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**Duluth Teachers' Retirement Fund**  
***ACTUARIAL VALUATION REPORT***

**July 1, 2001**



**Milliman USA**  
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November 13, 2001

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

**RE: Duluth Teachers' Retirement Fund**

Commission Members:

Pursuant to the terms of our Actuarial Services Contract, we have performed an actuarial valuation of the Fund as of July 1, 2001.

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

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 for Actuarial Work, adopted by the Commission.

Respectfully submitted,

**Milliman USA**

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## **Duluth Teachers' Retirement Fund**

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## **Duluth Teachers' Retirement Fund**

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**Duluth Teachers' Retirement Fund**

**Report Highlights**  
(dollars in thousands)

	07/01/2000 Valuation	07/01/2001 Valuation
<b>A. CONTRIBUTIONS (Table 11)</b>		
1. Statutory Contributions - Chapter 354A % of Payroll	12.21%	12.20%
2. Required Contributions - Chapter 356 % of Payroll	8.51%	7.49%
3. Sufficiency (Deficiency): (A.1. - A.2.)	3.70%	4.71%
<b>B. FUNDING RATIOS</b>		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	\$251,007	\$273,618
b. Current Benefit Obligations (Table 8)	\$231,146	\$243,473
c. Funding Ratio: (a/b)	108.59%	112.38%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$251,007	\$273,618
b. Actuarial Accrued Liability (Table 9)	\$241,899	\$254,255
c. Funding Ratio: (a/b)	103.77%	107.62%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$313,384	\$336,671
b. Current and Expected Future Benefit Obligations	\$281,027	\$293,544
c. Funding Ratio: (a/b)	111.51%	114.69%
<b>C. PLAN PARTICIPANTS</b>		
1. Active Members		
a. Number (Table 3)	1,441	1,420
b. Projected Annual Earnings	\$53,102	\$53,307
c. Average Annual Earnings (Projected \$)	\$36,851	\$37,540
d. Average Age	44.1	43.9
e. Average Service	10.5	10.3
2. Others		
a. Service Retirements (Table 4)	937	992
b. Survivors (Table 5)	53	60
c. Disability Retirements (Table 6)	6	6
d. Deferred Retirements (Table 7)	172	179
e. Terminated Other Non-vested (Table 7)	575	649
f. Total	1,743	1,886

## ***Commentary***

### ***Purpose***

The purpose of this valuation is to determine the financial status of the Plan. In order 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 112.38%. The corresponding ratio for the prior year was 108.59%.
- 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 2001 the ratio is 107.62%, which is an increase from the 2000 value of 103.77%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 114.69% verifies that the current statutory contributions are sufficient.

### ***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 five years. 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 E.1 to E.4.

Actuarial Value of Assets is determined as:

Market Value of Assets at June 30, 2001, *less*

80% of the current year Unrecognized Asset Return at July 1, 2001 (the difference between actual net return on Market Value of Assets between 06/30/2000 and 06/30/2001 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2000 Actuarial Valuation); *less*

60% of the current year Unrecognized Asset Return at July 1, 2000 (the difference between actual net return on Market Value of Assets between 06/30/1999 and 06/30/2000 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 1999 Actuarial Valuation); *less*

30% of the Unrecognized Asset Return at July 1, 1999 (the difference between Market Value of Assets on 06/30/99 and the Actuarial Value of Assets used in the July 1, 1999 Actuarial Valuation).

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 levels 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.

### ***GASB Disclosure***

Disclosure of the Current Benefit Obligation amounts used to be required by Statement No. 5 of the Governmental Accounting Standards Board (GASB). However, Statement No. 5 has been superseded by Statement No. 25. Tables 14 and 15 of this report are included to fulfill the requirements of Statement No. 25.

### ***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 corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

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

### ***Source 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 expectations. For a detailed analysis of the major components, 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 Plan has a contribution sufficiency since the Statutory Contribution Rate is 12.20% compared to the Required Contribution Rate of 7.49%.



### ***Changes in Actuarial Assumptions and Methods***

All actuarial assumptions and methods listed in Table 12 are the same as those used in the prior valuation.

### ***Changes in Plan Provisions***

Effective with this July 1, 2001 valuation, the following plan provisions have been added or amended:

- Effective January 1, 2002, the additional lump sum benefits that are paid to pre-1973 retirees will be paid as monthly installments to the retirees.
- The requirement that the amortization contribution requirement must be determined using an amortization target date of June 30, 2020 has been removed.

All other plan provisions are the same as those used in the prior actuarial valuation of the Fund.

TABLE 1

## Duluth Teachers' Retirement Fund

**Statement of Plan Net Assets**

(dollars in thousands)

JULY 1, 2001

	Market Value	Cost Value
<b>A. ASSETS IN TRUST</b>		
1. Cash, Equivalents, Short-term Securities	\$34,090	\$34,090
2. Fixed Income	171,460	169,098
3. Equity	86,156	84,100
4. Real Estate and Mortgage Loans	4,216	4,216
5. Equity in MPRIF	0	0
6. Invested Securities Lending Collateral	34,799	34,799
7. Other	473	473
<b>Subtotal</b>	<b>\$331,194</b>	<b>\$326,776</b>
<b>B. ASSETS RECEIVABLE</b>	<b>32,946</b>	<b>32,946</b>
<b>C. LIABILITIES</b>		
1. Invested Securities Lending Collateral	(34,799)	(34,799)
2. Other	(62,637)	(62,637)
<b>Subtotal</b>	<b>(97,436)</b>	<b>(97,436)</b>
<b>D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS</b>		
1. MPRIF Reserves	0	0
2. Member Reserves	26,043	26,043
3. Other Non-MPRIF Reserves	240,661	236,243
4. Total Assets Available for Benefits	<u>\$266,704</u>	<u>\$262,286</u>
<b>E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS</b>		
1. Market Value of Assets Available for Benefits (D4)		\$266,704
2. Unrecognized Asset Returns (UAR)		
a. June 30, 2001	(\$48,888)	
b. June 30, 2000	41,405	
c. June 30, 1999	24,513	
3. UAR Adjustment: $.80 * (E2.a) + .60 * (E2.b) + .30 * (E2.c)$		(6,914)
4. Actuarial Value of Assets (E1 - E3)		<u>273,618</u>
(Same as "Current Assets")		

## Duluth Teachers' Retirement Fund

**Statement of Change In Plan Net Assets**

(dollars in thousands)

