Duluth Teachers' Retirement Fund Association

Actuarial Valuation and Review as of July 1, 2008

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SEGAL

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November 20, 2008

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, 2008. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2009 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:

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cc: Legislative Commission on Pensions and Retirement
Minnesota Legislative Reference Library
Minnesota Department of Finance
Office of the State Auditor

SECTION 1

VALUATION SUMMARY

SECTION 2

VALUATION RESULTS

SECTION 3

SUPPLEMENTAL INFORMATION

SECTION 4

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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, 2008. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- Section 356.215 of the Minnesota Statutes, as amended in 2008;
- The benefit provisions of the Retirement Fund, as administered by the Legislative Commission on Pensions and Retirement;
- The data as provided and confirmed by the DTRFA staff;
- The characteristics of covered active members, inactive vested members, pensioners and beneficiaries as of July 1, 2008, provided by the Fund;
- The audited assets of the Fund as of June 30, 2008, 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, 2008 is 82.10% compared to 86.77% as of July 1, 2007. 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, 2008 actuarial value of assets resulted in a loss of $444,368.
- The July 1, 2009 actuarial value of assets will recognize a loss of $4,539,534 for previous years' gains and losses, along with one fifth of the actuarial value of asset gain/(loss) during the period July 1, 2008 – June 30, 2009, which in total is 20% of the unrecognized gain/loss for the five years ending June 30, 2009.
- For the year ended June 30, 2008, assets returned -10.03% 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 9.27%, compared to the assumed rate of 8.50%. As of July 1, 2008, the actuarial value of assets ($298.07 million) represented 109.7% of the market value ($271.62 million).
- The statutory contribution rate under Chapter 354A is equal to 11.87% of payroll (which includes a direct State aid payment of $346,000 per year under Subdivision 3a) compared to the required contribution rate under Chapter 356 of 15.87% of payroll. Therefore, the contribution deficiency is 4.00% of payroll as of July 1, 2008. Last year's contribution rate deficiency was 3.24% of payroll. Each year there is a contribution deficiency leads to an increased deficiency in all future years. A direct State aid payment of $346,000 is made each year on October 1st, with the first payment due in 2008.
- Based on past experiences and future expectations, the following actuarial assumptions were changed in this valuation:
  - The salary increase select and ultimate rates were changed to reflect higher salary increases during early years of service and lower salary increases for participants over 50 years of age.
  - The payroll growth assumption was lowered from 5.00% to 4.50% per annum.
  - The withdrawal select period rates were increased to assume more turnover during early years of service.
  - The retirement rates for Rule of 90 eligible participants were increased to 100% for participants over 66 years of age. The rates for other retirements under the New Plan were increased to match the Old Plan through age 66, and are equal to 100% for participants 67 years of age and older.

  - The post-retirement mortality tables were changed from the 1983 Group Annuity Mortality Table set back two years for males only to the 1994 Group Annuity Mortality Table set back two years for both males and females.
  - The pre-retirement mortality tables were changed from the 1983 Group Annuity Mortality Table set back ten years for males and seven years for females to the 1994 Group Annuity Mortality Table set back two years for both males and females.
  - The mortality table for disabled participants was changed from the 1977 Railroad Retirement Board Mortality Table for Disabled Lives to the Disabled Eligible for Social Security Disability – ERISA Sec. 4044 for 2006 through ages 54, graded to the 1994 Group Annuity Mortality Table set back two years for males and females at age 65.
  - The proportion of males assumed to select the 50% Joint and Survivor form of payment was lowered from 35% to 30% and from 55% to 40% for the 100% Joint and Survivor form of payment. The proportion of females assumed to select the 50% Joint and Survivor and 100% Joint and Survivor forms of payment was lowered from 25% to 15%.

- The net impact of all assumption changes on the actuarial accrued liability was an increase of $15,634,538.
- 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.
- Prior to recognition of the assumption changes, the target amortization date for full funding of the unfunded actuarial accrued liability was June 30, 2032. Minnesota Statute 356.215, Subdivision 11, outlines the methodology for modifying the full funding date when assumption and plan changes occur. The first step is to calculate the amortization as a percent of payroll based upon the valuation results prior to recognition of any changes. This result, based on the original 24 year amortization period and prior assumptions, was 5.12%. Next, the amortization due to the increase in unfunded accrued liability resulting from assumption and plan changes is calculated, based on an amortization period of 30 years. This resulted in a percent-of-pay amortization of 1.50% to reflect the assumption changes, for a total rate of 6.62%. The last step is to determine a new amortization period based on the total rate of 6.62%, and round to the nearest integral number of years. Based on the new assumptions, the updated amortization period is 26.83 years, or 27 years when rounded. Therefore, the new target amortization date for full funding of the unfunded actuarial accrued liability, after recognizing the changes in actuarial assumptions, is June 30, 2035.
- There were no other changes in plan provisions or actuarial cost methods since the prior valuation.

Summary of Key Valuation Results

	2008	2007
Contributions (% of payroll) for plan year beginning July 1:		
Statutory – Chapter 354A	11.87%	11.29%
Required – Chapter 356	15.87%	14.53%
Sufficiency/(Deficiency)	-4.00%	-3.24%
Funding elements for plan year beginning July 1:		
Normal cost	$5,022,602	$5,416,358
Market value of assets	271,616,844	318,973,530
Actuarial value of assets (AVA)	298,067,085	288,264,749
Actuarial accrued liability (AAL)	363,044,284	332,216,981
Unfunded/(Overfunded) actuarial accrued liability	64,977,199	43,952,232
Funded ratios as of July 1:		
Accrued Benefit Funded Ratio	85.68%	90.09%
Current assets (AVA)	$298,067,085	$288,264,749
Current benefit obligations	347,872,563	319,973,899
Projected Benefit Funded Ratio	89.69%	91.60%
Current and expected future assets	$356,902,863	$344,279,792
Current and expected future benefit obligations (Present Value of Benefits)	397,909,525	375,865,828
GASB 25/27 information:		
Annual required employer contributions for year ending June 30	$4,559,594	$4,736,451
Accrued Liability Funded Ratio (AVA/AAL) as of July 1	82.10%	86.77%
Covered actual payroll	$51,711,330	$50,789,240
Demographic data for plan year beginning July 1:		
Number of pensioners and beneficiaries	1,243	1,227
Number of vested terminated members	310	321
Number of other non-vested terminated members	676	682
Number of active members	1,140	1,150
Total projected payroll*	$59,548,231	$58,666,809
Average annual compensation (actual compensation paid in prior year)	44,843	42,771

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

A. MEMBER DATA

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

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

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

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

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

CHART 1

Member Population: 2002 – 2008

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

** 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 1,140 active members with an average age of 46.6, average years of service of 12.0 years and average projected compensation of $52,235. The 1,150 active members in the prior valuation had an average age of 46.2, average service of 11.8 years and average projected compensation of $51,015.

