# Annual Valuation Report for MTRFA Minneapolis Teachers'

Minneapolis Teachers' Retirement Fund Association







July 1, 2003

### Minneapolis Teachers' Retirement Fund ACTUARIAL VALUATION REPORT

July 1, 2003

#### MILLIMAN USA

A MILLIMAN GLOBAL FIRM **Milliman** USA Consultants and Actuaries

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November 26, 2003

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



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#### Re: Minneapolis Teachers' Retirement Fund July 1, 2003 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, 2003.

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 Report Highlights

(dollars in thousands)

	Ju	ıly 1, 2002	J	uly 1, 2003
	·	Valuation		Valuation
A. CONTRIBUTIONS % OF PATROLL (Table 11)		22 53%		22 10%
<ol> <li>Statutory Contributions - Chapter 354A</li> <li>Required Contributions - Chapter 356</li> </ol>		22.5576		31.06%
3 Sufficiency / (Deficiency)		(6 52%)		(9.47%)
5. Sumoloney (Denotorely)		(0.5270)		()(//0)
B. FUNDING RATIOS				
1. Accrued Benefit Funding Ratio				
a. Current Assets (Table 1)	\$	1,027,883	\$	956,913
b. Current Benefit Obligations (Table 8)		1,609,643		1,622,719
c. Funding Ratio		63.86%		58.97%
2. Accrued Liability Funding Ratio				
a. Current Assets (Table 1)	\$	1,027,883	\$	956,913
b. Actuarial Accrued Liability (Table 9)		1,659,512		1,671,982
c. Funding Ratio		61.94%		57.23%
3. Projected Benefit Funding Ratio (Table 8)				
a. Current and Expected Future Assets	\$	1,619,764	\$	1,532,096
b. Current and Expected Future Benefit Obligations		1,928,441		1,924,098
c. Funding Ratio		83.99%		79.63%
C. PLAN PARTICIPANTS				
1. Active Members				
a. Number (Table 3)		5,720		5,381
b. Projected Annual Earnings	\$	266,429	\$	264,766
c. Average Annual Earnings (Projected dollars)	\$	46,578	\$	49,204
d. Average Age		42.5		42.8
e. Average Service		8.4		9.0
f. Additional Members on Leave of Absence *		58		56
2. Others				
a. Service Retirements (Table 4)		3,283		3,334
b. Disability Retirements (Table 5)		21		23
c. Survivors (Table 6)		268		285
d. Deferred Retirements (Table 7)		1,043		1,123
e. Terminated Other Non-Vested (Table 7)		2,620		3,057
f. Total		7,235		7,822

\* 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 58.97%. The corresponding ratio for the prior year was 63.86%.

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 2003 the ratio is 57.23%, which is a decrease from the 2002 value of 61.94%.

The *Projected Benefit Funding Ratio* is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 79.63% 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, 2003, less

80% of the current year Unrecognized Asset Return at July 1, 2003 (the difference between actual net return on Market Value of Assets between June 30, 2002 and June 30,

2003 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2002 Actuarial Valuation); *less* 

60% 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* 

40% 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* 

20% 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).

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 three 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 22.49% compared to the Required Contribution Rate of 31.96%.

#### 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

All 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.

### Minneapolis Teachers' Retirement Fund Accounting Balance Sheet

(dollars in thousands)

#### July 1, 2003

	_		Market Value		Cost Value		
A ASSETS							
1 Cash Equivalents Short-Term Securities		\$	69 535	\$	69 553		
2. Investments		Ψ	0,000	Ψ	0,000		
a. Fixed Income			258,956		253,559		
b. Equity			398,450		418,643		
c. Real Estate			-		-		
3. Equity in Minnesota Post-Retirement Investment Fu	nd		-		-		
4. Other Assets	-	·	14,426		19,604		
B. TOTAL ASSETS	. <del>-</del>	\$	741,367	\$	761,359		
C. AMOUNTS CURRENTLY PAYABLE		\$	21,768	\$	21,768		
D. ASSETS AVAILABLE FOR BENEFITS							
1. Member Reserves		\$	214,308	\$	214,308		
2. Employer Reserves			505,291		525,283		
3. MPRIF Reserves			-		-		
4. Non-MPRIF Reserves	_			<u>.</u>			
5. Total Assets Available for Benefits	-	\$	719,599		739,591		
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND	•						
ASSETS AVAILABLE FOR BENEFITS	=	\$	741,367	<u> </u>	761,359		
F. DETERMINATION OF ACTUARIAL VALUE OF ASS	SETS						
1. Market Value of Assets Available for Benefits (D.5)		\$	719,599				
2. Unrecognized Asset Returns							
a. June 30, 2003	\$ (57,727)						
b. June 30, 2002	(187,993)						
c. June 30, 2001	(217,974)						
d. June 30, 2000	44,266		(005.01.1)				
3. UAK Adjustment: $.80 * 2(a) + .60 * 2(b) + .40 * 2(c)$	e) +.20 * 2(d) -	<u></u>	(237,314)				
4. Actuarial value of Assets (F.1 - F.3)		<u></u>	936,913				

### Minneapolis Teachers' Retirement Fund Change In Assets Available for Benefits

-

(dollars in thousands)

June 30, 2003

	Market Value			Cost Value	
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$	770,489	\$	825,510	
B. OPERATING REVENUES					
1. Member Contributions	\$	16,673	\$	16,673	
2. Employer Contributions		21,104		21,104	
3. Supplemental Contributions *		21,082		21,082	
4. Investment Income		21,659		21,659	
5. MPRIF Income		-		-	
6. Net Realized Gain / (Loss)		(49,008)		(49,008)	
7. Other		. –		-	
8. Net Change in Unrealized Gain / (Loss)		35,029		-	
9. Total Operating Revenue	\$	66,539	\$	31,510	
C. OPERATING EXPENSES					
1. Service Retirements	\$	105,537	\$	105,537	
2. Disability Benefits		864		864	
3. Survivor Benefits		7,248		7,248	
4. Refunds		669		669	
5. Administrative Expenses		804		804	
6. Investment Expenses		2,307		2,307	
7. Total Operating Expenses	\$	117,429	\$	117,429	
D. CHANGE IN ACCOUNTING METHOD	\$	-	\$	-	
E. ASSETS AVAILABLE AT END OF PERIOD	\$	719,599	\$	739,591	
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET 1. Average Balance	RETUR	N			
(a) Assets Available at Beginning of Period		770,489			
(b) Assets Available at End of Period		719,599			
(c) Average Balance {[(a) + (b) - Net Investment Income] / 2}	\$	742,358			
{Net Investment Income: B.4+B.5+B.6+B.7+B.8-C.6}					
2. Expected Return: .085 * F.1		63,100			
3. Actual Return		5,373			
4. Current Year UAR: F.3 - F.2		(57,727)			

