 to the surviving widow while caring for a child and an additional \$248.30 per month for each surviving dependent child. The maximum family benefit is \$579.30 per month. These benefits may be increased by the Board of Trustees.

Benefits to the widow cease upon death or when no longer caring for an eligible child. Benefits for dependent children cease upon marriage or age 18 (age 22 if a full time student).

Benefit Increases: Same as retirement.

TERMINATION

Deferred Annuity:

Eligibility: 7 years of Teaching 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.

In addition, the interest earned on the Member and city contributions between termination and age 60 can be applied to provide an additional annuity.

Refund of Contributions:

Eligibility: Termination of teaching service.

Amount: Member's contributions with 6.00% interest. A deferred annuity may be elected in lieu of a refund.

TABLE 3B
COORDINATED

Minneapolis Teachers' Retirement Fund
Active Members as of June 30, 2002

<u>Age</u>	<u>Years of Service</u>								<u>ALL</u>
	<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>	
<25	118	46	0	0	0	0	0	0	164
25-29	227	490	42	0	0	0	0	0	759
30-34	118	363	283	19	0	0	0	0	783
35-39	76	201	225	131	13	0	0	0	646
40-44	120	181	182	173	122	8	0	0	786
45-49	63	215	193	164	110	32	0	0	777
50-54	35	133	165	188	96	48	1	0	666
55-59	25	88	115	99	86	18	3	0	434
60-64	18	30	38	32	32	19	0	1	170
65+	8	10	13	13	6	1	0	0	51
ALL	808	1,757	1,256	819	465	126	4	1	5,236

AVERAGE ANNUAL EARNINGS

<u>Age</u>	<u>Years of Service</u>								<u>ALL</u>
	<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>	
<25	9,725	16,026	0	0	0	0	0	0	11,492
25-29	12,992	29,465	38,593	0	0	0	0	0	25,043
30-34	18,097	33,830	40,950	46,173	0	0	0	0	34,332
35-39	18,345	37,724	45,468	50,819	56,632	0	0	0	41,177
40-44	15,904	35,185	48,177	54,707	57,096	66,185	0	0	43,263
45-49	14,923	38,542	47,034	59,108	61,185	63,678	0	0	47,318
50-54	19,667	37,414	49,005	58,887	65,470	61,048	56,870	0	51,191
55-59	16,694	36,958	48,807	58,466	62,981	64,720	81,114	0	50,450
60-64	17,888	37,128	42,940	57,474	60,407	68,911	0	67,164	48,331
65+	1,875	20,128	39,129	51,021	63,269	70,253	0	0	36,041
ALL	14,750	33,715	45,482	56,232	61,175	63,825	75,053	67,164	40,333

PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE

<u>Age</u>	<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>ALL</u>
All	11,918	59,237	57,125	46,054	28,446	8,042	300	67	211,184

TABLE 4B
COORDINATED

Minneapolis Teachers' Retirement Fund
Service Retirements as of June 30, 2002

<u>Age</u>	<u>Years Retired</u>							<u>ALL</u>
	<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+</u>	
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	3	16	6	0	0	0	0	25
60-64	9	45	11	0	0	0	0	65
65-69	2	31	14	1	0	0	0	48
70-74	0	7	13	5	0	0	0	25
75-79	1	1	2	3	0	0	0	7
80-84	0	0	1	0	0	0	0	1
85+	0	0	0	0	0	0	0	0
ALL	15	100	47	9	0	0	0	171

AVERAGE ANNUAL BENEFIT

<u>Age</u>	<u>Years Retired</u>							<u>ALL</u>
	<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+</u>	
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	15,089	9,342	7,510	0	0	0	0	9,592
60-64	7,811	10,147	9,738	0	0	0	0	9,754
65-69	9,816	8,694	10,334	4,813	0	0	0	9,138
70-74	0	12,020	9,584	2,952	0	0	0	8,940
75-79	7,947	5,794	6,123	9,142	0	0	0	7,631
80-84	0	0	2,863	0	0	0	0	2,863
85+	0	0	0	0	0	0	0	0
ALL	9,543	9,655	9,288	5,222	0	0	0	9,311

