Duluth Teachers' Retirement Fund Association

Actuarial Valuation and Review as of July 1, 2009

Copyright © 2009

THE SEGAL GROUP, INC.,
THE PARENT OF THE SEGAL COMPANY
ALL RIGHTS RESERVED



The Segal Company
101 North Wacker Drive, Suite 500 Chicago, IL 60606-1724
T 312.984.8500 F 312.984.8590 www.segalco.com

November 18, 2009

Mr. J. Michael Stoffel
Executive Director
Duluth Teachers' Retirement Fund Association
625 East Central Entrance
Duluth, Minnesota 55811

Dear Mr. Stoffel:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2009. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2010 and analyzes the preceding year's experience.

The census information on which our calculations were based was prepared by the Fund and the financial information was provided by the Fund. That assistance is gratefully acknowledged. The actuarial calculations were completed under our supervision.

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions used in the valuation are consistent with those in the statute, and reasonably represent the experience of the plan.

Sincerely,

THE SEGAL COMPANY

*B*y:

Thomas D. Levy, FSA, FCIA, MAAA, EA Senior Vice President and Chief Actuary Matthew A. Strom, FSA, MAAA, EA

Consulting Actuary

SECTION 1

١	1	Α	L	U	Α	Τ	IO	N	S	Uľ	MN	Л	Α	R	Υ

Purposei
Summary of Key Valuation
Results iv

SECTION 2

VALUATION RESULTS

A.	Member Data	1
В.	Financial Information	4
C.	Actuarial Experience	5
	Information Required by the	6

SECTION 3

SUPPLEMENTAL INFORMATION

EXHIBIT A
Table of Plan Coverage7
EXHIBIT B
Members in Active Service as of
June 30, 20098
EXHIBIT C
Retired Participants as of
June 30, 2009
EXHIBIT D Disabled Members as of
June 30, 200916
EXHIBIT E
Beneficiaries as of June 30, 2009 20
EXHIBIT F
Reconciliation of Member Data24
EXHIBIT G
Schedule of Pensioners and
Beneficiaries Added to and
Removed from Rolls25
EXHIBIT H
Statement of Change in
Net Plan Assets for Year Ended
June 30, 200926 EXHIBIT I
Statement of Plan Net Assets for
Year Ended June 30, 200927
EXHIBIT J
Actuarial Value of Assets
Calculation History through
June 30, 200928
EXHIBIT K
Development of
Unfunded/(Overfunded) Actuarial
Accrued Liability for Year Ended
June 30, 200929
EXHIBIT L
Definitions of Pension Terms 30

SECTION 4

REPORTING INFORMATION

Purpose

This report has been prepared by The Segal Company to present a valuation of the Duluth Teachers' Retirement Fund Association (DTRFA) as of July 1, 2009. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- > Section 356.215 of the Minnesota Statutes, as amended in 2008;
- > The benefit provisions of the Retirement Fund, as administered by the Legislative Commission on Pensions and Retirement;
- > The data as provided and confirmed by the DTRFA staff;
- > The characteristics of covered active members, inactive vested members, pensioners and beneficiaries as of July 1, 2009, provided by the Fund;
- > The audited assets of the Fund as of June 30, 2009, provided by the Fund;
- > Economic assumptions regarding future salary increases and investment earnings; and
- > Other actuarial assumptions regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

- > The actuarial accrued liability funded ratio based on the actuarial value of assets over the actuarial accrued liability as of July 1, 2009 is 76.55%, compared to 82.10% as of July 1, 2008. This ratio is a measure of funding status, and its history is a measure of funding progress, and is the ratio required to be reported under GASB 25.
- > The statutory contribution rate under Chapter 354A is equal to 11.92% of payroll (which includes a direct State aid payment of \$346,000 per year under Subdivision 3a), compared to the required contribution rate under Chapter 356 of 17.82% of payroll. Therefore, the contribution deficiency is 5.90% of payroll as of July 1, 2009. Last year's contribution rate deficiency was 4.00% of payroll. Each year there is a contribution deficiency leads to an increased deficiency in all future years. A direct State aid payment of \$346,000 is made each year on October 1st, with the first payment made in 2008.
- > For the year ended June 30, 2009, assets returned -28.30% on a market value basis. However, due to the gradual recognition of asset gains and losses under the actuarial smoothing method, the actuarial rate of return was -0.53%, compared to the assumed rate of 8.50%. As of July 1, 2009, the actuarial value of assets (\$279.3 million) represented 155% of the market value (\$179.9 million).
- > The portion of deferred asset gains and losses recognized during the calculation of the July 1, 2009 actuarial value of assets resulted in a loss of \$23,892,446.
- > As indicated on page 4 of this report, the total investment loss not yet recognized as of June 30, 2009 is \$99,322,359. These unrecognized losses will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent they are not offset by recognition of gains derived from future experience. This means that earning the assumed rate of investment return of 8.50% per year (net of investment expenses) on a market value basis will result in investment losses on the actuarial value of assets in the next few years. Therefore, if the actual market return is equal to the assumed 8.50% rate and all other actuarial assumptions are met, the contribution requirements would increase in each of the next few years.
- The unrecognized investment losses represent about 55% of the DTRFA market value of assets. Unless offset by future investment gains or other favorable experience, the recognition of the \$99.3 million market losses is expected to have a significant impact on the Association's future funded ratio and actuarial contribution requirement. If the deferred losses were recognized immediately in the actuarial value assets, the funded percentage would decrease from 76.55% to 49.32%, and the actuarially determined contribution rate would increase from 17.82% to 28.91%.

- > As mentioned above, the current method used to determine the actuarial value of assets yields an amount that is 155% of the market value of assets as of June 30, 2009. Guidelines in Actuarial Standard of Practice No. 44 (Selection and Use of Asset Valuation Methods for Pension Valuations) recommend that asset values fall within a reasonable range around the corresponding market value. The most common method is to constrain the actuarial value of assets to be no more than 120%, or less than 80%, of the current market value of assets. Current Minnesota Statutes do not include a corridor in the actuarial asset determination.
- > As noted in our experience study report, the current 8.50% investment return assumption (as prescribed in Minnesota Statute 356.215, Subdivision 8) is at the high end of the reasonable range developed for this assumption. The 8.50% appears optimistic, and we recommend that a comprehensive review of the economic assumptions be performed when administratively feasible.
- > While the -0.53% return on the actuarial value of assets caused a \$26,140,717 loss in the unfunded actuarial liability, demographic and liability experience resulted in a \$10,572,081 gain. A portion of this gain was due to salary experience that was less than expected. In addition, during the course of performing this year's valuation, some technical improvements were made to the programming, which had the effect of slightly lowering costs and contributed to the experience gain shown above.
- > The actuarial valuation report as of June 30, 2009 is based on financial data as of that date. Changes in the value of assets subsequent to that date, to the extent that they exist, are not reflected. Declines in asset values will increase the actuarial cost of the plan, while increases will decrease the actuarial cost of the plan.
- There were no changes in plan provisions or actuarial assumptions since the prior valuation.

SECTION 1: Valuation Summary for the Duluth Teachers' Retirement Fund Association

Summary of Key Valuation Results	0000	0000
	2009	2008
Contributions (% of payroll) for plan year beginning July 1:		
Statutory – Chapter 354A	11.92%	11.87%
Required – Chapter 356	17.82%	15.87%
Sufficiency/(Deficiency)	-5.90%	-4.00%
Funding elements for plan year beginning July 1:		
Normal cost	\$4,108,948	\$5,022,602
Market value of assets	179,933,200	271,616,844
Actuarial value of assets (AVA)	279,255,559	298,067,085
Actuarial accrued liability (AAL)	364,811,453	363,044,284
Unfunded actuarial accrued liability	85,555,894	64,977,199
Funded ratios as of July 1:		
Accrued Benefit Funded Ratio	83.36%	85.68%
Current assets (AVA)	\$279,255,559	\$298,067,085
Current benefit obligations	335,015,635	347,872,563
Projected Benefit Funded Ratio	86.09%	89.69%
Current and expected future assets	\$337,012,744	\$356,902,863
Current and expected future benefit obligations (Present Value of Benefits)	391,449,065	397,909,525
GASB 25/27 information:		
Annual required employer contributions for year ending June 30	\$5,169,526	\$4,559,594
Accrued Liability Funded Ratio (AVA/AAL) as of July 1	76.55%	82.10%
Covered actual payroll	\$51,019,447	\$51,711,330
Demographic data for plan year beginning July 1:		
Number of pensioners and beneficiaries	1,264	1,243
Number of vested terminated members.	348	310
Number of other non-vested terminated members	750	676
Number of active members	1,016	1,140
Total projected payroll*	\$55,344,873	\$59,548,231
Average annual compensation (actual compensation paid in prior year)	47,150	44,843

^{*}Projected payroll includes annualized pay for new hires and increases to current fiscal year.

