Duluth Teachers' Retirement Fund Association

Actuarial Valuation and Review as of July 1, 2006

Copyright © 2006

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



The Segal Company 6300 S. Syracuse Way, Suite 750 Englewood, CO 80111 T 303.714.9900 F 303.714.9990 www.segalco.com

November 16, 2006

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, 2006. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2007 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 By:

Thomas D. Levy, FSA, MAAA, EABrad E. Ramirez,Senior Vice President and Chief ActuaryConsulting Actua

Brad E. Ramirez, FSA, MAAA, EA Consulting Actuary Susan M. Hogarth, MAAA, EA Consulting Actuary

cc: Legislative Commission on Pensions and Retirement (3 copies) Minnesota Legislative Reference Library (6 copies) Minnesota Department of Finance (2 copies) Office of the State Auditor (2 copies)

SECTION 1

SECTION 2

VALUATION SUMMARY

Purposei	L
Significant Issues in Valuation Yearii	
Summary of Key Valuation Resultsiii	

VALUATION RESULTS

A. Member Data 1
B. Financial Information4
C. Actuarial Experience5
D. Information Required by the GASB

SECTION 3

SUPPLEMENTAL INFORMATION

EXHIBIT A
Table of Plan Coverage7
EXHIBIT B
Members in Active Service as of June 30, 20068
EXHIBIT C
Retired Participants as of June 30, 200611
EXHIBIT D
Disabled Members as of June 30, 200614
EXHIBIT E
Beneficiaries as of June 30, 2006 17 EXHIBIT F
Reconciliation of Member Data20
EXHIBIT G
Schedule of Pensioners and Beneficiaries Added to and Removed from Rolls21
EXHIBIT H
Statement of Change in
Net Plan Assets for Year Ended
June 30, 2006
EXHIBIT I
Statement of Plan Net Assets for Year Ended June 30, 200623
EXHIBIT J
Development of the Fund Through June 30, 200624
EXHIBIT K
Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 200625
EXHIBIT L
Definitions of Pension Terms

SECTION 4

REPORTING INFORMATION

EXHIBIT I
Summary of Actuarial Valuation Results28
EXHIBIT II
Actuarial Balance Sheet
EXHIBIT III
Supplementary Information Required by the GASB – Schedule of
Employer Contributions
Supplementary Information Required by the GASB – Schedule of Funding Progress
Exhibit V
Determination of Contribution Sufficiency - Total
Exhibit VI
Determination of Contribution Sufficiency - Old Plan34
Exhibit VII
Determination of Contribution Sufficiency - New Plan35
EXHIBIT VIII
Supplementary Information Required by the GASB36
EXHIBIT IX
Actuarial Assumptions and Actuarial Cost Method
EXHIBIT X
Summary of Plan Provisions42

Purpose

This report has been prepared by The Segal Company to present a valuation of the Duluth Teachers' Retirement Fund Association as of July 1, 2006. 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;
- 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, 2006, provided by the Fund;
- > The audited assets of the Fund as of June 30, 2006, 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 following key findings were the result of this actuarial valuation:

- The actuarial accrued liability funded ratio based on the actuarial value of assets over the actuarial accrued liability as of July 1, 2006 is 84.08% compared to 86.35% as of July 1, 2005. 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 portion of deferred asset gains and losses recognized during the calculation of the July 1, 2006 actuarial value of assets was \$5,847,531.
- ➤ The July 1, 2007 actuarial value of assets will recognize a gain of \$3,108,669 for previous years' gains and losses, along with one fifth of the actuarial value of asset gain/(loss) during the period July 1, 2006 June 30, 2007.
- The statutory contribution rate under Chapter 354A is equal to 11.29% of payroll compared to the required contribution rate under Chapter 356 of 15.19% of payroll. Therefore, the contribution deficiency is 3.90% of payroll as of July 1, 2006. Last year's contribution rate deficiency was 2.87% of payroll. Each year there is a contribution deficiency leads to an increased deficiency in all future years.
- > There were no changes in actuarial assumptions or actuarial cost methods since the prior valuation.
- The only change in plan provisions since the prior valuation is a decrease in the deferred annuity benefit increase rate for post June 30, 2006 (New Plan) hires, to 2.50% for all years. This change did not impact the results of the July 1, 2006 actuarial valuation.