YEAR ENDING JUNE 30, 2001

	Non-MPRIF Assets	MPRIF Reserve	Market Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$298,839	\$0	\$298,839
B. ADDITIONS			
1. Member Contributions	\$3,141	\$0	\$3,141
2. Employer Contributions	3,011	0	3,011
3. Contributions From Other Sources	486	0	486
4. MPRIF Income	0	0	0
5. Net Investment Income			
a. Interest and Dividends	12,185	0	12,185
b. Net Realized Gain (Loss)	3,699	0	3,699
c. Net Change in Unrealized Gain (Loss)	(38,645)	0	(38,645)
d. Investment Expenses	(1,224)	0	(1,224)
e. Net Subtotal	(23,985)	0	(23,985)
6. Other	146	0	146
7. Total Additions	(\$17,201)	\$0	(\$17,201)
C. OPERATING EXPENSES			
1. Service Retirements	\$13,397	\$0	\$13,397
2. Disability Benefits	216	0	216
3. Survivor Benefits	728	0	728
4. Refunds	173	0	173
5. Administrative Expenses	420	0	420
6. Other	0	0	0
7. Total Disbursements	\$14,934	\$0	\$14,934
D. OTHER CHANGES IN RESERVES			
1. Annuities Awarded	0	0	0
2. Total Other Changes	0	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	<u>\$266,704</u>	<u>\$0</u>	<u>\$266,704</u>
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN			
1. Average Balance			
(a) Assets Available at Beginning of Period			298,839
(b) Assets Available at End of Period			266,704
(c) Average Balance { [F1.a + F1.b - B5.e - B6] / 2 }			294,691
2. Expected Return: .085 * F1.c			25,049
3. Actual Return			(23,839)
urrent Year Unrecognized Asset Return: F3 - F2			(48,888)

**Duluth Teachers' Retirement Fund**  
**Active Members as of June 30, 2001**

Age	Years of Service								ALL
	<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>	
<25	37	6	0	0	0	0	0	0	43
25-29	56	84	12	0	0	0	0	0	152
30-34	24	64	40	6	0	0	0	0	134
35-39	17	42	38	30	4	0	0	0	131
40-44	19	46	42	36	32	0	0	0	175
45-49	36	42	45	44	56	39	5	0	267
50-54	15	28	43	48	50	49	68	25	326
55-59	11	16	13	13	18	10	29	46	156
60-64	2	3	5	5	5	9	5	1	35
65+	5	0	1	1	1	0	0	0	8
ALL	222	331	239	183	166	107	107	72	1,427

**Average Annual Earnings**

Age	Years of Service								ALL
	<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>	
<25	3,101	23,391	0	0	0	0	0	0	5,932
25-29	4,859	24,532	30,412	0	0	0	0	0	17,748
30-34	4,616	26,398	34,299	40,217	0	0	0	0	25,474
35-39	3,663	27,289	38,820	44,292	52,577	0	0	0	32,234
40-44	2,211	26,778	35,020	41,381	49,451	0	0	0	33,239
45-49	3,297	27,913	35,627	43,699	49,903	54,152	56,384	0	37,474
50-54	8,138	33,492	37,879	49,089	51,336	52,632	54,910	56,333	47,033
55-59	3,098	19,544	32,452	54,016	48,663	52,440	56,055	55,909	45,312
60-64	612	6,753	34,111	41,509	48,796	52,204	52,696	56,574	40,956
65+	4,410	0	54,718	40,298	49,559	0	0	0	20,828
ALL	4,054	26,319	35,825	45,294	50,142	53,132	55,186	56,066	35,327

**Prior Fiscal Year Earnings (in Thousands) 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	899	8,711	8,562	8,288	8,323	5,685	5,904	4,036	50,411

# Duluth Teachers' Retirement Fund

## Service Retirements as of June 30, 2001

<u>Age</u>	<u>Years Retired</u>							<u>ALL</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>	
<50	0	0	2	0	0	0	0	2
50-54	0	1	1	1	0	0	0	3
55-59	37	67	3	1	1	0	0	109
60-64	20	110	64	0	0	0	0	194
65-69	4	40	126	41	1	0	1	213
70-74	1	4	47	98	44	1	0	195
75-79	0	0	6	26	69	12	0	113
80-84	0	0	0	3	39	24	13	79
85+	0	1	0	0	2	25	56	84
ALL	62	223	249	170	156	62	70	992

## Average Annual Benefit

<u>Age</u>	<u>Years Retired</u>							<u>ALL</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>	
<50	0	0	9,098	0	0	0	0	9,098
50-54	0	9,370	1,562	2,838	0	0	0	4,590
55-59	23,154	23,378	7,484	18,297	11,795	0	0	22,712
60-64	17,650	21,483	16,122	0	0	0	0	19,319
65-69	10,803	12,915	16,873	12,060	8,628	0	7,134	15,005
70-74	29,758	9,088	16,258	13,323	11,500	5,929	0	13,579
75-79	0	0	18,132	12,948	11,947	6,364	0	11,913
80-84	0	0	0	3,446	10,707	9,172	5,923	9,178
85+	0	13,683	0	0	7,696	9,028	9,934	9,656
ALL	20,688	20,204	16,357	12,754	11,434	8,518	9,149	15,103

## Total Annual Benefit (in Thousands) by Years 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>	<u>ALL</u>
All	1,282	4,505	4,072	2,168	1,783	528	640	14,982

## Duluth Teachers' Retirement Fund

Survivors as of June 30, 2001

<u>Age</u>	<u>Years Since Death</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	2	1	0	0	3
50-54	1	0	0	0	0	0	0	1
55-59	0	1	0	0	0	0	0	1
60-64	0	1	3	3	0	0	0	7
65-69	0	0	3	6	2	0	0	11
70-74	0	1	0	5	3	1	0	10
75-79	0	0	2	2	6	4	0	14
80-84	0	0	0	0	2	3	1	6
85+	0	0	0	0	0	2	5	7
ALL	1	3	8	18	14	10	6	60

Average Annual Benefit

<u>Age</u>	<u>Years Since Death</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	10,233	4,453	0	0	8,306
50-54	2,756	0	0	0	0	0	0	2,756
55-59	0	23,077	0	0	0	0	0	23,077
60-64	0	9,609	24,966	15,023	0	0	0	18,511
65-69	0	0	1,828	16,627	10,292	0	0	11,439
70-74	0	14,895	0	12,949	10,931	14,837	0	12,727
75-79	0	0	7,231	10,972	17,013	11,714	0	13,239
80-84	0	0	0	0	14,085	7,212	8,472	9,713
85+	0	0	0	0	0	9,965	8,220	8,719
ALL	2,756	15,860	11,856	13,999	13,434	10,326	8,262	12,301

