Duluth Teachers' Retirement Fund Association

Actuarial Valuation and Review
as of July 1, 2004

SEGAL

The Segal Company
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November 29, 2004

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, 2004. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2004 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.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

THE SEGAL COMPANY

By:			
	Leslie L. Thompson, FSA, MAAA, EA	*Wally Malles, ASA, MAAA, EA*	*Susan M. Hogarth*
	Senior Vice President and Actuary	*Associate Actuary*	*Actuarial Associate*

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

SECTION 1

VALUATION SUMMARY

SECTION 2

VALUATION RESULTS

SECTION 3

SUPPLEMENTAL INFORMATION

SECTION 4

REPORTING INFORMATION

Purpose

This report has been prepared by The Segal Company to present a valuation of the Duluth Teachers' Retirement Fund Association as of July 1, 2004. 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 characteristics of covered active members, inactive vested members, pensioners and beneficiaries as of July 1, 2004, provided by the Fund;
- The assets of the Fund as of June 30, 2004, 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, 2004 is 91.79% compared to 95.66% as of July 1, 2003. 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.
- As indicated on page 4 of this report, the total unrecognized investment loss as of June 30, 2004 is $18,117,537. This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience. Earnings in excess of 8.50% will help temper possible increases in future contribution requirements.
- The statutory contribution rate under Chapter 354A is equal to 11.29% of payroll compared to the required contribution rate under Chapter 356 of 12.11% of payroll. Therefore the contribution deficiency is 0.82% of payroll as of July 1, 2004.
- There were no changes in plan provisions, actuarial assumptions or actuarial cost methods since the prior valuation. This is the first year that The Segal Company prepared the actuarial valuation of the Fund.

Summary of Key Valuation Results

	2004	2003
Contributions (% of payroll) for plan year beginning July 1:		
Statutory – Chapter 354A	11.29%	11.29%
Required – Chapter 356	12.11%	11.27%
Sufficiency/(Deficiency)	-0.82%	0.02%
Funding elements for plan year beginning July 1:		
Normal cost	$4,903,049	$4,812,000
Market value of assets	258,831,515	231,247,000
Actuarial value of assets (AVA)	276,949,052	278,467,000
Actuarial accrued liability (AAL)	301,704,445	291,109,000
Unfunded/(Overfunded) actuarial accrued liability	24,755,393	12,642,000
Funded ratios:		
Accrued Benefit Funded Ratio	95.68%	99.65%
Current assets (AVA)	$276,949,052	$278,467,000
Current benefit obligations	289,460,171	279,444,000
Projected Benefit Funded Ratio	97.62%	100.06%
Current and expected future assets	$333,814,878	$330,285,000
Current and expected future benefit obligations (Present Value of Benefits)	341,956,772	330,102,000
GASB 25/27 for plan year beginning July 1:		
Annual required employer contributions	$2,510,314	$1,691,000
Accrued Liability Funded Ratio (AVA/AAL)	91.79%	95.66%
Covered actual payroll	$48,820,898	$50,656,000
Demographic data for plan year beginning July 1:		
Number of pensioners and beneficiaries	1,137	1,107
Number of vested terminated members	312	187
Number of other non-vested terminated members	650	826
Number of active members	1,178	1,373
Total projected payroll	$55,820,306	$52,972,000
Average annual payroll (actual dollars)	40,752	36,431

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 three valuations can be seen in this chart.

CHART 1

Member Population: 2002 – 2004

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

**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 1,178 active members with an average age of 46.1, average years of service of 12.4 years and average projected payroll of $47,386. The 1,373 active members in the prior valuation had an average age of 44.5, average service of 11.0 years and average projected payroll of $38,581.

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 650 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, 2004

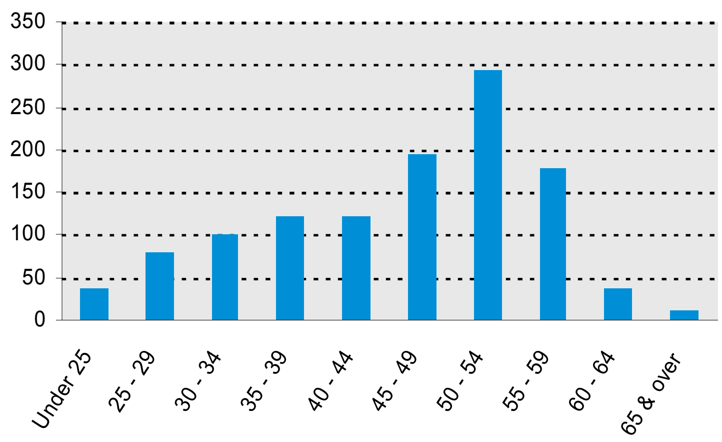
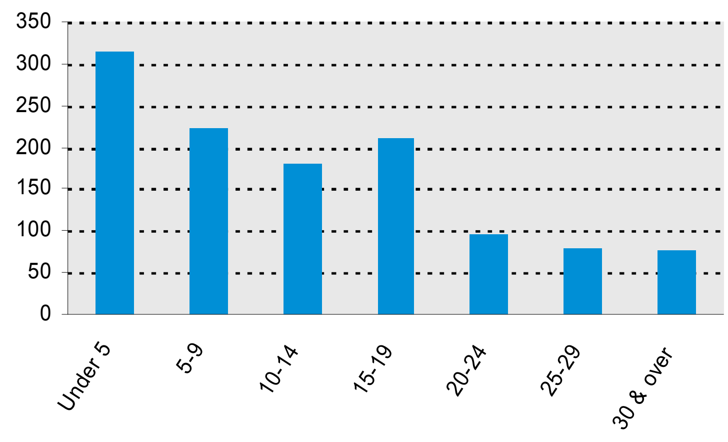


