

**ACTUARIAL SECTION**

# Saint Paul Teachers' Retirement Fund Association

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November 5, 2025

Mr. Phillip Tencick, Executive Director  
St. Paul Teachers' Retirement Fund Association  
2550 University Avenue W, Suite 312N  
St. Paul, Minnesota 55114

Dear Mr. Tencick:

We are pleased to present the report of the actuarial valuation of the St. Paul Teachers' Retirement Fund Association ("Fund") as of July 1, 2025. This report provides, among other things, the required annual contribution rate of the Fund for the Plan Year commencing July 1, 2025 and ending on June 30, 2026, according to prescribed assumptions. Note that the impact of GASB Statements No. 67 and No. 68 is provided in a separate report.

The valuation was based upon data and information through June 30, 2025 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 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 prescribed assumptions and generally accepted actuarial principles and practices. 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. GRS is not responsible for unauthorized use of this report.

The contribution rate in this report is determined using the actuarial methods and assumptions disclosed in Section 4 of this report. This report includes risk metrics beginning on page 9, but does not include a robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

We have assessed that the contribution rate calculated under the current funding policy is a reasonable Actuarially Determined Employer Contribution (ADEC) and it is consistent with the plan accumulating adequate assets to make benefit payments when due.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

Mr. Phillip Tencick  
St. Paul Teachers' Retirement Fund Association  
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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.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation, and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

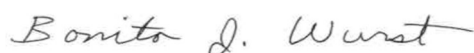
This report should not be relied on for any purpose other than the purpose described in this report. Determinations of financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

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 combined effect of the assumptions, excluding prescribed assumptions or methods set by law, is expected to have no significant bias (i.e., not significantly optimistic or pessimistic). All actuarial assumptions and methods used in the valuation follow the guidance in the applicable Actuarial Standards of Practice. The 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 has been prepared by actuaries who have substantial experience valuing public employee retirement systems. Bonita J. Wurst and Sheryl L. Christensen are Members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

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

Respectfully submitted,  
Gabriel, Roeder, Smith & Company



Bonita J. Wurst, ASA, EA, FCA, MAAA



Sheryl L. Christensen, FSA, EA, FCA, MAAA

# Saint Paul Teachers' Retirement Fund Association

## Actuarial Section Discussion

SPTRFA actuaries prepare actuarial valuations for the Fund. There are two separate valuations completed: a valuation used for funding purposes, and a valuation used for financial reporting purposes. The schedules found in much of the Actuarial Section are compiled based on the funding actuarial valuations.

The valuations are based on actuarial assumptions and methods 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. SPTRFA uses these assumptions and methods, including discount rates, mortality tables and others identified in this report, to monitor the funding progress and sufficiency of the member and employer contribution rates.

While most of the actuarial methods and assumptions used for financial reporting purposes are the same as those used for funding purposes, there are a few differences. For example, following GASB standards, the fair value of assets is used when calculating the net pension liability for reporting purposes. For funding purposes, an actuarial basis smooths the gains and losses over a five-year period to calculate the asset value. The effect of the difference in asset value on the funding ratio and contribution sufficiency/deficiency over the past ten years is shown below.

Fair Value Basis vs. Actuarial Basis  
Last 10 Years

Actuarial Valuation Date	Fair Value Basis			Actuarial Basis		
	Assets (in thousands)	Funded Ratio	Contribution Sufficiency/Deficiency	Assets (in thousands)	Funded Ratio	Contribution Sufficiency/Deficiency
7/1/2025	1,433,936	72.2%	5.86%	1,384,185	69.7%	4.50%
7/1/2024	1,335,037	69.1%	2.41%	1,299,916	67.2%	1.67%
7/1/2023	1,216,753	64.3%	0.83%	1,234,225	65.3%	1.21%
7/1/2022	1,154,427	66.0%	4.16%	1,203,096	68.7%	5.17%
7/1/2021	1,295,064	74.9%	7.47%	1,159,954	67.1%	4.62%
7/1/2020	1,037,613	61.4%	2.44%	1,090,243	64.5%	3.58%
7/1/2019	1,080,544	63.9%	3.24%	1,079,552	63.8%	3.22%
7/1/2018	1,070,572	63.9%	2.75%	1,067,675	63.7%	2.69%
7/1/2017	1,032,249	64.1%	0.66%	1,038,467	64.5%	0.52%
7/1/2016	959,666	60.3%	1.76%	1,007,360	63.3%	0.67%

Assumptions for financial reporting purposes can be found in the State Auditor's report found in Appendix A, *SPTRFA Annual Financial Report and Management and Compliance Report*, in the Notes to the Required Supplemental Information, pages 38-41.

