

**ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION**  
**ACTUARIAL VALUATION**  
**AS OF JULY 1, 2012**

November 6, 2012

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, 2012. This report provides among other things, the required annual contribution rate of the Fund for the Plan Year commencing July 1, 2012, and ending on June 30, 2013.

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.

The assumptions were changed since the previous valuation to reflect assumptions that were newly adopted by the Board 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. The assumption set is described in Section 4 of the report.

This report should not be relied on for any purpose other than the purpose described in the primary communication. 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.

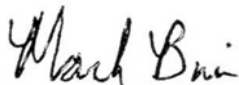
The undersigned are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. The signing actuaries are independent of the plan sponsor.

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

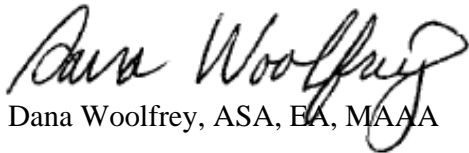
Respectfully submitted,



Bonita J. Wurst, ASA, EA, MAAA



Mark Buis, FSA, EA, MAAA



Dana Woolfrey, ASA, EA, MAAA

BJW/MB/DW:mb

# TABLE OF CONTENTS

---

<b>Summary of Valuation Results</b>		1-5
<b>Section 1</b>	<b>Asset Information</b>	
	Assets of the Plan	6
Table 1	Accounting Balance Sheet	7
Table 2	Changes in Assets Available for Benefits	8
<b>Section 2</b>	<b>Total Membership Data</b>	
Table 3	Active Members	9
Table 4	Service Retirements	10
Table 5	Disability Retirements	11
Table 6	Survivors	12
Table 7	Reconciliation of Members	13
<b>Section 3</b>	<b>Funding Status</b>	
Table 8	Actuarial Balance Sheet	14
Table 9	Determination of Unfunded Actuarial Accrued Liability (UAAL) and Supplemental Contribution Rate	15
Table 10	Changes in Unfunded Actuarial Accrued Liability (UAAL)	16
Table 11	Determination of Contribution Sufficiency	17
<b>Section 4</b>	<b>Actuarial Methods and Assumptions</b>	
Table 12	Summary of Actuarial Assumptions and Methods	18-25
<b>Section 5</b>	<b>Basic Plan</b>	
	<b>Membership Data</b>	
Table 3A	Active Members	26
Table 4A	Service Retirements	27
Table 5A	Disability Retirements	28
Table 6A	Survivors	29

## TABLE OF CONTENTS (CONCLUDED)

---

### Section 5 (Concluded)

#### Funding Status

Table 11A	Determination of Contribution Sufficiency	30
-----------	---	----

#### Plan Provisions

	Summary of Benefit Provisions for Basic Members	31-34
--	---	-------

### Section 6 Coordinated Plan

#### Membership Data

Table 3B	Active Members	35
----------	----------------	----

Table 4B	Service Retirements	36
----------	---------------------	----

Table 5B	Disability Retirements	37
----------	------------------------	----

Table 6B	Survivors	38
----------	-----------	----

#### Funding Status

Table 11B	Determination of Contribution Sufficiency	39
-----------	---	----

	Summary of Benefit Provisions for Coordinated Members	40-43
--	---	-------

### Section 7 GASB Disclosures

Table 14	Schedule of Funding Progress	44
----------	------------------------------	----

Table 15	Schedule of Employer Contributions	45
----------	------------------------------------	----

Table 16	Development of the Fund	46
----------	-------------------------	----

Table 17	GASB Supplementary Information	47
----------	--------------------------------	----

### Appendix Alternative Valuation Results

## 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, 2012. 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 increased from \$1,389.9 to \$1,471.2 million. This increase was primarily due to the assumption changes and expected growth and was partially offset by salary increases less than expected.

Market value returns during the year ending June 30, 2012 were (0.17%) compared with the assumed return of 8.50%. In addition, a portion of the outstanding losses from the year ending June 30, 2009 were recognized. As a result, there were losses on an actuarial value of assets of \$76.5 million.

The funded ratio based on actuarial value of assets decreased from 69.99% at July 1, 2011, to 61.98% at July 1, 2012. The deterioration was due to the change in assumptions as well as the losses on the actuarial value of assets.

The required contribution rate increased from 18.37% of pay for fiscal year ending June 30, 2012, to 22.87% of pay for fiscal year ending June 30, 2013, due to assumption changes and asset losses. The statutory contributions currently in place are not sufficient to cover this contribution rate. The statutory contribution rate for the current plan year based on the Basic Plan and Coordinated Plan active population at the valuation date is 16.47% of pay, a shortfall of 6.40% of pay, or \$16.4 million per year.

### Actuarial Assumptions Used

An experience study for the five-year period of July 1, 2006 to June 30, 2011 was performed in the spring of 2012. With the exception of the investment return, the Board adopted the recommended assumptions and those assumption changes were submitted to the State of Minnesota Legislative Commission on Pensions and Retirement (LCPR) for approval. Approval was granted, and, in addition, the legislated investment return was changed to a five-year select and ultimate discount rate, 8.00% during the five-year select period and 8.50% thereafter.

The resulting assumption changes are summarized below. All assumptions are included in Section 4 of the report.

## SUMMARY OF VALUATION RESULTS

---

### *Economic Assumptions*

1. Legislated investment return: Select and ultimate with 8.00% for the period July 1, 2012 through June 30, 2017 and 8.50% thereafter. Previously this assumption was 8.50%.
2. The underlying inflation assumption is 3% (previously unstated).
3. Reduce total payroll growth and wage inflation from 5.0% to 4.0%.
4. Extend the service-based promotional/longevity component of the salary scale from 10 to 15 years.

### *Mortality Assumptions*

5. Update the mortality tables for non-disabled participants (both pre- and post-retirement) to the RP-2000 Combined Mortality Table projected with Scale AA to 2020 with setbacks of one year for males and three years for females. This increases the assumed life expectancy.
6. Update the disabled mortality assumption to the RP-2000 Disabled Life Mortality Table.

### *Other Demographic Assumptions*

7. Change retirement rates to sex-distinct rates.
8. Increase termination and disability rates.
9. Reduce the Combined Service load (which applies to accrued liabilities, normal costs and present value of future benefits) from 7.0% to 2.0%. Leave this load unchanged for other groups.
10. Modify the percent married, spouse age, and commencement age for deferred benefits assumptions.

Overall, these changes increased liabilities and the contribution deficiency level. This was largely the result of the increased life expectancy and reduced discount rate. The actuarial results as of July 1, 2012, prior to these assumption changes, can be seen in Scenario A of the Appendix included at the end of the report.

The valuation assumes that future COLA's will be 1% per year. This assumption is based on the current market value funded ratio of 60% and projections that indicate a steadily declining funding level in the future given the current statutory contribution schedule.

## SUMMARY OF VALUATION RESULTS

---

### **Actuarial Assumptions Recommended**

The assumptions used in the valuation as of July 1, 2012 largely reflect the recommended assumptions from the experience study. However, the recommended assumption set is not used in its entirety.