Summary of Key Valuation Results		
	2006	2005
Contributions (% of payroll) for plan year beginning July 1:		
Statutory – Chapter 354A	11.29%	11.29%
Required – Chapter 356	15.19%	14.16%
Sufficiency/(Deficiency)	-3.90%	-2.87%
Funding elements for plan year beginning July 1:		
Normal cost	\$5,281,712	\$5,092,255
Market value of assets	281,950,173	267,383,556
Actuarial value of assets (AVA)	270,925,689	268,480,821
Actuarial accrued liability (AAL)	322,229,167	310,923,929
Unfunded/(Overfunded) actuarial accrued liability	51,303,478	42,443,108
Funded ratios:		
Accrued Benefit Funded Ratio	87.38%	89.81%
Current assets (AVA)	\$270,925,689	\$268,480,821
Current benefit obligations	310,052,477	298,956,352
Projected Benefit Funded Ratio	89.53%	92.01%
Current and expected future assets	\$326,671,670	\$324,077,398
Current and expected future benefit obligations (Present Value of Benefits)	364,865,937	352,211,826
GASB 25/27 for plan year beginning July 1:		
Annual required employer contributions	\$3,981,837	\$3,027,590
Accrued Liability Funded Ratio (AVA/AAL)	84.08%	86.35%
Covered actual payroll	\$49,521,572	\$49,148,256
Demographic data for plan year beginning July 1:		
Number of pensioners and beneficiaries	1,190	1,153
Number of vested terminated members	312	313
Number of other non-vested terminated members	570	638
Number of active members	1,174	1,164
Total projected payroll*	\$57,482,791	\$56,237,262
Average annual compensation (actual dollars)	41,405	41,666

*Projected compensation 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. 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, B, C, D, E and F.

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

CHART 1

Member Population: 2002 – 2006

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

*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 1,174 active members with an average age of 46.3, average years of service of 12.0 years and average projected compensation of \$48,963. The 1,164 active members in the prior valuation had an average age of 46.4, average service of 12.4 years and average projected compensation of \$48,314.

Inactive Members

In this year's valuation, there were 312 members with a vested right to a deferred or immediate vested benefit.

In addition, there were 570 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, 2006

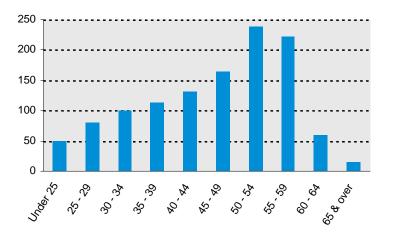
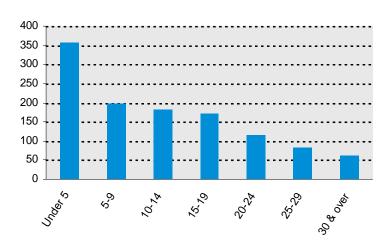


CHART 3

Distribution of Active Members by Years of Service as of June 30, 2006



Pensioners and Beneficiaries

As of June 30, 2006, 1,093 pensioners (including 17 disableds) and 97 beneficiaries were receiving total monthly benefits of \$1,658,446. For comparison, in the previous valuation, there were 1,059 pensioners (including 16 disableds) and 94 beneficiaries receiving monthly benefits of \$1,578,052.

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, 2006

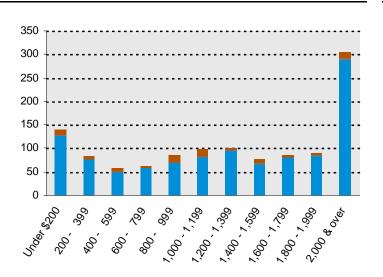
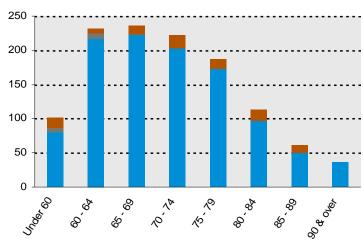


CHART 5

Distribution of Pensioners and Beneficiaries by Type and by Age as of June 30, 2006



Beneficiaries

Disability

Regular

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.

CHART 6

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

Determination of Actuarial Value of Assets for Years Ended June 30, 2006 and June 30, 2005

				2	2006		2005
1.	Calc	ulation of unrecognized return	Original Amount	% Not <u>Recognized</u>		% Not <u>Recognized</u>	
	(a)	Year ended June 30, 2006	\$6,274,217	80%	\$5,019,374		-
	(b)	Year ended June 30, 2005	140,297	60%	84,178	80%	\$112,238
	(c)	Year ended June 30, 2004	20,475,829	40%	8,190,332	60%	12,285,497
	(d)	Year ended June 30, 2003	-11,347,000	20%	-2,269,400	40%	-4,538,800
	(e)	Year ended June 30, 2002	-44,781,000		<u>-</u>	20%	<u>-8,956,200</u>
	(f)	Total unrecognized return			\$11,024,484		-\$1,097,265
2.	Tota	l return for the last five plan years			-\$29,237,657		-\$84,399,874
3.	Writ	e-up/down for year ended June 30, 2006: 2	20% of (2)		-5,847,531		-16,879,975
4.	Mar	ket value of assets available for benefits			\$281,950,173		\$267,383,556
5.	Less	: Unrecognized return			11,024,484		-1,097,265
6.	Actu	arial value of assets (Current Assets): (4)	- (5)		<u>\$270,925,689</u>		<u>\$268,480,821</u>
7.	Actu	arial value as a percent of market value			<u>96.09%</u>		100.41%

