Duluth Teachers' Retirement Fund Association

Actuarial Valuation and Review as of July 1, 2014

Segal Consulting

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December 3, 2014

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

Members of the Board:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2014. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2015, establishes the net pension liability under Governmental Accounting Standards Board (GASB) Statement No. 67, and analyzes the preceding year's experience.

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

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

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

Sincerely,

Segal Consulting, a Member of The Segal Group
By:

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

cc: Karen Kilberg, Executive Director

SECTION 1

VALUATION SUMMARY

Purpose i
Significant Issues in Valuation Year ii
Summary of Key Valuation Results iv

SECTION 2

VALUATION RESULTS

A. Member Data 1
B. Financial Information 4
C. Actuarial Experience 5

SECTION 3

SUPPLEMENTAL INFORMATION

EXHIBIT A
Table of Plan Coverage 6
EXHIBIT B
Members in Active Service as of June 30, 2014 7
EXHIBIT C
Retired Participants as of June 30, 2014 11
EXHIBIT D
Disabled Members as of June 30, 2014 15
EXHIBIT E
Beneficiaries as of June 30, 2014 .. 16
EXHIBIT F
Reconciliation of Member Data 20
EXHIBIT G
Schedule of Pensioners and Beneficiaries Added to and Removed from Rolls 21
EXHIBIT H
Statement of Change in Net Plan Assets for Year Ended June 30, 2014 22
EXHIBIT I
Statement of Plan Net Assets for Year Ended June 30, 2014 23
EXHIBIT J
Actuarial Value of Assets Calculation History through June 30, 2014 24
EXHIBIT K
Development of Unfunded Actuarial Accrued Liability for Year Ended June 30, 2014 25
EXHIBIT L
Definitions of Pension Terms 26

SECTION 4

REPORTING INFORMATION

EXHIBIT I
Summary of Actuarial Valuation Results 28
EXHIBIT II
Actuarial Balance Sheet 30
EXHIBIT III
Comparison of Employer Contributions to Actuarially Required Contributions 31
EXHIBIT IV
Schedule of Employer Contributions 32
EXHIBIT V
Schedule of Funding Progress 33
EXHIBIT VI
Determination of Contribution Sufficiency - Total 34
EXHIBIT VII
Determination of Contribution Sufficiency - Old Plan 35
EXHIBIT VIII
Determination of Contribution Sufficiency - New Plan Tier I 36
EXHIBIT IX
Determination of Contribution Sufficiency - New Plan Tier II 37
EXHIBIT X
Cash Flow Sufficiency Test 38
EXHIBIT XI
Net Pension Liability 39
EXHIBIT XII
Schedules of Changes in Net Pension Liability 41
EXHIBIT XIII
Actuarial Assumptions and Actuarial Cost Method 42
EXHIBIT XIV
Summary of Plan Provisions 47

Purpose

This report has been prepared by Segal Consulting to present a valuation of the Duluth Teachers' Retirement Fund Association (DTRFA) as of July 1, 2014. 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 2013;
- Standards for actuarial work as prescribed by the Legislative Commission on Pensions and Retirement;
- The benefit provisions of the Retirement Fund, as administered by the Legislative Commission on Pensions and Retirement;
- The data as provided and confirmed by the DTRFA staff;
- The characteristics of covered active members, inactive vested members, pensioners and beneficiaries as of July 1, 2014, provided by the Fund;
- The unaudited assets of the Fund as of June 30, 2014, 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

1. The Government Accounting Standards Board (GASB) approved two new Statements affecting the reporting of pension liabilities for accounting purposes. Statement 67 replaces Statement 25 and is for plan reporting. Statement 68 replaces statement 27 and is for employer reporting. Statement 67 is effective with the fiscal year ending June 30, 2014, for plan reporting. Statement 68 is effective with the fiscal year ending June 30, 2015, for employer reporting. The information contained in this valuation is intended to be used (along with other information) in order to comply with Statement 67.
2. The actuarial accrued liability funding ratio based on the actuarial value of assets over the actuarial accrued liability as of July 1, 2014, is 56.91%, compared to 53.99% as of July 1, 2013.
3. The statutory contribution rate under Chapter 354A.12 for the 2014 fiscal year is equal to 28.92% of payroll (which includes a direct State aid payment of $346,000 per year and an additional $6 million under Subdivision 3a, and $209,402 of redirected “amortization State aid” under 423A.02, Subdivision 3), and is compared to the required contribution rate under Chapter 356.215 of 31.16% of payroll. Therefore, the contribution deficiency is 2.24% of payroll as of July 1, 2014. Last year’s contribution rate deficiency was 2.88% of payroll. By statute, October 2014 is the last $6 million additional direct State Aid payment and without this payment, the contribution deficiency would be 14.98%. Each year there is a contribution deficiency leads to an increased deficiency in all future years.
4. For the year ended June 30, 2014, assets returned 17.91% 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 15.02%, compared to the assumed rate of 8.00% for the same time period. As of June 30, 2014, the actuarial value of assets ($202.9 million) represented 89.7% of the market value ($226.1 million).
5. The portion of deferred asset gains and losses recognized during the calculation of the July 1, 2014 actuarial value of assets resulted in a gain of $11,611,372.
6. As indicated on page 4 of this report, the total investment gain not yet recognized as of June 30, 2014, is $23,196,483. These unrecognized gains will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent they are not offset by recognition of losses derived from future experience.
7. The 15.02% return on the actuarial value of assets resulted in a gain of $12,826,077 on the unfunded actuarial liability and demographic and liability experience resulted in a $190,746 loss (less than 0.1% of the total accrued liability).
8. If valuation assets were based on market value, the unfunded actuarial accrued liability would be $130.4 million, the actuarial accrued liability funding ratio would be 63.42%, the actuarial contribution rate would be 27.85%, and there would be a contribution sufficiency of 1.07%.

9. The 2013 Omnibus Pension Bill included a change to the post-retirement adjustment under Chapter 354A.27, Subdivisions 6 and 7. The law provides for a post-retirement benefit adjustment of CPI-U (up to 5%) when the funding ratio using the actuarial value of assets equals or exceeds 90%. Until that 90% threshold is met, the post-retirement adjustment will be 1%. Since projected contributions are not sufficient to cover the long-term cost of the plan, a 90% funding ratio on an actuarial basis is not expected to be met. As a result, the July 1, 2014 valuation reflects only the 1% annual post-retirement adjustment.
10. When measuring pension liability for GASB purposes, the same actuarial cost method (Entry Age Normal) is used to determine the funded status of the Plan and the actuarially determined contribution. However, as of June 30, 2014, the GASB blended discount rate calculation results in a different discount rate than used for funding purposes. The total pension liability (TPL) measure for financial reporting is $482,988,941 as of June 30, 2014, using a blended discount rate of 5.40%.
11. The net pension liability (NPL) is equal to the difference between the TPL and the Plan’s fiduciary net position. The Plan’s fiduciary net position is equal to the market value of assets. Based on the Plan’s fiduciary net position of $226,071,060, the NPL as of June 30, 2014, is $256,917,881.
12. The actuarial valuation report as of June 30, 2014 is based on financial data as of that date. Changes in the value of assets subsequent to that date are not reflected.
13. The 2014 Omnibus Pensions and Retirement Bill authorized the merger of DTRFA into the Teachers Retirement Association of Minnesota, effective July 1, 2015. This valuation does not reflect any impact of this merger.

Summary of Key Valuation Results

	2014	2013
Contributions (% of payroll) for plan year beginning July 1:		
Statutory – Chapter 354A + Expected 423A	28.92%	27.66%
Required – Chapter 356	31.16%	30.54%
Sufficiency/(Deficiency)*	-2.24%	-2.88%
Funding elements for plan year beginning July 1:		
Normal cost	$3,708,012	$3,799,107
Market value of assets	226,071,060	205,300,543
Actuarial value of assets (AVA)	202,874,577	190,116,720
Actuarial accrued liability (AAL)	356,482,603	352,143,396
Unfunded actuarial accrued liability	153,608,026	162,026,676
Funding ratios as of July 1:		
Accrued Benefit Funding Ratio	61.48%	58.70%
Current assets (AVA)	$202,874,577	$190,116,720
Current benefit obligations	329,962,837	323,898,655
Projected Benefit Funding Ratio	73.85%**	74.25%
Current and expected future assets	$283,075,615	$282,061,456
Current and expected future benefit obligations (Present Value of Benefits)	383,319,294	379,862,545
GASB 67 information as of June 30:		
Discount rate	5.40%	5.62%
Total pension liability	$482,988,941	$464,828,657
Plan fiduciary net position	226,071,060	205,300,543
Net pension liability	256,917,881	259,528,114
Plan fiduciary net position as a percentage of total pension liability	46.81%	44.17%
Demographic data for plan year beginning July 1:		
Number of pensioners and beneficiaries	1,502	1,445
Number of vested terminated members	253	268
Number of other non-vested terminated members	747	757
Number of active members	837	873
Total projected payroll***	$47,103,796	$49,019,534

* *The contribution deficiency without the additional $6 million of state aid would be 14.98% and 15.12% for 2014 and 2013, respectively.*

** *Current assets exclude $23.2 million of deferred market gains. Projected Benefit Funding Ratio would be 79.90% with current assets valued at market.*

*** *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 last nine years.

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

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

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

CHART 1

Member Population: 2005 – 2014

Year Ended June 30	Active Members	Vested Terminated Members*	Pensioners and Beneficiaries	Ratio of Non-Actives to Actives
2005	1,164	313	1,153	1.26
2006	1,174	312	1,190	1.28
2007	1,150	321	1,227	1.35
2008	1,140	310	1,243	1.36
2009	1,016	348	1,264	1.59
2010	1,054	301	1,295	1.51
2011	1,006	290	1,344	1.62
2012	919	284	1,386	1.82
2013	873	268	1,445	1.96
2014	837	253	1,502	2.10

** 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 837 active members with an average age of 47.6, average years of service of 12.8 and average projected compensation of $56,277. The 873 active members in the prior valuation had an average age of 47.8, average service of 12.9 years and average projected compensation of $56,151.

