### ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION

### **Comprehensive Annual Report**

for the fiscal year ended June 30, 2013

St. Paul Teachers' Retirement Fund Assn. 1619 Dayton Avenue Room 309 Saint Paul, MN 55104-6276

Phone 651-642-2550 Fax 651-642-2553 www.sptrfa.org

Paul V. Doane

**Executive Director** 

**Christine MacDonald** 

Assistant Director

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### Mission

Provide our members and their beneficiaries with retirement, survivor and disability benefits as specified in law and the Association Articles and Bylaws.

Assist our members in planning a secure retirement by providing friendly, high quality, consumer oriented service, pre-retirement education and information in a professional and cost effective manner.

Invest the assets of the fund to provide the optimum return while preserving principal by controlling the portfolio risk.

### **Board of Trustees**

John R. Kunz Jr., President Mike McCollor, Vice President





Eugene R. Waschbusch, Secretary-Treasurer

Matt Bogenschultz, Trustee





Feryle W. Borgeson, Trustee Lori Borgeson, Trustee





John Brodrick, *Ex-Officio* Trustee

Karen Odegard, Trustee





James Paddock, Trustee Stephanie Pignato, Trustee





### St. Paul Teachers' Retirement Jund Association

#### TRUSTEES & OFFICERS

W. Matthew Bogenschultz Feryle W. Borgeson Lori Borgeson John Brodrick Karen Odegard James Paddock Stephanie Pignato John R. Kunz, Jr. ...... President
Mike McCollor ....... Vice President
Eugene R. Waschbusch .... Secretary-Treasurer
Paul V. Doane ..... Executive Director

1619 Dayton Avenue, Room 309 Saint Paul, MN 55104-6206 Phone: (651) 642-2550 Fax: (651) 642-2553 Website: www.sptrfa.org

#### Members of the Association:

The trustees and staff of the St. Paul Teachers' Retirement Fund Association (SPTRFA) present the Annual Financial Report for the fiscal year ended June 30, 2013, in accordance with the provisions of Minnesota Statutes § 356.20.

This report is intended to provide readers with sufficient information to make informed assessments about the financial condition, fiscal activities, actuarial status, investment performance, and compliance with laws, regulations, bylaws and policies.

This is the complete Annual Report of the Association. This report may also be found at the Fund's website, www.sptrfa.org, or is also available by request from the SPTRFA office.

A summary of the information in this report has been sent to each member, along with a statement of account status which includes retirement service credit and contributions of record.

Major sections of this report and their content are as follows:

#### Introduction

Mission Statement, information on the structure of the organization, the Board, and professional service relationships

#### Benefits Section

Summary information on the types of benefits offered, the application process and methods of benefit calculation

#### Investment Section

Fund investment returns, portfolio structure, security holdings, and investment advisors under contract with the Association

#### · Actuarial Valuation

Actuary's Certification Letter, portions of the actuarial valuation which assess long-term funded status and the adequacy of revenues for the pension fund

#### · Appendix A – State Auditor's Report

Management's Discussion and Analysis, financial statements and associated notes are as provided to our auditor. Our complete Audit Report, including our receipt of an unqualified opinion, is available online at: <a href="https://www.osa.state.mn.us">www.osa.state.mn.us</a>

This report has been prepared in conformity with standards established by the Governmental Accounting and Standards Board. Internal controls are intended to provide the highest level of assurance within reasonable constraints on cost, that the funds of the Association are secure, and transactions undertaken are at all times consistent with law and general norms of sound, prudent management of the organization.

The SPTRFA Board and staff are responsible for the safekeeping of Association assets, the prudent investment of those assets, making sure benefits are calculated properly and paid timely. Administrative costs are budgeted at a level sufficient to meet service needs of the members. We strive to be service providers of the first order and our administrative costs remain the most efficient.

The Board and staff of the SPTRFA serve as fiduciaries on behalf of our members, survivors and beneficiaries. We endeavor to manage the assets entrusted to our care in concert with the Prudent Person Standard in Minn. Stat. § 356A.04, subd. 2, and as specified under Minn. Stat. § 356A.06, subd. 7.

Fulfilling the SPTRFA's mission requires assistance from a number of valued consultants, advisors and regulators:

The Office of the State Auditor audits the financial statements of the SPTRFA.

**Gabriel Roeder Smith & Company**, Minneapolis, Minnesota, performs the actuarial valuation for the Association. Key portions of its valuation, reflecting our funding status and adequacy of contributions over a long-term funding horizon, are included.

**Oppenheimer Wolff & Donnelly LLP**, Minneapolis, Minnesota, serves as primary Legal Counsel to the Board and staff, providing advice, representation, and as a monitor of ongoing legal and regulatory developments.

**Asset Consulting Group,** St Louis, MO, and **RVKuhns**, Chicago, IL, consultants for investment performance measurement and compliance services and asset manager oversight and selection. With over 100 years of service to our members, the SPTRFA trustees and staff remain committed to administering the affairs of the Association with the highest degree of diligence and efficiency.

Egen & Wardhah

Respectfully submitted,

John R. Kunz, Jr. President

Eugene R. Waschbusch Secretary-Treasurer Paul V. Doane Executive Director

### Professional Listing as of June 30, 2013

### Actuary

Gabriel Roeder Smith & Company

#### Auditor

Minnesota Office of the State Auditor

### Investment Managers

Advantus Capital Management BlackRock Institutional Trust Co. Barrow, Hanley, Mewhinney & Strauss, Inc. The Boston Company Asset Management Brandywine Global Investment Mgmt. LLC Capital Guardian International, Inc. The Clifton Group Dimensional Fund Advisors, Inc. Franklin Park Guggenheim Partners LLC JPMorgan Asset Management Lazard Global Thematic Equity Trust Morgan Stanley Asset Management North Sky Private Equity Partners IV RWI Ventures I RWI Ventures II T. Rowe Price **UBS Trumbull Property Fund** Waddell & Reed Wellington Management Company, LLP

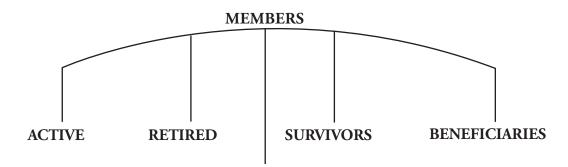
#### Investment Consultant

Asset Consulting Group RVKuhns & Associates Inc.

### Legal Counsel

Oppenheimer Wolff & Donnelly LLP Rice, Michels & Walther, LLP

### **Organizational Chart**



#### **BOARD OF TRUSTEES**

John R. Kunz Jr., President Mike McCollor, Vice President Eugene R. Waschbusch, Secretary-Treasurer Matt Bogenschultz, Trustee Feryle W. Borgeson, Trustee Lori Borgeson, Trustee John Brodrick, Ex-Officio Trustee Karen A. Odegard, Trustee James Paddock, Trustee Stephanie Pignato, Trustee

### ADMINISTRATION

Paul Doane, Executive Director
Christine MacDonald, Assistant Director
Nancy Langer, Member Records & Benefits Administration

Susan Nystrom, Fiscal Services
Janet Williams, Member Counseling & Benefits
Rachel Pastick, Communications & Benefits
Tamera Zielinski, Administrative Assistant



Active Member Services
Retired Member Services
Records Management
Member Counseling
Benefit Payments & Reporting

### **OPERATIONS**

Business Administration
Accounting/Reporting
Office Payroll & Benefits
Budget Administration
Investment Mgmt. &
Reporting
Publications
Information Systems

### PROFESSIONAL TECHNICAL SERVICES

Legal Counsel,

Oppenheimer Wolff & Donnelly LLP
Rice, Michels & Walther, LLP
Actuary,

Gabriel Roeder Smith & Company
Medical Advisors,

Dr. Ronald Vessey M.D.

Dr. David Johnson M.D.

Performance Measurement

Asset Consulting Group (ACG)

Manager Selection Services

ACG, R.V Kuhns, Bogdahn Group

Investment Managers

### GOVERNMENTAL RELATIONS

Minnesota State Auditor
Legislative Commission on
Pensions & Retirement
Minnesota Department of
Management and Budget
Minnesota Department of Revenue
Minnesota Campaign Finance
& Public Disclosure Board

U.S. Department of the Treasury

### **BENEFITS**

### **Pre-Retirement Topics**

#### Membership

Membership is mandatory upon employment in any position requiring a license issued by the MN Department of Education for employment with St. Paul Public Schools (SPPS), St. Paul College (SPC) – if you were first employed prior to July 1, 1995, or St. Paul Charter Schools – from July 1, 1995 through June 30, 2002. Hereinafter collectively referred to as "St. Paul Schools."

### Allowable Retirement Service Credit

A full year of retirement service credit is earned after 170 days are worked during each fiscal year. Partial years are calculated based on the ratio of days worked to 170 days. No more than one year of retirement service credit is allowable during any fiscal year.

### Definition of Salary

Minnesota Statutes Chapter 354A and the Association Articles and Bylaws define salary. Salary is the entire compensation upon which member contributions are required and made.