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 \$5,415,028, of which a loss of \$5,940,799 is from investments and a gain of \$525,771 is from all other sources. The net experience variation from individual sources other than investments was 0.2% of the actuarial accrued liability, which is under 1.0% of the actuarial accrued liability, including 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, 2006

1.	Net gain/(loss) from investments on an actuarial value of assets basis	-\$5,940,799
2.	Net gain/(loss) from other experience	<u>525,771</u>
3.	Net experience gain/(loss): $(1) + (2)$	-\$5,415,028

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 within the range of the GASB reporting requirements. Section 4, Exhibit III presents a schedule 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.

EXHIBIT A

Table of Plan Coverage

	Year End	ed June 30	
Category	2006	2005	Change From Prior Year
Active members in valuation:			
Number	1,174	1,164	0.9%
Average age	46.3	46.4	N/A
Average service	12.0	12.4	N/A
Total projected* payroll	\$57,482,791	\$56,237,262	2.2%
Average projected* compensation	48,963	48,314	1.3%
Total active vested members	862	902	-4.4%
Vested terminated members	312	313	-0.3%
Retired participants:			
Number in pay status	1,076	1,043	3.2%
Average age	71.0	70.9	N/A
Average monthly benefit	\$1,418	\$1,395	1.6%
Disabled members:			
Number in pay status	17	16	6.3%
Average age	61.0	60.1	N/A
Average monthly benefit	\$1,269	\$1,264	0.4%
Beneficiaries:			
Number in pay status	97	94	3.2%
Average age	75.0	75.1	N/A
Average monthly benefit	\$1,141	\$1,089	4.8%
Other non-vested terminated members	570	638	-10.7%

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

EXHIBIT B-1

Members in Active Service as of June 30, 2006 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	49	49									
	\$20,736	\$20,736									
25 - 29	81	80	1								
	23,405	23,206	\$39,355								
30 - 34	100	42	51	7							
	42,907	28,375	52,271	\$61,881							
35 - 39	114	37	39	37	1						
	48,639	29,325	56,214	59,660	\$60,034						
40 - 44	132	41	25	35	28	3					
	48,020	27,527	53,726	56,461	60,260	\$67,838					
45 - 49	164	35	34	32	43	19	1				
	50,570	22,555	50,843	63,394	58,000	62,530	\$64,735				
50 - 54	238	23	30	38	49	47	44	7			
	57,187	26,876	46,526	56,132	60,966	64,395	67,182	\$70,516			
55 - 59	222	24	16	27	43	36	32	44			
	58,863	24,275	54,502	56,484	63,061	63,862	65,394	67,831			
60 - 64	60	19	3	6	6	7	7	12			
	48,870	17,440	39,716	57,857	72,792	62,491	67,920	65,412			
65 & Over	14	7		1	3	3					
	35,211	19,397		52,914	44,086	57,336					
Total	1,174	357	199	183	173	115	84	63			
	\$48,963	\$24,468	\$52,042	\$58,489	\$60,747	\$63,710	\$66,533	\$67,668			

EXHIBIT B-2

Members in Active Service as of June 30, 2006 By Age, Years of Service, and Average Projected Compensation – Old

	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	3				1	1	1	
	\$62,986				\$58,610	\$65,614	\$64,735	
50 - 54	60		1		2	10	40	7
	67,122		\$60,987		57,430	66,171	67,404	\$70,516
55 - 59	83		1		3	4	31	44
	65,825		15,991		56,444	72,416	64,643	67,831
60 - 64	21					2	7	12
	64,909					51,356	67,920	65,412
65 & Over	3					3		
	57,336					57,336		
Total	170		2		6	20	79	63
	\$65,970		\$38,489		\$57,134	\$64,585	\$66,332	\$67,668

EXHIBIT B-3

Members in Active Service as of June 30, 2006 By Age, Years of Service, and Average Projected Compensation – New

	Years of Service								
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over	
Under 25	49	49							
	\$20,736	\$20,736							
25 - 29	81	80	1						
	23,405	23,206	\$39,355						
30 - 34	100	42	51	7					
	42,907	28,375	52,271	\$61,881					
35 - 39	114	37	39	37	1				
	48,639	29,325	56,214	59,660	\$60,034				
40 - 44	132	41	25	35	28	3			
	48,020	27,527	53,726	56,461	60,260	\$67,838			
45 - 49	161	35	34	32	42	18			
	50,339	22,555	50,843	63,394	57,985	62,359			
50 - 54	178	23	29	38	47	37	4		
	53,838	26,876	46,028	56,132	61,117	63,916	\$64,958		
55 - 59	139	24	15	27	40	32	1		
	54,705	24,275	57,069	56,484	63,557	62,792	88,680		
60 - 64	39	19	3	6	6	5			
	40,234	17,440	39,716	57,857	72,792	66,944			
65 & Over	11	7		1	3				
	29,177	19,397		52,914	44,086				
Total	1,004	357	197	183	167	95	5		
	\$46,084	\$24,468	\$52,179	\$58,489	\$60,877	\$63,526	\$69,702		

