



January 30, 2025

Mr. Anthony Estell
Executive Director
DTMB, Office of Retirement Services
530 West Allegan
Lansing, Michigan 48933

Re: SERS Cost-of-Living Adjustment (COLA) Study

Dear Anthony:

Enclosed are the results of a supplemental actuarial valuation related to various proposed changes to the Michigan State Employees' Retirement System (SERS) COLA provisions.

Please call if you have any questions or comments.

Sincerely,
Gabriel, Roeder, Smith & Company

A handwritten signature in black ink that reads "Louise Gates". The signature is written in a cursive, flowing style.

Louise Gates, ASA, FCA, MAAA

A handwritten signature in black ink that reads "Mita Drazilov". The signature is written in a cursive, flowing style.

Mita D. Drazilov, ASA, FCA, MAAA

LG/MDD:sc

Enclosure

Cc: Allison Wardlaw
Patrick Guysky

Supplemental Actuarial Valuation as of September 30, 2023 SERS COLA Study

Submitted To: Mr. Anthony Estell, Executive Director
Office of Retirement Services (ORS)

Date: January 30, 2025

Submitted By: Louise Gates, ASA, FCA, MAAA and Mita Drazilov, ASA, FCA, MAAA
Gabriel, Roeder, Smith & Company

This report contains an actuarial valuation of proposed changes to the current post retirement Cost of Living Adjustment (COLA) benefits for eligible members of the Michigan State Employees' Retirement System (SERS).

This report has been prepared at the request of the ORS and may be supplied to entities other than the ORS only in its entirety and only with the permission of the ORS.

The date of the valuations was September 30, 2023. The purpose of this study is to illustrate what the September 30, 2023 actuarial valuation would have shown if the proposed plan changes had been in effect on that date and if all actuarial assumptions were met in the future. This report should not be relied on for any other purpose. Supplemental valuations do **not** predict the result of future actuarial valuations. Rather, supplemental valuations give an indication of the probable long-term cost of the **benefit change only** without comment on the complete end result of the future valuations.

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 supplemental valuation was based upon information furnished by the ORS for use in the September 30, 2023 annual actuarial valuations of the SERS. We checked the data for internal consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the ORS. Except as indicated, all actuarial assumptions, methods, and Plan provisions included in this valuation are as described in the SERS September 30, 2023 annual actuarial valuation report (dated April 19, 2024).

Supplemental Actuarial Valuation as of September 30, 2023 SERS COLA Study

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 actuarial assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

Louise Gates and Mita Drazilov 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.

A brief summary of the SERS defined benefit plan participants as of September 30, 2023 who are included in this study is presented below:

	<u>As of September 30, 2023</u>
Retirees and beneficiaries currently receiving benefits:	59,614
Current Employees:	3,812
Inactive participants entitled to benefits and not yet receiving them*:	<u>1,871</u>
Total Participants	65,297

** Includes members who have chosen to participate in Group 3 (DB/DC Blend) and have not yet commenced their pension benefits.*

Supplemental Actuarial Valuation as of September 30, 2023

SERS COLA Study: Proposal A – Results

Present Provisions: Eligible retired members of SERS receive post retirement COLAs applied to their base pension benefits (i.e., non-compounded). The base pension benefit for a member is currently the member’s original benefit at retirement (i.e., excluding any COLAs granted prior to the effective date of the proposed change). The current COLA is paid annually to eligible retirees and survivors in an amount equal to 3% annual benefit increases, with a maximum \$300 annual increase. The \$300 annual COLA cap does not increase.

Proposed Provisions: Annual post retirement COLAs (non-compounded) will be based on changes in the Consumer Price index for Americans 62 years of age or older (referred to as R-CPI-E). There will be no cap on the amount of the increase.

Actuarial Information: The following is the result of our September 30, 2023 valuation of the estimated fiscal year 2026 employer DB pension plan contributions for current eligible members due to the proposed plan change:

Actuarial Valuation Results as of September 30, 2023				
Normal Cost FY 2026	<u>Present Provisions</u>	<u>Proposed Provisions</u>	<u>Change</u>	
(1) Total Normal Cost %	11.24%	12.72%	1.48%	
(2) Member Contribution %	<u>4.00%</u>	<u>4.00%</u>	<u>0.00%</u>	
(3) Employer Normal Cost %	7.24%	8.72%	1.48%	
(4) Projected Tier 1 Active Member Payroll for FY 2026	\$ 246,473,775	\$ 246,473,775	\$ 0	
(5) Employer Normal Cost \$ = (3) x (4)	17,844,701	21,492,513	3,647,812	
a. Tier 2 Employer Normal Cost \$	15,509,125	17,673,189	2,164,064	
b. Administrative Expenses	6,324,364	6,324,364	0	
c. Total Employer Normal Cost \$ = (5) + (5a) + (5b)	\$ 39,678,190	\$ 45,490,066	\$ 5,811,876	
Actuarial Accrued Liabilities (AAL)				
(6) AAL - Inactive Members	\$ 16,879,843,126	\$ 18,316,866,147	\$ 1,437,023,021	
(7) AAL - Active Members	2,114,935,964	2,459,819,779	344,883,815	
(8) Total Actuarial Accrued Liabilities	\$ 18,994,779,090	\$ 20,776,685,926	\$ 1,781,906,836	
(9) Funding Value of Assets	13,600,052,800	13,600,052,800	0	
(10) Unfunded Actuarial Accrued Liabilities (UAAL) = (8) - (9)	\$ 5,394,726,290	\$ 7,176,633,126	\$ 1,781,906,836	
Amortization Payment FY 2026				
(11) Initial UAAL Payment	\$ 586,753,859	\$ 586,753,859	\$ 0	
(12) Benefit Change - Inactives UAAL Payment ⁽¹⁾	0	372,250,436	372,250,436	
(13) Benefit Change - Actives UAAL Payment ⁽¹⁾	0	40,175,315	40,175,315	
(14) Total UAAL Payment	\$ 586,753,859	\$ 999,179,610	\$ 412,425,751	
(15) Total Computed FY 2026 Employer Contribution = (5c) + (14)	\$ 626,432,049	\$ 1,044,669,676	\$ 418,237,627	

⁽¹⁾ Based on the Funding Policy, changes in inactive member actuarial accrued liabilities as a result of the proposed benefit change were amortized over a closed, 5-year period and changes in active member actuarial accrued liabilities as a result of the proposed benefit change were amortized over a closed, 15-year period.