Inactive Members
In this year's valuation, there were 310 members with a vested right to a deferred or immediate vested benefit.

In addition, there were 676 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, 2008

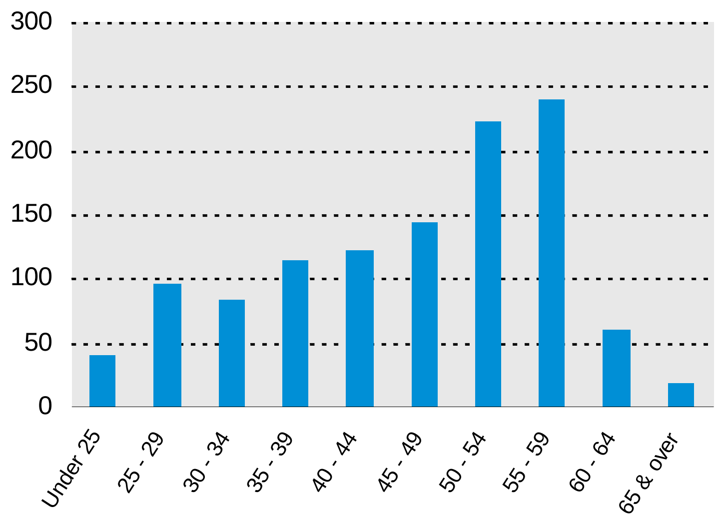
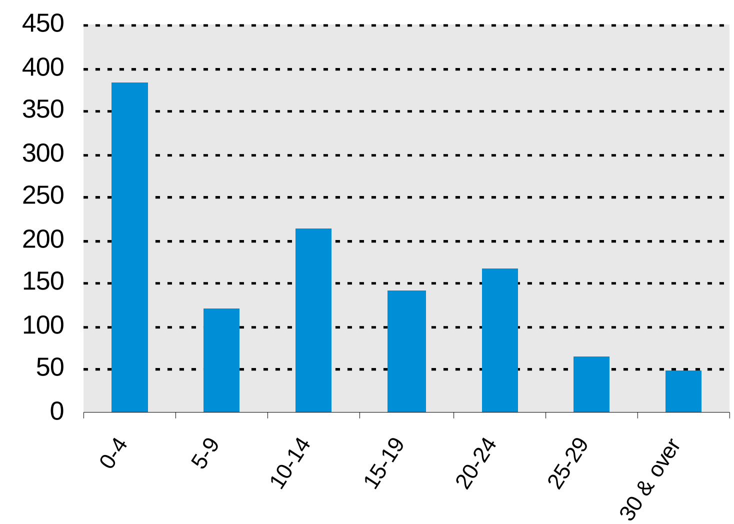


CHART 3

Distribution of Active Members by Years of Service as of June 30, 2008



Pensioners and Beneficiaries
As of June 30, 2008, 1,145 pensioners (including 17 disableds) and 98 beneficiaries were receiving total monthly benefits of $1,857,658. For comparison, in the previous valuation, there were 1,134 pensioners (including 15 disableds) and 93 beneficiaries receiving monthly benefi ts of $1,748,209.

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, 2008

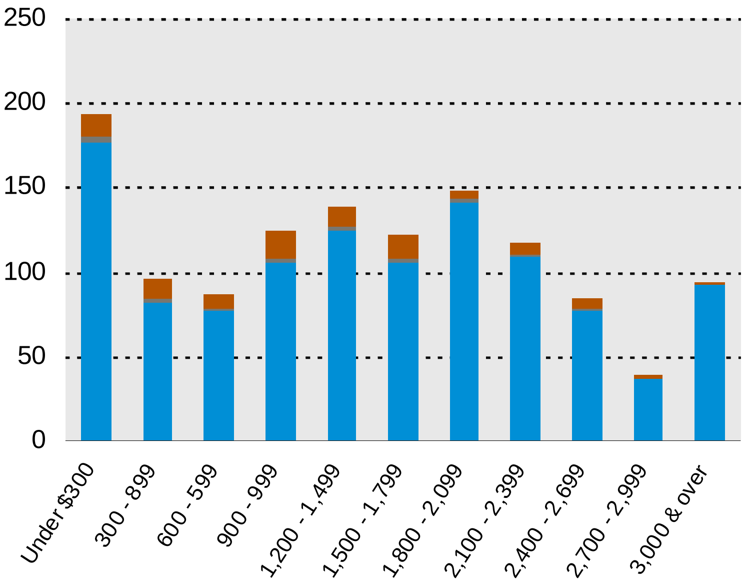
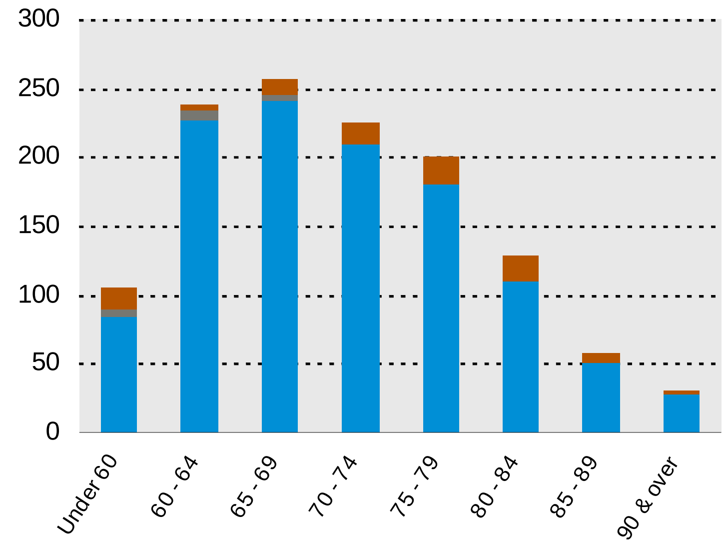


CHART 5

Distribution of Pensioners and Beneficiaries by Type and by Age as of June 30, 2008



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.