EXHIBIT C-1

Retired Participants as of June 30, 2006 By Age, Years Retired and Average Annual Benefit – Total

				Years R	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				
	\$6,675			\$6,675				
55 - 59	96	95	1					
	25,462	\$25,689	\$3,971					
60 - 64	231	101	126	3	1			
	18,337	20,409	16,995	6,592	\$13,437			
65 - 69	211	24	113	74				
	16,748	15,109	17,960	15,430				
70 - 74	194	1	37	109	45	1		1
	17,175	426	14,156	19,654	14,389	\$9,829		\$8,127
75 - 79	172		4	42	81	45		
	15,550		16,846	17,301	15,909	13,154		
80 - 84	93			4	23	54	12	
	13,297			18,467	13,942	13,693	\$8,556	
85 - 89	46				1	25	15	5
	11,089				1,347	12,974	10,432	5,585
90 & Over	32					1	15	16
	10,631					1,677	10,612	11,209
Total	1,076	221	281	233	151	126	42	22
	\$17,021	\$22,013	\$16,961	\$17,644	\$15,043	\$13,232	\$9,960	\$9,790

EXHIBIT C-2

Retired Participants as of June 30, 2006 By Age, Years Retired and Average Annual Benefit – Old

				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	32	31	1					
	\$16,904	\$17,321	\$3,971					
60 - 64	84	21	62		1			
	11,836	10,970	12,104		\$13,437			
65 - 69	72	1	34	37				
	13,104	7,409	12,053	\$14,223				
70 - 74	69		5	41	22			1
	13,253		12,069	15,588	9,403			\$8,127
75 - 79	47			2	25	20		
	11,287			18,632	13,906	\$7,279		
80 - 84	57				10	35	12	
	10,770				13,864	10,645	\$8,556	
85 - 89	36				1	15	15	5
	9,915				1,347	11,413	10,432	5,585
90 & Over	32					1	15	16
	10,631					1,677	10,612	11,209
Total	429	53	102	80	59	71	42	22
	\$12,202	\$14,617	\$12,005	\$15,033	\$11,999	\$9,733	\$9,960	\$9,790

EXHIBIT C-3

Retired Participants as of June 30, 2006 By Age, Years Retired and Average Annual Benefit – New

				Years R	etired			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Ove
Under 45								-
								-
45 - 49								-
								-
50 - 54	1			1				-
	\$6,675			\$6,675				-
55 - 59	64	64						-
	29,742	\$29,742						-
60 - 64	147	80	64	3				-
	22,052	22,887	\$21,733	6,592				-
65 - 69	139	23	79	37				-
	18,636	15,443	20,502	16,637				-
70 - 74	125	1	32	68	23	1		-
	19,340	426	14,482	22,106	\$19,159	\$9,829		-
75 - 79	125		4	40	56	25		
	17,152		16,846	17,234	16,803	17,854		-
80 - 84	36			4	13	19		-
	17,297			18,467	14,001	19,306		-
85 - 89	10					10		-
	15,316					15,316		-
90 & Over								-
								-
Total	647	168	179	153	92	55		-
	\$20,216	\$24,346	\$19,784	\$19,010	\$16,996	\$17,748		-

EXHIBIT D-1

Disabled Members as of June 30, 2006 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 & Ove				
Under 45								-				
								-				
45 - 49								-				
								-				
50 - 54	1	1						-				
	\$13,542	\$13,542						-				
55 - 59	6	2	1	2	1			-				
	14,064	19,933	\$1,779	\$19,752	\$3,233			-				
60 - 64	8	3	4	1				-				
	13,412	12,920	12,685	17,796				-				
65 - 69	2		2					-				
	26,806		26,806					-				
70 - 74								-				
								-				
75 - 79								-				
								-				
80 - 84								-				
								-				
85 - 89								-				
								-				
90 & Over								-				
								-				
Total	17	6	7	3	1			-				
	\$15,225	\$15,361	\$15,161	\$19,100	\$3,233			-				

EXHIBIT D-2

Disabled Members as of June 30, 2006 By Age, Years Disabled and Average Annual Benefit – Old

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

EXHIBIT D-3

Disabled Members as of June 30, 2006 By Age, Years Disabled and Average Annual Benefit - New