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS RETIRED

<u>Age</u>	<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+</u>	<u>ALL</u>
All	143	966	437	47	0	0	0	1,592

TABLE 5B
COORDINATED

Minneapolis Teachers' Retirement Fund
Disability Retirements as of June 30, 2002

<u>Age</u>	<u>Years Disabled</u>							<u>ALL</u>
	<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+</u>	
<50	1	1	0	0	0	0	0	2
50-54	0	2	0	0	0	0	0	2
55-59	0	0	0	0	0	0	0	0
60-64	0	0	1	0	0	0	0	1
65-69	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	1	3	1	0	0	0	0	5

AVERAGE ANNUAL BENEFIT

<u>Age</u>	<u>Years Disabled</u>							<u>ALL</u>
	<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+</u>	
<50	16,352	2,396	0	0	0	0	0	9,374
50-54	0	9,262	0	0	0	0	0	9,262
55-59	0	0	0	0	0	0	0	0
60-64	0	0	9,105	0	0	0	0	9,105
65-69	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	16,352	6,973	9,105	0	0	0	0	9,275

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS DISABLED

<u>Age</u>	<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+</u>	<u>ALL</u>
All	16	21	9	0	0	0	0	46

TABLE 6B
COORDINATED

Minneapolis Teachers' Retirement Fund
Survivors as of June 30, 2002

Age	Years Since Death							ALL
	<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+</u>	
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0
65-69	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	0	0	0	0	0	0	0	0

AVERAGE ANNUAL BENEFIT

Age	Years Since Death							ALL
	<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+</u>	
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0
65-69	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	0	0	0	0	0	0	0	0

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH

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+</u>	<u>ALL</u>
All	0	0	0	0	0	0	0	0

Minneapolis Teachers' Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 2002

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	5.50%	\$ 12,709
2. Employer Contributions	8.14%	18,810
3. Supplemental Contribution *		
a. 1993 Legislation	1.88%	4,335
b. 1996 Legislation	1.08%	2,483
c. 1997 Legislation	5.00%	11,546
4. Administrative Expense Assessment	0.00%	0
5. Total	21.60%	\$ 49,883
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	8.45%	\$ 19,529
b. Disability Benefits	0.13%	290
c. Surviving Spouse and Child Benefits	0.10%	238
d. Deferred Retirements	0.87%	2,013
e. Refund Liability Due to Death or Withdrawal	0.38%	883
f. Total	9.93%	\$ 22,953

Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: \$ 231,076

* Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

Minneapolis Teachers' Retirement Fund
Summary of Plan Provisions

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

GENERAL

<i>Eligibility:</i>	A teacher who is employed by the Board of Education of Special School District No. 1, other than a charter school, and who is covered by the Social Security Act. Certain part-time licensed employees are covered as well as employees of the Minneapolis Teachers Retirement Fund (unless they belong to the Minneapolis Employees Retirement Fund).
<i>Contributions:</i>	Member: 5.50% of Salary. Employer: 8.14% of Salary.
<i>Allowable Service:</i>	A year is earned during a school year if the Member is employed in a covered position and employee contributions are deducted. May also include certain part-time service, extended leaves of absence, sabbatical leaves, and military service.
<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 consecutive years of Salary. Average Salary is based on all Allowable Service if less than 5 years.

RETIREMENT

Normal Retirement Benefit:

Eligibility:

**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 later than age 66) and 3 years of Allowable Service. Proportionate Retirement Annuity is available at normal retirement age and 1 year of Allowable Service.

Amount: 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 the age eligible for Normal Retirement benefits at 3.00% per year and actuarial reduction for each month the Member is under the Normal Retirement Age.