Inactive Members

In this year's valuation, there were 253 members with a vested right to a deferred or immediate vested benefit.

In addition, there were 747 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, 2014

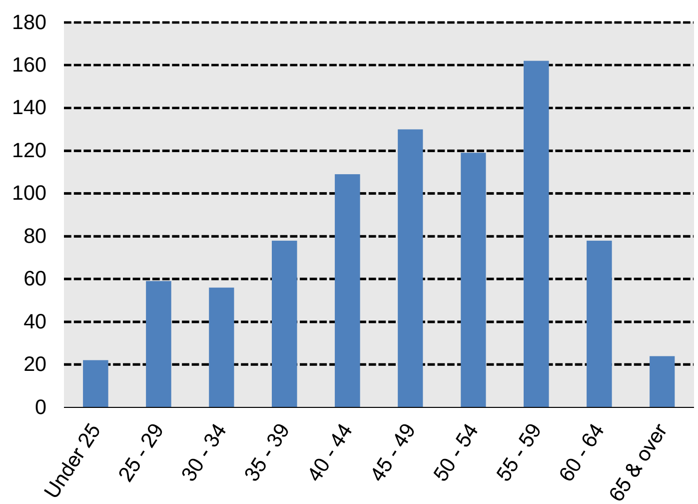
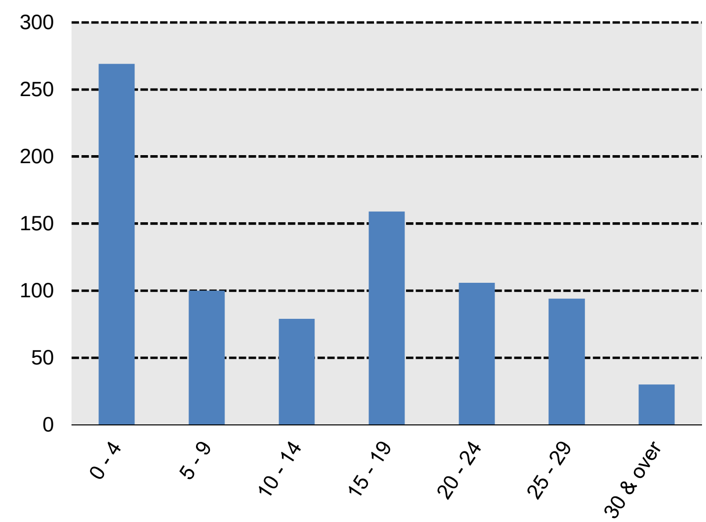


CHART 3

Distribution of Active Members by Years of Service as of June 30, 2014



Pensioners and Beneficiaries

As of June 30, 2014, 1,374 pensioners (including 21 disableds) and 128 beneficiaries were receiving total monthly benefits of $2,282,131. For comparison, in the previous valuation, there were 1,330 pensioners (including 19 disableds) and 115 beneficiaries receiving monthly benefits of $2,186,006.

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, 2014

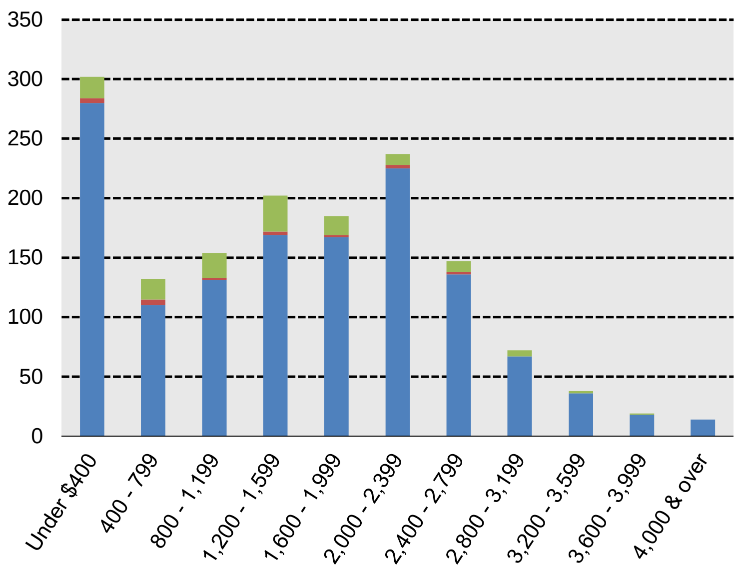
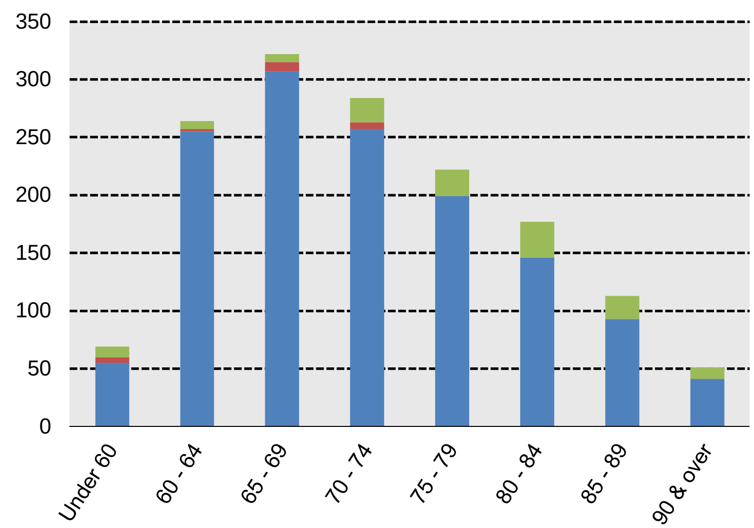


CHART 5

Distribution of Pensioners and Beneficiaries by Type and by Age as of June 30, 2014



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, 2014 and June 30, 2013

				2014		2013	
				% Not		% Not	
1.	Calculation of unrecognized return		Original Amount	Recognized		Recognized	
	(a)	Year ended June 30, 2014	$19,624,032	80%	$15,699,226		--
	(b)	Year ended June 30, 2013	15,797,970	60%	9,478,782	80%	$12,638,376
	(c)	Year ended June 30, 2012	-16,923,132	40%	-6,769,253	60%	-10,153,879
	(d)	Year ended June 30, 2011	23,938,638	20%	4,787,728	40%	9,575,455
	(e)	Year ended June 30, 2010	15,619,356			20%	3,123,871
	(f)	Total unrecognized return			$23,196,483		$15,183,823
2.	Market value of assets available for benefits				$226,071,060		$205,300,543
3.	Less: Unrecognized return				$23,196,483		$15,183,823
4.	Actuarial value of assets (Current Assets): (2) – (3)				$202,874,577		$190,116,720
5.	Actuarial value as a percent of market value				89.7%		92.6%

C. ACTUARIAL EXPERIENCE

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

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

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

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

The total gain is $12,635,331, of which a gain of $12,826,077 is from investments and a loss of $190,746 is from all other sources. The net experience variation from individual sources other than investments was less than 0.1% of the actuarial accrued liability.