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

#### Years of Service <u>1-4</u> <u>20-24</u> <u>25-29</u> 30+ <u><1</u> <u>5-9</u> <u>10-14</u> <u>15-19</u> <u>ALL</u> Age <25 25-29 30-34 35-39 40-44 45-49 50-54 55-59 60-64 65+ ALL 1,673 1,201 5,381

### Minneapolis Teachers' Retirement Fund Active Members as of June 30, 2003

#### AVERAGE ANNUAL EARNINGS

			Ye	ars of Serv	ice			
<u>&lt;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>
14,353	22,441	0	0	0	0	0	0	17,037
14,536	26,788	38,918	0	0	0	0	0	25,334
18,426	32,392	42,035	51,850	0	0	0	0	36,222
22,878	35,606	45,631	53,067	60,169	0	0	0	42,935
16,878	39,380	51,143	56,392	56,622	69,460	0	0	50,386
18,699	33,896	49,967	59,686	60,924	65,103	67,422	0	49,895
15,530	36,684	51,911	57,963	67,270	65,685	74,656	71,895	55,851
16,234	37,107	53,232	57,212	65,022	69,162	68,726	75,169	58,651
20,209	33,833	52,233	58,000	64,676	68,827	73,220	73,189	58,190
2,428	12,408	39,631	45,053	40,591	75,461	78,620	63,934	40,420
15,967	32,009	47,339	56,769	62,385	67,583	71,962	73,166	45,388
	$\leq 1$ 14,353 14,536 18,426 22,878 16,878 18,699 15,530 16,234 20,209 2,428 15,967	$ \leq \underline{1} \qquad \underline{1-4} \\ 14,353 \qquad 22,441 \\ 14,536 \qquad 26,788 \\ 18,426 \qquad 32,392 \\ 22,878 \qquad 35,606 \\ 16,878 \qquad 39,380 \\ 18,699 \qquad 33,896 \\ 15,530 \qquad 36,684 \\ 16,234 \qquad 37,107 \\ 20,209 \qquad 33,833 \\ 2,428 \qquad 12,408 \\ 15,967 \qquad 32,009 \\ \end{tabular}$	$\begin{array}{c cccccc} \leq 1 & 1-4 & 5-9 \\ 14,353 & 22,441 & 0 \\ 14,536 & 26,788 & 38,918 \\ 18,426 & 32,392 & 42,035 \\ 22,878 & 35,606 & 45,631 \\ 16,878 & 39,380 & 51,143 \\ 18,699 & 33,896 & 49,967 \\ 15,530 & 36,684 & 51,911 \\ 16,234 & 37,107 & 53,232 \\ 20,209 & 33,833 & 52,233 \\ 2,428 & 12,408 & 39,631 \\ 15,967 & 32,009 & 47,339 \\ \end{array}$	$\leq 1$ $1-4$ $5-9$ $10-14$ $14,353$ $22,441$ 00 $14,536$ $26,788$ $38,918$ 0 $14,536$ $26,788$ $38,918$ 0 $18,426$ $32,392$ $42,035$ $51,850$ $22,878$ $35,606$ $45,631$ $53,067$ $16,878$ $39,380$ $51,143$ $56,392$ $18,699$ $33,896$ $49,967$ $59,686$ $15,530$ $36,684$ $51,911$ $57,963$ $16,234$ $37,107$ $53,232$ $57,212$ $20,209$ $33,833$ $52,233$ $58,000$ $2,428$ $12,408$ $39,631$ $45,053$ $15,967$ $32,009$ $47,339$ $56,769$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\leq 1$ $1-4$ $5-9$ $10-14$ $15-19$ $20-24$ 14,35322,441000014,53626,78838,91800018,42632,39242,03551,8500022,87835,60645,63153,06760,169016,87839,38051,14356,39256,62269,46018,69933,89649,96759,68660,92465,10315,53036,68451,91157,96367,27065,68516,23437,10753,23257,21265,02269,16220,20933,83352,23358,00064,67668,8272,42812,40839,63145,05340,59175,46115,96732,00947,33956,76962,38567,583	$\leq 1$ $1-4$ $5-9$ $10-14$ $15-19$ $20-24$ $25-29$ 14,35322,4410000014,53626,78838,918000018,42632,39242,03551,85000022,87835,60645,63153,06760,1690016,87839,38051,14356,39256,62269,460018,69933,89649,96759,68660,92465,10367,42215,53036,68451,91157,96367,27065,68574,65616,23437,10753,23257,21265,02269,16268,72620,20933,83352,23358,00064,67668,82773,2202,42812,40839,63145,05340,59175,46178,62015,96732,00947,33956,76962,38567,58371,962	Years of Service $\leq 1$ $1-4$ $5-9$ $10-14$ $15-19$ $20-24$ $25-29$ $30+$ $14,353$ $22,441$ 000000 $14,536$ $26,788$ $38,918$ 00000 $14,536$ $26,788$ $38,918$ 00000 $18,426$ $32,392$ $42,035$ $51,850$ 0000 $22,878$ $35,606$ $45,631$ $53,067$ $60,169$ 000 $16,878$ $39,380$ $51,143$ $56,392$ $56,622$ $69,460$ 00 $16,878$ $39,380$ $51,143$ $56,392$ $56,622$ $69,460$ 00 $16,878$ $39,380$ $51,143$ $56,392$ $56,622$ $69,460$ 00 $16,878$ $39,380$ $51,143$ $56,392$ $56,622$ $69,460$ 00 $15,530$ $36,684$ $51,911$ $57,963$ $67,270$ $65,685$ $74,656$ $71,895$ $16,234$ $37,107$ $53,232$ $57,212$ $65,022$ $69,162$ $68,726$ $75,169$ $20,209$ $33,833$ $52,233$ $58,000$ $64,676$ $68,827$ $73,220$ $73,189$ $2,428$ $12,408$ $39,631$ $45,053$ $40,591$ $75,461$ $78,620$ $63,934$ $15,967$ $32,009$ $47,339$ $56,769$ $62,385$ $67,583$ $71,962$ $73,166$