Total Annual Benefit (Actual Dollars) by Years Since Death

<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	2,756	47,580	94,848	251,982	188,076	103,260	49,572	738,060

# Duluth Teachers' Retirement Fund

## Disability Retirements as of June 30, 2001

Age	Years Disabled							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	0	0	0	0	0	0	0	0
50-54	0	0	2	0	0	0	0	2
55-59	0	2	0	0	0	0	0	2
60-64	0	1	1	0	0	0	0	2
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	3	3	0	0	0	0	6

## Average Annual Benefit

Age	Years Disabled							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	0	0	0	0	0	0	0	0
50-54	0	0	17,338	0	0	0	0	17,338
55-59	0	4,057	0	0	0	0	0	4,057
60-64	0	3,026	27,102	0	0	0	0	15,064
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	3,713	20,593	0	0	0	0	12,153

## Total Annual Benefit (Actual Dollars) by Years Disabled

Age	<1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	0	11,139	61,779	0	0	0	0	72,918

TABLE 7

## Duluth Teachers' Retirement Fund

**Reconciliation Of Members**

	Actives	Terminated	
		Deferred Retirement	Other Non-Vested
A. ON JUNE 30, 2000	1,441	172	575
B. ADDITIONS	154	120	0
C. DELETIONS			
1. Service Retirement	(49)	(9)	0
2. Disability	0	0	0
3. Death	(2)	(2)	0
4. Terminated - Deferred	(120)	0	0
5. Terminated - Refund	(12)	(168)	0
6. Terminated - Other Non-Vested	0	0	0
7. Returned as Active	24	(22)	0
8. Transferred to Other Fund	0	0	0
D. DATA ADJUSTMENTS	(16)	88	74
Vested	1,003		
Non-Vested	417		
E. TOTAL ON JUNE 30, 2001	1,420	179	649

	Recipients		
	Retirement Annuitants	Disabled	Survivors
A. ON JUNE 30, 2000	937	6	53
B. ADDITIONS	60	0	5
C. DELETIONS			
1. Service Retirement	0	0	0
2. Death	(25)	(1)	0
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	20	1	2
E. TOTAL ON JUNE 30, 2001	992	6	60



## Duluth Teachers' Retirement Fund

**Actuarial Balance Sheet***(dollars in thousands)*

JULY 1, 2001

A. CURRENT ASSETS (TABLE 1, E6)				\$273,618
B. EXPECTED FUTURE ASSETS				
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)				\$23,764
2. Present Value of Future Normal Costs				39,289
3. Total Expected Future Assets				<u>\$63,053</u>
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				<u><u>\$336,671</u></u>
D. CURRENT BENEFIT OBLIGATIONS	<u>Non-Vested</u>	<u>Vested</u>		<u>Total</u>
1. Benefit Recipients				
a. Retirement Annuities		\$145,659		\$145,659
b. Disability Benefits		621		621
c. Surviving Spouse and Child Benefits		6,870		6,870
2. Deferred Retirements with Future Augmentation		6,560		6,560
3. Former Members without Vested Rights		572		572
4. Active Members				
a. Retirement Annuities	384	76,500		76,884
b. Disability Benefits	1,841	0		1,841
c. Survivor's Benefits	1,129	0		1,129
d. Deferred Retirements	42	2,631		2,673
e. Refund Liability Due to Death or Withdrawal	0	664		664
5. Total Current Benefit Obligations	<u>\$3,396</u>	<u>\$240,077</u>		<u>\$243,473</u>
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				<u>\$50,071</u>
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				<u><u>\$293,544</u></u>
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)				(\$30,145)
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)				(\$43,127)

## Duluth Teachers' Retirement Fund

**Determination Of Unfunded Actuarial Accrued Liability (UAAL)  
And Supplemental Contribution Rate**  
(dollars in thousands)

JULY 1, 2001

	Actuarial Present Value of Projected Benefits <i>(1)</i>	Actuarial Present Value of Future Normal Costs <i>(2)</i>	Actuarial Accrued Liability <i>(3)=(1)-(2)</i>
<b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>			
1. Active Members			
a. Retirement Annuities	\$122,760	\$32,373	\$90,387
b. Disability Benefits	2,994	1,097	1,897
c. Survivor's Benefit	1,829	699	1,130
d. Deferred Retirements	4,370	3,241	1,129
e. Refunds Due to Death or Withdrawal	1,309	1,879	(570)
f. Total	<u>\$133,262</u>	<u>\$39,289</u>	<u>\$93,973</u>
2. Deferred Retirements With Future Augmentation	6,560		6,560
3. Former Members Without Vested Rights	572		572
4. Annuitants in MPRIF	0		0
5. Recipients Not in MPRIF	<u>153,150</u>		<u>153,150</u>
6. Total	<u>\$293,544</u>	<u>\$39,289</u>	<u>\$254,255</u>
<b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b>			
1. AAL (A6)			\$254,255
2. Current Assets (Table 1, E6)			<u>273,618</u>
3. UAAL (B1-B2)			<u>(\$19,363)</u>
<b>C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE</b>			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2031			\$990,111
2. Supplemental Contribution Rate (B3/C1)			-1.96%

## Duluth Teachers' Retirement Fund

**Changes In Unfunded Actuarial Accrued Liability (UAAL)***(dollars in thousands)*

YEAR ENDING JUNE 30, 2001

A. UAAL AT BEGINNING OF YEAR	(S9,108)
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$5,007
2. Contribution	(6,638)
3. Interest on A, B1 and B2	<u>(843)</u>
4. Total (B1+B2+B3)	<u>(\$2,474)</u>
C. EXPECTED UAAL AT END OF YEAR (A+B4)	(\$11,582)
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Salary Increases	(\$1,811)
2. Investment Return	(5,482)
3. MPRIF Mortality	0
4. Mortality of Other Benefit Recipients	(2,194)
5. Other Items	<u>1,706</u>
6. Total	<u>(\$7,781)</u>
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTION (C+D6)	(\$19,363)
F. CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY DUE TO CHANGE IN ACTUARIAL METHODS	0
G. CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	<u>0</u>
H. UAAL AT END OF YEAR (E+F+G)	<u><u>(\$19,363)</u></u>

\* Gross asset gain of \$9,924 offset by \$4,442 of excess assets allocated for 1/1/2001  
'excess earnings' COLA to existing retirees and beneficiaries.

