Michigan State Employees' Retirement System

Annual Actuarial Valuation Report

September 30, 2024

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April 21, 2025

Mr. Anthony Estell
Director, Office of Retirement Services
530 W. Allegan
Lansing, Michigan 48933

Re: Michigan State Employees' Retirement System - Actuarial Valuation as of September 30, 2024

Dear Mr. Estell:

The results of the September 30, 2024 actuarial valuation of the Michigan State Employees' Retirement System (SERS) pension benefits are presented in this report. The purpose of the valuation was to measure the System's funding progress and to determine the employer contribution for the 2026-2027 fiscal year, and to provide actuarial information for the System's financial report. The report should not be relied upon for any other purpose. This report may be provided to parties other than the Office of Retirement Services (ORS) only in its entirety and only with the permission of the Office of Retirement Services. GRS is not responsible for unauthorized use of this report.

The valuation was based upon information, furnished by the Office of Retirement Services, concerning Retirement System benefits, financial transactions, and active members, terminated members, retirees and beneficiaries. Data was checked for internal and year-to-year consistency, but was not audited by us. As a result, we are unable to assume responsibility for the accuracy or completeness of the data provided. Year 2005's valuation results were not prepared by GRS and are presented for comparison with the current year's results.

The valuation summarized in this report involves actuarial calculations that require making assumptions about future events. We believe that the assumptions and methods used in this report are reasonable and appropriate. 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). However, other assumptions and methods could also be reasonable and could result in materially different results. Some of the numbers in this report are rounded. The use of the rounded numbers for plan liabilities should not imply a lack of precision. In addition, because it is not possible or practical to consider every possible contingency, we may use summary information, estimates or simplifications or calculations to facilitate the modeling of future events. We may also exclude factors or data that we deem to be immaterial.

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.

Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. This valuation was based on the assumption that the plan sponsor will continue to be able to make any contributions necessary to fund the plan in the future. A determination of the plan sponsor's ability to make the necessary contributions in the future is beyond the scope of our expertise and was not performed by us.

To the best of our knowledge, this report is accurate and fairly presents the actuarial position of the Retirement System. The valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the applicable State statutes. Mita D. Drazilov, Louise M. Gates, and Shana M. Neeson are independent of the plan sponsor and are Members of the American Academy of Actuaries (MAAA) who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. It is our opinion that the actuarial assumptions used for the valuation produce results which are reasonable.

Sincerely,
Gabriel, Roeder, Smith & Company

Mita D. Drazilov, ASA, FCA, MAAA

Louise M. Gates, ASA, FCA, MAAA

Shana M. Neeson, ASA, FCA, MAAA

MDD/LMG/SMN

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Executive Summary/Board Summary

1. Required Employer Contributions to Support Retirement Benefits

The computed employer contribution for fiscal year 2027 is shown below. Computed contributions are displayed as annual dollar amounts. The Retirement System is closed to new members and as a result, contributions expressed as percentages of active member payroll are not useful. We understand that the current policy is to contribute on the basis of the dollar amount shown below plus any reconciliation payments established by subsection 38(5) of the SERS statute.

Contribution $
$573,738,762

2. Contribution Comparison

The table below compares the results of this valuation of the Retirement System with the results of the prior year's valuation.

Valuation Date	9/30/2023	9/30/2024
Contribution $	$626,432,049	$573,738,762

3. Dedicated Gains Policy

In 2017, the Board adopted a Dedicated Gains Policy. The purpose of the Policy is to reduce the investment return assumption for actuarial valuation purposes if the fiscal year's net market value rate of return exceeds a certain amount. In accordance with discussions with ORS staff for purposes of the September 30, 2021 funding valuation, the excess return first eliminates the amount of the September 30, 2020 funding value of assets that exceeded the September 30, 2020 market value of assets. The remaining excess return is then used to reduce the investment return assumption to offset the increase in the computed employer contribution from where it otherwise would have been. Starting with the September 30, 2021 funding valuation, in accordance with modifications to the Dedicated Gains Policy, the Dedicated Gains Policy cannot lower the investment return assumption below 6.00%.

For SERS, the following is applicable:

- For normal cost purposes, the amount of excess investment return is sufficient to cover the increase in the employer normal cost for the first year only.

For the September 30, 2024 valuation, the investment return assumption remained at 6.00% as a result of the policy. Please see page C-3 for additional detail.

4. Reasons for Change

There are three general reasons why contributions change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions used to predict future occurrences and valuation methods. The third is the difference during the year between the plan's actual experience and what the assumptions predicted.

No benefit changes were reported to the actuary and no assumption or method changes were made in connection with this valuation of the System. System experience for the year ending September 30, 2024 was overall favorable and is described in more detail in Section B of this report.

5. Funding Policy

The Retirement Board adopted a Funding Policy for use in the September 30, 2023 and later actuarial valuations of the Retirement System. Our understanding of the provisions of this Funding Policy are detailed in Section G of this report.

SECTION A

INTRODUCTION

Contribution Requirements

Development of Employer Contributions for the Indicated Valuation Date

	Contributions for	September 30 2023	September 30 2024
(1)	Fiscal Year Ending September 30,	2026	2027
(2)	Total Normal Cost of Benefits (as a % of member pay)	11.24%	11.19%
(3)	Member Contribution %	4.00%	4.00%
(4)	Employer Normal Cost % = (2) - (3)	7.24%	7.19%
(5)	Projected Tier 1 Active Member Payroll for Applicable Fiscal Year	$ 246,473,775	$ 210,577,476
(6)	Employer Normal Cost $ = (4) x (5)	17,844,701	15,140,520
	a. Tier 2 Employer Normal Cost $	15,509,125	16,842,764
	b. Administrative Expenses	6,324,364	6,251,140
	c. Total Employer Normal Cost $ = (6) + (6a) + (6b)	$ 39,678,190	$ 38,234,424
(7)	Total Accrued Liability	18,994,779,090	18,569,428,080
(8)	Funding Value of Assets	13,600,052,800	13,815,977,749
(9)	Unfunded Actuarial Accrued Liabilities (UAAL) = (7) - (8)	$ 5,394,726,290	$ 4,753,450,331
	a. Present Value of Future Reconciliation Payments	0	0
	b. Net UAAL to be Amortized = (9) - (9a)	$ 5,394,726,290	$ 4,753,450,331
(10)	Amortization Period (years)	11	10
(11)	Amortization Factor (level dollar payments)	8.12118315	7.57874546
(12)	Amortization Payment $ (not less than $0)	$ 586,753,859	$ 535,504,338
(13)	Total Computed Employer Contribution = (6c) + (12)	**$ 626,432,049**	**$ 573,738,762**

Computed Employer Contributions

Based on the assumptions in Section E, the employer normal cost rate for Tier 1 (i.e., defined benefit plan) members of the Michigan State Employees' Retirement System is expected to be 7.19% of payroll. However, there is also an employer normal cost contribution needed to fund the disability and death-in-service benefits for the Tier 2 (i.e., defined contribution plan) member population. An amortization payment is also required to finance the UAAL. The sum of these contributions is the computed employer contribution.

Contribution Requirements

Determining Employer Dollar Contributions

For any period of time, the percent-of-payroll contribution rate needs to be converted to dollars, then promptly contributed to the Retirement System. The employer normal cost rate (expressed as a % of active member payroll) is 7.19%. Applying the employer normal cost contribution rate of 7.19% to the projected payroll for the 2027 fiscal year produces annual employer normal cost contributions of $15,140,520. The Tier 2 annual employer normal cost contributions are $16,842,764. The normal cost contribution for administrative expenses is $6,251,140. The amortization payment for funding the UAAL, $535,504,338, when added together produces a total employer contribution of $573,738,762. This contribution requirement is needed in addition to the reconciliation payment required by subsection 38(5) of the SERS statute.

Disability and Death-in-Service Benefits for Tier 2 Participants

Section 67a of the SERS statute provides that if a Tier 2 participant becomes disabled or dies in State employment, there may be a disability pension or survivor pension payable from the defined benefit (DB) plan. The pension amount would be based on the regular disability and death-in-service provisions of the defined benefit plan, but would be reduced to reflect the value of the distribution from the employer portion of the participant's defined contribution (DC) account. Beginning with the September 30, 2010 annual actuarial valuation, this Tier 2 benefit provision is included in the calculation of liabilities and the employer contribution requirement. In prior years, there was no advance funding for this benefit provision. When a Tier 2 participant became disabled or died in employment and a defined benefit pension was payable, an actuarial loss occurred and future employer contribution requirements were increased.

Discussion of Changes

Revisions in Benefits

There have been no benefit revisions reported to GRS in connection with this valuation of the Retirement System.

Revisions in Actuarial Assumptions or Methods

There have been no revisions in assumptions or methods since the last valuation of the System.

Actuarial Experience

Actuarial experience during the year ended September 30, 2024 was more favorable overall than anticipated by the actuarial assumptions. The net actuarial gain was approximately $266 million. The gain was due primarily to favorable investment experience. Pages B-2, B-3 and C-3 include additional information.

Comment on the Investment Markets

Investment markets continue to be volatile. The actuarial value of assets (funding value), used to determine both the funded status and the required employer contribution, is based on a 5-year smoothed value of assets. This helps to reduce the volatility of the valuation results.

As of September 30, 2024, the actuarial value of assets was approximately 94.9% of the market value of assets. If the September 30, 2024 results were based on the market value of assets instead of the actuarial value of assets, the funded percent of the plan would be 78.4% (instead of 74.4%).