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.

In addition, it was intended that, as a result of the reduction in wage inflation from 5.0% to 4.0%, the individual salary increases would also be reduced by 1.0%. However, this reduction was only communicated in the main body of the experience study report, and the State of Minnesota Legislative Commission on Pensions and Retirement (LCPR) motion on economic assumption changes did not include this 1.0% reduction.

Because the results contained in this report do not reflect the recommended assumption set in its entirety, we have included the valuation results as of July 1, 2012 had we performed them on that basis in Scenario C of the Appendix. *We would recommend that the Board use these results in their decision making processes.*

Although the valuation must follow the legislated discount rate, we recommend that a motion be submitted for the LCPR's approval for alternative individual salary increases to be used in the July 1, 2013 valuation. To that end, we have also included alternative valuation results as of July 1, 2012 had the legislated investment return been used with the alternative individual salary increases. Those results are shown in Scenario D of the Appendix.

### **Participants**

Active membership increased 8.4% during fiscal year 2012 from 3,578 to 3,880 (figures include members on leave of absence). Total participants receiving benefits under the Fund, including disabled retirees and beneficiaries, increased 2.5% during fiscal year 2012 from 3,212 to 3,292. Total expenditures for these benefits increased from \$98.2 million to \$102.7 million during fiscal year 2012, or 4.6%.

### **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 smoothes the Fund's level of required contributions and ensures the Fund's assets will track the market value of assets.



## SUMMARY OF VALUATION RESULTS

---

	July 1, 2011 Valuation	July 1, 2012 Valuation
<b>A. CONTRIBUTIONS % OF PAYROLL (Table 11)</b>		
1. Statutory Contributions - Chapter 354A	16.10%	16.47%
2. Required Contributions - Chapter 356	18.37%	22.87%
3. Sufficiency / (Deficiency)	(2.27%)	(6.40%)
<b>B. FUNDING RATIOS</b>		
1. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$ 972,718	\$ 911,930
b. Actuarial Accrued Liability (Table 9)	1,389,875	1,471,216
c. Funding Ratio	69.99%	61.98%
2. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$ 1,543,568	\$ 1,461,167
b. Current and Expected Future Benefit Obligations	1,581,075	1,677,829
c. Funding Ratio	97.63%	87.09%
<b>C. PLAN PARTICIPANTS</b>		
1. Active Members		
a. Number (Table 3)	3,469	3,828
b. Projected Annual Earnings	\$ 239,501	\$ 256,509
c. Average Annual Earnings (Projected dollars)	\$ 66,937	\$ 65,691
d. Average Age	45.5	45.0
e. Average Service	12.4	11.8
f. Additional Members on Leave of Absence	109	52
2. Others		
a. Service Retirements (Table 4)	2,864	2,942
b. Disability Retirements (Table 5)	29	29
c. Survivors (Table 6)	319	321
d. Deferred Retirements (Table 7)	1,880	1,833
e. Terminated Other Non-Vested (Table 7)	1,698	1,427
f. Total - Others	6,790	6,552
3. Grand Total (1.a + 1.f + 2.f)	10,368	10,432

## SUMMARY OF VALUATION RESULTS

---

### Experience Analysis

Overall, the Fund experienced a net loss of \$127.1 million (\$72.5 experience loss, \$54.6 assumption changes). In general, salary increases were smaller than predicted under the current valuation assumption and produced an actuarial gain of \$12.2 million.

The largest component of the Fund's experience loss was the investment loss. The market value of Fund assets returned (0.17%) (net of fees) for the year ended June 30, 2012, lower than the 8.5% assumption. This, in conjunction with the portion of the 2009 loss that was recognized this year, resulted in an overall loss of \$76.5 million on the actuarial value of assets. The rate of return on the actuarial value of assets for 2012 is 0.4%.

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, 2012, the actuarial value of assets was 103.4% of market value. This means that meeting the actuarial assumption in the next few years will require average future market returns that exceed the 8.0% investment return assumption.

The following table shows the July 1, 2012, valuation results, if they had been based on the market value instead of smoothed actuarial value:

<b>Market Value Results as of July 1, 2012</b>	
Actuarial Accrued Liability	\$1,471.2 million
Market Value of Assets	\$ 881.9 million
Unfunded Actuarial Accrued Liability (Market Value Basis)	\$ 589.3 million
Funded Ratio (Market Value Basis)	59.95%
Required Contribution Rate (Market Value Basis)	23.63% of pay
Shortfall (Market Value Basis)	7.16% of pay

---

## **SECTION 1**

### ASSET INFORMATION

---

## ASSETS OF THE PLAN

---

The cost value of the plan assets decreased from \$684.1 million as of June 30, 2011, to \$670.0 million as of June 30, 2012. The market value of the plan assets decreased from \$950.1 million as of June 30, 2011, to \$881.9 million as of June 30, 2012. The expected return on assets using the valuation interest rate assumption of 8.5 percent was \$78 million. The actual plan experience showed a return on assets of \$(4) million. Twenty percent of the asset return below the expected \$78 million is recognized as an actuarial loss in the development of the actuarial value of assets. The recognized loss from the current year along with the portion of prior gains and losses recognized this year results in an overall loss of \$76.5 million on the actuarial value of assets.

Table 1 shows the composition of assets as of June 30, 2012, and the development of the actuarial value of assets as of June 30, 2012. Table 2 details the development of asset values during fiscal year 2012.

**TABLE 1**  
**ACCOUNTING BALANCE SHEET**  
**AS OF JUNE 30, 2012**  
**(dollars in thousands)**

	<b>Market Value</b>	<b>Cost Value</b>
<b>A. ASSETS</b>		
1. Cash, Equivalents, Short-Term Securities	\$ 10,862	\$ 10,862
2. Investments		
a. Fixed Income	168,941	106,660
b. Equity	596,107	454,923
c. Real Estate	91,605	84,144
d. Alternative	10,841	9,838
3. Other Assets*	5,161	5,161
<b>B. TOTAL ASSETS</b>	<b>\$ 883,517</b>	<b>\$ 671,588</b>
<b>C. AMOUNTS CURRENTLY PAYABLE</b>	\$ 1,591	\$ 1,591
<b>D. ASSETS AVAILABLE FOR BENEFITS</b>		
1. Member Reserves	\$ 149,560	\$ 149,560
2. Employer Reserves	732,366	520,436
3. Total Assets Available for Benefits	<b>\$ 881,926</b>	<b>\$ 669,996</b>
<b>E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS</b>	<b>\$ 883,517</b>	<b>\$ 671,587</b>
<b>F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS</b>		
1. Market Value of Assets Available for Benefits (D.3)	\$ 881,926	
2. Unrecognized Asset Returns		
a. June 30, 2012	\$ (82,006)	
b. June 30, 2011	128,185	
c. June 30, 2010	36,792	
d. June 30, 2009	(280,135)	
3. UAR Adjustment: $.80 * 2(a) + .60 * 2(b) + .40 * 2(c) + .20 * 2(d)$	(30,004)	
4. Actuarial Value of Assets: (F.1 - F.3)	<b>\$ 911,930</b>	