CHART 3

Distribution of Active Members by Years of Service as of June 30, 2004



Pensioners and Beneficiaries
As of June 30, 2004, 1,050 pensioners (including 14 disabled participants) and 87 beneficiaries were receiving total monthly benefits of $1,520,020. For comparison, in the previous valuation, there were 1,033 pensioners (including 14 disabled participants) and 74 beneficiaries receiving monthly benefits of $1,450,205.

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, 2004

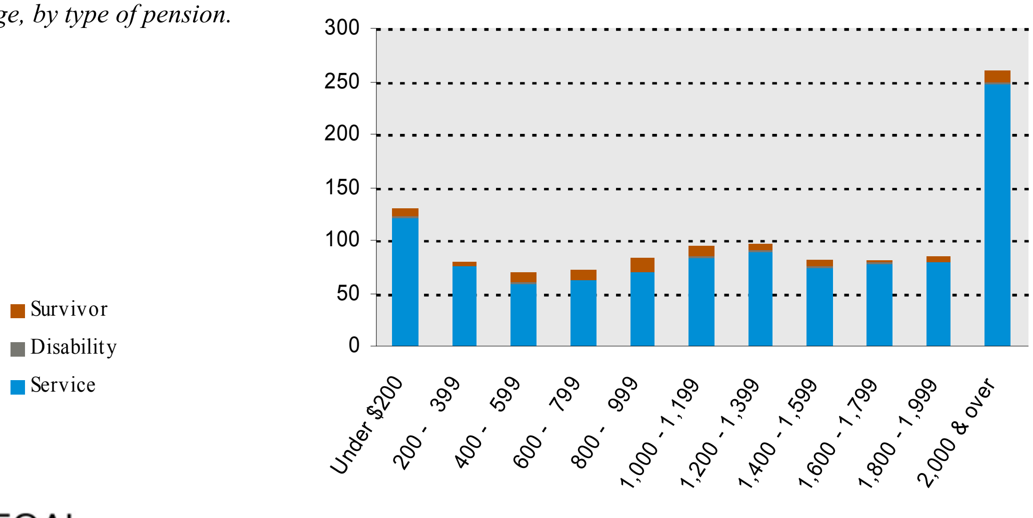
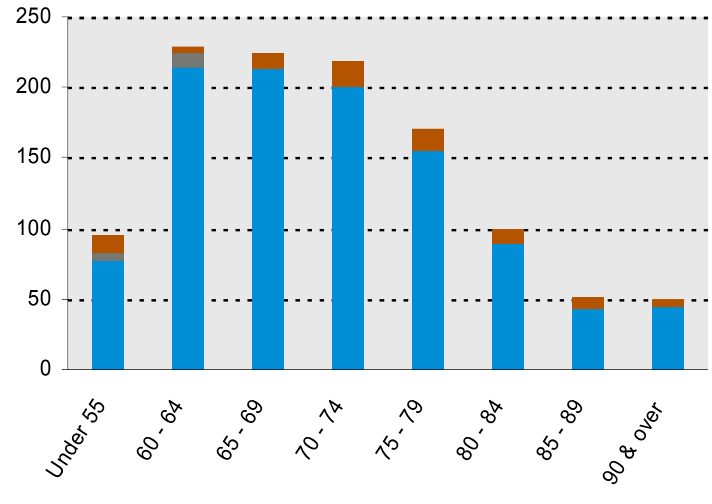


CHART 5

Distribution of Pensioners and Beneficiaries by Type and by Age as of June 30, 2004



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 Year Ended June 30, 2004

		Original Amount	% Not Recognized	
1.	Market value of assets available for benefits			$258,831,515
2.	Calculation of unrecognized return			
	(a) Year ended June 30, 2004	$20,475,829	80%	$16,380,663
	(b) Year ended June 30, 2003	-11,347,000	60%	-6,808,200
	(c) Year ended June 30, 2002	-44,781,000	40%	-17,912,400
	(d) Year ended June 30, 2001	-48,888,000	20%	-9,777,600
	(e) Total unrecognized return			-$18,117,537
3.	Actuarial value of assets: (1) – (2e) ("Current Assets")			$276,949,052

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 $11,396,778, a loss of $12,639,583 from investments and a gain of $1,242,805 from all other sources. The net experience variation from individual sources other than investments was 0.4% 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 7

Actuarial Experience for Year Ended June 30, 2004

1.	Net gain/(loss) from investments	-$12,639,583
2.	Net gain/(loss) from other experience	1,242,805
3.	Net experience gain/(loss): (1) + (2)	-$11,396,778

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 on an actuarially sound basis and in accordance with the GASB funding 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 changes.