### Refund of Contributions

In lieu of a monthly retirement benefit, a member who resigns from St. Paul Schools may apply for a refund of employee contributions, plus applicable interest. Coordinated Plan members have access to a refund of contributions at any age. Basic Plan members must be under Age 55 or be ineligible for a pension to receive a refund of contributions.

### Repaying a Refund of Contributions

A member who received a refund may reinstate previous retirement service credit by repaying the amount refunded plus 8.5% interest compounded annually from the date the refund was taken. The repayment can only be made after the member has accumulated at least two years of allowable retirement service credit since the last refund was taken.

### Leaves of Absence

The following St. Paul Schools approved leaves of absence qualify to allow members to purchase retirement service credit for the leave period. The terms and conditions for each leave are different: **Sabbatical**, **Military**, **Parental**, **Mobility**, **Medical**, **Family Medical** 

#### Service Payments

Members may repay refunds or purchase SPTRFA retirement service credit while on leave by using personal savings or by transferring money from their tax-sheltered retirement accounts, such as 403(b), 457, 401(k), IRAs, or from another plan qualified under 401(a).

#### Beneficiary

A beneficiary is the person or persons designated to receive a refund of employee contributions plus applicable interest, upon the death of the member if no survivor or family benefit is payable. If no valid beneficiary designation form is on file for a member, a refund of contributions plus applicable interest will be paid to the member's estate.

### Marriage Dissolution

Minnesota Statutes Section 518 covers marriage dissolutions and requires that SPTRFA receive a copy of the petition and summons, including a copy of the affidavit of service, before information will be released. In the event that the court orders that future pension benefits be divided, a formula for dividing the member's benefit must be written in the dissolution order(s). All inquires are kept confidential. Survivor benefit coverage ends at the dissolution of marriage.

#### Disability Benefit

A disability benefit is available to vested members who become totally and permanently disabled. Members may not have more than 60 sick days remaining at the time of application for the benefit, and they must have used all sick days prior to beginning the benefit. A Basic Plan member's disability benefit is 75% of the member's earnings for the last full year of service, less any benefits received from Workers' Compensation or Social Security. In the Coordinated Plan, the disability benefit is equal to the unreduced pension benefit amount using the member's years of retirement service credit and final average salary at the time of the disability, less any benefits received from Workers' Compensation.

### **Retirement Topics**

### Basic Plan Retirement Options

Basic Plan members receive a formula benefit payable for life. An automatic spousal survivor benefit is a percentage of the member's benefit, based on the ages of the member and spouse at the time of retirement. The survivor benefit\* does not cause a reduction in the member's benefit.

### Coordinated Plan Retirement Options

At the time of retirement, Coordinated Plan members select one from the five benefit annuity options below:

### C1 Member Life Only

Monthly benefit payable for life to the member, with nothing payable after the member's death. Other annuity option amounts (C2 - C5) are reduced from the C1 amount in an attempt to actuarially cover any financial obligation that the SPTRFA would incur in paying additional benefits after the member's death.

### C2 Guaranteed Refund

Reduced monthly benefit payable for life to the member. In exchange for the member's benefit reduction, after the member's death, the SPTRFA pays a refund to a designated beneficiary. The refund is equal to the difference between SPTRFA pre-retirement member contributions less cumulative SPTRFA post-retirement benefits paid to the member prior to death. The refundable amount payable to a beneficiary typically decreases to zero after two to three years after the member begins receiving retirement benefits.

### C3 15-Year Certain

Reduced monthly benefit payable for life to the member. In exchange for the member's benefit reduction, the SPTRFA continues monthly payments to a beneficiary if the member's death occurs within 15 years after retirement. The beneficiary payments would end after the balance of the 15 years of SPTRFA benefit payments (member and beneficiary combined) is fulfilled.

### C4 100% Joint & Survivor\*

Reduced monthly benefit payable for life to the member. In exchange for the member's benefit reduction, after the member's death, the member's spouse receives the same monthly benefit for life. If the spouse precedes the member in death, the member's benefit would bounceback to the full, unreduced benefit amount payable under the C1 option.

### C5 50% Joint & Survivor\*

Reduced monthly benefit payable for life to the member. In exchange for the member's benefit reduction, after the member's death, the member's spouse receives 50% of the member's benefit as a monthly benefit for life. If the spouse precedes the member in death, the member's benefit would bounceback to the full, unreduced benefit amount payable under the C1 option.

<sup>\*</sup> Survivor benefit coverage ends at the dissolution of marriage.

### **Post-Retirement Topics**

### Teaching After Retirement

If a retired member of SPTRFA is reemployed by SPPS prior to Age 65, their SPTRFA monthly benefits may be reduced. If the retiree earns more than \$46,000 from SPPS in any calendar year, the following year's pension will be reduced by one dollar for every three dollars in SPPS earnings over \$46,000. The amount of the reduction will be placed into an account for the retiree. When the retiree has had no excess earnings deductions from their pension for one year, the retiree may apply to receive the amount in the account, including interest accrued, if any. After age 65, retired members have no SPPS re-employment earnings limitation. Retired members can work for any other employer without a reduction in their SPTRFA pension benefits.

### Period of Separation

A member of the SPTRFA is not considered retired until there is a complete and continuous separation from employment as a "teacher" for an SPTRFA-covered employer for a period of at least 30 calendar days.

### Post-Retirement Increase

Post-retirement increases may be provided annually in January. 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: 2.00 percent
- If at least 90 percent, then the subdivisions for the 1 percent and 2 percent provisions above 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.
  - O 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 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.

### Basic Plan - Summary of Tier Benefits

Vested members of the Basic Plan are eligible to receive a lifetime monthly pension based on the member's Final Average Salary (FAS), Years of Service (YOS) and a Percentage Multiplier.

The following chart provides an overview of the Tier 1 and Tier 2 retirement benefits:

Normal	Minimum		
Benefit	Age	Service	<b>Computation of Annual Benefit</b>

#### Tier 1

Unreduced	Rule of 90		
	60 65	25 5	FAS x YOS x 2.0%
Reduced	55	5	Reduced for early retirement by 0.25% for each month a member's age is under 65.
	55	25	Reduced for early retirement by 0.25% for each month a member's age is under 60.

#### Tier 2

Unreduced	65	5	FAS x YOS x 2.5%
Reduced	55	5	Formula reduced for early retirement by the use of actuarial tables.

#### **Deferred Retirement**

55 Annual Benefit (see above).

1. Augmented by 3% per year from date of resignation to January 1 after reaching Age 55, then 5% per year thereafter, if first hired prior to July 1, 2006.

Augmented by 2.5% for all years if first hired on or after July 1, 2006.

Augmentation for all members, regardless or hire date, changed to 2% as of July 1, 2012 for the portion of benefit deferral occurring after June 30, 2012.

#### Formula Key:

FAS: Final Average Salary YOS: Years of Service

2.0% or 2.5%: Percentage Multiplier

### Coordinated Plan - Summary of Tier Benefits

Vested members of the Coordinated Plan are eligible to receive a lifetime monthly pension based on the member's Final Average Salary (**FAS**), Years of Service (**YOS**) and a Percentage Multiplier. Members first hired after June 30, 1989 are only eligible for Tier II benefits.

The following chart provides an overview of the Tier 1 and Tier 2 retirement benefits:

Normal	Minim	ıum					
Benefit	Age	Service	Computation of Annual Benefit				
Tier 1							
Unreduced	Rule of 90 62 65	30 3	(FAS x First 10 YOS x 1.2%) + (FAS x YOS greater than 10 x 1.7%)				
Reduced	55	3	Reduced for early retirement by 0.25% for each month a member's age is under 65.				
	Any Age	30	Reduced for early retirement by 0.25% for each month a member's age is under 62.				

#### Tier 2

Unreduced	If first employed before July 1, 1989:					
	65	3	FAS x YOS x 1.7%			
	If first employ	ed on or	after July 1, 1989:			
	65-66	3	FAS x YOS x 1.7%			
Reduced	55	3	Reduced for early retirement by the use of actuarial tables.			
	Any Age	30	Reduced for early retirement by the use of actuarial tables.			

#### **Deferred Retirement**

55	3	Annual Benefit (see above) with augementation <sup>1</sup> .
Any Age	30	

<sup>1.</sup> Augmented by 3% per year from date of resignation to January 1 after reaching Age 55, then 5% per year thereafter, if first hired prior to July 1, 2006.

Augmented by 2.5% for all years if first hired on or after July 1, 2006.

Augmentation for all members, regardless or hire date, changed to 2% as of July 1, 2012 for the portion of benefit deferral occurring after June 30, 2012.