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, 2008 and June 30, 2007

			2008		2007	
1.	Calculation of unrecognized return	Original Amount	% Not Recognized		% Not Recognized	
	(a) Year ended June 30, 2008	-$57,603,390	80%	-$46,082,712		--
	(b) Year ended June 30, 2007	28,491,208	60%	17,094,725	80%	$22,792,966
	(c) Year ended June 30, 2006	6,274,217	40%	2,509,687	60%	3,764,530
	(d) Year ended June 30, 2005	140,297	20%	28,059	40%	56,119
	(e) Year ended June 30, 2004	20,475,829			20%	4,095,166
	(f) Total unrecognized return			-$26,450,241		$30,708,781
2.	Market value of assets available for benefits			$271,616,844		$318,973,530
3.	Less: Unrecognized return			-$26,450,241		30,708,781
4.	Actuarial value of assets (Current Assets): (2) – (3)			$298,067,085		$288,264,749
5.	Actuarial value as a percent of market value			109.74%		90.37%
	Total original amount for the last five plan years preceding the valuation date			-$2,221,839		$44,034,551
	20% of total original amount stated above			-$444,368		$8,806,910

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 $1,449,267, of which a gain of $2,165,878 is from investments and a loss of $3,615,145 is from all other sources. The net experience variation from individual sources other than investments was 1.00% of the actuarial accrued liability, which includes 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, 2008

1.	Net gain from investments on an actuarial value of assets basis	-$2,165,878
2.	Net gain from salary increases different than assumed	-641,722
3.	Net gain from post-retirement mortality experience	-238,540
4.	Net loss from other experience	4,495,407
5.	Net experience loss: (1) + (2) + (3) + (4)	$1,449,267

D. INFORMATION REQUIRED BY THE GASB

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

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

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

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

EXHIBIT A

Table of Plan Coverage

Category	2008	2007	Change From Prior Year
Active members in valuation:			
Number	1,140	1,150	-0.9%
Average age	46.6	46.2	N/A
Average service	12.0	11.8	N/A
Total projected payroll*	$59,548,231	$58,666,809	1.5%
Average projected* compensation	52,235	51,015	2.4%
Total active vested members	821	817	0.5%
Vested terminated members	310	321	-3.4%
Retired participants:			
Number in pay status	1,128	1,119	0.8%
Average age	71.3	71.2	N/A
Average monthly benefit	$1,509	$1,448	4.2%
Disabled members:			
Number in pay status	17	15	13.3%
Average age	61.5	61.4	N/A
Average monthly benefit	$1,177	$1,167	0.9%
Beneficiaries:			
Number in pay status	98	93	5.4%
Average age	76.3	75.2	N/A
Average monthly benefit	$1,256	$1,185	6.0%
Other non-vested terminated members	676	682	-0.9%

** 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, 2008
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	39	39	--	--	--	--	--	--
	$18,420	$18,420	--	--	--	--	--	--
25 - 29	97	96	1	--	--	--	--	--
	24,625	24,427	$43,558	--	--	--	--	--
30 - 34	83	45	26	12	--	--	--	--
	43,239	30,381	56,594	$62,520	--	--	--	--
35 - 39	115	45	21	47	2	--	--	--
	54,288	40,615	55,058	66,483	$67,236	--	--	--
40 - 44	122	29	21	41	27	4	--	--
	54,409	28,945	63,960	59,840	64,049	$68,142	--	--
45 - 49	144	35	16	32	32	28	1	--
	53,477	29,738	43,550	62,425	62,268	68,141	$65,014	--
50 - 54	223	38	21	42	32	61	27	2
	60,433	31,739	64,579	60,668	64,350	68,501	73,027	$78,445
55 - 59	239	31	12	31	43	56	29	37
	61,659	23,809	49,979	63,623	64,479	70,660	69,413	72,540
60 - 64	60	16	2	6	6	14	6	10
	57,112	27,702	19,489	75,884	56,515	68,330	76,438	73,484
65 & Over	18	9	1	2	--	4	1	1
	35,041	17,311	39,778	64,115	--	47,989	47,058	67,926
Total	1,140	383	121	213	142	167	64	50
	$52,235	$27,889	$55,751	$63,051	$63,572	$68,650	$71,178	$72,872

EXHIBIT B-2

Members in Active Service as of June 30, 2008
By Age, Years of Service, and Average Projected Compensation – Old Plan

		Years of Service						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
30 - 34	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
35 - 39	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
40 - 44	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	32	--	--	--	--	5	25	2
	$72,738	--	--	--	--	$68,117	$73,206	$78,445
55 - 59	67	--	1	2	2	4	21	37
	69,261	--	$19,943	$37,437	$58,346	76,994	68,429	72,540
60 - 64	14	--	--	--	--	1	4	9
	68,932	--	--	--	--	65,696	68,400	69,529
65 & Over	3	--	--	--	--	1	1	1
	58,857	--	--	--	--	61,586	47,058	67,926
Total	116	--	1	2	2	11	51	49
	$69,911	--	$19,943	$37,437	$58,346	$70,531	$70,349	$72,133

EXHIBIT B-3

Members in Active Service as of June 30, 2008
By Age, Years of Service, and Average Projected Compensation – New Plan

		Years of Service						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	39	39	--	--	--	--	--	--
	$18,420	$18,420	--	--	--	--	--	--
25 - 29	97	96	1	--	--	--	--	--
	24,625	24,427	$43,558	--	--	--	--	--
30 - 34	83	45	26	12	--	--	--	--
	43,239	30,381	56,594	$62,520	--	--	--	--
35 - 39	115	45	21	47	2	--	--	--
	54,288	40,615	55,058	66,483	$67,236	--	--	--
40 - 44	122	29	21	41	27	4	--	--
	54,409	28,945	63,960	59,840	64,049	$68,142	--	--
45 - 49	144	35	16	32	32	28	1	--
	53,477	29,738	43,550	62,425	62,268	68,141	$65,014	--
50 - 54	191	38	21	42	32	56	2	--
	58,372	31,739	64,579	60,668	64,350	68,535	70,784	--
55 - 59	172	31	11	29	41	52	8	--
	58,699	23,809	52,710	65,429	64,778	70,172	71,996	--
60 - 64	46	16	2	6	6	13	2	1
	53,514	27,702	19,489	75,884	56,515	68,533	92,516	$109,077
65 & Over	15	9	1	2	--	3	--	--
	30,278	17,311	39,778	64,115	--	43,457	--	--
Total	1,024	383	120	211	140	156	13	1
	$50,233	$27,889	$56,049	$63,294	$63,647	$68,518	$74,429	$109,077