**\* DERIVATION OF OTHER ASSETS**

	<b>Market Value</b>
Accounts Receivable	
Employer Contribution	\$ 2,511
Employee Contribution	-
Service Purchases Receivable	84
Pensions Receivable	15
State Contributions	-
Real Estate Income Receivable	59
Commission Recapture Receivable	1
Interest Receivable	1
Dividend Receivable	194
Misc. Receivable	3
Security Purchases Receivable	609
Sale of Securities	1,657
Total Accounts Receivable	\$ 5,134
Fixed Assets	26
Total Other Assets	<b>\$ 5,160</b>

**TABLE 2**  
**CHANGE(S) IN ASSETS AVAILABLE FOR BENEFITS**  
**AS OF JUNE 30, 2012**  
**(dollars in thousands)**

	<u>Market Value</u>	<u>Cost Value</u>
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$ 950,121	\$ 684,103
B. OPERATING REVENUES		
1. Member Contributions	\$ 14,117	\$ 14,117
2. Employer Contributions	21,452	21,452
3. Supplemental Contributions	3,658	3,658
4. Investment Income	7,267	7,267
5. Investment Expenses	(4,080)	(4,080)
6. Net Realized Gain / (Loss)	46,926	46,926
7. Other	15	15
8. Net Change in Unrealized Gain / (Loss)	<u>(54,088)</u>	<u>-</u>
9. Total Operating Revenue	\$ 35,267	\$ 89,355
C. OPERATING EXPENSES		
1. Service Retirements	\$ 91,969	\$ 91,969
2. Disability Benefits	702	702
3. Survivor Benefits	9,117	9,117
4. Refunds	938	938
5. Administrative Expenses	<u>736</u>	<u>736</u>
6. Total operating Expenses	\$ 103,462	\$ 103,462
D. OTHER CHANGES IN RESERVES	\$ -	\$ -
E. ASSETS AVAILABLE AT END OF PERIOD	<u>\$ 881,926</u>	<u>\$ 669,996</u>
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN		
1. Average Balance		
(a) Assets available at BOY:		\$ 950,121
(b) Assets available at EOY:		881,926
(c) Average balance $\{[(a) + (b) - \text{Net Investment Income}] / 2\}$ {Net investment income: B.4+B.5+B.6+B.8}		\$ 918,011
2. Expected Return: $.085 * F.1$		78,031
3. Actual Return		(3,975)
4. Current Year Gross Asset Return: $F.3 - F.2$		\$ (82,006)

---

## **SECTION 2**

### **TOTAL MEMBERSHIP DATA**

---

**TABLE 3**  
**ACTIVE MEMBERS AS OF JUNE 30, 2012\***

Age	Years of Service								ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35+	
<25	76	0	0	0	0	0	0	0	76
25-29	302	40	0	0	0	0	0	0	342
30-34	205	200	44	0	0	0	0	0	449
35-39	121	127	246	34	0	0	0	0	528
40-44	95	83	191	201	13	0	0	0	583
45-49	71	63	103	134	88	29	0	0	488
50-54	75	48	99	102	101	79	12	0	516
55-59	56	40	76	100	77	82	68	6	505
60-64	43	40	56	49	47	38	30	11	314
65+	34	11	7	8	9	5	2	3	79
ALL	1,078	652	822	628	335	233	112	20	3,880

**AVERAGE ANNUAL EARNINGS**

Age	Years of Service								ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35+	
<25	16,644	0	0	0	0	0	0	0	16,644
25-29	32,612	53,933	0	0	0	0	0	0	35,106
30-34	37,347	59,762	65,610	0	0	0	0	0	50,101
35-39	39,341	61,113	70,674	81,515	0	0	0	0	61,892
40-44	39,846	62,373	72,384	78,403	82,080	0	0	0	67,948
45-49	39,703	66,150	73,885	78,359	84,942	90,545	0	0	72,126
50-54	28,051	59,518	73,933	78,373	83,091	86,471	77,583	0	70,598
55-59	22,508	61,410	67,421	77,369	82,010	80,425	87,507	85,860	71,194
60-64	16,266	45,714	64,843	76,483	79,725	81,804	80,727	82,977	64,003
65+	13,587	43,062	64,390	80,159	75,377	90,905	86,256	114,274	46,530
ALL	32,152	59,557	70,844	78,265	82,610	84,184	84,605	88,537	61,704

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

Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	ALL
ALL	34,660	38,831	58,233	49,151	27,674	19,615	9,476	1,771	239,411

\* Including those on leave of absence.



**TABLE 4**  
**SERVICE RETIREMENTS AS OF JUNE 30, 2012**

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	1	0	0	0	0	0	0	0	1
55-59	120	0	0	0	0	0	0	0	0	120
60-64	366	219	0	0	0	0	0	0	0	585
65-69	268	355	204	4	0	0	0	0	0	831
70-74	31	139	232	125	1	0	0	1	0	529
75-79	7	22	113	202	52	0	0	0	0	396
80-84	0	4	7	109	79	70	0	1	0	270
85-89	0	1	3	9	41	71	17	0	0	142
90+	0	0	0	0	7	23	29	9	0	68
<b>ALL</b>	792	741	559	449	180	164	46	11	0	2,942

**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	2,400	0	0	0	0	0	0	0	2,400
55-59	23,880	0	0	0	0	0	0	0	0	23,880
60-64	27,813	34,187	0	0	0	0	0	0	0	30,199
65-69	22,808	33,020	29,006	43,751	0	0	0	0	0	28,793
70-74	19,571	26,312	34,819	38,537	64,662	0	0	53,702	0	32,661
75-79	8,028	21,491	34,286	40,942	27,729	0	0	0	0	35,645
80-84	0	8,666	15,117	48,794	35,820	33,604	0	63,330	0	39,646
85-89	0	30,820	26,589	39,101	35,710	29,261	27,431	0	0	31,482
90+	0	0	0	0	36,959	26,575	27,079	16,855	0	26,573
<b>ALL</b>	25,026	31,588	32,299	42,167	33,662	30,738	27,209	24,429	0	31,555

**Total Annual Benefit (IN THOUSANDS) by Years RETIRED**

Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
<b>ALL</b>	19,820	23,407	18,055	18,933	6,059	5,041	1,252	269	0	92,836

**TABLE 5**  
**DISABILITY RETIREMENTS AS OF JUNE 30, 2012**

Age	Years Disabled									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	1	0	0	0	0	0	0	0	0	1
45-49	1	0	0	0	0	0	0	0	0	1
50-54	2	1	0	1	0	0	0	0	0	4
55-59	8	2	1	0	0	0	0	0	0	11
60-64	5	6	1	0	0	0	0	0	0	12
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	17	9	2	1	0	0	0	0	0	29

