

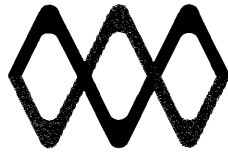
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**Duluth Teachers' Retirement Fund  
*ACTUARIAL VALUATION REPORT***

**July 1, 1995**



## MILLIMAN & ROBERTSON, INC.

Actuaries & Consultants

*Internationally WOODROW MILLIMAN*

Steven R. Baker, M.D.  
T. Scott Bentley, A.S.A.  
Gerald R. Bernstein, F.S.A.  
Stephen D. Brink, F.S.A.  
Brian Z. Brown, F.C.A.S.  
Stephen M. Cigich, F.S.A.  
Timothy D. Courtney, A.S.A.  
Thomas K. Custis, F.S.A.  
Patrick J. Dunks, F.S.A.  
Pamela J. Evans, A.S.A.  
Daniel J. Flaherty, F.C.A.S.  
Eric P. Goetsch, A.S.A.  
Steven G. Hanson, A.S.A.  
Richard H. Hauboldt, F.S.A.  
Peggy L. Hauser, F.S.A.  
Timothy J. Herman, A.S.A.  
Gregory N. Hertle, F.S.A.  
William V. Hogan, F.S.A.  
Gary R. Josephson, F.C.A.S.  
Gail E. Kappeler, A.C.A.S.  
Joan M. Klucarich, A.C.A.S.  
Catherine L. Knuth, A.S.A.  
Rose M. Leben, R.N.  
Frank Kopenski, Jr., A.S.A.  
Kenneth E. Leinbach, F.S.A.  
Mark E. Litow, F.S.A.  
John D. Meerschaert, A.S.A.  
Sandra A. Mertes, F.S.A.  
Nicholas E. Mischler, M.D.  
James C. Modaff, F.S.A.  
Stacey V. Muller, A.S.A.  
David F. Ogden, F.S.A.  
Nicholas J. Ortner, A.S.A.  
Anet L. Perrie, A.S.A.  
William M. Pollock, F.S.A.  
Michael D. Price, A.C.A.S.  
Patricia L. Priebe, R.N.  
Douglas A. Proebsting, A.S.A.  
Robert L. Sanders, F.C.A.S.  
Steven J. Sherman, F.S.A.  
Clark E. Slipper, F.S.A.  
John B. Snyder, F.S.A.  
Lee H. Straate, F.S.A.  
Collin J. Suttie, A.C.A.S.  
Gregory S. Wanner, A.C.A.S.  
Peter G. Wick, F.C.A.S.

Suite 400, 15800 Bluemound Road, Brookfield, Wisconsin 53005-6069  
Telephone: 414/784-2250  
Fax: 414/784-4116

Wendell Milliman, F.S.A. (1976)  
Stuart A. Robertson, F.S.A.  
Chairman Emeritus

November 10, 1995

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, 1995.

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 on July 8, 1992.

Respectfully submitted,

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

  
William V. Hogan, F.S.A., M.A.A.A.  
Consulting Actuary

TKC/WVH/bh

## **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)

	07/01/94 Valuation	07/01/95 Valuation
<b>A. CONTRIBUTIONS (Table 11)</b>		
1. Statutory Contributions - Chapter 353 % of Payroll	10.29%	11.29%
2. Required Contributions - Chapter 356 % of Payroll	10.36%	13.23%
3. Sufficiency (Deficiency): (A.1. - A.2.)	-0.07%	-1.94%
<b>B. FUNDING RATIOS</b>		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	\$133,631	\$142,852
b. Current Benefit Obligations (Table 8)	\$129,036	\$161,524
c. Funding Ratio: (a/b)	103.56%	88.44%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$133,631	\$142,852
b. Actuarial Accrued Liability (Table 9)	\$137,042	\$173,965
c. Funding Ratio: (a/b)	97.51%	82.12%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$178,307	\$196,994
b. Current and Expected Future Benefit Obligations	\$178,914	\$215,192
c. Funding Ratio: (a/b)	99.66%	91.54%
<b>C. PLAN PARTICIPANTS</b>		
1. Active Members		
a. Number (Table 3)	1,484	1,512
b. Projected Annual Earnings	\$45,415	\$48,465
c. Average Annual Earnings (Actual \$)	\$30,603	\$32,054
d. Average Age	43.9	43.9
e. Average Service	10.4	10.5
2. Others		
a. Service Retirements (Table 4)	774	788
b. Survivors (Table 5)	50	46
c. Disability Retirements (Table 6)	8	7
d. Deferred Retirements (Table 7)	124	122
e. Terminated Other Non-vested (Table 7)	559	561
f. Total	1,515	1,524

## **Duluth Teachers' Retirement Fund**

### ***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 88.44%. The corresponding ratio for the prior year was 103.56%.
- ° 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 1995 the ratio is 82.12%, which is a decrease from the 1994 value of 97.51%.
- ° The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 91.54% shows that the current statutory contributions are inadequate.