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	Year Ended June 30 2004	2003	Change From Prior Year
Active members in valuation:			
Number	1,178	1,373	-14.2%
Average age	46.1	44.5	N/A
Average service	12.4	11.0	N/A
Total projected payroll	$55,820,306	$52,972,000	5.4%
Average projected payroll	47,386	38,581	22.8%
Total active vested members	932	1,014	-8.1%
Vested terminated members	312	187	66.8%
Retired participants:			
Number in pay status	1,036	1,019	1.7%
Average age	70.9	70.7	N/A
Average monthly benefit	$1,360	$1,330	2.3%
Disabled members:			
Number in pay status	14	14	0.0%
Average age	59.9	59.3	N/A
Average monthly benefit	$1,166	$1,066	9.4%
Beneficiaries:			
Number in pay status	87	74	17.6%
Average age	72.2	74.9	N/A
Average monthly benefit	$1,089	$1,077	1.11%
Other non-vested terminated members	650	826	-21.3%

EXHIBIT B-1

Members in Active Service as of June 30, 2004
By Age, Years of Service, and Average Projected Payroll - Total

		Years of Service						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & over
Under 25	38	38	- -	- -	- -	- -	- -	- -
	$17,154	$17,154	- -	- -	- -	- -	- -	- -
25 - 29	80	66	14	- -	- -	- -	- -	- -
	23,771	20,568	$38,875	- -	- -	- -	- -	- -
30 - 34	101	40	55	6	- -	- -	- -	- -
	40,265	30,175	45,596	$58,659	- -	- -	- -	- -
35 - 39	122	44	43	31	4	- -	- -	- -
	44,911	36,543	46,203	53,025	$60,172	- -	- -	- -
40 - 44	122	31	23	37	29	2	- -	- -
	46,230	24,689	46,255	55,150	56,999	$58,672	- -	- -
45 - 49	194	35	37	38	57	22	5	- -
	50,146	26,385	47,616	54,979	59,075	57,973	$62,216	- -
50 - 54	293	25	33	49	77	39	47	23
	55,268	22,054	50,120	52,929	60,154	60,334	60,858	$67,365
55 - 59	179	22	10	17	36	25	24	45
	55,964	20,683	54,131	52,273	58,967	60,228	63,478	66,234
60 - 64	37	8	7	1	4	5	4	8
	46,758	15,691	44,730	57,643	52,060	56,329	60,879	62,547
65 & over	12	6	- -	1	3	2	- -	- -
	34,299	18,951	- -	48,242	43,673	59,307	- -	- -
Total	1,178	315	222	180	210	95	80	76
	$47,386	$24,631	$46,724	$53,964	$58,833	$59,492	$61,730	$66,189

EXHIBIT B-2

Members in Active Service as of June 30, 2004
By Age, Years of Service, and Average Projected Payroll - 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	21	- -	- -	- -	4	12	5	- -
	$63,581	- -	- -	- -	$77,875	$59,386	$62,216	- -
50 - 54	100	- -	1	2	2	26	46	23
	61,814	- -	$58,301	$46,621	56,088	60,319	60,869	$67,365
55 - 59	92	- -	1	- -	2	20	24	45
	63,412	- -	16,252	- -	65,865	59,098	63,478	66,234
60 - 64	17	- -	- -	- -	2	3	4	8
	59,924	- -	- -	- -	45,619	61,193	60,879	62,547
65 & over	2	- -	- -	- -	- -	2	- -	- -
	59,307	- -	- -	- -	- -	59,307	- -	- -
Total	232	- -	2	2	10	63	79	76
	$62,448	- -	$37,277	$46,621	$64,664	$59,763	$61,748	$66,188

EXHIBIT B-3

Members in Active Service as of June 30, 2004
By Age, Years of Service, and Average Projected Payroll - New

		Years of Service						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & over
Under 25	38	38	- -	- -	- -	- -	- -	- -
	$17,154	$17,154	- -	- -	- -	- -	- -	- -
25 - 29	80	66	14	- -	- -	- -	- -	- -
	23,771	20,568	$38,875	- -	- -	- -	- -	- -
30 - 34	101	40	55	6	- -	- -	- -	- -
	40,265	30,175	45,596	$58,659	- -	- -	- -	- -
35 - 39	122	44	43	31	4	- -	- -	- -
	44,911	36,543	46,203	53,025	$60,172	- -	- -	- -
40 - 44	122	31	23	37	29	2	- -	- -
	46,230	24,689	46,255	55,150	56,999	$58,672	- -	- -
45 - 49	173	35	37	38	53	10	- -	- -
	48,515	26,385	47,616	54,979	57,656	56,279	- -	- -
50 - 54	193	25	32	47	75	13	1	- -
	51,876	22,054	49,865	53,197	60,262	60,363	$60,340	- -
55 - 59	87	22	9	17	34	5	- -	- -
	48,087	20,683	58,339	52,273	58,562	64,749	- -	- -
60 - 64	20	8	7	1	2	2	- -	- -
	35,567	15,691	44,730	57,643	58,502	49,032	- -	- -
65 & over	10	6	- -	1	3	- -	- -	- -
	29,297	18,951	- -	48,242	43,673	- -	- -	- -
Total	946	315	220	178	200	32	1	- -
	$43,692	$24,631	$46,810	$54,047	$58,541	$58,958	$60,340	- -

