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PERS
of MISSISSIPPI

Report on the Annual Valuation of the Supplemental Legislative Retirement Plan of Mississippi

Prepared as of June 30, 2022

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The experience and dedication you deserve

November 1, 2022

Board of Trustees
Public Employees' Retirement System of Mississippi
429 Mississippi Street
Jackson, MS 39201-1005

Ladies and Gentlemen:

Presented in this report are the results of the annual actuarial valuation of the Supplemental Legislative Retirement Plan of Mississippi. The purpose of the valuation was to measure the Plan's funding progress and to determine the unfunded actuarial accrued liability amortization period beginning July 1, 2022. The results may not be applicable for other purposes.

The date of the valuation was June 30, 2022.

The valuation was based upon data, furnished by the Executive Director and the PERS staff, concerning active, inactive, and retired members along with pertinent financial information. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. The complete cooperation of the PERS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the presentation of results on page 1 and the comments on page 9. Since the projected funded ratio as of 2042 is less than 80% as of this valuation and the negative cash flow is approaching concerned levels, we recommend to the PERS Board that the Fixed Contribution Rate (FCR) be increased from 7.40% to 8.40% of annual compensation beginning July 1, 2024.

Since the previous valuation, some minor changes to the valuation were made in conjunction with the actuarial audit performed this year. No changes were made to the actuarial assumptions or plan provisions since the previous valuation.

The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board. We have reviewed the actuarial methods, including the asset valuation method, and continue to believe they are appropriate for the purpose of determining employer contribution levels.

In order to prepare the results in this report, we have utilized actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed results.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. An analysis of the potential range of future measurements is provided in Section X of this report.

This actuarial valuation was performed to determine the adequacy of the Board approved contribution rate to fund the plan. The asset values used to determine unfunded liabilities and funded ratios are not market values but less volatile market related values. A smoothing technique is applied to market values to determine the market related values. The unfunded liability amounts and funded ratios using the market value of assets would be different. The interest rate used for determining liabilities is based on the expected return on assets. Therefore, liability amounts in this report cannot be used to assess a settlement of the obligation.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the plan, and on actuarial assumptions that are, in the aggregate, internally consistent and reasonably based on the actual experience of the plan.

Respectfully submitted,

Edward J. Koebel

Edward J. Koebel, FCA, EA, MAAA
Chief Executive Officer

Ben Mobley

Ben D. Mobley, ASA, FCA, MAAA
Consulting Actuary

Table of Contents

Section I: Executive Summary

1. This report, prepared as of June 30, 2022, presents the results of the annual actuarial valuation of the Plan. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below. The current valuation and reported benefits amount reflect any benefit increases granted to retirees as of July 1, 2022. Based on the funding policy adopted by the Board in 2012, the employer contribution rate is to be set at 7.40% of annual compensation and the amortization period calculated on an open basis.

VALUATION DATE	June 30, 2022	June 30, 2021
Investment Return Assumption	**7.55%**	**7.55%**
Active members included in valuation		
Number	174	173
Annual compensation	$ 8,179,673	$ 8,029,670
Retirees		
Number	230	233
Annual allowances	$ 1,614,217	$ 1,596,810
Assets		
Market related actuarial value	$ 20,808,000	$ 19,980,000
Market value of assets (MVA)	$ 20,139,000	$ 22,950,000
Unfunded actuarial accrued liability (UAAL)	$ 5,325,030	$ 5,422,264
Funded Ratio on an actuarial value basis	79.6%	78.7%
Employer Fixed Contribution Rate (FCR)		
Normal Cost*	2.67%	2.85%
Accrued liability	4.73	4.55
Total	7.40%	7.40%
Payment period based on the FCR	21.9 years	25.1 years
Unfunded actuarial accrued liability based on MVA	$ 5,994,030	$ 2,452,264
Funded Ratio on a market value basis	77.1%	90.3%
Payment period based on the FCR	27.3 years	8.0 years

* Includes load for administrative expenses. See Section VI for more contribution rate detail.

Section I: Executive Summary

2. The valuation balance sheet showing the results and liabilities of the valuation is given in Section III.

3. Comments on the valuation results are provided in Section IV, comments on the experience and actuarial gains and losses during the valuation year are provided in Section V and the rates of contribution payable by employers are provided in Section VI.

4. Schedule A of this report presents the development of the actuarial value of assets. The estimated investment return for the plan year ending June 30, 2022 on a market value of assets basis was (8.72)% and on actuarial value of assets basis was 8.56%, compared to the assumed rate of return for the period of 7.55%.

