

Duluth Teachers' Retirement Fund Association

Actuarial Valuation and Review as of
July 1, 2010

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November 18, 2010

*Board of Trustees
Duluth Teachers' Retirement Fund Association
625 East Central Entrance
Duluth, Minnesota 55811*

Members of the Board:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2010. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2011 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.

We certify that to the best of our knowledge and belief this actuarial valuation was performed in accordance with the requirements of Section 356.215, Minnesota Statutes, and the requirements of the Standards for Actuarial Work.

Sincerely,

THE SEGAL COMPANY

By:

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Senior Vice President and Chief Actuary*

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Consulting Actuary*

cc: Jay Stoffel, Executive Director

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

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, 2010. 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 2010;
- Standards for actuarial work as prescribed by the Legislative Commission on Pensions and Retirement
- 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, 2010, provided by the Fund;
- The audited assets of the Fund as of June 30, 2010, provided by the Fund;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions regarding employee terminations, retirement, death, etc.

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

Significant Issues in Valuation Year

1. The following Plan changes are reflected in this valuation as described in the 2010 Omnibus Pension Bill:
 - a. Effective July 1, 2010, the amount of post-retirement benefit increase was adjusted to be based on the Plan's funding ratio.
 - b. Effective July 1, 2010, the vesting requirement for members hired after June 30, 2010 was increased from 3 years to 5 years.
 - c. Effective July 1, 2010, future interest on accumulated member contributions was reduced from 6% to 4%.
 - d. Effective July 1, 2012, the rate of benefit augmentation on deferred benefits will be reduced to 2.0% for all years.
2. The actuarial accrued liability funding ratio based on the actuarial value of assets over the actuarial accrued liability as of July 1, 2010 is 81.66%, compared to 76.55% as of July 1, 2009. 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.
3. The 2010 Omnibus Pension Bill included a change to the post-retirement adjustment under Chapter 354A.27, Subdivisions 5, 6 and 7. The new law provides for a post-retirement benefit adjustment of CPI-U (up to 5%) when the funding ratio using the actuarial value of assets equals or exceeds 90%. Until that 90% threshold is met, the post-retirement adjustment will operate under a transition schedule, which provides for an adjustment based on the funding ratio using the market value of assets (2% when greater than 90%, 1% when greater than 80%, otherwise 0%). Since projected contributions are not sufficient to cover the long-term cost of the plan, neither threshold is expected to be met (90% funded on an actuarial value basis or 80% funded on a market value basis). As a result, the valuation for July 1, 2010 does not reflect any increases to benefits after retirement.
4. The 2010 Omnibus Pension Bill also included changes to the vesting requirement for members hired after June 30, 2010, future interest on accumulated member contributions, and the rate of benefit augmentation on deferred benefits (beginning July 1, 2012). The combined impact of these changes – along with reflecting no increases to benefits after retirement – was a \$61.6 million decrease in the actuarial accrued liability.
5. The statutory contribution rate under Chapter 354A is equal to 12.48% of payroll (which includes a direct State aid payment of \$346,000 per year under Subdivision 3a and an estimated \$320,361 of redirected “amortization State aid” under 423A.02, Subdivision 3), compared to the required contribution rate under Chapter 356 of 13.22% of payroll. Therefore, the contribution deficiency is 0.74% of payroll as of July 1, 2010. Last year's contribution rate deficiency was 5.90% of payroll. Each year there is a contribution deficiency leads to an increased deficiency in all future years.

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

6. The 2010 Omnibus Pension Bill also included increases to the statutory contribution rates: 0.5% each for employee and employer for fiscal 2012 and an additional 0.5% each for employee and employer for fiscal 2013 and thereafter. When including the total 2% increase in the statutory contribution rate under Chapter 354A and comparing that to the required contribution rate under Chapter 356 of 13.22% of payroll, there would be a contribution sufficiency of 1.26% of payroll.
7. For the year ended June 30, 2010, assets returned 17.63% 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 -2.31%, compared to the assumed rate of 8.50%. As of June 30, 2010, the actuarial value of assets (\$255.3 million) represented 132.7% of the market value (\$192.4 million).
8. The portion of deferred asset gains and losses recognized during the calculation of the July 1, 2010 actuarial value of assets resulted in a loss of \$20,796,635.
9. As indicated on page 4 of this report, the total investment loss not yet recognized as of June 30, 2010 is \$62,906,367. 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.
10. The unrecognized investment losses represent about 33% of the DTRFA market value of assets. Unless offset by future investment gains or other favorable experience, the recognition of the \$62.9 million market losses is expected to have a significant impact on the Association's future funding ratio and actuarial contribution requirement. If the deferred losses were recognized immediately in the actuarial value assets, the funding ratio would decrease from 81.66% to 61.54%, the unfunded actuarial accrued liability would increase from \$57.3 million to \$120.2 million, the actuarially determined contribution rate would increase from 13.22% to 20.31%, and the contribution deficiency would increase from 0.74% of payroll to 7.83% of payroll. After reflecting the increases in statutory contribution rates described in item 6 above, there is still a contribution deficiency of 5.83% of payroll.
11. As mentioned above, the current method used to determine the actuarial value of assets yields an amount that is 132.7% of the market value of assets as of June 30, 2010. 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.

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

12. 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.
13. While the -2.31% return on the actuarial value of assets caused a \$29,239,035 loss in the unfunded actuarial liability, demographic and liability experience resulted in a \$1,283,443 gain. This gain was primarily due to salary experience that was less than expected, offset by small demographic losses from active retirement and post-retirement mortality (fewer deaths than expected).
14. The most recent experience review study for the Fund was completed for the four-year period ending June 30, 2006. We recommend that consideration be given to authorizing the completion of a new four-year experience study covering the period July 1, 2006 through June 30, 2010. Alternatively, a five-year experience study can be completed after next year's valuation that covers the period July 1, 2006 through June 30, 2011. In either case, an amendment to Actuarial Standard of Practice (ASOP) No. 35 will require, effective for valuations with a measurement date on or after June 30, 2011, additional consideration and disclosure regarding the effect of mortality improvement. A mortality assumption that includes longer life expectancies than those in the current table will generally result in an increase in both the unfunded actuarial accrued liability and normal cost.
15. The actuarial valuation report as of June 30, 2010 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.

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

Summary of Key Valuation Results

	2010	2009
Contributions (% of payroll) for plan year beginning July 1:		
Statutory – Chapter 354A + Expected 423A	12.48%	11.92%
Required – Chapter 356	13.22%	17.82%
Sufficiency/(Deficiency)	-0.74%	-5.90%
Funding elements for plan year beginning July 1:		
Normal cost	\$3,287,998	\$4,108,948
Market value of assets	192,402,546	179,933,200
Actuarial value of assets (AVA)	255,308,913	279,255,559
Actuarial accrued liability (AAL)	312,649,572	364,811,453
Unfunded actuarial accrued liability	57,340,659	85,555,894
Funding ratios as of July 1:		
<u>Accrued Benefit Funding Ratio</u>	88.75%	83.36%
Current assets (AVA)	\$255,308,913	\$279,255,559
Current benefit obligations	287,677,752	335,015,635
<u>Projected Benefit Funding Ratio*</u>	102.06%	86.09%
Current and expected future assets	\$341,090,726	\$337,012,744
Current and expected future benefit obligations (Present Value of Benefits)	334,221,463	391,449,065
GASB 25/27 information:		
Annual required employer contributions for year ending June 30	\$5,922,137	\$5,169,526
Accrued Liability Funding Ratio (AVA/AAL) as of July 1	81.66%	76.55%
Covered actual payroll	\$49,501,727	\$51,019,447
Demographic data for plan year beginning July 1:		
Number of pensioners and beneficiaries	1,295	1,264
Number of vested terminated members	301	348
Number of other non-vested terminated members	721	750
Number of active members	1,054	1,016
Total projected payroll**	\$56,152,078	\$55,344,873

*Current assets exclude \$62.9 million of deferred market losses. Projected Benefit Funding Ratio would be 83.23% with current assets valued at market.