The number of current benefit recipients impacted by the proposed change in plan provisions is 59,614.

**Supplemental Actuarial Valuation
as of September 30, 2023
SERS COLA Study: Proposal A – Projections**

Fiscal Year	Present Provisions			Proposed Provisions			Change in Total Computed Employer Contribution
	Normal Cost	Amortization Payment	Total Computed Employer Contribution	Normal Cost	Amortization Payment	Total Computed Employer Contribution	
2026	\$39,678,190	\$586,753,859	\$626,432,049	\$45,490,065	\$999,179,610	\$1,044,669,675	\$418,237,626
2027	38,042,104	592,163,251	630,205,355	43,401,940	1,004,589,284	1,047,991,224	417,785,869
2028	36,307,647	598,044,492	634,352,139	41,260,330	1,010,470,525	1,051,730,855	417,378,716
2029	34,957,433	639,258,088	674,215,521	39,566,507	1,051,684,122	1,091,250,629	417,035,108
2030	33,965,586	629,108,649	663,074,235	38,279,157	1,041,534,682	1,079,813,839	416,739,604
2031	33,233,467	629,108,649	662,342,116	37,315,473	669,284,247	706,599,720	44,257,604
2032	32,739,811	629,108,648	661,848,459	36,631,891	669,284,246	705,916,137	44,067,678
2033	32,454,064	629,108,649	661,562,713	36,195,014	669,284,246	705,479,260	43,916,547
2034	32,382,356	629,108,648	661,491,004	36,012,527	669,284,246	705,296,773	43,805,769
2035	32,490,170	629,108,648	661,598,818	36,040,840	669,284,245	705,325,085	43,726,267
2036	32,747,726	629,108,648	661,856,374	36,252,964	669,284,246	705,537,210	43,680,836
2037	33,133,299	0	33,133,299	36,620,167	40,175,316	76,795,483	43,662,184
2038	33,633,548	0	33,633,548	37,121,119	40,175,316	77,296,435	43,662,887
2039	34,238,344	0	34,238,344	37,745,132	40,175,315	77,920,447	43,682,103
2040	34,929,875	0	34,929,875	38,474,158	40,175,316	78,649,474	43,719,599
2041	35,697,885	0	35,697,885	39,293,834	0	39,293,834	3,595,949
2042	36,533,616	0	36,533,616	40,193,576	0	40,193,576	3,659,960
2043	37,427,140	0	37,427,140	41,160,796	0	41,160,796	3,733,656
2044	38,372,738	0	38,372,738	42,188,604	0	42,188,604	3,815,866
2045	39,365,884	0	39,365,884	43,271,087	0	43,271,087	3,905,203
2046	40,400,842	0	40,400,842	44,401,662	0	44,401,662	4,000,820
2047	41,477,429	0	41,477,429	45,579,792	0	45,579,792	4,102,363
2048	42,594,829	0	42,594,829	46,804,189	0	46,804,189	4,209,360
2049	43,750,900	0	43,750,900	48,072,073	0	48,072,073	4,321,173
2050	44,943,617	0	44,943,617	49,380,906	0	49,380,906	4,437,289
2051	46,172,581	0	46,172,581	50,730,053	0	50,730,053	4,557,472
2052	47,437,975	0	47,437,975	52,119,616	0	52,119,616	4,681,641
2053	48,739,958	0	48,739,958	53,549,664	0	53,549,664	4,809,706
2054	50,079,235	0	50,079,235	55,020,922	0	55,020,922	4,941,687
2055	51,456,198	0	51,456,198	56,533,724	0	56,533,724	5,077,526

Supplemental Actuarial Valuation as of September 30, 2023

SERS COLA Study: Proposal B – Results

Present Provisions: Eligible retired members of SERS receive post retirement COLAs applied to their base pension benefits (i.e., non-compounded). The base pension benefit for a member is currently the member’s original benefit at retirement (i.e., excluding any COLAs granted prior to the effective date of the proposed change). The current COLA is paid annually to eligible retirees and survivors in an amount equal to 3% annual benefit increases, with a maximum \$300 annual increase. The \$300 annual COLA cap does not increase.

Proposed Provisions: Annual post retirement COLAs (non-compounded) will be based on an amount equal to 3%, with a maximum \$808 annual increase. The \$808 annual COLA cap will be increased each year based on changes in the Consumer Price Index for Americans 62 years of age or older.

Actuarial Information: The following is the result of our September 30, 2023 valuation of the estimated fiscal year 2026 employer DB pension plan contributions for current eligible members due to the proposed plan change:

