

ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION
ACTUARIAL VALUATION
AS OF JULY 1, 2013



November 15, 2013

Mr. Paul V. Doane
Executive Director
St. Paul Teachers' Retirement Fund Association
1619 Dayton Avenue, Room 309
St. Paul, MN 55104-6206

Dear Mr. Doane:

We are pleased to present the report of the actuarial valuation of the St. Paul Teachers' Retirement Fund Association ("Fund") as of July 1, 2013. This report provides among other things, the required annual contribution rate of the Fund for the Plan Year commencing July 1, 2013, and ending on June 30, 2014.

The valuation was based upon information furnished by the Fund staff, concerning Retirement Fund benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. Their efforts in furnishing the materials needed are gratefully acknowledged. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the Fund.

The report has been prepared at the request of the Fund's Board of Trustees in accordance with Section 356.215 of the Minnesota Statutes as well as the Standards for Actuarial Work established by the State of Minnesota Legislative Commission on Pensions and Retirement. To the best of our knowledge, this report is complete and accurate, and has been prepared in accordance with generally accepted actuarial principles and practice. This report is intended for use by the Fund and those determined or approved by the Fund's Board of Trustees. This report may be provided to parties other than the Fund only in its entirety and only with the permission of the Board.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

Actuarial assumptions, including discount rates, mortality tables and others identified in this report, are prescribed by Minnesota Statutes Section 356.215, the Legislative Commission on Pensions and Retirement (LCPR), and the Board of Trustees. These parties are responsible for selecting the plan's funding policy, actuarial valuation methods, asset valuation methods, and assumptions. The

Mr. Paul V. Doane
November 15, 2013
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policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in the Actuarial Basis of this report. The Fund is solely responsible for communicating to GRS any changes required thereto.

This report should not be relied on for any purpose other than the purpose described herein. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

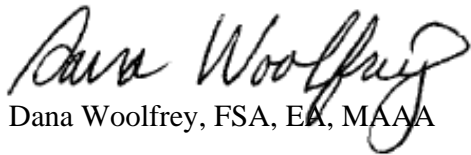
Bonita J. Wurst and Dana Woolfrey are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. The signing actuaries are independent of the plan sponsor.

We will be pleased to review this report with you at your convenience.

Respectfully submitted,



Bonita J. Wurst, ASA, EA, MAAA



Dana Woolfrey, FSA, EA, MAAA

BJW/DW:sc

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SUMMARY OF VALUATION RESULTS

This report sets forth the results of the actuarial valuation of the St. Paul Teachers' Retirement Fund Association ("Fund") as of July 1, 2013. The purposes of this valuation are:

1. To develop the annual required contribution (ARC) rates under GASB requirements.
2. To compare the ARC rates with the current funding policy in place.
3. To review the funding status of the Fund.

The funding status, in basic terms, is a comparison of the Fund's liabilities to assets expressed as either an unfunded liability (i.e., the difference between the assets and liabilities) or as a ratio of assets to liabilities. This comparison can be measured in various ways. Fund liabilities are dependent on the actuarial assumptions and actuarial cost method. Fund assets can be measured at market value, book value, or some variation to smooth the fluctuations that invariably occur from year to year. The Actuarial Value of Assets is determined from market value with investment gains and losses smoothed over a five-year period.

Comments on Results

Total actuarial liabilities decreased from \$1,471.2 to \$1,467.3 million. This decrease was primarily due to the assumption change described on the next page and lower than expected salary increases. The liability decrease was partially offset by a liability increase due to the Coordinated Plan benefit formula increase (although the member contribution rate increase is intended to approximately offset the cost of the benefit improvement, the contribution increase will be recognized gradually as the increases are phased in). There were losses on the actuarial value of assets of \$32.5 million due to the recognition of investment losses from prior years. As a result of the loss on the actuarial value of assets, the funded ratio decreased from 61.98% at July 1, 2012, to 60.40% at July 1, 2013.

The required contribution rate (as defined in Section 356 of Minnesota Statutes) decreased from 22.87% of pay for fiscal year ending June 30, 2013, to 22.13% of pay for fiscal year ending June 30, 2014, primarily due to the assumption change. Although the statutory contribution rate increased from 16.47% of payroll to 19.33% of payroll, it currently is not sufficient to cover the required contribution rate. The shortfall is 2.80% of pay, or \$7.6 million per year.

There are two significant issues that will affect the contribution shortfall going forward. The contribution deficiency reflects the 2013 State contribution of \$7 million but does not reflect the member and employer contribution increases that will be phased in over the next four years. The State contribution of \$7 million will be made for 2 years only. After 2014, when the State contributions will no longer be made, the statutory contribution rate will decrease approximately 2.59% of pay. The contribution increases that are being phased in will ultimately increase the statutory contribution rate by 2.50% of pay. As an estimate of the long-term contribution deficiency (after July 1, 2017), based on a statutory contribution rate that is expected to be approximately 19.24% of pay, the contribution deficiency would be 2.89% of pay, or \$7.8 million per year.

Without additional long-term funding sources, based on methods and assumptions described in this report, including the actuarial value of assets, an infinite number of years would be required to eliminate the unfunded liability (i.e. the unfunded liability will never be eliminated). Current contributions are not sufficient to cover the interest on the unfunded liability, which will result in the unfunded liability continuing to grow.

SUMMARY OF VALUATION RESULTS

Actuarial Methods and Assumptions

A number of assumption changes were recognized in the prior valuation as a result of statutory changes and a recent experience study. In addition, it was intended that, as a result of the reduction in wage inflation from 5.0% to 4.0% (a change that was made last year), the individual salary increases would also be reduced by 1.0%. However, this reduction was not reflected in the 2012 valuation report because the State of Minnesota Legislative Commission on Pensions and Retirement (LCPR) motion on economic assumption changes did not include this 1.0% reduction.

The 1.0% reduction in assumed individual salary increases was included in the 2013 Omnibus Retirement Bill, and is reflected herein.

Active members who have been hired within one year of the valuation date have had their reported pay annualized. Previously, reported pay was used.

Overall, these changes decreased liabilities and reduced the contribution deficiency level.

The valuation assumes that future COLA's will be 1% per year. This assumption is based on the current market value funded ratio of 64% and existing contribution deficiency.

Minnesota Statute Section 356.215 requires a select interest rate assumption of 8.0 percent through June 30, 2017 and an ultimate interest rate assumption of 8.5 percent after June 30, 2017. GRS reviewed the investment return assumption in the 2012 Experience Study and recommended an assumed rate of return of 7.5 percent per year. The impact of using an assumed rate of return of 7.5 percent is shown in the 2012 valuation report. The Actuarial Standard of Practice on selecting economic assumptions for pensions (ASOP No. 27) was recently updated. The updated standards may warrant an updated review of the reasonability of the long term rate of return assumption.

All assumptions are included in Section 4 of the report.

Benefit and Contribution Provisions

The 2013 Omnibus Retirement Bill included a number of changes in benefits and contributions. The changes are summarized below:

1. Basic contribution rates will increase an additional 1.00% of salary. Basic member and employer contributions were previously scheduled to increase to 9.00% and 12.64% of salary, respectively. The member rate will increase from 9.00% to 9.50% on July 1, 2015 and to 10.00% on July 1, 2016. The employer rate will increase from 12.64% to 13.14% on July 1, 2015, to 13.39% on July 1, 2016, and to 13.64% on July 1, 2017.
2. Coordinated contribution rates will increase an additional 1.00% of salary. Coordinated member and employer contributions were previously scheduled to increase to 6.50% and 9.34% of salary, respectively. The member rate will increase from 6.50% to 7.00% on July 1, 2015 and to 7.50% on July 1, 2016. The employer rate will increase from 9.34% to 9.84% on July 1, 2015, to 10.09% on July 1, 2016, and to 10.34% on July 1, 2017.

SUMMARY OF VALUATION RESULTS

Benefit and Contribution Provisions (Concluded)

3. The State of Minnesota is scheduled to make annual supplemental contributions of \$7,000,000 on October 1, 2013 and October 1, 2014.
4. Actuarial early retirement factors were changed to a table of stated reductions, with lower reductions for members who retire after age 62 with at least 30 years of service. See Summary of Benefit Provisions in Sections 5 and 6 for additional detail.
5. For Coordinated members, the formula multiplier was changed from 1.7% to 1.9% for service after June 30, 2015. For the Tier I formula, the 1.2% formula multiplier applicable to the first ten years of service was changed to 1.4% for service after June 30, 2015.
6. A number of changes were made to the return to work program for retirees. Although these changes are expected to ultimately reduce the cost of the plan, they did not have an immediate impact on the valuation results.

The early retirement factor change slightly decreased liabilities and the contribution deficiency level. The formula multiplier change increased liabilities and the contribution deficiency level but the increase in contribution deficiency will ultimately be approximately offset by the increase in the member contribution rate. Overall, the net effect of the benefit changes was to increase liabilities and the required contribution rate. The \$7 million state contribution decreased the contribution deficiency as of July 1, 2013 by 2.59% of payroll. The employer contribution increases will ultimately have a favorable impact on the funding of the plan.

SUMMARY OF VALUATION RESULTS

Effects of Changes

	Results as of July 1, 2013		
	Prior to Changes	Reflecting Assumption and Method Changes	Reflecting Assumption, Method and Plan* Changes
A. FUNDING RATIOS			
1. Accrued Liability Funding Ratio			
a. Current Assets	\$ 886,296	\$ 886,296	\$ 886,296
b. Actuarial Accrued Liability	1,486,497	1,464,447	1,467,350
c. Funding Ratio	59.62%	60.52%	60.40%
2. Projected Benefit Funding Ratio			
a. Current and Expected Future Assets	\$ 1,476,858	\$ 1,475,507	\$ 1,529,540
b. Current and Expected Future Benefit Obligations	1,703,114	1,643,440	1,655,608
c. Funding Ratio	86.72%	89.78%	92.39%
B. STATUTORY CONTRIBUTIONS - CHAPTER 354A			
1. Employee Contributions	6.27%	6.27%	6.27%
2. Employer Contributions	9.11%	9.11%	9.11%
3. Supplemental Contribution			
a. 1996 Legislation	0.31%	0.31%	0.31%
b. 1997 Legislation	1.05%	1.05%	1.05%
c. 2013 Legislation	N/A	N/A	2.59%
4. Total	16.74%	16.74%	19.33%
C. REQUIRED CONTRIBUTIONS - CHAPTER 356			
1. Normal Cost	8.36%	7.49%	7.83%
2. Supplemental Contribution Amortization	14.58%	13.94%	14.01%
3. Allowance for Administrative Expenses	0.29%	0.29%	0.29%
4. Total	23.23%	21.72%	22.13%

*Plan changes include all points listed under "Benefit and Contribution Provisions".