EXHIBIT C-1
Retired Participants as of June 30, 2008
By Age, Years Retired and Average Annual Benefit – Total

		Years Retired						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 – 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	1	--	--	1	--	--	--	--
	$7,170	--	--	$7,170	--	--	--	--
55 - 59	83	83	--	--	--	--	--	--
	25,745	$25,745	--	--	--	--	--	--
60 - 64	226	127	96	2	--	1	--	--
	20,653	22,181	$19,060	3,207	--	$14,434	--	--
65 - 69	241	36	125	78	2	--	--	--
	18,061	16,051	17,261	20,382	$13,739	--	--	--
70 - 74	209	--	35	75	99	--	--	--
	17,034	--	15,815	14,643	19,276	--	--	--
75 - 79	180	--	3	28	93	56	--	--
	17,792	--	28,039	14,676	19,914	15,277	--	--
80 - 84	110	--	1	2	26	63	18	--
	15,751	--	1,092	23,916	20,293	16,053	$8,041	--
85 - 89	51	--	--	--	3	14	30	4
	11,834	--	--	--	11,966	12,425	12,183	$7,055
90 & Over	27	--	--	--	--	1	13	13
	11,025	--	--	--	--	1,447	10,522	12,265
Total	1,128	246	260	186	223	135	61	17
	$18,106	$22,487	$17,793	$16,991	$19,513	$15,235	$10,607	$11,039

EXHIBIT C-2
Retired Participants as of June 30, 2008
By Age, Years Retired and Average Annual Benefit – Old Plan

		Years Retired						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
55 - 59	24	24	--	--	--	--	--	--
	$15,336	$15,336	--	--	--	--	--	--
60 - 64	64	23	39	1	--	1	--	--
	13,104	12,298	$13,772	$4,265	--	$14,434	--	--
65 - 69	80	5	42	32	1	--	--	--
	13,605	11,403	13,165	14,622	$10,555	--	--	--
70 - 74	84	--	3	39	42	--	--	--
	14,012	--	16,888	10,922	16,675	--	--	--
75 - 79	43	--	--	3	19	21	--	--
	13,132	--	--	3,384	17,794	10,305	--	--
80 - 84	52	--	--	--	3	31	18	--
	11,293	--	--	--	20,049	12,335	$8,041	--
85 - 89	38	--	--	--	--	9	25	4
	11,002	--	--	--	--	12,390	11,134	$7,055
90 & Over	27	--	--	--	--	1	13	13
	11,025	--	--	--	--	1,447	10,522	12,265
Total	412	52	84	75	65	63	56	17
	$12,961	$13,614	$13,580	$12,111	$17,064	$11,527	$9,998	$11,039

EXHIBIT C-3
Retired Participants as of June 30, 2008
By Age, Years Retired and Average Annual Benefit – New Plan

		Years Retired						
Age	**Total**	**Under 5**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 & Over**
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	1	--	--	1	--	--	--	--
	$7,170	--	--	$7,170	--	--	--	--
55 - 59	59	59	--	--	--	--	--	--
	29,979	$29,979	--	--	--	--	--	--
60 - 64	162	104	57	1	--	--	--	--
	23,636	24,367	$22,679	2,150	--	--	--	--
65 - 69	161	31	83	46	1	--	--	--
	20,276	16,801	19,334	24,389	$16,923	--	--	--
70 - 74	125	--	32	36	57	--	--	--
	19,064	--	15,714	18,673	21,193	--	--	--
75 - 79	137	--	3	25	74	35	--	--
	19,254	--	28,039	16,031	20,458	$18,259	--	--
80 - 84	58	--	1	2	23	32	--	--
	19,748	--	1,092	23,916	20,325	19,655	--	--
85 - 89	13	--	--	--	3	5	5	--
	14,266	--	--	--	11,966	12,487	$17,425	--
90 & Over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	716	194	176	111	158	72	5	--
	$21,258	$24,865	$19,804	$20,289	$20,520	$18,479	$17,425	--

EXHIBIT D-1
Disabled Members as of June 30, 2008
By Age, Years Disabled and Average Annual Benefit – Total

		Years Disabled						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	2	2	--	--	--	--	--	--
	$9,113	$9,113	--	--	--	--	--	--
55 - 59	3	3	--	--	--	--	--	--
	21,025	21,025	--	--	--	--	--	--
60 - 64	8	1	2	3	2	--	--	--
	11,631	12,176	$15,339	$6,252	$15,721	--	--	--
65 - 69	4	1	2	--	1	--	--	--
	16,447	16,462	15,105	--	19,116	--	--	--
70 - 74	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
75 - 79	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
80 - 84	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
85 - 89	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
90 & Over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	17	7	4	3	3	--	--	--
	$14,126	$15,706	$15,222	$6,252	$16,853	--	--	--

EXHIBIT D-2

Disabled Members as of June 30, 2008
By Age, Years Disabled and Average Annual Benefit – Old Plan

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

EXHIBIT D-3
Disabled Members as of June 30, 2008
By Age, Years Disabled and Average Annual Benefit – New Plan

		Years Disabled						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	2	2	--	--	--	--	--	--
	$9,113	$9,113	--	--	--	--	--	--
55 - 59	3	3	--	--	--	--	--	--
	21,025	21,025	--	--	--	--	--	--
60 - 64	8	1	2	3	2	--	--	--
	11,631	12,176	$15,339	$6,252	$15,721	--	--	--
65 - 69	4	1	2	--	1	--	--	--
	16,447	16,462	15,105	--	19,116	--	--	--
70 - 74	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
75 - 79	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
80 - 84	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
85 - 89	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
90 & Over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	17	7	4	3	3	--	--	--
	$14,126	$15,706	$15,222	$6,252	$16,853	--	--	--

EXHIBIT E-1
Beneficiaries as of June 30, 2008
By Age, Years Since Death and Average Annual Benefit – Total