Measures of Financial Soundness

The purpose of this section of the report is to provide certain measures which indicate the financial soundness of the program. These measures relate to long term solvency and level funding.

The various percentages listed in this section as of a single valuation date are not overly significant standing alone. What is more significant is the trend of the rates over a period of years. It is also important to keep in mind that each time benefits are revised, actuarial liabilities are created or diminished. In addition, changes in actuarial assumptions result in changes to the measurement of actuarial liabilities. Any changes in actuarial liabilities are financed systematically over a period of future years. All actuarially computed values in this analysis are based on the actuarial assumptions utilized in the respective years' actuarial valuations.

Long Term Funding Progress

Over the longer term, the funding progress of an ongoing plan can be measured by comparing the actuarial value of assets to an amount known as the Actuarial Accrued Liability (AAL) under the Entry Age actuarial cost method. This item has often been called the "past service liability." The AAL may be affected immediately by any revisions in benefits or assumptions. The accumulation of assets to equal the AAL can be considered a long range funding goal. Largely because of periodic benefit increases and poor investment experience since the early 2000s, very few retirement programs have attained this goal.

Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	% of AAL Covered by Assets
9/30/2024	$ 13,815,977,749	$18,569,428,080	74.4%
9/30/2023[1]	13,600,052,800	18,994,779,090	71.6
9/30/2023	13,600,052,800	19,273,250,081	70.6

[1] *Revised actuarial assumptions and/or methods.*

The table above illustrates that the funded percent has increased since the prior year. Page B-7 of this report shows the funded percent for a longer period and in greater detail. In particular, the funded percent for current benefit recipients is now 83.1% (compared to 80.9% last year).

Measures of Financial Soundness

Level Contributions

The actuarial assumptions and actuarial cost method have been chosen with the intent of producing required normal cost contributions which are expected to remain fairly level as a percentage of an active member's payroll. In a closed plan, the normal cost dollar amount will eventually decline as active members retire and terminate employment.

Valuation Date	Employer Normal Cost	Amortization Payment	Total Contribution
9/30/2024	$ 38,234,424	$535,504,338	$573,738,762
9/30/2023[1]	39,678,190	586,753,859	626,432,049
9/30/2023	41,759,203	625,562,905	667,322,108

[1] *Revised actuarial assumptions and/or methods.*

A major factor affecting the stability of the contribution requirements shown above is how well the actual plan experience compares to the actuarial assumptions. The value of the difference between what actually occurred and what was assumed to occur is called the actuarial gain or loss. Gains tend to lower the subsequent cost of the program while losses tend to cause subsequent costs to rise.

Year Ending	Actuarial Gain/(Loss)
9/30/2024	$ 266,123,262
9/30/2023	(52,063,531)

The experience gain for the year ending September 30, 2024 was 1.40% of the beginning of year actuarial accrued liability.

Analysis of all the benchmarks in this section over a period of years, will provide an indication of whether the program is becoming financially stronger or weaker.

Other Observations

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 6.00% on the actuarial value of assets), it is expected that:

(1) employer normal cost dollar amounts for Tier 1 will decrease as active payroll declines due to the closed nature of the plan,
(2) amortization payment dollar amounts will remain level from fiscal year 2027 through fiscal year 2036,
(3) the unfunded actuarial accrued liability will be fully amortized by September 30, 2036, and
(4) the funded status of the plan will gradually trend towards a 100% funded ratio.

When selecting a contribution allocation procedure, the following three items should be considered, including the balance amongst the three items:

(1) Benefit security,
(2) Intergenerational equity, and
(3) Contribution stability and predictability.

Generally, given the nature of public employee retirement systems (e.g., level contribution financing objective and perceived ongoing nature of the plan or plan sponsor), intergenerational equity and contribution stability and predictability have received more consideration than benefit security when contribution allocation procedures are selected. However, given the importance of benefit security to any retirement system, we suggest that contributions to the System in excess of those presented in this report be considered.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the actuarial value of assets. Unless otherwise indicated, with regards to any funded status measurements presented in this report:

(1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.
(2) The measurement is inappropriate for assessing the need for or the amount of future employer contributions.
(3) The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

Risks Associated with Measuring the Actuarial Accrued Liability and the Total Computed Employer Contribution

The determination of the actuarial accrued liability and the total computed employer contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the actuarial accrued liability and the total computed employer contribution that result from the differences between actual experience and the actuarial assumptions. 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 due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. **Other demographic risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant amount of assets held in trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	September 30,				
	2024	**2023**	**2022**	**2021**	**2020**
Ratio of actives to retirees and beneficiaries *	0.1	0.1	0.1	0.1	0.1
Ratio of net cash flow to market value of assets	(5.4)%	(5.8)%	(6.0)%	(5.4)%	(6.6)%
Duration of the actuarial accrued liability	9.19	9.35	9.78	9.44	9.58

** Tier 1 actives*

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of actives to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

Duration of the Actuarial Accrued Liability

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, a duration of 10 indicates that the actuarial accrued liability would increase approximately 10% if the assumed rate of return were lowered 1%.

Low-Default-Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the "Low-Default-Risk Obligation Measure" (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

"The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the "right" liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan's funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**"

Comparing the Accrued Liabilities and the LDROM

One of the fundamental financial objectives of SERS is to finance each member's retirement benefits over the period from the member's date of hire until the member's projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities of SERS is set equal to the expected return on the System's diversified portfolio of assets (referred to sometimes as the investment return assumption). For SERS, the investment return assumption is 6.00%.

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the projected unit credit actuarial cost method and discount rates based upon the September 2024 Treasury Yield Curve Spot Rates (monthly average). The 1-, 5-, 10-, and 30-year rates follow: 4.04%, 3.54%, 3.66%, and 4.14%.

Presented below are the actuarial accrued liability and the LDROM as of September 30, 2024 for SERS.

Type of Member	Valuation Accrued Liabilities	LDROM
Retirees	$ 16,413,461,328	$ 19,748,606,519
Deferreds[1]	268,595,570	349,373,494
Actives	1,887,371,182	2,470,623,205
Totals	**$ 18,569,428,080**	**$ 22,568,603,218**

[1] *Includes pending refunds and a liability for employees who transferred to the DC pension plan in connection with PA 264 of 2011.*

Low-Default-Risk Obligation Measure

Commentary Regarding the LDROM

Some ways in which the LDROM can assist the State of Michigan Retirement Board in a decision-making process include:

(1) It provides information to potentially allow for better risk management for SERS.
(2) It places the appropriateness of potential employer contribution rate reductions or benefit enhancements in a better context.
(3) It provides more complete information regarding the benefit security of the membership's benefits earned as of the measurement date.

Potentially Allows for Better Risk Management: A very useful risk metric to exhibit potential contribution rate volatility (or amortization period volatility for fixed rate plans) is the ratio of assets to payroll or AAL to payroll. How could we reduce that potential contribution rate volatility (or amortization period volatility for fixed rate plans)? The LDROM and liability driven investing (LDI) are closely related concepts.

Other than reducing benefits, all other things being equal, the only way to reduce that volatility is to immunize (i.e., LDI) a portion of the System's liability. This does not mean that the System needs to immunize all of the liability. For example, if they could immunize half of it, they could reduce the contribution rate volatility in half. This would require the actuary to use a cash flow matching method to value that portion of the liabilities. This means that the actuary would not use the System's investment return assumption for this portion of the liability, but the yield curve resulting from the fixed income portfolio that is being used to immunize the liability. The value of the assets (i.e., fixed income portfolio) and the value of the immunized liability would move in tandem with any changes (up or down) in future interest rates. The result being that the immunized portion of the System's liability would reduce the potential of producing new unfunded actuarial accrued liabilities. However, the fixed income portfolio would still have the minor potential for credit default risk.

Places the Appropriateness of Potential Employer Contribution Rate Reductions or Benefit Enhancements in a Better Context: Many Public Employees Retirement Systems (PERS) have adopted a funding policy. Many funding policies already take into account the System's funded ratio (based upon the AAL) when considering whether to allow for benefit enhancements or contribution rate reductions. For example, a System may not allow for a benefit enhancement if the funded ratio does not exceed a certain threshold. Similarly, a System may not allow for an employer contribution rate reduction in some circumstances. For example, a reduction to the employer normal cost contribution may not be allowed until the System reaches a funded ratio of 120%. Given the fact that most criteria are based upon the expectation of earning the investment return assumption, a System may want to consider extending these criteria to a funded ratio based upon the LDROM in addition to the AAL.

Provides more Complete Information Regarding the Benefit Security of the Membership's Benefits Earned as of the Measurement Date: Too often a high funded ratio (e.g., 100% funded) on an AAL basis is interpreted as benefit security for the participants. The fact that this funded ratio is based upon an expected measure is many times overlooked. If the AAL and LDROM measures are relatively close, then the System at least has the opportunity to make benefits payable in the future more secure.