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

SECTION 2: Valuation Results for the Duluth Teachers' Retirement Fund Association

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 decreased for the first time in the past several years.

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 nine valuations can be seen in this chart.

CHART 1
Member Population: 2002 – 2010

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
2010	1,054	301	1,295	1.51

* Excludes terminated members due a refund of employee contributions

SECTION 2: Valuation Results for the Duluth Teachers' Retirement Fund Association

Active Members

Plan costs are affected by the age, years of service and payroll of active members. In this year's valuation, there were 1,054 active members with an average age of 47.2, average years of service of 12.4 years and average projected compensation of \$53,275. The 1,016 active members in the prior valuation had an average age of 47.6, average service of 12.8 years and average projected compensation of \$54,473.

Among active participants, there were two with unknown age. The actuarial calculations were adjusted for missing information by assuming that it was the same as information provided for other active participants with similar known characteristics.

Inactive Members

In this year's valuation, there were 301 members with a vested right to a deferred or immediate vested benefit.

In addition, there were 721 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, 2010

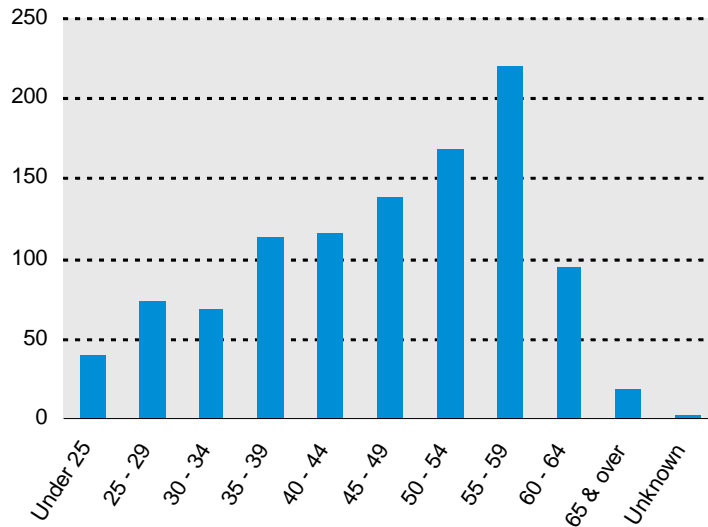
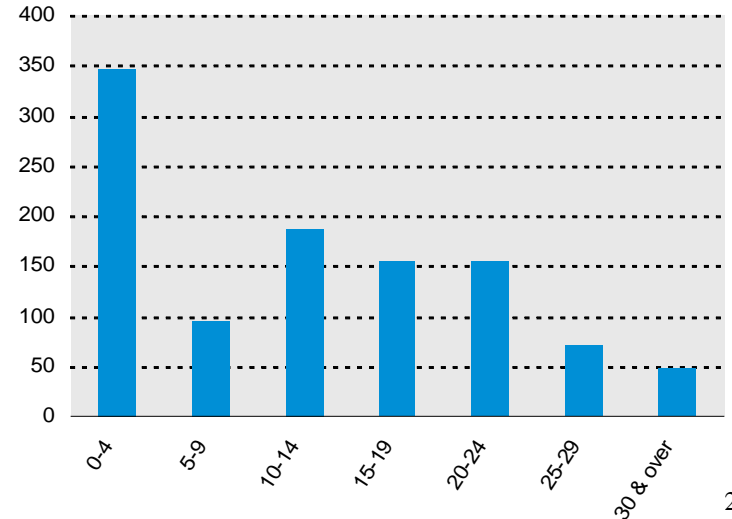


CHART 3

Distribution of Active Members by Years of Service as of June 30, 2010



SECTION 2: Valuation Results for the Duluth Teachers' Retirement Fund Association

Pensioners and Beneficiaries

As of June 30, 2010, 1,190 pensioners (including 19 disableds) and 105 beneficiaries were receiving total monthly benefits of \$1,859,012. For comparison, in the previous valuation, there were 1,168 pensioners (including 17 disableds) and 96 beneficiaries receiving monthly benefits of \$1,934,717.

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

CHART 4
Distribution of Pensioners and Beneficiaries by Type and by Monthly Amount as of June 30, 2010

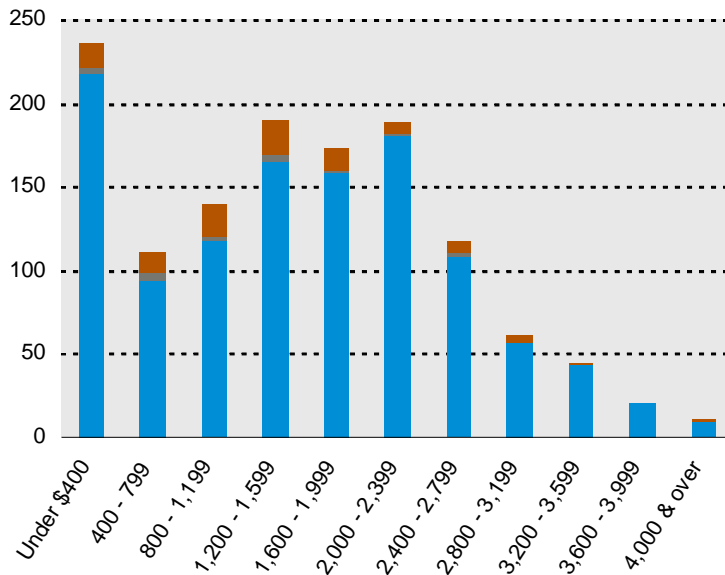
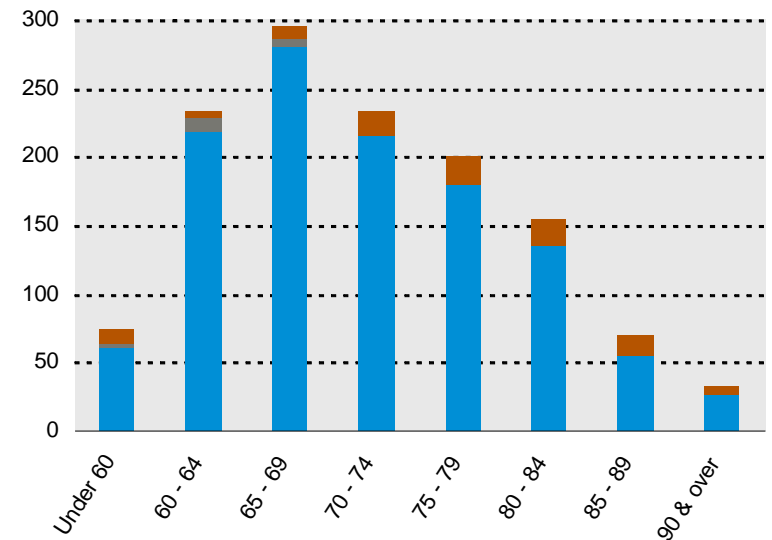