#### ***Asset Information (Tables 1 and 2)***

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

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F1 to F6. It combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

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

Reference to the Minnesota Post Retirement Investment Fund (MPRIF) is for purposes of consistency. This fund does not participate in the MPRIF and therefore, where the term MPRIF appears, there will be a value of zero.

### ***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 in accordance with Statement No. 5 of the Governmental Accounting Standards Board (GASB). Those requirements are:

- ° 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***

The Current Benefit Obligation amounts in Table 8 are required to be disclosed by Statement No. 5 of the Governmental Accounting Standards Board (GASB). However, Statement No. 5 uses the terms "Actuarial Present Value of Credited Projected Benefits" and "Pension Benefit Obligation" rather than "Current Benefit Obligation".

The JULY 1, 1995 Pension Benefit Obligation reported in Table 8 is reformatted for GASB reporting purposes in the following table:

Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$79,529,000
Current Employees	
Accumulated employee contributions including allocated investment income	\$29,718,000
Employer-financed vested	43,286,000
Employer-financed nonvested	<u>8,991,000</u>
Total Pension Benefit Obligation	\$161,524,000
Net Assets Available for Benefits at Cost	\$135,893,000
Total Benefit Obligation less Assets	\$25,631,000
Funded Ratio	84.13%

### ***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 A6, column 1, of Table 9).

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

The payments will increase 6.50% 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 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 deficiency since the Statutory Contribution Rate is 11.29% compared to the Required Contribution Rate of 13.23%.



### ***Changes in Actuarial Assumptions***

This report does not reflect any change in actuarial assumptions since the last valuation. Based on a recent experience study, a recommended set of revised assumptions has been developed. Adoption of the new assumptions is expected for use in the July 1, 1996 actuarial valuation. Based on earlier studies, it is expected that use of the recommended revised assumptions will result in significantly lower required contributions.

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

Benefit accrual rates were increased by .13%, member contribution rates were increased by 1% of payroll and the lump sum post-retirement payment was replaced with an annual cost of living adjustment. The combined change in benefits would have resulted in a change in the amortization date except for legislation which required the date to remain at July 1, 2020.

TABLE 1

## Duluth Teachers' Retirement Fund

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

JULY 1, 1995

	<u>Market Value</u>	<u>Cost Value</u>
<b>A. ASSETS</b>		
1. Cash, Equivalents, Short-term Securities	\$6,293	\$6,293
2. Investments		
a. Fixed Income	60,819	57,060
b. Equity	85,640	68,523
c. Real Estate	1,978	1,978
3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)	0	0
4. Other	<u>2,276</u>	<u>2,276</u>
<b>B. TOTAL ASSETS</b>	<u><u>\$157,006</u></u>	<u><u>\$136,130</u></u>
<b>C. AMOUNTS CURRENTLY PAYABLE</b>	\$237	\$237
<b>D. ASSETS AVAILABLE FOR BENEFITS</b>		
1. Member Reserves	\$19,592	\$19,592
2. Employer Reserves	137,177	116,301
3. MPRIF Reserves	0	0
4. Non-MPRIF Reserves	<u>0</u>	<u>0</u>
5. Total Assets Available for Benefits	<u>\$156,769</u>	<u>\$135,893</u>
<b>E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS</b>	<u><u>\$157,006</u></u>	<u><u>\$136,130</u></u>
<hr/>		
<b>F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS</b>		
1. Cost Value of Assets Available for Benefits (D5)		\$135,893
2. Market Value (D5)	\$156,769	
3. Cost Value (D5)	<u>135,893</u>	
4. Market Over Cost: (F2-F3)	<u>\$20,876</u>	
5. 1/3 of Market Over Cost: (F4)/3		6,959
6. Actuarial Value of Assets (F1+F5) (Same as "Current Assets")		<u><u>\$142,852</u></u>

TABLE 2

## Duluth Teachers' Retirement Fund

**Change In Assets Available For Benefits**  
*(dollars in thousands)*

YEAR ENDING JUNE 30, 1995

	<u>Market Value</u>	<u>Cost Value</u>
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$134,902	\$132,996
B. OPERATING REVENUES		
1. Member Contributions	\$2,144	\$2,144
2. Employer Contributions	2,694	2,694
3. Investment Income	4,840	4,840
4. MPRIF Income	0	0
5. Net Realized Gain (Loss)	2,021	2,021
6. Other	15	15
7. Net Change in Unrealized Gain (Loss)	18,970	0
8. Total Revenue	<u>\$30,684</u>	<u>\$11,714</u>
C. OPERATING EXPENSES		
1. Service Retirements	\$7,282	\$7,282
2. Disability Benefits	82	82
3. Survivor Benefits	373	373
4. Refunds	131	131
5. Investment Fees	612	612
6. Administrative Expenses	337	337
7. Other	0	0
8. Total Disbursements	<u>\$8,817</u>	<u>\$8,817</u>
D. OTHER CHANGES IN RESERVES	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	<u><u>\$156,769</u></u>	<u><u>\$135,893</u></u>