A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, pensioners and beneficiaries.

The ratio of non-actives to actives has increased for the sixth year in a row. If this trend continues, the long-term funding of the Plan will be less sensitive to changes in contributions and more reliant on asset performance.

This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A through F.

A historical perspective of how the member population has changed over the past several valuations can be seen in this chart.

CHART 1
Member Population: 2002 – 2009

Year Ended June 30	Active Members	Vested Terminated Members*	Pensioners and Beneficiaries	Ratio of Non-Actives to Actives
2002	1,276	305	1,085	1.09
2003	1,373	187	1,107	0.94
2004	1,178	312	1,137	1.23
2005	1,164	313	1,153	1.26
2006	1,174	312	1,190	1.28
2007	1,150	321	1,227	1.35
2008	1,140	310	1,243	1.36
2009	1,016	348	1,264	1.59

^{*} Excludes terminated members due a refund of employee contributions

Active Members

Plan costs are affected by the age, years of service and payroll of active members. In this year's valuation, there were 1,016 active members with an average age of 47.6, average years of service of 12.8 years and average projected compensation of \$54,473. The 1,140 active members in the prior valuation had an average age of 46.6, average service of 12.0 years and average projected compensation of \$52,235.

Inactive Members

In this year's valuation, there were 348 members with a vested right to a deferred or immediate vested benefit.

In addition, there were 750 other non-vested terminated members entitled to a return of their employee contributions.

These graphs show a distribution of active members by age and by years of service.

CHART 2
Distribution of Active Members by Age as of June 30, 2009

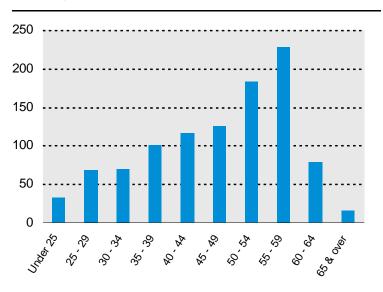
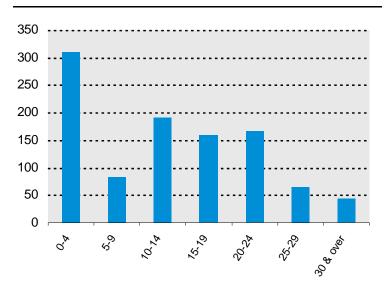


CHART 3
Distribution of Active Members by Years of Service as of June 30, 2009



Pensioners and Beneficiaries

As of June 30, 2009, 1,168 pensioners (including 17 disableds) and 96 beneficiaries were receiving total monthly benefits of \$1,934,717. For comparison, in the previous valuation, there were 1,145 pensioners (including 17 disableds) and 98 beneficiaries receiving monthly benefits of \$1,857,658.

These graphs show a distribution of the current pensioners and beneficiaries based on their monthly amount and age, by type of pension.

■ Beneficiaries■ Disability■ Regular

CHART 4 Distribution of Pensioners and Beneficiaries by Type and by Monthly Amount as of June 30, 2009

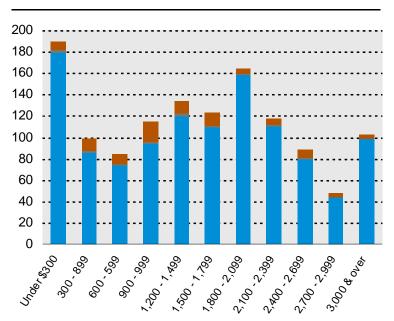
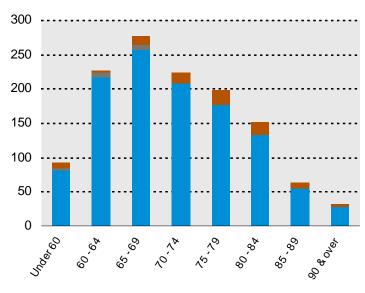


CHART 5 Distribution of Pensioners and Beneficiaries by Type and by Age as of June 30, 2009



B. FINANCIAL INFORMATION

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Minnesota Statutes require an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Both the actuarial value and market value of assets are representations of the Fund's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Fund's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 6

Determination of Actuarial Value of Assets for Years Ended June 30, 2009 and June 30, 2008

			2009		2008	
1.	Calculation of unrecognized return	Original Amount	% Not Recognized		% Not Recognized	
	(a) Year ended June 30, 2009	-\$96,764,564	80%	-\$77,411,651		
	(b) Year ended June 30, 2008	-57,603,390	60%	-34,562,034	80%	-\$46,082,712
	(c) Year ended June 30, 2007	28,491,208	40%	11,396,483	60%	17,094,725
	(d) Year ended June 30, 2006	6,274,217	20%	1,254,843	40%	2,509,687
	(e) Year ended June 30, 2005	140,297			20%	28,059
	(f) Total unrecognized return			-\$99,322,359		-\$26,450,241
2.	Market value of assets available for benefits			\$179,933,200		\$271,616,844
3.	Less: Unrecognized return			-\$99,322,359		-\$26,450,241
4.	Actuarial value of assets (Current Assets): (2) – (3)			\$279,255,559		\$298,067,085
5.	Actuarial value as a percent of market value			155.20%		109.74%
	Total original amount for the last five plan years preceding the valuation date 20% of total original amount stated above			-\$119,462,232 -\$23,892,446		-\$2,221,839 -\$444,368

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions.

For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total loss is \$15,568,636, of which a loss of \$26,140,717 is from investments and a gain of \$10,572,081 is from all other sources. The net experience variation from individual sources other than investments was 2.9% of the actuarial accrued liability, which includes technical improvements in the valuation program, age/service retirements, disability, mortality (pre and post-retirement), withdrawal and salary increases.

This chart provides a summary of the actuarial experience during the past year.

CHART 6 Actuarial Experience for Year Ended June 30, 2009

1.	Net loss from investments on an actuarial value of assets basis	-\$26,140,717
2.	Net gain from salary increases different than assumed	2,064,073
3.	Net loss from post-retirement mortality experience	-360,443
4.	Net gain from other experience	<u>8,868,451</u>
5.	Net experience loss: $(1) + (2) + (3) + (4)$	-\$15,568,636

D. INFORMATION REQUIRED BY THE GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

Critical information to GASB is the historical comparison of the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded in accordance with the GASB actuarially required contributions. Section 4, Exhibit III presents a representation of this information for the Fund.

The other critical piece of information regarding the Fund's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the plan as calculated under GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

GASB requires that the actuarial value of assets be used to determine the funded ratio as shown in Section 4, Exhibit IV.

SECTION 3: Supplemental Information for the Duluth Teachers' Retirement Fund Association

EXHIBIT A

Table of Plan Coverage

			Change From
Category	2009	2008	Prior Year
Active members in valuation:			
Number	1,016	1,140	-10.9%
Average age	47.6	46.6	N/A
Average service	12.8	12.0	N/A
Total projected payroll*	\$55,344,873	\$59,548,231	-7.1%
Average projected* compensation	54,473	52,235	4.3%
Total active vested members	755	821	-8.0%
Vested terminated members	348	310	12.3%
Retired participants:			
Number in pay status	1,151	1,128	2.0%
Average age	71.6	71.3	N/A
Average monthly benefit	\$1,548	\$1,509	2.6%
Disabled participants:			
Number in pay status	17	17	0.0%
Average age	62.5	61.5	N/A
Average monthly benefit	\$1,198	\$1,177	1.8%
Beneficiaries:			
Number in pay status	96	98	-2.0%
Average age	77.0	76.3	N/A
Average monthly benefit	\$1,377	\$1,256	9.6%
Other non-vested terminated members	750	676	10.9%

^{*} Projected payroll includes annualized pay for new hires and increases to current fiscal year.