PRIOR FISCAL	YEAR E	ARNINGS (I	IN THOU	SANDS) BY	YEARS OF	SERVICE	
 • · · ·							

Age	<u>&lt;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	7,265	53,551	56,854	56,201	33,875	15,814	10,794	9,877	244,233

				Years I	Retired			
Age	<u>&lt;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
<50	0	0	0	0	0	0	0	0
50-54	2	29	0	0	0	0	0	31
55-59	26	327	95	0	. 0	0	0	448
60-64	14	311	286	49	1	0	0	661
65-69	3	136	252	180	25	2	1	599
70-74	1	18	148	246	96	21	0	530
75-79	2	6	23	137	147	102	10	427
80-84	0	0	4	22	81	167	28	302
85+	0	0	0	1	23	88	224	336
ALL	48	827	808	635	373	380	263	3,334

### Minneapolis Teachers' Retirement Fund Service Retirements as of June 30, 2003

	Years Retired									
Age	<u>&lt;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		
<50	0	0	0	0	0	0	0	0		
50-54	4,722	40,101	0	0	0	0	0	37,819		
55-59	25,055	38,543	37,060	0	0	0	0	37,446		
60-64	15,571	25,885	39,243	29,755	3,472	0	0	31,699		
65-69	5,192	22,152	28,088	45,285	21,496	21,470	14,622	31,473		
70-74	3,771	31,918	25,511	36,661	36,717	23,103	0	32,797		
75-79	8,479	16,905	27,933	37,125	31,424	39,370	10,453	34,160		
80-84	0	0	15,405	40,227	27,101	30,208	17,552	28,735		
85+	0	0	0	1,097	32,932	26,496	19,174	21,980		
ALL	19,066	30,841	32,552	38,740	31,200	31,369	18,652	31,729		

		TOTAL AN	INUAL BEN	EFIT (IN T	HOUSANDS	5) BY YEAR	S RETIRED	
Age	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	20-24	<u>25+</u>	ALL
All	915	25,505	26,302	24,600	11,638	11,920	4,906	105,786

#### Minneapolis Teachers' Retirement Fund

				Years D	Disabled			
Age	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	20-24	<u>25+</u>	ALL
<50	1	2	0	0	0	0	0	3
50-54	1	3	1	1	0	0	0	6
55-59	0	2	4	1	1	0	0	8
60-64	0	1	2	2	1	0	0	6
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	2	8	7	4	2	0	0	23

### Disability Retirements as of June 30, 2003

				Years I	Disabled			
Age	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	15-19	<u>20-24</u>	<u>25+</u>	ALL
<50	3,875	23,323	0	0	0	0	0	16,841
50-54	17,989	6,896	52,971	40,963	0	0	0	22,102
55-59	0	41,234	52,244	63,526	36,469	0	0	48,930
60-64	0	7,464	69,592	44,366	32,433	0	0	44,635
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	10,932	19,658	57,304	48,305	34,451	0	0	36,625

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS DISABLED											
Age	<u>&lt;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	22	157	401	193	69	0	0	842			

### Minneapolis Teachers' Retirement Fund Survivors as of June 30, 2003

_				Years Sin	ce Death			
Age	<u>&lt;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>
<50	3	29	20	10	0	3	0	65
50-54	1	3	4	1	1	1	0	11
55-59	2	3	2	1	0	0	0	8
60-64	3	. 8	6	0	0	• 0	0	17
65-69	3	8	7	8	0	0	1	27
70-74	4	11	13	5	6	4	1	44
75-79	2	11	14	7	6	1	0	41
80-84	3	6	11	3	0	5	5	33
85+	1	7	8	8	5	7	3	39
ALL	22	86	85	43	18	21	10	285

			1	Years Sin	ice Death			
Age	<u>&lt;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
<50	14,273	17,236	17,802	7,665	0	16,046	0	15,746
50-54	13,070	13,716	23,734	87,380	6,315	7,009	0	22,714
55-59	50,164	27,341	24,155	19,667	0	0	0	31,291
60-64	24,527	17,264	20,678	0	0	• 0	0	19,751
65-69	22,966	45,657	52,730	40,761	0	0	17,621	42,480
70-74	22,870	24,969	38,919	31,358	33,310	25,405	19,518	30,679
75-79	37,701	26,308	31,247	27,276	31,498	14,182	0	29,179
80-84	28,799	25,491	24,409	30,520	0	25,270	19,932	25,012
85+	43,791	30,677	21,966	24,238	19,745	18,972	14,284	23,142
ALL	27,080	23,932	28,001	26,581	27,438	20,481	17,965	25,546

	TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH											
Age	<u>&lt;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				
All	596	2,058	2,380	1,143	494	430	180	7,281				

### Minneapolis Teachers' Retirement Fund Reconciliation of Members

				Terminated	
			Leave of	Deferred	Other
		<u>Actives</u>	Absence	<b>Retirement</b>	Non-Vested
Α.	ON JUNE 30, 2002	5,720	58	1,043	2,620
B.	ADDITIONS	491	7	154	552
C.	DELETIONS				
	1. Service Retirement	(113)	(4)	(27)	(4)
	2. Disability	(2)	0	(1)	0
	3. Death - Survivor	(1)	0	0	0
	4. Death - Other	(5)	0	0	0
	5. Terminated - Deferred	(154)	0	0	0
	6. Terminated - Refund	(86)	0	(21)	(60)
	7. Terminated - Other Non-Vested	(558)	(1)	. 0	0
	8. Returned as active	90	(4)	(38)	(48)
	9. Transferred to another fund	0	0	0	. 0
D.	DATA ADJUSTMENTS	(1)	0	13	(3)
	1. Vested	4,045	56	1,123	3,057
	2. Non-Vested	1,336	0	0	0
E.	TOTAL ON JUNE 30, 2003	5,381	56	1,123	3,057