#### Formula Key:

FAS: Final Average Salary YOS: Years of Service

1.2% or 1.7%: Percentage Multiplier

### Retirement History Record

Fiscal Year	Pensions	Persons On	Benefits	Fiscal Year	Pensions	Persons On	Benefits
Ending	Granted	Retirement	Paid (\$)	Ending	Granted	Retirement	Paid (\$)
			· · · · · · · · · · · · · · · · · · ·				` ,
June 1910	15	13	\$ 4,860	December 1975	52	778	\$ 3,765,322
June 1931	8	125	69,024	December 1976	77	883	4,393,513
June 1932	8	130	72,961	December 1977	63	919	5,050,507
June 1933	2	126	74,190	December 1978	48	946	5,523,548
June 1934	6	127	74,120	December 1979	40	946	6,240,309
June 1935	9	131	74,001	December 1980	47	963	6,623,804
June 1936	14	135	75,864	December 1981	47	981	7,139,037
June 1937	19	151	80,747	December 1982	61	996	7,725,617
June 1938	17	160	89,709	December 1983	72	1,042	8,555,099
June 1939	11	161	93,184	December 1984	64	1,061	9,466,664
June 1939 to				January 1985 to			
December 1939	0	158	23,870	June 1985	59	1,103	5,324,727
December 1940	71	222	170,685	June 1986	66	1,134	11,267,144
December 1941	35	246	210,257	June 1987	117	1,191	12,478,180
December 1941 December 1942	27	266	234,217	June 1988	70	1,191	14,690,455
December 1942 December 1943	38	286	253,031	June 1989	67	1,210	15,506,957
December 1943  December 1944	34	311	282,299	June 1990	67	1,270	17,382,410
December 1945	56	350	308,113	June 1990	80	1,309	18,811,677
December 1945  December 1946	51	378	337,512	June 1992	83	1,309	20,509,335
December 1947	28	387	360,571	June 1992  June 1993	120	1,426	22,763,806
December 1947 December 1948	42	413	375,912	June 1994	92	1,420	25,044,494
December 1948  December 1949	42	441	419,618	June 1994  June 1995	113		26,792,534
					113	1,539	
December 1950	30	461	450,641	June 1996		1,595	29,446,215
December 1951	27	476	472,670	June 1997	179	1,720	32,056,967
December 1952	28	486	508,923	June 1998	129	1,789	37,852,099
December 1953	32	487	525,959	June 1999	114	1,861	41,724,751
December 1954	10	482	529,429	June 2000	144	1,964	47,121,179
December 1955	38	509	666,994	June 2001	130	2,050	53,851,893
December 1956	46	529	750,146	June 2002	127	2,136	58,738,724
December 1957	59	560	840,883	June 2003	126	2,248	63,357,052
December 1958	41	579 595	1,019,502	June 2004	141	2,361	67,941,921
December 1959	30	585	1,084,506	June 2005	192	2,505	72,448,201
December 1960	38	600	1,144,380	June 2006	146	2,624	78,420,222
December 1961	39	611	1,230,715	June 2007	138	2,744	82,809,201
December 1962	49	624	1,352,779	June 2008	122	2,851	88,273,233
December 1963	42	647	1,467,461	June 2009	114	2,933	92,137,480
December 1964	33	653	1,545,252	June 2010	166	3,044	95,299,300
December 1965	40	668	1,631,554	June 2011	233	3,212	97,264,937
December 1966	43	676	1,770,083	June 2012	141	3,292	101,989,143
December 1967	36	682	1,862,249	June 2013	166	3,404	103,237,869
December 1968	45	695	1,969,760				
December 1969	53	726	2,319,186				
December 1970	31	719	2,385,868				
December 1971	47	731	2,522,350				
December 1972	51	745	2,742,660				
December 1973	36	744	3,039,253				
December 1974	46	754	3,372,453				

### **INVESTMENTS**

### Investment Returns for Fiscal Year End June 30, 2013

### St. Paul Teachers Retirement Fund Association Investment returns for Fiscal Year End June 30, 2013

	2013			
Damastia Equity	Assets Under Management (Market Value)	Fiscal Year Investment Performance		
Domestic Equity Advantus	21,010,361	8.90%		
BlackRock Institutional Trust Co S & P 500 Index	124,864,479	20.60%		
BlackRock Institutional Trust Co Russell 1000 Growth Index	43,616,115	17.20%		
Barrow, Hanley, Mewhinney & Strauss, Inc.	45,138,664	25.30%		
The Boston Company Asset Management	55,326,352	35.50%		
Dimensional Fund Advisors, Inc.	51,898,934	33.10%		
Wellington Management Company, LLP	50,162,795	25.20%		
Wellington Management Company, LLI	\$ 392,017,699	23.30%		
International Equity	Ψ 332,017,033	23.30 /0		
Capital International, Inc Emerging Market (Net)	31,825,612	4.00%		
JP Morgan Asset Management - EAFE	36,574,984	18.20%		
Morgan Stanley Asset Management	36,226,668	19.50%		
Morgan Stariley / toost Management	\$ 104,627,265	14.20%		
Global Equity	Ψ 104,027,200	14.2070		
Morgan Stanley Global Franchise	47,750,591	15.50%		
* JP Morgan Focus (new in 10/2012)	46,443,443			
Lazard Global Discounted Assets	20,582,700	15.70%		
* Lazard Thematic Global Equity (new in 1/2013)	20,986,683			
4.3(	\$ 135,763,416	14.70%		
Fixed Income				
BlackRock Institutional Trust Co US Debt Index	46,393,783	-0.50%		
* Brandywine Global Opportunistic Fixed (new in 5/2013)	47,753,489	0.00%		
* T Rowe Price Global Multi-Sector Bond (new in 6/2013)	49,739,211			
* Guggenheim Core Plus (new in 6/2013)	11,463,957			
	\$ 155,350,440	-1.10%		
Real Assets				
* Clifton Group TIPS (new in 12/2012)	18,307,375			
UBS Realty Advisors LLC - Trumbull Property Fund	75,900,294	9.50%		
	\$ 94,207,669	6.40%		
Private Equity				
RWI Ventures I	273,619	28.43%		
RWI Ventures II	3,664,131	-22.11%		
* Franklin Park (new in 11/2012)	2,535,939	35.00%		
North Sky	6,123,857	9.36%		
	\$ 12,597,546	-3.10%		
Alternatives				
* Waddell & Reed High Yield (new in 3/2013)	24,542,393			
	\$ 24,542,393			
Cash & Cash Equivalents				
Cash - US Bank	5,497,040	0.00%		
Clifton Group	2,855,756	12.80%		
	\$ 8,352,795	0.00%		
Total Fund	\$ 927,459,223	13.90%		
	Ψ JL1,+JJ,LLJ	12.70%		
Total Fund Benchmark		12.70%		

NOTE: Investment returns are calculated by Asset Consulting Group (performance measurement consultant)

The difference from the <u>total of investments at fair value</u> which are listed on the Statement of

Plan Net Position is a result of timing of cash inflow and outflow recognition.

<sup>\*</sup> Unable to assess performance for new funds held in portfolio for less than one year

### St. Paul Teachers' Retirement Fund Association Holdings by Asset Class, Security Type and Issuer as of June 30, 2013

Asset Class / Security Type / Issuer	Quantity Shares or Units		<u>Cost</u>	<u>N</u>	larket Value	In	accrued terest or <u>vidends</u>	<u>M</u>	kt + Accrued
Private Equity									
North Sky - PEP IV Fund		\$	5,393,172	\$	6,123,857			\$	6,123,857
Franklin Park Private Equity Fund			2,454,990	\$	2,535,939				
RWI Group - Ventures I Capital Ltd Ptnr	_		496,755		273,619			\$	273,619
RWI Group - Ventures II Capital Ltd Ptnr	-		3,376,116		3,664,131			7	3,664,131
Subtotal - Private Equity	-	\$	11,721,033	\$	12,597,546	\$		\$	10,061,607
1 7									
Cash or Equivalents									
Imprest Cash	-	\$	500	\$	500		_	\$	500
U.S. Bank Interest Bearing Checking Acct	-		5,253,384		5,253,384		-		5,253,384
Custodian Short Term Investment Pool	21,604,050		21,604,050		21,604,050		-		21,604,050
Subtotal - Cash or Equivalents	21,604,050	\$	26,857,934	\$	26,857,934	\$	-	\$	26,857,934
<b>Domestic Equity Securities</b>									
Acadia Rlty Tr	8,369	\$	160,307	\$	206,631	\$	1,736	\$	208,367
Affiliated Managers Group Inc	5,100		839,571		836,094		-		836,094
Aflac Inc	5,700		228,524		331,284		-		331,284
Agco Corp	15,800		758,875		793,002		-		793,002
Agree Rlty Corp	6,148		143,753		181,489		2,521		184,010
Align Technology Inc	13,580		476,602		503,003		-		503,003
Alliance Data Systems Corp	3,900		387,074		706,017		-		706,017
Altria Group Inc	35,000		584,105		1,224,650		15,400		1,240,050
American Axle & Mfg Hldgs Inc	32,770		380,308		610,505		-		610,505
American Campus Cmntys Inc	7,000		308,415		284,620		-		284,620
American Express Co	17,600		812,999		1,315,776		-		1,315,776
American Public Education	24,600		895,397		914,136		-		914,136
American Residential Propert	25,530		534,461		439,116		-		439,116
American Tower Corp	2,500		151,568		182,925		675		183,600
Ameriprise Finl Inc	10,500		515,498		849,240		-		849,240
Amreit Inc	3,700		52,456		71,558		-		71,558
Apartment Invt Mgmt Co Cl A	7,000		205,463		210,280		-		210,280
Applied Micro Circuits Corp	92,530		655,221		814,264		-		814,264
Arrow Electrs Inc	29,190		1,090,798		1,163,222		_		1,163,222
Ascena Retail Group Inc	52,000		1,004,817		907,400		-		907,400
Assured Guaranty Ltd	35,000		564,016		772,100		-		772,100
Att Inc	18,600		657,490		658,440		-		658,440