## Duluth Teachers' Retirement Fund

**Determination Of Contribution Sufficiency***(dollars in thousands)*

JULY 1, 2001

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	5.50%	\$2,932
2. Employer Contributions	5.79%	3,086
3. Additional State Contribution*	0.91%	486
4. Total	<u>12.20%</u>	<u>\$6,504</u>
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	7.14%	\$3,804
b. Disability Benefits	0.24%	127
c. Survivors	0.16%	83
d. Deferred Retirement Benefits	0.70%	373
e. Refunds Due to Death or Withdrawal	<u>0.42%</u>	<u>222</u>
f. Total	<u>8.66%</u>	<u>\$4,609</u>
2. Supplemental Contribution Amortization by July 1, 2031 of UAAL	-1.96%	(1,045)
3. Allowance for Expenses	<u>0.79%</u>	<u>421</u>
4. Total	<u>7.49%</u>	<u>\$3,985</u>
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	4.71%	\$2,519

Note: Projected Annual Payroll for Fiscal Year Beginning on JULY 1, 2001 is \$53,307.

\* Additional State Contribution is a level dollar amount which implies a decreasing percentage of payroll.

## Duluth Teachers' Retirement Fund

***Summary of Actuarial Assumptions and Methods***

<b><i>Interest:</i></b>	<b>Pre-Retirement:</b> 8.5% per annum <b>Post-Retirement:</b> 8.5% per annum
<b><i>Salary Increases:</i></b>	Graded from 8.0% to 5.25%. The graded rates consist of a 5% inflation component and varying levels of merit and productivity increases.
<b><i>Mortality:</i></b>	<b>Pre-Retirement:</b> Male - 1983 GAM (Males -4) Female - 1983 GAM (Females -3) <b>Post-Retirement:</b> Male - 1983 GAM (Males -2) Female - 1983 GAM (Females -1) <b>Post-Disability:</b> Male - 1977 RRB Female - 1977 RRB
<b><i>Retirement Age:</i></b>	Age-related from 15% to 80% for the old plan and age-related from 10% to 80% for the new plan. In addition, 40% of the Members are assumed to retire each year that they are eligible for Rule of 90.
<b><i>Separation:</i></b>	Graded rates shown in rate table.
<b><i>Disability:</i></b>	Rates as shown in rate table.
<b><i>Expenses:</i></b>	Prior year administrative expenses expressed as percentage of prior year payroll.
<b><i>Return of Contributions:</i></b>	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.

<b><i>Family Composition:</i></b>	80% of Members are assumed to be married. Female is three years younger than male.				
<b><i>Social Security:</i></b>	N/A				
<b><i>Benefit Increases After Retirement:</i></b>	N/A				
<b><i>Special Consideration:</i></b>	<p>Annual 2% increase for annuitants is accounted for by using a 6.5% post-retirement interest rate. Members in the Old Plan are assumed to receive their retirement benefits from the New Plan. Members who terminated under the Old Plan are assumed to take refund under the New Plan.</p> <p>Married Members assumed to elect subsidized joint and survivor form of annuity as follows:</p> <table> <tr> <td><b>Males -</b></td><td>30% elect 50% J&amp;S option 55% elect 100% J&amp;S option</td></tr> <tr> <td><b>Females -</b></td><td>30% elect 50% J&amp;S option 20% elect 100% J&amp;S option</td></tr> </table>	<b>Males -</b>	30% elect 50% J&S option 55% elect 100% J&S option	<b>Females -</b>	30% elect 50% J&S option 20% elect 100% J&S option
<b>Males -</b>	30% elect 50% J&S option 55% elect 100% J&S option				
<b>Females -</b>	30% elect 50% J&S option 20% elect 100% J&S option				
<b><i>Actuarial Cost Method:</i></b>	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.				
<b><i>Asset Valuation Method:</i></b>	On and after July 1, 2000, Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during the fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year). Transition rules apply between July 1, 2000 and July 1, 2003, when the method is fully in effect.				

***Payment on the  
Unfunded Actuarial  
Accrued Liability:***

A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 5% per annum. If there is a negative Unfunded Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percentage of payroll.

**TABLE 12**  
(Continued)

**Duluth Teachers' Retirement Fund**

***Summary of Actuarial Assumptions and Methods***

**Separation Expressed as Number of Occurrences Per 10,000:**

<u>Age</u>	<u>Death</u>		<u>Withdrawal</u>		<u>Disability</u>		<u>Retirement</u>		<u>Salary Increases</u>
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Old</u>	<u>New</u>	
20	3	2	2,000	1,500	4	4	0	0	8.00%
21	3	2	1,931	1,360	4	4	0	0	8.00
22	4	2	1,731	1,220	4	4	0	0	8.00
23	4	2	1,532	1,080	5	5	0	0	7.90
24	4	2	1,332	940	5	5	0	0	7.80
25	4	2	1,132	800	5	5	0	0	7.70
26	4	2	932	660	5	5	0	0	7.60
27	4	2	732	520	5	5	0	0	7.50
28	4	3	703	500	5	5	0	0	7.40
29	5	3	673	480	5	5	0	0	7.30
30	5	3	643	460	6	6	0	0	7.20
31	5	3	612	440	6	6	0	0	7.10
32	5	3	582	420	6	6	0	0	7.00
33	6	3	552	400	6	6	0	0	6.90
34	6	4	522	380	6	6	0	0	6.80
35	6	4	491	360	6	6	0	0	6.70
36	7	4	461	340	7	7	0	0	6.60
37	7	4	430	320	7	7	0	0	6.50
38	8	5	409	300	8	8	0	0	6.40
39	9	5	389	280	8	8	0	0	6.30
40	9	5	368	260	8	8	0	0	6.20
41	10	6	347	240	9	9	0	0	6.10
42	10	6	325	220	9	9	0	0	6.00
43	11	7	304	210	10	10	0	0	5.90
44	12	7	282	200	10	10	0	0	5.80
45	14	8	260	190	11	11	0	0	5.70
46	15	8	237	180	12	12	0	0	5.60
47	17	9	214	170	13	13	0	0	5.50
48	19	10	191	160	14	14	0	0	5.45
49	22	11	167	150	16	16	0	0	5.40