Participants

Active membership increased 4.7% during fiscal year 2013 from 3,880 to 4,061 (figures include members on leave of absence). Total participants receiving benefits under the Fund, including disabled retirees and beneficiaries, increased 3.4% during fiscal year 2013 from 3,292 to 3,404. Total expenditures for these benefits increased from \$102.7 million to \$104.4 million during fiscal year 2013, or 1.7%.

SUMMARY OF VALUATION RESULTS

Asset Valuation Method

The method used to develop the Fund's Actuarial Value of Assets, as set out in the Standards for Actuarial Work, is as follows: In years when Fund assets earn above the assumed rate (i.e., experience gain) or below the assumed rate (i.e., experience loss) the gain (or loss) will be gradually recognized over five years. This approach both removes volatility of the Fund's level of required contributions and ensures the Fund's assets will track the market value of assets.

Experience Analysis

Overall, the Fund experienced a net gain of \$8.6 million, including an experience loss of \$10.5 million, plan changes of \$2.9 million, and a \$22.0 million reduction in the liability due to assumption and method changes. In general, salary increases were smaller than predicted under the current valuation assumption and produced an actuarial gain of \$15.6 million.

The largest component of the Fund's experience loss was the investment loss. The market value of Fund assets returned 13.5% (net of fees) for the year ended June 30, 2013, higher than the 8.00% assumption. However, only 80% of this asset gain was recognized in actuarial value of assets. There was a loss of \$32.5 million on the actuarial value of assets. The rate of return on the actuarial value of assets for 2013 is 4.3%.

The changes in unfunded actuarial accrued liabilities are shown in Table 10 in Section 3.

Looking Ahead

Investment markets continue to be volatile. A 5-year smoothed value of assets, used to determine both the funded status and required contribution level, reduces the volatility of the valuation results.

As of July 1, 2013, the actuarial value of assets was 95.0% of market value. This means that over the next few years there will be an upward bias in the actuarial value of assets.

The following table shows the July 1, 2013, valuation results, if they had been based on the market value instead of smoothed actuarial value:

Market Value Results as of July 1, 2013	
Actuarial Accrued Liability	\$1,467.3 million
Market Value of Assets	\$ 933.1 million
Unfunded Actuarial Accrued Liability (Market Value Basis)	\$ 534.2 million
Funded Ratio (Market Value Basis)	63.59%
Required Contribution Rate (Market Value Basis)	21.00% of pay
Shortfall (Market Value Basis)	1.67% of pay

SUMMARY OF VALUATION RESULTS

	July 1, 2012 Valuation	July 1, 2013 Valuation
A. CONTRIBUTIONS % OF PAYROLL (Table 11)		
1. Statutory Contributions - Chapter 354A	16.47%	19.33%
2. Required Contributions - Chapter 356	22.87%	22.13%
3. Sufficiency / (Deficiency)	(6.40%)	(2.80%)
 B. FUNDING RATIOS		
1. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$ 911,930	\$ 886,296
b. Actuarial Accrued Liability (Table 9)	1,471,216	1,467,350
c. Funding Ratio	61.98%	60.40%
2. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$ 1,461,167	\$ 1,529,540
b. Current and Expected Future Benefit Obligations	1,677,829	1,655,608
c. Funding Ratio	87.09%	92.39%
 C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	3,828	3,941
b. Projected Annual Earnings	\$ 256,509	\$ 270,395
c. Average Annual Earnings (Projected dollars)	\$ 65,691	\$ 65,989
d. Average Age	45.0	44.8
e. Average Service	11.8	11.5
f. Additional Members on Leave of Absence	52	120
2. Others		
a. Service Retirements (Table 4)	2,942	3,047
b. Disability Retirements (Table 5)	29	30
c. Survivors (Table 6)	321	327
d. Deferred Retirements (Table 7)	1,833	1,788
e. Terminated Other Non-Vested (Table 7)	1,427	1,435
f. Total - Others	6,552	6,627
3. Grand Total (1.a + 1.f + 2.f)	10,432	10,688

SECTION 1

ASSET INFORMATION

ASSETS OF THE PLAN

The cost value of the plan assets increased from \$670.0 million as of June 30, 2012, to \$723.2 million as of June 30, 2013. The market value of the plan assets increased from \$881.9 million as of June 30, 2012, to \$933.1 million as of June 30, 2013. The expected return on assets using the valuation interest rate assumption of 8.0 percent was \$68 million. The actual plan experience showed a return on assets of \$115 million. Twenty percent of the asset return above the expected \$68 million is recognized as an actuarial gain in the development of the actuarial value of assets. The recognized gain from the current year along with the portion of prior gains and losses recognized this year results in an overall loss of \$32.5 million on the actuarial value of assets.

The significant asset loss (\$280 million) as of June 30, 2009 has now been fully recognized in the actuarial value of assets. The 2010, 2011, and 2013 asset gains as well as the 2012 asset loss (amounts shown on the next page) will be recognized incrementally over the next four years. As of July 1, 2013, there are currently more unrecognized asset gains than losses, which means that over the next few years the actuarial value of assets may grow more than 8.00% per year.

Table 1 shows the composition of assets as of June 30, 2013, and the development of the actuarial value of assets as of June 30, 2013. Table 2 details the development of asset values during fiscal year 2013.

TABLE 1
ACCOUNTING BALANCE SHEET
AS OF JUNE 30, 2013
(dollars in thousands)

	<u>Market Value</u>	<u>Cost Value</u>
A. ASSETS		
1. Cash, Equivalents, Short-Term Securities	\$ 14,547	\$ 14,547
2. Investments		
a. Fixed Income	155,350	150,209
b. Equity	632,408	432,991
c. Real Estate	94,208	88,995
d. Alternative	37,140	37,039
3. Other Assets*	<u>4,482</u>	<u>4,482</u>
B. TOTAL ASSETS	<u>\$ 938,135</u>	<u>\$ 728,263</u>
C. AMOUNTS CURRENTLY PAYABLE	\$ 5,053	\$ 5,045
D. ASSETS AVAILABLE FOR BENEFITS		
1. Member Reserves	\$ 155,540	\$ 155,540
2. Employer Reserves	<u>777,542</u>	<u>567,678</u>
3. Total Assets Available for Benefits	<u>\$ 933,082</u>	<u>\$ 723,218</u>
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	<u>\$ 938,135</u>	<u>\$ 728,263</u>
F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Market Value of Assets Available for Benefits (D.3)	\$ 933,082	
2. Unrecognized Asset Returns		
a. June 30, 2013	\$ 46,697	
b. June 30, 2012	(82,006)	
c. June 30, 2011	128,185	
d. June 30, 2010	36,792	
3. UAR Adjustment: $.80 * 2(a) + .60 * 2(b) + .40 * 2(c) + .20 * 2(d)$	<u>46,786</u>	
4. Actuarial Value of Assets: (F.1 - F.3)	<u>\$ 886,296</u>	

* DERIVATION OF OTHER ASSETS	<u>Market Value</u>
Accounts Receivable	
Employer Contribution	\$ 1,109
Employee Contribution	-
Service Purchases Receivable	69
Pensions Receivable	1
State Contributions	838
Real Estate Income Receivable	65
Commission Recapture Receivable	2
Interest Receivable	605
Dividend Receivable	164
Misc. Receivable	6
Security Purchases Receivable	-
Sale of Securities	<u>1,375</u>
Total Accounts Receivable	\$ 4,234
Fixed Assets	<u>249</u>
Total Other Assets	<u>\$ 4,482</u>

*Numbers may not add due to rounding.

TABLE 2
CHANGE(S) IN ASSETS AVAILABLE FOR BENEFITS
AS OF JUNE 30, 2013
(dollars in thousands)

	<u>Market Value</u>	<u>Cost Value</u>
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$ 881,926	\$ 669,996
B. OPERATING REVENUES		
1. Member Contributions	\$ 15,164	\$ 15,164
2. Employer Contributions	22,780	22,780
3. Supplemental Contributions	3,665	3,665
4. Investment Income	10,204	10,204
5. Investment Expenses	(5,009)	(5,009)
6. Net Realized Gain / (Loss)	111,580	111,580
7. Other	0	0
8. Net Change in Unrealized Gain / (Loss)	<u>(2,066)</u>	<u>-</u>
9. Total Operating Revenue	\$ 156,318	\$ 158,384
C. OPERATING EXPENSES		
1. Service Retirements	\$ 92,955	\$ 92,955
2. Disability Benefits	658	658
3. Survivor Benefits	9,625	9,625
4. Refunds	1,173	1,173
5. Administrative Expenses	<u>751</u>	<u>751</u>
6. Total Operating Expenses	\$ 105,162	\$ 105,162
D. OTHER CHANGES IN RESERVES	\$ -	\$ -
E. ASSETS AVAILABLE AT END OF PERIOD	<u>\$ 933,082</u>	<u>\$ 723,218</u>
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN		
1. Average Balance		
(a) Assets available at BOY:		\$ 881,926
(b) Assets available at EOY:		933,082
(c) Average balance $\{[(a) + (b) - \text{Net Investment Income}] / 2\}$ {Net investment income: B.4+B.5+B.6+B.8}		\$ 850,150
2. Expected Return: $.080 * F.1$ (was 0.85 in 2012)		68,012
3. Actual Return		114,709
4. Current Year Gross Asset Return: F.3 - F.2		\$ 46,697