<i>Form of Payment:</i>	Life annuity. Actuarial equivalent options are: <ul style="list-style-type: none">• Guaranteed refund• 10 or 15 year certain and life• 50%, 75%, or 100% joint and survivor with bounce back feature without additional reduction (option is canceled if Member is predeceased by beneficiary).
<i>Benefit Increases:</i>	<p>Benefits are increased 2.0% annually beginning on the January 1 or July 1 if the Member has been receiving benefits for at least 12 months. 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>	Total and permanent disability before the normal retirement age with 3 years of Allowable Service. Also, at least 2 of the years of Allowable Service must have been uninterrupted.
<i>Amount:</i>	<p>Normal Retirement Benefit based on Allowable Service and Average Salary at disability without reduction for commencement before the normal retirement age. Benefit is reduced by Workers' Compensation.</p> <p>Payments are recomputed as a retirement at the normal retirement age. Payments stop if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment.</p>
<i>Form of Payment:</i>	Same as for retirement.
<i>Benefit Increases:</i>	Same as for retirement.

Retirement After Disability:

<i>Eligibility:</i>	Normal retirement age with continued disability.
<i>Amount:</i>	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.
<i>Benefit Increases:</i>	Same as for retirement.

DEATH

Surviving Spouse Annuity:

<i>Eligibility:</i>	<p>Any active Member who dies with 3 years of Allowable Service prior to retirement or disability benefits commence.</p> <p>Any former Member who dies before retirement or disability benefits commence, if age 50 with 3 years of Allowable Service or any age with 30 years of Allowable Service. If the former Member dies prior to age 55 benefits are deferred to age 55.</p>
<i>Amount:</i>	<p>Survivor's payment of the 100% joint and survivor benefit the Member could have elected if terminated.</p> <p>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.</p>
<i>Benefit Increases:</i>	Same as for retirement.

Refund of Contributions:

<i>Eligibility:</i>	Member or former Member dies before receiving any retirement benefits and survivor's benefits are not payable.
<i>Amount:</i>	Member's contributions with 6.00% interest.

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.

Refund of Contributions:

Eligibility: Termination of teaching service.

Amount: Member's contributions with 6.00% interest. A deferred annuity may be elected in lieu of a refund.

Minneapolis Teachers' Retirement Fund
Schedule of Funding Progress
(dollars in thousands)

July 1, 2002

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	\$ 424,677	\$ 826,574	\$ 401,897	51.38%	\$ 119,065	337.54%
07/01/92	457,978	840,840	382,862	54.47%	136,870	279.73%
07/01/93	501,741	878,693	376,952	57.10%	135,505	278.18%
07/01/94	514,138	920,470	406,332	55.86%	155,671	261.02%
07/01/95	554,960	983,249	428,289	56.44%	163,824	261.43%
07/01/96	612,852	1,055,063	442,211	58.09%	171,060	258.51%
07/01/97	673,209	1,173,412	500,203	57.37%	185,229	270.05%
07/01/98	809,978	1,267,424	457,446	63.91%	199,376	229.44%
07/01/99	939,459	1,394,357	454,898	67.38%	230,189	197.62%
07/01/00	1,027,633	1,544,358	516,725	66.54%	242,072	213.46%
07/01/01	1,061,983	1,610,364	548,381	65.95%	254,100	215.81%
07/01/02	1,027,883	1,659,512	631,629	61.94%	248,304	254.38%

Minneapolis Teachers' Retirement Fund
Schedule of Employer Contributions
(dollars in thousands)

July 1, 2002

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	30.40%	\$ 119,065	\$ 9,337	\$ 26,859	\$ 12,358	46.01%
1992	30.55%	136,870	10,307	31,507	13,638	43.29%
1993	27.43%	135,505	10,713	26,456	13,711	51.83%
1994	25.83%	155,671	11,507	28,703	16,355	56.98%
1995	25.03%	163,824	10,470	30,535	21,194	69.41%
1996	25.18%	171,060	11,294	31,779	23,085	72.64%
1997	25.15%	185,229	11,697	34,888	24,021	68.85%
1998	28.23%	199,376	13,852	42,432	43,640	102.85%
1999	25.80%	230,189	14,935	44,464	40,476	91.03%
2000	23.88%	242,072	16,169	41,638	42,556	102.21%
2001	25.25%	254,100	16,321	47,839	42,904	89.68%
2002	25.45%	248,304	17,715	45,478	42,105	92.58%

*Includes contributions from other sources (if applicable)