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

CHART 7

Actuarial Experience for Year Ended June 30, 2014

1.	Net gain from investments on an actuarial value of assets basis	$12,826,077
2.	Net gain from salary increases different than assumed	2,694,414
3.	Net loss from post-retirement mortality experience	-2,955,161
4.	Net loss from turnover and retirement from active status	-518,003
5.	Net gain from other changes and experience	588,004
6.	Net experience gain: (1) + (2) + (3) + (4) + (5)	$12,635,331

EXHIBIT A

Table of Plan Coverage

Category	2014	2013	Change From Prior Year
Active members in valuation:			
Number	837	873	-4.1%
Average age	47.6	47.8	N/A
Average service	12.8	12.9	N/A
Total projected payroll*	$47,103,796	$49,019,534	-3.9%
Average projected compensation	56,277	56,151	0.2%
Total active vested members	583	640	-8.9%
Vested terminated members	253	268	-5.6%
Retired participants:			
Number in pay status	1,353	1,311	3.2%
Average age	72.4	72.3	N/A
Average monthly benefit	$1,539	$1,531	0.5%
Disabled participants:			
Number in pay status	21	19	10.5%
Average age	65.4	65.0	N/A
Average monthly benefit	$1,190	$1,179	0.9%
Beneficiaries:			
Number in pay status	128	115	11.3%
Average age	77.5	76.6	N/A
Average monthly benefit	$1,366	$1,360	0.4%
Other non-vested terminated members	747	757	-1.3%

** 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, 2014
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	22	22	--	--	--	--	--	--
	$22,727	$22,727	--	--	--	--	--	--
25 - 29	59	56	3	--	--	--	--	--
	28,781	27,248	$57,399	--	--	--	--	--
30 - 34	56	42	14	--	--	--	--	--
	35,194	28,365	55,683	--	--	--	--	--
35 - 39	78	31	22	15	10	--	--	--
	53,708	36,755	65,195	$61,080	$69,928	--	--	--
40 - 44	109	22	18	20	43	6	--	--
	63,111	30,477	66,702	68,906	73,960	$74,927	--	--
45 - 49	130	35	8	18	38	27	4	--
	61,386	37,149	60,285	65,710	71,644	74,027	$73,432	--
50 - 54	119	14	10	11	22	35	25	2
	62,839	32,806	48,830	58,426	69,835	69,898	70,488	$71,293
55 - 59	162	21	16	11	30	25	43	16
	65,974	38,567	59,382	61,456	70,691	69,496	73,625	76,736
60 - 64	78	8	7	4	16	11	21	11
	63,120	19,579	44,061	50,693	68,690	63,927	76,792	76,425
65 & Over	24	18	2	--	--	2	1	1
	33,223	26,807	19,513	--	--	68,060	67,589	72,083
Total	837	269	100	79	159	106	94	30
	$56,277	$30,616	$58,548	$63,273	$71,435	$70,485	$73,426	$76,104

EXHIBIT B-2

Members in Active Service as of June 30, 2014
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	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
55 - 59	11	--	--	--	--	--	1	10
	$76,409	--	--	--	--	--	$70,876	$76,963
60 - 64	11	--	--	--	1	--	2	8
	74,189	--	--	--	$67,942	--	72,842	75,307
65 & Over	1	--	--	--	--	--	--	1
	72,083	--	--	--	--	--	--	72,083
Total	23	--	--	--	1	--	3	19
	$75,160	--	--	--	$67,942	--	$72,187	$76,009

EXHIBIT B-3

Members in Active Service as of June 30, 2014
By Age, Years of Service, and Average Projected Compensation – New Plan Tier I

		Years of Service						
Age	**Total**	**Under 5**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 & Over**
Under 25	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
25 - 29	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
30 - 34	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
35 - 39	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
40 - 44	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	10	--	--	--	2	4	4	--
	$73,767	--	--	--	$72,645	$74,663	$73,432	--
50 - 54	49	1	--	1	4	16	25	2
	70,060	$15,562	--	$70,526	78,487	70,509	70,488	$71,293
55 - 59	54	--	--	--	2	6	40	6
	72,575	--	--	--	60,681	65,354	73,686	76,357
60 - 64	30	--	--	2	--	6	19	3
	71,580	--	--	33,290	--	62,609	77,208	79,406
65 & Over	1	--	--	--	--	--	1	--
	67,589	--	--	--	--	--	67,589	--
Total	144	1	--	3	8	32	89	11
	$71,560	$15,562	--	$45,702	$72,575	$68,580	$73,460	$76,268

EXHIBIT B-4

Members in Active Service as of June 30, 2014
By Age, Years of Service, and Average Projected Compensation – New Plan Tier II

		Years of Service						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 25	22	22	--	--	--	--	--	--
	$22,727	$22,727	--	--	--	--	--	--
25 - 29	59	56	3	--	--	--	--	--
	28,781	27,248	$57,399	--	--	--	--	--
30 - 34	56	42	14	--	--	--	--	--
	35,194	28,365	55,683	--	--	--	--	--
35 - 39	78	31	22	15	10	--	--	--
	53,708	36,755	65,195	$61,080	$69,928	--	--	--
40 - 44	109	22	18	20	43	6	--	--
	63,111	30,477	66,702	68,906	73,960	$74,927	--	--
45 - 49	120	35	8	18	36	23	--	--
	60,354	37,149	60,285	65,710	71,588	73,916	--	--
50 - 54	70	13	10	10	18	19	--	--
	57,784	34,133	48,830	57,215	67,913	69,384	--	--
55 - 59	97	21	16	11	28	19	2	--
	61,116	38,567	59,382	61,456	71,406	70,804	$73,789	--
60 - 64	37	8	7	2	15	5	--	--
	52,970	19,579	44,061	68,095	68,739	65,510	--	--
65 & Over	22	18	2	--	--	2	--	--
	29,894	26,807	19,513	--	--	68,060	--	--
Total	670	268	100	76	150	74	2	--
	$52,344	$30,672	$58,548	$63,967	$71,397	$71,309	$73,789	--

EXHIBIT C-1
Retired Participants as of June 30, 2014
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	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
55 - 59	55	55	--	--	--	--	--	--
	$18,779	$18,779	--	--	--	--	--	--
60 - 64	255	177	78	--	--	--	--	--
	20,369	21,678	$17,399	--	--	--	--	--
65 - 69	307	93	126	84	4	--	--	--
	18,529	16,050	20,393	$19,113	$5,172	--	--	--
70 - 74	257	7	47	107	95	1	--	--
	17,849	6,013	15,442	18,339	19,361	$17,824	--	--
75 - 79	199	3	4	32	85	75	--	--
	17,760	9,465	13,665	16,194	18,639	17,981	--	--
80 - 84	146	1	--	3	23	85	34	--
	18,830	2,100	--	21,593	14,411	21,997	$14,151	--
85 - 89	93	--	1	--	1	30	51	10
	17,162	--	15,189	--	37,649	18,038	18,365	$7,868
90 & Over	41	--	--	--	--	1	14	26
	14,457	--	--	--	--	30,917	16,016	12,984
Total	1,353	336	256	226	208	192	99	36
	$18,469	$19,152	$18,447	$18,366	$18,334	$19,834	$16,586	$11,563

EXHIBIT C-2

Retired Participants as of June 30, 2014
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	10	10	--	--	--	--	--	--
	$36,978	$36,978	--	--	--	--	--	--
60 - 64	101	69	32	--	--	--	--	--
	23,619	27,137	$16,032	--	--	--	--	--
65 - 69	82	26	27	27	2	--	--	--
	17,456	27,056	14,237	$11,994	$9,847	--	--	--
70 - 74	83	--	12	29	42	--	--	--
	13,047	--	14,243	13,327	12,511	--	--	--
75 - 79	83	--	1	2	43	37	--	--
	15,222	--	22,681	30,800	12,871	$16,909	--	--
80 - 84	44	--	--	--	4	24	16	--
	15,069	--	--	--	7,165	19,846	$9,878	--
85 - 89	32	--	--	--	--	1	21	10
	12,299	--	--	--	--	4,740	14,768	$7,868
90 & Over	30	--	--	--	--	--	7	23
	12,472	--	--	--	--	--	14,655	11,808
Total	465	105	72	58	91	62	44	33
	$17,126	$28,054	$15,153	$13,309	$12,388	$17,850	$12,972	$10,614

EXHIBIT C-3
Retired Participants as of June 30, 2014
By Age, Years Retired and Average Annual Benefit – New Plan Tier I

		Years Retired						
Age	**Total**	**Under 5**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 & Over**
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
55 - 59	24	24	--	--	--	--	--	--
	$20,869	$20,869	--	--	--	--	--	--
60 - 64	104	66	38	--	--	--	--	--
	22,475	23,039	$21,496	--	--	--	--	--
65 - 69	171	32	86	52	1	--	--	--
	22,840	16,518	24,471	$24,461	$612	--	--	--
70 - 74	119	1	11	60	46	1	--	--
	25,256	3,015	28,401	23,833	27,005	$17,824	--	--
75 - 79	65	1	1	4	26	33	--	--
	25,691	11,148	29,082	25,226	31,494	21,514	--	--
80 - 84	66	1	--	--	1	47	17	--
	21,429	2,100	--	--	35,674	23,241	$16,721	--
85 - 89	34	--	1	--	--	5	28	--
	21,929	--	15,189	--	--	21,763	22,200	--
90 & Over	8	--	--	--	--	--	5	3
	20,497	--	--	--	--	--	19,596	$21,999
Total	591	125	137	116	74	86	50	3
	$23,254	$20,530	$23,927	$24,163	$28,343	$22,429	$20,076	$21,999

EXHIBIT C-4
Retired Participants as of June 30, 2014
By Age, Years Retired and Average Annual Benefit – New Plan Tier II