Actuarial assumptions used in the funding valuations are found in the Gabriel Roeder Smith's report found in Appendix B, *SPTRFA Actuarial Valuation as of July 1, 2025*, Table 13, pages 27-35.

A summary of plan provision is available in the *Benefit Section* of this report on pages 18-19 as well as the State Auditor's report found in Appendix A, *SPTRFA Annual Financial Report and Management and Compliance Report*, in the Notes to the Financial Statements, pages 16-18.

# Saint Paul Teachers' Retirement Fund Association

## Actuarial Section Schedules

### Summary of Valuation Results

(Dollars in Thousands)

	July 1, 2024 Valuation	July 1, 2025 Valuation
<b>A. CONTRIBUTIONS % OF PAYROLL</b>		
1. Statutory Contributions - Chapter 354A	25.67% **	26.98%
2. Required Contributions - Chapter 356	23.52%	22.48%
3. Sufficiency / (Deficiency)	2.15%	4.50%
<b>B. FUNDING RATIOS</b>		
1. Accrued Liability Funding Ratio		
a. Current Assets	\$ 1,299,916	\$ 1,384,185
b. Actuarial Accrued Liability	1,933,107	1,986,406
c. Funding Ratio	67.24%	69.68%
2. Projected Benefit Funding Ratio		
a. Current and Expected Future Assets	2,348,579	2,454,333
b. Current and Expected Future Benefit Obligations	2,213,884	2,280,186
c. Funding Ratio	106.08%	107.64%
<b>C. PLAN PARTICIPANTS</b>		
1. Active Members		
a. Number	3,366	3,366
b. Projected Annual Earnings*	\$ 323,288	\$ 337,575
c. Average Annual Earnings (Projected dollars)*	\$ 99,434	\$ 96,949
d. Average Age	45.3	45.7
e. Average Service	13.2	13.6
f. Members on Leave of Absence	106	140
2. Others		
a. Service Retirements	3,956	3,984
b. Disability Retirements	22	23
c. Survivors	400	404
d. Deferred Retirements	2,681	2,664
e. Terminated Other Non-Vested	3,106	3,138
f. Total – Others	10,165	10,213
3. Grand Total (1.a + 1.f + 2.f)	13,637	13,695

\* Projected Annual Earnings includes expected payroll for teachers hired after the valuation date to replace retirements in May and June prior to the valuation date; Average Annual Earnings excludes this new teacher payroll. See page 35 for additional information.

\*\* Statutory contribution includes one-time state aid (25.19% without one-time state aid as of July 1, 2024).

# Saint Paul Teachers' Retirement Fund Association

## Accounting Balance Sheet

As of June 30, 2025  
(Dollars in Thousands)

	<u>Market Value</u>
A. ASSETS	
1. Cash, Equivalents, Short-Term Securities	\$ 5,808
2. Investments	
a. Fixed Income	398,702
b. Equity	703,443
c. Real Assets	73,073
d. Alternative	167,650
e. Cash and Cash Equivalents	108,262
3. Other Assets (see below)*	15,347
B. TOTAL ASSETS	\$ <u>1,472,285</u>
C. AMOUNTS CURRENTLY PAYABLE	\$ 38,349
D. ASSETS AVAILABLE FOR BENEFITS	
1. Member Reserves	\$ 278,997
2. Employer Reserves	1,154,939
3. Total Assets Available for Benefits	\$ <u>1,433,936</u>
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	\$ <u>1,472,285</u>
F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS	
1. Market Value of Assets Available for Benefits (D.3)	1,433,936
2. Unrecognized Asset Returns (UAR)	
a. June 30, 2025	49,903
b. June 30, 2024	63,187
c. June 30, 2023	25,514
d. June 30, 2022	(191,444)
3. UAR Adjustment: $.80 * 2(a) + .60 * 2(b) + .40 * 2(c) + .20 * 2(d)$	49,751
4. Actuarial Value of Assets: (F.1 - F.3)	\$ <u>1,384,185</u>