**TABLE 12**  
(Continued)

**Duluth Teachers' Retirement Fund**

***Summary of Actuarial Assumptions and Methods***

**Separation Expressed as Number of Occurrences Per 10,000:**

<u>Age</u>	<u>Death</u>		<u>Withdrawal</u>		<u>Disability</u>		<u>Retirement</u>		<u>Salary Increases</u>
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Old</u>	<u>New</u>	
50	25	12	143	140	17	17	0	0	5.35%
51	28	14	118	118	19	19	0	0	5.30
52	31	15	92	92	22	22	0	0	5.25
53	35	16	67	67	26	26	0	0	5.25
54	39	18	40	40	30	30	0	0	5.25
55	43	19	13	13	36	36	1,500	1,000	5.25
56	48	21	0	0	41	41	1,500	1,000	5.25
57	52	23	0	0	47	47	1,500	1,000	5.25
58	57	25	0	0	52	52	1,500	1,000	5.25
59	61	28	0	0	58	58	1,500	1,000	5.25
60	66	31	0	0	63	63	1,500	1,000	5.25
61	71	34	0	0	69	69	4,000	2,000	5.25
62	77	38	0	0	76	76	4,000	2,000	5.25
63	84	42	0	0	84	84	4,000	2,000	5.25
64	92	47	0	0	93	93	4,000	2,000	5.25
65	101	52	0	0	0	0	4,000	2,000	5.25
66	111	58	0	0	0	0	5,000	4,000	5.25
67	124	64	0	0	0	0	5,000	4,000	5.25
68	139	71	0	0	0	0	5,000	4,000	5.25
69	156	78	0	0	0	0	5,000	4,000	5.25
70	176	87	0	0	0	0	5,000	4,000	5.25

TABLE 14

## Duluth Teachers' Retirement Fund

SCHEDULE OF FUNDING PROGRESS  
(dollars in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (AAL) (B)	Unfunded AAL (UAAL) (B - A)	Funded Ratio (A)/(B)	Actual Covered Payroll (Previous FY) (C)	UAAL as % of Covered Payroll (B - A) / (C)
07/01/1991	105,087	117,582	12,495	89.37%	42,297	29.54%
07/01/1992	116,492	124,140	7,648	93.84%	42,884	17.83%
07/01/1993	130,856	132,700	1,844	98.61%	43,282	4.26%
07/01/1994	133,632	137,042	3,410	97.51%	43,109	7.91%
07/01/1995	142,852	173,965	31,113	82.12%	46,528	66.87%
07/01/1996	157,007	189,518	32,511	82.85%	44,870	72.46%
07/01/1997	170,059	197,820	27,761	85.97%	46,770	59.36%
07/01/1998	187,482	197,078	9,596	95.13%	47,064	20.39%
07/01/1999	218,699	220,540	1,841	99.17%	52,176	3.53%
07/01/2000	251,007	241,899	(9,108)	103.77%	52,270	-17.42%
07/01/2001	273,618	254,255	(19,363)	107.62%	51,996	-37.24%

TABLE 15

**Duluth Teachers' Retirement Fund**  
**SCHEDULE OF EMPLOYER CONTRIBUTIONS**  
(dollars in thousands)

Year Ended June 30	Actuarially Required Contribution Rate (A)	Actual Covered Payroll (B)	Actual Member Contributions (C)	Annual Required Contribution [(A) x (B)] - (C)	Actual Employer Contribution*	Percentage Contributed
1991	10.70%	42,297	2,043	2,483	2,449	98.63%
1992	11.09%	42,884	2,124	2,632	2,483	94.34%
1993	11.42%	43,282	2,126	2,817	2,506	88.96%
1994	10.21%	43,109	2,230	2,171	2,496	114.97%
1995	10.36%	46,528	2,144	2,676	2,694	100.67%
1996	13.23%	44,870	2,570	3,366	2,598	77.18%
1997	13.60%	46,770	2,644	3,717	2,708	72.85%
1998	12.87%	47,064	2,664	3,393	3,211	94.64%
1999	10.24%	52,176	3,118	2,225	3,507	157.62%
2000	9.16%	52,270	3,152	1,636	3,512	214.67%
2001	8.51% ***	51,996	3,141	1,284	3,497	272.35%
2002	7.49%					

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

\*\*\*Actuarially Required Contribution Rate prior to change in Asset Valuation Method is 6.57%

**Duluth Teachers' Retirement Fund**  
**Active Members as of June 30, 2001**

Age	Years of Service								ALL
	<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>	
<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	1	0	0	0	0	0	0	1
40-44	1	0	0	0	0	0	0	0	1
45-49	0	0	0	1	10	38	5	0	54
50-54	1	1	0	2	3	43	68	25	143
55-59	3	0	0	0	6	9	29	46	93
60-64	0	0	0	0	1	8	5	1	15
65+	1	0	0	0	1	0	0	0	2
ALL	6	2	0	3	21	98	107	72	309

**Average Annual Earnings**

Age	Years of Service								ALL
	<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>	
<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	40,010	0	0	0	0	0	0	40,010
40-44	560	0	0	0	0	0	0	0	560
45-49	0	0	0	105	43,266	54,112	56,384	0	51,314
50-54	1,694	51,098	0	37,817	55,834	52,529	54,910	56,333	53,824
55-59	372	0	0	0	43,704	52,285	56,055	55,909	53,025
60-64	0	0	0	0	52,867	54,051	52,696	56,574	53,689
65+	7,121	0	0	0	49,559	0	0	0	28,340
ALL	1,749	45,554	0	25,246	45,943	53,245	55,186	56,066	52,756

**Prior Fiscal Year Earnings (in Thousands) 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	10	91	0	75	964	5,218	5,904	4,036	16,301

## Duluth Teachers' Retirement Fund

Service Retirements as of June 30, 2001

<u>Age</u>	<u>Years Retired</u>							<u>ALL</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>	
<50	0	0	1	0	0	0	0	1
50-54	0	1	0	0	0	0	0	1
55-59	13	40	0	1	1	0	0	55
60-64	5	35	30	0	0	0	0	70
65-69	0	6	54	23	0	0	1	84
70-74	0	0	2	30	18	1	0	51
75-79	0	0	0	10	44	12	0	66
80-84	0	0	0	1	25	24	13	63
85+	0	0	0	0	2	25	56	83
ALL	18	82	87	65	90	62	70	474

Average Annual Benefit

<u>Age</u>	<u>Years Retired</u>							<u>ALL</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>	
<50	0	0	12,337	0	0	0	0	12,337
50-54	0	9,370	0	0	0	0	0	9,370
55-59	13,376	18,635	0	18,297	11,795	0	0	17,262
60-64	19,190	13,294	15,351	0	0	0	0	14,597
65-69	0	8,068	13,206	9,049	0	0	7,134	11,629
70-74	0	0	16,355	11,287	6,197	5,929	0	9,584
75-79	0	0	0	12,671	9,202	6,364	0	9,212
80-84	0	0	0	1,182	9,457	9,172	5,923	8,488
85+	0	0	0	0	7,696	9,028	9,934	9,607
ALL	14,991	15,469	14,008	10,660	8,667	8,518	9,149	11,390