		Years Disabled										
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Ove				
Under 45								-				
								-				
45 - 49								-				
								-				
50 - 54	1	1						-				
	\$13,542	\$13,542						-				
55 - 59	6	2	1	2	1			-				
	14,064	19,933	\$1,779	\$19,752	\$3,233			-				
60 - 64	8	3	4	1								
	13,412	12,920	12,685	17,796								
65 - 69	2		2					-				
	26,806		26,806									
70 - 74								-				
75 - 79								-				
80 - 84								-				
								-				
85 - 89								-				
								-				
90 & Over												
								-				
Total	17	6	7	3	1							
	\$15,225	\$15,361	\$15,161	\$19,100	\$3,233			-				

EXHIBIT E-1

Beneficiaries as of June 30, 2006 By Age, Years Since Death and Average Annual Benefit – Total

			Years Si	nce Member'	s Retirement	Date		
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	8		5		3			
	\$4,247		\$286		\$10,848			
45 - 49	3	1	2					
	6,438	\$485	9,416					
50 - 54	4		1	1	2			
	8,391		2,780	\$14,054	8,365			
55 - 59	1	1						
	6,089	6,089						
60 - 64	7	2	2	3				
	18,323	9,028	20,196	23,271				
65 - 69	12		2	7	3			
	19,920		22,945	23,034	10,638			
70 - 74	20	1		6	9	4		
	15,943	26,805		15,667	16,647	\$12,059		
75 - 79	14		1	2	7	4		
	13,413		16,969	14,800	12,940	12,660		
80 - 84	16			1	3	8	4	
	15,490			1,886	16,245	17,979	\$13,345	
85 - 89	11					2	3	6
	9,527					12,173	8,670	\$9,073
90 & Over	1							1
	8,794							8,794
Total	97	5	13	20	27	18	7	7
	\$13,694	\$10,287	\$9,714	\$18,530	\$13,716	\$14,836	\$11,342	\$9,033

EXHIBIT E-2

Beneficiaries as of June 30, 2006

By Age, Years Since Death and Average Annual Benefit – Old

			Years Si	nce Member's	Retirement I	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			-
	\$9,564			\$14,054	\$5,073			-
55 - 59								-
								-
60 - 64	4	2		2				-
	14,995	\$9,028		20,961				-
65 - 69	4			2	2			-
	14,868			15,689	14,049			-
70 - 74	6			3	3			-
	9,502			7,277	11,727			-
75 - 79	3				1	2		-
	12,950				18,876	\$9,988		-
80 - 84	9				1	4	4	-
	15,458				9,996	18,935	\$13,345	-
85 - 89	10					1	3	(
	8,473					4,275	8,670	\$9,073
90 & Over	1							
	8,794							8,794
Total	39	2		8	8	7	7	2
	\$11,976	\$9,028		\$13,648	\$12,153	\$14,284	\$11,342	\$9,033

EXHIBIT E-3

Beneficiaries as of June 30, 2006 By Age, Years Since Death and Average Annual Benefit – New

			Years Si	ince Member'	s Retirement	Date		
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	8		5		3			
	\$4,247		\$286		\$10,848			
45 - 49	3	1	2					
	6,438	\$485	9,416					
50 - 54	2		1		1			
	7,219		2,780		11,658			
55 - 59	1	1						
	6,089	6,089						
60 - 64	3		2	1				
	22,761		20,196	\$27,891				
65 - 69	8		2	5	1			
	22,446		22,945	25,972	3,818			
70 - 74	14	1		3	6	4		
	18,704	26,805		24,057	19,107	\$12,059		
75 - 79	11		1	2	6	2		
	13,540		16,969	14,800	11,951	15,332		
80 - 84	7			1	2	4		
	15,531			1,886	19,370	17,023		
85 - 89	1					1		
	20,071					20,071		
90 & Over								
Total	58	3	13	12	19	11		
	\$14,849	\$11,126	\$9,714	\$21,784	\$14,374	\$15,187		

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	Disableds	Beneficiaries	Total
A.	Nui	nber as of June 30, 2005	1,164	313	638	1,043	16	94	3,268
B.	Ado	litions	135	17	67	57	1	8	285
C.	Del	etions:							
	1.	Retirements	-41	-12		N/A			-53
	2.	Disability	-1				N/A		-1
	3.	Died with beneficiary				-8		N/A	-8
	4.	Died without beneficiary			-1	-16		-5	-22
	5.	Terminated – deferred	-12	N/A	-1				-13
	6.	Terminated - other non-vested	-67		N/A				-67
	7.	Refunds	-4	-4	-12				-20
	8.	Rehired as active	N/A	-1	-19				-20
	9.	Contributions Written Off		-1	-64				-65
D.	Dat	a Adjustments			-38			<u> </u>	-38
E.	Nui	nber as of June 30, 2006	1,174	312	570	1,076	17	97	3,246