DERIVATION OF OTHER ASSETS *	<u>Market Value</u>
Accounts Receivable	
Employer Contribution	\$ 521
Employee Contribution	315
Service Purchases Receivable	0
Pensions Receivable	77
State Contributions	838
Commission Recapture Receivable	0
Interest Receivable	92
Dividend Receivable	1,659
Miscellaneous Receivable	9
Sale of Securities	11,837
Total Accounts Receivable	<u>15,347</u>
Total Other Assets	\$ <u>15,347</u>

*Numbers may not add due to rounding.*

# Saint Paul Teachers' Retirement Fund Association

## Change in Assets Available for Benefits

Year Ended June 30, 2025  
(Dollars in Thousands)

		<u>Market Value</u>
A. ASSETS AVAILABLE AT BEGINNING OR PERIOD	\$	1,335,037
B. OPERATING REVENUES		
1. Member Contributions	\$	24,597
2. Employer Contributions		41,744
3. Supplemental Contributions		18,003
4. Re-employed Annuitant Employer Contributions		436
5. Investment Income		19,744
6. Investment expense		(2,839)
7. Net Realized Gain/(Loss)		196,670
8. Other		0
9. Net Change in Unrealized Gain/(Loss)		(71,723)
10. Total Operating Revenue	\$	<u>226,632</u>
C. OPERATING EXPENSES		
1. Service Retirements	\$	112,056
2. Disability Benefits		508
3. Survivor Benefits		12,912
4. Refunds		1,239
5. Benefit Payment Adjustment		0
6. Administrative Expenses		1,018
7. Total Operating Expenses	\$	<u>127,733</u>
D. OTHER CHANGES IN RESERVES	\$	0
E. ASSETS AVAILABLE AT END OF PERIOD	\$	<u>1,433,936</u>
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN		
1. Average Balance		
a. Assets available at BOY	\$	1,335,037
b. Assets available at EOY		1,433,936
c. Average balance {[ (a) + (b) – Net Investment Income ] / 2}	\$	1,313,561
d. {Net Investment Income: B.5+B.6+B.7+B.8}		
2. Expected Return: 0.70 * F.1		91,949
3. Actual Return		141,852
4. Current Year Gross Asset Gain/(Loss): F3-F2	\$	49,903

# Saint Paul Teachers' Retirement Fund Association

## Determination of Actuarial Accrued Liability (AAL)

As of June 30, 2025  
(Dollars in Thousands)

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
<b>DETERMINATION OF ACTUARIAL ACCRUED LIABILITY</b>			
1. Active Members*			
a. Retirement Benefits	\$ 886,252	\$ 206,474	679,778
b. Disability Benefits	\$ 13,066	\$ 4,532	8,534
c. Surviving Spouse and Child Benefits	\$ 6,704	\$ 2,033	4,671
d. Vested Withdrawals	\$ 42,762	\$ 57,952	(15,192)
e. Refund Liability Due to Death or Withdrawal	\$ 2,292	\$ 22,787	(20,495)
f. Total	\$ 951,076	\$ 293,780	657,296
2. Deferred Retirements	\$ 144,450	\$ 0	144,450
3. Former Members with Vested Rights	\$ 5,580	\$ 0	5,580
4. Annuitants	\$ 1,179,080	\$ 0	1,179,080
5. Total Actuarial Accrued Liability	\$ 2,280,186	\$ 293,780	\$ 1,986,406

## Determination of Unfunded Actuarial Accrued Liability (UAAL)

As of June 30, 2025  
(Dollars in Thousands)

### DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

1. Actuarial Accrued Liability	\$ 1,986,406
2. Current Assets	1,384,185
3. Unfunded Actuarial Accrued Liability	\$ 602,221
• Includes members on leave of absence.	

# Saint Paul Teachers' Retirement Fund Association

## Schedule of Changes in Unfunded Actuarial Accrued Liability

Year Ended June 30, 2025

(Dollars in Thousands)