SECTION 2

TOTAL MEMBERSHIP DATA

TABLE 3
ACTIVE MEMBERS AS OF JUNE 30, 2013*

Age	Years of Service								ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35+	
<25	64	0	0	0	0	0	0	0	64
25-29	338	27	0	0	0	0	0	0	365
30-34	254	165	33	0	0	0	0	0	452
35-39	160	149	213	30	0	0	0	0	552
40-44	135	77	168	202	17	0	0	0	599
45-49	87	64	108	182	86	17	0	0	544
50-54	90	36	83	121	102	87	3	0	522
55-59	69	43	65	91	90	77	65	6	506
60-64	56	35	52	62	51	57	30	13	356
65+	39	16	10	8	8	8	7	5	101
ALL	1,292	612	732	696	354	246	105	24	4,061

AVERAGE ANNUAL EARNINGS

Age	Years of Service								ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35+	
<25	27,192	0	0	0	0	0	0	0	27,192
25-29	38,197	52,637	0	0	0	0	0	0	39,265
30-34	43,481	59,758	70,418	0	0	0	0	0	51,389
35-39	42,788	61,038	70,571	80,103	0	0	0	0	60,463
40-44	44,470	64,787	72,319	78,750	83,695	0	0	0	67,566
45-49	39,000	66,356	72,427	79,866	83,594	82,119	0	0	70,924
50-54	33,981	66,880	76,652	78,302	84,379	90,516	92,031	0	72,912
55-59	31,982	58,257	67,880	77,107	83,030	83,334	86,855	87,417	71,542
60-64	18,124	45,531	61,902	77,829	80,235	81,404	80,148	83,195	64,244
65+	13,249	48,927	46,785	71,900	70,614	86,365	84,747	103,282	46,614
ALL	37,720	60,295	70,749	78,647	82,904	85,441	84,946	88,435	62,440

Prior Fiscal Year Earnings (In THOUSANDS) by Years of Service

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	ALL
ALL	48,734	36,900	51,788	54,738	29,348	21,019	8,919	2,122	253,569

*Including those on leave of absence, pay annualized for new hires.

TABLE 4
SERVICE RETIREMENTS AS OF JUNE 30, 2013

Age	Years Retired									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	1	0	0	0	0	0	0	0	0	1
55-59	123	1	0	0	0	0	0	0	0	124
60-64	348	195	0	0	0	0	0	0	0	543
65-69	294	375	182	5	0	0	0	0	0	856
70-74	40	156	279	112	1	0	0	1	0	589
75-79	5	18	118	213	63	0	0	0	0	417
80-84	3	4	5	117	105	61	0	0	0	295
85-89	0	1	4	7	45	80	21	1	0	159
90+	0	0	0	1	5	20	30	7	0	63
ALL	814	750	588	455	219	161	51	9	0	3,047

AVERAGE ANNUAL BENEFIT

Age	Years Retired									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	1,569	0	0	0	0	0	0	0	0	1,569
55-59	23,792	2,400	0	0	0	0	0	0	0	23,620
60-64	25,549	31,565	0	0	0	0	0	0	0	27,709
65-69	23,738	32,777	32,653	49,371	0	0	0	0	0	29,743
70-74	19,042	24,497	32,934	35,032	27,817	0	0	54,239	0	30,182
75-79	5,463	24,884	33,568	41,284	29,563	0	0	0	0	36,192
80-84	10,920	9,867	9,338	48,897	38,350	32,463	0	0	0	40,159
85-89	0	472	27,923	26,296	38,520	28,773	25,981	63,964	0	31,076
90+	0	0	0	60,004	32,877	26,981	29,685	20,824	0	28,577
ALL	24,103	30,345	32,740	41,602	35,684	29,949	28,160	29,330	0	31,144

Total Annual Benefit (IN THOUSANDS) by Years RETIRED

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	19,620	22,758	19,251	18,929	7,815	4,822	1,436	264	0	94,896

TABLE 5
DISABILITY RETIREMENTS AS OF JUNE 30, 2013

Age	Years Disabled									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	1	1	0	0	0	0	0	0	0	2
45-49	3	0	0	0	0	0	0	0	0	3
50-54	3	1	1	1	0	0	0	0	0	6
55-59	4	1	1	0	0	0	0	0	0	6
60-64	5	7	1	0	0	0	0	0	0	13
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0	0
85-89	0	0	0	0	0	0	0	0	0	0
90+	0	0	0	0	0	0	0	0	0	0
ALL	16	10	3	1	0	0	0	0	0	30

AVERAGE ANNUAL BENEFIT

Age	Years Disabled									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	32,688	7,643	0	0	0	0	0	0	0	20,165
45-49	13,938	0	0	0	0	0	0	0	0	13,938
50-54	18,009	1,310	23,944	5,471	0	0	0	0	0	14,125
55-59	15,992	13,017	26,910	0	0	0	0	0	0	17,316
60-64	33,222	31,361	9,484	0	0	0	0	0	0	30,394
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0	0
85-89	0	0	0	0	0	0	0	0	0	0
90+	0	0	0	0	0	0	0	0	0	0
ALL	22,413	24,149	20,113	5,471	0	0	0	0	0	22,197

Total Annual Benefit (IN THOUSANDS) by Years DISABLED

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	359	241	60	5	0	0	0	0	0	666

TABLE 6
SURVIVORS AS OF JUNE 30, 2013

Age	Years Since Member Death									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	4	3	3	0	0	0	0	0	0	10
45-49	0	2	0	0	0	0	0	0	0	2
50-54	1	0	0	0	0	0	0	0	0	1
55-59	5	2	5	1	0	0	0	0	0	13
60-64	2	3	1	0	1	1	0	0	1	9
65-69	2	3	11	9	4	0	1	0	0	30
70-74	0	5	14	12	11	5	2	0	0	49
75-79	1	1	8	18	23	8	3	0	0	62
80-84	0	1	1	4	28	24	5	3	0	66
85-89	0	0	0	1	6	29	15	2	0	53
90+	0	0	0	0	1	9	14	8	0	32
ALL	15	20	43	45	74	76	40	13	1	327

AVERAGE ANNUAL BENEFIT

Age	Years Since Member Death									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	8,830	701	6,502	0	0	0	0	0	0	5,693
45-49	0	791	0	0	0	0	0	0	0	791
50-54	284	0	0	0	0	0	0	0	0	284
55-59	9,185	18,332	7,926	47,476	0	0	0	0	0	13,053
60-64	22,014	25,589	42,702	0	41,058	26,807	0	0	3,350	26,079
65-69	40,536	33,106	19,621	29,429	26,749	0	19,779	0	0	26,262
70-74	0	17,007	32,320	37,912	36,122	21,838	17,724	0	0	31,315
75-79	18,719	62,616	28,166	39,292	37,628	32,444	22,372	0	0	35,581
80-84	0	39,099	33,502	21,457	44,388	30,294	20,443	23,406	0	34,860
85-89	0	0	0	52,609	34,037	31,584	29,656	38,347	0	31,968
90+	0	0	0	0	39,540	28,615	27,068	21,979	0	26,621
ALL	15,023	20,159	23,930	35,844	39,155	30,212	26,209	24,826	3,350	30,087

Total Annual Benefit (IN THOUSANDS) by Years Since Member Death

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	225	403	1,029	1,613	2,897	2,296	1,048	323	3	9,838

TABLE 7
RECONCILIATION OF MEMBERS
AS OF JUNE 30, 2013

	Active Participants	Leave of Absence	Vested Terminated	Other Non-Vested	Retired Participants	Disabled	Survivors and Beneficiaries	Alternate Payees ²	Total
A. Number as of June 30, 2012	3,828	52	1,833	1,427	2,912	29	321	30	10,432
B. Additions	444	85	64	178	160	4	26	3	964
C. Deletions									
1. Retirements	(96)	(4)	(59)	(1)					(160)
2. Disability	(1)	(2)	(1)						(4)
3. Died With Beneficiary	(1)				(25)				(26)
4. Died Without Beneficiary			(2)	(1)	(35)	(1)	(20)		(59)
5. Terminated - Deferred	(53)	(3)		(8)					(64)
6. Terminated - Not Vested	(155)		(1)						(156)
7. Refunds	(21)	(2)	(25)	(112)					(160)
8. Rehired as Active	79	(6)	(25)	(48)					-
9. Leave of Absence	(83)								(83)
10. Expired Benefits									-
11. Disability to Retirement					3	(3)			-
12. Write-offs									-
D. Data Adjustments ¹			4						4
E. Total on June 30, 2013	3,941	120	1,788	1,435	3,015	29	327	33	10,688

¹ Includes members not valued in prior valuation who repaid refunds for prior service.

² Includes 32 alternate payees of retired participants and one alternate payee of a disabled participant.

SECTION 3
FUNDING STATUS

TABLE 8
ACTUARIAL BALANCE SHEET
AS OF JULY 1, 2013
(dollars in thousands)

A. CURRENT ASSETS (TABLE 1; Line F.4)	\$ 886,296
B. EXPECTED FUTURE ASSETS	
1. Present Value of Expected Future Statutory Supplemental Contributions*	\$ 454,986
2. Present Value of Future Normal Costs	188,258
3. Total Expected Future Assets	<u>\$ 643,244</u>
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS	<u>\$ 1,529,540</u>
D. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS	<u>\$ 1,655,608</u>
E. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (D - C)	\$ 126,068

* Includes the effect of scheduled employee and employer contribution increases of 1.25% each, and \$7 million state contributions in 2013 and 2014.