Actuarial Valuation Results as of September 30, 2023				
Normal Cost FY 2026	<u>Present Provisions</u>	<u>Proposed Provisions</u>	<u>Change</u>	
(1) Total Normal Cost %	11.24%	12.62%	1.38%	
(2) Member Contribution %	4.00%	4.00%	0.00%	
(3) Employer Normal Cost %	7.24%	8.62%	1.38%	
(4) Projected Tier 1 Active Member Payroll for FY 2026	\$ 246,473,775	\$ 246,473,775	\$ 0	
(5) Employer Normal Cost \$ = (3) x (4)	17,844,701	21,246,039	3,401,338	
a. Tier 2 Employer Normal Cost \$	15,509,125	18,755,221	3,246,096	
b. Administrative Expenses	6,324,364	6,324,364	0	
c. Total Employer Normal Cost \$ = (5) + (5a) + (5b)	\$ 39,678,190	\$ 46,325,624	\$ 6,647,434	
Actuarial Accrued Liabilities (AAL)				
(6) AAL - Inactive Members	\$ 16,879,843,126	\$ 18,604,073,496	\$ 1,724,230,370	
(7) AAL - Active Members	2,114,935,964	2,386,082,280	271,146,316	
(8) Total Actuarial Accrued Liabilities	\$ 18,994,779,090	\$ 20,990,155,776	\$ 1,995,376,686	
(9) Funding Value of Assets	13,600,052,800	13,600,052,800	0	
(10) Unfunded Actuarial Accrued Liabilities (UAAL) = (8) - (9)	\$ 5,394,726,290	\$ 7,390,102,976	\$ 1,995,376,686	
Amortization Payment FY 2026				
(11) Initial UAAL Payment	\$ 586,753,859	\$ 586,753,859	\$ 0	
(12) Benefit Change - Inactives UAAL Payment ⁽¹⁾	0	446,649,426	446,649,426	
(13) Benefit Change - Actives UAAL Payment ⁽¹⁾	0	32,038,549	32,038,549	
(14) Total UAAL Payment	\$ 586,753,859	\$ 1,065,441,834	\$ 478,687,975	
(15) Total Computed FY 2026 Employer Contribution = (5c) + (14)	\$ 626,432,049	\$ 1,111,767,458	\$ 485,335,409	

⁽¹⁾ Based on the Funding Policy, changes in inactive member actuarial accrued liabilities as a result of the proposed benefit change were amortized over a closed, 5-year period and changes in active member actuarial accrued liabilities as a result of the proposed benefit change were amortized over a closed, 15-year period.

The number of current benefit recipients impacted by the proposed change in plan provisions is 44,712.

Supplemental Actuarial Valuation as of September 30, 2023 SERS COLA Study: Proposal B – Projections

Fiscal Year	Present Provisions			Proposed Provisions			Change in Total Computed Employer Contribution
	Normal Cost	Amortization Payment	Total Computed Employer Contribution	Normal Cost	Amortization Payment	Total Computed Employer Contribution	
2026	\$39,678,190	\$586,753,859	\$626,432,049	\$46,325,624	\$1,065,441,834	\$1,111,767,458	\$485,335,409
2027	38,042,104	592,163,251	630,205,355	44,320,287	1,070,851,538	1,115,171,825	484,966,470
2028	36,307,647	598,044,492	634,352,139	42,238,235	1,076,732,778	1,118,971,013	484,618,874
2029	34,957,433	639,258,088	674,215,521	40,604,630	1,117,946,375	1,158,551,005	484,335,484
2030	33,965,586	629,108,649	663,074,235	39,389,210	1,107,796,934	1,147,186,144	484,111,909
2031	33,233,467	629,108,649	662,342,116	38,493,033	661,147,509	699,640,542	37,298,426
2032	32,739,811	629,108,648	661,848,459	37,865,561	661,147,508	699,013,069	37,164,610
2033	32,454,064	629,108,649	661,562,713	37,484,860	661,147,508	698,632,368	37,069,655
2034	32,382,356	629,108,648	661,491,004	37,357,745	661,147,508	698,505,253	37,014,249
2035	32,490,170	629,108,648	661,598,818	37,444,571	661,147,509	698,592,080	36,993,262
2036	32,747,726	629,108,648	661,856,374	37,709,711	661,147,508	698,857,219	37,000,845
2037	33,133,299	0	33,133,299	38,129,600	32,038,549	70,168,149	37,034,850
2038	33,633,548	0	33,633,548	38,682,890	32,038,549	70,721,439	37,087,891
2039	34,238,344	0	34,238,344	39,361,720	32,038,549	71,400,269	37,161,925
2040	34,929,875	0	34,929,875	40,141,935	32,038,549	72,180,484	37,250,609
2041	35,697,885	0	35,697,885	41,012,999	0	41,012,999	5,315,114
2042	36,533,616	0	36,533,616	41,965,019	0	41,965,019	5,431,403
2043	37,427,140	0	37,427,140	42,984,790	0	42,984,790	5,557,650
2044	38,372,738	0	38,372,738	44,065,345	0	44,065,345	5,692,607
2045	39,365,884	0	39,365,884	45,201,480	0	45,201,480	5,835,596
2046	40,400,842	0	40,400,842	46,386,941	0	46,386,941	5,986,099
2047	41,477,429	0	41,477,429	47,620,776	0	47,620,776	6,143,347
2048	42,594,829	0	42,594,829	48,902,131	0	48,902,131	6,307,302
2049	43,750,900	0	43,750,900	50,228,311	0	50,228,311	6,477,411
2050	44,943,617	0	44,943,617	51,596,938	0	51,596,938	6,653,321
2051	46,172,581	0	46,172,581	53,007,349	0	53,007,349	6,834,768
2052	47,437,975	0	47,437,975	54,459,748	0	54,459,748	7,021,773
2053	48,739,958	0	48,739,958	55,954,288	0	55,954,288	7,214,330
2054	50,079,235	0	50,079,235	57,491,723	0	57,491,723	7,412,488
2055	51,456,198	0	51,456,198	59,072,479	0	59,072,479	7,616,281

Supplemental Actuarial Valuation as of September 30, 2023

SERS COLA Study: Proposal C – Results

Present Provisions: Eligible retired members of SERS receive post retirement COLAs applied to their base pension benefits (i.e., non-compounded). The base pension benefit for a member is currently the member’s original benefit at retirement (i.e., excluding any COLAs granted prior to the effective date of the proposed change). The current COLA is paid annually to eligible retirees and survivors in an amount equal to 3% annual benefit increases, with a maximum \$300 annual increase. The \$300 annual COLA cap does not increase.

Proposed Provisions: Annual post retirement COLAs (non-compounded) will be based on an amount equal to 4%, with a maximum \$400 annual increase. The \$400 annual COLA cap does not increase.