*SEGAL

EXHIBIT B-1

Members in Active Service as of June 30, 2009

By Age, Years of Service, and Average Projected Compensation – Total

	Years of Service										
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over			
Under 25	32	32									
	\$21,025	\$21,025									
25 - 29	68	68									
	22,318	22,318									
30 - 34	70	47	12	11							
	40,689	31,260	\$55,900	\$64,383							
35 - 39	100	28	19	47	6						
	55,486	38,191	53,209	65,284	\$66,656						
40 - 44	116	24	19	41	28	4					
	58,051	39,348	58,682	61,328	67,137	\$70,087					
45 - 49	125	24	15	21	37	26	2				
	58,536	29,284	49,170	64,258	72,397	65,827	\$68,523				
50 - 54	183	27	9	34	33	56	19	5			
	61,485	32,359	53,464	62,128	66,682	68,247	72,287	\$77,760			
55 - 59	228	25	6	31	42	61	33	30			
	63,812	23,056	43,537	63,337	65,058	72,549	71,536	74,314			
60 - 64	79	27	1	5	10	17	4	15			
	56,285	31,120	19,369	75,443	61,350	70,588	66,580	75,327			
65 & Over	15	8	2	1	2	2					
	30,614	14,994	25,769	66,374	64,351	46,322					
Total	1,016	310	83	191	158	166	58	50			
	\$54,473	\$28,343	\$52,380	\$63,664	\$67,301	\$69,469	\$71,336	\$74,962			

EXHIBIT B-2

Members in Active Service as of June 30, 2009

By Age, Years of Service, and Average Projected Compensation – Old Plan

	Years of Service									
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over		
Under 25										
25 - 29										
30 - 34										
35 - 39										
40 - 44										
45 - 49										
50 - 54	19					3	11	5		
	\$74,088					\$66,982	\$74,357	\$77,760		
55 - 59	54			1	2	2	21	28		
	72,640			\$66,762	\$61,058	67,745	71,933	74,558		
60 - 64	17					1	2	14		
	73,839					109,208	62,441	72,941		
65 & Over										
Total	90			1	2	6	34	47		
	\$73,172			\$66,762	\$61,058	\$74,274	\$72,159	\$74,417		

EXHIBIT B-3

Members in Active Service as of June 30, 2009

By Age, Years of Service, and Average Projected Compensation – New Plan Tier I

				Years of	Service			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25								
25 - 29								
30 - 34								
35 - 39								
40 - 44	8			1	3	4		
	\$60,544			\$19,333	\$61,558	\$70,087		
45 - 49	47			3	16	26	2	
	70,448			65,327	79,157	65,827	\$68,523	
50 - 54	71			3	7	53	8	
	66,702			56,689	54,333	68,319	69,440	
55 - 59	94		1	2	18	59	12	2
	69,699		\$37,488	42,742	63,716	72,712	70,840	\$70,896
60 - 64	22				3	16	2	1
	68,372				54,408	68,174	70,718	108,727
65 & Over	2					2		
	48,322					48,322		
Total	244		1	9	47	160	24	3
	\$68,360		\$37,488	\$53,318	\$66,843	\$69,289	\$70,170	\$83,507

EXHIBIT B-4

Members in Active Service as of June 30, 2009

By Age, Years of Service, and Average Projected Compensation – New Plan Tier II

				Years of	Service			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	32	32						
	\$21,025	\$21,025						
25 - 29	68	68						
	22,318	22,318						
30 - 34	70	47	12	11				
	40,689	31,260	\$55,900	\$64,383				
35 - 39	100	28	19	47	6			
	55,486	38,191	53,209	65,284	\$66,656			
40 - 44	108	24	19	40	25			
	57,867	39,348	58,682	62,378	67,807			
45 - 49	78	24	15	18	21			
	51,359	29,284	49,170	64,080	67,246			
50 - 54	93	27	9	31	26			
	54,928	32,359	53,464	62,128	66,682			
55 - 59	80	25	5	28	22			
	50,935	23,056	44,747	64,686	66,519			
60 - 64	40	27	1	5	7			
	42,177	31,120	19,369	75,443	64,325			
65 & Over	13	8	2	1	2			
	28,197	14,994	25,769	66,374	64,351			
Total	682	310	82	181	109			
	\$47,038	\$28,343	\$52,562	\$64,161	\$67,613			

EXHIBIT C-1
Retired Participants as of June 30, 2009
By Age, Years Retired and Average Annual Benefit – Total

				Years Re	etired			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45								
45 - 49								
50 - 54	1			1				
	\$7,330			\$7,330				
55 - 59	79	79						
	24,918	\$24,918						
60 - 64	216	126	86	3		1		
	22,082	23,890	\$20,227	1,775		\$14,756		
65 - 69	257	48	110	98	1			
	17,620	14,730	17,781	18,857	\$17,302			
70 - 74	207	4	33	90	80			
	17,465	13,265	16,379	18,149	17,354			
75 - 79	176		4	27	101	44		
	18,253		15,857	13,424	21,403	14,202		
80 - 84	132	1	1	2	38	72	18	
	17,210	14,743	1,116	24,451	18,963	18,705	\$7,756	
85 - 89	56				1	26	25	
	14,232				30,010	14,569	14,045	
90 & Over	27					1	7	19
	10,584					1,479	8,968	\$11,659
Total	1,151	258	234	221	221	144	50	23
	\$18,641	\$22,301	\$18,378	\$17,672	\$19,538	\$16,435	\$11,070	\$11,244

EXHIBIT C-2
Retired Participants as of June 30, 2009
By Age, Years Retired and Average Annual Benefit – Old Plan

				Years Re	etired			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45								
45 - 49								
50 - 54								
55 - 59	33	33						
	\$22,388	\$22,388						
60 - 64	58	27	29	1		1		
	15,691	17,045	\$14,854	\$4,361		\$14,756		
65 - 69	84	12	29	43				
	12,682	13,884	12,932	12,179				
70 - 74	85	1	2	44	38			
	14,756	22,017	29,897	12,361	\$16,541			
75 - 79	49			4	26	19		
	13,745			6,955	17,905	9,483		
80 - 84	45				1	26	18	
	11,885				4,601	15,024	\$7,756	
85 - 89	36					13	19	4
	12,371					13,364	12,344	\$9,271
90 & Over	27					1	7	19
	10,584					1,479	8,968	11,659
Total	417	73	60	92	65	60	44	23
	\$14,168	\$19,009	\$14,426	\$11,954	\$16,903	\$12,679	\$9,930	\$11,244

EXHIBIT C-3
Retired Participants as of June 30, 2009
By Age, Years Retired and Average Annual Benefit – New Plan Tier I

	Years Retired									
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over		
Under 45										
45 - 49										
50 - 54										
55 - 59	40	40								
	\$29,806	\$29,806								
60 - 64	143	89	53	1						
	26,343	27,854	\$24,291	\$594						
65 - 69	127	13	65	48	1					
	24,043	25,849	22,235	26,142	\$17,302					
70 - 74	71	1	5	27	38					
	24,390	28,230	27,089	30,252	19,767					
75 - 79	83			2	57	24				
	21,479			18,007	23,504	\$16,960				
80 - 84	47	1			6	40				
	21,958	14,743			24,817	21,710				
85 - 89	16					10	6			
	17,809					16,836	\$19,430			
90 & Over										
Total	527	144	123	78	102	74	6			
	\$24,372	\$28,127	\$23,318	\$27,029	\$22,129	\$19,511	\$19,430			

EXHIBIT C-4
Retired Participants as of June 30, 2009
By Age, Years Retired and Average Annual Benefit – New Plan Tier II