Total Annual Benefit (in Thousands) by Years 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>	<u>ALL</u>
All	269	1,268	1,218	692	780	528	640	5,398

## Duluth Teachers' Retirement Fund

Survivors as of June 30, 2001

<u>Age</u>	<u>Years Since Death</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	1	0	0	1
50-54	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0
60-64	0	0	1	1	0	0	0	2
65-69	0	0	2	2	0	0	0	4
70-74	0	0	0	1	2	1	0	4
75-79	0	0	0	1	3	4	0	8
80-84	0	0	0	0	1	3	1	5
85+	0	0	0	0	0	2	5	7
ALL	0	0	3	5	7	10	6	31

Average Annual Benefit

<u>Age</u>	<u>Years Since Death</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	4,453	0	0	4,453
50-54	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0
60-64	0	0	24,845	16,815	0	0	0	20,830
65-69	0	0	2,153	11,213	0	0	0	6,683
70-74	0	0	0	16,569	8,767	14,837	0	12,235
75-79	0	0	0	8,775	18,644	11,714	0	13,945
80-84	0	0	0	0	10,553	7,212	8,472	8,132
85+	0	0	0	0	0	9,965	8,220	8,719
ALL	0	0	9,717	12,917	12,639	10,326	8,262	10,808

Total Annual Benefit (in Thousands) by Years Since Death

<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	0	29,151	64,585	88,473	103,260	49,572	335,048

## Duluth Teachers' Retirement Fund

Disability Retirements as of June 30, 2001

<u>Age</u>	<u>Years Disabled</u>							<u>ALL</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>	
<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

<u>Age</u>	<u>Years Disabled</u>							<u>ALL</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>	
<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 (Actual Dollars) by Years Disabled

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

## Duluth Teachers' Retirement Fund

**Determination Of Contribution Sufficiency**  
(dollars in thousands)

JULY 1, 2001

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 353		
1. Employee Contributions	5.50%	\$944
2. Employer Contributions	5.79%	994
3. Total	<u>11.29%</u>	<u>\$1,938</u>
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	6.24%	\$1,072
b. Disability Benefits	0.19%	32
c. Survivors	0.14%	24
d. Deferred Retirement Benefits	0.82%	141
e. Refunds Due to Death or Withdrawal	<u>0.64%</u>	<u>110</u>
f. Total	<u>8.03%</u>	<u>\$1,379</u>

Note: Projected Annual Payroll for Fiscal Year Beginning on JULY 1, 2001 is \$17,169.



**Duluth Teachers' Retirement Fund**  
***Summary of Plan Provisions***

**GENERAL**

<b><i>Eligibility:</i></b>	A licensed teacher who is employed by the Duluth Public Schools, and eligible licensed staff at Lake Superior College, who have elected to retain their membership in the DTRFA. Also includes any employees of the Retirement Fund and certain part-time employees licensed by the State Department of Education. Employees in the Old Plan are those first hired before July 1, 1981.
<b><i>Contributions:</i></b>	
<b><i>Member:</i></b>	5.5% of salary.
<b><i>Employer:</i></b>	5.79% of salary. (In addition, the State will contribute \$486,000 to the DTRFA plans each year on October 1.)
<b><i>Credited Service:</i></b>	Earned while employed in a covered position and employee contributions are deducted. Credit is granted for service less than a legal school year on a pro rata basis.
<b><i>Salary:</i></b>	Annual contract salary.
<b><i>Average Salary:</i></b>	Average of the five highest years of annual salary.

**RETIREMENT**

***Normal Retirement Benefit:***

<b><i>Eligibility:</i></b>	Age 60 and one year of Credited Service.
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*Amount:* The greater of  
1.45% of Average Salary for each year of Credited Service  
or  
the New Plan Benefit.

***Early Retirement Benefit:***

*Eligibility:* Age 55 and five years of Credited Service.  
Rule of 90: Age plus Credited Service totals 90.

*Amount:* The greater of  
1.45% of Average Salary for each year of Credited  
Service with reduction of 0.25% for each month the  
Member is under age 60. No reduction if age plus years  
of Credited Service totals 90.  
or  
the New Plan Benefit.

*Form of Payment:* Life annuity. Actuarially equivalent options are:  
  
5, 10, 15 or 20 year certain and life.  
50% or 100% joint and survivor with bounce back  
feature without additional reduction.  
Other equivalent options approved by the Board.

*Benefit Increases:* Annual Cost-of-Living Adjustment (COLA):  
Increase all benefits by 2% each January 1. An additional  
increase will be allowed when the 5-year average rate of  
return of the fund exceeds the interest rate assumption of  
the plan, currently 8.5%. To be eligible for a COLA, a  
retiree or beneficiary must have received a payment for at  
least 12 months as of the adjustment date.

Members retired under laws in effect before June 30, 1971 receive an additional lump-sum payment each year. In 1989 this lump-sum payment is the greater of \$25 times each full year of Credited Service or the difference between \$400 times each full year of Credited Service and the sum of the benefits paid from any Minnesota public pension plan plus cash payments from the Social Security Administration for the 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, the annual lump sum payment is divided by 12 and paid as a monthly life annuity in the annuity form elected.

## DISABILITY

### *Disability Benefit:*

<i>Eligibility:</i>	Totally and permanently disabled as a teacher before the age of 60 with five years of Credited Service.
<i>Amount:</i>	Normal Retirement Benefit based on Credited Service and Average Salary at disability date without reduction for early commencement. Amount is reduced for Workers' Compensation. Payment stops at age 60 or earlier if disability ceases or death occurs.
<i>Form of Payment:</i>	Same as for retirement.
<i>Benefit Increases:</i>	Same as for retirement.

## DEATH

### *Return of Contributions I:*

<i>Eligibility:</i>	Death while active.
<i>Amount:</i>	Two times regular contributions accumulated with 5% interest if death occurred before May 16, 1989 or 6% interest if death occurred on or after May 16, 1989.

### *Return of Contributions II:*

<i>Eligibility:</i>	Death of Member who terminated employment after 10 years of service.
<i>Amount:</i>	Regular contributions accumulated with 5% interest if death occurred before May 16, 1989 or 6% interest if death occurred on or after May 16, 1989.