SECTION B

FUNDING RESULTS

Present Value of Future Benefits and Accrued Liability

Determination of Unfunded Accrued Liability as of September 30, 2024

	All Divisions
A. Accrued Liability	
1. For retirees and beneficiaries	$ 16,413,461,328
2. For vested and other terminated members[1]	232,206,058
3. For other inactive members[2]	36,389,512
4. For present active members	
a. Value of expected future benefit payments	2,193,702,352
b. Value of future normal costs	306,331,170
c. Active member accrued liability: (a) - (b)	1,887,371,182
5. Total accrued liability	18,569,428,080
B. Present Valuation Assets (Funding Value)	13,815,977,749
C. Unfunded Accrued Liability: (A.5) - (B)	$ 4,753,450,331
D. Funding Ratio: (B) / (A.5)	74.4%

[1]*Includes pending refunds.*
[2]*Liability for employees who transferred to the DC pension plan in connection with PA 264 of 2011.*

Experience Gain/(Loss)

A. Derivation of Actuarial Gain/(Loss):		
1. Unfunded Actuarial Accrued Liability (UAAL) - Previous Valuation	$	5,394,726,290
2. Total Normal Cost (employer plus member) for Year Ending 9/30/2024		59,063,119
3. Total Contributions (employer plus member) for Year Ending 9/30/2024		737,544,938
4. Interest at 6.0% on:		
a. UAAL: .060 x (1)		323,683,577
b. Normal Cost and Contributions: .030 x [(2) - (3)]		(20,354,455)
c. Net Total: (a) + (b)		303,329,122
5. Change in UAAL due to Benefit Changes		0
6. Change in UAAL due to Assumption/Method Changes		0
7. Expected UAAL Current Year: (1) + (2) - (3) + (4c) + (5) + (6)		5,019,573,593
8. Actual UAAL Current Year		4,753,450,331
9. Experience Gain/(Loss): (7) - (8)	$	266,123,262
B. Approximate Portion of Gain/(Loss) due to Investments	$	205,438,049
C. Approximate Portion of Gain/(Loss) due to Liabilities: (A.9) - (B)	$	60,685,213

The schedule above shows the net aggregate experience for the System. The next page shows this experience in detail.

Detailed Experience Gain/(Loss)

Gains/(Losses) during the Year Ended September 30, 2024
Resulting from Differences between Assumed and Actual Experience

TYPE OF ACTIVITY

	Gain/(Loss)
1. **Retirements** (including disability retirement). If members retire at older ages or with lower final average pay than assumed, there is a gain. If younger ages or higher average pays, a loss.	$ 20,751,756
2. **Withdrawal from Employment** (including death-in-service). If more liabilities are released by withdrawals and deaths than assumed, there is a gain. If smaller releases, a loss.	16,914,069
3. **Pay Increases.** If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(6,211,477)
4. **Investment Income.** If there is greater investment income than assumed, there is a gain. If less income, a loss.	205,438,049
5. **Death After Retirement.** If retirants and inactive vested members live longer than assumed, there is a loss. If not as long, a gain.	35,147,061
6. **Rehires.** Rehires into the System will generally result in an actuarial loss.	-
7. **Other.** Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, etc.	(5,916,196)
8. **Composite Gain/(Loss) During Year.**	**$ 266,123,262**

Experience Gain/(Loss)

Five-Year History
(Amounts Shown in Thousands)

Plan Year Ending September 30	Experience Gain/(Loss)	Gain/(Loss) Due to Investments	Actuarial Value of Investments	Investment Gain/(Loss) as % of Assets
2024	$ 266,123	$ 205,438	$ 13,815,978	1.49%
2023	(52,064)	(36,660)	13,600,053	(0.27)
2022	(142,391)	(88,583)	13,616,906	(0.65)
2021	1,427,343	1,330,686	13,690,059	9.72
2020	(55,732)	(80,212)	12,296,458	(0.65)

Plan Year Ending September 30	Gain/(Loss) Due to Liabilities	Actuarial Accrued Liability	Liability Gain/(Loss) as % of Accrued Liability
2024	$ 60,685	$ 18,569,428	0.33%
2023	(15,404)	18,994,779	(0.08)
2022	(53,808)	19,568,069	(0.27)
2021	96,657	19,799,364	0.49
2020	24,480	18,742,755	0.13

Historical Funding Levels for Actuarial Accrued Liabilities

(Dollar Amounts Shown in Thousands)

Valuation Date September 30	Actuarial Accrued Liability	Actuarial Value of Assets	Funded Ratio	Unfunded/ (Overfunded) Accrued Liability	Active Member Reported Payroll	Unfunded/(Overfunded) As % of Active Payroll
2011	$15,596,984	$ 10,212,036	65.5%	$ 5,384,948	$ 1,276,058	422.0 %
2012	15,654,138	9,447,057	60.3	6,207,081	1,155,591	537.1
2013	15,647,718	9,437,627	60.3	6,210,091	1,081,729	574.1
2014	15,770,544	9,961,903	63.2	5,808,641	1,010,987	574.6
2014 [1]	16,172,938	9,961,903	61.6	6,211,035	1,010,987	614.4
2015	16,237,490	10,416,577	64.2	5,820,913	922,093	631.3
2016	16,290,506	10,937,446	67.1	5,353,060	850,584	629.3
2016 [1]	17,015,799	10,937,446	64.3	6,078,353	850,584	714.6
2017	17,107,524	11,407,393	66.7	5,700,131	780,135	730.7
2017 [1]	17,880,549	11,883,784	66.5	5,996,765	780,135	768.7
2018	17,836,468	12,149,374	68.1	5,687,094	702,141	810.0
2018 [1]	18,995,244	12,494,361	65.8	6,500,883	702,141	925.9
2019	18,921,131	12,374,071	65.4	6,547,060	617,584	1060.1
2020	18,742,755	12,296,458	65.6	6,446,297	537,027	1,200.4
2021	18,492,141	12,764,839	69.0	5,727,302	459,576	1,246.2
2021 [1]	19,799,364	13,690,059	69.1	6,109,305	459,576	1,329.3
2022	19,568,069	13,616,906	69.6	5,951,163	403,056	1,476.5
2023	19,273,250	13,600,053	70.6	5,673,197	364,450	1,556.7
2023 [1]	18,994,779	13,600,053	71.6	5,394,726	364,450	1,480.2
2024	18,569,428	13,815,978	74.4	4,753,450	319,848	1,486.2

[1] *Revised actuarial assumptions and/or methods.*

Note that in a closed retirement system the unfunded actuarial accrued liability expressed as a percentage of payroll is expected to increase over time due to the reduction in payroll.

Computed and Actual State Contributions
Historical Comparison

Fiscal Year Ending September 30	Valuation Date September 30	Contribution Rates As Percents of Valuation Payroll	Actual Payroll	Employer Contribution for Fiscal Year	
				Computed [3]	Actual
2014	2013	N/A	$ 1,006,632,785	$ 624,467,122	$ 705,100,454
2015	2014	N/A	946,976,960	614,805,786	0
2015	2014 [2]	N/A	946,976,960	654,515,057	749,332,013
2016	2015	N/A	872,358,155	645,508,641	716,464,627
2017	2015	N/A	792,083,793	645,508,641	703,130,797
2018	2016	N/A	712,450,393	602,196,668	650,739,520
2019	2016	N/A	637,131,823	537,402,616	0
2019	2016 [2]	N/A	637,131,823	602,196,668	600,083,089
2020	2017	N/A	567,970,914	581,246,070	0
2020	2017 [2]	N/A	567,970,914	600,597,510	613,728,653
2021	2018	N/A	480,782,135	583,470,138	0
2021	2018 [2]	N/A	480,782,135	665,141,237	659,639,389
2022	2019	N/A	419,503,917	685,627,678	688,301,031
2023	2020	N/A	378,433,182	684,709,853	711,551,512
2024	2021	N/A	344,050,692	615,593,353	723,059,998
2024	2021 [2]	N/A	344,050,692	645,166,174	723,059,998
2025 [1]	2022	N/A		665,630,721	
2026 [1]	2023	N/A		667,322,108	
2026 [1]	2023 [2]	N/A		626,432,049	
2027 [1]	2024	N/A		573,738,762	

[1] *For the years ending September 30, 2025, September 30, 2026, and September 30, 2027 the actual payroll and actual contributions are not yet known.*

[2] *Revised actuarial assumptions and/or methods.*

[3] *Computed amounts do not include reconciliation payments required by subsection 38(5) of the SERS statute.*

Historical Funding Levels for Prioritized Actuarial Accrued Liability

Valuation Date September 30	Actuarial Accrued Liability ($ in Millions) (1) Active Member Contributions	(2) Retirants and Beneficiaries	(3) Active and Inactive Members (Employer Financed Portion)	Valuation Assets ($ in Millions)	Portion of Actuarial Accrued Liability Covered by Assets (1)	(2)	(3)	(4) [1]
2011	$ 93	$ 11,197	$ 4,307	$ 10,212	100%	90.4%	0.0%	65.5%
2012	121	11,392	4,141	9,447	100	81.9	0.0	60.3
2013	162	11,612	3,874	9,438	100	79.9	0.0	60.3
2014	195	11,869	3,707	9,962	100	82.3	0.0	63.2
2014 [2]	195	12,149	3,829	9,962	100	80.4	0.0	61.6
2015	220	12,483	3,534	10,417	100	81.7	0.0	64.2
2016	239	12,732	3,320	10,937	100	84.0	0.0	67.1
2016 [2]	239	13,240	3,537	10,937	100	80.8	0.0	64.3
2017	246	13,549	3,313	11,407	100	82.4	0.0	66.7
2017 [2]	246	14,104	3,531	11,884	100	82.5	0.0	66.5
2018	250	14,337	3,249	12,149	100	83.0	0.0	68.1
2018 [2]	250	15,259	3,486	12,494	100	80.2	0.0	65.8
2019	242	15,564	3,115	12,374	100	77.9	0.0	65.4
2020	232	15,783	2,728	12,296	100	76.4	0.0	65.6
2021	215	15,926	2,351	12,765	100	78.8	0.0	69.0
2021 [2]	215	16,921	2,663	13,690	100	79.6	0.0	69.1
2022	200	16,975	2,393	13,617	100	79.0	0.0	69.6
2023	188	16,890	2,195	13,600	100	79.4	0.0	70.6
2023 [2]	188	16,575	2,232	13,600	100	80.9	0.0	71.6
2024	178	16,413	1,978	13,816	100	83.1	0.0	74.4