Actuarial Information: The following is the result of our September 30, 2023 valuation of the estimated fiscal year 2026 employer DB pension plan contributions for current eligible members due to the proposed plan change:

Actuarial Valuation Results as of September 30, 2023			
Normal Cost FY 2026	<u>Present Provisions</u>	<u>Proposed Provisions</u>	<u>Change</u>
(1) Total Normal Cost %	11.24%	11.50%	0.26%
(2) Member Contribution %	4.00%	4.00%	0.00%
(3) Employer Normal Cost %	7.24%	7.50%	0.26%
(4) Projected Tier 1 Active Member Payroll for FY 2026	\$ 246,473,775	\$ 246,473,775	\$ 0
(5) Employer Normal Cost \$ = (3) x (4)	17,844,701	18,485,533	640,832
a. Tier 2 Employer Normal Cost \$	15,509,125	16,591,157	1,082,032
b. Administrative Expenses	6,324,364	6,324,364	0
c. Total Employer Normal Cost \$ = (5) + (5a) + (5b)	\$ 39,678,190	\$ 41,401,054	\$ 1,722,864
Actuarial Accrued Liabilities (AAL)			
(6) AAL - Inactive Members	\$ 16,879,843,126	\$ 17,380,761,471	\$ 500,918,345
(7) AAL - Active Members	2,114,935,964	2,147,362,011	32,426,047
(8) Total Actuarial Accrued Liabilities	\$ 18,994,779,090	\$ 19,528,123,482	\$ 533,344,392
(9) Funding Value of Assets	13,600,052,800	13,600,052,800	0
(10) Unfunded Actuarial Accrued Liabilities (UAAL) = (8) - (9)	\$ 5,394,726,290	\$ 5,928,070,682	\$ 533,344,392
Amortization Payment FY 2026			
(11) Initial UAAL Payment	\$ 586,753,859	\$ 586,753,859	\$ 0
(12) Benefit Change - Inactives UAAL Payment ⁽¹⁾	0	129,759,280	129,759,280
(13) Benefit Change - Actives UAAL Payment ⁽¹⁾	0	4,033,352	4,033,352
(14) Total UAAL Payment	\$ 586,753,859	\$ 720,546,491	\$ 133,792,632
(15) Total Computed FY 2026 Employer Contribution = (5c) + (14)	\$ 626,432,049	\$ 761,947,545	\$ 135,515,496

⁽¹⁾ Based on the Funding Policy, changes in inactive member actuarial accrued liabilities as a result of the proposed benefit change were amortized over a closed, 5-year period and changes in active member actuarial accrued liabilities as a result of the proposed benefit change were amortized over a closed, 15-year period.

The number of current benefit recipients impacted by the proposed change in plan provisions is 59,614.

Supplemental Actuarial Valuation as of September 30, 2023 SERS COLA Study: Scenario C – Projections

Fiscal Year	Present Provisions			Proposed Provisions			Change in Total Computed Employer Contribution
	Normal Cost	Amortization Payment	Total Computed Employer Contribution	Normal Cost	Amortization Payment	Total Computed Employer Contribution	
2026	\$39,678,190	\$586,753,859	\$626,432,049	\$41,401,053	\$720,546,491	\$761,947,544	\$135,515,495
2027	38,042,104	592,163,251	630,205,355	39,727,252	725,955,960	765,683,212	135,477,857
2028	36,307,647	598,044,492	634,352,139	37,926,502	731,837,200	769,763,702	135,411,563
2029	34,957,433	639,258,088	674,215,521	36,542,416	773,050,798	809,593,214	135,377,693
2030	33,965,586	629,108,649	663,074,235	35,515,743	762,901,357	798,417,100	135,342,865
2031	33,233,467	629,108,649	662,342,116	34,772,015	633,142,078	667,914,093	5,571,977
2032	32,739,811	629,108,648	661,848,459	34,274,260	633,142,077	667,416,337	5,567,878
2033	32,454,064	629,108,649	661,562,713	33,985,046	633,142,077	667,127,123	5,564,410
2034	32,382,356	629,108,648	661,491,004	33,924,615	633,142,077	667,066,692	5,575,688
2035	32,490,170	629,108,648	661,598,818	34,045,739	633,142,077	667,187,816	5,588,998
2036	32,747,726	629,108,648	661,856,374	34,326,579	633,142,078	667,468,657	5,612,283
2037	33,133,299	0	33,133,299	34,739,727	4,033,352	38,773,079	5,639,780
2038	33,633,548	0	33,633,548	35,271,468	4,033,352	39,304,820	5,671,272
2039	34,238,344	0	34,238,344	35,909,936	4,033,352	39,943,288	5,704,944
2040	34,929,875	0	34,929,875	36,640,033	4,033,352	40,673,385	5,743,510
2041	35,697,885	0	35,697,885	37,448,574	0	37,448,574	1,750,689
2042	36,533,616	0	36,533,616	38,328,940	0	38,328,940	1,795,324
2043	37,427,140	0	37,427,140	39,268,522	0	39,268,522	1,841,382
2044	38,372,738	0	38,372,738	40,261,956	0	40,261,956	1,889,218
2045	39,365,884	0	39,365,884	41,305,290	0	41,305,290	1,939,406
2046	40,400,842	0	40,400,842	42,392,232	0	42,392,232	1,991,390
2047	41,477,429	0	41,477,429	43,522,511	0	43,522,511	2,045,082
2048	42,594,829	0	42,594,829	44,695,528	0	44,695,528	2,100,699
2049	43,750,900	0	43,750,900	45,908,955	0	45,908,955	2,158,055
2050	44,943,617	0	44,943,617	47,160,736	0	47,160,736	2,217,119
2051	46,172,581	0	46,172,581	48,450,469	0	48,450,469	2,277,888
2052	47,437,975	0	47,437,975	49,778,387	0	49,778,387	2,340,412
2053	48,739,958	0	48,739,958	51,144,672	0	51,144,672	2,404,714
2054	50,079,235	0	50,079,235	52,550,052	0	52,550,052	2,470,817
2055	51,456,198	0	51,456,198	53,994,956	0	53,994,956	2,538,758

Supplemental Actuarial Valuation as of September 30, 2023

SERS COLA Study: Proposal D – Results

Present Provisions: Eligible retired members of SERS receive post retirement COLAs applied to their base pension benefits (i.e., non-compounded). The base pension benefit for a member is currently the member’s original benefit at retirement (i.e., excluding any COLAs granted prior to the effective date of the proposed change). The current COLA is paid annually to eligible retirees and survivors in an amount equal to 3% annual benefit increases, with a maximum \$300 annual increase. The \$300 annual COLA cap does not increase.