		Years Retired									
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over			
Under 45											
45 - 49											
50 - 54	1			1							
	\$7,330			\$7,330							
55 - 59	6	6									
	6,248	\$6,248									
60 - 64	15	10	4	1							
	6,178	7,095	\$5,339	369							
65 - 69	46	23	16	7							
	8,903	8,887	8,479	9,926							
70 - 74	51	2	26	19	4						
	12,339	1,407	13,280	14,354	\$2,123						
75 - 79	44		4	21	18	1					
	17,185		15,857	14,220	19,802	\$37,679					
80 - 84	40		1	2	31	6					
	17,621		1,116	24,451	18,293	14,624					
85 - 89	4				1	3					
	16,678				30,010	12,234					
90 & Over											
Total	207	41	51	51	54	10					
	\$13,063	\$7,699	\$11,114	\$13,675	\$17,815	\$16,213					

EXHIBIT D-1
Disabled Members as of June 30, 2009
By Age, Years Disabled and Average Annual Benefit – Total

	Years Disabled									
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over		
Under 45										
45 - 49										
50 - 54	1		1							
	\$14,871		\$14,871							
55 - 59	1	1								
	3,752	\$3,752								
60 - 64	8	4		2	1	1				
	19,214	19,217		\$8,261	\$28,595	\$3,550				
65 - 69	7		5	1	1					
	14,332		\$15,816	1,700	19,544					
70 - 74										
75 - 79										
80 - 84										
85 - 89										
90 & Over										
Total	17	5	6	3	2	1				
	\$14,381	\$16,122	\$15,658	\$6,074	\$24,069	\$3,550				

EXHIBIT D-2
Disabled Members as of June 30, 2009
By Age, Years Disabled and Average Annual Benefit – Old Plan

				Years Dis	abled			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45								
45 - 49								
50 - 54								
55 - 59								
60 - 64								
65 60								
65 - 69								
70 - 74								
70 - 74						 		
75 - 79			 					
13 17								
80 - 84								
85 - 89								
90 & Over								
Total								

EXHIBIT D-3
Disabled Members as of June 30, 2009
By Age, Years Disabled and Average Annual Benefit – New Plan Tier I

				Years Dis	abled			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45								
45 - 49								
50 - 54								
55 - 59								
60 64								
60 - 64			 	 	 	 	 	
65 - 69								
05 07								
70 - 74								
75 - 79								
80 - 84								
85 - 89								
90 & Over								
Total								
Total								

SECTION 3: Supplemental Information for the Duluth Teachers' Retirement Fund Association

EXHIBIT D-4
Disabled Members as of June 30, 2009
By Age, Years Disabled and Average Annual Benefit – New Plan Tier II

				Years Dis	abled			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45								
45 - 49								
50 - 54	1		1					
	\$14,871		\$14,871					
55 - 59	1	1						
	3,752	\$3,752						
60 - 64	8	4		2	1	1		
	19,214	19,217		\$8,261	\$28,595	\$3,550		
65 - 69	7		5	1	1			
	14,332		\$15,816	1,700	19,544			
70 - 74								
75 - 79								
80 - 84								
85 - 89								
90 & Over								
Total	17	5	6	3	2	1		
	\$14,381	\$16,122	\$15,658	\$6,074	\$24,069	\$3,550		

EXHIBIT E-1
Beneficiaries as of June 30, 2009
By Age, Years Since Death and Average Annual Benefit – Total

	Years Since Member's Retirement Date									
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over		
Under 45										
45 - 49	2				2					
	\$11,468				\$11,468					
50 - 54	2	1	1							
	8,267	\$16,003	\$532							
55 - 59	3	1			1	1				
	8,292	3,872			15,434	\$5,571				
60 - 64	3		1		2					
	17,575		6,687		23,019					
65 - 69	11		3	7	1					
	22,099		14,732	25,409	21,037					
70 - 74	18			5	11	2				
	20,182			18,714	22,225	12,618				
75 - 79	20			1	7	12				
	16,885			18,635	20,613	14,565				
80 - 84	18				5	6	7			
	17,150				19,747	14,521	\$17,548			
85 - 89	11				1	4	5	1		
	11,440				2,071	14,657	11,255	\$8,871		
90 & Over	6						1	5		
	9,121						7,146	9,516		
Total	94	2	5	13	30	25	13	6		
	\$16,494	\$9,937	\$10,282	\$22,313	\$19,834	\$14,053	\$14,327	\$9,408		

EXHIBIT E-2
Beneficiaries as of June 30, 2009
By Age, Years Since Death and Average Annual Benefit – Old Plan

	Years Since Member's Retirement Date									
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over		
Under 45										
45 - 49										
50 - 54										
55 - 59	1					1				
	\$5,571					\$5,571				
60 - 64	2				2					
	23,019				\$23,019					
65 - 69	4		2	1	1					
	15,700		\$9,914	\$21,937	21,037					
70 - 74	5			2	2	1				
	14,471			10,438	20,830	9,819				
75 - 79	3				2	1				
	12,387				8,215	20,729				
80 - 84	6					2	4			
	15,050					8,821	\$18,164			
85 - 89	5					2	2	1		
	14,469					22,312	9,424	\$8,871		
90 & Over	6						1	5		
	9,121						7,146	9,516		
Total	32		2	3	7	7	7	6		
	\$13,790		\$9,914	\$14,271	\$17,881	\$14,055	\$14,093	\$9,408		

EXHIBIT E-3
Beneficiaries as of June 30, 2009
By Age, Years Since Death and Average Annual Benefit – New Plan Tier I

	Years Since Member's Retirement Date									
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over		
Under 45										
45 - 49	2				2					
	\$11,468				\$11,468					
50 - 54										
55 - 59	1				1					
	15,434				15,434					
60 - 64	1		1							
	6,687		\$6,687							
65 - 69	4			4						
	33,132			\$33,132						
70 - 74	10			1	8	1				
	22,419			33,517	21,907	\$15,418				
75 - 79	11				1	10				
	16,467				28,608	15,253				
80 - 84	8				1	4	3			
	16,388				11,439	17,371	\$16,726			
85 - 89	6				1	2	3	-		
	8,917				2,071	7,001	12,475			
90 & Over	·					·		_		
Total	43		1	5	14	17	6	-		
	\$17,849		\$6,687	\$33,209	\$18,268	\$14,790	\$14,601			

EXHIBIT E-4
Beneficiaries as of June 30, 2009
By Age, Years Since Death and Average Annual Benefit – New Plan Tier II

	Years Since Member's Retirement Date									
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over		
Under 45										
45 - 49										
50 - 54	2	1	1							
	\$8,267	\$16,003	\$532							
55 - 59	1	1								
	3,872	3,872								
60 - 64										
65 - 69	3		1	2						
	15,922		24,367	\$11,699						
70 - 74	3			2	1					
	22,244			19,590	\$27,552					
75 - 79	6			1	4	1				
	19,900			18,635	24,812	\$1,514				
80 - 84	4				4					
	21,824				21,824					
85 - 89										
90 & Over										
Total	19	2	2	5	9	1				
	\$17,979	\$9,937	\$12,450	\$16,242	\$23,789	\$1,514				

SECTION 3: Supplemental Information for the Duluth Teachers' Retirement Fund Association

EXHIBIT F
Reconciliation of Member Data

				Vested	Other Non- Vested				
			Active Members	Terminated Members	Terminated Members	Retired Participants	Disabled Members	Beneficiaries	Total
A.	Nuı	mber as of June 30, 2008	1,140	310	676	1,128	17	98	3,369
B.	Ado	ditions	99	1	17	1		1	119
C.	Del	etions:							
	1.	Retirements	-36	-10	-1	47			
	2.	Disability							
	3.	Died with beneficiary		-1		-8		8	-1
	4.	Died without beneficiary		-1		-17		-3	-21
	5.	Terminated – deferred	-56	57	-1				
	6.	Terminated – other non-vested	-148	-7	155				
	7.	Refunds			-24				-24
	8.	Rehired as active	17	-1	-16				
	9.	Contributions Written Off			-56				-56
	10.	Expired Benefits						-8	-8
D.	Dat	a Adjustments							
E.	Nui	mber as of June 30, 2009	1,016	348	750	1,151	17	96	3,378

EXHIBIT G
Schedule of Pensioners and Beneficiaries Added to and Removed from Rolls