		Recipients					
		Retirement			Other		
		<b>Annuitants</b>	<b>Disabled</b>	<u>Survivors</u>	<b>Beneficiary</b>		
А.	ON JUNE 30, 2002	3,256	21	268	. 27		
B.	ADDITIONS	149	3	24	0		
C.	DELETIONS						
	1. Service Retirement	0	(1)	0	0		
	2. Death	(104)	0	(9)	0		
	3. Annuity Expired	0	0	(2)	0		
	4. Returned as Active	0	0	0	0		
D.	DATA ADJUSTMENTS	6	0	4	0		
E.	TOTAL ON JUNE 30, 2003	3,307	23	285	27		

#### Minneapolis Teachers' Retirement Fund Actuarial Balance Sheet

(dollars in thousands)

July 1, 2003

A. CURRENT ASSETS (Table 1; Line F.6)					\$	956,913
B EVDECTED EITTIDE ASSETS						
1. Present Value of Expected Future Statutory Supp.	lamar	tal Contrib	utio	20	¢	323.067
2 Present Value of Expected Future Statutory Supp.	φ	252,007				
2. Total Expected Enture Assets					<u></u>	575 183
5. Total Expected Future Assets						575,105
C. TOTAL CURRENT AND EXPECTED FUTURE AS		\$	1,532,096			
D. CURRENT BENEFIT OBLIGATIONS	Vested		Total			
1. Benefit Recipients						
a. Retirement Annuities			\$	1,111,076	\$	1,111,076
b. Disability Benefits				8,162		8,162
c. Surviving Spouse and Child Benefits				48,381		48,381
2. Deferred Retirements				43,968		43,968
3. Former Members Without Vested Rights				3,447		3,447
4. Active Members						
a. Retirement Annuities *	\$	2,914		375,812		378,726
b. Disability Benefits		4,250		_		4,250
c. Surviving Spouse and Child Benefits		2,880		-		2,880
d. Deferred Retirements		433		17,304		17,737
e. Refund Liability Due to Death or Withdrawal		-		4,092		4,092
5. Total Current Benefit Obligations	\$	10,477	\$	1,612,242	\$	1,622,719
E. EXPECTED FUTURE BENEFIT OBLIGATIONS					\$	301,379
F. TOTAL CURRENT AND EXPECTED FUTURE BE	(NEF)	T OBLIGA	TIC	NS	\$	1,924,098
					<del></del>	
G. CURRENT UNFUNDED ACTUARIAL LIABILITY	′ (D.5	- A)			\$	665,806
H. CURRENT AND FUTURE UNFUNDED ACTUAR	IAL I	LIABILITY	(F -	C)	\$	392,002
* 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, 2003

	Actuarial Present Value		Pre	Actuarial esent Value		Actuarial	
			110	of Future		Accrued	
	U	Benefits	No	ormal Costs	Liability		
						· · · · · · · · · · · · · · · · · · ·	
A. DETERMINATION OF ACTUARIAL							
ACCRUED LIABILITY (AAL)							
1. Active Members							
a. Retirement Benefits *	\$	655,293	\$	207,627	\$	447,666	
b. Disability Benefits		7,529		3,737		3,792	
c. Surviving Spouse and Child Benefits		5,532		2,581		2,951	
d. Deferred Retirements		31,948		25,808		6,140	
e. Refund Liability Due to Death or Withdrawal		8,762		12,363		(3,601)	
f. Total	\$	709,064	\$	252,116	\$	456,948	
2. Deferred Retirements	\$	43,968			\$	43,968	
3. Former Members Without Vested Rights		3,447				3,447	
4. Annuitants in MPRIF		-				-	
5. Annuitants Not in MPRIF	_	1,167,619				1,167,619	
6. Total	\$	1,924,098	\$	252,116	\$	1,671,982	
B. DETERMINATION OF UNFUNDED ACTUARIAI	,						
ACCRUED LIABILITY (UAAL)							
1. Actuarial Accrued Liability (A.6)					\$	1.671.982	
2. Current Assets (Table 1: Line F.6)						956,913	
3. Unfunded Actuarial Accrued Liability (B.1 - B.2)					\$	715,069	
C DETERMINATION OF SLIPPI EMENTAL CONTR	BU	ΤΊΩΝ ΡΑΤΈ	7				
1 Present Value of Future Payrolls Through the	шu						
A mortization Date of June 30, 2020						3 356 513	
2 Supplemental Contribution Rate (B 3 / C 1)						21 30%	
2. Supplemental Contribution Rate (B.57 C.1)						21.5070	

\* Includes members on leave of absence.

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

(dollars in thousands)

June 30, 2003

A. UAAL AT BEGINNING OF YEAR	\$	631,629
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF		
FUNDING	<b>•</b>	
1. Normal Cost and Expenses	\$	29,610
2. Contributions		(58,859)
3. Interest		53,704
4. Total	_\$	24,455
C. EXPECTED UAAL AT END OF YEAR (A + B.4)	\$	656,084
D. INCREASE / (DECREASE) DUE TO ACTUARIAL LOSSES / (GAINS) DECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		· .
1 A go and Service Detimments (k)	ው	
1. Age and Service Retirements (b)	2	-
2. Disability Reinements (b)		-
5. Death-in-Service Benefits (a)		-
4. withdrawal (b)		-
5. Salary increases		(15,/35)
6. Contribution income (b)		-
7. Investment income (c)		99,686
8. Mortality of Annuitants		(18,966)
9. Other Items		(6,000)
10. Total	_\$	58,985
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C + D.5)	\$	715,069
F. CHANGE IN UAAL DUE TO PLAN AMENDMENTS		-
G. CHANGE IN UAAL DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS		_
H. UAAL AT END OF YEAR $(E + F + G)$	\$	715,069
(a) Included in Item D.8.		

(b) Included in Item D.9.