TABLE 3

## Duluth Teachers' Retirement Fund

ACTIVE MEMBERS AS OF JUNE 30, 1995

AGE	YEARS OF SERVICE								ALL
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25	35	6							41
25-29	62	49	4						115
30-34	26	46	42	6					120
35-39	30	49	69	21	1				170
40-44	46	53	73	56	46	18			292
45-49	36	48	61	42	46	71	19		323
50-54	13	19	24	20	36	49	81	15	257
55-59	7	9	9	10	20	23	35	23	136
60-64	8	2	4	6	9	8	4	3	44
65+	7	1	2	1	1		1	1	14
ALL	270	282	288	162	159	169	140	42	1,512

## AVERAGE ANNUAL EARNINGS

AGE	YEARS OF SERVICE								ALL
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25	2,776	21,147							5,464
25-29	4,166	19,416	25,136						11,393
30-34	4,505	20,324	26,857	37,884					20,061
35-39	5,480	22,814	30,921	39,968	44,845				25,294
40-44	4,058	23,347	33,617	40,656	42,883	42,024			30,424
45-49	3,493	20,337	35,002	40,658	41,176	46,109	45,831		34,004
50-54	2,314	20,419	35,750	39,073	42,198	43,203	46,227	46,693	39,449
55-59	2,067	23,230	33,990	40,380	42,576	45,608	45,644	46,224	40,400
60-64	5,259	5,987	30,191	39,682	47,158	43,797	46,146	45,865	34,315
65+	2,391	3,525	41,695	661	44,264		45,610	44,882	17,076
ALL	3,899	21,125	32,359	39,969	42,458	44,654	46,021	46,334	30,086

## 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	1,052	5,957	9,319	6,474	6,750	7,546	6,442	1,946	45,490

TABLE 4

## Duluth Teachers' Retirement Fund

## SERVICE RETIREMENTS AS OF JUNE 30, 1995

AGE	YEARS RETIRED							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								
50-54		1						1
55-59	13	49						62
60-64	17	112	41		1		1	172
65-69	5	55	99	36	1			196
70-74		3	33	72	12			120
75-79			2	42	35	3		82
80-84				2	47	22		71
85+						47	37	84
ALL	35	220	175	152	96	72	38	788

## AVERAGE ANNUAL BENEFIT

AGE	YEARS RETIRED							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								
50-54		9,255						9,255
55-59	17,072	15,139						15,544
60-64	11,497	16,272	8,853		4,664		18,225	13,975
65-69	8,058	10,564	8,858	6,990	3,890			8,948
70-74		13,266	8,023	7,526	4,504			7,504
75-79			3,122	6,552	5,316	3,991		5,847
80-84				8,010	5,759	6,094		5,926
85+						7,342	7,401	7,368
ALL	13,076	14,520	8,634	7,136	5,410	6,821	7,686	9,581

TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY 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
ALL	457	3,194	1,510	1,084	519	491	292	7,549

TABLE 5

## Duluth Teachers' Retirement Fund

SURVIVORS AS OF JUNE 30, 1995

AGE	YEARS SINCE DEATH							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	1		1					2
50-54		1	1					2
55-59		3						3
60-64		2	2	2				6
65-69			2	2				4
70-74		1	1	6				8
75-79				3	3	2	3	11
80-84					1	3		4
85+					1	3	2	6
ALL	1	7	7	13	5	8	5	46

## AVERAGE ANNUAL BENEFIT

AGE	YEARS SINCE DEATH							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	9,386		2,861					6,124
50-54		11,985	11,078					11,532
55-59		17,166						17,166
60-64		7,917	10,839	6,485				8,414
65-69			4,745	6,549				5,647
70-74		1,108	14,667	8,311				8,205
75-79				7,869	5,120	3,732	5,200	5,639
80-84					7,167	5,718		6,080
85+					2,743	6,415	6,055	5,683
ALL	9,386	11,489	8,539	7,657	5,054	5,483	5,542	7,521

TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) 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	9,386	80,423	59,773	99,541	25,270	43,864	27,710	345,966

TABLE 6

## Duluth Teachers' Retirement Fund

## DISABILITY RETIREMENTS AS OF JUNE 30, 1995

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		1	1					2
50-54		1	1					2
55-59								
60-64		1	1					2
65-69		1						1
70-74								
75-79								
80-84								
85+								
ALL		4	3					7