Proposed Provisions: Annual post retirement COLAs (non-compounded) will be based on changes in the Consumer Price index for Americans 62 years of age or older (referred to as R-CPI-E). The benefit on the effective date of the proposed change (i.e., including any COLAs granted prior to the effective date of the benefit change) becomes the new base pension benefit. There will be no cap on the amount of the increase.

Actuarial Information: The following is the result of our September 30, 2023 valuation of the estimated fiscal year 2026 employer DB pension plan contributions for current eligible members due to the proposed plan change:

Actuarial Valuation Results as of September 30, 2023				
Normal Cost FY 2026	<u>Present Provisions</u>	<u>Proposed Provisions</u>	<u>Change</u>	
(1) Total Normal Cost %	11.24%	12.72%	1.48%	
(2) Member Contribution %	4.00%	4.00%	0.00%	
(3) Employer Normal Cost %	7.24%	8.72%	1.48%	
(4) Projected Tier 1 Active Member Payroll for FY 2026	\$ 246,473,775	\$ 246,473,775	\$ 0	
(5) Employer Normal Cost \$ = (3) x (4)	17,844,701	21,492,513	3,647,812	
a. Tier 2 Employer Normal Cost \$	15,509,125	17,673,189	2,164,064	
b. Administrative Expenses	6,324,364	6,324,364	0	
c. Total Employer Normal Cost \$ = (5) + (5a) + (5b)	\$ 39,678,190	\$ 45,490,066	\$ 5,811,876	
Actuarial Accrued Liabilities (AAL)				
(6) AAL - Inactive Members	\$ 16,879,843,126	\$ 18,722,698,606	\$ 1,842,855,480	
(7) AAL - Active Members	2,114,935,964	2,459,819,779	344,883,815	
(8) Total Actuarial Accrued Liabilities	\$ 18,994,779,090	\$ 21,182,518,385	\$ 2,187,739,295	
(9) Funding Value of Assets	13,600,052,800	13,600,052,800	0	
(10) Unfunded Actuarial Accrued Liabilities (UAAL) = (8) - (9)	\$ 5,394,726,290	\$ 7,582,465,585	\$ 2,187,739,295	
Amortization Payment FY 2026				
(11) Initial UAAL Payment	\$ 586,753,859	\$ 586,753,859	\$ 0	
(12) Benefit Change - Inactives UAAL Payment ⁽¹⁾	0	477,378,404	477,378,404	
(13) Benefit Change - Actives UAAL Payment ⁽¹⁾	0	40,175,315	40,175,315	
(14) Total UAAL Payment	\$ 586,753,859	\$ 1,104,307,578	\$ 517,553,719	
(15) Total Computed FY 2026 Employer Contribution = (5c) + (14)	\$ 626,432,049	\$ 1,149,797,644	\$ 523,365,595	

⁽¹⁾ Based on the Funding Policy, changes in inactive member actuarial accrued liabilities as a result of the proposed benefit change were amortized over a closed, 5-year period and changes in active member actuarial accrued liabilities as a result of the proposed benefit change were amortized over a closed, 15-year period.

The number of current benefit recipients impacted by the proposed change in plan provisions is 59,614.

**Supplemental Actuarial Valuation
as of September 30, 2023
SERS COLA Study: Proposal D – Projections**

Fiscal Year	Present Provisions			Proposed Provisions			Change in Total Computed Employer Contribution
	Normal Cost	Amortization Payment	Total Computed Employer Contribution	Normal Cost	Amortization Payment	Total Computed Employer Contribution	
2026	\$39,678,190	\$586,753,859	\$626,432,049	\$45,490,065	\$1,104,307,578	\$1,149,797,643	\$523,365,594
2027	38,042,104	592,163,251	630,205,355	43,401,940	1,109,717,252	1,153,119,192	522,913,837
2028	36,307,647	598,044,492	634,352,139	41,260,330	1,115,598,492	1,156,858,822	522,506,683
2029	34,957,433	639,258,088	674,215,521	39,566,507	1,156,812,090	1,196,378,597	522,163,076
2030	33,965,586	629,108,649	663,074,235	38,279,157	1,146,662,650	1,184,941,807	521,867,572
2031	33,233,467	629,108,649	662,342,116	37,315,473	669,284,247	706,599,720	44,257,604
2032	32,739,811	629,108,648	661,848,459	36,631,891	669,284,246	705,916,137	44,067,678
2033	32,454,064	629,108,649	661,562,713	36,195,014	669,284,246	705,479,260	43,916,547
2034	32,382,356	629,108,648	661,491,004	36,012,527	669,284,246	705,296,773	43,805,769
2035	32,490,170	629,108,648	661,598,818	36,040,840	669,284,245	705,325,085	43,726,267
2036	32,747,726	629,108,648	661,856,374	36,252,964	669,284,246	705,537,210	43,680,836
2037	33,133,299	0	33,133,299	36,620,167	40,175,316	76,795,483	43,662,184
2038	33,633,548	0	33,633,548	37,121,119	40,175,316	77,296,435	43,662,887
2039	34,238,344	0	34,238,344	37,745,132	40,175,315	77,920,447	43,682,103
2040	34,929,875	0	34,929,875	38,474,158	40,175,316	78,649,474	43,719,599
2041	35,697,885	0	35,697,885	39,293,834	0	39,293,834	3,595,949
2042	36,533,616	0	36,533,616	40,193,576	0	40,193,576	3,659,960
2043	37,427,140	0	37,427,140	41,160,796	0	41,160,796	3,733,656
2044	38,372,738	0	38,372,738	42,188,604	0	42,188,604	3,815,866
2045	39,365,884	0	39,365,884	43,271,087	0	43,271,087	3,905,203
2046	40,400,842	0	40,400,842	44,401,662	0	44,401,662	4,000,820
2047	41,477,429	0	41,477,429	45,579,792	0	45,579,792	4,102,363
2048	42,594,829	0	42,594,829	46,804,189	0	46,804,189	4,209,360
2049	43,750,900	0	43,750,900	48,072,073	0	48,072,073	4,321,173
2050	44,943,617	0	44,943,617	49,380,906	0	49,380,906	4,437,289
2051	46,172,581	0	46,172,581	50,730,053	0	50,730,053	4,557,472
2052	47,437,975	0	47,437,975	52,119,616	0	52,119,616	4,681,641
2053	48,739,958	0	48,739,958	53,549,664	0	53,549,664	4,809,706
2054	50,079,235	0	50,079,235	55,020,922	0	55,020,922	4,941,687
2055	51,456,198	0	51,456,198	56,533,724	0	56,533,724	5,077,526