(c) Includes a gross investment loss of \$99,686 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, 2003

	Percent of		
· · ·	Payroll	Do	llar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A			
1. Employee Contributions	5.84%	\$	15,460
2. Employer Contributions	8.59%		22,750
3. Supplemental Contribution *			
a. 1993 Legislation	1.89%		5,000
b. 1996 Legislation	1.14%		3,015
c. 1997 Legislation	5.03%		13,314
4. Administrative Expense Assessment			0
5. Total	22.49%	\$	59,539
<ul><li>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</li><li>1. Normal Cost</li></ul>			
a. Retirement Benefits	8.63%	\$	22,857
b. Disability Benefits	0.16%		419
c. Surviving Spouse and Child Benefits	0.10%		264
d. Deferred Retirements	1.00%		2,635
e. Refund Liability Due to Death or Withdrawal	0.47%		1,251
f. Total	10.36%	\$	27,426
2. Supplemental Contribution Amortization	21.30%		56,395
3. Allowance for Administrative Expenses	0.30%		794
4. Total =	31.96%	\$	84,615
C. CONTRIBUTION SUFFICIENCY / (DEFICIENCY) (A.3 - B.5)	(9.47%)		(25,076)
Projected Annual Payroll for Fiscal Year Beginning on the Valuation I	Date:	\$	264,766

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

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Interest:	Pre-Retirement: Post-Retirement:	8.50% per annum 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:	Pre-Retirement:					
	Male:	1983 Group Annuity Mortality Table male rates set back 12 years.				
	Female:	1983 Group Annuity Mortality Table female rates set back 10 years.				
	Post-Retirement:					
	Male:	1983 Group Annuity Mortality Table male rates set back 4 years.				
	Female:	1983 Group Annuity Mortality Table female rates set back 1 years.				
	Post-Disability:					
	Male:	1977 Railroad Retirement Board Mortality for Disabled Annuitants				
	Female:	1977 Railroad Retirement Board Mortality for Disabled Annuitants				

#### Retirement Age:

#### Active Members:

Active Members are assumed to retire according to the graded rates shown in the rate table. Rates are applied beginning at the participant's first early retirement age.

#### Deferred Members:

Basic Members are assumed to retire at age 60. Coordinated Members are assumed to retire at age 63. If over the assumed retirement age, one year from valuation date.

#### Other Non-Vested Members:

Graded rates shown in the rate table.

expressed as a percentage of prior year payroll.

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 Year30%Second Year15%Third Year10%\*

\*Ultimate rate is used if greater than 10%

4.0% load on liabilities for active Members and 30% load for

Prior year administrative expenses (excluding investment expenses)

All employees withdrawing after becoming eligible for a deferred

married. Female is assumed to be three years younger than male.

80% of male Members and 60% of female Members are assumed to be

benefit were assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.

Disability:

Allowance for Combined Service Annuity:

Administrative Expenses:

Return of Contributions:

Family Composition:

Social Security:

Benefit Increases After Retirement:

2.0% per annum

N/A

former Members.

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.

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

**Optional Benefit Forms:** 

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

	Females:	65% elect lif 15% elect 50 5% elect 75 15% elect 10	e annuity option % J&S option % J&S option 00% J&S option
Actuarial Cost Method:	Entry Age N as a level per (Losses) red	ormal Actuaria rcentage of earr uce (increase) th	l Cost Method with normal costs expressed nings. Under this method Actuarial Gains he Unfunded Actuarial Accrued Liability.
Asset Valuation Method:	Market Valu end of each f Asset Return fiscal years. actual net ret expected dur employed in Transition ru the method is	e, adjusted for a fiscal year, less determined at Unrecognized A urn on Market ing that fiscal y the July 1 Actu les apply betwe s fully in effect.	amortization obligations receivable at the of a percentage of the Unrecognized the close of each of the four preceding Asset Return is the difference between Value of Assets and the asset return rear (based on the assumed interest rate arial Valuation of the fiscal year). een July 1, 2000 and July 1, 2003, when
Payment on the Unfunded Actuarial Accrued Liability:	The Unfunder percentage of assuming pay	ed Actuarial Ac f payroll each y yroll increases o	crued Liability is amortized as level ear to the statutory amortization date of 5.00% per annum.
Missing Data:	The submitte and constanc audited this o the accuracy was missing	d participant day y with data sub lata, and the res of the underlyin or incomplete, t	ata has been reviewed for reasonableness mitted for prior valuations. We have not sults of this valuation may change based on ng data. In cases where submitted data the following assumptions were applied:
	Date	of Birth:	Average age of participant group based on prior years valuation report. Assumed date for 07/01/2003 is July 1, 1960.
	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.
	Defer	red 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 termination is estimated based on 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 \$27,153.

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:

 Year
 Amount

 June 30, 2004 - 2020
 \$2,000,000

1997 Legislation:

Supplemental contributions of \$13,314,000 annually are assumed to be made beginning July 1, 2003 and continuing until the amortization date of June 30, 2020.

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

	Pre-Re	tirement	Post-Re	etirement	Post-D	Post-Disability	
	Mor	tality	Mor	tality	Mor	rtality	
<u>Age</u>	Male	Female	Male	Female	<u>Male</u>	Female	
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	0	6	273	273	
40 41	с 5	с Л	10	7	275	273	
41	6	4 1	10	7	273	273	
42	0	4 1	10	/ 0	273	275	
43	07	4 1	12	. 0	274	277	
44	/	4	1 12	Ō	2/4	2/4	

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

Pre-Retire		tirement	Post-Re	tirement	Post-Disability		
	Mortality		Mor	tality	Mortality		
Age	Male	Female	Male	Female	Male	Female	
15	7	5	14	0	274	274	
45	0	· 5	14	<u>,</u>	274	274	
46	0	ן ב	15	10	275	275	
4/	9	5 4	1/	11	270	270	
48	9	0	19	12	2/9	2/3	
49	10	D	22	14	283	265	
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	21	16	66	38	473	473	
61	25	18	71	12	475	494	
62	20	10	71	42 17	516	516	
62	13	21	81	52	541	541	
03	45	21	07	50	560	569	
04	40	25	92	20	509	507	
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	

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

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

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

	Ultimate Rate of Annual Salary		Ultimate Rate of Annual Salary
Age	Increases	Age	Increases
<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		

#### Annual Salary Increases

### Minneapolis Teachers' Retirement Fund

### Active Members as of June 30, 2003

-	Years of Service								
Age	<u>&lt;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>	ALL
<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	0	2	2	4	7	0	15
50-54	0	0	0	7	15	19	61	17	119
55-59	0	0	2	4	14	31	52	74	177
60-64	0	0	1	1	10	11	19	28	70
65+	0	0	0	0	1	4	3	14	22
ALL	0	0	3	14	42	69	142	133	403