		Years Retired						
Age	**Total**	**Under 5**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 & Over**
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
55 - 59	21	21	--	--	--	--	--	--
	$7,725	$7,725	--	--	--	--	--	--
60 - 64	50	42	8	--	--	--	--	--
	9,424	10,570	$3,407	--	--	--	--	--
65 - 69	54	35	13	5	1	--	--	--
	6,508	7,447	6,207	$1,938	$380	--	--	--
70 - 74	55	6	24	18	7	--	--	--
	9,071	6,513	10,103	8,099	10,226	--	--	--
75 - 79	51	2	2	26	16	5	--	--
	11,781	8,624	1,449	13,681	13,252	$2,592	--	--
80 - 84	36	--	--	3	18	14	1	--
	18,662	--	--	21,593	14,841	21,506	$38,817	--
85 - 89	27	--	--	--	1	24	2	--
	17,412	--	--	--	37,649	17,816	2,449	--
90 & Over	3	--	--	--	--	1	2	--
	18,190	--	--	--	--	30,917	11,827	--
Total	297	106	47	52	43	44	5	--
	$11,047	$8,709	$7,517	$11,076	$13,692	$17,558	$13,474	--

EXHIBIT D
Disabled Members as of June 30, 2014
By Age, Years Disabled and Average Annual Benefit – Total

		Years Disabled						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	1	1	--	--	--	--	--	--
	$5,296	$5,296	--	--	--	--	--	--
55 - 59	4	1	3	--	--	--	--	--
	6,459	591	$8,415	--	--	--	--	--
60 - 64	2	1	1	--	--	--	--	--
	17,781	27,658	7,904	--	--	--	--	--
65 - 69	8	1	3	--	2	1	1	--
	16,444	8,224	24,369	--	$8,554	$29,459	$3,657	--
70 - 74	6	--	1	4	--	1	--	--
	16,934	--	17,339	$16,032	--	20,134	--	--
75 - 79	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
80 - 84	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
85 - 89	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
90 & Over	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
Total	21	4	8	4	2	2	1	--
	$14,278	$10,442	$15,449	$16,032	$8,554	$24,796	$3,657	--

EXHIBIT E-1
Beneficiaries as of June 30, 2014
By Age, Years Since Member's Retirement Date 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	3	--	--	3	--	--	--	--
	$3,324	--	--	$3,324	--	--	--	--
45 - 49	1	1	--	--	--	--	--	--
	1,774	$1,774	--	--	--	--	--	--
50 - 54	1	--	1	--	--	--	--	--
	846	--	$846	--	--	--	--	--
55 - 59	4	2	1	1	--	--	--	--
	18,833	29,149	16,486	548	--	--	--	--
60 - 64	7	4	1	--	1	--	1	--
	6,446	4,874	3,989	--	$15,900	--	$5,739	--
65 - 69	7	--	--	1	3	3	--	--
	18,417	--	--	6,888	20,729	$19,948	--	--
70 - 74	21	1	2	7	9	2	--	--
	19,691	28,616	2,121	16,275	23,671	26,847	--	--
75 - 79	23	--	--	--	4	16	3	--
	19,358	--	--	--	10,014	22,649	14,262	--
80 - 84	31	--	--	2	--	13	16	--
	18,128	--	--	9,880	--	20,443	17,279	--
85 - 89	20	--	--	--	--	5	9	6
	16,056	--	--	--	--	22,100	15,434	$11,954
90 & Over	10	1	--	--	--	1	3	5
	9,389	10,482	--	--	--	9,082	12,094	7,610
Total	128	9	5	14	17	40	32	11
	$16,388	$13,185	$5,113	$10,793	$19,481	$21,532	$15,630	$9,979

EXHIBIT E-2

Beneficiaries as of June 30, 2014
By Age, Years Since Member's Retirement Date and Average Annual Benefit – Old Plan

		Years Since Member's Retirement Date						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
55 - 59	1	1	--	--	--	--	--	--
	$16,620	$16,620	--	--	--	--	--	--
60 - 64	2	1	--	--	--	--	1	--
	8,640	11,542	--	--	--	--	$5,739	--
65 - 69	2	--	--	--	--	2	--	--
	23,714	--	--	--	--	$23,714	--	--
70 - 74	8	--	--	3	3	2	--	--
	21,320	--	--	$11,949	$27,008	26,847	--	--
75 - 79	8	--	--	--	3	4	1	--
	13,398	--	--	--	9,451	17,179	10,115	--
80 - 84	4	--	--	--	--	1	3	--
	11,990	--	--	--	--	3,192	14,922	--
85 - 89	3	--	--	--	--	--	2	1
	13,244	--	--	--	--	--	12,000	$15,732
90 & Over	7	1	--	--	--	--	1	5
	8,822	10,482	--	--	--	--	13,226	7,610
Total	35	3	--	3	6	9	8	6
	$14,529	$12,882	--	$11,949	$18,229	$19,226	$12,231	$8,963

EXHIBIT E-3
Beneficiaries as of June 30, 2014
By Age, Years Since Member's Retirement Date and Average Annual Benefit – New Plan Tier I

		Years Since Member's Retirement Date						
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over
Under 45	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
45 - 49	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
50 - 54	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
55 - 59	1	1	--	--	--	--	--	--
	$41,678	$41,678	--	--	--	--	--	--
60 - 64	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--
65 - 69	4	--	--	1	2	1	--	--
	15,865	--	--	$6,888	$22,076	$12,417	--	--
70 - 74	7	1	1	2	3	--	--	--
	22,259	28,616	$2,613	23,453	25,893	--	--	--
75 - 79	9	--	--	--	--	8	1	--
	23,430	--	--	--	--	24,260	$16,786	--
80 - 84	15	--	--	--	--	4	11	--
	19,676	--	--	--	--	24,403	17,958	--
85 - 89	6	--	--	--	--	1	4	1
	20,335	--	--	--	--	47,860	17,896	$2,567
90 & Over	1	--	--	--	--	--	1	--
	16,251	--	--	--	--	--	16,251	--
Total	41	2	1	3	5	14	17	1
	$20,929	$35,147	$2,613	$17,932	$24,366	$25,141	$17,774	$2,567

EXHIBIT E-4

Beneficiaries as of June 30, 2014

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

		Years Since Member's Retirement Date						
Age	**Total**	**Under 5**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 & Over**
Under 45	3	--	--	3	--	--	--	--
	$3,324	--	--	$3,324	--	--	--	--
45 - 49	1	1	--	--	--	--	--	--
	1,774	$1,774	--	--	--	--	--	--
50 - 54	1	--	1	--	--	--	--	--
	846	--	$846	--	--	--	--	--
55 - 59	2	--	1	1	--	--	--	--
	8,517	--	16,486	548	--	--	--	--
60 - 64	5	3	1	--	1	--	--	--
	5,569	2,651	3,989	--	$15,900	--	--	--
65 - 69	1	--	--	--	1	--	--	--
	18,033	--	--	--	18,033	--	--	--
70 - 74	6	--	1	2	3	--	--	--
	14,524	--	1,630	15,587	18,113	--	--	--
75 - 79	6	--	--	--	1	4	1	--
	21,197	--	--	--	11,706	$24,898	$15,884	--
80 - 84	12	--	--	2	--	8	2	--
	18,240	--	--	9,880	--	20,619	17,083	--
85 - 89	11	--	--	--	--	4	3	4
	14,489	--	--	--	--	15,659	14,440	$13,356
90 & Over	2	--	--	--	--	1	1	--
	7,943	--	--	--	--	9,082	6,804	--
Total	50	4	4	8	6	17	7	4
	$13,679	$2,432	$5,738	$7,682	$16,663	$19,780	$14,311	$13,356

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, 2013	873	268	757	1,311	19	115	3,343
B.	Additions and new hires	88	3	11	0	0	0	102
C.	Participant movement:							
	1. Retirements	-46	-16	-8	70	0	0	0
	2. Disability	-1	-1	0	0	2	0	0
	3. Died with beneficiary	0	0	0	-12	0	12	0
	4. Died without beneficiary	0	-1	-2	-17	0	-1	-21
	5. Terminated – deferred	-8	8	0	0	0	0	0
	6. Terminated – other non-vested	-84	-6	90	0	0	0	0
	7. Refunds	0	0	-34	0	0	0	-34
	8. Rehired as active	15	-2	-13	0	0	0	0
	9. Contributions written off	0	0	-54	0	0	0	-54
	10. Expired benefits	0	0	0	-1	0	0	-1
D.	Data adjustments	0	0	0	2	0	2	4
E.	Number as of June 30, 2014	837	253	747	1,353	21	128	3,339

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
2005	64	1,373,262	48	603,930	1,153	18,936,633	3.8	16,424
2006	66	1,359,258	29	312,333	1,190	19,901,351	5.1	16,724
2007	62	1,426,530	25	345,683	1,227	20,978,509	5.4	17,097
2008	58	1,196,895	42	525,597	1,243	22,291,901	6.3	17,934
2009	55	1,201,849	35	424,843	1,263	23,605,292	5.9	18,690
2010	60	1,132,248	28	331,381	1,295	24,114,153	2.2	18,621
2011	76	1,370,877	27	439,349	1,344	24,661,881	2.3	18,350
2012	78	1,717,231	36	644,163	1,386	25,338,231	2.7	18,282
2013	88	1,790,214	29	541,544	1,445	26,227,725	3.5	18,151
2014	88	1,594,849	31	517,549	1,502	27,385,577	4.4	18,233