EXHIBIT C-1
Retired Participants as of June 30, 2004
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	30-34	35 & over
Under 45	1	1	- -	- -	- -	- -	- -	- -	- -
	$17,642	$17,642	- -	- -	- -	- -	- -	- -	- -
45 - 49	1	- -	1	- -	- -	- -	- -	- -	- -
	6,416	- -	$6,416	- -	- -	- -	- -	- -	- -
50 - 54	1	- -	1	- -	- -	- -	- -	- -	- -
	13,509	- -	13,509	- -	- -	- -	- -	- -	- -
55 - 59	96	94	2	- -	- -	- -	- -	- -	- -
	24,660	25,130	2,553	- -	- -	- -	- -	- -	- -
60 - 64	215	113	101	1	- -	- -	- -	- -	- -
	19,175	19,385	18,979	$15,143	- -	- -	- -	- -	- -
65 - 69	212	35	93	83	- -	- -	1	- -	- -
	15,480	14,624	15,910	15,452	- -	- -	$7,812	- -	- -
70 - 74	192	4	28	109	51	- -	- -	- -	- -
	16,352	13,879	12,276	19,288	$12,507	- -	- -	- -	- -
75 - 79	150	1	2	39	79	29	- -	- -	- -
	14,664	977	21,401	16,497	16,444	$7,357	- -	- -	- -
80 - 84	89	- -	- -	2	30	47	10	- -	- -
	11,627	- -	- -	26,708	11,896	11,944	6,313	- -	- -
85 - 89	41	- -	- -	- -	1	20	17	3	- -
	8,968	- -	- -	- -	1,295	9,213	9,814	$5,103	- -
90 & Over	38	- -	- -	- -	- -	- -	20	14	4
	10,706	- -	- -	- -	- -	- -	9,274	12,456	$11,739
Total	1,036	248	228	234	161	96	48	17	4
	$16,368	$20,721	$16,702	$17,508	$14,255	$9,989	$8,818	$11,159	$11,739

EXHIBIT C-2
Retired Participants as of June 30, 2004
By Age, Years Retired and Average Annual Benefit - Old

		Years Retired							
Age	**Total**	**Under 5**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35 & over**
Under 45	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
45 - 49	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
50 - 54	1	- -	1	- -	- -	- -	- -	- -	- -
	$13,509	- -	$13,509	- -	- -	- -	- -	- -	- -
55 - 59	53	52	1	- -	- -	- -	- -	- -	- -
	22,682	$23,044	3,817	- -	- -	- -	- -	- -	- -
60 - 64	82	37	45	- -	- -	- -	- -	- -	- -
	14,923	14,888	14,952	- -	- -	- -	- -	- -	- -
65 - 69	89	2	46	40	- -	- -	1	- -	- -
	12,881	26,168	10,951	$14,563	- -	- -	$7,812	- -	- -
70 - 74	54	- -	4	29	21	- -	- -	- -	- -
	12,013	- -	6,087	15,326	$8,567	- -	- -	- -	- -
75 - 79	57	- -	- -	1	30	26	- -	- -	- -
	10,350	- -	- -	4,027	13,900	$6,498	- -	- -	- -
80 - 84	61	- -	- -	- -	13	38	10	- -	- -
	10,391	- -	- -	- -	11,793	10,985	6,313	- -	- -
85 - 89	40	- -	- -	- -	1	19	17	3	- -
	8,664	- -	- -	- -	1,295	8,585	9,814	$5,103	- -
90 & Over	38	- -	- -	- -	- -	- -	20	14	4
	10,706	- -	- -	- -	- -	- -	9,274	12,456	$11,739
Total	475	91	97	70	65	83	48	17	4
	$13,077	$19,796	$12,559	$14,729	$11,562	$9,030	$8,818	$11,159	$11,739

EXHIBIT C-3
Retired Participants as of June 30, 2004
By Age, Years Retired and Average Annual Benefit - New