5. Schedule B details the actuarial assumptions and methods employed. Since the previous valuation, some minor changes to the valuation were made in conjunction with the actuarial audit performed this year.

6. Schedule C gives a summary of the benefit and contribution provisions of the plan. There have been no changes since the previous valuation.

7. The funding policy for the System was changed in 2012. Under the prior funding policy, the amortization payment for the UAAL was calculated based on a fixed employer contribution rate using a floating amortization period no greater than 30 years. For continuity and informational purposes, we have provided this calculation in Section VII.

8. The funded ratio shown in the Summary of Principal Results, is the ratio of actuarial value of assets to the actuarial accrued liability. The funded status would be different based on the market value of assets. The funded ratio is an indication of progress in funding the promised benefits. Since the ratio is less than 100%, there is a need for additional contributions toward the payment of the unfunded accrued liability. In addition, this funded ratio does not have any relationship to measuring the sufficiency if the plan had to settle its liabilities.

9. The projection results, shown beginning in Section VIII, allow the Board to see a forecast of the System's funding progress over time, allow the Board to review the funding goals and benchmarks outlined in the funding policy, and provide the status of the metrics/targets in the Funding Policy that determines whether or not a contribution rate increase should be recommended. The objective of the current funding policy is to accumulate sufficient assets during a member's employment to fully finance the benefit the member receives throughout retirement. In order to reach that objective, some goals and benchmarks were established as follows:

- To maintain an increasing ratio of system assets to accrued liabilities and reach an 80 percent minimum funded ratio in 2042;
- To maintain adequate asset levels to finance the benefits promised to members;
- To develop a pattern of stable contribution rates when expressed as a percentage of member payroll as measured by valuations prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board, with a minimum employer contribution equal to the normal cost determined under the Entry Age Normal funding method;
- To provide intergenerational equity for taxpayers with respect to system costs; and
- To fund benefit improvements through increases in contribution rates in accordance with Article 14, § 272A, of the Mississippi Constitution.

Section I: Executive Summary

10. Utilizing the metrics based on the funding policy for PERS and with a fixed contribution rate as a percentage of annual compensation of 7.40% of payroll, the projection results for SLRP show that the Plan will have some "Yellow Light" status for two of the three metrics. **While we understand that none of the metrics are in the "Red Light" status, we are concerned with the negative cash flow projections and the projected Funded Ratio in 2042, therefore, we recommend to the PERS Board that the Fixed Contribution Rate (FCR) be increased from 7.40% to 8.40% of annual compensation beginning July 1, 2024.**

Metrics	Projection with 7.40% FCR (7.55%)	Status
Funded Ratio in 2042	79.2%	Yellow
Cash Flow as a Percentage of Assets	-6.3%	Yellow
ADC/FCR Ratio from 2022 Valuation	94.3%	Green
ADC/FCR Ratio from 2023 Valuation	98.0%	Green

The table below shows the metrics with an FCR of 8.40% of annual compensation beginning July 1, 2024.

Metrics	Projection with 8.40% FCR (7.55%)	Status
Funded Ratio in 2042	90.8%	Green
Cash Flow as a Percentage of Assets	-5.6%	Green
ADC/FCR Ratio from 2022 Valuation	94.3%	Green
ADC/FCR Ratio from 2023 Valuation	86.3%	Green

The Board should continue to review the Sensitivity Analysis section of this report during the fiscal year to understand the volatility that may occur in the projections if investment experience is more or less than expected going forward.

11. The table on the following page provides a ten-year history of some pertinent figures.

Comparative Schedule

Valuation Date June 30	Active Members				Retired Lives				Valuation Results ($ thousands)		
	Number	Payroll ($ in thousands)	Average Salary	% increase from previous year	Number	Active/ Retired Ratio	Annual Benefits ($ thousands)	Benefits as % of Payroll	Accrued Liability	Valuation Assets	UAAL
2013	175	$6,695	$38,259	(2.6)%	188	0.9	$1,121.4	16.7%	$19,978	$13,554	$6,424
2014	175	6,918	39,531	3.3	187	0.9	1,139.5	16.5	20,240	14,899	5,341
2015	174	6,861	39,432	(0.3)	185	0.9	1,133.6	16.5	21,213	16,098	5,115
2016	171	6,862	40,130	1.8	207	0.8	1,277.8	18.6	21,259	16,447	4,812
2017	174	6,928	39,817	(0.8)	205	0.8	1,279.5	18.5	21,849	17,208	4,641
2018	174	6,833	39,270	(1.4)	207	0.8	1,304.5	19.1	22,319	17,945	4,374
2019	170	6,937	40,806	3.9	215	0.8	1,372.9	19.8	22,934	18,428	4,506
2020	171	6,891	40,297	(1.2)	235	0.7	1,565.7	22.7	23,485	18,472	5,013
2021	173	8,030	46,414	15.2	233	0.7	1,596.8	19.9	25,402	19,980	5,422
2022	174	8,180	47,010	1.3	230	0.8	1,614.2	19.7	26,133	20,808	5,325