Supplemental Actuarial Valuation as of September 30, 2023

SERS COLA Study: Proposal E – Results

Present Provisions: Eligible retired members of SERS receive post retirement COLAs applied to their base pension benefits (i.e., non-compounded). The base pension benefit for a member is currently the member’s original benefit at retirement (i.e., excluding any COLAs granted prior to the effective date of the proposed change). The current COLA is paid annually to eligible retirees and survivors in an amount equal to 3% annual benefit increases, with a maximum \$300 annual increase. The \$300 annual COLA cap does not increase.

Proposed Provisions: Annual post retirement COLAs (non-compounded) will be based on an amount equal to 3%, with a maximum \$808 annual increase. The \$808 annual COLA cap will be increased each year based on changes in the Consumer Price Index for Americans 62 years of age or older. The benefit on the effective date of the proposed change becomes the new base pension benefit.

Actuarial Information: The following is the result of our September 30, 2023 valuation of the estimated fiscal year 2026 employer DB pension plan contributions for current eligible members due to the proposed plan change:

Actuarial Valuation Results as of September 30, 2023				
Normal Cost FY 2026	<u>Present Provisions</u>	<u>Proposed Provisions</u>	<u>Change</u>	
(1) Total Normal Cost %	11.24%	12.62%	1.38%	
(2) Member Contribution %	<u>4.00%</u>	<u>4.00%</u>	<u>0.00%</u>	
(3) Employer Normal Cost %	7.24%	8.62%	1.38%	
(4) Projected Tier 1 Active Member Payroll for FY 2026	\$ 246,473,775	\$ 246,473,775	\$ 0	
(5) Employer Normal Cost \$ = (3) x (4)	17,844,701	21,246,039	3,401,338	
a. Tier 2 Employer Normal Cost \$	15,509,125	18,755,221	3,246,096	
b. Administrative Expenses	6,324,364	6,324,364	0	
c. Total Employer Normal Cost \$ = (5) + (5a) + (5b)	\$ 39,678,190	\$ 46,325,624	\$ 6,647,434	
Actuarial Accrued Liabilities (AAL)				
(6) AAL - Inactive Members	\$ 16,879,843,126	\$ 18,989,597,390	\$ 2,109,754,264	
(7) AAL - Active Members	2,114,935,964	2,386,082,280	271,146,316	
(8) Total Actuarial Accrued Liabilities	\$ 18,994,779,090	\$ 21,375,679,670	\$ 2,380,900,580	
(9) Funding Value of Assets	13,600,052,800	13,600,052,800	0	
(10) Unfunded Actuarial Accrued Liabilities (UAAL) = (8) - (9)	\$ 5,394,726,290	\$ 7,775,626,870	\$ 2,380,900,580	
Amortization Payment FY 2026				
(11) Initial UAAL Payment	\$ 586,753,859	\$ 586,753,859	\$ 0	
(12) Benefit Change - Inactives UAAL Payment ⁽¹⁾	0	546,516,607	546,516,607	
(13) Benefit Change - Actives UAAL Payment ⁽¹⁾	0	32,038,549	32,038,549	
(14) Total UAAL Payment	\$ 586,753,859	\$ 1,165,309,015	\$ 578,555,156	
(15) Total Computed FY 2026 Employer Contribution = (5c) + (14)	\$ 626,432,049	\$ 1,211,634,639	\$ 585,202,590	

⁽¹⁾ Based on the Funding Policy, changes in inactive member actuarial accrued liabilities as a result of the proposed benefit change were amortized over a closed, 5-year period and changes in active member actuarial accrued liabilities as a result of the proposed benefit change were amortized over a closed, 15-year period.

The number of current benefit recipients impacted by the proposed change in plan provisions is 59,121.

Supplemental Actuarial Valuation as of September 30, 2023 SERS COLA Study: Proposal E – Projections