		Years Retired							
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
45 & Under	1	1	- -	- -	- -	- -	- -	- -	- -
	$17,642	$17,642	- -	- -	- -	- -	- -	- -	- -
45 - 49	1	- -	1	- -	- -	- -	- -	- -	- -
	6,416	- -	$6,416	- -	- -	- -	- -	- -	- -
50 - 54	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
55 - 59	43	42	1	- -	- -	- -	- -	- -	- -
	27,098	27,713	1,288	- -	- -	- -	- -	- -	- -
60 - 64	133	76	56	1	- -	- -	- -	- -	- -
	21,796	21,574	22,215	$15,143	- -	- -	- -	- -	- -
65 - 69	123	33	47	43	- -	- -	- -	- -	- -
	17,361	13,925	20,764	16,279	- -	- -	- -	- -	- -
70 - 74	138	4	24	80	30	- -	- -	- -	- -
	18,049	13,879	13,308	20,724	$15,265	- -	- -	- -	- -
75 - 79	93	1	2	38	49	3	- -	- -	- -
	17,307	977	21,401	16,825	18,001	$14,802	- -	- -	- -
80 - 84	28	- -	- -	2	17	9	- -	- -	- -
	14,319	- -	- -	26,708	11,974	15,994	- -	- -	- -
85 - 89	1	- -	- -	- -	- -	1	- -	- -	- -
	21,144	- -	- -	- -	- -	21,144	- -	- -	- -
90 & Over	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	561	157	131	164	96	13	- -	- -	- -
	$19,155	$21,256	$19,770	$18,694	$16,079	$16,115	- -	- -	- -

EXHIBIT D-1
Disabled Members as of June 30, 2004
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	30-34	35 & over
Under 45	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
45 - 49	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
50 - 54	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
55 - 59	6	- -	3	1	2	- -	- -	- -	- -
	$11,837	- -	$9,991	$25,027	$8,011	- -	- -	- -	- -
60 - 64	8	4	3	1	- -	- -	- -	- -	- -
	15,600	$13,669	17,672	17,105	- -	- -	- -	- -	- -
65 - 69	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
70 - 74	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
75 - 79	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
80 - 84	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
85 - 89	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
90 & Over	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	14	4	6	2	2	- -	- -	- -	- -
	$13,987	$13,669	$13,832	$21,067	$8,011	- -	- -	- -	- -

EXHIBIT D-2
Disabled Members as of June 30, 2004
By Age, Years Disabled and Average Annual Benefit - Old

		Years Disabled							
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
Under 45	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
45 - 49	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
50 - 54	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
55 - 59	1	- -	- -	- -	1	- -	- -	- -	- -
	$12,915	- -	- -	- -	$12,915	- -	- -	- -	- -
60 - 64	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
65 - 69	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
70 - 74	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
75 - 79	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
80 - 84	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
85 - 89	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
90 & Over	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	1	- -	- -	- -	1	- -	- -	- -	- -
	$12,915	- -	- -	- -	$12,915	- -	- -	- -	- -

EXHIBIT D-3
Disabled Members as of June 30, 2004
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**	**30-34**	**35 & over**
45 & Under	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
45 - 49	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
50 - 54	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
55 - 59	5	- -	3	1	1	- -	- -	- -	- -
	$11,621	- -	$9,991	$25,027	$3,107	- -	- -	- -	- -
60 - 64	8	4	3	1	- -	- -	- -	- -	- -
	15,600	$13,669	17,672	17,105	- -	- -	- -	- -	- -
65 - 69	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
70 - 74	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
75 - 79	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
80 - 84	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
85 - 89	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
90 & Over	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	13	4	6	2	1	- -	- -	- -	- -
	$14,070	$13,669	$13,832	$21,067	$3,107	- -	- -	- -	- -

EXHIBIT E-1
Beneficiaries as of June 30, 2004
By Age, Years Since Death and Average Annual Benefit - Total

		Years Since Death							
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
Under 45	6	2	4	- -	- -	- -	- -	- -	- -
	$5,442	$5,248	$5,540	- -	- -	- -	- -	- -	- -
45 - 49	3	1	1	1	- -	- -	- -	- -	- -
	4,046	475	458	$11,205	- -	- -	- -	- -	- -
50 - 54	2	1	- -	- -	1	- -	- -	- -	- -
	3,774	2,672	- -	- -	$4,876	- -	- -	- -	- -
55 - 59	2	1	- -	1	- -	- -	- -	- -	- -
	12,944	5,852	- -	20,034	- -	- -	- -	- -	- -
60 - 64	6	1	3	2	- -	- -	- -	- -	- -
	23,634	33,586	20,866	22,809	- -	- -	- -	- -	- -
65 - 69	11	- -	3	8	- -	- -	- -	- -	- -
	13,629	- -	9,575	15,150	- -	- -	- -	- -	- -
70 - 74	18	2	- -	6	9	- -	1	- -	- -
	15,870	21,037	- -	19,103	12,525	- -	$16,246	- -	- -
75 - 79	16	- -	- -	4	7	4	1	- -	- -
	14,891	- -	- -	14,127	16,725	$14,720	5,793	- -	- -
80 - 84	10	- -	- -	1	2	5	- -	2	- -
	10,697	- -	- -	1,813	19,529	9,811	- -	$8,521	- -
85 - 89	8	- -	- -	- -	- -	1	4	2	1
	10,291	- -	- -	- -	- -	19,292	9,132	9,502	$7,508
90 & Over	5	- -	- -	- -	- -	- -	1	3	1
	10,677	- -	- -	- -	- -	- -	10,711	11,407	8,453
Total	87	8	11	23	19	10	7	7	2
	$13,064	$11,894	$10,358	$16,130	$14,407	$12,723	$9,897	$10,038	$7,980