Section II: Membership Data

Data regarding the membership of the Plan for use as a basis for the valuation were furnished by the Plan's office. The following tables summarize the membership of the Plan as of June 30, 2022 upon which the valuation was based. Detailed tabulations of the data are given in Schedule D.

Active Members

				Group Averages		
Employers	Number of Employers	Number	Payroll	Salary	Age	Benefit Service*
State Agencies	4	174	$ 8,179,673	$47,010	56.6	10.7

* Eligibility service is 16.0 years.

Of the 174 active members, 121 are vested and 53 are non-vested.

Retired Lives

			Group Averages	
Type of Benefit Payment	No.	Annual Benefits	Benefit	Age
Retirement	183	$1,250,480	$6,833	74.2
Disability	1	8,880	8,880	67.5
Survivor	46	354,857	7,714	75.9
Total in SLRP	230	$1,614,217	$7,018	74.5

Deferred Vested/Inactive Lives

Type of Member	No.	Deferred Benefits	Outstanding Balance
Deferred Vested – Benefit Included	37	$129,844	N/A
Inactive	24	N/A	$101,437
Total in SLRP	61	$129,844	$101,437

For the liability in this valuation, deferred vested participants with benefits provided are valued assuming a retirement age of 60 and for inactive members, account balances are multiplied by two to estimate liabilities and interest in the future.

Section III: Valuation Balance Sheet

The following valuation balance sheet shows the assets and liabilities of the retirement plan as of the current valuation date of June 30, 2022 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2021. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date. The development of the actuarial value of assets is presented in Schedule A.

Section III: Valuation Balance Sheet

VALUATION BALANCE SHEET
SHOWING THE ASSETS AND LIABILITIES OF THE
SUPPLEMENTAL LEGISLATIVE RETIREMENT PLAN OF MISSISSIPPI

	JUNE 30, 2022	JUNE 30, 2021
ASSETS		
Current actuarial value of assets:		
Annuity Savings Account	$ 2,610,953	$ 2,331,172
Annuity Reserve	3,905,738	3,943,744
Employers' Accumulation Account	14,291,309	13,705,084
Total current assets	$ 20,808,000	$ 19,980,000
Future member contributions to Annuity Savings Account	$ 1,592,509	$ 1,660,506
Prospective contributions to Employer's Accumulation Account		
Normal contributions	$ 1,305,894	$ 1,422,500
Unfunded actuarial accrued liability contributions	5,325,030	5,422,264
Total prospective contributions	$ 6,630,924	$ 6,844,764
Total assets	$ 29,031,433	$ 28,485,270
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	$ 16,053,445	$ 16,275,129
Present value of benefits payable on account of inactive members for service rendered before the valuation date	1,332,908	1,331,692
Present value of benefits payable on account of active members	$ 11,645,080	$ 10,878,449
Total liabilities	$ 29,031,433	$ 28,485,270

Section III: Valuation Balance Sheet

BREAKDOWN OF TOTAL AND ACCRUED LIABILITIES
AS OF JUNE 30, 2022

	Total Liability	Accrued Liability
Active Members		
Retirement	$ 9,547,685	$ 7,731,875
Death	527,950	386,629
Disability	255,319	95,604
Termination	1,314,126	532,569
Total	$ 11,645,080	$ 8,746,677
Retirees		
Retirement	$ 13,135,997	$ 13,135,997
Survivor	2,843,521	2,843,521
Disability	73,927	73,927
Total	$ 16,053,445	$ 16,053,445
Deferred Vested Members	1,130,034	1,130,034
Inactive Members	202,874	202,874
Total Actuarial Values	$ 29,031,433	$ 26,133,030
Actuarial Value of Assets		20,808,000
Unfunded Actuarial Accrued Liability		$ 5,325,030

The total liability is the present value of future benefits for all current members as of the valuation date. The accrued liability is the present value of benefits that have been accrued as of the valuation date. Since all inactive members and retirees have accrued their full benefits, the total liability and accrued liability are the same. For actives, the difference between the total liability and the accrued liability is the present value of all future accruals.