**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	7,567	0	0	0	0	0	0	0	0	7,567
45-49	23,423	0	0	0	0	0	0	0	0	23,423
50-54	8,503	23,707	0	5,417	0	0	0	0	0	11,533
55-59	24,531	8,422	26,643	0	0	0	0	0	0	21,794
60-64	18,238	33,532	9,390	0	0	0	0	0	0	25,148
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	19,732	26,860	18,017	5,417	0	0	0	0	0	21,332

**Total Annual Benefit (IN THOUSANDS) by Years DISABLED**

Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	335	242	36	5	0	0	0	0	0	619

**TABLE 6**  
**SURVIVORS AS OF JUNE 30, 2012**

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	4	0	0	0	0	0	0	11
45-49	0	2	0	0	0	0	0	0	0	2
50-54	3	0	0	0	0	0	0	0	0	3
55-59	4	1	5	1	0	0	0	0	1	12
60-64	0	5	4	2	3	0	1	0	0	15
65-69	1	6	10	6	4	1	0	0	0	28
70-74	0	2	12	18	5	5	2	0	0	44
75-79	0	1	9	16	24	13	1	0	0	64
80-84	0	1	1	5	20	24	6	4	0	61
85-89	0	0	0	3	8	26	8	0	0	45
90+	0	0	0	0	1	13	13	9	0	36
ALL	12	21	45	51	65	82	31	13	1	321

**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	8,742	694	9,119	0	0	0	0	0	0	6,684
45-49	0	784	0	0	0	0	0	0	0	784
50-54	7,656	0	0	0	0	0	0	0	0	7,656
55-59	13,130	18,661	7,847	47,006	0	0	0	0	3,350	13,398
60-64	0	35,077	33,401	25,353	35,660	0	19,583	0	0	32,417
65-69	16,603	22,953	17,558	34,859	24,093	23,404	0	0	0	23,530
70-74	0	14,686	39,099	41,941	29,266	27,168	20,824	0	0	35,848
75-79	0	61,996	34,107	43,571	34,632	24,153	16,770	0	0	34,813
80-84	0	38,712	33,170	36,248	39,989	32,693	19,965	29,662	0	34,032
85-89	0	0	0	22,261	38,776	29,265	28,381	0	0	30,332
90+	0	0	0	0	39,149	28,453	22,907	22,456	0	25,248
ALL	10,589	22,167	26,538	39,352	35,846	29,130	23,311	24,673	3,350	29,779

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

Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	127	465	1,194	2,007	2,330	2,389	723	321	3	9,559

**TABLE 7**  
**RECONCILIATION OF MEMBERS**  
**AS OF JUNE 30, 2012**

	Active Participants	Leave of Absence	Vested Terminated	Other Non-Vested	Retired Participants	Disabled	Survivors and Beneficiaries	Alternate Payees	Total
A. Number as of June 30, 2011	3,469	109	1,880	1,698	2,838	29	319	26	10,368
B. Additions	414	11	87	192	139	2	28	4	877
C. Deletions									
1. Retirements	(69)	(3)	(66)	(1)	-	-	-	-	(139)
2. Disability	-	(1)	(1)	-	-	-	-	-	(2)
3. Died With Beneficiary	-	-	-	-	(27)	-	-	-	(27)
4. Died Without Beneficiary	(4)	-	-	(1)	(41)	-	(22)	-	(68)
5. Terminated - Deferred	(50)	(14)	-	(23)	-	-	-	-	(87)
6. Terminated - Not Vested	(102)	(1)	(1)	-	-	-	-	-	(104)
7. Refunds	(9)	-	(28)	(146)	-	-	-	-	(183)
8. Rehired as Active	190	(49)	(42)	(99)	-	-	-	-	-
9. Leave of Absence	(11)	-	-	-	-	-	-	-	(11)
10. Expired Benefits	-	-	-	-	-	-	(4)	-	(4)
11. Disability to Retirement	-	-	-	-	2	(2)	-	-	-
12. Write-offs	-	-	-	(193)	-	-	-	-	(193)
D. Data Adjustments <sup>1</sup>	-	-	4	-	1	-	-	-	5
E. Total on June 30, 2012	3,828	52	1,833	1,427	2,912	29	321	30	10,432

<sup>1</sup> Includes members not valued in prior valuation who repaid refunds for prior service.

---

**SECTION 3**  
FUNDING STATUS

---

**TABLE 8**  
**ACTUARIAL BALANCE SHEET**  
**AS OF JULY 1, 2012**  
**(dollars in thousands)**

---

A. CURRENT ASSETS (TABLE 1; Line F.4)	\$ 911,930
B. EXPECTED FUTURE ASSETS	
1. Present Value of Expected Future Statutory Supplemental Contributions*	\$ 342,624
2. Present Value of Future Normal Costs	206,613
3. Total Expected Future Assets	<u>\$ 549,237</u>
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS	<u>\$ 1,461,167</u>
D. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS	<u>\$ 1,677,829</u>
E. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (D - C)	\$ 216,662

\* Includes the effect of scheduled employee and employer contribution increases of 1.0% each, in 0.25% increments starting July 1, 2011.

**TABLE 9**  
**DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)**  
**AND SUPPLEMENTAL CONTRIBUTION RATE**  
**AS OF JULY 1, 2012**  
**(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>
<b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>			
1. Active Members*			
a. Retirement Benefits	\$ 579,299	\$ 156,537	\$ 422,762
b. Disability Benefits	11,675	4,671	7,004
c. Surviving Spouse and Child Benefits	8,258	3,022	5,236
d. Vested Withdrawals	28,340	30,346	(2,006)
e. Refund Liability Due to Death or Withdrawal	2,475	12,037	(9,562)
f. Total	<u>630,047</u>	<u>206,613</u>	<u>423,434</u>
2. Deferred Retirements	64,410	-	\$ 64,410
3. Former Members Without Vested Rights	3,506	-	3,506
4. Annuitants	979,866	-	979,866
5. Total	<u>\$ 1,677,829</u>	<u>\$ 206,613</u>	<u>\$ 1,471,216</u>
<b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b>			
1. Actuarial Accrued Liability (A.5)			\$ 1,471,216
2. Current Assets (Table 1; Line F.4)			\$ 911,930
3. Unfunded Actuarial Accrued Liability (B.1 - B.2)			<u>\$ 559,286</u>
<b>C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE</b>			
1. Present Value of Future Payrolls Through the Amortization Date of June 30, 2037 (25-year rolling amortization) #			\$ 3,948,324
2. Supplemental Contribution Rate (B.3 / C.1)			14.17%

\*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, 2012**  
(dollars in thousands)