## 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		15,058	1,854					8,456
50-54		10,309	7,789					9,049
55-59								
60-64		14,155	19,863					17,009
65-69		14,445						14,445
70-74								
75-79								
80-84								
85+								
ALL		13,492	9,835					11,925

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>	ALL
ALL		53,968	29,505					83,475

TABLE 7

## Duluth Teachers' Retirement Fund

*Reconciliation Of Members*

	Actives	Terminated	
		Deferred Retirement	Other Non-Vested
A. ON JUNE 30, 1994	1,484	124	559
B. ADDITIONS	206	145	1
C. DELETIONS			
1. Service Retirement	(22)	(4)	0
2. Disability	0	0	0
3. Death	(1)	(1)	0
4. Terminated - Deferred	(142)	0	0
5. Terminated - Refund	(21)	(112)	0
6. Terminated - Other Non-Vested	0	0	0
7. Returned as Active	0	(21)	0
8. Transferred to Other Fund	0	0	0
D. DATA ADJUSTMENTS	8	(9)	1
Vested	1,015		
Non-Vested	497		
E. TOTAL ON JUNE 30, 1995	1,512	122	561

	Retirement Annuitants	Recipients	
		Disabled	Survivors
A. ON JUNE 30, 1994	774	8	50
B. ADDITIONS	27	0	5
C. DELETIONS			
1. Service Retirement	0	(1)	0
2. Death	(25)	0	(7)
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	12	0	(2)
E. TOTAL ON JUNE 30, 1995	788	7	46



TABLE 8

## Duluth Teachers' Retirement Fund

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

JULY 1, 1995

A. CURRENT ASSETS (TABLE 1, F6)				\$142,852
B. EXPECTED FUTURE ASSETS				
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)				\$12,915
2. Present Value of Future Normal Costs				41,227
3. Total Expected Future Assets				<u>\$54,142</u>
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				<u>\$196,994</u>
D. CURRENT BENEFIT OBLIGATIONS	<u>Non-Vested</u>	<u>Vested</u>		<u>Total</u>
1. Benefit Recipients				
a. Retirement Annuities		\$73,039		\$73,039
b. Disability Benefits		1,046		1,046
c. Surviving Spouse and Child Benefits		3,354		3,354
2. Deferred Retirements with Future Augmentation		1,857		1,857
3. Former Members without Vested Rights		233		233
4. Active Members				
a. Retirement Annuities	350	69,136		69,486
b. Disability Benefits	6,927	0		6,927
c. Survivor's Benefits	1,666	0		1,666
d. Deferred Retirements	48	3,361		3,409
e. Refund Liability Due to Death or Withdrawal	0	507		507
5. Total Current Benefit Obligations	<u>\$8,991</u>	<u>\$152,533</u>		<u>\$161,524</u>
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				<u>\$53,668</u>
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				<u>\$215,192</u>
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)				\$18,672
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)				\$18,198

TABLE 9

## Duluth Teachers' Retirement Fund

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

JULY 1, 1995

	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	\$115,182	\$30,441	\$84,741
b. Disability Benefits	11,635	4,452	7,183
c. Survivor's Benefit	2,782	1,129	1,653
d. Deferred Retirements	5,016	4,077	939
e. Refunds Due to Death or Withdrawal	1,048	1,128	(80)
f. Total	<u>\$135,663</u>	<u>\$41,227</u>	<u>\$94,436</u>
2. Deferred Retirements With Future Augmentation	1,857		1,857
3. Former Members Without Vested Rights	233		233
4. Annuitants in MPRIF	0		0
5. Recipients Not in MPRIF	<u>77,439</u>		<u>77,439</u>
6. Total	<u>\$215,192</u>	<u>\$41,227</u>	<u>\$173,965</u>
<b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b>			
1. AAL (A6)			\$173,965
2. Current Assets (Table 1, F6)			<u>142,852</u>
3. UAAL (B1-B2)			<u>\$31,113</u>
<b>C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE</b>			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2020			\$935,884
2. Supplemental Contribution Rate (B3/C1)			3.32%

TABLE 10

## Duluth Teachers' Retirement Fund

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

YEAR ENDING JUNE 30, 1995

A. UAAL AT BEGINNING OF YEAR	\$3,410
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$4,532
2. Contribution	(4,838)
3. Interest on A, B1 and B2	277
	<hr/>
4. Total (B1+B2+B3)	(\$29)
C. EXPECTED UAAL AT END OF YEAR (A+B4)	\$3,381
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Salary Increases	(\$1,353)
2. Investment Return	(1,355)
3. MPRIF Mortality	0
4. Mortality of Other Benefit Recipients	1,949
5. Other Items	55
	<hr/>
6. Total	(\$704)
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTION (C+D6)	\$2,677
F. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO PLAN AMENDMENTS	28,436
G. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	0
	<hr/>
H. UAAL AT END OF YEAR (E+F+G)	<u><u>\$31,113</u></u>