	Quantity			Accrued Interest or	
Asset Class / Security Type / Issuer	Shares or Units	Cost	Market Value	<u>Dividends</u>	Mkt + Accrued
Atwood Oceanics Inc	17,800	752 <i>,</i> 195	926,490	-	926,490
Autodesk Inc	7,300	270,102	247,762	-	247,762
Autozone Inc	2,300	880,202	974,487	-	974,487
Avalonbay Cmntys Inc	6,300	809,417	849,933	6,741	856,674
Avis Budget Group Inc	6,430	127,839	184,863	-	184,863
Avnet Inc	31,020	927,869	1,042,272	-	1,042,272
Ball Corp	15,200	632,049	631,408	-	631,408
Bally Technologies Inc	12,600	673,075	710,892	-	710,892
Bank Of America Corp	62,428	1,203,707	802,824	-	802,824
Barrick Gold Corp	12,700	248,417	199,898	-	199,898
Baxter Intl Inc	13,100	591,732	907,437	6,419	913,856
Bed Bath & Beyond Inc	6,900	434,652	489,555	-	489,555
Belden Inc	23,400	886,075	1,168,362	1,180	1,169,542
Biomed Realty Trust Inc	14,100	258,004	285,243	3,314	288,557
Blackstone Mortgage Tru Cl A	2,700	68,850	66,690	-	66,690
Block H R Inc	18,610	306,954	516,428	3,930	520,358
Borg Warner Inc	5,290	413,007	455,734	-	455,734
Boston Pptys Inc	8,179	726,509	862,639	5,316	867,955
Bp Plc Spons A D R	23,800	1,106,549	993,412	-	993,412
Brandywine Realty Trust	10,280	113,285	138,986	-	138,986
Brookdale Sr Living Inc	6,200	170,913	163,928	-	163,928
Brown & Brown Inc	25,050	574,465	807,612	-	807,612
Buckle Inc	13,300	587,734	691,866	-	691,866
Camden Ppty Tr Sbi	6,200	347,467	428,668	3,906	432,574
Cameron Intl Corp	10,100	504,942	617,716	-	617,716
Campus Crest Communities Inc	5,300	58,320	61,162	875	62,037
Capital One Financial Corp	14,400	1,033,688	904,464	-	904,464
Cardinal Health Inc	32,300	1,415,958	1,524,560	9,952	1,534,512
Cardtronics Inc	20,480	574,502	565,248	-	565,248
Carefusion Corporation	25,230	667,717	929,726	-	929,726
Carnival Corp	27,500	868,150	942,975	-	942,975
Cbl Associates Properties	15,600	278,052	334,152	3,519	337,671
Celanese Corp Ser A	5,500	217,836	246,400	-	246,400
Check Point Software Tech Ltd	16,100	762,656	799,848	-	799,848
Chevron Corporation	6,200	288,530	733,708	-	733,708
Chicago Bridge Iron Ny Shs	16,400	847,017	978,424	-	978,424
Chicos Fas Inc	22,200	307,489	378,732	1,370	380,102
Ciena Corp	90,870	1,444,077	1,765,604	-	1,765,604
Cigna Corp	26,050	1,209,260	1,888,365	-	1,888,365
Citigroup Inc	20,010	828,537	959,880	-	959,880
Coach Inc	6,500	360,581	371,085	2,329	373,414

		Accrued					
Accel Class / Consulta True / Joseph	Quantity Shares or Units	Cost	Market Value	Interest or <u>Dividends</u>	Mkt + Accrued		
Asset Class / Security Type / Issuer	8,000	<u>cost</u> 511,461	501,120		501,120		
Cognizant Tech Solutions Cl A	3,200	75,614	77,184	-	77,184		
Colonial Properties Trust	7,000	124,209	139,230	2,450	141,680		
Colony Financial Inc	23,570	654,949	918,287	2,430 -	918,287		
Con Way Inc	16,500	420,852	998,250	-	998,250		
Conocophillips Continental Resources Inc	4,800	388,773	413,088	-	413,088		
	22,330	462,837	517,386	-	517,386		
Core logic Inc	7,600	577,142	719,416	-	719,416		
Cracker Barrel Old Ctry Store	10,800	505,855	647,136	-			
Crane Co	27,290	556,699	594,240	-	647,136 594,240		
Csg Sys Intl Inc	16,057	171,554	256,591	1,766	258,357		
Cubist Pharmacoutine Land	17,310	787,642		1,700			
Cubist Pharmaceuticals Inc	4,100		835,900	656	835,900		
Cyrusone Inc		88,341	85,034		85,690		
D R Horton Inc	47,700	884,588	1,015,056	-	1,015,056		
Dana Holding Corp	110,790	1,663,510	2,133,815	- 0.001	2,133,815		
Ddr Corp	24,600	348,633	409,590	3,321	412,911		
Dealertrack Hldgs Inc	51,680	1,291,202	1,831,022	-	1,831,022		
Delphi Automotive Plc	13,600	337,464	689,384	-	689,384		
Diageo Plc Sponsored A D R	3,600	227,041	413,820	-	413,820		
Digital Realty 7.0% Pfd	800	20,093	20,480	-	20,480		
Digital Realty Trust Inc	7,600	445,705	463,600	-	463,600		
Dollar Tree Inc	13,800	547,788	701,592	-	701,592		
Dover Corp	5,400	383,046	419,364	-	419,364		
Duke Realty Corporation	18,600	247,936	289,974	-	289,974		
Dundee Real Estate Investment	1,100	39,255	34,034	43	34,077		
E Trade Financial Corp	188,490	1,826,709	2,386,283	-	2,386,283		
Eastgroup Pptys Inc	3,600	185,964	202,572	-	202,572		
Emerson Elec Co	15,300	466,330	834,462	-	834,462		
Entergy Corporation	7,600	300,024	529,568	-	529,568		
Epr Properties	1,500	67,178	75,405	500	75,905		
Equity Residential	14,900	707,731	865,094	5,960	871,054		
Essex Ppty Tr Inc	3,094	402,612	491,698	3,744	495,442		
Federal Rlty Invt Tr Sbi New	2,000	219,650	207,360	1,387	208,747		
Fifth Pacific Co Inc	38,220	293,799	853,835	-	853,835		
First Niagara Finl Group Inc	136,960	1,255,023	1,379,187	-	1,379,187		
Flowserve Corp	11,700	425,784	631,917	1,638	633,555		
Forest City Enterprises Inc Cl A	10,700	155,541	191,637	-	191,637		
Fossil Group Inc	7,000	654,382	723,170	-	723,170		
Francescas Holdings Corp	14,100	399,819	391,839	-	391,839		
Gamestop Corp Cl A	9,400	251,041	395,082	-	395,082		
General Dynamics Corp	8,900	690,553	697,137	-	697,137		