---

A. UAAL AT BEGINNING OF YEAR	\$	417,157
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING		
1. Normal Cost and Expenses	\$	18,901
2. Contributions		(39,227)
3. Interest		35,367
4. Total	<u>\$</u>	<u>15,041</u>
C. EXPECTED UAAL AT END OF YEAR (A + B.4)	\$	432,198
D. INCREASE / (DECREASE) DUE TO ACTUARIAL LOSSES / (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		
1. Age and Service Retirements	\$	2,803
2. Disability Retirements		2
3. Death-in-Service Benefits		(741)
4. Withdrawals		201
5. Salary Increases		(12,247)
6. Investment Income		76,504
7. Mortality of Annuitants		3,087
8. Other Items		2,857
9. Total	<u>\$</u>	<u>72,466</u>
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C + D.9)	\$	504,664
F. CHANGE IN UAAL DUE TO PLAN AMENDMENTS		-
G. CHANGE IN UAAL DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS		<u>54,622</u>
H. UAAL AT END OF YEAR (E + F + G)	<u>\$</u>	<u>559,286</u>



**TABLE 11**  
**CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)**  
**AS OF JULY 1, 2012**  
**(dollars in thousands)**

	<u>Percent of Payroll</u>	<u>Dollar Amount</u>
<b>A. STATUTORY CONTRIBUTIONS - CHAPTER 354A</b>		
1. Employee Contributions	6.02%	\$ 15,449
2. Employer Contributions	8.87%	22,753
3. Supplemental Contribution		
a. 1996 Legislation	0.48%	1,230
b. 1997 Legislation	1.10%	2,827
4. Total	<u>16.47%</u>	<u>\$ 42,259</u>
<b>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</b>		
1. Normal Cost		
a. Retirement Benefits	6.47%	\$ 16,602
b. Disability Benefits	0.18%	455
c. Surviving Spouse and Child Benefits	0.12%	296
d. Vested Withdrawals	1.12%	2,868
e. Refund Liability Due to Death or Withdrawal	0.50%	1,282
f. Total	<u>8.39%</u>	<u>\$ 21,503</u>
2. Supplemental Contribution Amortization	14.17%	36,347
3. Allowance for Administrative Expenses	0.31%	795
4. Total	<u>22.87%</u>	<u>\$ 58,645</u>
<b>C. CONTRIBUTION SUFFICIENCY / (DEFICIENCY) (A.4 - B.4)</b>	<b>(6.40%)</b>	<b>(16,386)</b>
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 256,509

---

## **SECTION 4**

### ACTUARIAL METHODS AND ASSUMPTIONS

---

**TABLE 12**  
**ACTUARIAL METHODS AND ASSUMPTIONS**  
**AS OF JULY 1, 2012**

---

**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**

The assumptions were changed since the previous valuation to reflect assumptions that were newly adopted by the Board 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.

**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, 2012**

---

*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, 2012**

---

*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, 2012**

---

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, 2012**

---

Rates of Termination:

<u>Years of Service</u>	<u>Number of Terminations per 1,000 Active Members</u>	
	<u>Male</u>	<u>Female</u>
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:*

<u>Age</u>	<u>Basic Members Eligible for Rule of 90 Provision</u>	<u>Basic Members Not Eligible for Rule of 90 Provision</u>	<u>Male Coordinated Members Eligible for Rule of 90 Provision</u>	<u>Female Coordinated Members Eligible for Rule of 90</u>	<u>Male Coordinated Members Not Eligible for Rule of 90 Provision</u>	<u>Female Coordinated Members Not Eligible for Rule</u>
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, 2012**

---

***B. Economic Assumptions***

Investment Return Rate: Select and Ultimate Rates:  
8.00% for the period July 1, 2012 to June 30, 2017;  
8.50% thereafter.  
8.34% Equivalent Discount Rate – Present Value of Benefits Determination

Cost of Living Increases: 1.00% per annum

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*

<u>Age</u>	<u>Ultimate Rate of Annual Salary Increases</u>	<u>Age</u>	<u>Ultimate Rate of Annual Salary Increases</u>
<22	6.90%	45	5.75%
23	6.85	46	5.70
24	6.80	47	5.65
		48	5.60
25	6.75	49	5.55
26	6.70		
27	6.65	50	5.50
28	6.60	51	5.45
29	6.55	52	5.40
		53	5.35
30	6.50	54	5.30
31	6.45		
32	6.40	55	5.25
33	6.35	56	5.20
34	6.30	57	5.15
		58	5.10
35	6.25	59	5.05
36	6.20		
37	6.15	60 & Over	5.00
38	6.10		
39	6.05		
40	6.00		
41	5.95		
42	5.90		
43	5.85		
44	5.80		

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, 2012**

---

**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. Deferred vested members without salary information were valued using accumulated contributions. 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. Active members with salaries less than those reported at the prior valuation date are valued using their prior salary amount.
Supplemental Contributions:	According to 1996 legislation, the St. Paul School District and the State of Minnesota are scheduled to make a combined annual supplemental contribution of \$1,230,000. According to 1997 legislation, annual supplemental contributions of \$2,827,000 are scheduled to be paid on October 1.
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.

**TABLE 12**  
**ACTUARIAL METHODS AND ASSUMPTIONS**  
**AS OF JULY 1, 2012**

---

Projected Annual Payroll  
Calculation:

The census data as of July 1, 2012 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 \$34,674; and the Projected Annual Payroll for the fiscal year ending June 30, 2013 includes this replacement salary amount.

New Retiree Benefits:

Benefits reported for many new retirees included one-time retroactive amounts. Benefits for new retirees were set to the original benefit payment amount adjusted for any COLAs that would have been received since retirement.

---

**SECTION 5**  
BASIC PLAN

---

**TABLE 3A**  
**BASIC ACTIVE MEMBERS AS OF JUNE 30, 2012**

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	3	6	3	12
60-64	0	0	0	0	0	1	5	5	11
65+	0	0	0	0	0	1	0	2	3
ALL	0	0	0	0	0	5	11	10	26

**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	82,816	82,525	82,499	82,591
60-64	0	0	0	0	0	80,786	82,001	80,705	81,302
65+	0	0	0	0	0	85,977	0	130,170	115,439
ALL	0	0	0	0	0	83,042	82,287	91,136	85,836

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

Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	ALL
ALL	0	0	0	0	0	415	905	911	2,232

**TABLE 4A  
BASIC SERVICE RETIREMENTS AS OF JUNE 30, 2012**

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	21	0	0	0	0	0	0	0	0	21
60-64	103	157	0	0	0	0	0	0	0	260
65-69	55	213	164	3	0	0	0	0	0	435
70-74	3	44	168	107	1	0	0	1	0	324
75-79	0	5	68	174	51	0	0	0	0	298
80-84	0	0	1	87	74	70	0	1	0	233
85-89	0	0	1	6	38	68	17	0	0	130
90+	0	0	0	0	7	21	28	9	0	65
ALL	182	419	402	377	171	159	45	11	0	1,766

**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	41,950	0	0	0	0	0	0	0	0	41,950
60-64	45,453	40,548	0	0	0	0	0	0	0	42,492
65-69	42,092	42,848	33,461	51,950	0	0	0	0	0	39,276
70-74	63,707	46,921	42,590	42,803	64,662	0	0	53,702	0	43,546
75-79	0	68,559	48,073	44,949	28,150	0	0	0	0	43,183
80-84	0	0	9,456	56,504	37,906	33,604	0	63,330	0	43,545
85-89	0	0	38,545	44,858	37,522	30,255	27,431	0	0	32,748
90+	0	0	0	0	36,959	28,714	27,912	16,855	0	27,614
ALL	44,334	42,721	39,701	47,061	35,029	31,526	27,730	24,429	0	40,877