EXHIBIT E-2
Beneficiaries as of June 30, 2004
By Age, Years Since Death and Average Annual Benefit - Old

		Years Since Death							
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
Under 45	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
45 - 49	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
50 - 54	1	- -	- -	- -	1	- -	- -	- -	- -
	$4,876	- -	- -	- -	$4,876	- -	- -	- -	- -
55 - 59	1	- -	- -	1	- -	- -	- -	- -	- -
	20,034	- -	- -	$20,034	- -	- -	- -	- -	- -
60 - 64	2	- -	- -	2	- -	- -	- -	- -	- -
	22,809	- -	- -	22,809	- -	- -	- -	- -	- -
65 - 69	5	- -	2	3	- -	- -	- -	- -	- -
	7,754	- -	$2,478	11,271	- -	- -	- -	- -	- -
70 - 74	4	- -	- -	1	2	- -	1	- -	- -
	10,734	- -	- -	2,712	11,989	- -	$16,246	- -	- -
75 - 79	7	- -	- -	- -	2	4	1	- -	- -
	13,781	- -	- -	- -	15,898	$14,720	5,793	- -	- -
80 - 84	8	- -	- -	- -	2	4	- -	2	- -
	11,418	- -	- -	- -	19,529	8,812	- -	$8,521	- -
85 - 89	7	- -	- -	- -	- -	- -	4	2	1
	9,006	- -	- -	- -	- -	- -	9,132	9,502	$7,508
90 & Over	5	- -	- -	- -	- -	- -	1	3	1
	10,677	- -	- -	- -	- -	- -	10,711	11,407	8,453
Total	40	- -	2	7	7	8	7	7	2
	$11,412	- -	$2,478	$14,597	$14,244	$11,766	$9,897	$10,038	$7,980

EXHIBIT E-3
Beneficiaries as of June 30, 2004
By Age, Years Since Death and Average Annual Benefit - New

		Years Since Death							
Age	**Total**	**Under 5**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35 & over**
Under 45	6	2	4	- -	- -	- -	- -	- -	- -
	$5,442	$5,248	$5,540	- -	- -	- -	- -	- -	- -
45 - 49	3	1	1	1	- -	- -	- -	- -	- -
	4,046	475	458	$11,205	- -	- -	- -	- -	- -
50 - 54	1	1	- -	- -	- -	- -	- -	- -	- -
	2,672	2,672	- -	- -	- -	- -	- -	- -	- -
55 - 59	1	1	- -	- -	- -	- -	- -	- -	- -
	5,852	5,852	- -	- -	- -	- -	- -	- -	- -
60 - 64	4	1	3	- -	- -	- -	- -	- -	- -
	24,046	33,586	20,866	- -	- -	- -	- -	- -	- -
65 - 69	6	- -	1	5	- -	- -	- -	- -	- -
	18,526	- -	23,770	17,477	- -	- -	- -	- -	- -
70 - 74	14	2	- -	5	7	- -	- -	- -	- -
	17,338	21,037	- -	22,381	$12,679	- -	- -	- -	- -
75 - 79	9	- -	- -	4	5	- -	- -	- -	- -
	15,754	- -	- -	14,127	17,056	- -	- -	- -	- -
80 - 84	2	- -	- -	1	- -	1	- -	- -	- -
	7,810	- -	- -	1,813	- -	$13,807	- -	- -	- -
85 - 89	1	- -	- -	- -	- -	1	- -	- -	- -
	19,292	- -	- -	- -	- -	12,292	- -	- -	- -
90 & Over	- -	- -	- -	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -	- -	- -	- -
Total	47	8	9	16	12	2	- -	- -	- -
	$14,470	$11,894	$12,109	$16,801	$14,503	$16,550	- -	- -	- -

EXHIBIT F

Reconciliation of Member Data

	Active Members	Vested Terminated Members	Other Non-Vested Terminated Members	Retired Participants	Disableds	Beneficiaries	Total
A. Number as of June 30, 2003	1,373	187	826	1,019	14	74	3,493
B. Additions	102	137	112	42	1	7	401
C. Deletions:							
1. Retirements	-31	-9	-1	N/A	0	0	-41
2. Disability	0	0	0	0	N/A	0	0
3. Died with beneficiary	0	0	0	-7	0	N/A	-7
4. Died without beneficiary	0	0	0	-19	0	0	-19
5. Terminated - deferred	-137	N/A	0	0	0	0	-137
6. Terminated – other non-vested	-112	0	N/A	0	0	0	-112
7. Refunds	-17	-3	-276	0	0	0	-296
8. Rehired as active	0	-2	-13	0	0	0	-15
D. Data adjustments	0	2	2	1	-1	6	10
E. Number as of June 30, 2004	1,178	312	650	1,036	14	87	3,277

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
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