CHART 5
Distribution of Pensioners and Beneficiaries by Type and by Age as of June 30, 2010



SECTION 2: Valuation Results for the Duluth Teachers' Retirement Fund Association

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, 2010 and June 30, 2009

		2010		2009	
	<u>Original Amount</u>	<u>% Not Recognized</u>		<u>% Not Recognized</u>	
1. Calculation of unrecognized return					
(a) Year ended June 30, 2010	\$15,619,356	80%	\$12,495,485		--
(b) Year ended June 30, 2009	-96,764,564	60%	-58,058,738	80%	-\$77,411,651
(c) Year ended June 30, 2008	-57,603,390	40%	-23,041,356	60%	-34,562,034
(d) Year ended June 30, 2007	28,491,208	20%	<u>5,698,242</u>	40%	11,396,483
(e) Year ended June 30, 2006	6,274,217			20%	<u>1,254,843</u>
(f) Total unrecognized return			-\$62,906,367		-\$99,322,359
2. Market value of assets available for benefits			\$192,402,546		\$179,933,200
3. Less: Unrecognized return			-\$62,906,367		-\$99,322,359
4. Actuarial value of assets (Current Assets): (2) – (3)			<u>\$255,308,913</u>		<u>\$279,255,559</u>
5. Actuarial value as a percent of market value			<u>132.7%</u>		<u>155.20%</u>
Total original amount for the last five plan years preceding the valuation date			-\$103,983,173		-\$119,462,232
20% of total original amount stated above			-\$20,796,635		-\$23,892,446

SECTION 2: Valuation Results for the Duluth Teachers' Retirement Fund Association

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. Absent changes in external factors, 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 \$27,955,592, of which a loss of \$29,239,035 is from investments and a gain of \$1,283,443 is from all other sources. The net experience variation from individual sources other than investments was 0.4% of the actuarial accrued liability.

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

CHART 6

Actuarial Experience for Year Ended June 30, 2010

1. Net loss from investments on an actuarial value of assets basis	-\$29,239,035
2. Net gain from salary increases different than assumed	2,152,999
3. Net loss from post-retirement mortality experience	-840,350
4. Net loss from other experience	<u>-29,206</u>
5. Net experience loss: (1) + (2) + (3) + (4)	-\$27,955,592

SECTION 2: Valuation Results for the Duluth Teachers' Retirement Fund Association

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 funding 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 funding 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

Category	2010	2009	Change From Prior Year
Active members in valuation:			
Number	1,054	1,016	3.7%
Average age	47.2	47.6	N/A
Average service	12.4	12.8	N/A
Total projected payroll*	\$56,152,078	\$55,344,873	1.5%
Average projected compensation	53,275	54,473	-2.2%
Total active vested members	776	755	2.8%
Vested terminated members	301	348	-13.5%
Retired participants:			
Number in pay status	1,171	1,151	1.7%
Average age	71.7	71.6	N/A
Average monthly benefit	\$1,573	\$1,548	1.6%
Disabled participants:			
Number in pay status	19	17	11.8%
Average age	62.8	62.5	N/A
Average monthly benefit	\$1,151	\$1,198	-3.9%
Beneficiaries:			
Number in pay status	105	96	9.4%
Average age	77.5	77.0	N/A
Average monthly benefit	\$1,383	\$1,377	0.4%
Other non-vested terminated members	721	750	-3.9%

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

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

EXHIBIT B-1

**Members in Active Service as of June 30, 2010
By Age, Years of Service, and Average Projected Compensation – Total**

Age	Years of Service							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	27	27	--	--	--	--	--	--
	\$16,750	\$16,750	--	--	--	--	--	--
25 - 29	80	79	1	--	--	--	--	--
	21,797	21,529	\$42,959	--	--	--	--	--
30 - 34	68	51	16	1	--	--	--	--
	34,550	29,632	48,286	\$65,584	--	--	--	--
35 - 39	106	31	24	47	4	--	--	--
	55,743	36,747	58,653	65,794	\$67,405	--	--	--
40 - 44	123	35	15	44	28	1	--	--
	55,440	32,961	58,901	63,458	68,645	\$67,729	--	--
45 - 49	132	28	18	22	36	27	1	--
	57,284	29,189	53,973	66,267	66,141	69,088	\$68,377	--
50 - 54	166	31	8	30	35	49	13	--
	57,579	26,819	40,279	58,394	68,860	67,016	73,755	--
55 - 59	215	23	8	31	31	50	37	35
	64,984	32,669	39,337	61,334	67,760	70,683	73,028	\$76,212
60 - 64	122	33	4	11	19	24	19	12
	59,287	20,932	64,431	73,548	82,790	73,113	67,104	72,734
65 & Over	15	8	1	--	2	3	--	1
	36,972	16,464	41,335	--	64,393	54,272	--	89,931
Total	1,054	346	95	186	155	154	70	48
	\$53,275	\$26,531	\$52,781	\$63,818	\$69,582	\$69,276	\$71,488	\$75,628

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

EXHIBIT B-2

**Members in Active Service as of June 30, 2010
By Age, Years of Service, and Average Projected Compensation – Old Plan**

Age	Years of Service							
	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	5	--	--	--	--	2	3	--
55 - 59	\$66,537	--	--	--	--	\$58,803	\$71,694	--
60 - 64	59	--	--	1	1	4	19	34
65 & Over	73,987	--	--	\$67,395	\$66,041	62,709	72,837	\$76,384
	16	--	--	1	--	--	3	12
	74,112	--	--	103,302	--	--	69,891	72,734
	1	--	--	--	--	--	--	1
	89,931	--	--	--	--	--	--	89,931
Total	81	--	--	2	1	6	25	47
	\$73,748	--	--	\$85,349	\$66,041	\$61,407	\$72,346	\$75,740

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

EXHIBIT B-3

**Members in Active Service as of June 30, 2010
By Age, Years of Service, and Average Projected Compensation – New Plan Tier I**

Age	Years of Service							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
25 - 29	1	1	--	--	--	--	--	--
	\$17,813	\$17,813	--	--	--	--	--	--
30 - 34	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
35 - 39	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
40 - 44	1	--	--	1	--	--	--	--
	66,630	--	--	\$66,630	--	--	--	--
45 - 49	43	--	1	4	11	26	1	--
	67,682	--	\$33,936	67,777	\$67,063	\$69,201	\$68,377	--
50 - 54	65	--	--	3	6	46	10	--
	66,856	--	--	47,023	60,291	67,372	74,374	--
55 - 59	71	--	1	1	6	44	18	1
	70,308	--	38,530	18,733	60,309	72,369	73,229	\$70,364
60 - 64	49	--	--	1	9	23	16	--
	76,197	--	--	53,991	103,122	73,317	66,581	--
65 & Over	3	--	--	--	--	3	--	--
	54,272	--	--	--	--	54,272	--	--
Total	233	1	2	10	32	142	45	1
	\$69,651	\$17,813	\$36,233	\$55,153	\$74,668	\$69,941	\$71,012	\$70,364

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

EXHIBIT B-4

**Members in Active Service as of June 30, 2010
By Age, Years of Service, and Average Projected Compensation – New Plan Tier II**