Section IV: Comments on Valuation

The valuation balance sheet gives the following information with respect to the funds of the Plan as of June 30, 2022.

Total Assets

The Annuity Savings Account is the fund to which are credited contributions made by members together with interest thereon. When a member retires, the amount of his or her accumulated contributions is transferred from the Annuity Savings Account to the Annuity Reserve. The Employer's Accumulation Account is the fund to which are credited employer contributions and investment income, and from which are paid all employer-provided benefits under the plan. The assets credited to the Annuity Savings Account as of the valuation date, which represent the accumulated contributions of members to that date, amounted to $2,610,953. The assets credited to the Annuity Reserve were $3,905,738 and the assets credited to the Employer's Accumulation Account totaled $14,291,309. Current actuarial assets as of the valuation date equaled the sum of these three funds, $20,808,000. Future member contributions to the Annuity Savings Account were valued to be $1,592,509. Prospective contributions to the Employer's Accumulation Account were calculated to be $6,630,924 of which $1,305,894 is attributable to service rendered after the valuation date (normal contributions) and $5,325,030 is attributable to service rendered before the valuation date (unfunded actuarial accrued liability contributions).

Therefore, the balance sheet shows the present value of current and future assets of the Plan to be $29,031,433 as of June 30, 2022.

Total Liabilities

The present value of benefits payable on account of presently retired members and beneficiaries totaled $16,053,445 as of the valuation date. The present value of future benefit payments on behalf of active members amounted to $11,645,080. In addition, the present value of benefits for inactive members, due to service rendered before the valuation date, was calculated to be $1,332,908.

Therefore, the balance sheet shows the present value for all prospective benefit payments under the Plan to be $29,031,433 as of June 30, 2022.

Section 25-11-307(1) of State law requires that active members contribute 3.00% of annual compensation to the Plan.

Section 25-11-307(2) requires that the State contribute a certain percentage of the annual compensation of members to cover the normal contributions and a certain percentage to cover the accrued liability contributions of the Plan. These individual contribution percentages are established in accordance with an actuarial valuation. Based on the funding policy adopted by the Board in October 2012, the employer rate is set at 7.40% of annual compensation and the amortization period calculated on an open basis. Therefore, the amortization period for the June 30, 2022 valuation is 21.9 years, compared to 25.1 years for the previous valuation. See page 12 for a reconciliation of the amortization period.

See Schedule E for a complete analysis of the Financial Experience.

Section V: Derivation of Experience Gains & Losses

Actual experience will never (except by coincidence) match exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Details on the derivation of the experience gain/(loss) for the years ended June 30, 2022 and June 30, 2021 are shown below.

		2022 Valuation $ Thousands	2021 Valuation $ Thousands
(1)	UAAL* as of beginning of year	$ 5,422.3	$ 5,012.8
(2)	Total normal cost from last valuation	482.2	413.8
(3)	Total contributions	852.0	849.0
(4)	Interest Rate (Beginning of Year)	7.55%	7.75%
(5)	Interest accrual: [[(1) + (2)] x (4)] - [(3) x ((4) / 2)]	413.6	387.7
(6)	Expected UAAL before changes: (1) + (2) – (3) + (5)	$ 5,466.1	$ 4,965.3
(7)	Change due to plan amendments	0.0	0.0
(8)	Change due to actuarial assumptions or methods	0.0	364.7
(9)	Expected UAAL after changes: (6) + (7) + (8)	$ 5,466.1	$ 5,330.0
(10)	Actual UAAL as of end of year	$ 5,325.0	$ 5,422.3
(11)	Gain/(loss): (9) – (10)	$ 141.1	$ (92.3)
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year.	0.6%	(0.4)%

*Unfunded actuarial accrued liability.

Valuation Date June 30	Actuarial Gain/(Loss) as a % of Beginning Accrued Liabilities
2017	1.9%
2018	1.4
2019	(0.2)
2020	(2.0)
2021	(0.4)
2022	0.6

Section VI: Fixed Contribution Rate (FCR)

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Retirement Plan. The following table shows the rates of contribution payable by employers as determined from the present valuation for the fiscal year and a comparison to the previous valuation results.