EXHIBIT H

Statement of Change in Net Plan Assets for Year Ended June 30, 2004

		Market Value	Cost Value
A.	Assets available at beginning of period	$231,247,693	$233,777,047
B.	Additions:		
	1. Member contributions	$2,991,801	$2,991,801
	2. Employer contributions	2,826,730	2,826,730
	3. Supplemental contribution	0	0
	4. Investment income	7,238,868	7,238,868
	5. Investment expenses	-1,239,283	-1,239,283
	6. Net realized gain/(loss)	13,213,486	13,213,486
	7. Other	143,074	143,074
	8. Net change in unrealized gain/(loss)	20,264,186	0
	9. Total Additions	$45,438,862	$25,174,676
C.	Operating Expenses:		
	1. Service retirements	$16,052,665	$16,052,665
	2. Disability benefits	194,061	194,061
	3. Survivor benefits	1,100,850	1,100,850
	4. Refunds	58,760	58,760
	5. Administrative expenses	448,704	448,704
	6. Total operating expenses	$17,855,040	$17,855,040
D.	Other changes in reserves	0	0
E.	Assets available at end of period	$258,831,515	$241,096,683

F.	Determination of current year unrecognized asset return	
	1. Average balance:	
	(a) Assets available at BOY: (A)	$231,247,693
	(b) Assets available at EOY: (E)	258,831,515
	(c) Average balance [(a) + (b) – Net Investment Income] / 2 [Net Investment Income: (B.4) + (B.6) + (B.7) + (B.8) + (B.9)]	225,229,439
	2. Expected return: 8.50% x (F.1.(c))	19,144,502
	3. Actual return: (B.4) + (B.6) + (B.7) + (B.8) + (B.9)	39,620,331
	4. Current year unrecognized asset return: (F.3) – (F.2)	$20,475,829

EXHIBIT I

Statement of Plan Net Assets for Year Ended June 30, 2004

	Market Value	Cost Value
Assets in trust		
Cash, equivalents, short-term securities	$47,887,105	$47,887,105
Investments:		
Fixed income	$131,662,560	$132,105,430
Equity	100,372,507	82,194,805
Real estate and mortgage loans	2,390,846	2,390,846
Invested securities lending collateral	58,302,130	58,302,130
Other assets	387,925	387,925
Total assets in trust	$341,003,073	$323,268,241
Assets receivable	$4,066,281	$4,066,281
Liabilities		
Invested securities lending collateral	-58,302,130	-58,302,130
Other	-27,935,709	-27,935,709
Total liabilities	-$86,237,839	-$86,237,839
Net assets held in trust for pension benefits		
Member reserves	$30,448,460	$30,448,460
Future reserves	228,383,055	210,648,223
Total assets available for benefits	$258,831,515	$241,096,683
Net Assets at Market/Cost Value	$258,831,515	$241,096,683

EXHIBIT J

Development of the Fund Through June 30, 2004

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

* *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, 2004

1. Unfunded/(Overfunded) actuarial accrued liability at beginning of year		$12,642,000
2. Normal cost at beginning of year, including expenses		5,260,704
3. Total contributions		5,818,531
4. Interest		
(a) For whole year on (1) + (2)	$1,521,730	
(b) For half year on (3)	247,288	
(c) Total interest: (4a) – (4b)		1,274,442
5. Expected unfunded/(overfunded) actuarial accrued liability: (1) + (2) – (3) + (4)		$13,358,615
6. Changes due to (gain)/loss from:		
(a) Investments	$12,639,583	
(b) Demographics*	-1,242,805	
(c) Total changes due to (gain)/loss		$11,396,778
7. Unfunded/(Overfunded) actuarial accrued liability at end of year		$24,755,393

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

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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 87 beneficiaries in pay status)		1,137
2.	Members inactive during year ended June 30, 2004 with vested rights		312
3.	Members active during the year ended June 30, 2004		1,178
	Fully vested	932	
	Not vested	246	
4.	Other non-vested terminated members as of June 30, 2004		650

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	$146,330,261	$34,179,057	$112,151,204
(b) Disability benefits	1,350,000	503,667	846,333
(c) Death benefits	1,991,268	677,815	1,313,453
(d) Withdrawal benefits	5,861,422	4,891,788	969,634
(e) Total	$155,532,951	$40,252,327	$115,280,624
2. Vested terminated members	$14,897,923	- -	$14,897,923
3. Other non-vested terminated members	857,483	- -	857,483
4. Annuitants	170,668,415	- -	170,668,415
5. Total	$341,956,772	$40,252,327	$301,704,445
B. Determination of Unfunded Actuarial Accrued Liability			
1. Actuarial Accrued Liability			$301,704,445
2. Actuarial Value of Assets			276,949,052
3. Unfunded Actuarial Accrued Liability: (1) – (2)			$24,755,393
C. Determination of Supplemental Contribution Rate			
1. Present value of future payrolls through the amortization date of June 30, 2032			$994,820,310
2. Supplemental contribution rate: (B.3) / (C.1)			2.49%