Fiscal Year	Present Provisions			Proposed Provisions			Change in Total Computed Employer Contribution
	Normal Cost	Amortization Payment	Total Computed Employer Contribution	Normal Cost	Amortization Payment	Total Computed Employer Contribution	
2026	\$39,678,190	\$586,753,859	\$626,432,049	\$46,325,624	\$1,165,309,015	\$1,211,634,639	\$585,202,590
2027	38,042,104	592,163,251	630,205,355	44,320,287	1,170,718,719	1,215,039,006	584,833,651
2028	36,307,647	598,044,492	634,352,139	42,238,235	1,176,599,958	1,218,838,193	584,486,054
2029	34,957,433	639,258,088	674,215,521	40,604,630	1,217,813,556	1,258,418,186	584,202,665
2030	33,965,586	629,108,649	663,074,235	39,389,210	1,207,664,114	1,247,053,324	583,979,089
2031	33,233,467	629,108,649	662,342,116	38,493,033	661,147,509	699,640,542	37,298,426
2032	32,739,811	629,108,648	661,848,459	37,865,561	661,147,509	699,013,070	37,164,611
2033	32,454,064	629,108,649	661,562,713	37,484,860	661,147,508	698,632,368	37,069,655
2034	32,382,356	629,108,648	661,491,004	37,357,745	661,147,508	698,505,253	37,014,249
2035	32,490,170	629,108,648	661,598,818	37,444,571	661,147,509	698,592,080	36,993,262
2036	32,747,726	629,108,648	661,856,374	37,709,711	661,147,508	698,857,219	37,000,845
2037	33,133,299	0	33,133,299	38,129,600	32,038,549	70,168,149	37,034,850
2038	33,633,548	0	33,633,548	38,682,890	32,038,549	70,721,439	37,087,891
2039	34,238,344	0	34,238,344	39,361,720	32,038,549	71,400,269	37,161,925
2040	34,929,875	0	34,929,875	40,141,935	32,038,549	72,180,484	37,250,609
2041	35,697,885	0	35,697,885	41,012,999	0	41,012,999	5,315,114
2042	36,533,616	0	36,533,616	41,965,019	0	41,965,019	5,431,403
2043	37,427,140	0	37,427,140	42,984,790	0	42,984,790	5,557,650
2044	38,372,738	0	38,372,738	44,065,345	0	44,065,345	5,692,607
2045	39,365,884	0	39,365,884	45,201,480	0	45,201,480	5,835,596
2046	40,400,842	0	40,400,842	46,386,941	0	46,386,941	5,986,099
2047	41,477,429	0	41,477,429	47,620,776	0	47,620,776	6,143,347
2048	42,594,829	0	42,594,829	48,902,131	0	48,902,131	6,307,302
2049	43,750,900	0	43,750,900	50,228,311	0	50,228,311	6,477,411
2050	44,943,617	0	44,943,617	51,596,938	0	51,596,938	6,653,321
2051	46,172,581	0	46,172,581	53,007,349	0	53,007,349	6,834,768
2052	47,437,975	0	47,437,975	54,459,748	0	54,459,748	7,021,773
2053	48,739,958	0	48,739,958	55,954,288	0	55,954,288	7,214,330
2054	50,079,235	0	50,079,235	57,491,723	0	57,491,723	7,412,488
2055	51,456,198	0	51,456,198	59,072,479	0	59,072,479	7,616,281

Supplemental Actuarial Valuation as of September 30, 2023

SERS COLA Study: Proposal F – Results

Present Provisions: Eligible retired members of SERS receive post retirement COLAs applied to their base pension benefits (i.e., non-compounded). The base pension benefit for a member is currently the member’s original benefit at retirement (i.e., excluding any COLAs granted prior to the effective date of the proposed change). The current COLA is paid annually to eligible retirees and survivors in an amount equal to 3% annual benefit increases, with a maximum \$300 annual increase. The \$300 annual COLA cap does not increase.

Proposed Provisions: Annual post retirement COLAs (non-compounded) will be based on an amount equal to 4%, with a maximum \$400 annual increase. The benefit on the effective date of the proposed change becomes the new base pension benefit. The \$400 annual COLA cap does not increase.

Actuarial Information: The following is the result of our September 30, 2023 valuation of the estimated fiscal year 2026 employer DB pension plan contributions for current eligible members due to the proposed plan change:

Actuarial Valuation Results as of September 30, 2023			
Normal Cost FY 2026	<u>Present Provisions</u>	<u>Proposed Provisions</u>	<u>Change</u>
(1) Total Normal Cost %	11.24%	11.50%	0.26%
(2) Member Contribution %	<u>4.00%</u>	<u>4.00%</u>	<u>0.00%</u>
(3) Employer Normal Cost %	7.24%	7.50%	0.26%
(4) Projected Tier 1 Active Member Payroll for FY 2026	\$ 246,473,775	\$ 246,473,775	\$ 0
(5) Employer Normal Cost \$ = (3) x (4)	17,844,701	18,485,533	640,832
a. Tier 2 Employer Normal Cost \$	15,509,125	16,591,157	1,082,032
b. Administrative Expenses	<u>6,324,364</u>	<u>6,324,364</u>	<u>0</u>
c. Total Employer Normal Cost \$ = (5) + (5a) + (5b)	\$ 39,678,190	\$ 41,401,054	\$ 1,722,864
Actuarial Accrued Liabilities (AAL)			
(6) AAL - Inactive Members	\$ 16,879,843,126	\$ 17,473,017,099	\$ 593,173,973
(7) AAL - Active Members	<u>2,114,935,964</u>	<u>2,147,362,011</u>	<u>32,426,047</u>
(8) Total Actuarial Accrued Liabilities	\$ 18,994,779,090	\$ 19,620,379,110	\$ 625,600,020
(9) Funding Value of Assets	<u>13,600,052,800</u>	<u>13,600,052,800</u>	<u>0</u>
(10) Unfunded Actuarial Accrued Liabilities (UAAL) = (8) - (9)	\$ 5,394,726,290	\$ 6,020,326,310	\$ 625,600,020
Amortization Payment FY 2026			
(11) Initial UAAL Payment	\$ 586,753,859	\$ 586,753,859	\$ 0
(12) Benefit Change - Inactives UAAL Payment ⁽¹⁾	0	153,657,434	153,657,434
(13) Benefit Change - Actives UAAL Payment ⁽¹⁾	0	<u>4,033,352</u>	<u>4,033,352</u>
(14) Total UAAL Payment	\$ 586,753,859	\$ 744,444,645	\$ 157,690,786
(15) Total Computed FY 2026 Employer Contribution = (5c) + (14)	\$ 626,432,049	\$ 785,845,699	\$ 159,413,650

⁽¹⁾ Based on the Funding Policy, changes in inactive member actuarial accrued liabilities as a result of the proposed benefit change were amortized over a closed, 5-year period and changes in active member actuarial accrued liabilities as a result of the proposed benefit change were amortized over a closed, 15-year period.

The number of current benefit recipients impacted by the proposed change in plan provisions is 59,614.