**Total Annual Benefit (IN THOUSANDS) by Years RETIRED**

Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	8,069	17,900	15,960	17,742	5,990	5,013	1,248	269	0	72,190

**TABLE 5A**  
**BASIC DISABILITY RETIREMENTS AS OF JUNE 30, 2012**

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	2	0	0	0	0	0	0	0	0	2
60-64	2	4	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	4	4	0	0	0	0	0	0	0	8

**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	50,015	0	0	0	0	0	0	0	0	50,015
60-64	27,685	48,669	0	0	0	0	0	0	0	41,675
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	38,850	48,669	0	0	0	0	0	0	0	43,760

**Total Annual Benefit (IN THOUSANDS) by Years DISABLED**

Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	155	195	0	0	0	0	0	0	0	350

**TABLE 6A**  
**BASIC SURVIVORS AS OF JUNE 30, 2012**

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	0	0	4	1	0	0	0	0	1	6
60-64	0	2	4	1	3	0	1	0	0	11
65-69	0	3	4	6	4	1	0	0	0	18
70-74	0	0	8	18	5	5	2	0	0	38
75-79	0	1	7	16	22	13	1	0	0	60
80-84	0	1	1	5	20	24	6	4	0	61
85-89	0	0	0	1	8	26	8	0	0	43
90+	0	0	0	0	1	13	13	9	0	36
ALL	0	7	28	48	63	82	31	13	1	273

**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	0	0	9,643	47,006	0	0	0	0	3,350	14,821
60-64	0	62,877	33,401	37,622	35,660	0	19,583	0	0	38,504
65-69	0	25,865	28,658	34,859	24,093	23,404	0	0	0	28,953
70-74	0	0	51,035	41,941	29,266	27,168	20,824	0	0	39,132
75-79	0	61,996	35,731	43,571	36,248	24,153	16,770	0	0	35,624
80-84	0	38,712	33,170	36,248	39,989	32,693	19,965	29,662	0	34,032
85-89	0	0	0	52,088	38,776	29,265	28,381	0	0	31,401
90+	0	0	0	0	39,149	28,453	22,907	22,456	0	25,248
ALL	0	43,437	34,942	41,233	36,449	29,130	23,311	24,673	3,350	32,942

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

Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	0	304	978	1,979	2,296	2,389	723	321	3	8,993

**TABLE 11A**  
**BASIC DETERMINATION OF CONTRIBUTION SUFFICIENCY**  
**AS OF JULY 1, 2012**  
**(dollars in thousands)**

---

	<b>Percent of Payroll</b>	<b>Dollar Amount</b>
<b>A. STATUTORY CONTRIBUTIONS - CHAPTER 354A</b>		
1. Employee Contributions	8.50%	\$ 199
2. Employer Contributions	12.14%	285
3. Supplemental Contribution		
a. 1996 Legislation	0.48%	11
b. 1997 Legislation	1.10%	26
4. Total	22.22%	\$ 521
<b>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</b>		
1. Normal Cost		
a. Retirement Benefits	10.17%	\$ 238
b. Disability Benefits	0.47%	11
c. Surviving Spouse and Child Benefits	0.10%	2
d. Deferred Retirements	1.64%	38
e. Refund Liability Due to Death or Withdrawal	1.02%	24
f. Total	13.40%	\$ 313
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 2,344



## **SUMMARY OF BENEFIT PROVISIONS FOR BASIC MEMBERS AS OF JULY 1, 2012**

---

### **STATUTORY CONTRIBUTIONS**

The statutory contributions for members and the employer are 8.50% and 12.14% of salary respectively. The member rate will increase from 8.50% to 9.00%, and the employer rate will increase from 12.14% to 12.64%, by 0.25% increments over the next two years, with the next increase scheduled for July 1, 2013.

### **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, 2012**

---

### **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, augmented at 3.00 percent compounded annually from the age at retirement until age 65 and then actuarially reduced for each month the member is under age 65.

### **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.

### **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 1<sup>st</sup> of the month following termination until the January 1<sup>st</sup> 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 1<sup>st</sup> of the month following termination to July 1, 2012. Augmentation for all members, regardless of hire date, will change to 2.00 percent as of July 1, 2012 for the portion of benefit deferral which occurs after June 30, 2012.

## **SUMMARY OF BENEFIT PROVISIONS FOR BASIC MEMBERS AS OF JULY 1, 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.

### **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 (5.00 percent if terminated before May 16, 1989). Interest accruing after July 1, 2011, will become 4.00 percent. Interest accrues annually on July 1<sup>st</sup>, so the 4.00 percent rate will apply for refund payments made on or after July 1, 2012.

### **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.

## SUMMARY OF BENEFIT PROVISIONS FOR BASIC MEMBERS AS OF JULY 1, 2012

---

### 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, 2012**

Age	Years of Service								ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35+	
<25	76	0	0	0	0	0	0	0	76
25-29	302	40	0	0	0	0	0	0	342
30-34	205	200	44	0	0	0	0	0	449
35-39	121	127	246	34	0	0	0	0	528
40-44	95	83	191	201	13	0	0	0	583
45-49	71	63	103	134	88	29	0	0	488
50-54	75	48	99	102	101	79	12	0	516
55-59	56	40	76	100	77	79	62	3	493
60-64	43	40	56	49	47	37	25	6	303
65+	34	11	7	8	9	4	2	1	76
ALL	1,078	652	822	628	335	228	101	10	3,854

**AVERAGE ANNUAL EARNINGS**

Age	Years of Service								ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35+	
<25	16,644	0	0	0	0	0	0	0	16,644
25-29	32,612	53,933	0	0	0	0	0	0	35,106
30-34	37,347	59,762	65,610	0	0	0	0	0	50,101
35-39	39,341	61,113	70,674	81,515	0	0	0	0	61,892
40-44	39,846	62,373	72,384	78,403	82,080	0	0	0	67,948
45-49	39,703	66,150	73,885	78,359	84,942	90,545	0	0	72,126
50-54	28,051	59,518	73,933	78,373	83,091	86,471	77,583	0	70,598
55-59	22,508	61,410	67,421	77,369	82,010	80,334	87,989	89,222	70,917
60-64	16,266	45,714	64,843	76,483	79,725	81,832	80,472	84,871	63,375
65+	13,587	43,062	64,390	80,159	75,377	92,137	86,256	82,482	43,810
ALL	32,152	59,557	70,844	78,265	82,610	84,209	84,858	85,937	61,541

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

Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over	ALL
ALL	34,660	38,831	58,233	49,151	27,674	19,200	8,571	859	237,179