EXHIBIT G

Schedule of Pensioners and Beneficiaries Added to and Removed from Rolls

	Added to Rolls		Removed from Rolls		Rolls – End of Year		% Increase in	Average
Fiscal <u>Year</u>	<u>Number</u>	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>
1998	58	\$898,675	27	\$242,860	910	\$9,744,631	12.3%	\$10,708
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

EXHIBIT H

Statement of Change in Net Plan Assets for Year Ended June 30, 2006

			Market Value	Cost Value
A.	Assets	available at beginning of period	\$267,383,556	\$251,079,154
3.	Additi	ons:		
	1.	Member contributions	\$3,030,418	\$3,030,418
	2.	Employer contributions	2,867,299	2,867,299
	3.	Supplemental contribution		
	4.	Investment income	14,777,865	14,777,865
	5.	Investment expenses	-1,345,556	-1,345,556
	6.	Net realized gain/(loss)	11,922,924	11,922,924
	7.	Other	18,599	18,599
	8.	Net change in unrealized gain/(loss)	3,039,502	
	9.	Total Additions	\$34,311,051	\$31,271,549
C.	Operat	ting Expenses:		
	1.	Service retirements	\$17,749,633	\$17,749,633
	2.	Disability benefits	250,733	250,733
	3.	Survivor benefits	1,229,545	1,229,545
	4.	Refunds	89,683	89,683
	5.	Administrative expenses	424,840	424,840
	6.	Total operating expenses	\$19,744,434	\$19,744,434
D.	Other	changes in reserves		
Ε.	Assets	available at end of period	\$281,950,173	\$262,606,269
F.	Deterr	nination of current year unrecognized asset return		
	1.	Average balance:		
		(a) Assets available at BOY: (A)		\$267,383,556
		(b) Assets available at EOY: (E)		281,950,173
		(c) Average balance $[(a) + (b) - Net Investment Income] / 2$		
		[Net Investment Income: $(B.4) + (B.5) + (B.6) + (B.7) + (B.8)$]		260,460,198
	2.	Expected return: 8.50% x (F.1.(c))		22,139,117
	3.	Actual return: $(B.4) + (B.5) + (B.6) + (B.7) + (B.8)$		28,413,334
	4.	Current year unrecognized asset return: (F.3) – (F.2)		\$6,274,217

EXHIBIT I

Statement of Plan Net Assets for Year Ended June 30, 2006

	Market Value	Cost Value
Assets in trust		
Cash, equivalents, short-term securities	\$29,830,071	\$29,830,071
Investments:		
Fixed income	\$151,451,603	\$151,631,115
Equity	128,945,047	109,421,631
Real estate and mortgage loans	2,369,667	2,369,667
Invested securities lending collateral	40,200,081	40,200,081
Other assets	355,389	355,389
Total assets in trust	\$353,151,858	\$333,807,954
Assets receivable	\$2,240,248	\$2,240,248
Liabilities		
Invested securities lending collateral	-40,200,081	-40,200,081
Other	<u>-33,241,852</u>	<u>-33,241,852</u>
Total liabilities	-\$73,441,933	-\$73,441,933
Net assets held in Trust for Pension Benefits		
Member reserves	\$31,672,850	\$31,672,850
Future reserves	250,277,323	230,933,419
Total Assets Available for Benefits	\$281,950,173	\$262,606,269
Net Assets at Market/Cost Value	<u>\$281,950,173</u>	<u>\$262,606,269</u>

EXHIBIT J

Development of the Fund Through June 30, 2006

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

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

EXHIBIT K

Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2006

1. Unfunded/(Overfunded) actuarial accrued liability at beginning of year		\$42,443,108
 Normal cost at beginning of year, including expenses 		5,517,095
3. Total contributions		5,897,717
4. Interest		
(a) For whole year on $(1) + (2)$	\$4,076,617	
(b) For half year on (3)	250,653	
(c) Total interest: $(4a) - (4b)$		<u>3,825,964</u>
5. Expected unfunded/(overfunded) actuarial accrued liability: $(1) + (2) - (3) + (4(c))$		\$45,888,450
6. Changes due to (gain)/loss from:		
(a) Investments	\$5,940,799	
(b) Demographics*	-525,771	
(c) Total changes due to (gain)/loss		\$5,415,028
7. Unfunded/(Overfunded) actuarial accrued liability at end of year		<u>\$51,303,478</u>

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

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: Investment return — the rate of investment yield that the Fund will earn over (a) the long-term future; Mortality rates — the death rates of employees and pensioners; life (b) expectancy is based on these rates; <u>Retirement rates</u> — the rate or probability of retirement at a given age; (c) (d) Turnover rates — 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** The single sum value of lifetime benefits to existing pensioners. This sum takes For Pensioners: 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