#### **AVERAGE ANNUAL EARNINGS**

			Ye	ars of Serv	ice			
<u>&lt;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>
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	65,853	29,634	58,717	67,422	0	59,853
0	0	0	67,895	68,089	64,702	75,289	71,895	71,771
0	0	38,560	66,185	59,582	70,444	67,320	75,550	70,345
0	0	74,831	100,564	64,021	72,022	73,220	73,350	72,183
0	0	0	0	69,862	80,475	78,620	63,934	69,214
0	0	50,650	69,448	62,496	69,016	71,777	73,397	70,633
	$\leq 1$ 0 0 0 0 0 0 0 0 0 0 0 0 0	$\begin{array}{cccc} \leq 1 & 1-4 \\ 0 & 0 \\ $	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\leq 1$ $1-4$ $5-9$ $10-14$ 0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         65,853         0           0         0         0         66,185         0           0         0         74,831         100,564         0           0         0         0         0         0           0         0         50,650         69,448         0	$\leq 1$ $1-4$ $5-9$ $10-14$ $15-19$ 0065,85329,6340067,8950038,56066,18559,5820074,831100,56464,021000000000000050,65069,44862,496	$\leq 1$ 1-45-910-1415-1920-2400065,85329,63458,71700067,89568,08964,7020038,56066,18559,58270,4440074,831100,56464,02172,022000069,86280,4750050,65069,44862,49669,016	Years of Service $\leq 1$ $1-4$ $5-9$ $10-14$ $15-19$ $20-24$ $25-29$ 0065,85329,63458,71767,42200067,89568,08964,70275,2890038,56066,18559,58270,44467,3200074,831100,56464,02172,02273,220000069,86280,47578,6200050,65069,44862,49669,01671,777	Years of Service $\leq 1$ $1-4$ $5-9$ $10-14$ $15-19$ $20-24$ $25-29$ $30+$ 00065,85329,63458,71767,422000065,85329,63458,71767,422000066,18559,58270,44467,32075,5500074,831100,56464,02172,02273,22073,350000069,86280,47578,62063,9340050,65069,44862,49669,01671,77773,397

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

<u>Age</u>	<u>&lt;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	152	972	2,625	4,762	10,192	9,762	28,465

### Minneapolis Teachers' Retirement Fund Service Retirements as of June 30, 2003

-				Years I	Retired			
<u>Age</u>	<u>&lt;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
<50	0	0	0	0	0	0	0	0
50-54	2	28	0	0	0	0	0	30
55-59	21	308	89	0	0	0	0	418
60-64	9	260	275	49	1	0	0	594
65-69	0	91	229	179	25	2	1	527
70-74	0	14	133	239	96	21	0	503
75-79	1	4	20	133	147	102	10	417
80-84	0	0	3	22	81	167	28	301
85+	0	0	0	1	23	88	224	336
ALL	33	705	749	623	373	380	263	3,126

				Years l	Retired			
Age	<u>&lt;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
<50	0	0	0	0	0	0	0	0
50-54	4,722	41,081	0	0	0	0	. 0	38,657
55-59	29,228	40,137	39,042	0	0	0	0	39,356
60-64	16,340	28,963	40,444	29,755	3,472	0	0	34,109
65-69	0	27,810	29,933	45,510	21,496	21,470	14,622	34,396
70-74	0	37,642	27,220	37,604	36,717	23,103	0	34,085
75-79	4,885	21,850	31,180	37,950	31,424	39,370	10,453	34,779
80-84	0	0	19,566	40,227	27,101	30,208	17,552	28,821
85+	0	0	0	1,097	32,932	26,496	19,174	21,980
ALL	23,491	34,309	34,385	39,366	31,200	31,369	18,652	33,175

_		TOTAL AN	INUAL BEN	TEFIT (IN T	HOUSANDS	S) BY YEAR	S RETIRED	
Age	<u>&lt;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
All	775	24,188	25,754	24,525	11,638	11,920	4,906	103,706

		.:		Years D	isabled			
Age	<u>&lt;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
<50	0	1	0	0	0	0	0	1
50-54	0	1	1	1	0	0	0	3
55-59	0	1	4	1	1	0	0	7
60-64	0	1	2	2	1	0	0	6
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	4	7	4	2	0	0	17

### Minneapolis Teachers' Retirement Fund Disability Retirements as of June 30, 2003

_				Years D	bisabled			
Age	<u>&lt;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
<50	0	44,202	0	0	0	0	0	44,202
50-54	0	1,792	52,971	40,963	0	0	0	31,909
55-59	0	60,191	52,244	63,526	36,469	0	0	52,738
60-64	0	7,464	69,592	44,366	32,433	0	0	44,635
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	28,413	57,304	48,305	34,451	0	0	45,700

-		TOTAL ANI	NUAL BEN	EFIT (IN TH	IOUSANDS	<b>BY YEARS</b>	DISABLED	
Age	<u>&lt;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
All	0	114	401	193	69	0	0	777

### Minneapolis Teachers' Retirement Fund Survivors as of June 30, 2003

			Years Sin	ice Death			
<u>&lt;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
3	29	20	10	0	3	0	65
1	3	4	1	1	1	0	11
2	3	2	1	0	0	0	8
3.	8	6	0	0	0	0	17
3	8	7	8	0	0	1	27
4	11	13	5	6	4	1	44
2	11	14	7	6	1	0	41
3	6	11	3	0	5	5	33
1	7	8	8	5	7	3	39
22	86	85	43	18	21	10	285
	$\leq 1$ 3 1 2 3 4 2 3 4 2 3 1 22	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\leq 1$ $1-4$ $5-9$ $10-14$ 3292010134123213860387841113521114736113178822868543	Years Since Death $\leq 1$ 1-45-910-1415-19329201001341123210386003878041113562111476361130178852286854318	Years Since Death $\leq 1$ 1-45-910-1415-1920-2432920100313411123210038600038780041113564211147613611305178857228685431821	Years Since Death $\leq 1$ 1-45-910-1415-1920-2425+3292010030134111023210003860000387800141113564121114761036113055178857322868543182110