	Quantity			Accrued Interest or	
Asset Class / Security Type / Issuer	Shares or Units	Cost	Market Value	<u>Dividends</u>	Mkt + Accrued
General Growth Properties	24,000	436,628	476,880	-	476,880
Global Payments Inc	19,200	863,111	889,344	-	889,344
Gnc Acquisitions Holdings Inc	18,100	660,169	800,201	-	800,201
Grand Canyon Education Inc	36,200	849,015	1,166,726	-	1,166,726
Green Mountain Coffee Roasters Inc	6,800	239,406	511,482	-	511,482
Hanger Inc	10,690	225,154	338,125	-	338,125
Harley Davidson Inc	18,400	848,882	1,008,688	-	1,008,688
Hartford Financial Svc Group Inc	6,600	201,821	204,072	-	204,072
Hcp Inc	13,700	467,366	622,528	-	622,528
Health Care Reit Inc	10,300	523,821	690,409	-	690,409
Heartland Payment Systems Inc	23,800	761,102	886,550	-	886,550
Herbalife Ltd	1,200	50,169	54,168	-	54,168
Hersha Hospitality Trust	16,029	90,112	90,404	962	91,365
Hertz Global Holdings Inc	46,500	868,412	1,153,200	-	1,153,200
Hewlett Packard Co	25,200	808,467	624,960	3,659	628,619
Honeywell International Inc	15,300	502,144	1,213,902	-	1,213,902
Host Hotels Resorts Inc	29,510	433,070	497,834	3,224	501,058
Hudson Pacific Properties Inc	8,200	151,538	174,496	988	175,484
Hunt J B Trans Svcs Inc	9,600	535,169	693,504	-	693,504
IGATE Capital Corporation	55,800	967,777	916,236	-	916,236
Iac Interactivecorp	18,800	890,102	894,504	-	894,504
Illinois Tool Worksinc	16,300	660,274	1,127,471	6,194	1,133,665
Intel Corp	36,500	581,480	884,395	-	884,395
Interpublic Group Cos Inc	39,900	540,931	580,545	-	580,545
Invesco Ltd	19,800	552,022	629,640	-	629,640
J P Morgan Chase Co	24,300	907,177	1,282,797	-	1,282,797
Jds Uniphase Corp	173,480	2,176,404	2,496,377	-	2,496,377
Johnson Johnson	13,700	851,492	1,176,282	-	1,176,282
Kilroy Rlty Corp	7,100	295,703	376,371	2,485	378,856
Kimco Realty Corp	21,100	379,838	452,173	-	452,173
Kirby Corp	14,680	995,594	1,167,647	-	1,167,647
Kite Rlty Group Tr	22,641	123,211	136,525	-	136,525
Kohls Corp	10,700	524,463	540,457	-	540,457
Landstar Sys Inc	22,490	1,072,202	1,158,235	-	1,158,235
Lasalle Hotel Properties	4,100	98,564	101,270	820	102,090
Lennar Corp Cl A	1,800	70,606	64,872	-	64,872
Macerich Co	7,345	323,345	447,825	-	447,825
Marathon Oil Corporation	34,700	794,972	1,199,926	-	1,199,926
Mattel Inc	11,100	494,121	502,941	-	502,941
Mednax Inc	13,850	993,403	1,268,383	-	1,268,383
Medtronic Inc	27,900	951,587	1,436,013	-	1,436,013

	Quantity			Accrued Interest or	30
Asset Class / Security Type / Issuer	Shares or Units	Cost	Market Value	<u>Dividends</u>	Mkt + Accrued
Merck And Co Inc	21,800	920,027	1,012,610	9,374	1,021,984
Merit Med Sys Inc	8,780	121,823	97,897	-	97,897
Michael Kors Holdings Lld	12,500	687,194	775,250	-	775,250
Microsemi Corp	28,150	503,055	640,413	-	640,413
Microsoft Corp	36,100	681,357	1,247,075	-	1,247,075
Mid-Amer Apt Cmntys Inc	4,600	282,637	311,742	-	311,742
Miller Herman Inc	66,240	1,373,340	1,793,117	9,292	1,802,409
Monster Beverage Corp	6,100	304,850	371,063	-	371,063
Msc Indl Direct Co Inc Cl A	10,430	859,301	807,908	-	807,908
Mylan Inc	28,000	641,110	868,840	-	868,840
Newell Rubbermaid Inc	10,240	170,167	268,800	-	268,800
Northern Tr Corp	7,480	396,692	433,092	2,449	435,541
Occidental Petroleum Corporation	14,800	421,207	1,320,604	9,472	1,330,076
Omnicare Inc	14,900	641,835	710,879	-	710,879
P N C Financial Services Group Inc	13,400	789,958	977,128	-	977,128
Packaging Corp America	12,300	463,923	602,208	4,800	607,008
Parker Hannifin Corp	5,290	429,443	504,666	-	504,666
Parkway Pptys Inc	11,500	204,395	192,740	-	192,740
Pebblebrook Hotel Tr 8.00% Pfd	3,900	97,217	101,673	1,950	103,623
Pfizer Inc	44,755	1,131,477	1,253,588	-	1,253,588
Philip Morris Intl	12,900	322,484	1,117,398	10,965	1,128,363
Phillips 66	8,250	125,928	486,008	-	486,008
Plexus Corp	25,630	630,745	766,081	-	766,081
Plum Creek Timber Co Inc	1,200	57,867	56,004	-	56,004
Polaris Inds Inc	6,800	510,952	646,000	-	646,000
Portfolio Recovery Associates	4,340	294,682	666,754	-	666,754
Post Pptys Inc	7,300	324,206	361,277	2,409	363,686
Prologis Inc	22,450	748,166	846,814	-	846,814
Public Storage Inc	6,800	835,272	1,042,644	-	1,042,644
Pure Industrial Real Estate Trust	14,900	<i>75,</i> 559	64,970	590	65,560
Range Resources Corp	6,620	543,485	511,858	-	511,858
Rayonier Inc	1,700	97,973	94,163	-	94,163
Raytheon Company	20,800	973,467	1,375,296	-	1,375,296
Regal Beloit Corp	15,100	1,016,530	979,084	3,020	982,104
Regeneron Pharmaceuticals Inc	2,000	326,863	449,760	-	449,760
Riocan Real Estate Invt Tr	8,000	215,363	191,630	-	191,630
Robert Half Intl Inc	14,700	488,379	488,481	-	488,481
Ross Stores Inc	7,400	424,184	479,594	-	479,594
Salix Pharmaceuticals Ltd	20,260	877,990	1,340,199	-	1,340,199
Sandisk Corp	15,490	665,327	946,439	-	946,439
Sanofi A D R	23,800	870,942	1,225,938	-	1,225,938

	Quantity			Accrued Interest or	
Asset Class / Security Type / Issuer	Shares or Units	Cost	Market Value	<b>Dividends</b>	Mkt + Accrued
Sba Communications Corp Cl A	1,900	132,063	140,828	-	140,828
Scansource Inc	24,230	674,203	775,360	-	775,360
Seagate Technology	6,140	180,795	275,256	-	275,256
Select Comfort Corp	8,500	191,971	212,968	-	212,968
Sherwin Williams Co	4,870	453,492	860,042	-	860,042
Simon Property Group Inc	12,965	1,260,497	2,047,433	-	2,047,433
Skyworks Solutions Inc	23,600	522,684	516,604	-	516,604
Sl Green Rlty Corp	5,500	359,464	485,045	1,815	486,860
Slm Corp	51,700	1,122,150	1,181,862	-	1,181,862
Sovran Self Storage Inc	3,467	215,088	224,627	-	224,627
Spirit Realty Capital Inc	4,600	98,892	81,512	1,438	82,950
St Jude Med Inc	17,800	692,891	812,214	4,700	816,914
Staples Inc	35,990	565,043	571,161	4,319	575,480
Starwood Hotels & Resorts	2,000	113,368	126,380	-	126,380
Starwood Property Trust Inc	16,390	340,333	405,653	7,539	413,192
State Str Corp	20,600	894,507	1,343,326	5,356	1,348,682
Steelcase Inc Cl A	77,720	1,033,336	1,133,158	6,066	1,139,224
Summit Hotel Properties Inc	21,000	180,611	198,450	-	198,450
Sunstone Hotel Invs Inc	11,952	123,114	144,380	-	144,380
Superior Energy Svcs Inc	20,000	574,295	518,800	-	518,800
Svb Finl Group	14,890	957,131	1,240,635	-	1,240,635
T C F Finl Corp	27,570	341,017	390,943	-	390,943
Tanger Factory Outlet Ctrs Inc	9,000	275,389	301,140	-	301,140
Taubman Centers Inc	3,300	254,689	247,995	-	247,995
Texas Instruments Inc	25,100	623,781	874,735	-	874,735
The Jones Group Inc	151,170	1,737,504	2,078,588	-	2,078,588
Tiffany & Co	3,530	218,649	257,125	1,329	258,455
Titan Intl Inc Ill	35,400	803,109	597,198	187	597,385
Toll Bros Inc	3,400	115,686	110,942	-	110,942
Towers Watson Co Cl A	6,300	395,479	516,222	-	516,222
Travelers Cos Inc	15,200	625,302	1,214,784	-	1,214,784
Trinity Inds Inc	15,640	452,517	601,202	-	601,202
Trueblue Inc	24,370	383,447	512,989	-	512,989
Trw Automotive Holdings Corp	6,030	283,816	400,633	-	400,633
Tumi Holdings Inc	31,160	659,692	747,840	-	747,840
United Health Group Inc	21,600	963,128	1,414,368	-	1,414,368
Valspar Corp	13,310	896,348	860,758	-	860,758
Ventas Inc	11,261	582,224	782,189	-	782,189
Verizon Communications Inc	13,100	420,035	659,454	-	659,454
Vishay Intertechnology Inc	94,010	949,950	1,305,799	-	1,305,799
Vodafone Group Plc A D R	32,100	894,780	922,715	33,024	955,739