		Years Since Member's Retirement Date						
Age	**Total**	**Under 5**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 & Over**
Under 45	6	--	--	4	2	--	--	--
	$3,965	--	--	$256	$11,382	--	--	--
45 - 49	4	--	1	2	1	--	--	--
	7,989	--	$19,716	511	11,217	--	--	--
50 - 54	2	2	--	--	--	--	--	--
	8,262	$8,262	--	--	--	--	--	--
55 - 59	4	2	--	1	--	1	--	--
	7,718	5,164	--	15,097	--	$5,449	--	--
60 - 64	4	--	1	1	2	--	--	--
	19,921	--	17,532	17,121	22,515	--	--	--
65 - 69	12	--	4	4	4	--	--	--
	23,004	--	17,249	22,854	28,910	--	--	--
70 - 74	16	--	--	3	9	4	--	--
	16,511	--	--	15,661	18,674	12,281	--	--
75 - 79	20	--	1	2	8	9	--	--
	16,629	--	18,227	24,548	15,686	15,530	--	--
80 - 84	19	--	--	--	2	11	6	--
	17,879	--	--	--	18,145	18,917	$15,888	--
85 - 89	7	--	--	1	--	--	4	2
	9,086	--	--	2,026	--	--	9,585	$11,620
90 & Over	4	--	--	--	--	--	--	4
	7,994	--	--	--	--	--	--	7,994
Total	98	4	7	18	28	25	10	6
	$15,072	$6,713	$17,781	$12,432	$18,732	$16,097	$13,366	$9,203

EXHIBIT E-2
Beneficiaries as of June 30, 2008
By Age, Years Since Death and Average Annual Benefit – Old Plan

		Years Since Member's Retirement Date						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
55 - 59	2	--	--	1	--	1	--	--
	$10,273	--	--	$15,097	--	$5,449	--	--
60 - 64	3	--	1	--	2	--	--	--
	20,854	--	$17,532	--	$22,515	--	--	--
65 - 69	4	--	1	1	2	--	--	--
	18,575	--	1,862	21,457	25,490	--	--	--
70 - 74	5	--	--	2	2	1	--	--
	10,682	--	--	10,210	11,693	9,604	--	--
75 - 79	3	--	--	--	1	2	--	--
	9,942	--	--	--	3,031	13,398	--	--
80 - 84	8	--	--	--	--	4	4	--
	18,123	--	--	--	--	19,795	$16,451	--
85 - 89	6	--	--	--	--	--	4	2
	10,263	--	--	--	--	--	9,585	$11,620
90 & Over	4	--	--	--	--	--	--	4
	7,994	--	--	--	--	--	--	7,994
Total	35	--	2	4	7	8	8	6
	$13,691	--	$9,697	$14,243	$17,490	$15,129	$13,018	$9,203

EXHIBIT E-3
Beneficiaries as of June 30, 2008
By Age, Years Since Death and Average Annual Benefit – New Plan

		Years Since Member's Retirement Date						
Age	**Total**	**Under 5**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 & Over**
Under 45	6	--	--	4	2	--	--	--
	$3,965	--	--	$256	$11,382	--	--	--
45 - 49	4	--	1	2	1	--	--	--
	7,989	--	$19,716	511	11,217	--	--	--
50 - 54	2	2	--	--	--	--	--	--
	8,262	$8,262	--	--	--	--	--	--
55 - 59	2	2	--	--	--	--	--	--
	5,164	5,164	--	--	--	--	--	--
60 - 64	1	--	--	1	--	--	--	--
	17,121	--	--	17,121	--	--	--	--
65 - 69	8	--	3	3	2	--	--	--
	25,219	--	22,377	23,319	32,330	--	--	--
70 - 74	11	--	--	1	7	3	--	--
	19,161	--	--	26,564	20,669	$13,174	--	--
75 - 79	17	--	1	2	7	7	--	--
	17,809	--	18,227	24,548	17,494	16,140	--	--
80 - 84	11	--	--	--	2	7	2	--
	17,702	--	--	--	18,145	18,415	$14,762	--
85 - 89	1	--	--	1	--	--	--	--
	2,026	--	--	2,026	--	--	--	--
90 & Over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	63	4	5	14	21	17	2	--
	$16,059	$6,713	$21,015	$11,915	$19,146	$16,553	$14,762	--

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, 2007	1,150	321	682	1,119	15	93	3,380
B. Additions	102	3	6	--	--	3	114
C. Deletions:							--
1. Retirements	-27	-14	-3	44	--	--	--
2. Disability	-2	-1	--	--	3	--	--
3. Died with beneficiary	-1	--	--	-7	--	8	--
4. Died without beneficiary	--	-1	-2	-28	-1	-6	-38
5. Terminated – deferred	-2	11	-9	--	--	--	--
6. Terminated – other non-vested	-95	-1	96	--	--	--	--
7. Refunds	-5	--	5	--	--	--	--
8. Rehired as active	20	-8	-12	--	--	--	--
9. Contributions Written Off	--	--	-53	--	--	--	-53
10. Expired Benefits	--	--	--	--	--	--	--
D. Data Adjustments	--	--	-34	--	--	--	-34
E. Number as of June 30, 2008	1,140	310	676	1,128	17	98	3,369

EXHIBIT G

Schedule of Pensioners and Beneficiaries Added to and Removed from Rolls

	Added to Rolls		Removed from Rolls		Rolls – End of Year			
Fiscal Year	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances	% Increase in Annual Allowances	Average 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

EXHIBIT H

Statement of Change in Net Plan Assets for Year Ended June 30, 2008

			Market Value
A.	Assets available at beginning of year (BOY)		$318,973,530
B.	Additions:		
	1.	Member contributions	$2,954,062
	2.	Employer contributions	2,994,086
	3.	Direct State aid	--
	4.	Investment income	10,339,717
	5.	Investment expenses	-1,591,864
	6.	Other	31,173
	7.	Net appreciation/(depreciation)	-39,957,251
	8.	Total Additions	-$25,230,077
C.	Operating Expenses:		
	1.	Service retirements	$19,934,499
	2.	Disability benefits	218,783
	3.	Survivor benefits	1,426,239
	4.	Refunds	59,144
	5.	Administrative expenses	487,944
	6.	Total operating expenses	$22,126,609
D.	Other changes in reserves		--
E.	Assets available at end of year (EOY)		$271,616,844
F.	Determination of current year unrecognized asset return		
	1.	Average balance:	
		(a) Assets available at BOY: (A)	$318,973,530
		(b) Assets available at EOY: (E)	271,616,844
		(c) Average balance [(a) + (b) – Net Investment Income] / 2 [Net Investment Income: (B.4) + (B.5) + (B.6) + (B.7)]	310,884,300
	2.	Expected return: 8.50% x (F.1.(c))	26,425,165
	3.	Actual return: (B.4) + (B.5) + (B.6) + (B.7)	-31,178,225
	4.	Current year unrecognized asset return: (F.3) – (F.2)	-$57,603,390