	Adde	Added to Rolls		Removed from Rolls		End of Year	% Increase in	Average
Fiscal <u>Year</u>	Number	Annual <u>Allowances</u>	<u>Number</u>	Annual <u>Allowances</u>	<u>Number</u>	Annual <u>Allowances</u>	Annual <u>Allowances</u>	Annual <u>Allowances</u>
1999	61	1,263,965	32	251,972	939	10,926,102	12.1	11,636
2000	90	2,519,000	33	633,465	996	12,359,721	13.1	12,409
2001	88	2,458,668	26	547,671	1,058	14,341,500	16.0	13,555
2002	56	1,817,094	29	800,165	1,085	15,968,396	11.3	14,717
2003	41	1,191,364	19	574,944	1,107	16,767,603	5.0	15,147
2004	56	1,203,279	26	303,856	1,137	18,240,239	8.8	16,042
2005	64	1,373,262	48	603,930	1,153	18,936,633	3.8	16,424
2006	66	1,359,258	29	312,333	1,190	19,901,351	5.1	16,724
2007	62	1,426,530	25	345,683	1,227	20,978,509	5.4	17,097
2008	58	1,196,895	42	525,597	1,243	22,291,901	6.3	17,934
2009	55	1,201,849	35	424,843	1,263	23,605,292	5.9	18,690

EXHIBIT H
Statement of Change in Net Plan Assets for Year Ended June 30, 2009

		Market Value
A. Asset	s available at beginning of year (BOY)	\$271,616,844
B. Addit	ions:	
1.	Member contributions	\$2,927,260
2.	Employer contributions	2,954,026
3.	Direct State aid	346,000
4.	Investment income	5,984,792
5.	Investment expenses	-1,289,965
6.	Other	19,769
7.	Net appreciation/(depreciation)	<u>-79,125,807</u>
8.	Total Additions	-\$68,183,925
. Opera	ating Expenses:	
1.	Service retirements	\$20,943,537
2.	Disability benefits	217,325
3.	Survivor benefits	1,543,301
4.	Refunds	290,392
5.	Administrative expenses	<u>505,164</u>
6.	Total operating expenses	\$23,499,719
. Other	changes in reserves	
. Asset	s available at end of year (EOY)	\$179,933,200
. Deter	mination of current year unrecognized asset return	
1.	Average balance:	
	(a) Assets available at BOY: (A)	\$271,616,844
	(b) Assets available at EOY: (E)	179,933,200
	(c) Average balance [(a) + (b) – Net Investment Income] / 2 [Net Investment Income: (B.4) + (B.5) + (B.6) + (B.7)]	262,980,628
2.	Expected return: 8.50% x (F.1.(c))	22,353,353
3.	Actual return: $(B.4) + (B.5) + (B.6) + (B.7)$	-74,411,21 <u>1</u>
4.	Current year unrecognized asset return: (F.3) – (F.2)	-\$96,764,564

SECTION 3: Supplemental Information for the Duluth Teachers' Retirement Fund Association

EXHIBIT I Statement of Plan Net Assets for Year Ended June 30, 2009

	Market Value
Assets in trust	
Cash, equivalents, short-term securities	\$13,081,672
Investments:	
Fixed income	\$75,884,144
Equity and other	96,822,307
Real estate and mortgages	
Invested securities lending collateral	8,352,760
Other assets	317,612
Total assets in trust	\$194,458,495
Assets receivable	\$2,518,927
Liabilities	
Invested securities lending collateral	-\$10,871,599
Stock and bond purchases, and accounts payable	<u>-6,172,623</u>
Total liabilities	-\$17,044,222
Net assets held in Trust for Pension Benefits	
Member reserves	\$33,285,446
Other reserves	146,647,754
Total Assets Available for Benefits	\$179,933,200
Net Assets at Market Value	<u>\$179,933,200</u>

SECTION 3: Supplemental Information for the Duluth Teachers' Retirement Fund Association

EXHIBIT J
Actuarial Value of Assets Calculation History Through June 30, 2009

Year Ended June 30	Employer Contributions*	Employee Contributions	Net Investment Return**	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2002						\$280,515,000
2003	\$2,933,000	\$3,299,000	\$9,174,000	\$445,000	\$17,009,000	278,467,000
2004	2,826,730	2,991,801	10,518,561	448,704	17,406,336	276,949,052
2005	2,845,684	2,924,264	4,566,718	436,507	18,368,390	268,480,821
2006	2,867,299	3,030,418	16,291,585	424,840	19,319,594	270,925,689
2007	2,940,697	2,978,435	32,143,488	456,987	20,266,573	288,264,749
2008	2,994,086	2,954,062	25,980,797	487,944	21,638,665	298,067,085
2009	3,300,026	2,927,260	-1,539,093	505,164	22,994,555	279,255,559

^{*} Includes direct State aid payments for years ending 2009 and later.

^{**} Net Investment Return on an Actuarial Value of Assets basis, and net of investment fees.

SECTION 3: Supplemental Information for the Duluth Teachers' Retirement Fund Association

EXHIBIT K

Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2009

Unfunded/(Overfunded) actuarial accrued liability at beginning of year		\$64,977,199
2. Normal cost at beginning of year, including expenses		5,510,546
3. Total contributions		6,227,286
4. Interest		
(a) For whole year on $(1) + (2)$	\$5,991,459	
(b) For half year on (3)	<u>264,660</u>	
(c) Total interest: (4a) – (4b)		5,726,799
5. Expected unfunded/(overfunded) actuarial accrued liability: $(1) + (2) - (3) + (4(c))$		\$69,987,258
6. Changes due to (gain)/loss from:		
(a) Investments	\$26,140,717	
(b) Demographics*	<u>-10,572,081</u>	
(c) Total changes due to (gain)/loss		<u>15,568,636</u>
7. Unfunded/(Overfunded) actuarial accrued liability at end of year		<u>\$85,555,894</u>

^{*} Includes (gain)/loss due to age/service retirements, disability, mortality (pre and post-retirement), withdrawal and salary increases.

SECTION 3: Supplemental Information for the Duluth Teachers' Retirement Fund Association

EXHIBIT L

Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or Actuarial Assumptions:

The estimates on which the cost of the Fund is calculated including:

- (a) <u>Investment return</u> the rate of investment yield that the Fund will earn over the long-term future;
- (b) <u>Mortality rates</u> the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) <u>Retirement rates</u> the rate or probability of retirement at a given age;
- (d) <u>Turnover rates</u> the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Normal Cost:

The amount of contributions required to fund the benefit allocated to the current year of service.

Actuarial Accrued Liability For Actives:

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

Actuarial Accrued Liability For Pensioners:

The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded Actuarial Accrued Liability:

The extent to which the actuarial accrued liability of the Fund exceeds the assets of the Fund. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the Unfunded Actuarial Accrued Liability:

Payments made over a period of years equal in value to the Fund's unfunded actuarial

accrued liability.

Investment Return:

The rate of earnings of the Fund from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one

year to the next.

Accrued Benefit Funded Ratio:

A current year funded status that measures the percent of benefits covered by Current Assets. This ratio is based on benefits earned to the valuation date (accrued service) and includes future salary increases to retirement. The liability for these benefits is defined as the Current Benefit Obligations. The Accrued Benefit Funded Ratio is calculated as the Actuarial Value of Assets (Current Assets) divided by the Current

Benefit Obligations.

Projected Benefit Funded Ratio:

A projected funded status that measures contribution sufficiency/deficiency, which is based on a present value of all plan benefits for the lifetime of all plan members. The liability for these benefits is defined as the Current and Expected Future Benefit Obligations, or Present Value of Benefits. The Current and Expected Future Assets are determined as the sum of the Actuarial Value of Assets (Current Assets), the Present Value of Expected Future Statutory Supplemental Contributions and the Present Value of Future Normal Costs. The Projected Benefit Funded Ratio is calculated as the Current and Expected Future Assets divided by the Current and Expected Future Benefit Obligations. If the ratio is equal to or more than 100%, there is a contribution sufficiency, and if it is less than 100% there is a contribution

deficiency.