TABLE 9
DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)
AND SUPPLEMENTAL CONTRIBUTION RATE
AS OF JULY 1, 2013
(dollars in thousands)

	<u>Actuarial Present Value of Projected Benefits</u>	<u>Actuarial Present Value of Future Normal Costs</u>	<u>Actuarial Accrued Liability</u>
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members*			
a. Retirement Benefits	\$ 547,373	\$ 132,655	\$ 414,718
b. Disability Benefits	11,459	4,279	7,180
c. Surviving Spouse and Child Benefits	7,597	2,488	5,109
d. Vested Withdrawals	30,450	33,980	(3,530)
e. Refund Liability Due to Death or Withdrawal	2,954	14,856	(11,902)
f. Total	<u>599,833</u>	<u>188,258</u>	<u>411,575</u>
2. Deferred Retirements	\$ 64,034	-	\$ 64,034
3. Former Members Without Vested Rights	3,618	-	3,618
4. Annuitants	988,123	-	988,123
5. Total	<u>\$ 1,655,608</u>	<u>\$ 188,258</u>	<u>\$ 1,467,350</u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. Actuarial Accrued Liability (A.5)			\$ 1,467,350
2. Current Assets (Table I; Line F.4)			<u>\$ 886,296</u>
3. Unfunded Actuarial Accrued Liability (B.1 - B.2)			<u>\$ 581,054</u>
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of June 30, 2038 (25-year rolling amortization) #			\$ 4,148,432
2. Supplemental Contribution Rate (B.3 / C.1)			14.01%

*Includes members on leave of absence.

Calculated using 8.0% select and 8.5% ultimate rate.

TABLE 10
CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)
AS OF JULY 1, 2013
(dollars in thousands)

A. UAAL AT BEGINNING OF YEAR	\$	559,286
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING		
1. Normal Cost and Expenses	\$	22,254
2. Contributions		(41,609)
3. Interest*		49,727
4. Total	\$	<u>30,372</u>
C. EXPECTED UAAL AT END OF YEAR (A + B.4)	\$	589,658
D. INCREASE / (DECREASE) DUE TO ACTUARIAL LOSSES / (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		
1. Age and Service Retirements	\$	488
2. Disability Retirements		213
3. Death-in-Service Benefits		(192)
4. Withdrawals		575
5. Salary Increases		(15,631)
6. Investment Income		32,493
7. Mortality of Annuitants		3,164
8. Other Items		(10,567)
9. Total	\$	<u>10,543</u>
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C + D.9)	\$	600,201
F. CHANGE IN UAAL DUE TO PLAN AMENDMENTS		2,903
G. CHANGE IN UAAL DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS		<u>(22,050)</u>
H. UAAL AT END OF YEAR (E + F + G)	\$	<u><u>581,054</u></u>

**Interest on assets determined at 8.00%; interest on liability determined at 8.34%.*

TABLE 11
DETERMINATION OF CONTRIBUTION SUFFICIENCY
AS OF JULY 1, 2013
(dollars in thousands)

	<u>Percent of Payroll</u>	<u>Dollar Amount</u>
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	6.27%	\$ 16,947
2. Employer Contributions	9.11%	24,641
3. Supplemental Contribution		
a. 1996 Legislation	0.31%	838
b. 1997 Legislation	1.05%	2,827
c. 2013 Legislation*	2.59%	7,000
4. Total	<u>19.33%</u>	<u>\$ 52,253</u>
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	5.65%	\$ 15,290
b. Disability Benefits	0.17%	451
c. Surviving Spouse and Child Benefits	0.10%	268
d. Vested Withdrawals	1.28%	3,463
e. Refund Liability Due to Death or Withdrawal	0.63%	1,696
f. Total	<u>7.83%</u>	<u>\$ 21,168</u>
2. Supplemental Contribution Amortization	14.01%	37,882
3. Allowance for Administrative Expenses	0.29%	784
4. Total	<u>22.13%</u>	<u>\$ 59,834</u>
C. CONTRIBUTION SUFFICIENCY / (DEFICIENCY) (A.4 - B.4)	(2.80%)	(7,581)
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 270,395

**2013 legislation provides for contributions by the State of Minnesota of \$7 million on October 1, 2013 and October 1, 2014. The Fund's contribution deficiency is expected to increase by \$7 million (approximately 2.59% of pay) in 2015.*

SECTION 4

ACTUARIAL METHODS AND ASSUMPTIONS

TABLE 12
ACTUARIAL METHODS AND ASSUMPTIONS
AS OF JULY 1, 2013

I. ACTUARIAL COST METHOD

An Actuarial Cost Method is a set of techniques used by the actuary to develop contribution levels under a retirement plan. The Actuarial Cost Method used in this valuation for all purposes is the Entry Age Actuarial Cost Method. Under this Method, a Normal Cost is developed by amortizing the actuarial value of benefits expected to be received by each active participant (as a level percentage of pay) over the total working lifetime of that participant, from hire to termination. Years of Service for valuation purposes was provided by the Retirement Fund. Age as of the valuation date was calculated based on the dates of birth provided by the Retirement Fund. Entry Age for valuation purposes was calculated as the age on the valuation date minus the years of service on the valuation date.

To the extent that current assets and future Normal Costs do not support participants' expected future benefits, an Unfunded Actuarial Accrued liability ("UAAL") develops. The UAAL is amortized over the statutory amortization period using level percent of payroll assuming payroll increases of 4.00% per annum. The total contribution developed under this method is the sum of the Normal Cost and the payment toward the UAAL.

II. CURRENT ACTUARIAL ASSUMPTIONS

Ultimate salary increase rates were reduced by 100 basis points at each age since the previous valuation. This change, which is statutory, is consistent with the recommendation in the most recent experience study. The assumptions were last updated for the July 1, 2012 valuation as a result of an experience study during the five-year period of July 1, 2006 to June 30, 2011 as well as a legislated change to the investment return assumption in 2012.

A. Demographic Assumptions

Mortality:

1. Healthy Mortality*:

- a. Male: RP-2000 Combined Mortality Table for males projected with Scale AA to 2020 set back 1 year
- b. Female: RP-2000 Combined Mortality Table for females projected with Scale AA to 2020 set back 3 years

2. Disabled Mortality:

- i. Male: RP-2000 Disabled Life Mortality Table for males
- ii. Female: RP-2000 Disabled Life Mortality Table for females

* Mortality rates were adjusted to include margin for future mortality improvement as described in the table name above.

TABLE 12
ACTUARIAL METHODS AND ASSUMPTIONS
AS OF JULY 1, 2013

Deaths Expressed as the Number of Occurrences per 10,000:

<u>Age</u>	<u>Healthy Mortality</u>		<u>Disabled Mortality</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20	2	1	226	75
21	2	1	226	75
22	2	1	226	75
23	3	1	226	75
24	3	1	226	75
25	3	1	226	75
26	3	1	226	75
27	3	1	226	75
28	3	2	226	75
29	4	2	226	75
30	4	2	226	75
31	4	2	226	75
32	5	2	226	75
33	5	2	226	75
34	6	3	226	75
35	6	3	226	75
36	7	3	226	75
37	8	4	226	75
38	8	4	226	75
39	9	4	226	75
40	9	4	226	75
41	9	5	226	75
42	10	5	226	75
43	10	5	226	75
44	10	6	226	75

TABLE 12
ACTUARIAL METHODS AND ASSUMPTIONS
AS OF JULY 1, 2013

Deaths Expressed as the Number of Occurrences per 10,000:

<u>Age</u>	<u>Healthy Mortality</u>		<u>Disabled Mortality</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
45	11	6	226	75
46	12	7	238	82
47	12	8	251	90
48	13	8	264	98
49	13	9	277	106
50	14	9	290	115
51	15	10	303	125
52	17	11	316	135
53	18	12	329	145
54	19	13	342	155
55	21	15	354	165
56	25	17	367	176
57	29	20	380	187
58	33	23	393	197
59	38	27	407	208
60	43	31	420	218
61	49	35	435	229
62	57	40	450	241
63	65	46	466	253
64	76	53	483	266
65	85	60	502	280
66	96	69	522	296
67	111	78	545	313
68	124	88	569	332
69	135	99	596	353

TABLE 12
ACTUARIAL METHODS AND ASSUMPTIONS
AS OF JULY 1, 2013

Rates of Disability:

Disability Expressed as the Number of Occurrences per 10,000:

Age	Disability	Age	Disability
20	2	45	5
21	2	46	5
22	2	47	5
23	2	48	5
24	2	49	5
25	2	50	10
26	2	51	10
27	2	52	10
28	2	53	10
29	2	54	10
30	3	55	20
31	3	56	20
32	3	57	20
33	3	58	20
34	3	59	20
35	3	60	40
36	3	61	40
37	3	62	40
38	3	63	40
39	3	64	40
40	3		
41	3		
42	3		
43	3		
44	3		

TABLE 12
ACTUARIAL METHODS AND ASSUMPTIONS
AS OF JULY 1, 2013

Rates of Termination:

Years of Service	Number of Terminations per 1,000 Active Members	
	Male	Female
0	400	400
1	180	180
2	140	140
3	100	100
4	60	67
5	50	59
6	45	51
7	41	43
8	37	35
9	33	31
10	29	27
11	25	23
12	20	19
13	20	15
14	20	13
15 & Over	20	13

Rates of Retirement:

Retirements Expressed as the Number of Occurrences per 10,000:

Age	Basic Members Eligible for Rule of 90 Provision	Basic Members Not Eligible for Rule of 90 Provision	Male Coordinated Members Eligible for Rule of 90 Provision	Female Coordinated Members Eligible for Rule of 90	Male Coordinated Members Not Eligible for Rule of 90 Provision	Female Coordinated Members Not Eligible for Rule
55	5,000	800	3,500	3,500	700	500
56	5,000	1,300	3,500	3,500	700	500
57	4,000	1,300	3,500	3,500	700	500
58	4,000	1,800	3,500	3,500	700	500
59	3,500	1,800	3,500	3,500	700	500
60	3,500	2,000	3,500	3,500	1,100	800
61	3,500	2,000	3,500	3,500	1,500	1,100
62	3,500	4,000	3,500	3,500	1,900	1,400
63	3,500	4,000	3,500	3,500	2,300	1,900
64	4,000	4,000	3,500	4,000	2,700	2,400
65	5,000	5,000	3,500	5,000	3,100	3,500
66	3,000	5,000	3,500	5,000	3,500	3,500
67	3,000	5,000	3,500	5,000	3,500	3,500
68	3,000	5,000	3,500	5,000	3,500	3,500
69	3,000	5,000	3,500	5,000	3,500	3,500
70 & Over	10,000	10,000	10,000	10,000	10,000	10,000

TABLE 12
ACTUARIAL METHODS AND ASSUMPTIONS
AS OF JULY 1, 2013

B. Economic Assumptions

Investment Return Rate: Select and Ultimate Rates:
8.00% for the period July 1, 2013 to June 30, 2017;
8.50% thereafter.
8.37% Equivalent Discount Rate – Present Value of Benefits Determination

Cost of Living Increases: 1.00% per annum. This valuation does not reflect any potential additional Cost of Living Increases payable if the plan’s funding ratio exceeds 80%.