## Duluth Teachers' Retirement Fund

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

JULY 1, 1995

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 353		
1. Employee Contributions	5.50%	\$2,666
2. Employer Contributions	5.79%	2,806
3. Total	11.29%	\$5,472
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	6.83%	\$3,311
b. Disability benefits	0.95%	460
c. Survivors	0.24%	118
d. Deferred Retirement Benefits	0.91%	439
e. Refunds Due to Death or Withdrawal	0.24%	118
f. Total	9.17%	\$4,446
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL	3.32%	1,609
3. Allowance for Expenses	0.74%	359
4. Total	13.23%	\$6,414
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	-1.94%	(\$942)

Note: Projected Annual Payroll for Fiscal Year Beginning on JULY 1, 1995 is \$48,465.

## Duluth Teachers' Retirement Fund

**Summary of Actuarial Assumptions and Methods**

<b>Interest:</b>	<b>Pre-Retirement:</b> 8.5% per annum <b>Post-Retirement:</b> 8.5% per annum
<b>Salary Increases:</b>	Reported salary increased 6.5% to current fiscal year and 6.5% annually for each future year.
<b>Mortality:</b>	<b>Pre-Retirement:</b> Male - 1971 Group Annuity Mortality Table male rates set back 8 years Female - 1971 Group Annuity Mortality Table male rates set back 8 years  <b>Post-Retirement:</b> Male - Same as above Female - Same as above  <b>Post-Disability:</b> Male - Same as above Female - Same as above
<b>Retirement Age:</b>	Age 61 for the Old Plan and age 63 for the New Plan. In addition, 30% of the Members are assumed to retire each year that they are eligible for Rule of 90.
<b>Separation:</b>	Graded rates shown in rate table.
<b>Disability:</b>	Rates as shown in rate table.
<b>Expenses:</b>	Prior year administrative expenses expressed as percentage of prior year payroll.
<b>Return of Contributions:</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>Family Composition:</b>	80% of Members are assumed to be married. Female is three years younger than male.
<b>Social Security:</b>	N/A

**TABLE 12**  
(Continued)

***Benefit Increases  
After Retirement:***

N/A

***Special Consideration:***

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.

Married Members assumed to elect subsidized joint and survivor form of annuity as follows:

**Males -**        40% elect 50% J&S option  
                     40% elect 100% J&S option

**Females -**      10% elect 50% J&S option  
                     10% elect 100% J&S option

***Actuarial Cost Method:***

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.

***Asset Valuation Method:***

Cost Value plus one-third Unrealized Gains or Losses.

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

A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.5% per annum.

**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>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20	4	4	2,000	2,000	28	28	0	0
21	4	4	1,931	1,931	28	28	0	0
22	4	4	1,731	1,731	28	28	0	0
23	4	4	1,532	1,532	28	28	0	0
24	4	4	1,332	1,332	28	28	0	0
25	5	5	1,132	1,132	28	28	0	0
26	5	5	932	932	28	28	0	0
27	5	5	732	732	28	28	0	0
28	5	5	703	703	28	28	0	0
29	5	5	673	673	28	28	0	0
30	5	5	643	643	28	28	0	0
31	6	6	612	612	28	28	0	0
32	6	6	582	582	28	28	0	0
33	6	6	552	552	28	28	0	0
34	7	7	522	522	28	28	0	0
35	7	7	491	491	29	29	0	0
36	7	7	461	461	29	29	0	0
37	8	8	430	430	30	30	0	0
38	8	8	409	409	31	31	0	0
39	9	9	389	389	31	31	0	0
40	9	9	368	368	32	32	0	0
41	10	10	347	347	33	33	0	0
42	10	10	325	325	35	35	0	0
43	11	11	304	304	37	37	0	0
44	12	12	282	282	38	38	0	0
45	13	13	260	260	41	41	0	0
46	14	14	237	237	43	43	0	0
47	15	15	214	214	46	46	0	0
48	16	16	191	191	49	49	0	0
49	18	18	167	167	53	53	0	0

**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>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
50	20	20	143	143	57	57	0	0
51	23	23	118	118	62	62	0	0
52	26	26	92	92	68	68	0	0
53	29	29	67	67	74	74	0	0
54	33	33	40	40	80	80	0	0
55	38	38	13	13	87	87	0	0
56	42	42	0	0	95	95	0	0
57	47	47	0	0	104	104	0	0
58	53	53	0	0	114	114	0	0
59	59	59	0	0	125	125	0	0
60	65	65	0	0	136	136	0	0
61	71	71	0	0	149	149	0	0
62	78	78	0	0	163	163	0	0
63	85	85	0	0	0	0	10,000	10,000
64	93	93	0	0	0	0	0	0
65	100	100	0	0	0	0	0	0
66	109	109	0	0	0	0	0	0
67	119	119	0	0	0	0	0	0
68	131	131	0	0	0	0	0	0
69	144	144	0	0	0	0	0	0
70	159	159	0	0	0	0	0	0