EXHIBIT H

Statement of Change in Net Plan Assets for Year Ended June 30, 2014

			Market Value
A.	Assets available at beginning of year (BOY)		$205,300,543
B.	Additions:		
	1.	Member contributions	$3,160,794
	2.	Employer contributions	3,133,292
	3.	State funding	6,555,402
	4.	Investment income	1,380,506
	5.	Investment expenses	-1,480,069
	6.	Other	2,886
	7.	Net appreciation/(depreciation)	35,557,154
	8.	Total Additions	$48,309,965
C.	Operating Expenses:		
	1.	Service retirements	$24,426,344
	2.	Disability benefits	111,667
	3.	Survivor benefits	1,965,596
	4.	Refunds	374,187
	5.	Administrative expenses	661,654
	6.	Total operating expenses	$27,539,448
D.	Other changes in reserves		--
E.	Assets available at end of year (EOY): (A) + (B.8) – (C.6) + (D)		$226,071,060
F.	Determination of current year unrecognized asset return		
	1.	Average balance:	
		(a) Assets available at BOY: (A)	$205,300,543
		(b) Assets available at EOY: (E)	226,071,060
		(c) Average balance [(a) + (b) – Net Investment Income] / 2 [Net Investment Income: (B.4) + (B.5) + (B.6) + (B.7)]	197,955,563
	2.	Expected return: 8.00% x (F.1.(c))	15,836,445
	3.	Actual return: (B.4) + (B.5) + (B.6) + (B.7)	35,460,477
	4.	Current year unrecognized asset return: (F.3) – (F.2)	$19,624,032

EXHIBIT I

Statement of Plan Net Assets for Year Ended June 30, 2014

	Market Value
Assets in trust:	
Cash, equivalents, short-term securities	$4,785,069
Investments:	
Equity	139,129,460
Fixed income	36,417,280
Private equity and limited partnerships	43,806,242
Invested securities lending collateral	5,006,859
Real assets	1,519,400
Other assets	229,179
Total assets in trust	$230,893,489
Assets receivable	$1,272,929
Liabilities:	
Invested securities lending collateral	-$5,834,579
Stock and bond purchases, and accounts payable	-260,779
Total liabilities	-$6,095,358
Net assets held in Trust for Pension Benefits:	
Member reserves	$31,756,691
Other reserves	194,314,369
Total Assets Available for Benefits	$226,071,060
Net Assets at Market Value	$226,071,060

EXHIBIT J

Actuarial Value of Assets Calculation History through June 30, 2014

Year Ended June 30	Employer Contributions[1]	Employee Contributions	Net Investment Return[2]	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2004	- -	- -	- -	- -	- -	$276,949,052
2005	$2,845,684	$2,924,264	$4,566,718	$436,507	$18,368,390	268,480,821
2006	2,867,299	3,030,418	16,291,585	424,840	19,319,594	270,925,689
2007	2,940,697	2,978,435	32,143,488	456,987	20,266,573	288,264,749
2008	2,994,086	2,954,062	25,980,797	487,944	21,638,665	298,067,085
2009	3,300,026	2,927,260	-1,539,093	505,164	22,994,555	279,255,559
2010	3,626,514	2,899,071	-6,254,241	505,672	23,712,318	255,308,913
2011	3,456,562	2,779,703	-1,697,460	497,009	24,278,734	235,071,975
2012	3,432,259	2,888,242	-9,026,836	628,923	24,903,292	206,833,425
2013	3,359,717	3,050,990	3,105,019	537,013	25,695,418	190,116,720
2014	9,688,694	3,160,794	27,447,817	661,654	26,877,794	202,874,577

(1) *Includes direct State aid payments for years ending 2009 and later.*

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

EXHIBIT K

Development of Unfunded Actuarial Accrued Liability for Year Ended June 30, 2014

1.	Unfunded actuarial accrued liability at beginning of year		$162,026,676
2.	Normal cost at beginning of year, including expenses		4,313,812
3.	Total contributions		-12,849,488
4.	Interest		
	(a) For whole year on (1) + (2)	$13,307,239	
	(b) For half year on (3)	-513,979	
	(c) Total interest: (4a) + (4b)		12,793,260
5.	Expected unfunded actuarial accrued liability:		$166,284,260
6.	Changes due to (gain)/loss from:		
	(a) Investments	-$12,826,077	
	(b) Demographic experience[1] and other changes	190,746	
	(c) Total changes due to (gain)/loss		-12,635,331
7.	Change due to method change		-40,903
8.	Unfunded actuarial accrued liability at end of year		$153,608,026

[1] *Includes (gain)/loss due to age/service retirements, disability, mortality (pre and post-retirement), withdrawal, salary increases, and other experience*

EXHIBIT L

Definitions of Pension Terms

The following list provides an overview of certain technical terms for the convenience of the reader:

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

(a) Investment return — the rate of investment yield that the Fund will earn over the long-term future. 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;

(b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;

(c) Retirement rates — the rate or probability of retirement at a given age;

(d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Actuarial Cost Method: Entry Age Normal Actuarial Cost Method. Entry Age is calculated as current age minus pension credits. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are expressed as a level percentage of payroll.

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

Unfunded Actuarial Accrued Liability:	The extent to which the actuarial accrued liability of the Fund exceeds the assets of the Fund. There are a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.
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.
Accrued Benefit Funding Ratio:	A current year funded status that measures the percent of benefits covered by Current Assets. This ratio is based on benefits earned to the valuation date (accrued service) and includes future salary increases to retirement. The liability for these benefits is defined as the Current Benefit Obligations. The Accrued Benefit Funding Ratio is calculated as the Actuarial Value of Assets (Current Assets) divided by the Current Benefit Obligations.
Net Pension Liability (NPL):	The Net Pension Liability is equal to the Total Pension Liability minus the Plan Fiduciary Net Position.
Plan Fiduciary Net Position:	Market value of assets.
Total Pension Liability (TPL):	The actuarially accrued liability under the entry age normal cost method and based on the blended discount rate as described in GASB 67 and 68.
Projected Benefit Funding Ratio:	A projected funded status that measures contribution sufficiency/deficiency, which is based on a present value of all plan benefits for the lifetime of all plan members. The liability for these benefits is defined as the Current and Expected Future Benefit Obligations, or Present Value of Benefits. The Current and Expected Future Assets are determined as the sum of the Actuarial Value of Assets (Current Assets), the Present Value of Expected Future Statutory Supplemental Contributions and the Present Value of Future Normal Costs. The Projected Benefit Funding Ratio is calculated as the Current and Expected Future Assets divided by the Current and Expected Future Benefit Obligations. In general (and without consideration of unrecognized investment gains or losses), if the ratio is equal to or more than 100%, there is a contribution sufficiency, and if it is less than 100% there is a contribution deficiency.

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 128 beneficiaries in pay status)		1,502
2.	Members inactive during year ended June 30, 2014 with vested rights		253
3.	Members active during the year ended June 30, 2014		837
	Fully vested	583	
	Not vested	254	
4.	Other non-vested terminated members as of June 30, 2014		747

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	$114,559,108	$20,291,590	$94,267,518
(b) Disability benefits	1,651,119	502,392	1,148,727
(c) Death benefits	2,099,017	536,809	1,562,208
(d) Withdrawal benefits	4,299,499	5,505,900	(1,206,401)
(e) Total	$122,608,743	$26,836,691	$95,772,052
2. Vested terminated members	$8,346,133	--	$8,346,133
3. Other non-vested terminated members	1,337,540	--	1,337,540
4. Annuitants	251,026,878	--	251,026,878
5. Total	$383,319,294	$26,836,691	$356,482,603
B. Determination of Unfunded Actuarial Accrued Liability			
1. Actuarial Accrued Liability			$356,482,603
2. Actuarial Value of Assets			202,874,577
3. Unfunded Actuarial Accrued Liability: (1) – (2)			$153,608,026
C. Determination of Supplemental Contribution Rate			
1. Present value of future payrolls through the amortization date of June 30, 2040			$700,013,112
2. Supplemental contribution rate: (B.3) / (C.1)			21.94%

EXHIBIT II

Actuarial Balance Sheet

A. Current Assets[1]				$202,874,577
B. Expected Future Assets				
1. Present Value of Expected Future Statutory Supplemental Contributions				$53,364,349
2. Present Value of Future Normal Costs				26,836,691
3. Total Expected Future Assets				$80,201,040
C. Total Current and Expected Future Assets[1]				$283,075,617
D. Current Benefit Obligations		**Non-Vested**	**Vested**	**Total**
1. Benefit recipients:				
	(a) Retirement annuities	- -	$233,450,260	$233,450,260
	(b) Disability benefits	- -	3,226,369	3,226,369
	(c) Beneficiaries	- -	14,350,249	14,350,249
2. Vested terminated members		- -	8,346,133	8,346,133
3. Other non-vested terminated members		- -	1,337,540	1,337,540
4. Active members:				
	(a) Retirement benefits	$1,793,560	62,933,108	64,726,668
	(b) Disability benefits	283,729	558,104	841,833
	(c) Death benefits	21,423	1,168,074	1,189,497
	(d) Withdrawal benefits	182,879	2,311,410	2,494,289
5. Total Current Benefit Obligations		$2,281,590	$327,681,247	$329,962,837
E. Expected Future Benefit Obligations				$53,356,457
F. Total Current and Expected Future Benefit Obligations - Present Value of Benefits: (D.5 + E)				$383,319,294
G. Unfunded Current Benefit Obligations (D.5 - A)				$127,088,260
H. Unfunded Current and Future Benefit Obligations (F - C)[2]				$100,243,677