Wage Inflation: 4.00% per annum

Future Salary Increases: In addition to the age-based rates shown below, during the first 15 years of employment, a service-based component of 0.20% x (15-T), where T is completed years of service, is included in the salary increase used.

Annual Salary Increases

Age	Ultimate Rate of Annual Salary Increases	Age	Ultimate Rate of Annual Salary Increases
<22	5.90%	45	4.75%
23	5.85	46	4.70
24	5.80	47	4.65
		48	4.60
25	5.75	49	4.55
26	5.70		
27	5.65	50	4.50
28	5.60	51	4.45
29	5.55	52	4.40
		53	4.35
30	5.50	54	4.30
31	5.45		
32	5.40	55	4.25
33	5.35	56	4.20
34	5.30	57	4.15
		58	4.10
35	5.25	59	4.05
36	5.20		
37	5.15	60 & Over	4.00
38	5.10		
39	5.05		
40	5.00		
41	4.95		
42	4.90		
43	4.85		
44	4.80		

Asset Value: The actuarial value of assets is smoothed by using a five-year average market value.

TABLE 12
ACTUARIAL METHODS AND ASSUMPTIONS
AS OF JULY 1, 2013

C. Other Assumptions

Marital Status:	It is assumed that 75% of male members and 60% of female members have an eligible spouse. The male spouse is assumed to be two years older than the female spouse. Married members are assumed to have two dependent children.
Deferred Benefit Commencement:	Basic Plan members who terminate vested are assumed to commence benefits at age 61. Coordinated Plan members are assumed to commence benefits at age 62. If the member is already past the assumed deferral age, the member is assumed to commence benefits one year from the valuation date.
Administrative Expenses:	Prior year administrative expenses (excluding investment expenses) are expressed as a percentage of payroll and then applied to current projected payroll.
Allowance for Combined:	7.00% load on liabilities for active members hired before July 1, 1989; 2.00% load on liabilities for active members hired after June 30, 1989; and 30.00% load on liabilities for former members.
Missing Salary and Salary Minimums:	Active members with reported salaries of \$100 or less were assumed to have the average non-zero active salary. Active members with salaries less than those reported at the prior valuation date are valued using their prior salary amount. Active members who have been hired within one year of the valuation date have had their pay annualized by dividing by months of service credited, not to exceed the average non-zero active salary. For members on leave of absence at valuation date who were not on leave at the prior valuation date, the prior year's valuation pay was used. Deferred vested members without salary information were valued using accumulated contributions.
Supplemental Contributions:	1996 legislation provides for a variable amortization aid contribution paid annually on July 15. We assumed the annual amortization aid contribution will equal \$838,000, which was the actual contribution for the most recent fiscal year. Additionally, according to 1997 legislation, annual additional supplemental contributions currently equal to \$2,827,000 are scheduled to be paid on October 1. The contributions described herein will continue until the plan is 100% funded or until June 30, 2037, whichever occurs earlier. According to 2013 legislation, the State of Minnesota is scheduled to make annual supplemental contributions of \$7,000,000 on October 1, 2013 and October 1, 2014.

TABLE 12
ACTUARIAL METHODS AND ASSUMPTIONS
AS OF JULY 1, 2013

Decrement Timing:	Retirement and Termination: end of valuation year - consistent with retirements and terminations occurring at the end of the school year. Death and Disability: middle of valuation year.
Projected Annual Payroll Calculation:	The census data as of July 1, 2013 reflects retirements and terminations occurring during the months of May and June; however, it does not necessarily reflect the replacements hired to fill their positions who may have hire dates in August and September. We assumed that May and June retirements are replaced by members coming in at the B.A. Step 1 salary level of \$36,392; and the Projected Annual Payroll for the fiscal year ending June 30, 2014 includes this replacement salary amount.

SECTION 5
BASIC PLAN

TABLE 3A
BASIC ACTIVE MEMBERS AS OF JUNE 30, 2013

Age	Years of Service								ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35+	
<25	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	1	1	2	4
60-64	0	0	0	0	0	1	5	5	11
65+	0	0	0	0	0	0	3	3	6
ALL	0	0	0	0	0	2	9	10	21

AVERAGE ANNUAL EARNINGS

Age	Years of Service								ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35+	
<25	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	82,888	87,784	87,465	86,401
60-64	0	0	0	0	0	91,007	73,786	81,747	78,970
65+	0	0	0	0	0	0	86,626	114,902	100,764
ALL	0	0	0	0	0	86,948	79,621	92,837	86,612

Prior Fiscal Year Earnings (In THOUSANDS) by Years of Service

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	ALL
ALL	0	0	0	0	0	174	717	928	1,819

TABLE 4A
BASIC SERVICE RETIREMENTS AS OF JUNE 30, 2013

Age	Years Retired									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0
55-59	18	0	0	0	0	0	0	0	0	18
60-64	74	113	0	0	0	0	0	0	0	187
65-69	52	221	143	4	0	0	0	0	0	420
70-74	7	46	197	91	1	0	0	1	0	343
75-79	0	4	67	180	59	0	0	0	0	310
80-84	0	0	0	91	95	60	0	0	0	246
85-89	0	0	1	5	40	76	21	1	0	144
90+	0	0	0	1	5	18	29	7	0	60
ALL	151	384	408	372	200	154	50	9	0	1,728

AVERAGE ANNUAL BENEFIT

Age	Years Retired									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0
55-59	42,210	0	0	0	0	0	0	0	0	42,210
60-64	41,489	41,504	0	0	0	0	0	0	0	41,498
65-69	47,381	43,100	37,924	56,878	0	0	0	0	0	41,999
70-74	43,776	45,139	39,920	40,375	27,817	0	0	54,239	0	40,826
75-79	0	70,999	48,507	46,043	31,004	0	0	0	0	44,035
80-84	0	0	0	57,829	41,166	32,933	0	0	0	45,322
85-89	0	0	38,930	24,934	41,255	29,963	25,981	63,964	0	32,643
90+	0	0	0	60,004	32,877	29,516	30,578	20,824	0	29,803
ALL	43,710	43,165	40,628	47,410	37,912	31,068	28,647	29,330	0	41,349

Total Annual Benefit (IN THOUSANDS) by Years RETIRED

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	6,600	16,575	16,576	17,637	7,582	4,784	1,432	264	0	71,452

TABLE 5A
BASIC DISABILITY RETIREMENTS AS OF JUNE 30, 2013

Age	Years Disabled									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0
55-59	0	1	0	0	0	0	0	0	0	1
60-64	3	3	0	0	0	0	0	0	0	6
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0	0
85-89	0	0	0	0	0	0	0	0	0	0
90+	0	0	0	0	0	0	0	0	0	0
ALL	3	4	0	0	0	0	0	0	0	7

AVERAGE ANNUAL BENEFIT

Age	Years Disabled									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0
55-59	0	13,017	0	0	0	0	0	0	0	13,017
60-64	47,979	63,012	0	0	0	0	0	0	0	55,496
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0	0
85-89	0	0	0	0	0	0	0	0	0	0
90+	0	0	0	0	0	0	0	0	0	0
ALL	47,979	50,513	0	0	0	0	0	0	0	49,427

Total Annual Benefit (IN THOUSANDS) by Years DISABLED

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	144	202	0	0	0	0	0	0	0	346

TABLE 6A
BASIC SURVIVORS AS OF JUNE 30, 2013

Age	Years Since Member Death									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0
55-59	1	0	4	1	0	0	0	0	0	6
60-64	0	1	1	0	1	1	0	0	1	5
65-69	0	2	7	7	4	0	1	0	0	21
70-74	0	0	8	11	11	5	2	0	0	37
75-79	1	1	6	17	22	8	3	0	0	58
80-84	0	1	1	4	27	24	5	3	0	65
85-89	0	0	0	1	4	29	15	2	0	51
90+	0	0	0	0	1	9	14	8	0	32
ALL	2	5	27	41	70	76	40	13	1	275

AVERAGE ANNUAL BENEFIT

Age	Years Since Member Death									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0
55-59	21,136	0	9,739	47,476	0	0	0	0	0	17,928
60-64	0	48,786	42,702	0	41,058	26,807	0	0	3,350	32,541
65-69	0	44,166	22,948	35,383	26,749	0	19,779	0	0	29,687
70-74	0	0	42,960	39,850	36,122	21,838	17,724	0	0	35,784
75-79	18,719	62,616	30,042	40,768	38,165	32,444	22,372	0	0	36,568
80-84	0	39,099	33,502	21,457	45,728	30,294	20,443	23,406	0	35,270
85-89	0	0	0	52,609	47,345	31,584	29,656	38,347	0	32,931
90+	0	0	0	0	39,540	28,615	27,068	21,979	0	26,621
ALL	19,927	47,767	29,620	38,171	40,694	30,212	26,209	24,826	3,350	33,318

Total Annual Benefit (IN THOUSANDS) by Years Since Member Death

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	40	239	800	1,565	2,849	2,296	1,048	323	3	9,163

TABLE 11A
BASIC DETERMINATION OF CONTRIBUTION SUFFICIENCY
AS OF JULY 1, 2013
(dollars in thousands)

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	8.75%	\$ 166
2. Employer Contributions	12.39%	234
3. Supplemental Contribution		
a. 1996 Legislation	0.31%	6
b. 1997 Legislation	1.05%	20
c. 2013 Legislation*	2.59%	49
4. Total	25.09%	\$ 475
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	8.50%	\$ 161
b. Disability Benefits	0.44%	8
c. Surviving Spouse and Child Benefits	0.09%	2
d. Deferred Retirements	1.71%	32
e. Refund Liability Due to Death or Withdrawal	1.25%	24
f. Total	11.99%	\$ 227
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 1,892

**2013 legislation provides for contributions by the State of Minnesota of \$7 million on October 1, 2013 and October 1, 2014. The Fund's contribution deficiency is expected to increase by \$7 million (approximately 2.59% of pay) in 2015.*

SUMMARY OF BENEFIT PROVISIONS FOR BASIC MEMBERS AS OF JULY 1, 2013

STATUTORY CONTRIBUTIONS

Statutory contribution rates for members and their employers are shown as a percent of pay below:

<u>Contribution After June 30,</u>	<u>Member</u>	<u>Employer</u>
2012	8.50%	12.14%
2013	8.75%	12.39%
2014	9.00%	12.64%
2015	9.50%	13.14%
2016	10.00%	13.39%
2017	10.00%	13.64%

PARTICIPANTS

Professional Educators first employed prior to July 1, 1978 by schools in the City of St. Paul or St. Paul College (including charter schools) whose position requires a license from the Minnesota Department of Education, who are not covered under the Social Security Act.