**TABLE 3A**  
**OLD**

**Duluth Teachers' Retirement Fund**

ACTIVE MEMBERS AS OF JUNE 30, 1995

AGE	YEARS OF SERVICE								
	<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									
25-29									
30-34									
35-39			1	3	1				5
40-44			1	12	46	18			77
45-49			1	8	46	71	19		145
50-54				4	36	49	81	15	185
55-59				4	20	23	35	23	105
60-64			1	1	9	8	4	3	26
65+			1		1		1	1	4
ALL			5	32	159	169	140	42	547

AVERAGE ANNUAL EARNINGS

AGE	YEARS OF SERVICE								
	<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									
25-29									
30-34									
35-39			27,369	44,608	44,845				41,208
40-44			37,187	37,691	42,883	42,024			41,799
45-49			15,138	42,435	41,176	46,109	45,831		44,091
50-54				31,951	42,198	43,203	46,227	46,693	44,371
55-59				41,692	42,576	45,608	45,644	46,224	45,028
60-64			2,600	41,115	47,158	43,797	46,146	45,865	43,873
65+			49,190		44,264		45,610	44,882	45,987
ALL			26,297	39,415	42,458	44,654	46,021	46,334	44,020

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			131	1,261	6,750	7,546	6,442	1,946	24,078

**TABLE 4A  
OLD**

**Duluth Teachers' Retirement Fund**

SERVICE RETIREMENTS AS OF JUNE 30, 1995

<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								
50-54								
55-59	8	25						33
60-64	9	34	22		1			66
65-69		3	39	18	1			61
70-74			12	51	12			75
75-79			1	35	35	3		74
80-84				2	47	22		71
85+						47	37	84
ALL	17	62	74	106	96	72	37	464

**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								
50-54								
55-59	13,366	17,666						16,624
60-64	9,178	13,510	7,889		4,664			10,912
65-69		8,922	7,525	4,015	3,890			6,498
70-74			7,851	6,113	4,504			6,134
75-79			765	6,275	5,316	3,991		5,654
80-84				8,010	5,759	6,094		5,926
85+						7,342	7,401	7,368
ALL	11,149	14,964	7,595	5,846	5,410	6,821	7,401	7,723

<u>TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS RETIRED</u>								
<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	189	927	562	619	519	491	273	3,583

**TABLE 5A  
OLD**

**Duluth Teachers' Retirement Fund**

**SURVIVORS AS OF JUNE 30, 1995**

<u>AGE</u>	<u>YEARS SINCE DEATH</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	1		1					2
50-54		1	1					2
55-59		1						1
60-64				1				1
65-69			1	2				3
70-74				4				4
75-79				2	3	2	3	10
80-84					1	3		4
85+					1	3	2	6
ALL	1	2	3	9	5	8	5	33

**AVERAGE ANNUAL BENEFIT**

<u>AGE</u>	<u>YEARS SINCE DEATH</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	9,386		2,861					6,124
50-54		11,985	11,078					11,532
55-59		16,386						16,386
60-64				7,283				7,283
65-69			3,466	6,549				5,521
70-74				8,551				8,551
75-79				6,010	5,120	3,732	5,200	5,044
80-84					7,167	5,718		6,080
85+					2,743	6,415	6,055	5,683
ALL	9,386	14,186	5,802	7,401	5,054	5,483	5,542	6,624

<u>TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH</u>								
<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	9,386	28,372	17,406	66,609	25,270	43,864	27,710	218,592

**TABLE 6A  
OLD**

**Duluth Teachers' Retirement Fund**

**DISABILITY RETIREMENTS AS OF JUNE 30, 1995**

<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								
50-54			1					1
55-59								
60-64								
65-69								
70-74								
75-79								
80-84								
85+								
ALL			1					1

**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								
50-54			7,789					7,789
55-59								
60-64								
65-69								
70-74								
75-79								
80-84								
85+								
ALL			7,789					7,789

<u>TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS DISABLED</u>								
<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			7,789					7,789

**TABLE 11A  
OLD**

**Duluth Teachers' Retirement Fund**

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

JULY 1, 1995

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 353		
1. Employee Contributions	5.50%	\$1,411
2. Employer Contributions	5.79%	1,485
3. Total	11.29%	\$2,896
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	6.35%	\$1,628
b. Disability benefits	0.78%	201
c. Survivors	0.21%	55
d. Deferred Retirement Benefits	1.13%	290
e. Refunds Due to Death or Withdrawal	0.21%	54
f. Total	8.68%	\$2,228

Note: Projected Annual Payroll for Fiscal Year Beginning on JULY 1, 1995 is \$25,650.