EXHIBIT I				
Summary of Actuarial Valuation Results				
The valuation was made with respect to the following data supplied to us:				
1. Pensioners as of the valuation date (including 98 beneficiaries in pay status)		1,264		
2. Members inactive during year ended June 30, 2009 with vested rights		348		
3. Members active during the year ended June 30, 2009		1,016		
Fully vested	755			
Not vested	261			
4. Other non-vested terminated members as of June 30, 2009		750		

SECTION 4: Reporting Information for the Duluth Teachers' Retirement Fund Association

EXHIBIT I (continued)

Summary of Actuarial Valuation Results

		Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
A. Det	ermination of Actuarial Accrued Liability			
1.	Active members:			
	(a) Retirement benefits	\$139,634,789	\$21,740,347	\$117,894,442
	(b) Disability benefits	1,613,677	478,772	1,134,905
	(c) Death benefits	2,188,958	588,958	1,600,000
	(d) Withdrawal benefits	5,212,940	<u>3,829,535</u>	1,383,405
	(e) Total	\$148,650,364	\$26,637,612	\$122,012,752
2.	Vested terminated members	\$15,175,898		\$15,175,898
3.	Other non-vested terminated members	884,522		884,522
4.	Annuitants	226,738,281		226,738,281
5.	Total	\$391,449,065	\$26,637,612	\$364,811,453
. Det	ermination of Unfunded Actuarial Accrued Liability			
1.	Actuarial Accrued Liability			\$364,811,453
2.	Actuarial Value of Assets			279,255,559
3.	Unfunded Actuarial Accrued Liability: (1) – (2)			\$85,555,894
. Det	ermination of Supplemental Contribution Rate			
1.	Present value of future payrolls through the amortization date of June 30, 2035			\$895,661,745
2.	Supplemental contribution rate: (B.3) / (C.1)			9.55%

EXHI	BIT II			
Actua	arial Balance Sheet			
A. C	urrent Assets			\$279,255,559
B. E	xpected Future Assets			
1.	Present Value of Expected Future Statutory Supplemental Contributions			\$31,119,573
2.	Present Value of Future Normal Costs			26,637,612
3.	Total Expected Future Assets			\$57,757,185
C. T	otal Current and Expected Future Assets			\$337,012,744
D. C	urrent Benefit Obligations	Non-Vested	Vested	<u>Total</u>
1.	Benefit recipients:			
	(a) Retirement annuities		\$210,976,680	\$210,976,680
	(b) Disability benefits		3,005,190	3,005,190
	(c) Beneficiaries		12,756,411	12,756,411
2.	Vested terminated members		15,175,898	15,175,898
3.	Other non-vested terminated members		884,522	884,522
4.	Active members:			
	(a) Retirement benefits	\$292,021	\$86,684,963	\$86,976,984
	(b) Disability benefits	3,787	862,518	866,305
	(c) Death benefits	7,214	1,252,044	1,259,258
	(d) Withdrawal benefits	116,344	2,998,043	3,114,387
5.	Total Current Benefit Obligations	\$419,366	\$334,596,269	\$335,015,635
E. E	xpected Future Benefit Obligations			\$56,433,430
	otal Current and Expected Future Benefit Obligations - resent Value of Benefits: $(D.5+E)$			\$391,449,065
G. C	urrent Unfunded Actuarial Liability (D.5 - A)			\$55,760,076
H. C	urrent and Future Unfunded Actuarial Liability (F - C)			\$54,436,321

EXHIBIT III Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended June 30	Actuarially Required Contribution Rate (a)	Actual Covered Payroll (b)	Actual Member Contributions (c)	Annual Required Employer Contributions [(a) x (b)] – (c) = (d)	Actual Employer Contributions* (e)	Percentage Contributed (e) / (d)
1991	10.70%	\$42,297,000	\$2,043,000	\$2,483,000	\$2,449,000	98.63%
1992	11.09	42,884,000	2,124,000	2,632,000	2,483,000	94.34
1993	11.42	43,282,000	2,126,000	2,817,000	2,506,000	88.96
1994	10.21	43,109,000	2,230,000	2,171,000	2,496,000	114.97
1995	10.36	46,528,000	2,144,000	2,676,000	2,694,000	100.67
1996	13.23	44,870,000	2,570,000	3,366,000	2,598,000	77.18
1997	13.60	46,770,000	2,644,000	3,717,000	2,708,000	72.85
1998	12.87	47,064,000	2,664,000	3,393,000	3,211,000	94.64
1999	10.24	52,176,000	3,118,000	2,225,000	3,507,000	157.62
2000	9.16	52,270,000	3,152,000	1,636,000	3,512,000	214.67
2001	8.51	51,996,000	3,141,000	1,284,000	3,497,000	272.35
2002	7.49	51,054,000	3,275,000	549,000	3,442,000	626.96
2003**	9.85	50,656,000	3,299,000	1,691,000	2,933,000	173.45
2004	11.27	48,820,898	2,991,801	2,510,314	2,826,730	112.60
2005	12.11	49,148,256	2,924,264	3,027,590	2,845,684	93.99
2006	14.16	49,521,572	3,030,418	3,981,837	2,867,299	72.01
2007	15.19	50,789,240	2,978,435	4,736,451	2,940,697	62.09
2008	14.53	51,711,330	2,954,062	4,559,594	2,994,086	65.67
2009	15.87	51,019,447	2,927,260	5,169,526	3,300,026	63.84

 ^{*} Includes contributions from other sources (if applicable)
 ** Actuarially Required Contribution Rate prior to change in actuarial assumptions and plan provisions is 7.62%.

EXHIBIT IV

Supplementary Information Required by the GASB – Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) – (a)	Funded Ratio (a) / (b)	Actual Covered Payroll (Previous FY) (c)	UAAL as a Percentage of Covered Payroll [(b) – (a)] / (c)
07/01/1991	\$105,087,000	\$117,582,000	\$12,495,000	89.37%	\$42,297,000	29.54%
07/01/1992	116,492,000	124,140,000	7,648,000	93.84	42,884,000	17.83
07/01/1993	130,856,000	132,700,000	1,844,000	98.61	43,282,000	4.26
07/01/1994	133,632,000	137,042,000	3,410,000	97.51	43,109,000	7.91
07/01/1995	142,852,000	173,965,000	31,113,000	82.12	46,528,000	66.87
07/01/1996	157,007,000	189,518,000	32,511,000	82.85	44,870,000	72.46
07/01/1997	170,059,000	197,820,000	27,761,000	85.97	46,770,000	59.36
07/01/1998	187,482,000	197,078,000	9,596,000	95.13	47,064,000	20.39
07/01/1999	218,699,000	220,540,000	1,841,000	99.17	52,176,000	3.53
07/01/2000	251,007,000	241,899,000	-9,108,000	103.77	52,270,000	-17.42
07/01/2001	273,618,000	254,255,000	-19,363,000	107.62	51,996,000	-37.24
07/01/2002	280,515,000	279,428,000	-1,087,000	100.39	51,054,000	-2.13
07/01/2003	278,467,000	291,109,000	12,642,000	95.66	50,656,000	24.96
07/01/2004	276,949,052	301,704,445	24,755,393	91.79	48,820,898	50.71
07/01/2005	268,480,821	310,923,929	42,443,108	86.35	49,148,256	86.36
07/01/2006	270,925,689	322,229,167	51,303,478	84.08	49,521,572	103.60
07/01/2007	288,264,749	332,216,981	43,952,232	86.77	50,789,240	86.54
07/01/2008	298,067,085	363,044,284	64,977,199	82.10	51,711,330	125.65
07/01/2009	279,255,559	364,811,453	85,555,894	76.55	51,019,447	167.69

Exhibit V

Determination of Contribution Sufficiency – Total

	July 1, 2	009
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount
1. Member contributions	5.50%	\$3,043,968
2. Employer contributions	5.79%	3,204,468
3. Direct State aid*	0.63%	346,000
4. Total	<u>11.92%</u>	<u>\$6,594,436</u>
B. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount
1. Normal Cost:		
(a) Retirement	6.22%	\$3,444,520
(b) Disability	0.12%	69,123
(c) Death	0.15%	80,861
(d) Withdrawal	0.93%	514,444
(e) Total	<u>7.42%</u>	<u>\$4,108,948</u>
2. Supplemental contribution amortization	9.55%	\$5,285,435
3. Allowance for administrative expenses	0.85%	470,431
4. Total	<u>17.82%</u>	<u>\$9,864,814</u>
C. Contribution Sufficiency / (Deficiency): (A.4) – (B.4)	-5.90%	-\$3,270,378
Projected annual payroll for fiscal year beginning on the valuation date**		\$55,344,873

^{*} A direct State aid payment of \$346,000 is made each year on October 1st, with the first payment made in 2008.