Th	e valuation was made with respect to the following data supplied to us:			
1. Pensioners as of the valuation date (including 97 beneficiaries in pay status)				
2.	Members inactive during year ended June 30, 2006 with vested rights		312	
3.	Members active during the year ended June 30, 2006		1,174	
	Fully vested	862		
	Not vested	312		
4.	Other non-vested terminated members as of June 30, 2006		570	

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.	Dete	ermination of Actuarial Accrued Liability			
	1.	Active members:			
		(a) Retirement benefits	\$154,412,482	\$35,530,165	\$118,882,317
		(b) Disability benefits	1,424,602	546,556	878,046
		(c) Death benefits	2,250,520	780,222	1,470,298
		(d) Withdrawal benefits	7,086,132	<u>5,779,827</u>	<u>1,306,305</u>
		(e) Total	\$165,173,736	\$42,636,770	\$122,536,966
	2.	Vested terminated members	\$12,584,058		\$12,584,058
	3.	Other non-vested terminated members	950,077		950,077
	4.	Annuitants	186,158,066	<u> </u>	<u>186,158,066</u>
	5.	Total	\$364,865,937	\$42,636,770	\$322,229,167
B.	Dete	ermination of Unfunded Actuarial Accrued Liability			
	1.	Actuarial Accrued Liability			\$322,229,167
	2.	Actuarial Value of Assets			270,925,689
	3.	Unfunded Actuarial Accrued Liability: (1) – (2)			\$51,303,478
C.	Dete	ermination of Supplemental Contribution Rate			
	1.	Present value of future payrolls through the amortization date of June 30, 2032			\$978,299,358
	2.	Supplemental contribution rate: (B.3) / (C.1)			5.24%

EXHIBIT II

Actuarial Balance Sheet

A.	Cu	rrent A	Assets			\$270,925,689	
B.	Exp	Expected Future Assets					
	1.	1. Present Value of Expected Future Statutory Supplemental Contributions					
	2.	Prese	nt Value of Future Normal Costs			42,636,770	
	3.	Total	Expected Future Assets			\$55,745,981	
C.	Tot	tal Cu	rent and Expected Future Assets			\$326,671,670	
D.	Cu	rrent E	Benefit Obligations	Non-Vested	Vested	<u>Total</u>	
	1.	Bene	fit recipients:				
		(a)	Retirement annuities		\$172,852,369	\$172,852,369	
		(b)	Disability benefits		2,657,887	2,657,887	
		(c)	Beneficiaries		10,647,810	10,647,810	
	2.	Veste	ed terminated members		12,584,058	12,584,058	
	3.	Other	non-vested terminated members		950,077	950,077	
	4.	Activ	e members:				
		(a)	Retirement benefits	\$440,199	103,304,377	103,744,576	
		(b)	Disability benefits	7,702	892,141	899,843	
		(c)	Death benefits	11,506	1,405,461	1,416,967	
		(d)	Withdrawal benefits	132,666	4,166,224	4,298,890	
	5.	Total	Current Benefit Obligations	\$592,073	\$309,460,404	\$310,052,477	
E.	Exp	pected	Future Benefit Obligations			<u>54,813,460</u>	
F.	 F. Total Current and Expected Future Benefit Obligations - Present Value of Benefits: (D.5 + E) 						
G.	Cu	rrent U	Infunded Actuarial Liability (D.5 - A)			\$39,126,788	
H.	Cu	rrent a	nd Future Unfunded Actuarial Liability (F - C)			\$38,194,267	

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

* 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

Exhibit V

Determination of Contribution Sufficiency – Total

	July 1, 2	006	
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount	
1. Member contributions	5.50%	\$3,161,554	
2. Employer contributions	<u>5.79%</u>	<u>3,328,254</u>	
3. Total	<u>11.29%</u>	<u>\$6,489,808</u>	
B. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount	
1. Normal Cost:			
(a) Retirement	7.77%	\$4,464,259	
(b) Disability	0.11%	62,513	
(c) Death	0.16%	92,002	
(d) Withdrawal	<u>1.15%</u>	<u>662,938</u>	
(e) Total	<u>9.19%</u>	<u>\$5,281,712</u>	
2. Supplemental contribution amortization	5.24%	\$3,012,098	
3. Allowance for administrative expenses	0.76%	436,869	
4. Total	<u>15.19%</u>	<u>\$8,730,679</u>	
C. Contribution Sufficiency / (Deficiency): (A.3) – (B.4)	-3.90%	-\$2,240,871	
Projected* annual payroll for fiscal year beginning on the valuation date		\$57,482,791	