[1] *Percent funded on a total valuation asset and total actuarial accrued liability basis.*

[2] *Revised actuarial assumptions and/or methods.*

Financial Objective Achievement Indicators
Historical Comparison
(Dollar Amounts in Thousands)

Valuation September 30	Valuation Assets	Termination Indicator [1]		Experience Indicator Actuarial Gain/(Loss)
		Actuarial Present Value of Vested Benefits	Funded Ratio	
2011	$ 10,212,036	$ 15,193,088	67.2 %	$ (1,004,765)
2012	9,447,057	15,318,309	61.7	(807,610)
2013	9,437,627	15,338,434	61.5	(96,787)
2014	9,961,903	15,487,041	64.3	202,925
2014 [2]	9,961,903	15,880,526	62.7	202,925
2015	10,416,577	15,971,116	65.2	142,773
2016	10,937,446	16,051,342	68.1	216,873
2016 [2]	10,937,446	16,781,070	65.2	216,873
2017	11,407,393	16,897,115	67.5	618,769
2017 [2]	11,883,784	17,678,267	67.2	618,769
2018	12,149,374	17,659,402	68.8	448,265
2018 [2]	12,494,361	18,792,368	66.5	448,265
2019	12,374,071	18,746,396	66.0	(187,079)
2020	12,296,458	18,601,515	66.1	(55,732)
2021	12,764,839	18,390,228	69.4	1,427,343
2021 [2]	13,690,059	19,676,953	69.6	1,427,343
2022	13,616,906	19,448,413	70.0	(142,391)
2023	13,600,053	19,168,713	70.9	(52,064)
2023 [2]	13,600,053	18,904,837	71.9	(52,064)
2024	13,815,978	18,493,525	74.7	266,123

[1] *Based upon the actuarial assumptions used for funding purposes, including the assumed rate of interest.*
[2] *Revised actuarial assumptions and/or methods.*

SECTION C

FUND ASSETS

Statement of Plan Net Assets
(Assets at Market or Fair Value)

	As of September 30th	
	2023	**2024**
Equity in Common Cash	$ 61,988,145	$ 57,540,668
Total Receivables	89,807,462	88,762,121
Short Term Investment Pools	521,791,962	621,254,359
Fixed Income Pools	1,176,343,808	1,481,298,862
Domestic Equity Pools	2,543,983,108	3,094,896,284
Real Estate & Infrastructure Pools	1,340,518,371	1,284,103,036
Alternative Investment Pools	3,110,394,747	3,065,331,262
International Equity Pools	1,711,918,404	2,068,996,346
Absolute Return Pools	1,374,192,166	1,441,504,638
Real Return and Opportunistic Pools	1,415,448,877	1,363,979,524
Securities Lending Collateral less Obligations	0	0
Total Assets	13,346,387,050	14,567,667,100
Other Liabilities	(2,271,912)	(2,576,444)
Net Assets Held in Trust for Pension Benefits	**$13,344,115,138**	**$14,565,090,656**

Note: Asset amounts exclude assets held for health benefits.

Reconciliation of Plan Net Assets

	Fiscal Year Ending	
	September 30, 2023	**September 30, 2024**
Market Value, Beginning of Year	$13,064,690,798	$13,344,115,138
Additions		
Member Contributions	19,382,014	14,484,940
Employer Contributions	711,551,512	723,059,998
Net Investment Income	1,053,412,365	2,003,030,147
Audit Adjustment	0	0
Other Additions	38,106	(6,383,972)
Total Additions	1,784,383,997	2,734,191,113
Deductions		
Benefit Payments	1,498,379,842	1,506,883,241
Contribution Refunds/Transfers	255,451	81,214
Administrative Expenses	6,324,364	6,251,140
Total Deductions	1,504,959,657	1,513,215,595
Market Value, End of Year	**$13,344,115,138**	**$14,565,090,656**

Development of Valuation Assets

Year Ended September 30	2024	2025	2026	2027	2028
A. Funding Value Beginning of Year	$ 13,600,052,800				
B. Market Value					
B1. Market Value End of Year	14,565,090,656				
B2. Market Value Beginning of Year	13,344,115,138				
B3. Audit Adjustment	-				
C. Non-Investment Net Cash Flow					
C1. Member Contributions	14,484,940				
C2. Employer Contributions	723,059,998				
C3. Benefit Payments	(1,506,883,241)				
C4. Contribution Refunds / Transfers	(81,214)				
C5. Administrative Expenses	(6,251,140)				
C6. Other	(6,383,972)				
C7. Total Net Cash Flow: C1 + C2 + C3 + C4 + C5 + C6	(782,054,629)				
D. Investment Return					
D1. Market Return Total: B1 - B2 - B3 - C7	2,003,030,147				
D2. Assumed Rate of Return	6.00%	6.00%			
D3. Market Rate of Return	15.46%				
D4. Dedicated Gains Policy Trigger (Excess Return %)	0.00%				
D5. Market Return for Immediate Recognition: D4 x (B2 + B3 + C6/2)	-				
D6. Assumed Amount of Return: D2 x (A + B3 + C6/2)	792,541,529				
D7. Amount Subject to Phase-In: D1 - D5 - D6	1,210,488,618				
E. Phased-In Recognition of Investment Return					
E1. Current Year: 0.20 x D7	242,097,724				
E2. First Prior Year	51,923,532	$ 242,097,724			
E3. Second Prior Year	(286,465,373)	51,923,532	$ 242,097,724		
E4. Third Prior Year	197,882,166	(286,465,373)	51,923,532	$ 242,097,724	
E5. Fourth Prior Year	0	197,882,167	(286,465,375)	51,923,530	$ 242,097,722
E6. Total Phase-Ins	205,438,049	205,438,050	7,555,881	294,021,254	242,097,722
F. Funding Value End of Year					
F1. Preliminary Funding Value End of Year: A + B3 + C6 + D5 + D6 + E6	$ 13,815,977,749				
F2. Corridor Percent	30%				
F3. Upper Corridor Limit: (100% + F2) x B1	18,934,617,853				
F4. Lower Corridor Limit: (100% - F2) x B1	10,195,563,459				
F5. Funding Value End of Year	$ 13,815,977,749				
G. Difference Between Market and Funding Value	749,112,907				
H. Recognized Rate of Return	7.56 %				
I. Market Rate of Return	15.46 %				
J. Ratio of Funding Value to Market Value	0.9486				

Development of Valuation Assets

Year Ended September 30	2019	2020	2021	2022	2023
A. Funding Value Beginning of Year	$ 12,494,360,972	$ 12,374,070,881	$ 12,296,457,948	$ 13,690,059,002	$ 13,616,905,793
B. Market Value					
B1. Market Value End of Year	12,227,892,179	12,027,536,294	14,481,587,667	13,064,690,798	13,344,115,138
B2. Market Value Beginning of Year	12,398,001,517	12,227,892,179	12,027,536,294	14,481,587,667	13,064,690,798
B3. Audit Adjustment	532	-	44,744,821	-	-
C. Non-Investment Net Cash Flow					
C1. Member Contributions	28,442,002	25,264,952	23,881,406	18,751,535	19,382,014
C2. Employer Contributions	600,083,089	613,728,653	659,639,389	688,301,031	711,551,512
C3. Benefit Payments	(1,398,264,962)	(1,432,400,830)	(1,459,748,602)	(1,483,367,682)	(1,498,379,842)
C4. Contribution Refunds / Transfers	(4,539,677)	(311,218)	(388,667)	(184,506)	(255,451)
C5. Administrative Expenses	(6,987,894)	(5,955,829)	(5,924,583)	(6,002,959)	(6,324,364)
C6. Other	Included in D1	Included in D1	64,058	3,996	38,106
C7. Total Net Cash Flow: C1 + C2 + C3 + C4 + C5 + C6	(781,267,442)	(799,674,272)	(782,476,999)	(782,498,585)	(773,988,025)
D. Investment Return					
D1. Market Return Total: B1 - B2 - B3 - C7	611,157,572	599,318,387	3,191,783,551	(634,398,284)	1,053,412,365
D2. Assumed Rate of Return	6.70%	6.70%	6.70%	6.00%	6.00%
D3. Market Rate of Return	5.09%	5.07%	27.32%	-4.50%	8.31%
D4. Dedicated Gains Policy Trigger (Excess Return %)	0.00%	0.00%	12.00%	0.00%	0.00%
D5. Market Return for Immediate Recognition: D4 x (B2 + B3 + C6/2)	-	-	1,401,725,114	-	-
D6. Assumed Amount of Return: D2 x (A + B3 + C6/2)	810,949,761	802,273,661	800,647,606	797,928,583	793,794,707
D7. Amount Subject to Phase-In: D1 - D5 - D6	(199,792,189)	(202,955,274)	989,410,831	(1,432,326,867)	259,617,658
E. Phased-In Recognition of Investment Return					
E1. Current Year: 0.20 x D7	(39,958,438)	(40,591,055)	197,882,166	(286,465,373)	51,923,532
E2. First Prior Year	5,530,270	(39,958,438)	(162,364,219)	197,882,166	(286,465,373)
E3. Second Prior Year	2,257,338	5,530,270	(119,875,312)	-	197,882,166
E4. Third Prior Year	(7,450,439)	2,257,338	11,060,539	-	-
E5. Fourth Prior Year	(110,351,673)	(7,450,437)	2,257,338	-	-
E6. Total Phase-Ins	(149,972,942)	(80,212,322)	(71,039,488)	(88,583,207)	(36,659,675)
F. Funding Value End of Year					
F1. Preliminary Funding Value End of Year: A + B3 + C6 + D5 + D6 + E6	$ 12,374,070,881	$ 12,296,457,948	$ 13,690,059,002	$ 13,616,905,793	$ 13,600,052,800
F2. Corridor Percent	30%	30%	30%	30%	30%
F3. Upper Corridor Limit: (100% + F2) x B1	15,896,259,833	15,635,797,182	18,826,063,967	16,984,098,037	17,347,349,679
F4. Lower Corridor Limit: (100% - F2) x B1	8,559,524,525	8,419,275,406	10,137,111,367	9,145,283,559	9,340,880,597
F5. Funding Value End of Year	$ 12,374,070,881	$ 12,296,457,948	$ 13,690,059,002	$ 13,616,905,793	$ 13,600,052,800
G. Difference Between Market and Funding Value	(146,178,702)	(268,921,654)	791,528,665	(552,214,995)	(255,937,662)
H. Recognized Rate of Return	5.46 %	6.03 %	17.84 %	5.33 %	5.72 %
I. Market Rate of Return	5.09 %	5.07 %	27.32 %	(4.50)%	8.31 %
J. Ratio of Funding Value to Market Value	1.0120	1.0224	0.9453	1.0423	1.0192