[1] *Item does not reflect $23.2 million of deferred market gains.*

[2] *Item H would be $77,047,194 with current assets valued at market.*

EXHIBIT III

Comparison of Employer Contributions to Actuarially Required 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[1] (e)	Percentage Contributed (e) / (d)
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[2]	9.85	50,656,000	3,299,000	1,691,000	2,933,000	173.45
2004	11.27	48,820,898	2,991,801	2,510,314	2,826,730	112.60
2005	12.11	49,148,256	2,924,264	3,027,590	2,845,684	93.99
2006	14.16	49,521,572	3,030,418	3,981,837	2,867,299	72.01
2007	15.19	50,789,240	2,978,435	4,736,451	2,940,697	62.09
2008	14.53	51,711,330	2,954,062	4,559,594	2,994,086	65.67
2009	15.87	51,019,447	2,927,260	5,169,526	3,300,026	63.84
2010	17.82	49,501,727	2,899,071	5,922,137	3,626,514	61.24
2011	13.22	48,325,164	2,779,703	3,608,884	3,456,562	95.78
2012	17.23	45,763,895	2,888,242	4,996,877	3,432,259	68.69
2013	23.01	44,384,639	3,050,990	7,161,915	3,359,717	46.91
2014	30.54	42,980,686	3,160,794	9,965,508	9,688,694	97.22

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

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

EXHIBIT IV

Schedule of Employer Contributions

Fiscal Year	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Actual Covered Employee Payroll	Contributions as a Percentage of Covered Employee Payroll
2013	$7,161,915	$3,359,717	$3,802,198	$44,384,639	7.57%
2014	9,965,508	9,688,694	276,814	42,980,686	22.54%

EXHIBIT V

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) – (a)	Funding Ratio (a) / (b)	Actual Covered Payroll (Previous FY) (c)	UAAL as a Percentage of Covered Payroll [(b) – (a)] / (c)
07/01/1994	$133,632,000	$137,042,000	$3,410,000	97.51%	$43,109,000	7.91%
07/01/1995	142,852,000	173,965,000	31,113,000	82.12	46,528,000	66.87
07/01/1996	157,007,000	189,518,000	32,511,000	82.85	44,870,000	72.46
07/01/1997	170,059,000	197,820,000	27,761,000	85.97	46,770,000	59.36
07/01/1998	187,482,000	197,078,000	9,596,000	95.13	47,064,000	20.39
07/01/1999	218,699,000	220,540,000	1,841,000	99.17	52,176,000	3.53
07/01/2000	251,007,000	241,899,000	-9,108,000	103.77	52,270,000	-17.42
07/01/2001	273,618,000	254,255,000	-19,363,000	107.62	51,996,000	-37.24
07/01/2002	280,515,000	279,428,000	-1,087,000	100.39	51,054,000	-2.13
07/01/2003	278,467,000	291,109,000	12,642,000	95.66	50,656,000	24.96
07/01/2004	276,949,052	301,704,445	24,755,393	91.79	48,820,898	50.71
07/01/2005	268,480,821	310,923,929	42,443,108	86.35	49,148,256	86.36
07/01/2006	270,925,689	322,229,167	51,303,478	84.08	49,521,572	103.60
07/01/2007	288,264,749	332,216,981	43,952,232	86.77	50,789,240	86.54
07/01/2008	298,067,085	363,044,284	64,977,199	82.10	51,711,330	125.65
07/01/2009	279,255,559	364,811,453	85,555,894	76.55	51,019,447	167.69
07/01/2010	255,308,913	312,649,572	57,340,659	81.66	49,501,727	115.84
07/01/2011	235,071,975	321,065,000	85,993,025	73.22	48,325,164	177.95
07/01/2012	206,833,425	326,243,873	119,410,448	63.40	45,763,895	260.93
07/01/2013	190,116,720	352,143,396	162,026,676	53.99	44,384,639	365.05
07/01/2014	202,874,577	356,482,603	153,608,026	56.91	42,980,686	357.39

EXHIBIT VI

Determination of Contribution Sufficiency – Total

		July 1, 2014	
A. Statutory Contributions – Chapter 354A		**Percent of Payroll**	**Dollar Amount**
1.	Member contributions	7.50%	$3,532,785
2.	Employer contributions	7.50%	3,532,785
3.	Direct State aid[1]	1.18%	555,402
4.	Additional direct State aid[2]	12.74%	6,000,000
5.	Total	28.92%	$13,620,972
B. Required Contributions – Chapter 356		**Percent of Payroll**	**Dollar Amount**
1.	Normal Cost:		
	(a) Retirement	5.96%	$2,806,723
	(b) Disability	0.13%	62,565
	(c) Death	0.16%	76,491
	(d) Withdrawal	1.62%	762,232
	(e) Total	7.87%	$3,708,011
2.	Supplemental contribution amortization	21.94%	$10,334,573
3.	Allowance for administrative expenses	1.35%	635,901
4.	Total	31.16%	$14,678,485
C. Contribution Sufficiency / (Deficiency): (A.5) – (B.4)[3]		-2.24%	-$1,057,513
Projected annual payroll for fiscal year beginning on the valuation date[4]			$47,103,796

(1) *A direct State aid payment of $346,000 is made each year on October 1st. In addition, it is assumed that $209,402 of redirected "amortization State aid" under 423A.02, Subdivision 3 is paid on July 15th.*

(2) *An additional State aid payment of $6,000,000 will be made in October 2014.*

(3) *Contribution deficiency would be 14.98% without the $6 million additional State aid.*

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

EXHIBIT VII

Determination of Contribution Sufficiency – Old Plan

		July 1, 2014	
A. Statutory Contributions – Chapter 354A		**Percent of Payroll**	**Dollar Amount**
1.	Member contributions	7.50%	$129,650
2.	Employer contributions	7.50%	129,650
3.	Direct State aid[(1)]	1.18%	20,383
4.	Additional direct State aid[(2)]	12.74%	220,195
5.	Total	28.92%	$499,878

B. Required Contributions – Chapter 356		**Percent of Payroll**	**Dollar Amount**
1.	Normal Cost:		
	(a) Retirement	5.40%	$93,389
	(b) Disability	0.10%	1,680
	(c) Death	0.28%	4,876
	(d) Withdrawal	3.63%	62,808
	(e) Total	9.41%	$162,753

Projected annual payroll for fiscal year beginning on the valuation date[(3)]	$1,728,669

(1) $20,383 represents a pro-rata portion of the $555,402 direct State aid and redirected "amortization State aid" payments, allocated by projected payroll.
(2) $220,195 represents a pro-rata portion of the $6 million additional State aid, allocated by projected payroll.
(3) Projected payroll includes increases to current fiscal year.

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

EXHIBIT VIII

Determination of Contribution Sufficiency – New Plan Tier I

	July 1, 2014	
A. Statutory Contributions – Chapter 354A	**Percent of Payroll**	**Dollar Amount**
1. Member contributions	7.50%	$772,851
2. Employer contributions	7.50%	772,851
3. Direct State aid[1]	1.18%	121,503
4. Additional direct State aid[2]	12.74%	1,312,592
5. Total	28.92%	$2,979,797

B. Required Contributions – Chapter 356	**Percent of Payroll**	**Dollar Amount**
1. Normal Cost:		
(a) Retirement	5.66%	$583,434
(b) Disability	0.11%	11,382
(c) Death	0.17%	17,463
(d) Withdrawal	2.42%	249,504
(e) Total	8.36%	$861,783

Projected annual payroll for fiscal year beginning on the valuation date[3]	$10,304,677

(1) *$121,503 represents a pro-rata portion of the $555,402 direct State aid and redirected "amortization State aid" payments, allocated by projected payroll.*
(2) *$1,312,592 represents a pro-rata portion of the $6 million additional State aid, allocated by projected payroll.*
(3) *Projected payroll includes increases to current fiscal year.*

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

EXHIBIT IX

Determination of Contribution Sufficiency – New Plan Tier II

	July 1, 2014	
A. Statutory Contributions – Chapter 354A	**Percent of Payroll**	**Dollar Amount**
1. Member contributions	7.50%	$2,630,284
2. Employer contributions	7.50%	2,630,284
3. Direct State aid[1]	1.18%	413,517
4. Additional direct State aid[2]	12.74%	4,467,213
5. Total	28.92%	$10,141,298