**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.
<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.
<b><i>Amount:</i></b>	The greater of 1.38% of Average Salary for each year of Credited Service or 1.13% of Average Salary for each of the first 10 years of Allowable Service and 1.63% 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 service totals 90.

or

1.63% of Average Salary for each year of Credited Service assuming augmentation to age 65 at 3% per year and actuarial reduction for each month Member is under age 65.

Minimum benefit for employees who were Members on June 30, 1971 is equal to the actuarial equivalent of 2.4 times the accumulated regular contributions.

***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  
1.38% 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  
1.13% of Average Salary for each of the first 10 years of Allowable Service and 1.63% 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  
1.63% of Average Salary for each year of Credited Service assuming augmentation to age 65 at 3% per year and actuarial reduction for each month the Member is under age 65.

*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:* Lump Sum Post-Retirement Payment:  
Prior to November 1, 1995, the Board of Trustees may declare a bonus of up to 1% of the asset value of the

fund at the end of the previous fiscal year. This bonus is allocated to those eligible on a prorated basis according to the combined number of years of service and years receiving a benefit. A retired Member is eligible if receiving an annuity for at least one year. Members have the option of receiving the increase in the form of a lump sum or may annuitize the increase at 7.5%. The last payment of this kind will be made on October 31, 1995.

Annual Cost-of-Living Adjustment (COLA):

Effective November 1, 1995, the Board will 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.

## **DISABILITY**

*Disability Benefit:*

*Eligibility:* Totally and permanently disabled as a teacher before the age of 60 with five years of Credited Service.

*Amount:* 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.

*Form of Payment:* Same as for retirement.

*Benefit Increases:* Same as for retirement.

## **DEATH**

### ***Return of Contributions I:***

*Eligibility:* Death while active.

*Amount:* 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:***

*Eligibility:* Death of Member who terminated employment after 10 years of service.

*Amount:* 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:***

*Eligibility:* 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.

*Amount:* 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:***

<i>Eligibility:</i>	Ten years of Credited Service.
<i>Amount:</i>	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.

## **SUMMARY OF SIGNIFICANT CHANGES**

Benefit formulas increased by 0.13% effective May 15, 1995. Lump sum post-retirement payment replaced with annual cost-of-living adjustment. Employee contribution rate increased from 4.5% to 5.5% effective July 1, 1995.

**TABLE 3B**  
**NEW**

**Duluth Teachers' Retirement Fund**

ACTIVE MEMBERS AS OF JUNE 30, 1995

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	35	6							41
25-29	62	49	4						115
30-34	26	46	42	6					120
35-39	30	49	68	18					165
40-44	46	53	72	44					215
45-49	36	48	60	34					178
50-54	13	19	24	16					72
55-59	7	9	9	6					31
60-64	8	2	3	5					18
65+	7	1	1	1					10
ALL	270	282	283	130					965

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	2,776	21,147							5,464
25-29	4,166	19,416	25,136						11,393
30-34	4,505	20,324	26,857	37,884					20,061
35-39	5,480	22,814	30,974	39,196					24,812
40-44	4,058	23,347	33,569	41,471					26,352
45-49	3,493	20,337	35,334	40,240					25,787
50-54	2,314	20,419	35,750	40,855					26,802
55-59	2,067	23,230	33,990	39,507					24,726
60-64	5,259	5,987	39,388	39,396					20,511
65+	2,391	3,525	34,201	661					5,512
ALL	3,899	21,125	32,467	40,108					22,188

AGE	PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY 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>	
ALL	1,052	5,957	9,188	5,214					21,411

**TABLE 4B**  
**NEW**

**Duluth Teachers' Retirement Fund**

SERVICE RETIREMENTS AS OF JUNE 30, 1995

<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								
50-54		1						1
55-59	5	24						29
60-64	8	78	19				1	106
65-69	5	52	60	18				135
70-74		3	21	21				45
75-79			1	7				8
80-84								
85+								
ALL	18	158	101	46			1	324

**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								
50-54		9,255						9,255
55-59	23,008	12,516						14,325
60-64	14,109	17,487	9,983				18,225	15,894
65-69	8,058	10,662	9,746	9,974				10,067
70-74		13,266	8,128	10,974				9,799
75-79			5,479	7,943				7,635
80-84								
85+								
ALL	14,900	14,354	9,412	10,122			18,225	12,255

<u>TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS RETIRED</u>								
<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	268	2,267	950	465			18	3,970

**TABLE 5B**  
**NEW**

**Duluth Teachers' Retirement Fund**

SURVIVORS AS OF JUNE 30, 1995

<u>AGE</u>	<u>YEARS SINCE DEATH</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								
50-54								
55-59		2						2
60-64		2	2	1				5
65-69			1					1
70-74		1	1	2				4
75-79				1				1
80-84								
85+								
ALL		5	4	4				13