History of Approximate Investment Return Rates

Plan Year Ending September 30	Approximate Rate of Return [1]	
	Market	Actuarial
2015	2.11 %	9.50 %
2016	7.40	10.31
2017	13.15	14.32
2018	11.05	11.14
2019	5.09	5.46
2020	5.07	6.03
2021	27.32	17.84
2022	(4.50)	5.33
2023	8.31	5.72
2024	15.46	7.56
Average Returns:		
Last five years:	9.82 %	8.40 %
Last ten years:	8.75 %	9.25 %

[1] *Approximate return based on ratio of total investment return to average asset value, using an assumed beginning-of-year timing of audit adjustments (if any) and an assumed mid-year timing of other asset flows (see previous two pages).*

Historical Growth of Assets at Market Value

Fiscal Year Ended September	Revenues by Source			Expenses by Type			
	Member Contributions	Employer Contributions	Net Investment Income [1]	Retirement Benefits	Return of Contributions and Transfers	Administrative Expenses	Market Value of Assets
2005	$ 30,395,040	$ 256,433,052	$ 1,168,692,344	$ 746,673,263	$ 187,049	$ 4,297,985	$ 10,132,825,663
2006	9,434,310	270,705,017	1,248,722,460	767,000,706	133,474	4,628,043	10,889,925,227
2007	19,696,132	150,858,506	1,802,354,022	795,842,013	(41,180,003) [2]	5,115,226	12,103,056,651
2008	5,643,805	355,732,115	(1,840,403,196)	832,553,176	183,559	5,048,737	9,786,243,903
2009	6,994,975	343,787,486	(678,455,022)	870,278,863	272,631	4,865,232	8,583,154,616
2010	26,055,668	369,952,868	883,646,242	917,328,820	265,155	5,073,446	8,940,141,973
2011	25,830,556	424,546,805	360,430,046	1,089,822,880	472,818	6,079,017	8,654,574,665
2012	33,290,784	419,926,997	1,330,021,741	1,156,035,451	188,926	9,253,880	9,272,335,930
2013	53,035,321	604,845,495	1,185,982,164	1,187,911,357	113,038	5,658,318	9,922,516,197
2014	47,527,233	705,100,454	1,529,625,883	1,222,881,091	151,929	6,930,656	10,974,806,091
2015	46,688,372	749,332,013	232,643,264	1,265,335,477	144,115	6,227,748	10,731,762,400
2016	46,665,882	716,464,627	781,806,695	1,289,597,875	130,258	6,628,719	10,980,342,752
2017	40,838,900	703,130,797	1,411,669,258	1,322,339,410	298,192	6,284,973	11,807,059,132
2018	35,598,366	650,739,520	1,273,573,537	1,362,275,563	205,121	6,488,354	12,398,001,517
2019	28,442,002	600,083,089	611,158,104	1,398,264,962	4,539,677	6,987,894	12,227,892,179
2020	25,264,952	613,728,653	599,318,387	1,432,400,830	311,218	5,955,829	12,027,536,294
2021	23,881,406	659,639,389	3,236,592,430	1,459,748,602	388,667	5,924,583	14,481,587,667
2022	18,751,535	688,301,031	(634,394,288)	1,483,367,682	184,506	6,002,959	13,064,690,798
2023	19,382,014	711,551,512	1,053,450,471	1,498,379,842	255,451	6,324,364	13,344,115,138
2024	14,484,940	723,059,998	1,996,646,175	1,506,883,241	81,214	6,251,140	14,565,090,656

[1] *Includes net investment income and items categorized as an audit adjustment or other additions on page C-2.*

[2] *Includes transfers to/from the Health Advance Funding Subaccount.*

Note: Data for the year 2005 was provided by the State of Michigan Department of Technology, Management and Budget - Financial Services.

SECTION D

CENSUS DATA

Summary of Participant Data by Category

	As of September 30	
	2023	**2024**
Retirees and beneficiaries currently receiving benefits:		
Regular benefits	48,826	48,123
Survivor benefits	7,844	7,928
Disability benefits	2,944	2,877
Total	59,614	58,928
Current Employees:		
Vested	3,808	3,266
Non-vested	4	3
Total	3,812	3,269
Inactive participants entitled to benefits and not yet receiving them*:	1,871	1,619
Total Participants	65,297	63,816

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

Retirees and Beneficiaries – Historical Comparison

Year Ended September 30	Number Added	Number Removed	Rolls End of Year		% Increase in Annual Benefits	Average Annual Benefit
			Number	Annual Benefit [1]		
2005	1,542	1,360	45,801	$ 747,428	2.5 %	$ 16,319
2006	1,728	1,549	45,980	769,096	2.9	16,727
2007	2,206	1,300	46,886	802,018	4.3	17,106
2008	2,653	1,461	48,078	842,612	5.1	17,526
2009	2,423	1,472	49,029	880,763	4.5	17,964
2010	2,937	1,504	50,462	934,092	6.1	18,511
2011 [2]	6,656	1,470	55,648	1,113,963	19.3	20,018
2012	2,186	1,546	56,288	1,143,400	2.6	20,313
2013	2,181	1,615	56,854	1,175,329	2.8	20,673
2014	2,421	1,660	57,615	1,212,333	3.1	21,042
2015	2,490	1,652	58,453	1,254,602	3.5	21,463
2016	2,306	1,721	59,038	1,290,760	2.9	21,863
2017	2,452	1,806	59,684	1,331,385	3.1	22,307
2018	2,224	1,898	60,010	1,366,045	2.6	22,764
2019	2,394	1,903	60,501	1,403,492	2.7	23,198
2020	2,089	1,957	60,633	1,434,395	2.2	23,657
2021	2,035	2,168	60,500	1,459,922	1.8	24,131
2022	1,763	2,089	60,174	1,480,185	1.4	24,598
2023	1,510	2,070	59,614	1,490,606	0.7	25,004
2024	1,375	2,061	58,928	1,498,248	0.5	25,425

[1] *Amounts shown in thousands of dollars (excludes temporary Corrections Officers' benefits)*
[2] *Early Retirement Incentive (ERI) program*

Retirees and Beneficiaries
as of September 30, 2024
by Type of Retirement and Selected Option

Amount of Monthly Benefit	Number of Retirees	Type of Retirement*							
		1	2	3	4	5	6	7	8
$ 1 - 400	1,541	1,155	182	8	121	5	50	10	10
401 - 800	5,676	3,742	677	57	756	10	250	25	159
801 - 1,200	6,809	3,988	1,181	28	874	0	317	122	299
1,201 - 1,600	7,220	4,278	899	26	892	3	322	426	374
1,601 - 2,000	7,791	4,677	912	16	605	2	262	1,126	191
2,001 - 2,400	8,470	5,729	721	6	236	0	162	1,543	73
2,401 - 2,800	7,076	5,163	439	3	67	0	73	1,294	37
2,801 - 3,200	5,164	3,887	234	1	20	0	47	965	10
3,201 - 3,600	3,373	2,591	112	0	8	0	22	634	6
3,601 - 4,000	2,119	1,623	66	0	5	0	10	413	2
Over 4,000	3,689	3,073	95	0	4	0	19	497	1
Totals	**58,928**	**39,906**	**5,518**	**145**	**3,588**	**20**	**1,534**	**7,055**	**1,162**