B. Required Contributions – Chapter 356	**Percent of Payroll**	**Dollar Amount**
1. Normal Cost:		
(a) Retirement	6.07%	$2,129,900
(b) Disability	0.14%	49,503
(c) Death	0.15%	54,152
(d) Withdrawal	1.28%	449,920
(e) Total	7.64%	$2,683,475

Projected annual payroll for fiscal year beginning on the valuation date[3]	$35,070,450

(1) *$413,517 represents a pro-rata portion of the $555,402 direct State aid and redirected "amortization State aid" payments, allocated by projected payroll.*

(2) *$4,467,213 represents a pro-rata portion of the $6 million additional State aid, allocated by projected payroll.*

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

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

EXHIBIT X

Cash Flow Sufficiency Test

	7/1/2014	7/1/2015	7/1/2016	7/1/2017	7/1/2018	7/1/2019	7/1/2020	7/1/2021	7/1/2022	7/1/2023
1. Market value of assets at beginning of year	$226,071,060	$225,467,015	$221,024,398	$216,078,087	$211,570,593	$206,493,787	$200,790,827	$194,417,630	$187,382,124	$179,753,296
2. Total member and employer contributions	7,065,570	7,312,864	7,568,815	7,833,723	8,107,903	8,391,680	8,685,389	8,989,377	9,304,006	9,629,646
3. Direct State aid	6,346,000	346,000	346,000	346,000	346,000	346,000	346,000	346,000	346,000	346,000
4. Amortization State aid	209,402	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
5. Projected benefit payments	31,086,058	28,830,416	29,205,914	29,631,507	30,059,596	30,504,525	30,949,723	31,342,025	31,623,831	31,831,702
6. Administrative Expenses	635,901	658,158	681,193	705,035	729,711	755,251	781,685	809,044	837,361	866,668
7. Expected investment return										
(a) For whole year on (1) + (4)	18,102,437	18,053,361	17,697,952	18,383,637	18,000,500	17,568,972	17,084,220	16,542,499	15,944,481	15,296,030
(b) For half year on (2)	282,623	292,515	302,753	332,933	344,586	356,646	369,129	382,049	395,420	409,260
(c) For three-fourths of a year on (3)	380,760	20,760	20,760	22,058	22,058	22,058	22,058	22,058	22,058	22,058
(d) For half year on (5) + (6)	1,268,878	1,179,543	1,195,484	1,289,303	1,308,546	1,328,540	1,348,585	1,366,420	1,379,601	1,389,681
(e) Total expected return: (7a) + (7b) + (7c) – (7d)	17,496,942	17,187,093	16,825,981	17,449,325	17,058,598	16,619,136	16,126,822	15,580,186	14,982,358	14,337,667
8. Projected market value of assets at end of year: (1) + (2) + (3) + (4) – (5) – (6) + (7e)	$225,467,015	$221,024,398	$216,078,087	$211,570,593	$206,493,787	$200,790,827	$194,417,630	$187,382,124	$179,753,296	$171,568,239

Notes:
1. *Future total member and employer contributions are based on projected payroll increasing at the payroll growth assumption (3.5% annually).*
2. *Direct State aid includes $6 million on October 1, 2014; $346,000 per year each October 1.*
3. *Amortization State aid includes $209,402 in July 2014 and an estimated $200,000 in July of each subsequent year.*
3. *Projected benefit payments are based on a closed-group projection of the current members where actives, inactive vesteds, and members in payment status are assumed to decrement based on the demographic assumptions outlined in Exhibit XIII.*
4. *Administrative expenses are assumed to be 1.35% of projected payroll in the future.*
5. *Expected investment return is 8.00% from July 1, 2014 through June 30, 2017 and 8.50% thereafter.*

EXHIBIT XI

Net Pension Liability

The components of the net pension liability are as follows:	**June 30, 2014**	**June 30, 2013**
Total pension liability	$482,988,941	$464,828,657
Plan fiduciary net position	(226,071,060)	(205,300,543)
Net pension liability	$256,917,881	$259,528,114
Plan fiduciary net position as a percentage of the total pension liability	46.81%	44.17%

The net pension liability was measured as of June 30, 2014, and is determined based on the total pension liability from the July 1, 2014, actuarial valuation.

Plan provisions. The plan provisions used in the measurement of the net pension liability are the same as those used in the actuarial valuation as of July 1, 2014.

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of July 1, 2014, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.25%
Salary increases	Select and ultimate rates by age, with ultimate rates of 3.25% to 6.00%
Long-term expected rate of return	8.00%, net of investment expense, per annum
Cost of living adjustments	1% compound

For healthy participants, mortality rates were based on the RP-2000 Healthy Mortality Table for Males or Females, as appropriate, set back 3 years and adjusted for mortality improvements generationally from 2012 based on Scale AA. For disabled participants, rates for ages 54 and younger are based on the Disabled Eligible for Social Security Disability ERISA Sec. 4044 for 2006, rates for ages 55 to 64 are graded from the table for ages 54 and younger to the table for healthy participants, and rates for ages 65 and older are the same as for healthy participants.

The actuarial assumptions used in the July 1, 2014, valuation were based on the results of an experience study for the period July 1, 2006, through June 30, 2011. They are the same as the assumptions used in the July 1, 2014, funding actuarial valuation.

Discount rate: The discount rate used to measure the total pension liability was 5.40% as of June 30, 2014. The projection of cash flows used to determine the discount rate assumed plan member and employer contributions will be made at the current contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be insufficient to make all projected future benefit payments of current plan members. In order to determine the total pension liability, the long-term expected rate of return on pension plan investments was applied to periods of projected benefit payments for which the plan's fiduciary net position was projected to remain positive and the rate of a 20-year tax-exempt general obligation municipal bond was applied to periods of projected benefit payments for which the plan's fiduciary net position was projected to be negative. The equivalent single discount rate was determined to be 5.62% as of June 30, 2013, and 5.40% as of June 30, 2014.

Sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability as of June 30, 2014, calculated using the discount rate of 5.40%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (4.40%) or 1-percentage-point higher (6.40%) than the current rate:

	1% Decrease (4.40%)	**Current Discount Rate (5.40%)**	**1% Increase (6.40%)**
Net pension liability as of June 30, 2014	$316,921,277	$256,917,881	$206,829,111

EXHIBIT XII

Schedules of Changes in Net Pension Liability

	2014
Total pension liability	
Service cost	$7,256,722
Interest	25,775,932
Change of benefit term	0
Differences between expected and actual experience	205,252
Changes of assumptions	11,800,172
Benefit payments, including refunds of employee contributions	(26,877,794)
Net change in total pension liability	$18,160,284
Total pension liability – beginning	464,828,657
Total pension liability – ending (a)	$482,988,941
Plan fiduciary net position	
Contributions – employer	$3,133,292
Contributions – state funding	6,555,402
Contributions – employee	3,160,794
Net investment income	35,460,477
Benefit payments, including refunds of employee contributions	(26,877,794)
Administrative expense	(661,654)
Other	0
Net change in plan fiduciary net position	$20,770,517
Plan fiduciary net position – beginning	205,300,543
Plan fiduciary net position – ending (b)	$226,071,060
Fund's net pension liability – ending (a) – (b)	$256,917,881
Plan fiduciary net position as a percentage of the total pension liability	46.81%
Covered employee payroll	$42,980,686
Fund's net pension liability as percentage of covered employee payroll	597.75%

EXHIBIT XIII

Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

Healthy:

Male: RP-2000 Mortality Table for males, set back 3 years, and projected with generational improvement from 2012

Female: RP-2000 Mortality Table for females, set back 3 years, and projected with generational improvement from 2012

Rates for sample ages are shown on the next page. (Adopted effective July 1, 2012)

Disabled:

Male and Female tables apply: (Adopted effective July 1, 2012)

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	RP-2000 Mortality Table, set back 3 years, and projected with generational improvement from 2012

The mortality tables above without generational improvement reasonably reflect the projected mortality experience of the Fund as of the measurement date. The mortality table was then adjusted to future years using generational improvement under Scale AA to anticipate future mortality improvement.