Age	Years of Service							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	27	27	--	--	--	--	--	--
	\$16,750	\$16,750	--	--	--	--	--	--
25 - 29	79	78	1	--	--	--	--	--
	21,847	21,576	\$42,959	--	--	--	--	--
30 - 34	68	51	16	1	--	--	--	--
	34,550	29,632	48,286	\$65,584	--	--	--	--
35 - 39	106	31	24	47	4	--	--	--
	55,743	36,747	58,653	65,794	\$67,405	--	--	--
40 - 44	122	35	15	43	28	1	--	--
	55,348	32,961	58,901	63,384	68,645	\$67,729	--	--
45 - 49	89	28	17	18	25	1	--	--
	52,260	29,189	55,152	65,931	65,736	66,141	--	--
50 - 54	96	31	8	27	29	1	--	--
	50,831	26,819	40,279	59,657	70,633	67,063	--	--
55 - 59	85	23	7	29	24	2	--	--
	54,288	32,669	39,453	62,594	69,694	49,537	--	--
60 - 64	57	33	4	9	10	1	--	--
	40,589	20,932	64,431	72,415	64,492	68,413	--	--
65 & Over	11	8	1	--	2	--	--	--
	27,439	16,464	41,335	--	64,393	--	--	--
Total	740	345	93	174	122	6	--	--
	\$45,878	\$26,556	\$53,137	\$64,068	\$68,277	\$61,403	--	--

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

**EXHIBIT C-1
Retired Participants as of June 30, 2010
By Age, Years Retired and Average Annual Benefit – Total**

Age	Years Retired							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
50 - 54	1	--	--	1	--	--	--	--
55 - 59	\$7,477	--	--	\$7,477	--	--	--	--
60 - 64	60	60	--	--	--	--	--	--
65 - 69	22,132	\$22,132	--	--	--	--	--	--
70 - 74	219	133	85	1	--	--	--	--
75 - 79	22,755	24,550	\$20,161	4,448	--	--	--	--
80 - 84	280	57	129	92	1	1	--	--
85 - 89	17,682	15,574	18,222	18,260	\$17,648	\$15,051	--	--
90 & Over	215	5	25	110	75	--	--	--
Total	18,042	11,816	14,266	20,884	15,549	--	--	--
	179	1	2	25	113	38	--	--
	18,807	22,457	8,515	14,158	21,845	13,278	--	--
	135	1	1	--	41	64	28	--
	18,006	15,038	36,082	--	21,379	18,473	\$11,459	--
	55	--	--	--	--	15	36	4
	15,532	--	--	--	--	17,791	15,267	\$9,456
	27	--	--	--	--	--	11	16
	11,457	--	--	--	--	--	11,572	11,378
Total	1,171	257	242	229	230	118	75	20
	\$18,881	\$21,702	\$18,488	\$18,965	\$19,691	\$16,684	\$13,303	\$10,994

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

**EXHIBIT C-2
Retired Participants as of June 30, 2010
By Age, Years Retired and Average Annual Benefit – Old Plan**

Age	Years Retired							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
50 - 54	--	--	--	--	--	--	--	--
55 - 59	15	15	--	--	--	--	--	--
60 - 64	\$11,913	\$11,913	--	--	--	--	--	--
65 - 69	48	21	26	1	--	--	--	--
70 - 74	13,493	12,448	\$14,685	\$4,448	--	--	--	--
75 - 79	88	9	38	40	--	1	--	--
80 - 84	12,238	11,357	12,452	12,162	--	\$15,051	--	--
85 - 89	83	--	4	37	42	--	--	--
90 & Over	14,914	--	16,175	14,199	\$15,424	--	--	--
Total	54	--	--	3	33	18	--	--
	14,506	--	--	9,710	17,839	9,194	--	--
	45	--	--	--	1	24	20	--
	12,315	--	--	--	29,699	15,400	\$7,745	--
	34	--	--	--	--	6	24	4
	12,481	--	--	--	--	14,955	12,366	\$9,456
	25	--	--	--	--	--	9	16
	10,836	--	--	--	--	--	9,874	11,378
Total	392	45	68	81	76	49	53	20
	\$13,199	\$12,052	\$13,525	\$12,907	\$16,660	\$13,058	\$10,199	\$10,994

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

EXHIBIT C-3

Retired Participants as of June 30, 2010

By Age, Years Retired and Average Annual Benefit – New Plan Tier I

Age	Years Retired							
	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	--	--	--	--	--	--
60 - 64	\$32,742	\$32,742	--	--	--	--	--	--
65 - 69	149	97	52	--	--	--	--	--
70 - 74	27,825	29,268	\$25,131	--	--	--	--	--
75 - 79	132	17	69	45	1	--	--	--
80 - 84	25,261	28,125	24,863	\$24,958	\$17,648	--	--	--
85 - 89	80	1	2	49	28	--	--	--
90 & Over	25,146	28,794	22,389	29,232	18,063	--	--	--
	79	--	--	1	59	19	--	--
	23,749	--	--	35,321	26,104	\$15,824	--	--
	44	--	--	--	5	31	8	--
	22,205	--	--	--	24,871	22,151	\$20,745	--
	16	--	--	--	--	4	12	--
	20,441	--	--	--	--	18,562	21,067	--
	2	--	--	--	--	--	2	--
	19,212	--	--	--	--	--	19,212	--
Total	535	148	123	95	93	54	22	--
	\$25,778	\$29,908	\$24,936	\$27,272	\$23,526	\$19,659	\$20,781	--

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

EXHIBIT C-4

Retired Participants as of June 30, 2010

By Age, Years Retired and Average Annual Benefit – New Plan Tier II

Age	Years Retired							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	1	--	--	1	--	--	--	--
	\$7,477	--	--	\$7,477	--	--	--	--
55 - 59	12	12	--	--	--	--	--	--
	5,728	\$5,728	--	--	--	--	--	--
60 - 64	22	15	7	--	--	--	--	--
	8,628	10,981	\$3,585	--	--	--	--	--
65 - 69	60	31	22	7	--	--	--	--
	8,994	9,915	7,362	10,044	--	--	--	--
70 - 74	52	4	19	24	5	--	--	--
	12,106	7,571	13,008	14,145	\$2,517	--	--	--
75 - 79	46	1	2	21	21	1	--	--
	15,371	22,457	8,515	13,786	16,175	\$38,433	--	--
80 - 84	46	1	1	--	35	9	--	--
	19,557	15,038	36,082	--	20,643	13,999	--	--
85 - 89	5	--	--	--	--	5	--	--
	20,578	--	--	--	--	20,578	--	--
90 & Over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	244	64	51	53	61	15	--	--
	\$12,888	\$9,509	\$9,555	\$13,335	\$17,619	\$17,820	--	--

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

**EXHIBIT D
Disabled Members as of June 30, 2010
By Age, Years Disabled and Average Annual Benefit – Total**

Age	Years Disabled							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
50 - 54	2	1	1	--	--	--	--	--
55 - 59	\$10,584	\$5,999	\$15,169	--	--	--	--	--
60 - 64	1	1	--	--	--	--	--	--
65 - 69	3,827	3,827	--	--	--	--	--	--
70 - 74	9	4	1	2	1	1	--	--
75 - 79	15,131	13,645	31,959	\$8,426	\$29,167	\$3,621	--	--
80 - 84	7	--	5	1	1	--	--	--
85 - 89	14,458	--	15,986	1,734	19,544	--	--	--
90 & Over	--	--	--	--	--	--	--	--
Total	19	6	7	3	2	1	--	--
	\$13,810	\$10,734	\$18,151	\$6,196	\$24,355	\$3,621	--	--