EXHIBIT I

Statement of Plan Net Assets for Year Ended June 30, 2008

	Market Value
Assets in trust	
Cash, equivalents, short-term securities	$21,634,841
Investments:	
Fixed income	$144,043,648
Equity and other	129,178,502
Real estate and mortgages	--
Invested securities lending collateral	44,213,053
Other assets	342,105
Total assets in trust	$339,412,149
Assets receivable	$13,642,490
Liabilities	
Invested securities lending collateral	-$44,213,053
Stock and bond purchases, and accounts payable	-37,224,742
Total liabilities	-$81,437,795
Net assets held in Trust for Pension Benefits	
Member reserves	$32,750,049
Other reserves	238,866,795
Total Assets Available for Benefits	$271,616,844
Net Assets at Market Value	$271,616,844

EXHIBIT J

Actuarial Value of Assets Calculation History Through June 30, 2008

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

* *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, 2008

1. Unfunded/(Overfunded) actuarial accrued liability at beginning of year		$43,952,232
2. Normal cost at beginning of year, including expenses		5,904,301
3. Total contributions		5,948,148
4. Interest		
(a) For whole year on (1) + (2)	$4,237,805	
(b) For half year on (3)	252,796	
(c) Total interest: (4a) – (4b)		3,985,009
5. Expected unfunded/(overfunded) actuarial accrued liability: (1) + (2) – (3) + (4(c))		$47,893,394
6. Changes due to (gain)/loss from:		
(a) Investments	-$2,165,878	
(b) Demographics*	3,615,145	
(c) Total changes due to (gain)/loss		1,449,267
7. Increase due to changes in actuarial assumptions		15,634,538
8. Unfunded/(Overfunded) actuarial accrued liability at end of year		$64,977,199

** 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: (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.
Normal Cost:	The amount of contributions required to fund the benefit allocated to the current year of service.
Actuarial Accrued Liability For Actives:	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial Accrued Liability For Pensioners:	The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Unfunded Actuarial Accrued Liability:	The extent to which the actuarial accrued liability of the Fund exceeds the assets of the Fund. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the Unfunded Actuarial Accrued Liability: Payments made over a period of years equal in value to the Fund's unfunded actuarial accrued liability.

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

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

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

EXHIBIT I

Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us:

1.	Pensioners as of the valuation date (including 98 beneficiaries in pay status)		1,243
2.	Members inactive during year ended June 30, 2008 with vested rights		310
3.	Members active during the year ended June 30, 2008		1,140
	Fully vested	821	
	Not vested	319	
4.	Other non-vested terminated members as of June 30, 2008		676

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	$155,371,435	$28,693,771	$126,677,664
(b) Disability benefits	1,702,632	522,269	1,180,363
(c) Death benefits	2,853,958	807,903	2,046,055
(d) Withdrawal benefits	7,031,093	4,841,298	2,189,795
(e) Total	$166,959,118	$34,865,241	$132,093,877
2. Vested terminated members	$12,645,823	--	$12,645,823
3. Other non-vested terminated members	1,050,125	--	1,050,125
4. Annuitants	217,254,459	--	217,254,459
5. Total	$397,909,525	$34,865,241	$363,044,284
B. Determination of Unfunded Actuarial Accrued Liability			
1. Actuarial Accrued Liability			$363,044,284
2. Actuarial Value of Assets			298,067,085
3. Unfunded Actuarial Accrued Liability: (1) – (2)			$64,977,199
C. Determination of Supplemental Contribution Rate			
1. Present value of future payrolls through the amortization date of June 30, 2035			$985,145,958
2. Supplemental contribution rate: (B.3) / (C.1)			6.60%

EXHIBIT II
Actuarial Balance Sheet

		Non-Vested	Vested	Total
A.	Current Assets			$298,067,085
B.	Expected Future Assets			
	1. Present Value of Expected Future Statutory Supplemental Contributions			$23,970,537
	2. Present Value of Future Normal Costs			34,865,241
	3. Total Expected Future Assets			$58,835,778
C.	Total Current and Expected Future Assets			$356,902,863
D.	Current Benefit Obligations			
	1. Benefit recipients:			
	(a) Retirement annuities	- -	$202,221,675	$202,221,675
	(b) Disability benefits	- -	2,974,879	2,974,879
	(c) Beneficiaries	- -	12,057,905	12,057,905
	2. Vested terminated members	- -	12,645,823	12,645,823
	3. Other non-vested terminated members	- -	1,050,125	1,050,125
	4. Active members:			
	(a) Retirement benefits	$660,339	$108,790,491	$109,450,830
	(b) Disability benefits	11,480	1,112,074	1,123,554
	(c) Death benefits	16,655	1,911,891	1,928,546
	(d) Withdrawal benefits	204,382	4,214,844	4,419,226
	5. Total Current Benefit Obligations	$892,856	$346,979,707	$347,872,563
E.	Expected Future Benefit Obligations			$50,036,962
F.	Total Current and Expected Future Benefit Obligations - Present Value of Benefits: (D.5 + E)			$397,909,525
G.	Current Unfunded Actuarial Liability (D.5 - A)			$49,805,478
H.	Current and Future Unfunded Actuarial Liability (F - C)			$41,006,662

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

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

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

EXHIBIT IV

Supplementary Information Required by the GASB – Schedule of Funding Progress

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

Exhibit V

Determination of Contribution Sufficiency – Total

		July 1, 2008	
A. Statutory Contributions – Chapter 354A		**Percent of Payroll**	**Dollar Amount**
1.	Member contributions	5.50%	$3,275,153
2.	Employer contributions	5.79%	3,447,843
3.	Direct State aid*	0.58%	346,000
4.	Total	11.87%	$7,068,996
B. Required Contributions – Chapter 356		**Percent of Payroll**	**Dollar Amount**
1.	Normal Cost:		
	(a) Retirement	7.08%	$4,216,815
	(b) Disability	0.12%	69,837
	(c) Death	0.19%	110,743
	(d) Withdrawal	1.05%	625,207
	(e) Total	8.44%	$5,022,602
2.	Supplemental contribution amortization	6.60%	$3,930,183
3.	Allowance for administrative expenses	0.83%	494,250
4.	Total	15.87%	$9,447,035
C. Contribution Sufficiency / (Deficiency): (A.4) – (B.4)		-4.00%	-$2,378,039
Projected annual payroll for fiscal year beginning on the valuation date**			$59,548,231