**TABLE 4B**  
**COORDINATED SERVICE RETIREMENTS AS OF JUNE 30, 2012**

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	1	0	0	0	0	0	0	0	1
55-59	99	0	0	0	0	0	0	0	0	99
60-64	263	62	0	0	0	0	0	0	0	325
65-69	213	142	40	1	0	0	0	0	0	396
70-74	28	95	64	18	0	0	0	0	0	205
75-79	7	17	45	28	1	0	0	0	0	98
80-84	0	4	6	22	5	0	0	0	0	37
85-89	0	1	2	3	3	3	0	0	0	12
90+	0	0	0	0	0	2	1	0	0	3
ALL	610	322	157	72	9	5	1	0	0	1,176

**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	2,400	0	0	0	0	0	0	0	2,400
55-59	20,047	0	0	0	0	0	0	0	0	20,047
60-64	20,904	18,078	0	0	0	0	0	0	0	20,365
65-69	17,828	18,278	10,739	19,155	0	0	0	0	0	17,277
70-74	14,842	16,767	14,420	13,181	0	0	0	0	0	15,456
75-79	8,028	7,647	13,453	16,040	6,280	0	0	0	0	12,725
80-84	0	8,666	16,061	18,306	4,953	0	0	0	0	15,095
85-89	0	30,820	20,611	27,587	12,760	6,715	0	0	0	17,769
90+	0	0	0	0	0	4,124	3,754	0	0	4,001
ALL	19,265	17,102	13,347	16,542	7,703	5,678	3,754	0	0	17,557

**Total Annual Benefit (IN THOUSANDS) by Years RETIRED**

Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	11,752	5,507	2,095	1,191	69	28	4	0	0	20,647

**TABLE 5B**  
**COORDINATED DISABILITY RETIREMENTS AS OF JUNE 30, 2012**

Age	Years Disabled									ALL
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	
<45	1	0	0	0	0	0	0	0	0	1
45-49	1	0	0	0	0	0	0	0	0	1
50-54	2	1	0	1	0	0	0	0	0	4
55-59	6	2	1	0	0	0	0	0	0	9
60-64	3	2	1	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	13	5	2	1	0	0	0	0	0	21

**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	7,567	0	0	0	0	0	0	0	0	7,567
45-49	23,423	0	0	0	0	0	0	0	0	23,423
50-54	8,503	23,707	0	5,417	0	0	0	0	0	11,533
55-59	16,037	8,422	26,643	0	0	0	0	0	0	15,523
60-64	11,940	3,257	9,390	0	0	0	0	0	0	8,621
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	13,849	9,413	18,017	5,417	0	0	0	0	0	12,788

**Total Annual Benefit (IN THOUSANDS) by Years DISABLED**

Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	180	47	36	5	0	0	0	0	0	269



**TABLE 6B**  
**COORDINATED SURVIVORS AS OF JUNE 30, 2012**

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	4	0	0	0	0	0	0	11
45-49	0	2	0	0	0	0	0	0	0	2
50-54	3	0	0	0	0	0	0	0	0	3
55-59	4	1	1	0	0	0	0	0	0	6
60-64	0	3	0	1	0	0	0	0	0	4
65-69	1	3	6	0	0	0	0	0	0	10
70-74	0	2	4	0	0	0	0	0	0	6
75-79	0	0	2	0	2	0	0	0	0	4
80-84	0	0	0	0	0	0	0	0	0	0
85-89	0	0	0	2	0	0	0	0	0	2
90+	0	0	0	0	0	0	0	0	0	0
ALL	12	14	17	3	2	0	0	0	0	48

**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	8,742	694	9,119	0	0	0	0	0	0	6,684
45-49	0	784	0	0	0	0	0	0	0	784
50-54	7,656	0	0	0	0	0	0	0	0	7,656
55-59	13,130	18,661	666	0	0	0	0	0	0	11,975
60-64	0	16,544	0	13,084	0	0	0	0	0	15,679
65-69	16,603	20,041	10,158	0	0	0	0	0	0	13,767
70-74	0	14,686	15,228	0	0	0	0	0	0	15,047
75-79	0	0	28,422	0	16,857	0	0	0	0	22,639
80-84	0	0	0	0	0	0	0	0	0	0
85-89	0	0	0	7,348	0	0	0	0	0	7,348
90+	0	0	0	0	0	0	0	0	0	0
ALL	10,589	11,531	12,697	9,260	16,857	0	0	0	0	11,788

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

Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	ALL
ALL	127	161	216	28	34	0	0	0	0	566

**TABLE 11B**  
**COORDINATED DETERMINATION OF CONTRIBUTION SUFFICIENCY**  
**AS OF JULY 1, 2012**  
**(dollars in thousands)**

	<u>Percent of Payroll</u>	<u>Dollar Amount</u>
<b>A. STATUTORY CONTRIBUTIONS - CHAPTER 354A</b>		
1. Employee Contributions	6.00%	\$ 15,250
2. Employer Contributions	8.84%	22,468
3. Supplemental Contribution		
a. 1996 Legislation	0.48%	1,219
b. 1997 Legislation	1.10%	2,801
4. Total	<u>16.42%</u>	<u>\$ 41,738</u>
<b>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</b>		
1. Normal Cost		
a. Retirement Benefits	6.44%	\$ 16,364
b. Disability Benefits	0.17%	444
c. Surviving Spouse and Child Benefits	0.12%	294
d. Deferred Retirements	1.11%	2,830
e. Refund Liability Due to Death or Withdrawal	0.49%	1,258
e. Total	<u>8.33%</u>	<u>\$ 21,190</u>
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 254,165

# SUMMARY OF BENEFIT PROVISIONS FOR COORDINATED MEMBERS AS OF JULY 1, 2012

---

## STATUTORY CONTRIBUTIONS

The statutory contributions for members and the employer are 6.00% and 8.84% respectively. The member rate will increase from 6.00% to 6.50%, and the employer rate will increase from 8.84% to 9.34%, by 0.25% increments over the next two years, with the next increase scheduled for July 1, 2013.

## 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.

## EARLY RETIREMENT BENEFIT

### *Eligibility*

Attainment of age 55 and 3 years of Allowable Service.

## **SUMMARY OF BENEFIT PROVISIONS FOR COORDINATED MEMBERS AS OF JULY 1, 2012**

---

### ***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) 1.20 percent of Average Salary for each of the first ten years of Allowable Service plus 1.70 percent of Average Salary for each subsequent year of Allowable Service. 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 augmented at 3.00 percent compounded annually from the age at retirement until Normal Retirement Age and then actuarially reduced for each month the member is under the Normal Retirement Age.

### **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 1<sup>st</sup> of the month following termination until the January 1<sup>st</sup> 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 1<sup>st</sup> of the month following termination to July 1, 2012. Augmentation for all members, regardless of hire date, will change 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.

## **SUMMARY OF BENEFIT PROVISIONS FOR COORDINATED MEMBERS AS OF JULY 1, 2012**

---

### ***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 for the calculation of the survivorship portion of a 100 percent joint and survivor benefit is 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.