Amount of Monthly Benefit	Number of Retirees	Selected Option**							
		Reg.	Opt. A	Opt. B	Opt. C	Opt. E	Opt. E1	Opt. E2	Opt. E3
$ 1 - 400	1,541	691	462	282	34	44	11	16	1
401 - 800	5,676	2,577	1,714	838	189	172	61	111	14
801 - 1,200	6,809	2,504	1,729	1,231	241	573	148	334	49
1,201 - 1,600	7,220	2,715	1,962	946	329	754	164	279	71
1,601 - 2,000	7,791	3,159	2,529	1,004	470	364	119	105	41
2,001 - 2,400	8,470	3,671	2,634	1,231	592	157	113	49	23
2,401 - 2,800	7,076	3,179	2,123	1,108	506	75	47	29	9
2,801 - 3,200	5,164	2,338	1,494	838	381	61	29	15	8
3,201 - 3,600	3,373	1,528	985	538	263	27	13	15	4
3,601 - 4,000	2,119	957	588	363	170	17	11	8	5
Over 4,000	3,689	1,631	1,002	646	343	24	23	15	5
Totals	**58,928**	**24,950**	**17,222**	**9,025**	**3,518**	**2,268**	**739**	**976**	**230**

*** Type of Retirement**

1 – Normal retirement for age & service
2 – Survivor payment – normal or early retirement
3 – Duty disability retirement (incl. survivors)
4 – Non-duty disability retirement (incl. survivors)
5 – Survivor payment – duty death in service
6 – Survivor payment – non-duty death in service
7 – Retirees with supplemental benefits for early retirement incentive factors
8 – Retirees with reduced benefits for early retirement reduction factors

**** Selected Option**

Reg. – Straight life allowance
Opt. A – 100% survivor option
Opt. B – 50% survivor option
Opt. C – 75% survivor option
Opt. E – Social Security equated
Opt. E1 – Social Security equated w/100% survivor option
Opt. E2 – Social Security equated w/50% survivor option
Opt. E3 – Social Security equated w/75% survivor option

Active Members by Classification

	September 30, 2023	September 30, 2024
Conservation Officers		
Number	12	9
Average Age	52.5	52.7
Average Service	27.3	27.4
Reported Payroll	$ 1,315,808	$ 968,931
Average Annual Payroll	109,651	107,659
Corrections Officers		
Number	386	283
Average Age	53.4	54.0
Average Service	29.0	29.6
Reported Payroll	$ 37,877,682	$ 28,474,943
Average Annual Payroll	98,129	100,618
All Other		
Number	3,414	2,977
Average Age	59.0	59.5
Average Service	32.1	32.5
Reported Payroll	$ 325,256,830	$ 290,403,944
Average Annual Payroll	95,271	97,549
Total		
Number	3,812	3,269
Average Age	58.4	59.0
Average Service	31.7	32.3
Reported Payroll	$ 364,450,320	$ 319,847,818
Average Annual Payroll	95,606	97,843

Active Members

Members in Active Service as of September 30, 2024
by Age and Years of Service

Age	Years of Service							Total Count	Total Payroll[1]	Average Pay
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & up			
Less than 30	-	-	-	-	-	-	-	-	$ -	$ -
30 - 34	-	-	-	-	-	-	-	-	-	-
35 - 39	-	-	-	-	-	-	-	-	-	-
40 - 44	-	-	-	-	-	-	-	-	-	-
45 - 49	-	1	8	14	21	64	18	126	12,938,548	102,687
50 - 54	-	2	13	27	65	384	228	719	71,712,000	99,739
55 - 59	-	-	17	34	42	304	598	995	97,802,659	98,294
60 - 64	-	-	9	19	41	141	638	848	82,143,009	96,867
65 - 69	-	-	3	11	11	46	323	394	36,309,473	92,156
70 & up	-	-	-	2	4	9	172	187	18,942,129	101,295
Total	**-**	**3**	**50**	**107**	**184**	**948**	**1,977**	**3,269**	**$ 319,847,818**	**$ 97,843**

[1] *Total payroll for Group 1 active members is $316,128,265 and total payroll for Group 2 active members is $3,719,553.*

Active and Inactive Members Reported for Valuation
Historical Comparison

Valuation Date September 30	Number of Inactive Vested Members[2]	Active Members					
				Average			
		Number	Reported Payroll [1]	Annual Pay	% Increase	Age	Years of Service
2005	7,200	33,770	$ 1,880,179	$ 55,676	2.4 %	49.3	20.0
2006	7,217	32,575	1,847,653	56,720	1.9	50.1	21.0
2007	6,663	30,864	1,825,889	59,159	4.3	50.8	21.8
2008	6,912	28,568	1,763,672	61,736	4.4	51.4	22.7
2009	6,613	27,455	1,734,325	63,170	2.3	52.1	23.5
2010	6,243	25,478	1,621,709	63,651	0.8	52.6	24.1
2011	6,094	19,650	1,276,058	64,939	2.0	51.9	23.3
2012	6,271	17,860	1,155,591	64,703	(0.4)	52.5	24.2
2013	5,343	16,466	1,081,729	65,695	1.5	53.2	25.0
2014	5,007	14,985	1,010,987	67,467	2.7	53.7	25.8
2015	4,606	13,404	922,093	68,792	2.0	54.2	26.5
2016	4,295	11,965	850,584	71,089	3.3	54.7	27.2
2017	3,986	10,459	780,135	74,590	4.9	55.1	27.8
2018	3,817	9,128	702,141	76,922	3.1	55.6	28.5
2019	3,248	7,788	617,584	79,299	3.1	56.0	29.0
2020	2,782	6,515	537,027	82,429	3.9	56.5	29.7
2021	2,518	5,402	459,576	85,075	3.2	57.1	30.4
2022	2,153	4,509	403,056	89,389	5.1	57.8	31.0
2023	1,871	3,812	364,450	95,606	7.0	58.4	31.7
2024	1,619	3,269	319,848	97,843	2.3	59.0	32.3

[1] *Amounts shown in thousands of dollars.*
[2] *Includes Group 3 members.*

SECTION E

METHODS AND ASSUMPTIONS

Valuation Methods

***Actuarial Cost Method* -** Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an Individual Entry-Age Actuarial Cost Method having the following characteristics:

(i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and

(ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains (losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

***Financing of Unfunded Actuarial Accrued Liabilities* -** Unfunded actuarial accrued liabilities were amortized by level (principal and interest combined) dollar contributions over a reasonable period of future years.

***Present Value of Future Reconciliation Payments* –** Subsection 38(5) of the SERS statute provides for a process to reconcile actual employer contributions to the required employer contribution requirements. In order to avoid duplication of the employer contributions, the present value of future reconciliation payments is subtracted from the unfunded actuarial accrued liability. The net unfunded actuarial accrued liability is then amortized, resulting in the required amortization payment. Please refer to page A-1 and page E-8 for additional information.

***Actuarial Value of System Assets* -** The actuarial value of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased in over a closed five-year period. During periods when investment performance exceeds the assumed rate, actuarial value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, actuarial value of assets will tend to be greater than market value. The actuarial value of assets is not permitted to deviate from the market value of assets by more than 30%.

Valuation Assumptions

In accordance with Section 38(1) of the SERS statute (Act 240 of the Public Acts of 1943, as amended), the actuarial assumptions are adopted by the Retirement Board and the Department of Management and Budget after consultation with the actuary and investment counsel. The actuarial assumptions were based upon the results of an Experience Study for SERS covering the period October 1, 2017 through September 30, 2022. A report dated October 30, 2023 presented the results of the Experience Study. The actuarial assumptions represent estimates of future experience.

The rate of investment return was 6.00% a year, compounded annually net of investment expenses. The 6.00% assumption was first used for the September 30, 2021 valuation of the System. The assumed real rate of investment return is the rate of investment return in excess of either wage inflation or price inflation. Considering a wage inflation assumption of 2.75% and a price inflation assumption of 2.35%, the 6.00% nominal rate of investment return translates into a real rate of investment return of 3.25% over wage inflation and 3.65% over price inflation.

The rates of salary increase used for individual members are in accordance with the table below. This assumption is used to project a member's current pay to the pay upon which System benefits will be based. These rates were first used for the September 30, 2018 valuation of the System.

Sample Ages	Salary Increase Assumptions For an Individual Member		
	Merit & Seniority	Base (Economy)	Increase Next Year
20	9.00%	2.75%	11.75%
25	6.00	2.75	8.75
30	2.60	2.75	5.35
35	1.20	2.75	3.95
40	0.80	2.75	3.55
45	0.50	2.75	3.25
50	0.40	2.75	3.15
55	0.40	2.75	3.15
60	0.00	2.75	2.75
65	0.00	2.75	2.75
Ref	326		

The tables shown in this section of the report may include a reference number (for example, 326 is used above). These reference numbers are used by GRS to track and identify assumption tables.

Valuation Assumptions

The mortality tables: The mortality tables described below were first used in the September 30, 2023 valuation of the System:

Healthy Male Retirees:	PubG-2010 Retiree Mortality Male Table, scaled by 104% and projected with mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
Healthy Female Retirees:	PubG-2010 Retiree Mortality Female Table, scaled by 115% and projected with mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
Disabled Male Retirees:	PubNS-2010 Disabled Retiree Mortality Male Table, scaled by 100% and projected with mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
Disabled Female Retirees:	PubNS-2010 Disabled Retiree Mortality Female Table, scaled by 100% and projected with mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
Male Active Members:	PubG-2010 Employee Mortality Male Table, scaled by 100% and projected with mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
Female Active Members:	PubG-2010 Employee Mortality Female Table, scaled by 100% and projected with mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.