EXHIBIT II
Actuarial Balance Sheet

A. Current Assets				$276,949,052
B. Expected Future Assets				
1. Present Value of Expected Future Statutory Supplemental Contributions				$16,613,499
2. Present Value of Future Normal Costs				40,252,327
3. Total Expected Future Assets				$56,865,826
C. Total Current and Expected Future Assets				$333,814,878
D. Current Benefit Obligations		**Non-Vested**	**Vested**	**Total**
1. Benefit recipients:				
(a) Retirement annuities		- -	$158,852,723	$158,852,723
(b) Disability benefits		- -	1,941,520	1,941,520
(c) Beneficiaries		- -	9,874,172	9,874,172
2. Vested terminated members		- -	14,897,923	14,897,923
3. Other non-vested terminated members		- -	857,483	857,483
4. Active members:				
(a) Retirement benefits		$346,626	97,081,676	97,428,302
(b) Disability benefits		6,014	861,742	867,756
(c) Death benefits		8,718	1,257,600	1,266,318
(d) Withdrawal benefits		88,418	3,385,556	3,473,974
5. Total Current Benefit Obligations		$449,776	$289,010,395	$289,460,171
E. Expected Future Benefit Obligations				52,496,601
F. Total Current and Expected Future Benefit Obligations - Present Value of Benefits: (D.5 + E)				$341,956,772
G. Current Unfunded Actuarial Liability (D.5 - A)				$12,511,119
H. Current and Future Unfunded Actuarial Liability (F - C)				$8,141,894

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

* *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

Exhibit V

Determination of Contribution Sufficiency – Total

	July 1, 2004	
A. Statutory Contributions – Chapter 354A	**Percent of Payroll**	**Dollar Amount**
1. Employee contributions	5.50%	$3,070,117
2. Employer contributions	5.79	3,231,996
3. Total	11.29%	$6,302,113
B. Required Contributions – Chapter 356	**Percent of Payroll**	**Dollar Amount**
1. Normal Cost:		
(a) Retirement	7.55%	$4,214,487
(b) Disability	0.10	58,546
(c) Death	0.14	80,403
(d) Withdrawal	0.98	549,611
(e) Total	8.77%	$4,903,047
2. Supplemental contribution amortization	2.49%	$1,389,926
3. Allowance for administrative expenses	0.85	474,473
4. Total	12.11%	$6,767,446
C. Contribution Sufficiency / (Deficiency): (A.3) – (B.4)	-0.82%	-$465,333
Projected annual payroll for fiscal year beginning on the valuation date	$55,820,306	

Exhibit VI

Determination of Contribution Sufficiency – Old Plan

		July 1, 2004	
A. Statutory Contributions – Chapter 354A		**Percent of Payroll**	**Dollar Amount**
1.	Employee contributions	5.50%	$796,834
2.	Employer contributions	5.79	838,848
3.	Total	11.29%	$1,635,682
B. Required Contributions – Chapter 356		**Percent of Payroll**	**Dollar Amount**
1.	Normal Cost:		
	(a) Retirement	6.69%	$969,606
	(b) Disability	0.09	13,011
	(c) Death	0.12	17,028
	(d) Withdrawal	1.17	169,235
	(e) Total	8.07%	$1,168,880

Projected annual payroll for fiscal year beginning on the valuation date $14,487,882

Exhibit VII

Determination of Contribution Sufficiency – New Plan

	July 1, 2004	
A. Statutory Contributions – Chapter 354A	**Percent of Payroll**	**Dollar Amount**
1. Employee contributions	5.50%	$2,273,283
2. Employer contributions	5.79	2,393,147
3. Total	11.29%	$4,666,430
B. Required Contributions – Chapter 356	**Percent of Payroll**	**Dollar Amount**
1. Normal Cost:		
(a) Retirement	7.85%	$3,244,881
(b) Disability	0.11	45,536
(c) Death	0.15	63,377
(d) Withdrawal	0.92	380,376
(e) Total	9.03%	$3,734,170
Projected annual payroll for fiscal year beginning on the valuation date	$41,332,424	

EXHIBIT VIII

Supplementary Information Required by the GASB

Valuation date	July 1, 2004
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll, assuming payroll increases of 5.00% per annum
Remaining amortization period	28 years remaining as of July 1, 2004
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	1,137
Terminated vested members entitled to, but not yet receiving benefits	312
Other terminated non-vested members	650
Active members	1,178
Total	3,277

EXHIBIT IX

Actuarial Assumptions and Actuarial Cost Method

Mortality 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: Shown below for selected ages:

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

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:	65
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% x (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 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 made to the actuarial assumptions and cost methods since the prior valuation.

EXHIBIT X
Summary of Plan Provisions

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

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

Retirement (Old Plan):

Normal Retirement:

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

Early Retirement:

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

Retirement (New Plan Tier I):

<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:	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.

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):	
<u>*Surviving Spouse Optional Annuity*</u>:	
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.
<u>*Refund of Member's Contributions:*</u>	
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:	There have been no changes made to the plan provisions since the prior valuation.