	Actuarial Accrued Liability	Current Assets	Unfunded Actuarial Accrued Liability
A. UAAL at BEGINNING OF YEAR	\$ 1,933,107	\$ 1,299,916	\$ 633,191
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING			
1. Normal Cost and Expenses	32,231	(1,018)	33,249
2. Benefit Payments	(126,715)	(126,715)	0
3. Contributions	0	84,780	(84,780)
4. Interest on A, B.1., B.2., and B.3.	131,735	89,365	(9,161)
5. Total (B.1. + B.2. + B.3. + B.4.)	\$ 37,251	\$ 46,412	\$ (9,161)
C. EXPECTED VALUES AT END OF YEAR (A + B.5.)	\$ 1,970,358	\$ 1,346,328	\$ 624,030
D. INCREASE / (DECREASE) DUE TO ACTUARIAL LOSSES / (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED			
1. Age and Service Retirements			\$ 4,298
2. Disability Retirements			(56)
3. Death-Service Benefits			165
4. Withdrawals			(2,100)
5. Salary Increases			11,474
6. Investment Income			(37,857)
7. Mortality of Annuitants			(1,859)
8. Other Items			(6,632)
9. Total			\$ (32,567)
E. UAAL AT END OF YEAR BEFORE PLAN ADMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C + D.9.)			\$ 591,463
F. CHANGE IN UAAL DUE TO PLAN AMENDMENTS			10,758
G. CHANGE IN UAAL DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS			0
H. UAAL AT END OF YEAR (E + F + G)			\$ 602,221

# Saint Paul Teachers' Retirement Fund Association

## Determination of Contribution Sufficiency/(Deficiency)

Year Ended June 30, 2025

(Dollars in Thousands)

	Percent-of- Payroll	Dollar Amount
<b>A. STATUTORY CONTRIBUTIONS – CHAPTER 354A</b>		
1. Employee Contributions	8.75%	\$ 29,538
2. Employer Contributions		
a. Regular	9.75%	32,914
b. Additional	3.84%	12,963
3. Supplemental Contribution		
a. 1996 Legislation	0.25%	838
b. 1997 Legislation	0.84%	2,827
c. 2014 Legislation	2.07%	7,000
d. 2018 Legislation	1.48%	5,000
4. Total	26.98%	\$ 91,080
<b>B. REQUIRED CONTRIBUTIONS – CHAPTER 356</b>		
1. Normal Cost		
a. Retirement Benefits	7.19%	\$ 24,272
b. Disability Benefits	0.15%	506
c. Surviving Spouse and Child Benefits	0.07%	236
d. Vested Withdrawals	1.87%	6,313
e. Refund Liability Due to Death or Withdrawal	0.75%	2,532
f. Total	10.03%	\$ 33,859
2. Supplemental Contribution Amortization	12.14%	40,982
3. Allowance for Administrative Expenses	0.31%	1,046
4. Total	22.48%	\$ 75,887
<b>C. CONTRIBUTION SUFFICIENCY/(DEFICIENCY) (A.4. – B.4)</b>	<b>4.50%</b>	<b>\$ 15,193</b>
Project Annual Payroll for Fiscal Year Beginning on the Valuation Date (determined by increasing reported pay for each member by one full year of assumed pay increase, according to the actuarial salary scale, as prescribed by the LCPR Standards for Actuarial Work), plus replacement payroll (described in Table 13)		<b>\$ 337,575</b>

# Saint Paul Teachers' Retirement Fund Association

## Solvency Test

Last 10 years  
(Dollars in Thousands)

Actuarial Valuation Date	Actuarial Accrued Liability For:			Portion of Accrued Liabilities Covered by Valuation Assets			
	Active Member Contribution (1)	Current Retiree & Beneficiaries (2)	Active Member (Employer Financed) Portion (3)	Valuation Assets	(1)	(2)	(3)
7/1/2025	278,997	1,179,080	528,329	1,384,185	100%	93.7%	n/a
7/1/2024	264,303	1,186,511	482,293	1,299,916	100%	87.3%	n/a
7/1/2023	252,145	1,173,727	465,745	1,234,225	100%	83.7%	n/a
7/1/2022	240,258	1,161,360	345,803	1,203,096	100%	82.9%	n/a
7/1/2021	228,685	1,151,345	349,591	1,159,954	100%	80.9%	n/a
7/1/2020	217,959	1,135,360	337,917	1,090,243	100%	76.8%	n/a
7/1/2019	210,364	1,133,369	347,988	1,079,552	100%	76.7%	n/a
7/1/2018	199,911	1,129,864	346,418	1,067,675	100%	76.8%	n/a
7/1/2017	187,955	1,068,690	354,563	1,038,467	100%	79.6%	n/a
7/1/2016	178,135	1,052,827	361,608	1,007,360	100%	78.8%	n/a

## Schedule of Funding Progress

Last 10 years  
(Dollars in Thousands)