### *Return of Contributions III:*

<i>Eligibility:</i>	Death of a retired or disabled Member whose benefits have commenced in the form of a life annuity or the death of a survivor of a retired or disabled Member under a joint and survivor option.
<i>Amount:</i>	Excess of regular contributions accumulated with 5% interest if death occurred before May 16, 1989 or 6% interest if death occurred on or after May 16, 1989 over total benefits paid.

***Surviving Spouse Benefit***

***Optional Annuity I***

<i>Eligibility:</i>	Death of active Member with 10 years of Credited Service.
<i>Amount:</i>	In lieu of Return of Contributions I, an annuity to surviving spouse equivalent to 120% of the value of what would have been refunded.

***Optional Annuity II***

<i>Eligibility:</i>	Death of active Member who is age 50 with 10 years of Credited Service. If the Member dies before age 55, benefits commence when Member would have been age 55.
<i>Amount:</i>	In lieu of Return of Contributions I or Surviving Spouse Optional Annuity I, spouse receives survivor portion of the joint and 100% contingent annuity the Member could have elected if terminated.

**TERMINATION**

***Refund of Employee Contributions:***

<i>Eligibility:</i>	Termination from teaching service.
<i>Amount:</i>	Member's contributions with 5% interest compounded annually if termination occurred before May 16, 1989 and 6% interest if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund if the Member has 10 years of Credited Service.

***Deferred Annuity:***

*Eligibility:* Ten years of Credited Service.

*Amount:* Benefit computed under law in effect at termination and increased by the following annual percentage: 3% until January 1 of the year following attainment of age 55 and 5% thereafter until the annuity begins. Amount is payable as a normal or early retirement.

**Duluth Teachers' Retirement Fund**  
**Active Members as of June 30, 2001**

Age	Years of Service								ALL
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25	37	6	0	0	0	0	0	0	43
25-29	56	84	12	0	0	0	0	0	152
30-34	24	64	40	6	0	0	0	0	134
35-39	17	41	38	30	4	0	0	0	130
40-44	18	46	42	36	32	0	0	0	174
45-49	36	42	45	43	46	1	0	0	213
50-54	14	27	43	46	47	6	0	0	183
55-59	8	16	13	13	12	1	0	0	63
60-64	2	3	5	5	4	1	0	0	20
65+	4	0	1	1	0	0	0	0	6
ALL	216	329	239	180	145	9	0	0	1,118

**Average Annual Earnings**

Age	Years of Service								ALL
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25	3,101	23,391	0	0	0	0	0	0	5,932
25-29	4,859	24,532	30,412	0	0	0	0	0	17,748
30-34	4,616	26,398	34,299	40,217	0	0	0	0	25,474
35-39	3,663	26,983	38,820	44,292	52,577	0	0	0	32,175
40-44	2,303	26,778	35,020	41,381	49,451	0	0	0	33,427
45-49	3,297	27,913	35,627	44,713	51,352	55,554	0	0	33,966
50-54	8,599	32,840	37,879	49,580	51,049	53,389	0	0	41,728
55-59	4,121	19,544	32,452	54,016	51,146	53,841	0	0	33,926
60-64	612	6,753	34,111	41,509	47,779	37,442	0	0	31,407
65+	3,733	0	54,718	40,298	0	0	0	0	18,325
ALL	4,118	26,202	35,825	45,629	50,752	51,908	0	0	30,511

**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	889	8,620	8,562	8,213	7,359	467	0	0	34,111

**Duluth Teachers' Retirement Fund**

**Service Retirements as of June 30, 2001**

<u>Age</u>	<u>Years Retired</u>							<u>ALL</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>	
<50	0	0	1	0	0	0	0	1
50-54	0	0	1	1	0	0	0	2
55-59	24	27	3	0	0	0	0	54
60-64	15	75	34	0	0	0	0	124
65-69	4	34	72	18	1	0	0	129
70-74	1	4	45	68	26	0	0	144
75-79	0	0	6	16	25	0	0	47
80-84	0	0	0	2	14	0	0	16
85+	0	1	0	0	0	0	0	1
ALL	44	141	162	105	66	0	0	518

**Average Annual Benefit**

<u>Age</u>	<u>Years Retired</u>							<u>ALL</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>	
<50	0	0	5,859	0	0	0	0	5,859
50-54	0	0	1,562	2,838	0	0	0	2,200
55-59	28,457	30,423	7,484	0	0	0	0	28,275
60-64	17,140	25,323	16,813	0	0	0	0	22,000
65-69	10,803	13,774	19,647	15,924	8,628	0	0	17,220
70-74	29,758	9,088	16,252	14,234	15,177	0	0	15,000
75-79	0	0	18,132	13,124	16,805	0	0	15,721
80-84	0	0	0	4,578	12,947	0	0	11,901
85+	0	13,683	0	0	0	0	0	13,683
ALL	23,024	22,972	17,631	14,062	15,221	0	0	18,513

**Total Annual Benefit (in Thousands) by Years 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>	<u>ALL</u>
All	1,013	3,239	2,856	1,476	1,004	0	0	9,589



# Duluth Teachers' Retirement Fund

## Survivors as of June 30, 2001

Age	Years Since Death							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	0	0	0	2	0	0	0	2
50-54	1	0	0	0	0	0	0	1
55-59	0	1	0	0	0	0	0	1
60-64	0	1	2	2	0	0	0	5
65-69	0	0	1	4	2	0	0	7
70-74	0	1	0	4	1	0	0	6
75-79	0	0	2	1	3	0	0	6
80-84	0	0	0	0	1	0	0	1
85+	0	0	0	0	0	0	0	0
ALL	1	3	5	13	7	0	0	29

## Average Annual Benefit

Age	Years Since Death							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	0	0	0	10,233	0	0	0	10,233
50-54	2,756	0	0	0	0	0	0	2,756
55-59	0	23,077	0	0	0	0	0	23,077
60-64	0	9,609	25,027	14,127	0	0	0	17,583
65-69	0	0	1,180	19,333	10,292	0	0	14,157
70-74	0	14,895	0	12,045	15,260	0	0	13,056
75-79	0	0	7,231	13,169	15,385	0	0	12,298
80-84	0	0	0	0	17,618	0	0	17,618
85+	0	0	0	0	0	0	0	0
ALL	2,756	15,860	13,139	14,416	14,231	0	0	13,898

## Total Annual Benefit (Actual Dollars) by Years Since Death

Age	<1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	2,756	47,580	65,695	187,408	99,617	0	0	403,042

# Duluth Teachers' Retirement Fund

## Disability Retirements as of June 30, 2001

Age	Years Disabled							ALL
	<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>	
<50	0	0	0	0	0	0	0	0
50-54	0	0	2	0	0	0	0	2
55-59	0	2	0	0	0	0	0	2
60-64	0	1	1	0	0	0	0	2
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	3	3	0	0	0	0	6