^{**} Projected payroll includes annualized pay for new hires and increases to current fiscal year.

Exhibit VI

Determination of Contribution Sufficiency – Old Plan

	July 1, 2009		
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount	
. Member contributions	5.50%	\$362,203	
2. Employer contributions	5.79%	381,301	
5. Direct State aid*	<u>0.63%</u>	41,171	
. Total	<u>11.92%</u>	<u>\$784,675</u>	
3. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount	
. Normal Cost:			
(a) Retirement	5.77%	\$380,082	
(b) Disability	0.11%	7,536	
(c) Death	0.14%	9,463	
(d) Withdrawal	<u>1.20%</u>	79,243	
(e) Total	<u>7.22%</u>	<u>\$476,324</u>	
Projected annual payroll for fiscal year beginning on the valuation date**		\$6,585,515	

^{* \$41,171} represents a pro-rata portion of the \$346,000 direct State aid payment, allocated by projected payroll.

^{**} Projected payroll includes annualized pay for new hires and increases to current fiscal year.

Exhibit VII

Determination of Contribution Sufficiency – New Plan Tier I

	July 1, 2009		
. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount	
. Member contributions	5.50%	\$905,067	
. Employer contributions	5.79%	952,789	
. Direct State aid*	<u>0.63%</u>	102,877	
. Total	<u>11.92%</u>	\$1,960,733	
3. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount	
. Normal Cost:			
(a) Retirement	6.40%	\$1,053,243	
(b) Disability	0.13%	21,624	
(c) Death	0.14%	22,251	
(d) Withdrawal	<u>0.96%</u>	157,753	
(e) Total	<u>7.63%</u>	<u>\$1,254,871</u>	
Projected annual payroll for fiscal year beginning on the valuation date**		\$16,455,767	

^{* \$102,877} represents a pro-rata portion of the \$346,000 direct State aid payment, allocated by projected payroll.

39

^{**} Projected payroll includes annualized pay for new hires and increases to current fiscal year.

Exhibit VIII Determination of Contribution Sufficiency – New Plan Tier II

	July 1,	2009
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount
5. Member contributions	5.50%	\$1,776,698
5. Employer contributions	5.79%	1,870,378
7. Direct State aid*	<u>0.63%</u>	201,952
8. Total	<u>11.92%</u>	\$3,849,028
3. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount
2. Normal Cost:		
(a) Retirement	6.23%	\$2,011,195
(b) Disability	0.12%	39,963
(c) Death	0.15%	49,147
(d) Withdrawal	0.86%	277,448
(e) Total	<u>7.36%</u>	\$2,377,753
Projected annual payroll for fiscal year beginning on the valuatio	n date**	\$32,303,591

^{* \$201,952} represents a pro-rata portion of the \$346,000 direct State aid payment, allocated by projected payroll.

^{**} Projected payroll includes annualized pay for new hires and increases to current fiscal year.

FXHIRIT I	ı x

Supplementary Information Required by the GASB

Valuation date	July 1, 2009
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll, assuming payroll increases of 4.50% per annum
Remaining amortization period	26 years remaining as of July 1, 2009
Asset valuation method	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 that fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year).
Actuarial assumptions:	
Investment rate of return:	
Pre-retirement	8.50% per annum
Post-retirement	6.50% per annum
Projected salary increases	Select and ultimate rates by age, with ultimate rates of 3.50% - 7.00%
Plan membership:	
Pensioners and beneficiaries receiving benefits	1,264
Terminated vested members entitled to, but not yet receiving benefits	348
Other terminated non-vested members	750
Active members	<u>1,016</u>
Total	3,378

EXHIBIT X

Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

Healthy:

Male: 1994 Group Annuity Mortality Table for Males set back 2 yearsFemale: 1994 Group Annuity Mortality Table for Females set back 2 years

Rates for sample ages are shown on the next page.

Disabled:

Male and Female tables apply:

Age	Table
54 and younger	Disabled Eligible for Social Security Disability – ERISA Sec. 4044 for 2006
55 – 64	Graded from table for ages 54 and younger to table for ages 65 and older
65 and older	1994 Group Annuity Mortality Table set back 2 years

SECTION 4: Reporting Information for the Duluth Teachers' Retirement Fund Association

Summary of Rates:

Shown below for selected ages:

Rate (%)

	Mortality				Retirement		Ultimate Rate of Salary
Age	Male	Female	Withdrawal	Disability	Old	New	Increases
20	0.05%	0.03%	3.50%				6.90%
25	0.06	0.03	3.25				6.75
30	0.08	0.03	3.00				6.50
35	0.08	0.04	2.75	0.01%			6.25
40	0.09	0.06	2.50	0.03			6.00
45	0.14	0.09	2.00	0.06			5.50
50	0.21	0.12	1.50	0.10			5.00
55	0.36	0.19	0.75	0.15	15.00%	15.00%	4.50
60	0.63	0.34		0.21	15.00	15.00	4.00
65	1.15	0.67			40.00	40.00	3.50
67*	1.45	0.86			100.00	100.00	

^{*} Last Retirement Age

SECTION 4: Reporting Information for the Duluth Teachers' Retirement Fund Association

Retirement Rates:	Rates are shown for selected ages on the previous page. In addition, 40% of the members are assumed to retire each year that they are eligible for Rule of 90.		
Withdrawal Rates:	Select and ultimate rates are based on recent plan experience. Ultimate rates after the third year are shown for sample ages on the previous page. Select rates are as follows:		
First year:	60.00%		
Second year:	20.00%		
Third year:	15.00%		
Retirement Age for Inactive Vested Members:	60		
Unknown Data for Members:	Same as those exhibited by members with similar known characteristics.		
Percent Married:	80% of members are assumed to be married.		
Age of Spouse:	Females three years younger than males.		
Net Investment Return:			
Pre-Retirement:	8.50% per annum		
Post-Retirement:	6.50% per annum		
Salary Increases:	Reported salary for prior fiscal year, with new hires annualized, increased to current fiscal year and annually for each future year according to the ultimate rate table on the prior page. This table includes a 10-year select period. For service from hire through 7 completed years, an 8.00% salary increase is assumed. With 8 completed years, a 7.25% increase is assumed. With 9 completed years, a 6.50% increase is assumed.		
Administrative Expenses:	Prior year administrative expenses expressed as percentage of prior year projected payroll.		
Allowance for Combined Service Annuity:	10% load on liabilities for active members and 25% load on benefits for deferred vested participants in a Combined Service arrangement as of the valuation date.		

SECTION 4: Reporting Information for the Duluth Teachers' Retirement Fund Association

Return of Contributions:	All employees withdrawing after becoming eligible for a deferred benefit were assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.	
Special Consideration:	Annual 2.00% increase for annuitants is accounted for by using a 6.50% 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:	30% elect 50% J&S option	
	40% elect 100% J&S option	
Females:	15% elect 50% J&S option	
	15% elect 100% J&S option	
Asset Valuation Method:	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). Each year's Unrecognized Asset Return is being amortized over 5 years on a straight-line basis.	
Actuarial Cost Method:	Entry Age Normal Cost Method. Entry Age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are expressed as a level percentage of payroll, with Normal Cost determined as if the current benefit accrual rate had always been 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 4.50% per annum. If the Actuarial Value of Assets exceeds the Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percentage of payroll.	

EXHIBIT XI

Summary of Plan Provisions

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

Plan Year:	July 1 through June 30			
Eligibility (Old Plan and New Plan):	Licensed full-time and part-time teachers who are employed by the Duluth Public Schools other than a charter school teacher, 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 Association. Employees in the Old Plan are those first hired before July 1, 1981. Employees in the New Plan, Tier I are those first hired on or after July 1, 1981. Employees in the New Plan, Tier II are those first hired on or after July 1, 1989.			
Credited Service (Old Plan and New Plan):	Earned while employed in a covered position and employee contributions are deducted. May also include extended or mid-career leaves of absence, medical leave of absence, sabbatical leave, and military service. Credit for less than a full year is granted on a prorated basis.			
Salary (Old Plan and New Plan):	Total Compensation. Excludes any lump-sum annual leave or sick leave payments and lump-sum payments at time of separation from employment.			
Average Salary (Old Plan):	Average of the five highest years of annual salary.			
Average Salary (New Plan):	Average of the five highest successive years of salary. Average Salary is based on all Credited Service if less than five years.			