** A direct State aid payment of $346,000 is made each year on October 1st, with the first payment due in 2008.*
*** Projected payroll includes annualized pay for new hires and increases to current fiscal year.*

Exhibit VI

Determination of Contribution Sufficiency – Old Plan

A. Statutory Contributions – Chapter 354A	July 1, 2008 Percent of Payroll	July 1, 2008 Dollar Amount
1. Member contributions	5.50%	$446,034
2. Employer contributions	5.79%	469,552
3. Direct State aid*	0.58%	47,121
4. Total	11.87%	$962,707

B. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount
1. Normal Cost:		
(a) Retirement	6.46%	$523,967
(b) Disability	0.10%	8,205
(c) Death	0.19%	15,608
(d) Withdrawal	1.33%	108,108
(e) Total	8.08%	$655,888

Projected annual payroll for fiscal year beginning on the valuation date**	$8,109,707

** $47,121 represents a pro-rata portion of the $346,000 direct State aid payment, allocated by projected payroll.*
*** Projected payroll includes annualized pay for new hires and increases to current fiscal year.*

Exhibit VII

Determination of Contribution Sufficiency – New Plan

		July 1, 2008	
A. Statutory Contributions – Chapter 354A		**Percent of Payroll**	**Dollar Amount**
1.	Member contributions	5.50%	$2,829,119
2.	Employer contributions	5.79%	2,978,291
3.	Direct State aid*	0.58%	298,879
4.	Total	11.87%	$6,106,289
B. Required Contributions – Chapter 356		**Percent of Payroll**	**Dollar Amount**
1.	Normal Cost:		
	(a) Retirement	7.18%	$3,692,848
	(b) Disability	0.12%	61,632
	(c) Death	0.18%	95,135
	(d) Withdrawal	1.01%	517,099
	(e) Total	8.49%	$4,366,714
Projected annual payroll for fiscal year beginning on the valuation date**			$51,438,524

** $298,879 represents a pro-rata portion of the $346,000 direct State aid payment, allocated by projected payroll.*
*** Projected payroll includes annualized pay for new hires and increases to current fiscal year.*

EXHIBIT VIII

Supplementary Information Required by the GASB

Valuation date	July 1, 2008
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll, assuming payroll increases of 4.50% per annum
Remaining amortization period	27 years remaining as of July 1, 2008
Asset valuation method	Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during that fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year).
Actuarial assumptions:	
Investment rate of return:	
Pre-retirement	8.50% per annum
Post-retirement	6.50% per annum
Projected salary increases	Select and ultimate rates by age, with ultimate rates of 3.50% - 7.00%
Plan membership:	
Pensioners and beneficiaries receiving benefits	1,243
Terminated vested members entitled to, but not yet receiving benefits	310
Other terminated non-vested members	676
Active members	1,140
Total	3,369

EXHIBIT IX
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

Summary of Rates: Shown below for selected ages:

	Rate (%)						
	Mortality				Retirement		Ultimate Rate of Salary Increases
Age	Male	Female	Withdrawal	Disability	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

Retirement Rates:	Rates are shown for selected ages on the previous page. In addition, 40% of the members are assumed to retire each year that they are eligible for Rule of 90.
Withdrawal Rates:	Select and ultimate rates are based on recent plan experience. Ultimate rates after the third year are shown for sample ages on the previous page. Select rates are as follows:
First year:	60.00%
Second year:	20.00%
Third year:	15.00%
Retirement Age for Inactive Vested Members:	60
Unknown Data for Members:	Same as those exhibited by members with similar known characteristics.
Percent Married:	80% of members are assumed to be married.
Age of Spouse:	Females three years younger than males.
Net Investment Return:	
Pre-Retirement:	8.50% per annum
Post-Retirement:	6.50% per annum
Salary Increases:	Reported salary for prior fiscal year, with new hires annualized, increased to current fiscal year and annually for each future year according to the ultimate rate table on the prior page. This table includes a 10-year select period. For service from hire through 7 completed years, an 8.00% salary increase is assumed. With 8 completed years, a 7.25% increase is assumed. With 9 completed years, a 6.50% increase is assumed.
Administrative Expenses:	Prior year administrative expenses expressed as percentage of prior year projected payroll.
Allowance for Combined Service Annuity:	10.00% 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:	30% elect 50% J&S option
	40% elect 100% J&S option
Females:	15% elect 50% J&S option
	15% elect 100% J&S option
Asset Valuation Method:	Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during the fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year). Each year's Unrecognized Asset Return is being amortized over 5 years on a straight-line basis.
Actuarial Cost Method:	Entry Age Normal Cost Method. Entry Age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are expressed as a level percentage of payroll, with Normal Cost determined as if the current benefit accrual rate had always been in effect.
Payment on the Unfunded Actuarial Accrued Liability:	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 4.50% per annum. If the Actuarial Value of Assets exceeds the Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percentage of payroll.

Changes in Actuarial Assumptions and Cost Methods: Based on past experiences and future expectations, the following actuarial assumptions were changed:

- Salary increase rates: select rates previously assumed smaller increases with fewer years of service and ultimate rates changed after age 50. Sample rates are shown below:

Age	Prior Ultimate Rate	New Ultimate Rate
55	5.00%	4.50%
60	5.00	4.00
65	5.00	3.50

- Payroll growth assumption changed to 4.50% per annum, previously 5.00% per annum
- Withdrawal select period rates:

Year	Prior Rate	New Rate
First	40.00%	60.00%
Second	10.00	20.00
Third	6.00	15.00

- Post-retirement mortality tables changed to the 1994 Group Annuity Mortality Table set back 2 years for males and females; previously the 1983 Group Annuity Mortality Table set back 2 years for males only
- Pre-retirement mortality tables changed to the 1994 Group Annuity Mortality Table set back 2 years for males and females; previously the 1983 Group Annuity Mortality Table set back 10 years for males and 7 years for females
- Disabled lives mortality table changed to the Disabled Eligible for Social Security Disability – ERISA Sec. 4044 for 2006 for ages 54 and younger, graded between ages 55 and 64, and the 1994 Group Annuity Mortality Table set back 2 years for ages 65 and older; previously the 1977 Railroad Retirement Board Mortality Table for Disabled Lives