Note: All participants are in New Plan Tier II

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

EXHIBIT E-1

Beneficiaries as of June 30, 2010

By Age, Years Since Member's Retirement Date and Average Annual Benefit – Total

Age	Years Since Member's Retirement Date							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	1	1	--	--	--	--	--	--
	\$838	\$838	--	--	--	--	--	--
50 - 54	3	2	1	--	--	--	--	--
	19,377	28,794	\$543	--	--	--	--	--
55 - 59	6	4	--	--	1	1	--	--
	5,542	2,956	--	--	\$15,743	\$5,682	--	--
60 - 64	5	--	1	1	2	1	--	--
	16,820	--	6,820	\$18,027	23,479	12,294	--	--
65 - 69	9	--	2	5	2	--	--	--
	20,440	--	10,112	22,207	26,350	--	--	--
70 - 74	18	--	1	4	10	3	--	--
	21,526	--	24,854	28,323	21,280	12,177	--	--
75 - 79	22	--	--	2	8	9	3	--
	18,752	--	--	18,984	22,374	16,973	\$14,272	--
80 - 84	20	--	--	--	3	10	7	--
	17,344	--	--	--	25,690	13,360	19,458	--
85 - 89	15	--	--	--	1	4	9	1
	11,325	--	--	--	2,113	14,950	10,990	\$9,048
90 & Over	6	--	--	--	--	--	2	4
	10,825	--	--	--	--	--	11,914	10,280
Total	105	7	5	12	27	28	21	5
	\$16,590	\$10,036	\$10,488	\$23,360	\$21,718	\$14,309	\$14,370	\$10,034

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

EXHIBIT E-2

Beneficiaries as of June 30, 2010

By Age, Years Since Member's Retirement Date and Average Annual Benefit – Old Plan

Age	Years Since Member's Retirement Date							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
50 - 54	--	--	--	--	--	--	--	--
55 - 59	2	--	--	--	1	1	--	--
60 - 64	\$10,712	--	--	--	\$15,743	\$5,682	--	--
65 - 69	2	--	--	--	2	--	--	--
70 - 74	23,479	--	--	--	23,479	--	--	--
75 - 79	4	--	2	1	1	--	--	--
80 - 84	16,015	--	\$10,112	\$22,376	21,457	--	--	--
85 - 89	5	--	--	1	2	2	--	--
90 & Over	17,806	--	--	34,187	17,019	10,402	--	--
Total	4	--	--	1	1	2	--	--
	14,216	--	--	18,960	3,161	17,371	--	--
	5	--	--	--	--	2	3	--
	15,960	--	--	--	--	8,998	\$20,601	--
	7	--	--	--	--	2	4	1
	15,209	--	--	--	--	22,758	12,975	\$9,048
	5	--	--	--	--	--	1	4
	9,682	--	--	--	--	--	7,289	10,280
Total	34	--	2	3	7	9	8	5
	\$15,088	--	\$10,112	\$25,174	\$17,337	\$13,860	\$15,124	\$10,034

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

EXHIBIT E-3

Beneficiaries as of June 30, 2010

By Age, Years Since Member's Retirement Date and Average Annual Benefit – New Plan Tier I

Age	Years Since Member's Retirement Date							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
50 - 54	1	1	--	--	--	--	--	--
	\$41,266	\$41,266	--	--	--	--	--	--
55 - 59	--	--	--	--	--	--	--	--
60 - 64	3	--	1	1	--	1	--	--
	12,380	--	\$6,820	\$18,027	--	\$12,294	--	--
65 - 69	2	--	--	1	1	--	--	--
	30,345	--	--	29,448	\$31,242	--	--	--
70 - 74	7	--	--	1	6	--	--	--
	25,944	--	--	39,141	23,744	--	--	--
75 - 79	7	--	--	--	2	4	1	--
	23,033	--	--	--	40,206	16,595	\$14,440	--
80 - 84	5	--	--	--	--	4	1	--
	18,069	--	--	--	--	18,244	17,372	--
85 - 89	2	--	--	--	1	--	1	--
	9,102	--	--	--	2,113	--	16,090	--
90 & Over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	27	1	1	3	10	9	3	--
	\$21,870	\$41,266	\$6,820	\$28,872	\$25,623	\$16,850	\$15,967	--

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

EXHIBIT E-4

Beneficiaries as of June 30, 2010

By Age, Years Since Member's Retirement Date and Average Annual Benefit – New Plan Tier II

Age	Years Since Member's Retirement Date							
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
50 - 54	1	1	--	--	--	--	--	--
	\$838	\$838	--	--	--	--	--	--
55 - 59	2	1	1	--	--	--	--	--
	8,433	16,323	\$543	--	--	--	--	--
60 - 64	4	4	--	--	--	--	--	--
	2,956	2,956	--	--	--	--	--	--
65 - 69	3	--	--	3	--	--	--	--
	19,737	--	--	\$19,737	--	--	--	--
70 - 74	6	--	1	2	2	1	--	--
	19,474	--	24,854	19,982	\$18,150	\$15,727	--	--
75 - 79	11	--	--	1	5	3	2	--
	17,676	--	--	19,007	19,083	17,212	\$14,189	--
80 - 84	10	--	--	--	3	4	3	--
	17,673	--	--	--	25,690	10,657	19,011	--
85 - 89	6	--	--	--	--	2	4	--
	7,534	--	--	--	--	7,141	7,730	--
90 & Over	1	--	--	--	--	--	1	--
	16,540	--	--	--	--	--	16,540	--
Total	44	6	2	6	10	10	10	--
	\$14,511	\$4,831	\$12,699	\$19,697	\$20,879	\$12,427	\$13,287	--

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

EXHIBIT F

Reconciliation of Member Data

	Active Members	Vested Terminated Members	Other Non- Vested Terminated Members	Retired Participants	Disabled Members	Beneficiaries	Total
A. Number as of June 30, 2009	1,016	347	750	1,151	17	96	3,377
B. Additions	97	0	0	0	0	0	97
C. Deletions:							0
1. Retirements	-39	-11	-1	51	0	0	0
2. Disability	-2	0	0	0	2	0	0
3. Died with beneficiary	-1	-1	-1	-11	0	13	0
4. Died without beneficiary	-1	0	-1	-22	0	-3	-28
5. Terminated – deferred	-3	4	-1	0	0	0	0
6. Terminated – other non-vested	-88	-4	92	0	0	0	0
7. Refunds	0	0	-35	0	0	0	-35
8. Rehired as active	75	-35	-40	0	0	0	0
9. Contributions Written Off	0	0	-46	0	0	0	-46
10. Expired Benefits	0	0	0	0	0	-2	-2
D. Data Adjustments	<u>0</u>	<u>1</u>	<u>4</u>	<u>2</u>	<u>0</u>	<u>1</u>	<u>8</u>
E. Number as of June 30, 2010	1,054	301	721	1,171	19	105	3,371

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

EXHIBIT G

Schedule of Pensioners and Beneficiaries Added to and Removed from Rolls

Fiscal Year	Added to Rolls		Removed from Rolls		Rolls – End of Year		% Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
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	1,264	23,605,292	5.9	18,690
2010	60	1,132,248	29	331,381	1,295	24,114,153	2.2	18,621