### **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 (5.00 percent if terminated before May 16, 1989). Interest accruing after July 1, 2011, will become 4.00 percent. Interest accrues annually on July 1<sup>st</sup>, so the 4.00 percent rate will apply for refund payments made on or after July 1, 2012.

### **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.

**SUMMARY OF BENEFIT PROVISIONS FOR COORDINATED MEMBERS  
AS OF JULY 1, 2012**

---

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)

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (A)</b>	<b>Actuarial Accrued Liability (B)</b>	<b>Unfunded AAL (UAAL) (B)-(A)</b>	<b>Funded Ratio (A)/(B)</b>	<b>Actual Covered Payroll (Previous FY) (C)</b>	<b>UAAL as % of Covered Payroll ((B)-(A))/(C)</b>
07/01/92	\$ 355,998	\$ 533,865	\$ 177,867	66.68%	\$ 115,274	154.30%
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%



**TABLE 15**  
**SCHEDULE OF EMPLOYER CONTRIBUTIONS**  
(dollars in thousands)

<b>Year Ended June 30</b>	<b>Actuarially Required Contribution Rate (A)</b>	<b>Actual Covered Payroll (B)</b>	<b>Actual Member Contributions (C)</b>	<b>Annual Required Contributions [(A)*(B)]-(C)</b>	<b>Actual Employer Contributions <sup>(1)</sup></b>	<b>Percentage Contributed</b>
1993	19.74%	\$ 122,930	\$ 8,202	\$ 16,064	\$ 10,839	67.47%
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% <sup>(2)</sup>	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

<sup>(1)</sup> Includes contributions from other sources (if applicable)

<sup>(2)</sup> 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>
2003	-	-	-	-	-	-	\$ 898,760
2004	\$ 20,378	\$ 14,308	\$ 3,393	\$ 31,417	\$ 516	\$ 68,880	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

**TABLE 17**  
**GASB SUPPLEMENTARY INFORMATION**

---

<b>Valuation Date</b>	July 1, 2012
<b>Actuarial Cost Method</b>	Entry Age Normal
<b>Amortization Method</b>	Level Percent of Pay, Open, Assuming Four Percent Payroll Growth
<b>Amortization Period</b>	25 year open period
<b>Asset Valuation Method</b>	5-Year Smoothed Market
<b>Actuarial Assumptions:</b>	
Investment rate of return	8.00% during 5 year select period, 8.50% thereafter
Projected salary increases	5.00% - 9.90%; age and service based
Cost-of-living adjustments	1.00% *
<b>Plan Membership:</b>	
Active Members	3,880
Retirees and Beneficiaries	3,292
Terminated Vested Members	1,833
Other Non-Vested Terminated Members	<u>1,427</u>
Total	10,432

*\*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%.*

---

## **APPENDIX**

### ALTERNATIVE VALUATION RESULTS

---

## APPENDIX

### ALTERNATIVE VALUATION RESULTS

---

Beginning with the actuarial valuation as of July 1, 2012, many of the actuarial assumptions were changed to reflect the recommendations of an experience study performed during the prior year. The actuarial valuation results as of July 1, 2012, had these assumption changes not been made, are shown in Scenario A. Scenario B shows the official results contained in the valuation report.

The assumptions used in the valuation as of July 1, 2012 largely reflect the recommended assumptions from the experience study. However, the recommended assumption set is not used in its entirety.

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.

In addition, it was intended that, as a result of the reduction in wage inflation from 5.0% to 4.0%, the individual salary increases would also be reduced by 1.0%. However, this reduction was only communicated in the main body of the experience study report, and the LCPR motion on economic assumption changes did not include this 1.0% reduction.

Because the results contained in this report do not reflect the recommended assumption set in its entirety, we have included the valuation results as of July 1, 2012 had we performed them on that basis in Scenario C of the Appendix. *We would recommend that the Board use these results in their decision making processes.*

Although the valuation must follow the legislated discount rate, we recommend that a motion be submitted for the LCPR's approval for alternative individual salary increases to be used in the July 1, 2013 valuation. To that end, we have also included alternative valuation results as of July 1, 2012 had the legislated investment return been used with the alternative individual salary increases. Those results are shown in Scenario D of the Appendix.

**APPENDIX**  
**ALTERNATIVE VALUATION RESULTS**

---

- Scenario A: Actuarial assumptions consistent with those used in the July 1, 2011 Actuarial Valuation  
 Scenario B: Actuarial assumptions consistent with those approved by the LCPR (legislated) and shown in report  
 Scenario C: Actuarial assumptions consistent with GRS recommendation  
 Scenario D: Actuarial assumptions consistent with GRS recommendation except legislated discount rate

	<u>Demographic</u>	<u>Discount Rate</u>	<u>Wage Inflation</u>	<u>Age-based Salary Increases</u>
Scenario A:	Same as last year	8.5%	5.00%	6.90% to 5.00%
Scenario B:	Newly approved based on experience study	8.0%/8.5% Select and Ultimate	4.00%	6.90% to 5.00%
Scenario C:	Newly approved based on experience study	7.5%	4.00%	5.90% to 4.00%
Scenario D:	Newly approved based on experience study	8.0%/8.5% Select and Ultimate	4.00%	5.90% to 4.00%

**APPENDIX**  
**ALTERNATIVE VALUATION RESULTS**

**Actuarial Valuation Results as of July 1, 2012 (\$ in thousands)**

<b>Scenario</b>	<b>A (Prior)</b>	<b>B (Official)</b>	<b>C (Recommended)</b>	<b>D (Possible Future)</b>
Interest Rate	8.50%	8.00%/8.50%	7.50%	8.00%/8.50%
Wage Inflation	5.00%	4.00%	4.00%	4.00%
Age Based Salary Increases	6.90% to 5.00%	6.90% to 5.00%	5.90% to 4.00%	5.90% to 4.00%
Actuarial Accrued Liability	\$ 1,416,594	\$ 1,471,216	\$ 1,576,622	\$ 1,449,674
Current Assets	911,930	911,930	911,930	911,930
Unfunded Actuarial Accrued Liability	504,664	559,286	664,692	537,744
Actuarial Liability Funding Ratio	64.37%	61.98%	57.84%	62.91%
Projected Benefit Funding Ratio	92.19%	87.09%	82.12%	89.97%
Required Contribution Rate				
Normal Cost	8.19%	8.39%	8.95%	7.49%
Supplemental Contribution Amortization	11.85%	14.17%	15.71%	13.73%
Allowance for Administrative Expenses	0.31%	0.31%	0.31%	0.31%
Total	20.35%	22.87%	24.97%	21.53%
Statutory Contribution Rate	16.47%	16.47%	16.48%	16.48%
Contribution Sufficiency / (Deficiency) Percent	(3.88%)	(6.40%)	(8.49%)	(5.05%)
Contribution Sufficiency / (Deficiency) Dollar	\$ (9,934)	\$ (16,387)	\$ (21,597)	\$ (12,841)
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:	\$ 256,509	\$ 256,509	\$ 254,386	\$ 254,386