Valuation Year Ended	Actuarial Value of Assets (a)"	Actuarial Accrued Liability (b)"	Unfunded Actuarial Accrued Liability (b-a)"	Funded Ratio (a/b)"	Covered Payroll (c)"	UAAL as Percentage of Covered Payroll [(b-a)/c]"
6/30/2025	1,384,185	1,986,406	602,211	69.68%	321,336	187.41%
6/30/2024	1,299,916	1,933,107	633,191	67.24%	319,667	198.08%
6/30/2023	1,234,225	1,891,617	657,392	65.25%	296,674	221.59%
6/30/2022	1,203,096	1,750,421	547,325	68.73%	304,227	179.91%
6/30/2021	1,159,954	1,729,621	569,667	67.06%	279,916	203.51%
6/30/2020	1,090,243	1,691,236	600,993	64.46%	274,667	218.81%
6/30/2019	1,079,552	1,691,721	612,169	63.81%	268,614	227.90%
6/30/2018	1,067,675	1,676,193	608,518	63.70%	263,122	231.27%
6/30/2017	1,038,467	1,611,208	572,741	64.45%	264,342	216.67%
6/30/2016	1,007,360	1,592,570	585,210	63.25%	258,787	226.14%

# Saint Paul Teachers' Retirement Fund Association

## Schedule of Active Members Valuation Data

Last 10 years

Valuation Year Ended	Number	Valuation Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2025	3,342	321,336,000	96,151	1.2%
6/30/2024	3,366	319,667,000	94,969	7.0%
6/30/2023	3,360	296,674,000	88,296	-1.3%
6/30/2022	3,400	304,227,000	89,479	5.0%
6/30/2021	3,294	279,916,000	84,978	3.6%
6/30/2020	3,353	274,667,000	81,917	2.0%
6/30/2019	3,347	268,614,000	80,255	4.8%
6/30/2018	3,445	263,122,000	76,378	-1.5%
6/30/2017	3,409	264,342,000	77,542	3.4%
6/30/2016	3,455	258,787,000	74,902	2.1%

## Schedule of Retirees and Beneficiaries

Last 10 years

Valuation Year Ended	Number Added	Annual Allowances Added	Number Removed	Annual Allowances Removed	Number at Year End	Allowances at Year End	Average Annual Allowances	Change from Prior Year
6/30/2025	172	4,952,236	139	4,010,181	4,411	125,209,000	28,386	(0.6%)
6/30/2024	199	5,797,924	131	3,775,772	4,378	125,018,000	28,556	0.3%
6/30/2023	160	4,634,698	103	3,005,224	4,310	122,720,000	28,473	(0.5%)
6/30/2022	183	5,296,286	103	2,998,486	4,253	121,763,000	28,630	(0.4%)
6/30/2021	194	5,642,324	123	3,602,262	4,173	119,934,000	28,740	(0.1%)
6/30/2020	211	6,101,572	113	3,211,992	4,102	118,057,000	28,780	(1.2%)
6/30/2019	191	5,623,332	101	3,025,688	4,004	116,692,000	29,144	(2.0%)
6/30/2018	165	4,897,690	102	3,048,897	3,914	116,379,000	29,734	(0.6%)
6/30/2017	220	7,315,136	92	3,048,868	3,851	115,146,000	29,900	(1.3%)
6/30/2016	192	5,859,588	102	3,124,644	3,723	112,747,000	30,284	(1.0%)

# Saint Paul Teachers' Retirement Fund Association

## Actuarial Methods and Assumptions

as of July 1, 2025

### 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 Method used in this valuation for all purposes is the Entry Age Actuarial Cost Method. Under this Method, 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.

Payments on the unfunded actuarial accrued liability (UAAL) are determined by source as a level percentage of payroll each year assuming payroll increases of 2.50% per annum, and amortized according to the following closed statutory amortization periods, beginning in the valuation year in which they arise:

Source of UAAL	Closed Period
Legacy UAAL as of July 1, 2024	Period ending June 30, 2048
Experience gain or loss	15 years
Assumption or method changes	20 years
Active member benefit changes	15 years
Long-term inactive member benefit changes	15 years
Short-term inactive member benefit changes	Period during which benefit change is in effect
Statutory Contributions (per Chapter 354A) that are more or less than the Total Required Contribution (per Chapter 356)	15 years

As required by the Standards for Actuarial Work, projected payroll is 1) determined by increasing reported payroll for each member by one full year's assumed pay increase according to the actuarial salary scale and 2) multiplied by 0.964 in the determination of the present value of future payroll to account for timing differences. This statutory method produces a required contribution that is like, but slightly below, the contribution that would be produced by more common actuarial methods.

### II. CURRENT ACTUARIAL ASSUMPTIONS

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.