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

EXHIBIT H

Statement of Change in Net Plan Assets for Year Ended June 30, 2010

	Market Value
A. Assets available at beginning of year (BOY)	\$179,933,200
B. Additions:	
1. Member contributions	\$2,899,071
2. Employer contributions	2,866,150
3. Direct State aid (including redirected "amortization State aid" payments)	760,364
4. Investment income	3,496,324
5. Investment expenses	- \$1,216,188
6. Other	51,643
7. Net appreciation/(depreciation)	<u>27,829,972</u>
8. Total Additions	\$36,687,336
C. Operating Expenses:	
1. Service retirements	\$21,744,534
2. Disability benefits	161,700
3. Survivor benefits	1,689,957
4. Refunds	116,127
5. Administrative expenses	<u>505,672</u>
6. Total operating expenses	\$24,217,990
D. Other changes in reserves	--
E. Assets available at end of year (EOY)	\$192,402,546
F. Determination of current year unrecognized asset return	
1. Average balance:	
(a) Assets available at BOY: (A)	\$179,933,200
(b) Assets available at EOY: (E)	192,402,546
(c) Average balance [(a) + (b) – Net Investment Income] / 2 [Net Investment Income: (B.4) + (B.5) + (B.6) + (B.7)]	171,086,998
2. Expected return: 8.50% x (F.1.(c))	14,542,395
3. Actual return: (B.4) + (B.5) + (B.6) + (B.7)	<u>30,161,751</u>
4. Current year unrecognized asset return: (F.3) – (F.2)	\$15,619,356

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

EXHIBIT I

Statement of Plan Net Assets for Year Ended June 30, 2010

	Market Value
Assets in trust	
Cash, equivalents, short-term securities	\$12,900,142
Investments:	
Fixed income	\$60,743,478
Equity and other	121,968,370
Real estate and mortgages	--
Invested securities lending collateral	4,151,237
Other assets	<u>294,654</u>
Total assets in trust	\$200,057,881
Assets receivable	\$7,607,649
Liabilities	
Invested securities lending collateral	-\$5,717,726
Stock and bond purchases, and accounts payable	<u>-9,545,258</u>
Total liabilities	-\$15,262,984
Net assets held in Trust for Pension Benefits	
Member reserves	\$33,653,349
Other reserves	<u>158,749,197</u>
Total Assets Available for Benefits	\$192,402,546
Net Assets at Market Value	<u>\$192,402,546</u>

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

EXHIBIT J

Actuarial Value of Assets Calculation History Through June 30, 2010

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
2010	3,626,514	2,899,071	-6,254,241	505,672	23,712,318	255,308,913

* 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, 2010

1. Unfunded/(Overfunded) actuarial accrued liability at beginning of year		\$85,555,895
2. Normal cost at beginning of year, including expenses		4,614,116
3. Total contributions		-6,525,585
4. Interest		
(a) For whole year on (1) + (2)	\$7,664,451	
(b) For half year on (3)	<u>277,337</u>	
(c) Total interest: (4a) – (4b)		<u>7,387,114</u>
5. Expected unfunded/(overfunded) actuarial accrued liability:		\$91,031,540
6. Changes due to (gain)/loss from:		
(a) Investments	\$29,239,035	
(b) Demographics*	<u>-1,283,443</u>	
(c) Total changes due to (gain)/loss		\$27,955,592
7. Change due to plan amendments		<u>-61,646,473</u>
8. Unfunded/(Overfunded) actuarial accrued liability at end of year		<u>\$57,340,659</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 provides an overview of 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) Investment return — the rate of investment yield that the Fund will earn over the long-term future;
- (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) Retirement rates — the rate or probability of retirement at a given age;
- (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Actuarial Cost Method:

Entry Age Normal Actuarial Cost Method. Entry Age is calculated as current age minus pension credits. 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.

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 are 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.

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

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 Funding 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 Funding Ratio is calculated as the Actuarial Value of Assets (Current Assets) divided by the Current Benefit Obligations.

Projected Benefit Funding 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 Funding Ratio is calculated as the Current and Expected Future Assets divided by the Current and Expected Future Benefit Obligations. In general (and without consideration of unrecognized investment gains or losses), 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.

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

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 105 beneficiaries in pay status)		1,295
2. Members inactive during year ended June 30, 2010 with vested rights		301
3. Members active during the year ended June 30, 2010		1,054
Fully vested	776	
Not vested	278	
4. Other non-vested terminated members as of June 30, 2010		721

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. Determination of Actuarial Accrued Liability			
1. Active members:			
(a) Retirement benefits	\$117,419,816	\$17,141,561	\$100,278,255
(b) Disability benefits	1,360,312	404,088	956,224
(c) Death benefits	1,851,777	467,980	1,383,797
(d) Withdrawal benefits	<u>4,280,406</u>	<u>3,558,262</u>	<u>722,144</u>
(e) Total	\$124,912,311	\$21,571,891	\$103,340,420
2. Vested terminated members	\$7,467,513	--	\$7,467,513
3. Other non-vested terminated members	1,362,737	--	1,362,737
4. Annuitants	<u>200,478,902</u>	--	<u>200,478,902</u>
5. Total	\$334,221,463	\$21,571,891	\$312,649,572
B. Determination of Unfunded Actuarial Accrued Liability			
1. Actuarial Accrued Liability			\$312,649,572
2. Actuarial Value of Assets			<u>255,308,913</u>
3. Unfunded Actuarial Accrued Liability: (1) – (2)			\$57,340,659
C. Determination of Supplemental Contribution Rate			
1. Present value of future payrolls through the amortization date of June 30, 2035			\$887,714,217
2. Supplemental contribution rate: (B.3) / (C.1)			6.46%

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

**EXHIBIT II
Actuarial Balance Sheet**

A. Current Assets*				\$255,308,913
B. Expected Future Assets				
1. Present Value of Expected Future Statutory Supplemental Contributions				\$64,209,922
2. Present Value of Future Normal Costs				<u>21,571,891</u>
3. Total Expected Future Assets				\$85,781,813
C. Total Current and Expected Future Assets*				\$341,090,726
D. Current Benefit Obligations				
		<u>Non-Vested</u>	<u>Vested</u>	<u>Total</u>
1. Benefit recipients:				
(a) Retirement annuities		--	\$186,009,965	\$186,009,965
(b) Disability benefits		--	2,220,135	2,220,135
(c) Beneficiaries		--	12,248,802	12,248,802
2. Vested terminated members		--	7,467,513	7,467,513
3. Other non-vested terminated members		--	1,362,737	1,362,737
4. Active members:				
(a) Retirement benefits	206,484		73,958,437	74,164,921
(b) Disability benefits	2,540		729,337	731,877
(c) Death benefits	5,088		1,056,871	1,061,959
(d) Withdrawal benefits	<u>110,405</u>		<u>2,299,438</u>	<u>2,409,843</u>
5. Total Current Benefit Obligations	\$324,517		\$287,353,325	\$287,677,752
E. Expected Future Benefit Obligations				<u>\$46,543,711</u>
F. Total Current and Expected Future Benefit Obligations - Present Value of Benefits: (D.5 + E)				\$334,221,463
G. Unfunded Current Benefit Obligations (D.5 - A)				\$32,368,839
H. Unfunded Current and Future Benefit Obligations (F - C)*				-\$6,869,263

* Items do not reflect \$62.9 million of deferred market losses. Item H would be \$56,037,104 with current assets valued at market.