Contribution for	2022 Valuation	2021 Valuation
Total Normal Cost:		
Service retirement benefits	4.82%	4.97%
Disability benefits	0.29%	0.30%
Survivor benefits	0.29%	0.30%
Total	5.39%	5.57%
Less Member Contributions:	3.00%	3.00%
Employer Normal Cost	2.39%	2.57%
Administrative Expense Load	0.28%	0.28%
Total Employer Normal Cost Rate	2.67%	2.85%
Unfunded Actuarial Accrued Liabilities (21.9 year level % of payroll amortization*)	4.73%	4.55%
Total Employer Fixed Contribution Rate (FCR)	7.40%	7.40%

*Amortization period a year ago was 25.1 years.

The current funding policy has set the employer contribution rate to 7.40% of payroll and kept the amortization period to open-ended. Thirty-year projections are completed to determine if an increase or decrease in the employer contribution rate is warranted according to the triggers set forth in the funding policy. Please see Schedule F for the current funding policy.

Section VI: Fixed Contribution Rate (FCR)

The components of the change in the computed unfunded actuarial accrued liability amortization period from 25.1 years to 21.9 years are as follows:

Previously Reported Period	25.1 years
Change due to:	
Normal amortization	(1.0)
Actuarial experience	(1.6)
Assumption changes	0.0
Plan amendments	0.0
Contribution Shortfall/(Excess)	(0.6)
Computed Period	21.9 years

Section VII: Supplemental Disclosure Information

1. The following supplemental disclosure information is provided for informational purposes only. One such item is a distribution of the number of employees by type of membership, as follows:

NUMBER OF ACTIVE AND RETIRED PARTICIPANTS
AS OF JUNE 30, 2022

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	230
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	61
Active Participants	174
Total	465

Section VII: Supplemental Disclosure Information

2. Another such item is the schedule of funding progress as shown below. As can be seen in column 3 of the table below, the funded ratio increased this year and remains at a healthy level. In addition, the UAAL as a percentage of payroll, shown in column 6, has decreased again this valuation.

SCHEDULE OF FUNDING PROGRESS

Plan Year Ended	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2) – (1)	(5) Annual Covered Payroll	(6) Unfunded AAL as a Percentage of Covered Payroll (4)/(5)
06/30/2013#	$13,554,000	$19,977,584	67.8%	$6,423,584	$6,695,359	95.9%
06/30/2014	14,899,000	20,239,757	73.6	5,340,757	6,917,939	77.2
06/30/2015#	16,098,000	21,213,446	75.9	5,115,446	6,861,166	74.6
06/30/2016	16,447,000	21,258,800	77.4	4,811,800	6,862,262	70.1
06/30/2017#	17,208,000	21,848,868	78.8	4,640,868	6,928,085	67.0
06/30/2018	17,945,000	22,318,685	80.4	4,373,685	6,832,961	64.0
06/30/2019#	18,428,000	22,933,853	80.4	4,505,853	6,937,075	65.0
06/30/2020	18,472,000	23,484,818	78.7	5,012,818	6,890,817	72.7
06/30/2021#	19,980,000	25,402,264	78.7	5,422,264	8,029,670	67.5
06/30/2022	20,808,000	26,133,030	79.6	5,325,030	8,179,673	65.1

After change in actuarial assumptions.

Section VII: Supplemental Disclosure Information

3. Under the prior funding policy, the amortization payment of the unfunded actuarial accrued liability rate was calculated based on a fixed employer contribution rate using a floating amortization period no greater than 30 years. The calculation of this amount for the past two valuations is shown below for informational purposes only:

Prior Funding Policy		
Valuation Date June 30	**2022**	**2021**
Employer contribution rate		
Normal Cost*	2.67%	2.85%
Accrued liability	4.09	4.17
Total	6.76%	7.02%
Anticipated accrued liability payment period	30 years	30 years

* Includes load for administrative expenses. See Section VI for more contribution rate detail.