Summary of Rates: Shown below for selected ages:

	Rate (%)						
	Mortality*				Retirement		Ultimate Rate of Salary Increases
Age	Male	Female	Withdrawal	Disability	Old/Tier 1	Tier 2	
20	0.03%	0.02%	3.50%	- -	- -	- -	6.00%
25	0.04	0.02	3.25	- -	- -	- -	6.00
30	0.04	0.02	3.00	- -	- -	- -	6.00
35	0.06	0.04	2.75	0.01%	- -	- -	6.00
40	0.09	0.06	2.50	0.03	- -	- -	5.31
45	0.12	0.09	2.00	0.06	- -	- -	4.63
50	0.17	0.13	1.50	0.10	- -	- -	3.94
55	0.27	0.20	0.75	0.15	7.50%	7.50%	3.25
60	0.47	0.35	- -	0.21	25.00	15.00	3.25
65	0.88	0.67	- -	- -	35.00	30.00	3.25
70**	1.61	1.22	- -	- -	100.00	100.00	- -

* *Does not include generational improvement*
** *Last Retirement Age*

Retirement Rates:	Rates are shown for selected ages on the previous page. In addition, 30% of the members are assumed to retire each year that they are eligible for Rule of 90. (Adopted effective July 1, 2012)
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: (Adopted effective July 1, 2012)
First year:	45.00%
Second year:	20.00%
Third year:	12.00%
Decrement Timing:	Retirements are assumed to occur at the beginning of the fiscal year and all other decrements are assumed to occur at the middle of fiscal year.
Retirement Age for Inactive Vested Members:	Normal retirement age
Unknown Data for Members:	Same as those exhibited by members with similar known characteristics.
Percent Married:	80% of members are assumed to be married.
Gender and Age of Spouse:	Spouses are assumed to be opposite sex of participant. Females are three years younger than males.
Net Investment Return:	8.00% per annum for the period July 1, 2014 through June 30, 2017, 8.50% thereafter. (Adopted effective July 1, 2012)
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 an 8-year select period. For service from hire through 7 completed years, a 7.75% salary increase is assumed. (Adopted effective July 1, 2012)
Administrative Expenses:	Prior year administrative expenses expressed as percentage of prior year projected payroll.

Allowance for Combined Service Annuity:	10% load on liabilities for active and deferred participants. (Adopted effective July 1, 2002)
Return of Contributions:	All employees withdrawing after becoming eligible for a deferred benefit - for purposes of determining the liability in the actuarial valuation - were assumed to take either their contributions accumulated with interest or their deferred benefit, whichever is more valuable.
Special Consideration:	Members in the Old Plan are assumed to receive their retirement benefits from either the Old Plan or New Plan, based on whichever benefit is larger. Direct State aid payments include a portion attributed to redirected "amortization State aid" under 423A.02, Subdivision 3 and an additional $6 million in October 2014. For fiscal 2015, the "amortization State aid" is $209,402 and is assumed to be $200,000 for fiscal 2016 and thereafter. Married Members assumed to elect subsidized joint and survivor form of annuity as follows: (Adopted effective July 1, 2008)
Males:	30% elect 50% J&S option
	40% elect 100% J&S option
Females:	15% elect 50% J&S option
	15% elect 100% J&S option
Post-retirement Increases	Effective July 1, 2013, the law provides for a post-retirement benefit adjustment of CPI-U (up to 5%) when the funding ratio using the actuarial value of assets equals or exceeds 90%. Until that 90% threshold is met, the post-retirement adjustment will be 1%. Since projected contributions are not sufficient to cover the long-term cost of the plan, a 90% funding ratio on an actuarial basis is not expected to be met. As a result, the July 1, 2014 valuation reflects the 1% annual post-retirement adjustment. (Adopted effective July 1, 2013)

Asset Valuation Method:	Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during the fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year). Each year's Unrecognized Asset Return is being amortized over 5 years (20% per year) on a straight-line basis.
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is calculated as current age minus pension credits. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are expressed as a level percentage of payroll. Prior to the July 1, 2014, actuarial valuation, Normal Cost had been determined as if the current benefit provisions 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 3.50% per annum. If the Actuarial Value of Assets exceeds the Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percentage of payroll.

EXHIBIT XIV

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:	The Normal Retirement Amount with a 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> Post-retirement benefit adjustments are based on the Plan's funding ratio as outlined in the assumptions section. **Note: A member who is eligible for normal or early benefits under the Old Plan may instead receive a benefit under New Plan Tier I or New Plan Tier II if it is greater than the benefit from the Old Plan.**

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:	For Credited Service earned before July 1, 2013: 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. For Credited Service earned after June 30, 2013: 1.40% of Average Salary for each of the first ten years of Credited Service and 1.90% of Average Salary for each subsequent year.

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

Age/Service Requirement:	(a) Age 55 and three years (five years, if hired after June 30, 2010) 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:	The Normal Retirement Amount with a reduction of 0.25% for each month the member is under Normal Retirement Age. No reduction if the sum of age and years of Credited Service equals 90.
Form of Payment:	Life annuity. Actuarially equivalent options are: (a) 5, 10, 15 or 20-year certain and life, or (b) 50% or 100% joint and survivor with bounce back feature without additional reduction. (c) A larger life annuity before age 62 and reduced thereafter.

Benefit Increases:	Annual Cost-of-Living Adjustment (COLA): Post-retirement benefit adjustments are based on the Plan's funding ratio as outlined in the assumptions section. **Note: A member who is eligible for normal or early benefits under the New Plan Tier I may instead receive a benefit under New Plan Tier II if it is greater than the benefit from New Plan Tier I.**

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 earned before July 1, 2013 and 1.90% of Average Salary for each year of Credited Service earned after June 30, 2013.

Early Retirement:

Age/Service Requirement:	Age 55 and three years (five years, if hired after June 30, 2010) of Credited Service.
Amount:	The Normal Retirement Amount is augmented to the age eligible for full social security retirement benefits at 2.50% per year. The benefit is then reduced by 7% per year for ages under Normal Retirement Age until age 59 and 4% thereafter, for participants retiring under age 62 or with less than 30 years of service. For participants retiring at age 62 or older with 30 or more years of service, the benefit is reduced by 6% per year under Normal Retirement Age.
Form of Payment:	Life annuity. Actuarially equivalent options are: (a) 5, 10, 15 or 20-year certain and life, or (b) 50% or 100% joint and survivor with bounce back feature without additional reduction. (c) A larger life annuity before age 62 and reduced thereafter.

Benefit Increases:	Annual Cost-of-Living Adjustment (COLA): Post-retirement benefit adjustments are based on the Plan's funding ratio as outlined in the assumptions section.

Disability (Old Plan):

Age/Service Requirement:	Totally and permanently disabled as a teacher before the age of 60 with five years of Credited Service.
Amount:	(a) Normal Retirement Amount 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 (five years, if hired after June 30, 2010) of Credited Service. Also, at least two of the years of Credited Service must have been uninterrupted.
Amount:	(a) Normal Retirement Amount based on Credited Service and Average Salary at disability without reduction commencement before retirement age. Benefit is reduced by Workers' Compensation. (b) Payments may begin 90 days after disability and stops at Normal Retirement Age, or earlier if disability ceases or death occurs. Benefits paid while partially employed may be reduced.
Form of Payment:	Same as for Normal Retirement.
Benefit Increases:	Same as for Normal Retirement.

Retirement After Disability:

Age/Service Requirement:	Normal Retirement Age if still totally and permanently disabled.
Amount:	Optional annuity continues, otherwise the larger of the disability benefit paid before Normal Retirement Age or the Normal Retirement benefit available at Normal Retirement Age, or an actuarial equivalent optional annuity.
Benefit Increases:	Same as for retirement.

Withdrawal (Old Plan):

Refund of Member's Contributions:

Age/Service Requirement:	Termination from Teaching Service.
Amount:	Member's contributions with 4.00% interest compounded annually

Deferred Annuity:

Age/Service Requirement:	Ten years of Credited Service.
Amount:	For members hired before July 1, 2006, the benefit 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% annually until the annuity begins. Effective July 1, 2012, the annual augmentation percentage is reduced to 2.00% from the age of termination to the age the annuity begins. The amount is payable as a Normal or Early Retirement.

Withdrawal (New Plan):

Refund of Member's Contributions:

Age/Service Requirement:	Termination from Teaching Service.
Amount:	Member contributions accumulate with 4.00% interest compounded annually.

Deferred Annuity:

Age/Service Requirement:	Three years (five years, if hired after June 30, 2010) of Credited Service.
Amount:	For members hired before July 1, 2006, the benefit is computed under law in effect at termination and increased by the following annual percentage: (a) 3.00% until January 1 of the year following attainment of age 55, and (b) 5.00% thereafter until the annuity begins. For members hired after June 30, 2006, the benefit is computed under law in effect at termination and increased by 2.50% for all years. Effective July 1, 2012, the annual augmentation percentage for all New Plan members is reduced to 2.00% from the age of termination to the age the annuity begins. The amount is payable as a Normal or Early Retirement.

Pre-Retirement Death Benefit (Old Plan):

Age/Service Requirement:	None.
Amount:	Refund of two times member's contributions accumulated with 4.00% interest compounded annually.

Post-Retirement Death Benefit (Old Plan):

Age/Service Requirement:	None.
Amount:	Refund the excess of member's contributions over total benefits paid, accumulated with 4.00% interest compounded annually.

Surviving Spouse Benefit (Old Plan):

Optional Annuity I:

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

Optional Annuity II:

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

Pre-Retirement Death Benefit (New Plan):

Surviving Spouse Optional Annuity:

Age/Service Requirement:	Member who dies before retirement benefits commence with three years (five years, if hired after June 30, 2010) 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 4.00% interest compounded annually.

Contributions:

Member:	7.50% of salary.
Employer:	7.50% of salary.
Direct State Aid:	$346,000 per year each October 1, beginning in 2008, plus a redirected "amortization State aid" payment of $209,402 for fiscal 2015 and an estimated $200,000 thereafter, plus an additional State aid of $6 million in October 2014.

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

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