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

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
2010	17.82	49,501,727	2,899,071	5,922,137	3,626,514	61.24

* Includes contributions from other sources (if applicable)

** Actuarially Required Contribution Rate prior to change in actuarial assumptions and plan provisions is 7.62%.

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

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)	Funding 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
07/01/2010*	255,308,913	312,649,572	57,340,659	81.66	49,501,727	115.84

* Actuarial Accrued Liability reflects changes adopted as a result of the 2010 Omnibus Pension Bill.

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

Exhibit V

Determination of Contribution Sufficiency – Total

July 1, 2010		
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount
1. Member contributions	5.50%	\$3,088,365
2. Employer contributions	5.79%	3,251,205
3. Direct State aid*	<u>1.19%</u>	<u>666,361</u>
4. Total**	<u>12.48%</u>	<u>\$7,005,931</u>
B. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount
1. Normal Cost:		
(a) Retirement	4.79%	\$2,691,988
(b) Disability	0.10%	58,079
(c) Death	0.12%	65,708
(d) Withdrawal	<u>0.84%</u>	<u>472,223</u>
(e) Total	<u>5.85%</u>	<u>\$3,287,998</u>
2. Supplemental contribution amortization	6.46%	\$3,627,424
3. Allowance for administrative expenses	<u>0.91%</u>	<u>510,984</u>
4. Total	<u>13.22%</u>	<u>\$7,426,406</u>
C. Contribution Sufficiency / (Deficiency): (A.4) – (B.4)	-0.74%	-\$420,475
Projected annual payroll for fiscal year beginning on the valuation date***		\$56,152,078

* A direct State aid payment of \$346,000 is made each year on October 1st. In addition, it is assumed that an estimated \$320,361 of redirected "amortization State aid" under 423A.02, Subdivision 3 is paid the following June 30th.

** Statutory contribution rates are set to increase 0.5% each for employee and employer for fiscal 2012 and an additional 0.5% each for fiscal 2013 and thereafter. When including the total 2% increase in the statutory contribution rate under Chapter 354A and comparing that to the required contribution rate under Chapter 356 of 13.22% of payroll, there would be a contribution sufficiency of 1.26% of payroll.

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

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

Exhibit VI

Determination of Contribution Sufficiency – Old Plan

July 1, 2010		
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount
1. Member contributions	5.50%	\$328,549
2. Employer contributions	5.79%	345,872
3. Direct State aid*	<u>1.19%</u>	<u>70,889</u>
4. Total	<u>12.48%</u>	<u>\$745,310</u>
B. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount
1. Normal Cost:		
(a) Retirement	3.92%	\$233,976
(b) Disability	0.10%	5,757
(c) Death	0.11%	6,727
(d) Withdrawal	<u>1.07%</u>	<u>63,763</u>
(e) Total	<u>5.20%</u>	<u>\$310,223</u>
Projected annual payroll for fiscal year beginning on the valuation date**		\$5,973,617

* \$70,889 represents a pro-rata portion of the \$666,361 direct State aid and redirected "amortization State aid" payments, allocated by projected payroll.

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

Note: The above calculation does not take into account the necessary required contributions to amortize the unfunded accrued liability nor an allowance for administrative expenses.

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

Exhibit VII

Determination of Contribution Sufficiency – New Plan Tier I

			July 1, 2010	
A. Statutory Contributions – Chapter 354A			Percent of Payroll	Dollar Amount
1.	Member contributions		5.50%	\$892,582
2.	Employer contributions		5.79%	939,645
3.	Direct State aid*		<u>1.19%</u>	<u>192,588</u>
4.	Total		<u>12.48%</u>	<u>\$2,024,815</u>
B. Required Contributions – Chapter 356			Percent of Payroll	Dollar Amount
1.	Normal Cost:			
	(a) Retirement		4.67%	\$757,677
	(b) Disability		0.11%	17,519
	(c) Death		0.11%	18,368
	(d) Withdrawal		<u>0.85%</u>	<u>138,558</u>
	(e) Total		<u>5.74%</u>	<u>\$932,122</u>
Projected annual payroll for fiscal year beginning on the valuation date**				\$16,228,760

* \$192,588 represents a pro-rata portion of the \$666,361 direct State aid and redirected "amortization State aid" payments, allocated by projected payroll.

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

Note: The above calculation does not take into account the necessary required contributions to amortize the unfunded accrued liability nor an allowance for administrative expenses.

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

Exhibit VIII

Determination of Contribution Sufficiency – New Plan Tier II

			July 1, 2010	
			Percent of Payroll	Dollar Amount
A. Statutory Contributions – Chapter 354A				
1.	Member contributions		5.50%	\$1,867,234
2.	Employer contributions		5.79%	1,965,688
3.	Direct State aid*		<u>1.19%</u>	<u>402,884</u>
4.	Total		<u>12.48%</u>	<u>\$4,235,806</u>
B. Required Contributions – Chapter 356				
1.	Normal Cost:			
	(a) Retirement		5.01%	\$1,700,335
	(b) Disability		0.10%	34,803
	(c) Death		0.12%	40,613
	(d) Withdrawal		<u>0.80%</u>	<u>269,902</u>
	(e) Total		<u>6.03%</u>	<u>\$2,045,653</u>
Projected annual payroll for fiscal year beginning on the valuation date**				\$33,949,701

* \$402,884 represents a pro-rata portion of the \$666,361 direct State aid and redirected "amortization State aid" payments, allocated by projected payroll.

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

Note: The above calculation does not take into account the necessary required contributions to amortize the unfunded accrued liability nor an allowance for administrative expenses.

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

Exhibit IX

Additional Actuarial Disclosure – Key Results Prior to Any Plan Changes

A. Required Contributions	July 1, 2010	
	Percent of Payroll	Dollar Amount
1. Normal Cost:		
(a) Retirement	5.78%	\$3,243,928
(b) Disability	0.13%	70,767
(c) Death	0.14%	80,839
(d) Withdrawal	<u>0.92%</u>	<u>514,941</u>
(e) Total	<u>6.97%</u>	<u>\$3,910,475</u>
2. Supplemental contribution amortization	13.40%	\$7,524,378
3. Allowance for administrative expenses	<u>0.91%</u>	<u>510,984</u>
4. Total	<u>21.28%</u>	<u>\$11,945,837</u>
B. Funding Ratios		July 1, 2010
1. Actuarial Liability Funding Ratio		68.21%
2. Projected Benefit Funding Ratio		78.84%
C. Unfunded Actuarial Accrued Liability		\$118,987,132