Accet Class / Security Type / Issuer	Quantity Shares or Units	Cost	Market Value	Accrued Interest or Dividends	Mkt + Accrued
Asset Class / Security Type / Issuer	5,542	420,189	459,155	Dividends	459,155
Vornado Realty Trust Waddell & Reed Financial Inc	31,400	1,087,862	1,365,900	-	1,365,900
Wal Mart Stores Inc	8,900	405,946	662,961	_	662,961
Walgreen Co	27,700	885,836	1,224,340	_	1,224,340
Waters Corp	2,500	187,219	250,125	_	250,125
Waters Corp Watts Water Technologies Cl A	10,730	441,938	486,498	_	486,498
Web Com Group Inc	53,000	902,855	1,356,800	_	1,356,800
Wellpoint Inc	5,900	220,094	482,856	_	482,856
Wells Fargo Co	38,100	1,010,576	1,572,387	_	1,572,387
Wesco Intl Inc	22,890	1,376,549	1,555,604	_	1,555,604
Wex Inc	19,220	1,018,188	1,474,174	_	1,474,174
Whiting Petroleum Corp	29,100	1,389,068	1,341,219	_	1,341,219
Williams Sonoma Inc	22,430	871,069	1,253,613	-	1,253,613
Xilinx Inc	7,300	292,826	289,153	-	289,153
Subtotal - Cash or Equivalents	4,863,532	\$ 135,631,310	\$ 169,740,162	\$ 229,073	\$ 169,969,235
Domestic Equity Commingled Accoun	ts				
BGI - Equity Index Fund	238,939	\$ 58,999,123	\$ 124,864,479	\$ -	\$ 124,864,479
BGI - Russell 1000 Growth Fund	2,824,977	21,026,653	43,616,115	-	43,616,115
Dimensional Fund Advisors	30,351	15,507,658	51,898,934	-	51,898,934
Subtotal - Domestic Equity Commingl	3,094,267	\$ 95,533,434	\$ 220,379,528		\$ 220,379,528
1 ,					
<b>International Equity Commingled Acc</b>	ounts				
JPM International Equity Fund	1,678,167	\$ 24,943,042	\$ 36,574,984	\$ -	\$ 36,574,984
MS Investment Mgmt International Eq	164,277	16,349,588	36,226,668	-	36,226,668
JPM Global Focus Fund	2,704,918	42,900,000	46,443,443		46,443,443
Subtotal - Domestic Equity Commingl	4,547,362	\$ 84,192,630	\$ 119,245,095		\$ 119,245,095
Laterate Material					
International Equity Mutual Funds	4 271 904	¢ 27.0E1.E10	¢ 21.93E.613	¢.	¢ 21.90E.610
Capital International	4,271,894	\$ 37,051,510	\$ 31,825,612	\$ -	\$ 31,825,612
Morgan Stanley Ins Glb Fra I	2,430,056	40,956,638	47,750,591 \$ 79,576,204		47,750,591
Subtotal - Domestic Equity Commingl	6,701,950	\$ 78,008,147	\$ 79,576,204		\$ 79,576,204
Commingled Global Equity Accounts					
Lazard Global Thematic Equity Trust	1,867,718	\$ 17,334,500	\$ 20,986,683	\$ -	\$ 20,986,683
Lazard Global Discounted Assets	2,013,147	20,397,822	20,582,700		20,582,700
Subtotal - Domestic Equity Commingl	3,880,865	\$ 37,732,322	\$ 41,569,382		\$ 41,569,382
Fixed Income Commingled Accounts					
Blackrock Us Debt Index Fund	913,544	\$ 38,434,150	\$ 46,393,783	\$ -	\$ 46,393,783
Brandywine Global Opportunistic Fi	1,212,764	50,000,000	47,753,489	ψ -	47,753,489
brandy write Global Opportunistic FI	1,414,704	20,000,000	41,100,409	-	±1,100,±01

	Quantity Shares or Units		Cost	M	oulcat Valua	Int	ccrued erest or	MI	ch + Aggrega d
Asset Class / Security Type / Issuer		_	Cost		Market Value		<u>vidends</u>	Mkt + Accrued	
Subtotal - Domestic Equity Commingl	2,126,307	\$	88,434,150	\$	94,147,272			\$	94,147,272
Fixed Income Securities									
A S Co Iss Sub Inc 7.875% 12/15/20	275,000	\$	278,158	\$	276,375	\$	963	\$	277,338
Abc Supply Co Inc 5.625% 4/15/21	528,000		541,750		518,760		6,188		524,948
Acadia Healthcare Co 6.125% 3/15/21	34,000		34,000		34,000		631		34,631
Affiliated Mngrs Grp 5.1% Conv Pfd	900		59,850		55,069		574		55,643
Affinia Group Inc 7.750% 5/01/21	12,000		12,000		12,090		171		12,261
Agilent Tech Inc 3.875% 7/15/23	475,000		452,898		458,736		511		459,247
Air Lease Corp 5.625% 4/01/17	500,000		531,250		517,500		7,031		524,531
Alliance Data 5.250% 12/01/17	500,000		522,500		515,000		2,188		517,188
Amc Networks Inc 4.750% 12/15/22	500,000		498,750		482,500		1,056		483,556
American Seafoods 10.750% 5/15/16	250,000		263,750		260,000		3,434		263,434
Americredit Auto 2.380% 6/10/19	110,000		109,977		108,910		80		108,990
Apache Corp 6.00% Cv Pfd	1,900		91,067		90,706		-		90,706
Audatex North	23,000		23,000		22,943				22,943
Avis Budget Rental 1.920% 9/20/19	175,000		175,082		170,928		103		171,030
Bakercorp 8.250% 6/01/19	566,000		579,518		554,680		3,891		558,571
Bc America Commer 5.81111% 8/10/17	85,000		95,535		91,959		298		92,257
Bear Stearns 0.66406% 2/25/36	222,441		173,782		155,086		23		155,109
Bluescope Steel Ltd 7.125% 5/01/18	82,000		83,208		83,230		1,217		84,447
Bnk Of Amer 7.25% Cv Pfd	38		45,982		42,146		689		42,835
Boe Intermediate Hld 9.000% 11/01/17	34,000		33,660		32,640		408		33,048
Brazil Federative Re 2.625% 1/05/23	200,000		186,776		173,500		2,567		176,067
British Airways	500,000		500,000		500,000				500,000
Brunswick Corp 4.625% 5/15/21	514,000		522,125		501,150		3,170		504,320
Builders Firstsource 7.625% 6/01/21	10,000		10,000		9,675		68		9,743
Cablevision Sys 5.875% 9/15/22	1,116,000		1,124,555		1,079,730		19,305		1,099,035
Capital Auto Receiv 2.660% 4/22/19	95,000		94,996		95,000		35		95,035
Cco Hldgs Llc Cap 5.750% 1/15/24	606,000		609,125		584,790		5,614		590,404
Centurylink Inc 5.625% 4/01/20	34,000		34,000		34,340		531		34,871
Centurylink Inc 5.800% 3/15/22	500,000		506,250		492,500		8,539		501,039
Chesapeake Lodging Trust							192		192
Cke Restaurants Ho 3.92718% 3/20/43	164,381		172,806		164,266		225		164,491
Claires Stores Inc 7.750% 6/01/20	260,000		266,973		251,550		2,631		254,181
Claries Stores Inc 6.125% 3/15/20	17,000		17,000		16,703		307		17,009
Cnl Lifestyle Pptys 7.250% 4/15/19	750,000		753 <i>,</i> 750		748,125		11,479		759,604
Codelco, Inc.	200,000		181,846		180,560				180,560
Coinstar Inc 6.000% 3/15/19	542,000		553,321		541,323		9,846		551,169
Colombia Rep 7.375% 3/18/19	100,000		125,130		121,420		2,110		123,530
Compass Investor 7.750% 1/15/21	863,000		871,034		850,055		34,184		884,239
Constellation Brands 3.750% 5/01/21	38,000		38,000		35,578		186		35,764
Constellation Brands 4.250% 5/01/23	57,000		57,000		53,794		316		54,110
Contl Airlines Cv 4.500% 1/15/15	58,000		106,068		101,392		1,204		102,595
Copper River Clo 1.08806% 1/20/21	500,000		429,219		464,620		164		464,784
Credit Suisse Mtg 6.25214% 2/15/41	105,000		122,596		119,742		547		120,289