				Years Sir	ice Death			
Age	<u>&lt;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
<50	14,273	17,236	17,802	7,665	0	16,046	0	15,746
50-54	13,070	13,716	23,734	87,380	6,315	7,009	0	22,714
55-59	50,164	27,341	24,155	19,667	0	0	0	31,291
60-64	24,527	17,264	20,678	0	0	0	0	19,751
65-69	22,966	45,657	52,730	40,761	0	0	17,621	42,480
70-74	22,870	24,969	38,919	31,358	33,310	25,405	19,518	30,679
75-79	37,701	26,308	31,247	27,276	31,498	14,182	0	29,179
80-84	28,799	25,491	24,409	30,520	0	25,270	19,932	25,012
85+	43,791	30,677	21,966	24,238	19,745	18,972	14,284	23,142
ALL	27,080	23,932	28,001	26,581	27,438	20,481	17,965	25,546

_	T(	DTAL ANNI	UAL BENE	FIT (IN THO	DUSANDS) I	BY YEARS S	SINCE DEAT	ſH
Age	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	20-24	<u>25+</u>	ALL
All	596	2,058	2,380	1,143	494	430	180	7,281

### Minneapolis Teachers' Retirement Fund Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2003

	Percent of		
	Payroll	Doll	ar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A			
1. Employee Contributions	8.50%	\$	2,545
2. Employer Contributions	12.14%		3,635
3. Supplemental Contribution *			
a. 1993 Legislation	1.89%		566
b. 1996 Legislation	1.14%		341
c. 1997 Legislation	5.03%		1,506
4. Administrative Expense Assessment	0.00%		0
5. Total	28.70%	\$	8,593
B. REQUIRED CONTRIBUTIONS - CHAPTER 356			
a. Retirement Benefits	13.20%	\$	3.951
b. Disability Benefits	0.42%	•	127
c. Surviving Spouse and Child Benefits	0.14%		41
d. Deferred Retirements	2.25%		674
e. Refund Liability Due to Death or Withdrawal	0.85%		255
f. Total	16.86%	\$	5,048
Projected Annual Payroll for Fiscal Year Beginning on the Valuation D	ate:	\$	29,943

\* 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 Statues 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

Eligibility:	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. Certa part-time licensed employees are covered as well as employees of the Minneapolis Teachers Retirement Fund			
Contributions:	Member:	8.50% of Salary.		
	Employer:	12.14% of Salary.		
Teaching Service:	A year is earn employed in a are deducted. is also include	ed during a calendar year if the Member is covered position and employee contributions Certain part-time service and military service ed.		
Salary:	Total compen- unused vacation	sation. Excludes lump sum payments for on leave or unused sick leave at separation.		
Average Salary:	Average of the	e 5 highest consecutive years of Salary.		

### RETIREMENT

Normal Retirement Benefit:

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

#### Early Retirement Benefit:

*Eligibility:* Age 55 with less than 30 years of Teaching Service.

TABLE 13A (Continued) BASIC

Amount:

#### The greater of:

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.

#### or

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.

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.

#### Life annuity.

Actuarially equivalent options are:

- 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.

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.

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.

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 cash payments from the Social Security Administration for

#### Form of Payment:

Benefit Increases:

#### TABLE 13A (Continued) BASIC

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.

TABLE 13A (Continued) BASIC

	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 cou have received if he had resigned on the date of death. Pa to the beneficiary in the form of a life annuity or a 15 yea certain and life annuity.
Benej	fit C:	
	Eligibility:	An active Member who dies and leaves surviving childre
	Amount:	A monthly benefit of \$248.30 to the surviving widow wh 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 long caring for an eligible child. Benefits for dependent child cease upon marriage or age 18 (age 22 if a full time student).
	Benefit Increases:	Same as retirement

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:

Amount:

Termination of teaching service.

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

## TABLE 3BCOORDINATED

#### Minneapolis Teachers' Retirement Fund

_	Years of Service											
Age	<u>&lt;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>			
<25	145	72	0	0	0	0	0	0	217			
25-29	122	439	50	0	0	0	0	0	611			
30-34	44	347	288	28	0	0	0	0	707			
35-39	35	212	241	150	5	. 0	0	0	643			
40-44	23	147	163	207	121	14	0	0	675			
45-49	28	191	175	181	123	37	0	0	735			
50-54	27	134	136	212	123	50	3	0	685			
55-59	22	69	96	130	81	38	5	1	442			
60-64	5	41	36	55	42	23	0	1	203			
65+	4	21	13	13	6	3	0	0	60			
ALL	455	1,673	1,198	976	501	165	8	2	4,978			

### Active Members as of June 30, 2003

### **AVERAGE ANNUAL EARNINGS**

	Years of Service											
Age	<u>&lt;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>			
<25	14,353	22,441	0	0	0	0	0	0	17,037			
25-29	14,536	26,788	38,918	0	0	0	0	0	25,334			
30-34	18,426	32,392	42,035	51,850	0	0	0	0	36,222			
35-39	22,878	35,606	45,631	53,067	60,169	0	0	0	42,935			
40-44	16,878	39,380	51,143	56,392	56,622	69,460	0	0	50,386			
45-49	18,699	33,896	49,967	59,618	61,432	65,793	0	0	49,692			
50-54	15,530	36,684	51,911	57,635	67,170	66,058	61,796	0	53,086			
55-59	16,234	37,107	53,538	56,935	65,963	68,116	83,348	46,960	53,968			
60-64	20,209	33,833	51,605	57,226	64,831	67,299	0	68,698	53,364			
65+	2,428	12,408	39,631	45,053	35,713	68,775	0	0	29,863			
ALL	15,967	32,009	47,331	56,587	62,376	66,984	75,266	57,829	43,344			

	PR	IOR FISCA	AL YEAR H	EARNINGS	(IN THOU	JSANDS) B	Y YEARS	OF SERVI	ICE
Age	<u>&lt;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>	ALL
All	7,265	53,551	56,703	55,229	31,250	11,052	602	116	215,766