## Average Annual Benefit

Age	Years Disabled							ALL
	<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>	
<50	0	0	0	0	0	0	0	0
50-54	0	0	17,338	0	0	0	0	17,338
55-59	0	4,057	0	0	0	0	0	4,057
60-64	0	3,026	27,102	0	0	0	0	15,064
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	3,713	20,593	0	0	0	0	12,153

## Total Annual Benefit (Actual Dollars) 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	0	11,139	61,779	0	0	0	0	72,918

Duluth Teachers' Retirement Fund

**Determination Of Contribution Sufficiency**  
(dollars in thousands)

JULY 1, 2001

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 353		
1. Employee Contributions	5.50%	\$1,988
2. Employer Contributions	5.79%	2,092
3. Total	11.29%	\$4,080
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	7.56%	\$2,732
b. Disability Benefits	0.26%	95
c. Survivors	0.16%	59
d. Deferred Retirement Benefits	0.64%	231
e. Refunds Due to Death or Withdrawal	0.31%	112
f. Total	8.93%	\$3,229

Note: Projected Annual Payroll for Fiscal Year Beginning on JULY 1, 2001 is \$36,138.

Duluth Teachers' Retirement Fund

***Summary of Plan Provisions***

**GENERAL**

<b><i>Eligibility:</i></b>	A licensed teacher who is employed by the Duluth Public Schools, and eligible licensed staff at Lake Superior College, who have elected to retain their membership in DTRFA. Also includes any employees of the Retirement Fund and certain part-time employees licensed by the State Department of Education. Employees in the New Plan are those first hired on or after July 1, 1981 including any Old Plan Members who may elect to join any time prior to retirement.
<b><i>Contributions:</i></b>	
<b><i>Member:</i></b>	5.5% of salary.
<b><i>Employer:</i></b>	5.79% of salary. (In addition, the State will contribute \$486,000 to the DTRFA plans each year on October 1.)
<b><i>Allowable Service:</i></b>	Earned 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.
<b><i>Salary:</i></b>	Total compensation. Excludes any lump-sum annual leave or sick leave payments and lump-sum payment at separation.
<b><i>Average Salary:</i></b>	Average of the five highest successive years of salary. Average Salary is based on all Allowable Service if less than five years.

## **RETIREMENT**

### ***Normal Retirement Benefit:***

<b><i>Eligibility:</i></b>	First hired before July 1, 1989: Age 65 and three years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.
	First hired after June 30, 1989: The greater of age 65 or the age eligible for full Social Security retirement benefits but not higher than age 66 and three years of Allowable Service. Proportionate Retirement Annuity is available at normal retirement age and one year of Allowable Service.
<b><i>Amount:</i></b>	Hired before July 1, 1989: The greater of 1.2% of Average Salary for each of the first 10 years of Allowable Service and 1.7% of Average Salary for each subsequent year. or 1.7% of Average Salary for each year of Allowable Service.
	Hired after June 30, 1989: 1.7% of Average Salary for each year of Allowable Service.

### ***Early Retirement Benefit:***

<b><i>Eligibility:</i></b>	Hired before July 1, 1989: Age 55 and three years of Allowable Service. Any age with 30 years of Allowable Service. Rule of 90: Age plus Allowable Service totals 90.
	Hired after June 30, 1989: Age 55 and three years of Allowable Service.

*Amount:*

Hired before July 1, 1989:

The greater of 1.2% of Average Salary for the first 10 years of Allowable Service and 1.7% of Average Salary for each subsequent year with reduction of 0.25% for each month the Member is under age 65 at time of retirement (age 62 if 30 years of Allowable service). No reduction if age plus years of Allowable Service totals 90.

or

1.7% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3% per year and actuarial reduction for each month the Member is under age 65.

Hired after June 30, 1989:

1.7% of Average Salary for each year of Allowable Service with augmentation to the age eligible for full Social Security retirement benefits at 3% per year and actuarial reduction for each month the Member is under the Social Security retirement age.

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

5, 10, 15 or 20 year certain and life.

50% or 100% joint and survivor with bounce back feature without additional reduction.

A larger life annuity before age 62 and reduced thereafter.

*Benefit Increases:* Annual Cost-of-Living Adjustment (COLA):

Increase all benefits by 2% each January 1. An additional increase will be allowed when the 5-year average rate of return of the fund exceeds the interest rate assumption of the plan, currently 8.5%. To be eligible for a COLA, a retiree or beneficiary must have received a payment for at least 12 months as of the adjustment date.

## DISABILITY

### *Disability Benefit:*

*Eligibility:* Totally and permanently disabled under normal retirement age with three years of Allowable Service. Also, at least two of the years of Allowable Service must have been uninterrupted.

*Amount:* Normal Retirement Benefit based on Allowable Service and Average Salary at disability without reduction commencement before retirement age. Benefit is reduced by Workers' Compensation.

Payments may begin 90 days after disability and stops at normal retirement age, or earlier if disability ceases or death occurs. Benefits paid while partially employed may be reduced.

*Form of Payment:* Same as for retirement.

*Benefit Increases:* Same as for retirement.

### *Retirement After Disability:*

*Eligibility:* Normal retirement age if still totally and permanently disabled.

*Amount:* Optional annuity continues. Otherwise the larger of the disability benefit paid before normal retirement age or the normal retirement benefit available at normal retirement age, or an actuarial equivalent optional annuity.

*Benefit Increase:* Same as for retirement.

## DEATH

### *Surviving Spouse Optional Annuity:*

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

*Benefit Increases:* Same as for retirement.

### *Refund of Member's Contributions:*

<i>Eligibility:</i>	Member or former Member dies before receiving any disability or retirement benefits and survivor benefits are not payable.
<i>Amount:</i>	Member's contributions with 5% interest if death occurred before May 16, 1989 or 6% interest if death occurred on or after May 16, 1989.

## TERMINATION

### *Refund of Member's Contributions:*

<i>Eligibility:</i>	Termination from teaching service.
<i>Amount:</i>	Member's contributions with 5% interest if termination occurred before May 16, 1989 and 6% interest if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund.



***Deferred Annuity:***

***Eligibility:*** Three years of Allowable Service.

***Amount:*** Benefit computed under law in effect at termination and increased by the following annual percentage: 3% until January 1 of the year following attainment of age 55 and 5% thereafter until the annuity begins. Amount is payable as a normal or early retirement.