Sample Attained Ages	Future Life Expectancy (years)*					
	Pre-Retirement		Healthy Post-Retirement		Disabled Retirement	
	Men	Women	Men	Women	Men	Women
45	44.27	46.50	40.34	42.47	30.24	33.29
50	39.20	41.36	35.24	37.31	26.41	29.36
55	34.20	36.25	30.37	32.37	22.91	25.76
60	29.29	31.22	25.66	27.53	19.73	22.42
65	24.52	26.29	21.17	22.85	16.77	19.12
70	19.86	21.45	16.93	18.38	13.94	15.73
75	15.32	16.73	13.02	14.21	11.16	12.43
80	10.90	12.17	9.56	10.48	8.57	9.47

* *Life expectancy in future years is determined by the fully generational MP-2021 projection scale. The sample values shown are for individuals with the indicated attained ages in 2024. For Conservation Officers, 80% of active member deaths are assumed to be non-duty related. For Correction Officers, 70% of active member deaths are assumed to be non-duty related. For all others, 90% of active member deaths are assumed to be non-duty related.*

Valuation Assumptions

The rates of regular retirement used to measure the probability of eligible members retiring under regular retirement (i.e., with an unreduced benefit for DB members) during the next year are shown below. Regular retirement eligibility conditions for DC members were assumed to be the same as regular retirement eligibility conditions for DB members. These rates were first used for the September 30, 2023 valuation of the System.

Retirement Ages	Percent of Eligible Members Retiring					
	Regular Retirement					
	Conservation Officers		Corrections Officers		Others	
	DB	DC	DB	DC	DB	DC
45	28%	15%				
46	28	15				
47	28	15				
48	28	15				
49	28	15				
50	28	15				
51	28	15	45%	20%		
52	28	15	35	10		
53	28	15	30	10		
54	28	15	30	10		
55	28	15	30	10	20%	20%
56	28	15	35	10	20	10
57	28	15	30	10	15	8
58	28	15	30	10	15	8
59	28	15	30	10	15	8
60	28	15	30	10	17	8
61	28	15	30	10	17	8
62	50	15	35	10	25	10
63	40	15	35	10	22	10
64	40	15	40	10	22	10
65	60	15	40	15	25	15
66	50	20	40	15	25	15
67	50	20	50	15	25	15
68	50	20	50	15	20	15
69	50	20	50	15	20	15
70	100	100	100	100	25	15
71	100	100	100	100	25	15
72	100	100	100	100	25	15
73	100	100	100	100	25	15
74	100	100	100	100	25	15
75	100	100	100	100	100	100
Ref	1603	3407	3405	3408	3406	3409

Note: For DB Plan Conservation Officers, 40% are assumed to retire in their first year of eligibility for unreduced benefits (completion of 25 years of service). For DC Plan Conservation Officers, 20% are assumed to retire in the first year of completing 25 years of service.

Valuation Assumptions

The rates of early retirement used to measure the probability of eligible members retiring under early retirement (i.e., with a reduced benefit for DB members) during the next year are shown below. Early retirement eligibility conditions for DC members were assumed to be the same as early retirement eligibility conditions for DB members. These rates were first used for the September 30, 2018 valuation of the System.

Retirement Ages	Percent of Eligible Members Retiring
55	3.0%
56	3.0
57	3.0
58	3.5
59	3.5
Ref	2839

The rates of separation from active membership used in the valuation are shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment. Rates for DB Plan members were first used for the September 30, 2018 valuation and rates for DC Plan members were first used for the September 30, 2023 actuarial valuation of the System.

DB Members

Sample Ages	Years of Service	Percent Separating Within Next Year
All	0	17.00 %
	1	12.00
	2	8.00
	3	5.50
	4	4.50
20	5 & Over	4.00
25		3.50
30		2.82
35		2.38
40		2.06
45		1.84
50		1.68
55		1.60
60		1.60
Ref	1138	1291

DC Members

Sample Ages	Years of Service	Percent Separating Within Next Year
All	0	20.00 %
	1	15.00
	2	10.00
	3	7.00
	4	5.00
20	5 & Over	5.00
25		5.00
30		4.70
35		3.90
40		3.20
45		2.88
50		2.63
55		2.50
60		2.50
Ref	1473	1372

Valuation Assumptions

Rates of disability among active members used in the valuation are shown below, and were first used for the September 30, 2010 valuation of the System.

Sample Ages	Percent Becoming Disabled Within Next Year	
	Non-Duty Disability	Duty Disability
25	0.03%	0.00%
30	0.05	0.01
35	0.10	0.01
40	0.20	0.02
45	0.34	0.04
50	0.47	0.06
55	0.92	0.08
60	2.10	0.11
65	2.30	0.16
Ref.	571	14 x .20

Unknown Data:

- Retired members with unknown gender were assumed to be female.
- Active members with an entry-age below 16 were assumed to have an entry-age equal to 27.
- Frozen defined benefit amounts were estimated for active members who elected to participate in the DC Plan prospectively as a result of PA 264, when not supplied.
- Accrued benefits were estimated for inactive participants based upon the service and final average compensation provided in the data. If final average compensation was not supplied, the member was assumed to have a final average compensation equal to that of the average of the remaining group.

Miscellaneous and Technical Assumptions

Administrative Expenses	Administrative expenses are funded through an addition to the normal cost (administrative expense from the prior fiscal year).
Benefit Service	Exact fractional service is used to determine the amount of benefit.
Decrement Operation	Disability and withdrawal decrements do not operate during retirement eligibility.
Decrement Timing	Decrements of all types are assumed to occur mid-year.
Defined Contribution (DC) Member Account Balance	For purposes of determining the Tier 2 death and disability benefit contribution for the DC member account balance of Tier 2 members, a total contribution rate (employer only) of 6.70% per year was used. In addition, for valuation purposes, the interest rate credited on the DC member account balance is set equal to the valuation interest rate assumption.
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.
Employee Contributions	DB Plan employee contributions were credited with interest at 3.5% per year.
Forfeitures	For vested separations from service, it is assumed that 0% of members separating will withdraw their contributions and forfeit an employer financed benefit. It was further assumed that the liability at termination is the greater of the vested deferred benefit (if any) or the member's accumulated contributions.
Incidence of Contributions	Contributions are assumed to be received continuously throughout the year.
Liability Adjustments	Retirement liabilities were increased by 2.25% to account for unused vacation time. Inactive vested member liabilities were increased by 2% to reflect the value of the death benefit provision.
Marriage Assumption	75% of males and 55% of females were assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Normal Form of Benefit	A straight life benefit is the normal form of benefit.
Pay Increase Timing	Pay increases were assumed to be at the beginning of the fiscal year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.

Miscellaneous and Technical Assumptions

Reconciliation Payments

ORS provided the following schedule of reconciliation payments. For purposes of determining the present value of the reconciliation payments, it was assumed that payments occur in the middle of the fiscal year.

Fiscal Year	Reconciliation Payment/(Credit)
2025	$ 0
2026	0
2027	0
2028	0
2029	0
2030	0

Service Credit Accruals

Members were assumed to accrue 1 year of service credit per year.

Service Purchase Load

Per ORS, $999,726 has been reported for purchased service that has not been paid for yet by the members. This amount was included in the accrued liability, to account for the amounts included in the plan's reported assets for purchased service.

SECTION F

PLAN PROVISIONS

Plan Provisions as of September 30, 2024

On December 15, 2011, the Governor signed Public Act 264 of 2011 into law. The legislation granted members a one-time opportunity to choose their future retirement plan which resulted in three distinct benefit groups within the State Employees' Retirement System Defined Benefit (DB) pension plan.

Group 1: DB Classified: Members who elected to remain in the DB plan for future years of service and contribute 4% of their annual compensation to the pension fund until they terminate state employment. The 4% member contributions began on April 1, 2012.

Group 2: DB 30: Members who elected to remain in the DB plan for future years of service and contribute 4% of pay until they complete 30 years of service. When they complete 30 years of service, they will switch to the State's Defined Contribution (DC) pension plan. The 4% member contributions began on April 1, 2012, and will continue until they switch to the DC plan or terminate state employment, whichever comes first.

Group 3: DB/DC Blend: Members who chose not to pay the 4% contributions and therefore became active participants in the DC pension plan for future years of service beginning April 1, 2012.

Group 2 and Group 3 members may be eligible to receive a pension benefit from the SERS DB plan based on service, compensation and the retirement benefit formula in effect as of their date of transfer into the DC plan. This benefit is payable upon meeting the retirement or other eligibility conditions of the DB plan.

Regular Retirement (no reduction factor for age):

Eligibility - Age 55 with 30 years of service; or age 60 with 10 or more years of service. Unclassified Legislative employees, Executive Branch employees, or Judicial Branch employees are eligible for full retirement at age 60 with 5 or more years of service. Corrections Officers may retire at age 51 with 25 or more years of service; or age 56 with 10 or more years of service (the last 3 years must be in a covered position). Conservation Officers may retire after 25 years of service regardless of age. If a Conservation Officer is hired before 4/1/1991, 20 of the 25 years must be as a Conservation Officer. For those hired after 4/1/1991, 23 of the 25 years must be as a Conservation Officer (the last 2 years must be as a Conservation Officer).

Final Average Compensation - Regular retirement benefit is based on Final Average Compensation (FAC), which is usually the average of highest 3 consecutive years (2 years for Conservation Officers).