Retirement (Old Plan):

Normal Retirement:

Age Requirement: Age 60, and

Service Requirement: 10 years of Credited Service

Amount: 1.45% of Average Salary for each year of Credited Service

Early Retirement:

Age Requirement: Age 55, and

Service Requirement: 10 years of Credited Service, or

Age/Service

Requirement: The sum of age and Credited Service equals 90, if earlier.

Amount: 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 the sum of age and years

of Credited Service equals 90.

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

(a) 5, 10, 15 or 20-year certain and life, or

(b) 50% or 100% joint and survivor with bounce back feature without additional

reduction.

(c) Other equivalent options approved by the Board.

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

Increase all benefits by 2.00% each January 1. An additional increase will be allowed when the 5-year average rate of return of the fund exceeds the Fund's assumed rate of return, currently 8.50%. 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.

Note: A member who is eligible for normal or early benefits under the Old Plan may instead receive a benefit under New Plan Tier I or New Plan Tier II if it is greater than the benefit from the Old Plan.

Retirement (New Plan Tier I):

Normal Retirement:

Age/Service Requirement: Members first hired before July 1, 1989:

(a) Age 65, or

(b) Age 62 and 30 years of Credited Service.

Amount: 1.20% of Average Salary for each of the first ten years of Credited Service and 1.70%

of Average Salary for each subsequent year.

Early Retirement:

Age/Service Requirement: (a) Age 55 and three years of Credited Service, or

(b) Any age with 30 years of Credited Service, or

(c) The sum of age and Credited Service equals 90.

Amount: 1.20% of Average Salary for the first ten years of Credited Service and 1.70% of

Average Salary for each subsequent year with reduction of 0.25% for each month the member is under Normal Retirement Age. No reduction if the sum of age and years

of Credited Service equals 90.

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

(a) 5, 10, 15 or 20-year certain and life, or

(b) 50% or 100% joint and survivor with bounce back feature without additional

reduction.

(c) A larger life annuity before age 62 and reduced thereafter.

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

Increase all benefits by 2.00% each January 1. An additional increase will be allowed when the 5-year average rate of return of the fund exceeds the Fund's assumed rate of return, currently 8.50%. 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.

Note: A member who is eligible for normal or early benefits under the New Plan Tier I may instead receive a benefit under New Plan Tier II if it is greater than the benefit from New Plan Tier I.

Retirement (New Plan Tier II):

Normal Retirement:

Age/Service Requirement: Members 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.

Amount: 1.70% of Average Salary for each year of Credited Service.

Early Retirement:

Age/Service Requirement: Age 55 and three years of Credited Service.

Amount: 1.70% of Average Salary for each year of Credited Service with augmentation to the

age eligible for full social security retirement benefits at 3.00% 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:

(a) 5, 10, 15 or 20-year certain and life, or

(b) 50% or 100% joint and survivor with bounce back feature without additional

reduction.

(c) A larger life annuity before age 62 and reduced thereafter.

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

Increase all benefits by 2.00% each January 1. An additional increase will be allowed when the 5-year average rate of return of the fund exceeds the Fund's assumed rate of

		return, currently 8.50%. 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.
Disabilit	y (Old Plan):	
	Age/Service Requirement:	Totally and permanently disabled as a teacher before the age of 60 with five years of Credited Service.
	Amount:	(a) Normal Retirement benefit based on Credited Service and Average Salary at disability date without reduction for early commencement. Amount is reduced for Workers' Compensation.
		(b) Payment stops at age 60, or earlier if disability ceases or death occurs.
	Form of Payment:	Same as for Normal Retirement.
	Benefit Increases:	Same as for Normal Retirement.
Disabilit	y (New Plan):	
	Age/Service Requirement:	Totally and permanently disabled under Normal Retirement Age with three years of Credited Service. Also, at least two of the years of Credited Service must have been uninterrupted.
	Amount:	(a) Normal Retirement benefit based on Credited Service and Average Salary at disability without reduction commencement before retirement age. Benefit is reduced by Workers' Compensation.

employed may be reduced.

Form of Payment: Same as for Normal Retirement.

Benefit Increases: Same as for Normal Retirement.

Retirement After Disability:

Amount:

Age/Service Requirement: Normal Retirement Age if still totally and permanently disabled.

Optional annuity continues, otherwise the larger of the disability benefit paid before

Normal Retirement Age or the Normal Retirement benefit available at Normal

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

Retirement Age, or an actuarial equivalent optional annuity.

Benefit Increases: Same as for retirement.

Withdrawal (Old Plan):

Refund of Member's Contributions:

Age/Service Requirement: Termination from Teaching Service.

Amount: Member's contributions with 5.00% interest compounded annually if termination

occurred before May 16, 1989, and 6.00% interest if termination occurred on or after

May 16, 1989.

<u>Deferred Annuity</u>:

Age/Service Requirement: Ten years of Credited Service.

Amount: Benefit computed under law in effect at termination and increased by the following

annual percentage: 3.00% until January 1 of the year following attainment of age 55 and 5.00% thereafter until the annuity begins. Amount is payable as a Normal or

Early Retirement.

Withdrawal (New Plan):

Refund of Member's Contributions:

Age/Service Requirement: Termination from Teaching Service.

Amount: Member's contributions with 5.00% interest compounded annually if termination

occurred before May 16, 1989, and 6.00% interest if termination occurred on or after

May 16, 1989.

Deferred Annuity:

Age/Service Requirement: Three years of Credited Service.

Amount: For members hired before July 1, 2006, the benefit is computed under law in effect at

termination and increased by the following annual percentage:

(a) 3.00% until January 1 of the year following attainment of age 55, and

(b) 5.00% thereafter until the annuity begins.

For members hired after June 30, 2006, the benefit is computed under law in effect at

termination and increased by 2.50% for all years.

Amount is payable as a Normal or Early Retirement.

Pre-Retirement Death Benefit

(Old Plan):

Age/Service Requirement: None.

Amount: Refund of two times member's contributions accumulated with 5.00% interest

compounded annually if death occurred before May 16, 1989, and 6.00% interest if

death occurred on or after May 16, 1989.

Post-Retirement Death Benefit (Old Plan):

Age/Service Requirement:

None.

Amount:

Refund the excess of member's contributions over total benefits paid, accumulated with 5.00% interest compounded annually if death occurred before May 16, 1989, and 6.00% interest compounded annually if death occurred on or after May 16, 1989.

Surviving Spouse Benefit

(Old Plan):

Optional Annuity I:

Age/Service Requirement: Death of active member with ten years of Credited Service.

Amount: In lieu of the Pre-Retirement Death Benefit Refund, an annuity to surviving spouse

equivalent to 120% of the refund amount.

Optional Annuity II:

Age/Service Requirement: Death of active member who is age 55 with ten years of Credited Service.

Amount: In lieu of Pre-Retirement Death Benefit Refund or Surviving Spouse Optional

Annuity I, spouse may elect survivor portion of the 100% joint and survivor annuity

the member could have elected if terminated.

Pre-Retirement Death Benefit

(New Plan):

Surviving Spouse Optional Annuity:

Age/Service Requirement: Member who dies before retirement benefits commence with three years of Credited

Service.

Amount: Survivor's payment of the 100% joint and survivor benefit or an actuarial equivalent

term certain annuity. If commencement is prior to Normal Retirement Age, the benefit is reduced at the early retirement reduction factors, 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 Normal Retirement.

Refund of Member's Contributions:

Age/Service Requirement: Member or former member dies before receiving any disability or retirement benefits,

and survivor benefits are not payable.

Amount: Member's contributions with 5.00% interest compounded annually if death occurred

before May 16, 1989, and 6.00% interest if death occurred on or after May 16, 1989.

Contributions:

Member: 5.50% of salary. Employer: 5.79% of salary.

Direct State Aid: \$346,000 per year each October 1, beginning in 2008.

Changes in Plan Provisions: There have been no changes in the plan provisions since the prior valuation.

5070158v1/05776.072