**AVERAGE ANNUAL BENEFIT**

<u>AGE</u>	<u>YEARS SINCE DEATH</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								
50-54								
55-59		17,556						17,556
60-64		7,917	10,839	5,687				8,640
65-69			6,025					6,025
70-74		1,108	14,667	7,834				7,861
75-79				11,587				11,587
80-84								
85+								
ALL		10,411	10,593	8,236				9,798

<u>TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH</u>								
<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		52,055	42,372	32,944				127,374

**TABLE 6B**  
**NEW**

**Duluth Teachers' Retirement Fund**

**DISABILITY RETIREMENTS AS OF JUNE 30, 1995**

<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		1	1					2
50-54		1						1
55-59								
60-64		1	1					2
65-69		1						1
70-74								
75-79								
80-84								
85+								
ALL		4	2					6

**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		15,058	1,854					8,456
50-54		10,309						10,309
55-59								
60-64		14,155	19,863					17,009
65-69		14,445						14,445
70-74								
75-79								
80-84								
85+								
ALL		13,492	10,859					12,614

<u>TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS DISABLED</u>								
<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		53,968	21,718					75,684

**Duluth Teachers' Retirement Fund**

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

JULY 1, 1995

	Percent of Payroll	Dollar Amount
<b>A. STATUTORY CONTRIBUTIONS - CHAPTER 353</b>		
1. Employee Contributions	5.50%	\$1,255
2. Employer Contributions	5.79%	1,321
3. Total	11.29%	\$2,576
<b>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</b>		
1. Normal Cost		
a. Retirement Benefits	7.38%	\$1,683
b. Disability benefits	1.14%	259
c. Survivors	0.28%	63
d. Deferred Retirement Benefits	0.65%	149
e. Refunds Due to Death or Withdrawal	0.28%	65
f. Total	9.73%	\$2,219

Note: Projected Annual Payroll for Fiscal Year Beginning on JULY 1, 1995 is \$22,815.



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.
<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:*

<i>Eligibility:</i>	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 and three years of Allowable Service. Proportionate Retirement Annuity is available at normal retirement age and one year of Allowable Service.
<i>Amount:</i>	Hired before July 1, 1989: The greater of 1.13% of average salary for each of the first 10 years of Allowable Service and 1.63% of average salary for each subsequent year. or 1.63% of average salary for each year of Allowable Service.
	Hired after June 30, 1989: 1.63% of Average Salary for each year of Allowable Service.

### *Early Retirement Benefit:*

<i>Eligibility:</i>	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.
<i>Amount:</i>	Hired before July 1, 1989: The greater of 1.13% of Average Salary for the first 10 years of Allowable Service and 1.63% 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

1.63% 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:

1.63% 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:* Lump Sum Post-Retirement Payment:

Prior to November 1, 1995, the Board of Trustees may declare a bonus of up to 1% of the asset value of the fund at the end of the previous fiscal year. This bonus is allocated to those eligible on a prorated basis according to the combined number of years of service and years receiving a benefit. A retired Member is eligible if receiving an annuity for at least one year. Members have the option of receiving the increase in the form of a lump sum or may annuitize the increase at 7.5%. The last payment of this kind will be made on October 31, 1995.

Annual Cost-of-Living Adjustment (COLA):

Effective November 1, 1995, the Board will 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 \$25 times each full year of Credited Service. In each following year, the lump-sum payment will increase by the same percentage increase that is applied to regular annuities.

## **DISABILITY**

### ***Disability Benefit:***

<i>Eligibility:</i>	Totally and permanently disabled under normal retirement age and is age 50 or older with three years of Allowable Service. Also, at least two of the years of Allowable Service must have been uninterrupted.
<i>Amount:</i>	<p>Normal Retirement Benefit based on Allowable Service and Average Salary at disability without reduction commencement before retirement age. Benefit is reduced by Workers' Compensation.</p> <p>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.</p>
<i>Form of Payment:</i>	Same as for retirement.
<i>Benefit Increases:</i>	Same as for retirement.

### ***Retirement After Disability:***

<i>Eligibility:</i>	Normal retirement age if still totally and permanently disabled.
<i>Amount:</i>	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.
<i>Benefit Increase:</i>	Same as for retirement.

## DEATH

### *Surviving Spouse Optional Annuity:*

*Eligibility:* Member who dies before retirement benefits commence with three years of Allowable Service.

*Amount:* 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:*

*Eligibility:* Member or former Member dies before receiving any disability or retirement benefits and survivor benefits are not payable.

*Amount:* 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:*

*Eligibility:* Termination from teaching service.

*Amount:* 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.

**SUMMARY OF SIGNIFICANT CHANGES**

Benefit formulas increased by 0.13% effective May 15, 1995. Lump sum post-retirement payment replaced with annual cost-of-living adjustment. Employee contribution rate increased from 4.5% to 5.5% effective July 1, 1995.