	0 111			Accrued	
A . CT . /C . 'C TT . /T	Quantity	Cook	Mauleat Value	Interest or	Mist I Assurad
Asset Class / Security Type / Issuer	Shares or Units	Cost	Market Value	<u>Dividends</u>	Mkt + Accrued
Croatia 6.625% 7/14/20	100,000	111,250	105,840	3,073	108,913
Dish Dbs Corp 5.125% 5/01/20	12,000	12,000	11,760	147	11,907
Dominican Rep 5.875% 4/18/24				1,191	1,191
Dominos Pizza Mast 5.216% 1/25/42	161,906	180,020	172,843	141	172,984
Ducommun Inc 9.750% 7/15/18	507,000	562,760	553,898	22,794	576,691
Dynacast Intl Llc 9.250% 7/15/19	26,000	28,373	28,340	1,109	29,449
Eagle Midco Inc 9.000% 6/15/18	250,000	245,000	243,750	1,313	245,063
Flextronics Intl Ltd 5.000% 2/15/23	508,000	512,435	491,490	9,243	500,733
Fmg Resources Aug 6.875% 4/01/22	250,000	268,438	242,500	4,297	246,797
Fremf Mortgage Tru 3.16502% 4/25/20	120,000	116,936	109,864	317	110,180
Fremf Mortgage Tru 3.49436% 2/25/23	60,000	54,096	60,000	175	60,175
General Mtrs Cv Pfd	600	29,718	28,896	-	28,896
Gibson Energy Inc 6.750% 7/15/21	500,000	492,380	498,750	281	499,031
Govt Of Dominican	100,000	107,000	107,660		107,660
Greenwich	750,000	720,938	727,958		727,958
Hawk Acquisition Sub 4.250% 10/15/20	48,000	48,000	45,900	510	46,410
Hd Supply Inc 7.500% 7/15/20	513,000	517,600	519,413	8,123	527,535
Hd Supply Inc 11.500% 7/15/20	250,000	291,875	290,000	6,069	296,069
Homebanc Mortgage 0.45406% 10/25/35	208,232	169,709	173,453	16	173,469
Hot Topic Inc 9.250% 6/15/21	29,000	28,599	29,363	142	29,504
Igate Corp 9.000% 5/01/16	500,000	547,500	520,000	7,500	527,500
Illumina Inc Cv 0.250% 3/15/16	18,000	19,418	19,463	13	19,476
J P Morgan Chase 5.70615% 2/12/49	155,000	173,600	167,961	483	168,444
J P Morgan Chase 5.99725% 2/15/51	65,000	70,588	70,349	173	70,522
Jo Ann Stores Hlds 9.750% 10/15/19	255,000	267,750	262,013	5,249	267,261
Laureate Educ Inc 9.250% 9/01/19	700,000	764,750	749,000	21,583	770,583
Level 3 Comm 8.875% 6/01/19	500,000	548,750	520,000	3,698	523,698
Linear Tech Cv 3.000% 5/01/27	24,000	25,776	25,050	120	25,170
Magnetation Llc Fin 11.000% 5/15/18	223,000	223,000	218,540	2,794	221,334
Mce Finance Ltd 5.000% 2/15/21	250,000	251,250	234,375	5,000	239,375
Needle Merger 8.125% 3/15/19	3,000	3,060	3,060	72	3,132
Nes Rentals Holdings 7.875% 5/01/18	19,000	19,000	18,763	308	19,070
New Acad Co Corp 8.000% 6/15/18	15,000	15,506	15,375	53	15,428
Nexeo Solutions 8.375% 3/01/18	500,000	490,625	497,500	13,958	511,458
Offshore Group Invst 7.125% 4/01/23	580,000	590,610	569,850	10,676	580,526
Orion Engineered Car 9.250% 8/01/19	750,000	756,875	750,000	28,906	778,906
Patriot	187,000	187,288	182,793	,	182,793
Petroleos De Venezue 8.500% 11/02/17	150,000	142,500	132,765	2,090	134,855
Petroleos Mexicanos 5.500% 6/27/44	150,000	149,250	133,185	92	133,277
Priceline Com Inc Cv 1.000% 3/15/18	13,000	15,054	15,113	38	15,151
Prince Mineral 11.500% 12/15/19	550,000	610,938	588,500	2,811	591,311
Provdient Fdg Pfg 6.750% 6/15/21	110,000	110,666	109,725	557	110,282
Regal Entertainment 5.750% 2/01/25	615,000	606,038	584,250	16,110	600,360
Rep Of South Africa	1,000,000	108,250	1,087,500	_0,110	1,087,500
Rep Of Sri Lanka 7.400% 1/22/15	100,000	105,500	105,150	3,268	108,418
Republic Indonesia 5.875% 3/13/20	100,000	115,099	107,820	1,763	109,583
· '	,	,	, -	,	,

	Quantity	_		Accrued Interest or	
Asset Class / Security Type / Issuer	Shares or Units	Cost	Market Value	<u>Dividends</u>	Mkt + Accrued
Republic Of Iceland 4.875% 6/16/16	100,000	106,420	105,000	203	105,203
Republic Of Serbia 7.250% 9/28/21	200,000	223,000	205,140	3,746	208,886
Republic Of Turkey 7.000% 3/11/19	100,000	122,000	115,010	2,139	117,149
Republic Philippines 8.375% 6/17/19	100,000	132,850	128,300	326	128,626
Republic Venezuela 12.750% 8/23/22	100,000	110,350	101,130	4,533	105,663
Romania Mtn 6.750% 2/07/22	200,000	237,260	222,820	5,400	228,220
Russian Federation 7.500% 3/31/30	149,000	181,594	174,688	2,825	177,512
Salesforce Com Cv 0.250% 4/01/18	15,000	14,975	14,278	11	14,289
Sba Communicat Cv 4.000% 10/01/14	21,000	52,369	51,476	210	51,686
Sealed Air Corp 5.250% 4/01/23	29,000	29,000	28,203	423	28,625
Serius Xm Radio 4.625% 5/15/23	1,003,000	1,003,000	927,775	5,799	933,574
Service Corp	23,000	23,000	22,943		22,943
Servicemaster	200,000	190,500	189,750		189,750
Servicemaster Co 7.000% 8/15/20	526,000	539,180	499,043	13,910	512,952
Servicemaster Co 8.000% 2/15/20	500,000	531,250	498,750	15,111	513,861
Shelf Drl Hold 8.625% 11/01/18	281,000	300,905	292,240	4,039	296,279
Simmons Foods Inc 10.500% 11/01/17	21,000	21,184	22,103	368	22,470
Sirius Xm Radio 4.250% 5/15/20	23,000	23,000	21,620	122	21,742
Sonic Automotive Inc 5.000% 5/15/23	657,000	670,703	637,290	4,745	642,035
Sophia Lp Fin Inc 9.750% 1/15/19	500,000	555,000	535,000	22,479	557,479
Speedy Cash Inc 10.750% 5/15/18	350,000	375,375	365,750	4,808	370,558
Spencer Spirit Hldgs 9.000% 5/01/18	46,000	45,080	44,850	679	45,529
State Of Qatar 4.500% 1/20/22	200,000	221,940	213,500	4,025	217,525
Stonemor Part 7.875% 6/01/21	30,000	29,350	29,400	217	29,617
T Rowe Price Emerg Mkt Multi Sec Fd	375,207	4,017,607	3,812,105	-	3,812,105
T Rowe Price Emerg Mkts Loc M-S Fd	1,149,649	11,045,523	10,450,310	-	10,450,310
T Rowe Price Hy Sector Trust Fd	569,315	6,051,870	5,818,401	-	5,818,401
T Rowe Price Invest Grade Corp Fd	587,757	5,994,446	5,783,532	-	5,783,532
T Rowe Price Mort-Back Multi-Sect Fd	459,466	4,425,200	4,369,524	-	4,369,524
T Rowe Price Reserve Inv Fd	8,000,160	8,000,160	8,000,160	-	8,000,160
Tenet Healthcare Cor 6.875% 11/15/31	250,000	231,250	215,000	2,196	217,196
Trac Int Llc Cor 11.000% 8/15/19	392,000	429,410	431,200	16,290	447,490
Transdigm Inc	107,000	107,000	109,408		109,408
Transunion Holding 8.125% 6/15/18	250,000	262,500	264,688	903	265,590
Trw Auto Inc Cv 3.500% 12/01/15	33,000	73,549	75,096	96	75,192
Turkey Rep 4.875% 4/16/43	200,000	196,000	174,860	2,031	176,891
U S Treasury Bd 4.500% 2/15/36	1,200,000	1,467,180	1,428,936	20,287	1,449,223
USTreasury IPS 0.125% 4/15/17	2,969,049	3,156,071	3,046,304	781	3,047,084
USTreasury IPS 0.625% 7/15/21	4,622,240	5,255,367	4,770,290	13,327	4,783,618
USTreasury IPS 1.875% 7/15/15	2,929,000	3,160,223	3,113,673	25,335	3,139,008
USTreasury IPS 1.875% 7/15/19	1,345,014	1,638,306	1,516,395	11,634	1,528,030
USTreasury IPS 2.000% 1/15/26	2,508,417	3,311,722	2,896,645	23,144	2,919,789
US Treasury IPS 2.125% 2/15/41	1,327,338	1,975,670	1,616,140	10,597	1,626,736
USTreasury IPS 2.500% 1/15/29	1,083,090	1,543,885	1,335,927	12,491	1,348,418
U S Treasury Nt 1.000% 5/31/18	1,800,000	1,796,738	1,769,058	1,529	1,770,587
Ukraine Government 6.750% 11/14/17	150,000	148,875	137,175	1,322	138,497