➤ Retirement rates:

	Prior Rate		New Rate	
Age	**Old Plan**	**New Plan**	**Old Plan**	**New Plan**
55	15.00%	10.00%	15.00%	15.00%
60	15.00	10.00	15.00	15.00
65	40.00	20.00	40.00	40.00
70	50.00	40.00	100.00	100.00
75	80.00	80.00	100.00	100.00
80	100.00	100.00	100.00	100.00

➤ Election of subsidized joint and survivor form of annuity:

Sex	Prior Assumption	New Assumption
Male	35% elect 50% J&S option	30% elect 50% J&S option
	55% elect 100% J&S option	40% elect 100% J&S option
Female	25% elect 50% J&S option	15% elect 50% J&S option
	25% elect 100% J&S option	15% elect 100% J&S option

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):

<u>*Normal Retirement:*</u>

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

<u>*Early Retirement:*</u>

Age Requirement:	Age 55, and
Service Requirement:	10 years of Credited Service, or
Age/Service Requirement:	The sum of age and Credited Service equals 90, if earlier.
Amount:	1.45% of Average Salary for each year of Credited Service with reduction of 0.25% for each month the member is under age 60. No reduction if the sum of age and years of Credited Service equals 90.
Form of Payment:	Life annuity. Actuarially equivalent options are: (a) 5, 10, 15 or 20-year certain and life, or (b) 50% or 100% joint and survivor with bounce back feature without additional reduction. (c) Other equivalent options approved by the Board.
Benefit Increases:	<u>Annual Cost-of-Living Adjustment (COLA):</u> Increase all benefits by 2.00% each January 1. An additional increase will be allowed when the 5-year average rate of return of the fund exceeds the Fund's assumed rate of return, currently 8.50%. To be eligible for a COLA, a retiree or beneficiary must have received a payment for at least 12 months as of the adjustment date.

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

Retirement (New Plan Tier I):

<u>*Normal Retirement:*</u>

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.

<u>*Early Retirement*</u>*:*

Age/Service Requirement:	(a) Age 55 and three years of Credited Service, or (b) Any age with 30 years of Credited Service, or (c) The sum of age and Credited Service equals 90.
Amount:	1.20% of Average Salary for the first ten years of Credited Service and 1.70% of Average Salary for each subsequent year with reduction of 0.25% for each month the member is under Normal Retirement Age. No reduction if the sum of age and years of Credited Service equals 90.
Form of Payment:	Life annuity. Actuarially equivalent options are: (a) 5, 10, 15 or 20-year certain and life, or (b) 50% or 100% joint and survivor with bounce back feature without additional reduction. (c) A larger life annuity before age 62 and reduced thereafter.

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

Increase all benefits by 2.00% each January 1. An additional increase will be allowed when the 5-year average rate of return of the fund exceeds the Fund's assumed rate of return, currently 8.50%. To be eligible for a COLA, a retiree or beneficiary must have received a payment for at least 12 months as of the adjustment date.

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

Retirement (New Plan Tier II):

Normal Retirement:

Age/Service Requirement: Members first hired after June 30, 1989:

The greater of age 65 or the age eligible for full Social Security retirement benefits but not higher than age 66.

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

Early Retirement:

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

Amount: 1.70% of Average Salary for each year of Credited Service with augmentation to the age eligible for full social security retirement benefits at 3.00% per year and actuarial reduction for each month the member is under the Social Security Retirement Age.

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

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

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

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

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

Increase all benefits by 2.00% each January 1. An additional increase will be allowed when the 5-year average rate of return of the fund exceeds the Fund's assumed rate of return, currently 8.50%. To be eligible for a COLA, a retiree or beneficiary must have received a payment for at least 12 months as of the adjustment date.

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.

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 at termination and increased by the following annual percentage: (a) 3.00% until January 1 of the year following attainment of age 55, and (b) 5.00% thereafter until the annuity begins. For members hired after June 30, 2006, the benefit is computed under law in effect at termination and increased by 2.50% for all years. Amount is payable as a Normal or Early Retirement.

Pre-Retirement Death Benefit (Old Plan):

Age/Service Requirement:	None.
Amount:	Refund of two times member's contributions accumulated with 5.00% interest compounded annually if death occurred before May 16, 1989, and 6.00% interest if death occurred on or after May 16, 1989.

Post-Retirement Death Benefit (Old Plan):

Age/Service Requirement:	None.
Amount:	Refund the excess of member's contributions over total benefits paid, accumulated with 5.00% interest compounded annually if death occurred before May 16, 1989, and 6.00% interest compounded annually if death occurred on or after May 16, 1989.

Surviving Spouse Benefit (Old Plan):

Optional Annuity I:

Age/Service Requirement:	Death of active member with ten years of Credited Service.
Amount:	In lieu of the Pre-Retirement Death Benefit Refund, an annuity to surviving spouse equivalent to 120% of the refund amount.

Optional Annuity II:

Age/Service Requirement:	Death of active member who is age 55 with ten years of Credited Service.
Amount:	In lieu of Pre-Retirement Death Benefit Refund or Surviving Spouse Optional Annuity I, spouse may elect survivor portion of the 100% joint and survivor annuity the member could have elected if terminated.

Pre-Retirement Death Benefit (New Plan):

Surviving Spouse Optional Annuity:

Age/Service Requirement:	Member who dies before retirement benefits commence with three years of Credited Service.
Amount:	Survivor's payment of the 100% joint and survivor benefit or an actuarial equivalent term certain annuity. If commencement is prior to Normal Retirement Age, the benefit is reduced at the early retirement reduction factors, with half the applicable reduction factor used from age 55 to the actual commencement age. If no surviving spouse, then an actuarial equivalent dependent child benefit is paid to age 20 or for five years if longer.
Benefit Increases:	Same as for Normal Retirement.

Refund of Member's Contributions:

Age/Service Requirement:	Member or former member dies before receiving any disability or retirement benefits, and survivor benefits are not payable.
Amount:	Member's contributions with 5.00% interest compounded annually if death occurred before May 16, 1989, and 6.00% interest if death occurred on or after May 16, 1989.

Contributions:

Member:	5.50% of salary.
Employer:	5.79% of salary.
Direct State Aid:	$346,000 per year each October 1, beginning in 2008.

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

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