ACCREDITED SERVICE

Service which has been verified and accredited by the Association for the purpose of determining contributions and benefits. May include service earned while working outside of St. Paul Public Schools, previous St. Paul service, military service and governmental service.

ALLOWABLE ST. PAUL SERVICE

Service earned as a licensed educator in the St. Paul Public Schools, in the St. Paul College, or in certain charter schools, or as an employee of the Association. Also includes service credited after receipt of payment as required, for licensed educators on leave.

SALARY

Total compensation earned during a school year (July 1 to June 30) excluding lump sum payments for unused leave at termination and employer-paid insurance coverage.

AVERAGE SALARY

Average of the highest five years of salary during the last 10 years of St. Paul service while making contributions or while disabled.

NORMAL RETIREMENT BENEFIT

Eligibility

Attainment of age 65 and 5 years of Accredited Service.

Benefit

2.50% of Average Salary for each year of Accredited Service.

SUMMARY OF BENEFIT PROVISIONS FOR BASIC MEMBERS AS OF JULY 1, 2013

EARLY RETIREMENT BENEFIT

Eligibility

Attainment of age 55 and 5 years of Accredited Service.

Benefit

The greater of the following benefits:

- 2.00 percent of Average Salary per year of Accredited Service, subject to a maximum of 40 years with a 0.25% reduction for each month the member is under age 65. If the member has 25 years of Accredited Service, the reduction is taken from age 60, therefore no reduction is required if the member is age 60 or older. No reduction is taken if age plus years of Accredited Service totals at least 90.
- 2.50 percent of Average Salary per year of Accredited Service, subject to a maximum of 40 years, reduced for each month the member is under age 65 using linear interpolation of the table listed below.

<u>Age at Retirement</u>	<u>Under Age 62 or less than 30 years of service</u>	<u>Age 62 or older with 30 years of service</u>
55	0.5376	
56	0.5745	
57	0.6092	
58	0.6419	
59	0.6726	
60	0.7354	
61	0.7947	
62	0.8507	0.8831
63	0.9035	0.9246
64	0.9533	0.9635
65	1.0000	1.0000

DISABILITY RETIREMENT BENEFIT

Eligibility

Total and permanent disablement before attaining age 65 and 5 years of Accredited Service.

Benefit

If the member is under age 65, 75 percent of the member's annual contract salary less any Social Security and Workers' Compensation benefits payable until age 65. At age 65, a normal retirement benefit is calculated using the projected service and average salary as if the member had continued to teach in their position held at the time of disability. Members age 65 or older at time of disability receive a normal retirement benefit.

SUMMARY OF BENEFIT PROVISIONS FOR BASIC MEMBERS AS OF JULY 1, 2013

DEFERRED RETIREMENT BENEFIT

Eligibility

5 years of Accredited Service.

Benefit

Benefit computed under law in effect at termination and payable as a normal or early retirement benefit. For members hired on or before June 30, 2006, the benefit is augmented at 3.00 percent compounded annually from the 1st of the month following termination until the January 1st after turning age 55 and then augmented at 5.00 percent compounded annually from that date to July 1, 2012. For members hired after June 30, 2006, the benefit is augmented at 2.50 percent compounded annually from the 1st of the month following termination to July 1, 2012. Augmentation for all members, regardless of hire date, changed to 2.00 percent as of July 1, 2012 for the portion of benefit deferral which occurs after June 30, 2012.

ACTIVE SURVIVOR BENEFIT (Family Benefit)

Eligibility

Active member with three years of Accredited Service.

Benefit

- Children's Benefit: 25 percent of the maximum B.A. salary for the year in which the member died for each eligible child up to a maximum of two. Benefits are paid until the child attains age 18, or 22 for full-time students.
- Spousal Benefit: 15 percent of the maximum B.A. salary for an eligible spouse who has legal custody of an eligible child. Spousal benefits cease when the spouse remarries, dies, or elects the regular survivor benefit. Electing the regular survivor benefit does not disqualify the child from receiving the family benefit.

SURVIVOR BENEFIT (Active or Retired Member)

Eligibility

Active member or retired member with five years of Accredited Service. A surviving spouse must have been married to the member for three years at the earlier of his death or retirement.

Benefit

Retirement benefit earned at the time of death or retirement, whichever is earlier, reduced by the use of one hundred percent joint survivorship tables, based on the ages of the member and survivor at the time of retirement.

SUMMARY OF BENEFIT PROVISIONS FOR BASIC MEMBERS AS OF JULY 1, 2013

REFUND OF CONTRIBUTIONS

Eligibility

Termination or death where no annuity is payable, or prior to age 55, if a refund of contributions is chosen in lieu of an annuity.

Benefit

Member contributions with 6.00 percent interest accrued before July 1, 2011, with 4.00 percent accrual thereafter.

NORMAL FORM OF RETIREMENT BENEFITS

Unreduced annuity payments made until the death of the member, with a 100 percent Joint & Survivor adjusted pension payable to the surviving beneficiary.

BENEFIT INCREASES

Effective July 1, 2011, for the next COLA payable January 1, 2012, the 2011 Omnibus Pension Bill modified statutes to provide a transitional change to the COLA. If the Accrued Liability Funding Ratio, based on Actuarial Value of Assets, as determined by the most recent actuarial valuation is:

Less than 80 percent, the COLA: 1.00 percent

At least 80 percent, but less than 90 percent, the COLA: 2.00 percent

If at least 90 percent, then the subdivisions for the 1.00 percent and 2.00 percent provisions above will expire and COLAs will be paid as follows:

Increases will be equal to the Consumer Price Index urban wage earners and clerical workers all items index as reported by the Bureau of Labor Statistics within the United States Department of Labor each year as part of the determination of annual COLA to recipients of federal old age survivors, and disability insurance.

The COLA is determined by dividing the most recent average of third quarter monthly index values by the same average third quarter index value from the previous year, subtracting the quantity one from the resulting quotient, and expressing the final result as a percentage amount, which must be rounded to the nearest one-tenth of one percent. The final amount may not be a negative number and may not exceed 5.0 percent. Partial increases are granted for new retirees in the calendar year immediately preceding the increase on the basis of whole calendar quarters that the benefit recipient has been in pay status, calculated to the third decimal place.

SECTION 6
COORDINATED PLAN

TABLE 3B
COORDINATED ACTIVE MEMBERS AS OF JUNE 30, 2013*

Age	Years of Service								ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35+	
<25	64	0	0	0	0	0	0	0	64
25-29	338	27	0	0	0	0	0	0	365
30-34	254	165	33	0	0	0	0	0	452
35-39	160	149	213	30	0	0	0	0	552
40-44	135	77	168	202	17	0	0	0	599
45-49	87	64	108	182	86	17	0	0	544
50-54	90	36	83	121	102	87	3	0	522
55-59	69	43	65	91	90	76	64	4	502
60-64	56	35	52	62	51	56	25	8	345
65+	39	16	10	8	8	8	4	2	95
ALL	1,292	612	732	696	354	244	96	14	4,040

AVERAGE ANNUAL EARNINGS

Age	Years of Service								ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35+	
<25	27,192	0	0	0	0	0	0	0	27,192
25-29	38,197	52,637	0	0	0	0	0	0	39,265
30-34	43,481	59,758	70,418	0	0	0	0	0	51,389
35-39	42,788	61,038	70,571	80,103	0	0	0	0	60,463
40-44	44,470	64,787	72,319	78,750	83,695	0	0	0	67,566
45-49	39,000	66,356	72,427	79,866	83,594	82,119	0	0	70,924
50-54	33,981	66,880	76,652	78,302	84,379	90,516	92,031	0	72,912
55-59	31,982	58,257	67,880	77,107	83,030	83,339	86,841	87,394	71,424
60-64	18,124	45,531	61,902	77,829	80,235	81,232	81,421	84,100	63,774
65+	13,249	48,928	46,785	71,900	70,614	86,365	83,337	85,852	43,194
ALL	37,720	60,295	70,749	78,647	82,904	85,429	85,446	85,291	62,314

Prior Fiscal Year Earnings (In THOUSANDS) by Years of Service

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	ALL
ALL	48,734	36,900	51,788	54,738	29,348	20,845	8,203	1,194	251,750

*Including those on leave of absence, pay annualized for new hires.