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

EXHIBIT X

Cash Flow Sufficiency Test

	7/1/2010	7/1/2011	7/1/2012	7/1/2013	7/1/2014	7/1/2015	7/1/2016	7/1/2017	7/1/2018	7/1/2019
1. Market value of assets at beginning of year	\$192,402,546	\$186,428,496	\$183,647,689	\$181,142,115	\$178,248,490	\$175,088,496	\$171,684,345	\$168,104,891	\$164,461,788	\$160,779,033
2. Total expected contributions	7,005,931	7,909,919	8,879,060	9,278,617	9,696,155	10,132,482	10,588,444	11,064,924	11,562,845	12,083,173
3. Projected benefit payments	28,403,100	25,755,996	26,233,413	26,799,885	27,235,933	27,647,695	27,993,089	28,237,552	28,475,194	28,547,529
4. Administrative Expenses	510,984	533,978	558,007	583,118	609,358	636,779	665,434	695,378	726,671	759,371
5. Expected investment return at 8.50%										
(a) For whole year on (1)	16,354,216	15,846,422	15,610,054	15,397,080	15,151,122	14,882,522	14,593,169	14,288,916	13,979,252	13,666,218
(b) For half year on (2)	297,752	336,172	377,360	394,341	412,087	430,630	450,009	470,259	491,421	513,535
(c) For half year on (3) + (4)	1,228,849	1,117,324	1,138,635	1,163,778	1,183,425	1,202,090	1,217,987	1,229,650	1,241,079	1,245,543
(d) Total expected return: (5a) + (5b) – (5c)	15,423,119	15,065,270	14,848,779	14,627,643	14,379,784	14,111,062	13,825,191	13,529,525	13,229,594	12,934,210
6. Projected market value of assets at end of year: (1) + (2) - (3) - (4) + (5d)	\$186,428,496	\$183,647,689	\$181,142,115	\$178,248,490	\$175,088,496	\$171,684,345	\$168,104,891	\$164,461,788	\$160,779,033	\$157,248,887

- Notes:
1. Future total expected contributions are based on projected payroll increasing at the payroll growth assumption (4.5% annually) and include Statutory contribution rate increases of 0.5% each for employee and employer for fiscal 2012 and an additional 0.5% each for fiscal 2013 and thereafter.
 2. Projected benefit payments are based on a closed-group projection of the current members where actives, inactive vesteds, and members in payment status are assumed to decrement based on the demographic assumptions outlined in Exhibit XII.
 3. Administrative expenses are assumed to be 0.91% of projected payroll in the future.

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

EXHIBIT XI

Supplementary Information Required by the GASB

Valuation date	July 1, 2010
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll, assuming payroll increases of 4.50% per annum
Remaining amortization period	25 years remaining as of July 1, 2010
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), and is recognized (20% per year) over a five-year period.
Actuarial assumptions:	
Investment rate of return	8.50% 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	1,295
Terminated vested members entitled to, but not yet receiving benefits	301
Other terminated non-vested members	721
Active members	<u>1,054</u>
Total	3,371

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

EXHIBIT XII
Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

Healthy:

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

Age	Rate (%)						Ultimate Rate of Salary Increases
	Mortality		Withdrawal	Disability	Retirement		
	Male	Female			Old	New	
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:	Normal retirement age
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:	8.50% per annum
Salary Increases:	Reported salary for prior fiscal year, with new hires annualized, increased to current fiscal year and annually for each future year according to the ultimate rate table 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: 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.

Direct State aid payments include a portion attributed to redirected "amortization State aid" under 423A.02, Subdivision 3. For fiscal 2011, the amount is assumed to equal the amount that was paid for the 2010 fiscal year on June 30, 2010.

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

Post-retirement Increases Effective July 1, 2010, the law provides for a post-retirement benefit adjustment of CPI-U (up to 5%) when the funding ratio using the actuarial value of assets equals or exceeds 90%. Until that 90% threshold is met, the post-retirement adjustment will operate under a transition schedule, which provides for an adjustment based on the funding ratio using the market value of assets (2% when greater than 90%, 1% when greater than 80%, otherwise 0%). Since projected contributions are not sufficient to cover the long-term cost of the plan, neither threshold is expected to be met (90% funded on an actuarial value basis or 80% funded on a market value basis). Therefore, the valuation results do not reflect any increases to benefits after retirement.

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

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 (20% per year) on a straight-line basis.

Actuarial Cost Method: Entry Age Normal Actuarial Cost Method. Entry Age is calculated as current age minus pension credits. 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.

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

EXHIBIT XIII

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.

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

Retirement (Old Plan):

Normal Retirement:

<i>Age Requirement:</i>	Age 60, and
<i>Service Requirement:</i>	10 years of Credited Service
<i>Amount:</i>	1.45% of Average Salary for each year of Credited Service

Early Retirement:

<i>Age Requirement:</i>	Age 55, and
<i>Service Requirement:</i>	10 years of Credited Service, or
<i>Age/Service Requirement:</i>	The sum of age and Credited Service equals 90, if earlier.
<i>Amount:</i>	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.
<i>Form of Payment:</i>	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.
<i>Benefit Increases:</i>	<u>Annual Cost-of-Living Adjustment (COLA):</u>

Post-retirement benefit adjustments are based on the Plan's funding ratio as outlined in the assumptions section.

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.

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

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):

Post-retirement benefit adjustments are based on the Plan's funding ratio as outlined in the assumptions section.

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.

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

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):

Post-retirement benefit adjustments are based on the Plan's funding ratio as outlined in the assumptions section.

Disability (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.

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

Disability (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.
- (b) Payments may begin 90 days after disability and stops at Normal Retirement Age, or earlier if disability ceases or death occurs. Benefits paid while partially employed may be reduced.

Form of Payment: Same as for Normal Retirement.

Benefit Increases: Same as for Normal Retirement.

Retirement After Disability:

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

Amount: Optional annuity continues, otherwise the larger of the disability benefit paid before Normal Retirement Age or the Normal Retirement benefit available at Normal Retirement Age, or an actuarial equivalent optional annuity.

Benefit 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 4.00% interest compounded annually if termination occurred before May 16, 1989, and 6.00% interest if termination occurred on or after May 16, 1989. Effective July 1, 2010, member contributions accumulate with 4.00% interest compounded annually.

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

Deferred Annuity:

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. Effective July 1, 2012, the annual augmentation percentage is reduced to 2.00% from the age of termination to the age the annuity begins. The 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. Effective July 1, 2010, member contributions accumulate with 4.00% interest compounded annually.

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.

Effective July 1, 2012, the annual augmentation percentage for all New Plan members is reduced to 2.00% from the age of termination to the age the annuity begins. The amount is payable as a Normal or Early Retirement.

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

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. Effective July 1, 2010, member contributions accumulate with 4.00% interest compounded annually.

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. Effective July 1, 2010, member contributions accumulate with 4.00% interest compounded annually.

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.

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

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. Effective July 1, 2010, member contributions accumulate with 4.00% interest compounded annually.

Contributions:

- Member:* 5.50% of salary. Effective July 1, 2011, 6.00% of salary; effective July 1, 2012, 6.50% of salary.
- Employer:* 5.79% of salary. Effective July 1, 2011, 6.29% of salary; effective July 1, 2012, 6.79% of salary.
- Direct State Aid:* \$346,000 per year each October 1, beginning in 2008, plus a redirected "amortization State aid" payment of \$320,361 each June 30.

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

Changes in Plan Provisions:

The following Plan changes are reflected in this valuation as described in the 2010 Omnibus Pension Bill:

- Effective July 1, 2010, the amount of post-retirement benefit increases was adjusted to be based on the Plan's funding ratio.
- Effective July 1, 2010, the vesting requirement for members hired after June 30, 2010 was increased from 3 years to 5 years.
- Effective July 1, 2010, future interest on accumulated member contributions was reduced from 6% to 4%.
- Effective July 1, 2012, the rate of benefit augmentation on deferred benefits will be reduced to 2.0% for all years.

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