Annual Amount - Total service times 1.5% of FAC. For members with 20 or more years of service, a $3,000 minimum annual benefit is payable. Corrections Officers receive an additional temporary supplement to age 62 equal to the product of supplemental service times 0.5% of FAC. Conservation Officers retiring after 25 years receive a benefit equal to 60% of FAC. For eligible Group 2 and Group 3 members, the benefit amount (regular retirement and any supplemental benefit) is determined as of the date of transfer to the DC pension plan, based on FAC and service at the time of transfer.

Early Retirement (age reduction factor used):

Eligibility - Age 55 with 15 or more years of service.

Annual Amount - Computed as described above under "regular retirement" but reduced by ½ % for each month under age 60.

Deferred Retirement (vested benefit):

Eligibility - 10 years of service (5 years for unclassified persons in the executive or legislative branch). Benefit commences at age 60.

Annual Amount - Computed as described above under "regular retirement" based on service and FAC at termination of State employment for Group 1.

Duty Disability Retirement:

Eligibility - No age or service requirement.

Annual Amount - Disability age 60+: Computed as a regular retirement benefit with minimum benefit based on 10 years of service. Disability prior to age 60: To age 60, benefit is computed as a regular retirement benefit using service at the time of disability retirement with a minimum benefit of $6,000 per year. Additional limitation such that benefit plus workers' compensation does not exceed final compensation. At age 60, benefit is recomputed as a regular retirement benefit with service granted for period in receipt of disability benefit before age 60. If the member dies before age 60, benefits are payable to a surviving spouse computed as a regular retirement benefit but based on service at time of disability retirement plus elapsed time between date of retirement and death. Eligible Group 2 and Group 3 members may elect this benefit (in lieu of PA 264 benefits).

Non-Duty Disability Retirement:

Eligibility - 10 years of service.

Annual Amount - Computed as regular retirement benefit based on service and FAC at time of disability. Minimum annual benefit is $600. Eligible Group 2 and Group 3 members may elect this benefit (in lieu of PA 264 benefits).

Duty Death Before Retirement:

Eligibility - No age or service requirement.

Annual Amount - Surviving spouse receives annual benefit computed as a regular retirement benefit as if the deceased member retired the day before date of death and elected Option A. Benefit is based on member's service at time of death, or 10 years of service, whichever is greater. A minimum benefit of $6,000 per year is payable. Children under age 21 each receive an equal share of 1/2 of the benefit payable (surviving spouse receives the other 1/2), to a maximum of 1/2 for all children. A given child's share of benefits terminates upon the child's marriage, death or attainment of age 21. In the event that there is no surviving spouse, the benefit is allocated equally among all children subject to the limitations described above. In the event that there is no surviving spouse or eligible children, benefits may be paid to an eligible, dependent parent. Benefits end upon the marriage or death of the surviving parent. Additional limitation such that benefit plus workers' compensation does not exceed final compensation. Eligible Group 2 and Group 3 members may elect this benefit (in lieu of PA 264 benefits).

Non-Duty Death Before Retirement:

Eligibility - 10 years of service. In the case of a deceased vested former member, the survivor benefit commences when the deceased former member would have attained age 60.

Annual Amount - Computed as a regular retirement benefit but reduced in accordance with a 100% Joint and Survivor form of payment. Eligible Group 2 and Group 3 members may elect this benefit (in lieu of PA 264 benefits).

Post Retirement Cost-of-Living Adjustments (COLA):

One-time upward adjustments have been made in 1972, 1974, 1976, 1977, and 1987. Beginning in 1983 some benefit recipients share in a distribution of a portion of investment income earned in excess of 8% annually (supplemental payment). Beginning in 1988 all benefit recipients are eligible for automatic 3% annual (non-compounded) benefit increases, with a maximum $300 annual increase. Eligibility for the above benefits:

Retired before October 1, 1987 - Greater of supplemental payment or the combination of the 1987 one-time adjustment and the automatic increases.
Retired on or after October 1, 1987 - Automatic increases only.

Eligible members of Groups 1, 2 and 3 receive automatic post retirement COLA.

Plan Provisions as of September 30, 2024

Member Contributions:

Group 1 Members: 4% of annual pay effective April 1, 2012.

Group 2 Members: 4% of annual pay effective April 1, 2012 until the date of transfer to DC pension plan.

Group 3 Members: N/A

Defined Contribution Legislation (Public Act 487 of 1996):

New state employees hired on or after March 31, 1997 become participants in Tier 2 (i.e., a defined contribution plan) rather than Tier 1 (i.e., the above described defined benefit plan).

Active members on March 30, 1997 could irrevocably elect to terminate membership in Tier 1 and become participants in Tier 2. Elections had to be in writing and submitted between January 2, 1998 and April 30, 1998. Such members became Tier 2 participants on June 1, 1998, and had the actuarial present value of their Tier 1 accrued benefit transferred into Tier 2 by November 30, 1998.

An actuarially calculated supplemental disability or death-in-service benefit may be payable if a Tier 2 participant becomes disabled or dies in service.

Former Tier 1 Members:

A former non-vested member who is reemployed on or after January 1, 2014 is not eligible for membership in Tier 1. This type of member shall become a qualified participant in Tier 2, and shall be treated as being first employed by the State as of his or her date of reemployment.

Optional Forms of Payment:

The normal form of payment for a member is a straight life annuity.

Section 31 of the SERS statute gives retiring plan members the opportunity to elect an optional form of payment including:

- 100% joint and survivor annuity with pop-up
- 75% joint and survivor annuity with pop-up
- 50% joint and survivor annuity with pop-up

Section 20 of the SERS statute permits a retiring plan member to elect a Social Security Equated optional form of payment.

The optional forms of payment are actuarially equivalent to the straight life annuity. Option factors are based upon the following: (1) investment return assumption 6.75%, (2) valuation mortality assumptions for healthy retirees, (3) unisex percent 60% (i.e., retiree assumed to be 60% male; beneficiary the opposite) and (4) calculation year of 2021. The pop-up provision is reflected in the factors.

SECTION G

FUNDING POLICY

Funding Policy

The goal of the Funding Policy is to ensure adequate funding of the plans and to set a funding target that will allow the plans to remain at or above that target during successive years of investment or actuarial losses.

Funding Security

1. Until the pension plan is at or above 120% funded or the Other Post-Employment Benefits (OPEB) plan is at or above 140% funded [hereafter funding target], as determined in its annual actuarial valuation, the employer contribution rate cannot be less than the actuarially determined employer normal cost.
    a. For systems with multiple subplans (i.e., MPSERS, SPRS), until all of the subplans are at or above the funding target, the employer contribution rate cannot be less than the actuarially determined employer normal cost.
2. Once the pension plan or the OPEB plan is at or above the funding target, the employer normal cost contribution for any fiscal year will be reduced by the negative UAAL in excess of the funding target. The employer normal cost contribution rate can be reduced to no less than 0%.
    a. The negative UAAL payments for any fiscal year will not be greater than the total amount of contributions for that year.

Layered Amortization

3. Layered Amortization Principles
    a. Once 15 years for open plans (10 years for closed plans) remain in the current amortization period for the existing UAAL, the existing UAAL will be frozen and amortized by the end of the plan's amortization period, unless the period is extended.
    b. Beginning with the actuarial valuation where the amortization period of the existing UAAL is less than 15 years for open plans (10 years for closed plans), and for subsequent annual actuarial valuations, changes in the UAAL due to actuarial gains or losses or from changes to actuarial assumptions will be amortized over a closed 15-year amortization period for open plans (10 years for closed plans).
    c. Regardless of funded %, once plans have reached layered amortization, negative UAAL layers will be recognized (i.e. offset positive UAAL layers).
    d. If the plan is more than 100% funded, all the layers will be eliminated, and an open 20-year amortization period will be used.
    e. Increases in the UAAL due to changes in benefit provisions will be amortized over a closed 15-year period for active members and a closed 5-year period for non-active members (i.e., retired members and deferred members), unless specified otherwise in statute.
    f. Decreases in the UAAL due to changes in benefit provisions will be amortized over a closed 20-year period for all members, unless specified otherwise in statute.
4. These provisions will be applied separately to the pension and OPEB plans.
5. MPSERS Pension Plus 2 is exempt from the UAAL amortization provisions of this policy due to its amortization method being defined in Section 41b(2) of PA 300 of 1980, as amended.
    a. Pension Plus 2 members will pay 50% of the total NC rate. Employers will pay the greater of 50% of the total NC rate or the employer NC contribution rate from the previous fiscal year, pursuant to Section 41(2)(c).

Funding Policy (Concluded)

Considerations for SERS Pension Actuarial Valuation

6. According to the Funding Policy, layered amortization for the SERS pension actuarial valuation begins effective with the September 30, 2025 valuation of SERS.
7. For the SERS pension actuarial valuation, a level dollar amortization method shall be used.
8. The Funding Policy was adopted by the Retirement Board for use in the September 30, 2023 and later actuarial valuations.

SECTION H

GLOSSARY

Glossary

Actuarial Accrued Liability	The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."
Accrued Service	The service credited under the plan which was rendered before the date of the actuarial valuation.
Actuarial Assumptions	Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."
Actuarial Equivalent	A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.
Actuarial Present Value	The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.
Amortization	Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.
Experience Gain/(Loss)	A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Glossary

Normal Cost	The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.
Reserve Account	An account used to indicate that funds have been set aside for a specific purpose and is not generally available for other uses.
Unfunded Actuarial Accrued Liability	The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."
Valuation Assets	The value of current plan assets recognized for valuation purposes. Generally based on market value plus a portion of unrealized appreciation or depreciation.