Assumptions are based on an experience study for the five-year period of July 1, 2016 to June 30, 2021, as well as a legislated change to the investment return assumption effective July 1, 2023. Note that significant plan changes effective July 1, 2023 and July 1, 2025 may ultimately result in behavior changes not anticipated in the actuarial assumptions. The Allowance for Combined Service Annuity assumptions are based on an analysis completed by the LCPR actuary and documented in a report dated February 2025.

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## A. Demographic Assumptions

1. Healthy and Disabled Annuitant Mortality:
  - a. Male: Pub-2010 Male Healthy Teacher Retiree Mortality Table, adjusted for mortality improvements using projection scale MP-2021 from 2010. Rates are multiplied by a factor of 1.03.
  - b. Female: Pub-2010 Female Healthy Teacher Retiree Mortality Table, adjusted for mortality improvements using projection scale MP-2021 from 2010. Rates are multiplied by a factor of 1.03.
2. Employee Mortality:
  - a. Male: Pub-2010 Male Healthy Teacher Employee Mortality Table, adjusted for mortality improvements using projection scale MP-2021 from 2010.
  - b. Female: Pub-2010 Female Healthy Teacher Employee Mortality Table, adjusted for mortality improvements using projection scale MP-2021 from 2010.  
See table of sample rates in Appendix B, *SPTRFA Actuarial Valuation as of July 1, 2025*, Table 13, pages 29-30.
3. Rates of Disability for males and females:  
Age-related rates based on experience. See table of sample rates in Appendix B, *SPTRFA Actuarial Valuation as of July 1, 2025*, Table 13, page 31.
4. Rates of Termination:  
Service -related rates based on experience. See table of sample rates in Appendix B, *SPTRFA Actuarial Valuation as of July 1, 2025*, Table 13, page 32.
5. Rates of Retirement:  
Age-related rates based on both eligibility for unreduced early retirement and those based on non-eligibility for unreduced early retirement. See table of sample rates in Appendix B, *SPTRFA Actuarial Valuation as of July 1, 2025*, Table 13, page 32.

## B. Economic Assumptions

1. Assumed Rate of Return on Assets and Liabilities: 7.00%
2. Investment Rate of Return: 7.00%
3. Price Inflation: 2.50% per year
4. Payroll Growth (Wage Inflation): 2.50% per year
5. Future Salary Increases: Service -based rates decreasing from 8.00% to 2.50%.  
See table of sample rates in Appendix B, *SPTRFA Actuarial Valuation as of July 1, 2025*, Table 13, page 33.
6. Asset Value:  
The assets are valued based on a five-year moving average of expected and market values (five-year average actuarial value). At the end of each plan year, an average asset value is calculated as the average of the market asset value at the beginning and end of the fiscal year net of investment income for the fiscal year. The investment gain or (loss) is taken as the excess of actual investment income over the expected investment income based on the average asset value as calculated above. The investment gain or (loss) is recognized over five years at 20% per year. The asset value is the sum of the market asset value plus the scheduled recognition of investment gains or (losses) during the current and the preceding four fiscal years.
7. Benefit Increases: 1.00% per year on January 1

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## 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 63. 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.
Refund of Contributions:	All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit. Account balances for deferred members accumulate interest until the assumed benefit commencement date and are discounted back to the valuation date.
Allowance for Combined Service Annuity:	28.0% load on liabilities for former, vested members. 58.0% load on liabilities for former, non-vested 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.
Missing Data for Deferred Vested Members:	Deferred vested members without a reported benefit and without salary information were assumed to have a final average salary of \$40,000.
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.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Service Credit Accruals:	It is assumed that members accrue one year of service credit per year. Exact fractional service is used to determine the amount of benefit payable.
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,

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annual supplemental contributions equal to \$14,827,000 are scheduled to be paid each October 1.

The contributions described herein will continue until the plan is 100% funded for three consecutive years or until June 30, 2048, whichever occurs earlier.

Projected Annual Payroll Calculation:

The census data as of July 1, 2025 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. entry salary level of \$56,788; the Projected Annual Payroll for the fiscal year ending June 30, 2026 includes this replacement salary amount.

Changes in Actuarial Methods and Assumptions Since the Prior Valuation:

Layered amortization was implemented effective with the July 1, 2025 valuation, with the amortization periods as defined earlier in this report.

The Combined Service Annuity load was changed from 20% to 28% for vested terminated members, and from 9% to 58% for non-vested terminated members.