TABLE 4B
COORDINATED SERVICE RETIREMENTS AS OF JUNE 30, 2013

Age	Years Retired									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	1	0	0	0	0	0	0	0	0	1
55-59	105	1	0	0	0	0	0	0	0	106
60-64	274	82	0	0	0	0	0	0	0	356
65-69	242	154	39	1	0	0	0	0	0	436
70-74	33	110	82	21	0	0	0	0	0	246
75-79	5	14	51	33	4	0	0	0	0	107
80-84	3	4	5	26	10	1	0	0	0	49
85-89	0	1	3	2	5	4	0	0	0	15
90+	0	0	0	0	0	2	1	0	0	3
ALL	663	366	180	83	19	7	1	0	0	1,319

AVERAGE ANNUAL BENEFIT

Age	Years Retired									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	1,569	0	0	0	0	0	0	0	0	1,569
55-59	20,635	2,400	0	0	0	0	0	0	0	20,463
60-64	21,243	17,869	0	0	0	0	0	0	0	20,466
65-69	18,658	17,963	13,325	19,346	0	0	0	0	0	17,937
70-74	13,795	15,865	16,150	11,875	0	0	0	0	0	15,342
75-79	5,463	11,708	13,942	15,327	8,304	0	0	0	0	13,470
80-84	10,920	9,867	9,338	17,633	11,589	4,277	0	0	0	14,236
85-89	0	472	24,254	29,701	16,641	6,176	0	0	0	16,036
90+	0	0	0	0	0	4,165	3,792	0	0	4,041
ALL	19,637	16,893	14,858	15,571	12,227	5,330	3,792	0	0	17,773

Total Annual Benefit (IN THOUSANDS) by Years RETIRED

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	13,019	6,183	2,675	1,292	232	37	4	0	0	23,443

TABLE 5B
COORDINATED DISABILITY RETIREMENTS AS OF JUNE 30, 2013

Age	Years Disabled									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	1	1	0	0	0	0	0	0	0	2
45-49	3	0	0	0	0	0	0	0	0	3
50-54	3	1	1	1	0	0	0	0	0	6
55-59	4	0	1	0	0	0	0	0	0	5
60-64	2	4	1	0	0	0	0	0	0	7
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0	0
85-89	0	0	0	0	0	0	0	0	0	0
90+	0	0	0	0	0	0	0	0	0	0
ALL	13	6	3	1	0	0	0	0	0	23

AVERAGE ANNUAL BENEFIT

Age	Years Disabled									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	32,688	7,643	0	0	0	0	0	0	0	20,165
45-49	13,938	0	0	0	0	0	0	0	0	13,938
50-54	18,009	1,310	23,944	5,471	0	0	0	0	0	14,125
55-59	15,992	0	26,910	0	0	0	0	0	0	18,176
60-64	11,087	7,622	9,484	0	0	0	0	0	0	8,878
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0	0
85-89	0	0	0	0	0	0	0	0	0	0
90+	0	0	0	0	0	0	0	0	0	0
ALL	16,513	6,573	20,113	5,471	0	0	0	0	0	13,910

Total Annual Benefit (IN THOUSANDS) by Years DISABLED

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	215	39	60	5	0	0	0	0	0	320

TABLE 6B
COORDINATED SURVIVORS AS OF JUNE 30, 2013

Age	Years Since Member Death									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	4	3	3	0	0	0	0	0	0	10
45-49	0	2	0	0	0	0	0	0	0	2
50-54	1	0	0	0	0	0	0	0	0	1
55-59	4	2	1	0	0	0	0	0	0	7
60-64	2	2	0	0	0	0	0	0	0	4
65-69	2	1	4	2	0	0	0	0	0	9
70-74	0	5	6	1	0	0	0	0	0	12
75-79	0	0	2	1	1	0	0	0	0	4
80-84	0	0	0	0	1	0	0	0	0	1
85-89	0	0	0	0	2	0	0	0	0	2
90+	0	0	0	0	0	0	0	0	0	0
ALL	13	15	16	4	4	0	0	0	0	52

AVERAGE ANNUAL BENEFIT

Age	Years Since Member Death									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	8,830	701	6,502	0	0	0	0	0	0	5,693
45-49	0	791	0	0	0	0	0	0	0	791
50-54	284	0	0	0	0	0	0	0	0	284
55-59	6,197	18,332	673	0	0	0	0	0	0	8,875
60-64	22,014	13,990	0	0	0	0	0	0	0	18,002
65-69	40,536	10,986	13,799	8,589	0	0	0	0	0	18,271
70-74	0	17,007	18,133	16,586	0	0	0	0	0	17,535
75-79	0	0	22,537	14,205	25,827	0	0	0	0	21,277
80-84	0	0	0	0	8,223	0	0	0	0	8,223
85-89	0	0	0	0	7,421	0	0	0	0	7,421
90+	0	0	0	0	0	0	0	0	0	0
ALL	14,268	10,957	14,328	11,992	12,223	0	0	0	0	12,999

Total Annual Benefit (IN THOUSANDS) by Years Since Member Death

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	185	164	229	48	49	0	0	0	0	676

TABLE 11B
COORDINATED DETERMINATION OF CONTRIBUTION SUFFICIENCY
AS OF JULY 1, 2013
(dollars in thousands)

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	6.25%	\$ 16,781
2. Employer Contributions	9.09%	24,407
3. Supplemental Contribution		
a. 1996 Legislation	0.31%	832
b. 1997 Legislation	1.05%	2,807
c. 2013 Legislation*	2.59%	6,951
4. Total	19.29%	\$ 51,778
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	5.63%	\$ 15,129
b. Disability Benefits	0.17%	443
c. Surviving Spouse and Child Benefits	0.10%	266
d. Deferred Retirements	1.28%	3,431
e. Refund Liability Due to Death or Withdrawal	0.62%	1,672
e. Total	7.80%	\$ 20,941
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 268,503

* 2013 legislation provides for contributions by the State of Minnesota of \$7 million on October 1, 2013 and October 1, 2014. The Fund's contribution deficiency is expected to increase by \$7 million (approximately 2.59% of pay) in 2015.

SUMMARY OF BENEFIT PROVISIONS FOR COORDINATED MEMBERS AS OF JULY 1, 2013

STATUTORY CONTRIBUTIONS

Statutory contribution rates for members and their employers are shown as a percent of pay below.

<u>Contribution After June 30,</u>	<u>Member</u>	<u>Employer</u>
2012	6.00%	8.84%
2013	6.25%	9.09%
2014	6.50%	9.34%
2015	7.00%	9.84%
2016	7.50%	10.09%
2017	7.50%	10.34%

PARTICIPANTS

Professional educators in the public schools of the City of St. Paul, excluding charter schools, whose position requires a license from the Minnesota Department of Education, and who are covered under the Social Security Act and make contributions to the St. Paul Teachers' Retirement Fund Association, are covered under the Coordinated Plan.

ALLOWABLE SERVICE

Service rendered while making employee contributions, or if credit is purchased during an authorized leave from St. Paul Schools. Service is granted on a proportional basis for part-time teachers.

SALARY

Total compensation excluding lump sum payments for unused leave at termination and employer-paid insurance coverage.

AVERAGE SALARY

Average of the highest five successive years of salary while making contributions. In cases where the Allowable Service is less than five years, Average Salary is based on the Allowable Service years.

NORMAL RETIREMENT BENEFIT

Eligibility

Three years of Allowable Service. The eligibility age is 65 for those hired before July 1, 1989, and the earlier of eligibility for full Social Security retirement benefits to a maximum of age 66 for those hired on or after July 1, 1989. A Proportionate Retirement Annuity is available at Normal Retirement Age with one year of Allowable Service.

Benefit

1.70 percent of Average Salary for each year of Allowable Service rendered before July 1, 2015 and 1.90 percent of Average Salary for each year of Allowable Service rendered after June 30, 2015.

SUMMARY OF BENEFIT PROVISIONS FOR COORDINATED MEMBERS AS OF JULY 1, 2013

EARLY RETIREMENT BENEFIT

Eligibility

Attainment of age 55 and 3 years of Allowable Service.

Benefit

Members hired before July 1, 1989, are eligible for the greater of the following benefits. Members hired after July 1, 1989, are eligible for the benefits shown in item (b):

- a) For the first ten years of Allowable Service, 1.20 percent of Average Salary for each year of Allowable Service rendered prior to July 1, 2015, plus 1.40 percent of Average Salary for each year of Allowable Service rendered after June 30, 2015. Additionally, for each subsequent year of Allowable Service in excess of ten years, 1.70 percent of Average Salary for each year rendered prior to July 1, 2015, plus 1.90 percent of Average Salary for each year rendered after June 30, 2015. There is a reduction of 0.25 percent for each month the member is under age 65, or under age 62 with 30 years of Allowable Service. No reduction applies if the age plus years of service totals at least 90.

- b) 1.70 percent of Average Salary per year of Allowable Service rendered before July 1, 2015 and 1.90 percent of Average Salary for each year of service rendered after June 30, 2015 reduced for each month the member is under the Normal Retirement Age using linear interpolation of the table listed below. For normal retirement ages between ages 65 and 66, the early retirement factors will be determined using linear interpolation between the early retirement factors applicable for normal retirement ages 65 and 66.

Normal retirement age: <u>Age at Retirement</u>	Under Age 62 or less than 30 years of service		Age 62 or older with 30 years of service	
	65	66	65	66
55	0.5376	0.4592		
56	0.5745	0.4992		
57	0.6092	0.5370		
58	0.6419	0.5726		
59	0.6726	0.6062		
60	0.7354	0.6726		
61	0.7947	0.7354		
62	0.8507	0.7947	0.8831	0.8389
63	0.9035	0.8507	0.9246	0.8831
64	0.9533	0.9035	0.9635	0.9246
65	1.0000	0.9533	1.0000	0.9635
66		1.0000		1.0000

SUMMARY OF BENEFIT PROVISIONS FOR COORDINATED MEMBERS AS OF JULY 1, 2013

DISABILITY RETIREMENT BENEFIT

Eligibility

Total and permanent disablement and three years of Allowable Service with service earned within the current fiscal year and at least two years of Allowable Service since the last interruption in service.

Benefit

Calculated as a normal retirement benefit payable for life without reduction for early commencement. At normal retirement age, the benefit converts from a disability benefit to a retirement benefit. The disability benefit is reduced by any Workers' Compensation benefits payable.

DEFERRED RETIREMENT BENEFIT

Eligibility

Three years of Allowable Service.

Benefit

Benefit computed under law in effect at termination and payable as a normal or early retirement benefit. For members hired on or before June 30, 2006, the benefit is augmented at 3.00 percent compounded annually from the 1st of the month following termination until the January 1st after turning age 55 and then augmented at 5.00 percent compounded annually from that date to July 1, 2012. For members hired after June 30, 2006, the benefit is augmented at 2.50 percent compounded annually from the 1st of the month following termination to July 1, 2012. Augmentation for all members, regardless of hire date, changed to 2.00 percent as of July 1, 2012 for the portion of benefit deferral which occurs after June 30, 2012.