#### Minneapolis Teachers' Retirement Fund

_	Years Retired											
Age	<u>&lt;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				
<50	0	0	0	0	0	0	0	0				
50-54	0	1	0	0	• 0	0	0	1				
55-59	5	19	6	0	0	0	0	30				
60-64	5	-51	11	0	0	0	0	67				
65-69	3	45	23	1	0	0	0	72				
70-74	1	4	15	7	0	0	0	27				
75-79	1	2	3	. 4	0	0	0	10				
80-84	0	0	1	0	0	0	0	1				
85+	0	0	0	0	0	0	0	0				
ALL	15	122	59	12	0	0	0	208				

### Service Retirements as of June 30, 2003

- -

				Years I	Retired	-		
Age	<u>&lt;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
<50	0	0	0	0	0	0	0	0
50-54	0	12,679	0	0	0	0	0	12,679
55-59	7,529	12,703	7,660	0	0	0	0	10,832
60-64	14,186	10,192	9,218	0	0	0	0	10,330
65-69	5,192	10,709	9,714	4,909	0	0	0	10,080
70-74	3,771	11,885	10,351	4,468	0	0	0	8,809
75-79	12,072	7,013	6,288	9,674	0	0	0	8,366
80-84	0	0	2,920	0	0	0	0	2,920
85+	0	0	0	0	0	0	0	0
ALL	9,333	10,797	9,285	6,240	0	0	0	10,000

_		TOTAL AN	NUAL BEN	EFIT (IN T	HOUSANDS	5) BY YEAR	S RETIRED	
Age	<u>&lt;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
All	140	1,317	548	75	0	0	0	2,080

	Years Disabled										
Age	<u>&lt;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			
<50	1	1	0	0	0	0	0	2			
50-54	1	2	0	0	0	0	0	3			
55-59	0	1	0	0	0	0	0	1			
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	2	4	0	0	0	0	0	6			

### Minneapolis Teachers' Retirement Fund Disability Retirements as of June 30, 2003

	Years Disabled										
Age	<u>&lt;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			
<50	3,875	2,444	0	0	0	0	0	3,160			
50-54	17,989	9,447	0	0	0	0	0	12,294			
55-59	0	22,277	0	0	0	0	0	22,277			
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	10,932	10,904	0	0	0	0	0	10,913			

-		TOTAL AND	UAL BEN	EFIT (IN TH	IOUSANDS)	<b>BY YEARS</b>	DISABLED	
Age	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	20-24	<u>25+</u>	<u>ALL</u>
All	22	44	0	0	0	0	0	65

**TABLE 6B** 

#### COORDINATED

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### Minneapolis Teachers' Retirement Fund Survivors as of June 30, 2003

	Years Since Death							
Age	<u>&lt;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
<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

_	Years Since Death							
Age	<u>&lt;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
<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>&lt;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
All	0	0	0	0	0	0	0	0

### Minneapolis Teachers' Retirement Fund Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2003

	Percent of		
-	Payroll	Dol	lar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A			
1. Employee Contributions	5.50%	\$	12,915
2. Employer Contributions	8.14%		19,115
3. Supplemental Contribution *			
a. 1993 Legislation	1.89%		4,434
b. 1996 Legislation	1.14%		2,674
c. 1997 Legislation	5.03%		11,808
4. Administrative Expense Assessment	0.00%		0
5. Total	21.70%	\$	50,946
<ul> <li>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</li> <li>1. Normal Cost</li> </ul>			
a. Retirement Benefits	8.05%	\$	18,906
b. Disability Benefits	0.12%		292
c. Surviving Spouse and Child Benefits	0.09%		223
d. Deferred Retirements	0.84%		1,961
e. Refund Liability Due to Death or Withdrawal	0.42%		996
f. Total	9.52%	\$	22,378
Projected Annual Payroll for Fiscal Year Beginning on the Valuation	Date:	\$	234,823

\* 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 Statues 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.

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### GENERAL

Eligibility:	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).
Contributions:	Member:5.50% of Salary.Employer:8.14% of Salary.
Allowable Service:	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.
Salary:	Total compensation. Excludes lump sum payments for unused vacation leave or unused sick leave at separation.
Average Salary:	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<br/>July 1, 1989:The greater of age 65 or the age eligible for full Social<br/>Security retirement benefits (but not later than age 66) and<br/>3 years of Allowable Service. Proportionate Retirement<br/>Annuity is available at normal retirement age and 1 year of<br/>Allowable Service.Amount:1.70% of Average Salary for each year of Allowable

#### 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:

Service.

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.

#### Form of Payment:

Benefit Increases:

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### DISABILITY

Disability Benefit:

Eligibility:

Amount:

Form of Payment:

Benefit Increases:

Life annuity. Actuarial equivalent options are:

- 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).

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.

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.

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.

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.

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.

Same as for retirement.

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, 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.
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.
Benefit Increases:	Same as for retirement.
Refund of Contributions:	
Eligibility:	Member or former Member dies before receiving any retirement benefits and survivor's benefits are not payable.
Amount:	Member's contributions with 6.00% interest.

### TERMINATION

Deferred Annuity:

Eligibility:

Amount:

3 years of Allowable Service.

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:

Amount:

Termination of teaching service.

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)

Jul	ly	1,	20	03
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					Actual	
					Covered	
Actuarial					Payroll	
Valuation	Actuarial Value	Actuarial	Unfunded	Funded	(Previous	UAAL as % of
Date	of Assets	Accrued Liability	AAL (UAAL)	Ratio	FY)	<b>Covered Payroll</b>
	(A)	(B)	(B)-(A)	(A)/(B)	(C)	((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%
07/01/03	956,913	1,671,982	715,069	57.23%	247,418	289.01%

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### Minneapolis Teachers' Retirement Fund Schedule of Employer Contributions

(dollars in thousands)

Jul	lv	1.	20	03
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	Actuarially					
Year	Required	Actual		Annual		
Ended	Contribution	Covered	Actual Member	Required	Actual Employer	Percentage
June 30	Rate	Payroll	Contributions	Contributions	Contributions <sup>(1)</sup>	Contributed
	(A)	(B)	(C)	[(A)*(B)]-(C)		
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%
2003	29.05% <sup>(2)</sup>	247,418	16,673	55,202	42,186	76.42%

<sup>(1)</sup> Includes contributions from other sources (if applicable)

<sup>(2)</sup> Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 17.89%.