Supplemental Actuarial Valuation as of September 30, 2023 SERS COLA Study: Proposal F – Projections

Fiscal Year	Present Provisions			Proposed Provisions			Change in Total Computed Employer Contribution
	Normal Cost	Amortization Payment	Total Computed Employer Contribution	Normal Cost	Amortization Payment	Total Computed Employer Contribution	
2026	\$39,678,190	\$586,753,859	\$626,432,049	\$41,401,053	\$744,444,645	\$785,845,698	\$159,413,649
2027	38,042,104	592,163,251	630,205,355	39,727,252	749,668,029	789,395,281	159,189,926
2028	36,307,647	598,044,492	634,352,139	37,926,502	755,520,271	793,446,773	159,094,634
2029	34,957,433	639,258,088	674,215,521	36,542,416	796,733,868	833,276,284	159,060,763
2030	33,965,586	629,108,649	663,074,235	35,515,743	786,584,427	822,100,170	159,025,935
2031	33,233,467	629,108,649	662,342,116	34,772,015	633,326,400	668,098,415	5,756,299
2032	32,739,811	629,108,648	661,848,459	34,274,260	633,326,399	667,600,659	5,752,200
2033	32,454,064	629,108,649	661,562,713	33,985,046	633,326,400	667,311,446	5,748,733
2034	32,382,356	629,108,648	661,491,004	33,924,615	633,326,399	667,251,014	5,760,010
2035	32,490,170	629,108,648	661,598,818	34,045,739	633,326,400	667,372,139	5,773,321
2036	32,747,726	629,108,648	661,856,374	34,326,579	633,326,398	667,652,977	5,796,603
2037	33,133,299	0	33,133,299	34,739,727	4,033,352	38,773,079	5,639,780
2038	33,633,548	0	33,633,548	35,271,468	4,033,352	39,304,820	5,671,272
2039	34,238,344	0	34,238,344	35,909,936	4,033,352	39,943,288	5,704,944
2040	34,929,875	0	34,929,875	36,640,033	4,033,352	40,673,385	5,743,510
2041	35,697,885	0	35,697,885	37,448,574	0	37,448,574	1,750,689
2042	36,533,616	0	36,533,616	38,328,940	0	38,328,940	1,795,324
2043	37,427,140	0	37,427,140	39,268,522	0	39,268,522	1,841,382
2044	38,372,738	0	38,372,738	40,261,956	0	40,261,956	1,889,218
2045	39,365,884	0	39,365,884	41,305,290	0	41,305,290	1,939,406
2046	40,400,842	0	40,400,842	42,392,232	0	42,392,232	1,991,390
2047	41,477,429	0	41,477,429	43,522,511	0	43,522,511	2,045,082
2048	42,594,829	0	42,594,829	44,695,528	0	44,695,528	2,100,699
2049	43,750,900	0	43,750,900	45,908,955	0	45,908,955	2,158,055
2050	44,943,617	0	44,943,617	47,160,736	0	47,160,736	2,217,119
2051	46,172,581	0	46,172,581	48,450,469	0	48,450,469	2,277,888
2052	47,437,975	0	47,437,975	49,778,387	0	49,778,387	2,340,412
2053	48,739,958	0	48,739,958	51,144,672	0	51,144,672	2,404,714
2054	50,079,235	0	50,079,235	52,550,052	0	52,550,052	2,470,817
2055	51,456,198	0	51,456,198	53,994,956	0	53,994,956	2,538,758

Supplemental Actuarial Valuation as of September 30, 2023 SERS COLA Study Comments

Comment 1 — The calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based upon present and proposed plan provisions that are outlined in this report. If you have reason to believe that the assumptions that were used are unreasonable, that the Plan provisions are incorrectly described, that important Plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact the authors of this report prior to relying on information in the report.

Comment 2 — Price inflation in the future defies accurate prediction by anyone. The price inflation assumption for annual actuarial valuation purposes is 2.35% and is based upon changes in the CPI-U. Proposals A, B, D and E are based upon changes in the Consumer Price index for Americans 62 years of age or older (referred to as R-CPI-E). A comparison of increases in the CPI-U and the R-CPI-E over various time periods ending in 2023 are presented below:

Geometric Averages	June to June		Dec to Dec	
	CPI-U	R-CPI-E	CPI-U	R-CPI-E
40 year	2.84%	2.99%	2.81%	2.97%
35 year	2.75%	2.89%	2.71%	2.86%
30 year	2.53%	2.63%	2.51%	2.63%
25 year	2.54%	2.63%	2.54%	2.65%
20 year	2.57%	2.64%	2.58%	2.66%
15 year	2.24%	2.30%	2.55%	2.60%
10 year	2.71%	2.82%	2.79%	2.92%
5 year	3.90%	3.89%	4.07%	4.10%

In order to measure the liabilities associated with the proposed plan changes in Proposals A, B, D and E, an assumption about changes in the R-CPI-E was required. Based upon the table above, it was assumed that annual changes in the R-CPI-E would be 2.45%.

It is worth noting that the proposed inflation index (R-CPI-E) is a research index with a number of limitations. Stakeholders may want to consider the use of a common index for the purpose of the proposals.

Comment 3 — For the purpose of this study, we assumed that alternate payees now in pay status (i.e., former spouses of current and future retirees) were eligible for the same proposed benefits as the retiree.

Supplemental Actuarial Valuation as of September 30, 2023 SERS COLA Study Comments (Concluded)

Comment 4 — The reader of this report should keep in mind that actuarial calculations are mathematical estimates based on current data and assumptions about future events (which may or may not materialize). Please note that actuarial calculations can and do vary from one valuation year to the next. As a result, the cost impact of the proposed changes shown in this study will fluctuate over time.

Comment 5 — No statement in this report is intended to be interpreted as a recommendation in favor of the changes, or in opposition to them.

Comment 6 — This proposal was based on a valuation date of September 30, 2023 and assumes that all actuarial assumptions are met in the future, unless otherwise noted.

Comment 7 — The impact of Proposals A, B, D and E will vary depending on the base pension benefit and/or future levels of price inflation. For example, under Proposal A, individuals with an original pension benefit of \$10,000 per year or less will see a reduction in their annual COLA in years where the change in the R-CPI-E is less than 3.0%.

Comment 8 — There may be cases where schedules do not add, or where they do not exactly balance to other related schedules due to rounding.