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

Exhibit VI

Determination of Contribution Sufficiency – Old Plan

	July 1, 2006			
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount		
. Member contributions	5.50%	\$616,817		
. Employer contributions	<u>5.79%</u>	<u>649,340</u>		
. Total	<u>11.29%</u>	<u>\$1,266,157</u>		
3. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount		
. Normal Cost:				
(a) Retirement	7.11%	\$797,822		
(b) Disability	0.09%	10,068		
(c) Death	0.14%	15,763		
(d) Withdrawal	<u>1.50%</u>	167,818		
(e) Total	<u>8.84%</u>	<u>\$991,471</u>		
Projected* annual payroll for fiscal year beginning on the valuation date		\$11,214,847		

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

Exhibit VII

Determination of Contribution Sufficiency – New Plan

	July 1, 2006		
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount	
. Member contributions	5.50%	\$2,544,737	
2. Employer contributions	<u>5.79%</u>	<u>2,678,914</u>	
B. Total	<u>11.29%</u>	<u>\$5,223,651</u>	
3. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount	
. Normal Cost:			
(a) Retirement	7.92%	\$3,666,437	
(b) Disability	0.11%	52,445	
(c) Death	0.16%	76,239	
(d) Withdrawal	<u>1.07%</u>	495,120	
(e) Total	<u>9.26%</u>	<u>\$4,290,241</u>	
Projected* annual payroll for fiscal year beginning on the valuation date		\$46,267,944	

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

EXHIBIT VIII

Supplementary Information Required by the GASB

Valuation date	July 1, 2006
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll, assuming payroll increases of 5.00% per annum
Remaining amortization period	26 years remaining as of July 1, 2006
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 5.00% - 7.00%
Plan membership:	
Pensioners and beneficiaries receiving benefits	1,190
Terminated vested members entitled to, but not yet receiving benefits	312
Other terminated non-vested members	570
Active members	<u>1,174</u>
Total	3,246

EXHIBIT IX

Actuarial Assumptions and Actuarial Cost Method

rtality Rates:		
Healthy Pre-Retirement:		
	Male:	1983 Group Annuity Mortality Table for Males set back 10 years
	Female:	1983 Group Annuity Mortality Table for Females set back 7 years
Healthy Post-Retirement:		
	Male:	1983 Group Annuity Mortality Table for Males set back 2 years
	Female:	1983 Group Annuity Mortality Table for Females
Disabled:		
	Male:	1977 Railroad Retirement Board Mortality Table for Disabled Lives
	Female:	1977 Railroad Retirement Board Mortality Table for Disabled Lives

Summary of Rates:		Show	n below for selecte	d ages:			
				Rate (%)			
	Mor	tality			Retirement		Ultimate Rate of Salary
Age	Male	Female	Withdrawal	Disability	Old	New	Increases
20	0.03%	0.01%	3.50%				6.90%
25	0.03	0.02	3.25				6.75
30	0.04	0.02	3.00				6.50
35	0.05	0.03	2.75	0.01%			6.25
40	0.06	0.04	2.50	0.03			6.00
45	0.09	0.06	2.00	0.06			5.50
50	0.12	0.08	1.50	0.10			5.00
55	0.22	0.14	0.75	0.15	15.00%	10.00%	5.00
60	0.39	0.21		0.21	15.00	10.00	5.00
65	0.61	0.34			40.00	20.00	5.00
70	0.92	0.58			50.00	40.00	5.00
75	1.56	0.97			80.00	80.00	5.00
80	2.75	1.85			100.00	100.00	5.00

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 in the rate table shown above. Select rates are as follows:	
First year:	40.00%	
Second year:	10.00%	
Third year:	6.00%	
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 5.00% base inflation assumption. During a 10-year select period, $0.30\% \times (10$ -T) where T is completed years of service is added to the ultimate rate.	
Administrative Expenses:	Prior year administrative expenses expressed as percentage of prior year projected payroll.	
Allowance for Combined		
Service Annuity:	10.00% load on liabilities for active members and 10.00% load on liabilities for former members.	

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:	35% elect 50% J&S option		
	55% elect 100% J&S option		
Females:	25% elect 50% J&S option		
	25% 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).		
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 5.00% per annum. If there is a negative Unfunded Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percentage of payroll.		

Changes in Actuarial Assumptions	
and Cost Methods:	There have been no changes in the actuarial assumptions or cost methods since the
	prior valuation.

EXHIBIT X

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 year 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 of 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 Pla. 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):		
<u>Normal Retirement:</u>		
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 hav received a payment for at least 12 months as of the adjustment date.
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.
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.
<u>Retirement After Disability</u> :	
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.

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

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.
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. 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 a 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 a 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):		
<u>Optional Annuity I</u> :		
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.	
Changes in Plan Provisions:	The only change made to the plan provisions since the prior valuation is the decrease in the deferred annuity benefit increase rate for post June 30, 2006 (New Plan) hires, to 2.50% for all years. This change did not impact the results of the July 1, 2006 actuarial valuation.	