						Accrued		
	Quantity				Iı	nterest or		
Asset Class / Security Type / Issuer	Shares or Units	Cost	N	<u> Iarket Value</u>	$\overline{\mathbf{D}}$	M	kt + Accrued	
United Continental 6.375% 6/01/18	-	-		-				-
United Mexican Sts 3.625% 3/15/22	100,000	103,500		98,090		1,067		99,157
United Technologies Cor Unit	3,750	228,563		222,600		-		222,600
Univision Comm 6.750% 9/15/22	8,000	8,380		8,400		159		8,559
Us Foods Inc 8.500% 6/30/19	799,000	842,725		834,955		34,146		869,101
Verisign Inc 4.625% 5/01/23	1,035,000	1,051,250		1,003,950		9,973		1,013,923
Vpii Escrow	8,000	8,290		8,280				8,280
Vpii Escrow	87,000	87,000		89,175				89,175
Walter Energy Inc 8.500% 4/15/21	24,000	24,000		19,200		533		19,733
Wideopenwest Fin 10.250% 7/15/19	46,000	52,095		48,875		2,174		51,049
Xilinx Inc Cv 3.125% 3/15/37	38,000	54,958		52,440		350		52,790
Subtotal - Domestic Equity Commingl	63,359,851	\$ 95,792,643	\$	92,699,690	\$	605,407	\$	93,305,097
Real Estate Commingled Fund								
UBS Trumbull Property Fund	1,678,167	\$ 68,941,837	\$	75,900,294	\$	-	\$	75,900,294
Subtotal - Real Estate Commingled	1,678,167	\$ 68,941,837	\$	75,900,294	\$	-	\$	75,900,294
TOTAL FUND	111,856,350	\$ 722,845,439	\$	932,713,106	\$	834,480	\$	931,011,647

### **ACTUARIAL SECTION**



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 Page 2

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

Bonita J. Wurst

Dana Woolfrey, FSA, I

BJW/DW:sc

### SUMMARY OF VALUATION RESULTS

	July 1, 2012 Valuation			ly 1, 2013
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

## ACCOUNTING BALANCE SHEET AS OF JUNE 30, 2013

(dollars in thousands)

			Market Value		Cost Value
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*			4,482		4,482
B. TOTAL ASSETS		\$	938,135	\$	728,263
C. AMOUNTS CURRENTLY PAYABLE		\$	5,053	\$	5,045
D. ASSETS AVAILABLE FOR BENEFITS					
1. Member Reserves		\$	155,540	\$	155,540
2. Employer Reserves		*	777,542	•	567,678
3. Total Assets Available for Benefits		\$	933,082	\$	723,218
E TOTAL AMOUNTS CURRENTLY DAVABLE AND					
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS		\$	938,135	\$	728,263
F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS					
1. Market Value of Assets Available for Benefits (D.3)		\$	933,082		
2. Unrecognized Asset Returns		Ψ	, , , , , , , , , , , , , , , , , , ,		
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)	30,752		46,786		
4. Actuarial Value of Assets: (F.1 - F.3)		\$	886,296		
* DERIVATION OF OTHER ASSETS Accounts Receivable	Market Value				
Employer Contribution	\$ 1,109				
Employee Contribution	-				
Service Purchases Receivable	69				
Pensions Receivable State Contributions	1 838				
Real Estate Income Receivable	65				
Commission Recapture Receiva					
Interest Receivable	605				
Dividend Receivable Misc. Receivable	164				
Security Purchases Receivable	6				
Sale of Securities	1,375				
Total Accounts Receivable	\$ 4,234				
Fixed Assets	249				
Total Other Assets	\$ 4,482				

<sup>\*</sup>Numbers may not add due to rounding.

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

	Market Value		Cost Value			
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$	881,926	\$	669,996		
B. OPERATING REVENUES						
Member Contributions	\$	15,164	\$	15,164		
Employer Contributions	ψ	22,780	φ	22,780		
Supplemental Contributions		3,665		3,665		
Supplemental contributions     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)		(2,066)		-		
9. Total Operating Revenue	\$	156,318	\$	158,384		
C. OPERATING EXPENSES						
Service Retirements	\$	92,955	\$	92,955		
Disability Benefits	Ψ	658	Ψ	658		
3. Survivor Benefits		9,625		9,625		
4. Refunds		1,173		1,173		
5. Administrative Expenses		751		751		
6. Total Operating Expenses	\$	105,162	\$	105,162		
D. OTHER CHANGES IN RESERVES	\$	-	\$	-		
E. ASSETS AVAILABLE AT END OF PERIOD	\$	933,082	\$	723,218		
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET	RETUR	RN				
1. Average Balance						
(a) Assets available at BOY:			\$	881,926		
(b) Assets available at EOY:				933,082		
(c) Average balance $\{[(a) + (b) - Net Investment Income] / 2\}$			\$	850,150		
{Net investment income: B.4+B.5+B.6+B.8}						
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		

## 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	\$ 643,244
C.	TOTAL CURRENT AND EXPECTED FUTURE ASSETS	\$ 1,529,540
D.	TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS	\$ 1,655,608
E.	CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (D - C)	\$ 126,068

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

# DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL) AND SUPPLEMENTAL CONTRIBUTION RATE AS OF JULY 1, 2013

(dollars in thousands)

			Actuarial Present Value of Projected Benefits		Actuarial Present Value of Future Normal Costs		Actuarial Accrued Liability	
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		599,833		188,258		411,575	
	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	\$	1,655,608	\$	188,258	\$	1,467,350	
B.	DETERMINATION OF UNFUNDED ACTUARIAL							
	ACCRUED LIABILITY (UAAL)							
	1. Actuarial Accrued Liability (A.5)					\$	1,467,350	
	2. Current Assets (Table 1; Line F.4)					\$	886,296	
	3. Unfunded Actuarial Accrued Liability (B.1 - B.2)					\$	581,054	
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%	

<sup>\*</sup>Includes members on leave of absence.

 $<sup>^{\#}</sup>$ Calculated using 8.0% select and 8.5% ultimate rate.

### 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	\$	30,372
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
	<ul><li>7. Mortality of Annuitants</li><li>8. Other Items</li></ul>		3,164
	9. Total	Φ.	(10,567)
	9. Total	\$	10,543
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		(22,050)
Н.	UAAL AT END OF YEAR (E + F + G)	\$	581,054

<sup>\*</sup>Interest on assets determined at 8.00%; interest on liability determined at 8.34%.

### DETERMINATION OF CONTRIBUTION SUFFICIENCY AS OF JULY 1, 2013

(dollars in thousands)

	Percent of Payroll	Doll:	ar Amount
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	19.33%	\$	52,253
B. REQUIRED CONTRIBUTIONS - CHAPTER 356 1. Normal Cost			
a. Retirement Benefits	5.65%	\$	15,290
b. Disability Benefits	0.17%	Ψ	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	7.83%	\$	21,168
2. Supplemental Contribution Amortization	14.01%	Ψ	37,882
3. Allowance for Administrative Expenses	0.29%		784
4. Total	22.13%	\$	59,834
C. CONTRIBUTION SUFFICIENCY / (DEFICIENCY) (A.4 - B.4)	(2.80%)		(7,581)
Projected Annual Payroll for Fiscal Year Beginning on the Valuation	on Date:	\$	270,395

<sup>\*2013</sup> 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.

#### 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

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

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

		althy tality	Disabled Mortality		
<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	
20	2	1	226	75	
20	2	1			
	2		226	75 75	
22	3	1	226	75 75	
23		1	226	75 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	
			-		

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

		althy rtality	Disabled Mortality		
<u>Age</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	

Rates of Disability:

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

Age	Dis ability	Age	Disability
20	2 2	45	5
21		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		

#### Rates of Termination:

Number of Terminations per 1,000 Active Members		
400	400	
180	180	
140	140	
100	100	
60	67	
50	59	
45	51	
41	43	
37	35	
33	31	
29	27	
25	23	
20	19	
20	15	
20	13	
20	13	
	male  400 180 140 100 60 50 45 41 37 33 29 25 20 20	

#### 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	2 500	700	500
	· · · · · · · · · · · · · · · · · · ·			3,500		
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

#### 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

	Ultimate Rate of Annual Salary		Ultimate Rate of Annual Salary
Age	Increases	Age	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.

#### 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 Basic Plan members who terminate vested are assumed to Commencement: Commence benefits at age 61. Coordinated Plan members are

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.

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.

#### **APPENDIX A –** State Auditor's Report

### STATE OF MINNESOTA

#### Office of the State Auditor



# Rebecca Otto State Auditor

The SPTRFA received the highest possible audit opinion for its fiscal year ended June 30, 2013 financial statements. We invite you to read the 67 page report on the website of the Minnesota Office of the State Auditor <a href="http://www.osa.state.mn.us/reports/aud/2013/financialStatements/sptrfafsml">http://www.osa.state.mn.us/reports/aud/2013/financialStatements/sptrfafsml</a> 13 report.pdf

### ST. PAUL TEACHERS' RETIREMENT FUND ASSOCIATION ST. PAUL, MINNESOTA

FOR THE YEAR ENDED JUNE 30, 2013