SURVIVOR BENEFIT (Active Members)

Eligibility

Active member with three years of Allowable service. A surviving spouse is defined as the person legally married to the member at the time of death. If none, a dependent child who is the legal child of the member, who is less than 20 years of age and unmarried.

Benefit

Retirement benefit earned at the time of death with choices for either a reduced for 100 percent joint survivorship, or 5-, 10-, 15-, or 20-year term certain. The benefit is available immediately upon application. Actuarial reductions assuming 2.5% augmentation for the calculation of the survivorship portion of a 100 percent joint and survivor benefit are actuarially determined based on the member's and survivor's ages at the death of the member.

Early retirement reductions apply to the survivor benefit based on the member's age when deceased. If the deceased member had not yet attained age 55 at time of death, the additional early retirement reduction from age 55 to the age of the member at death applies at only one-half of the actuarial rate.

SUMMARY OF BENEFIT PROVISIONS FOR COORDINATED MEMBERS AS OF JULY 1, 2013

REFUND OF CONTRIBUTIONS

Eligibility

Termination or death where no annuity is payable or a refund of contributions is chosen in lieu of an annuity.

Benefit

Member contributions with 6.00 percent interest accrued until July 1, 2011, with 4.00 percent accrual thereafter.

NORMAL FORM OF RETIREMENT BENEFITS

Straight life annuity. Actuarially equivalent options are available to provide post-retirement beneficiary or survivor benefits.

BENEFIT INCREASES

Effective July 1, 2011, for the next COLA payable January 1, 2012, the 2011 Omnibus Pension Bill modified statutes to provide a transitional change to the COLA. If the Accrued Liability Funding Ratio based on the Actuarial Value of Assets, as determined by the most recent actuarial valuation is:

Less than 80 percent, the COLA: 1.00 percent

At least 80 percent, but less than 90 percent, the COLA: 2.00 percent

If at least 90 percent, then the subdivisions for the 1 percent and 2 percent provisions above will expire and COLAs will be paid as follows:

Increases will be equal to the Consumer Price Index urban wage earners and clerical workers all items index as reported by the Bureau of Labor Statistics within the United States Department of Labor each year as part of the determination of annual COLA to recipients of federal old age, survivors, and disability insurance.

The COLA is determined by dividing the most recent average of third quarter monthly index values by the same average third quarter index value from the previous year, subtracting the quantity one from the resulting quotient, and expressing the final result as a percentage amount, which must be rounded to the nearest one-tenth of one percent. The final amount may not be a negative number and may not exceed 5.00 percent. Partial increases are granted for new retirees in the calendar year immediately preceding the increase on the basis of whole calendar quarters that the benefit recipient has been in pay status, calculated to the third decimal place.

SECTION 7

GASB DISCLOSURES

This information is presented in draft form for review by the Fund's auditor. Please let us know if there are any changes so that we may maintain consistency with the Fund's financial statements.

TABLE 14
SCHEDULE OF FUNDING PROGRESS
(dollars in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (B)	Unfunded AAL (UAAL) (B)-(A)	Funded Ratio (A)/(B)	Actual Covered Payroll (Previous FY) (C)	UAAL as % of Covered Payroll ((B)-(A))/(C)
07/01/93	\$ 393,168	\$ 571,059	\$ 177,891	68.85%	\$ 122,930	144.71%
07/01/94	407,275	596,441	189,166	68.28%	129,308	146.29%
07/01/95	445,733	633,070	187,337	70.41%	139,175	134.61%
07/01/96	494,931	664,072	169,141	74.53%	145,677	116.11%
07/01/97	556,406	805,066	248,660	69.11%	151,363	164.28%
07/01/98	625,053	861,584	236,531	72.55%	168,564	140.32%
07/01/99	704,233	938,847	234,614	75.01%	178,254	131.62%
07/01/00	801,823	998,253	196,430	80.32%	187,950	104.51%
07/01/01	869,045	1,060,931	191,886	81.91%	202,915	94.56%
07/01/02	899,572	1,141,300	241,728	78.82%	201,456	119.99%
07/01/03	898,760	1,189,361	290,601	75.57%	205,655	141.31%
07/01/04	898,860	1,251,460	352,600	71.82%	221,685	159.05%
07/01/05	905,292	1,299,832	394,540	69.65%	223,762	176.32%
07/01/06	938,919	1,346,072	407,153	69.75%	226,351	179.88%
07/01/07	1,015,722	1,380,151	364,429	73.59%	229,172	159.02%
07/01/08	1,075,951	1,432,040	356,089	75.13%	235,993	150.89%
07/01/09	1,049,954	1,454,314	404,360	72.20%	243,166	166.29%
07/01/10	1,001,444	1,471,630	470,185	68.05%	239,996	195.91%
07/01/11	972,718	1,389,875	417,157	69.99%	239,738	174.01%
07/01/12	911,930	1,471,216	559,286	61.98%	239,053	233.96%
07/01/13	886,296	1,467,350	581,054	60.40%	247,432	234.83%

TABLE 15
SCHEDULE OF EMPLOYER CONTRIBUTIONS
(dollars in thousands)

Year Ended June 30	Actuarially Required Contribution Rate (A)	Actual Covered Payroll (B)	Actual Member Contributions (C)	Annual Required Contributions [(A)*(B)]-(C)	Actual Employer Contributions ⁽¹⁾	Percentage Contributed
1994	18.68%	\$ 129,308	\$ 9,100	\$ 15,055	\$ 11,736	77.95%
1995	18.63%	139,175	8,788	17,140	13,084	76.34
1996	17.96%	145,677	9,093	17,071	15,101	88.46
1997	16.97%	151,363	9,484	16,202	16,043	99.02
1998	20.35%	168,564	11,057	23,246	21,702	93.36
1999	18.82%	178,254	11,649	21,898	21,066	96.20
2000	18.09%	187,950	13,184	20,816	22,622	108.68
2001	16.57%	202,915	13,170	20,453	23,569	115.23
2002	15.81%	201,456	14,468	17,382	24,216	139.32
2003	18.56% ⁽²⁾	205,655	14,222	23,948	23,370	97.59
2004	20.36%	221,685	14,308	30,827	23,771	77.11
2005	21.59%	223,762	13,587	34,723	23,833	68.64
2006	23.78%	226,351	13,453	40,373	24,015	59.48
2007	24.55%	229,172	13,438	42,823	24,117	56.32
2008	23.40%	235,993	13,642	41,580	24,285	58.40
2009	17.63%	243,166	13,864	29,007	24,844	85.65
2010	18.40%	239,996	13,832	30,328	25,126	82.85
2011	19.84%	239,738	13,745	33,819	25,090	74.19
2012	18.37%	239,053	14,117	29,797	25,109	84.27
2013	22.87%	247,432	15,164	41,424	26,445	63.84

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

⁽²⁾ Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 16.19%.

TABLE 16
DEVELOPMENT OF THE FUND
(dollars in thousands)

<u>Year Ended June 30</u>	<u>Employer Contributions</u>	<u>Employee Contributions</u>	<u>Supplemental Contributions</u>	<u>Net Investment Return</u>	<u>Administrative Expenses</u>	<u>Benefit Payments</u>	<u>Actuarial Value of Assets EOY</u>
2004	-	-	-	-	-	-	\$ 898,860
2005	\$ 20,435	\$ 13,587	\$ 3,398	\$ 43,082	\$ 559	\$ 73,510	905,293
2006	19,815	13,453	4,200	76,317	591	79,567	938,919
2007	19,666	13,438	4,451	124,214	696	84,271	1,015,722
2008	20,775	13,642	3,509	112,804	691	89,810	1,075,951
2009	21,501	13,864	3,343	28,924	605	93,024	1,049,954
2010	21,018	13,832	4,108	9,496	602	96,362	1,001,444
2011	21,013	13,745	4,077	31,391	722	98,230	972,718
2012	21,452	14,117	3,658	3,447	736	102,726	911,930
2013	22,780	15,164	3,665	37,919	751	104,411	886,296

TABLE 17
GASB SUPPLEMENTARY INFORMATION

Valuation Date	July 1, 2013
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent of Pay, Open, Assuming Four Percent Payroll Growth
Amortization Period	25- Year open period
Asset Valuation Method	5- Year Smoothed Market
Actuarial Assumptions:	
Investment rate of return	8.00% during 4-year select period, 8.50% thereafter
Projected salary increases	4.00% - 8.90%; age and service based
Cost-of-living adjustments	1.00% *
Plan Membership:	
Active Members	4,061
Retirees and Beneficiaries	3,404
Terminated Vested Members	1,788
Other Non- Vested Terminated Members	<u>1,435</u>
Total	10,688

**Beginning with the cost-of-living adjustment payable January 1, 2012, COLA is 1.00% until 80% funding is achieved, 2.00% once 80% funding is achieved but funding is less than 90%. Once 90% funding is achieved, COLA determined by CPI with a maximum of 5.00% and a minimum of 0.00%.*

November 15, 2013

Mr. Paul V. Doane
Executive Director
St. Paul Teachers' Retirement Fund Association
1619 Dayton Avenue, Room 309
St. Paul, MN 55104-6206

Dear Mr. Doane:

Enclosed are 16 bound copies of the July 1, 2013 actuarial valuation report for the St. Paul Teachers' Retirement Fund Association. I look forward to presenting the results of the report to the Board of Trustees.

Sincerely,



Bonita J. Wurst, ASA, EA, MAAA

BJW:sc
Enclosures

cc: Mr. Larry Martin, Executive Director
Legislative Commission on Pensions and Retirement, (3 bound copies and 1 electronic copy)
Mr. Jim Showalter, Commissioner
Minnesota Management & Budget, (1 bound copy and 1 electronic copy)
Mr. Bryan Dahl, Minnesota Management & Budget, (1 electronic copy)
Ms. Jess Hopeman
Legislative Reference Library, (2 bound copies and 1 electronic copy)
Dana Woolfrey, GRS