Solvency Tests
($ in Thousands)

	Actuarial Accrued Liabilities for				Portions of Accrued Liabilities Covered by Assets		
Valuation Date	(1) Accumulated Employee Contributions Including Allocated Investment Earnings	(2) Retirees and Beneficiaries Currently Receiving Benefits	(3) Active and Inactive Members Employer Financed Portion	Net Assets Available for Benefits	(1)	(2)	(3)
6/30/2013	$2,416	$11,909	$5,652	$13,554	100%	93.5%	0.0%
6/30/2014	2,638	11,920	5,682	14,899	100	100.0	6.0
6/30/2015	2,862	12,329	6,023	16,098	100	100.0	15.1
6/30/2016	2,485	13,758	5,016	16,447	100	100.0	4.1
6/30/2017	2,636	13,799	5,414	17,208	100	100.0	14.3
6/30/2018	2,693	13,840	5,786	17,945	100	100.0	24.4
6/30/2019	2,701	14,282	5,951	18,428	100	100.0	24.3
6/30/2020	2,145	16,356	4,984	18,472	100	99.8	0.0
6/30/2021	2,331	16,275	6,796	19,980	100	100.0	20.2
6/30/2022	2,611	16,053	7,469	20,808	100	100.0	28.7

As can be seen from the table above, the SLRP plan assets currently cover 100% of the active member contribution account balances and 100% of the retiree liability as of the valuation date. However, the remaining assets only cover a small percentage of the employer financed active liabilities.

Section VII: Supplemental Disclosure Information

Schedule of Active Member Valuation Data

Valuation Date	Number of Employers	Active Members			
		Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
2013	5	175	$6,695,359	$38,259	(2.6)%
2014	5	175	6,917,939	39,531	3.3
2015	5	174	6,861,166	39,432	(0.3)
2016	5	171	6,862,262	40,130	1.8
2017	5	174	6,928,085	39,817	(0.8)
2018	5	174	6,832,961	39,270	(1.4)
2019	5	170	6,937,075	40,806	3.9
2020	5	171	6,890,817	40,297	(1.2)
2021	5	173	8,029,670	46,414	15.2
2022	4	174	8,179,673	47,010	1.3

Schedule of Number of Retirants Added To and Removed From Rolls*
Last Ten Fiscal Years

Item	Fiscal Year Ended June 30									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Beginning of Year	173	188	187	185	207	205	207	215	235	233
Added	20	6	8	28	6	6	11	24	3	1
Removed	(5)	(7)	(10)	(6)	(8)	(4)	(3)	(4)	(5)	(4)
End of Year	188	187	185	207	205	207	215	235	233	230

*See Schedule D for a breakdown by type of retirement.

Section VII: Supplemental Disclosure Information

Schedule of Annual Benefit Payments Added To and Removed From Rolls
Last Seven Fiscal Years

Year Ending	2016	2017	2018	2019	2020	2021	2022
Beginning of Year	$1,133,588	$1,277,763	$1,279,471	$1,304,548	$1,372,878	$1,565,656	$1,596,810
Added	177,207	31,300	34,983	72,406	216,379	14,393	2,970
Removed	(57,546)	(64,321)	(42,480)	(43,651)	(64,124)	(26,951)	(34,377)
Benefit increase due to annual COLA	24,514	34,729	32,574	39,575	40,523	43,712	48,814
Benefit increase due to plan amendments	0	0	0	0	0	0	0
End of Year	$1,277,763	$1,279,471	$1,304,548	$1,372,878	$1,565,656	$1,596,810	$1,614,217

Schedule of Average Benefit Payments

	Years of Credited Service								
	0-9	10-14	15-19	20-24	25	26-29	30	31+	TOTAL
July 1, 2021 to June 30, 2022									
Average Monthly Benefit	$123.42								$123.42
Average Final Salary	$31,733.04								$31,733.04
Number of Active Retirants	1								1
July 1, 2020 to June 30, 2021									
Average Monthly Benefit	$192.21					$815.03			$399.82
Average Final Salary	$32,588.76					$44,865.25			$36,680.92
Number of Active Retirants	2					1			3
July 1, 2019 to June 30, 2020									
Average Monthly Benefit	$244.53	$334.26	$551.15	$799.36		$969.20		$713.07	$657.06
Average Final Salary	$36,523.16	$40,009.26	$32,107.39	$39,043.63		$34,675.32		$42,094.84	$37,017.34
Number of Active Retirants	3	2	5	7		4		3	24
July 1, 2018 to June 30, 2019									
Average Monthly Benefit	$169.43	$372.79	$636.97	$742.14		$738.58		$960.08	$548.53
Average Final Salary	$24,872.76	$42,782.28	$42,042.72	$42,479.52		$40,654.56		$44,126.04	$38,076.62
Number of Active Retirants	3	2	1	2		1		2	11
July 1, 2017 to June 30, 2018									
Average Monthly Benefit	$33.20		$538.18	$512.85				$1,284.96	$485.87
Average Final Salary	$20,839.50		$40,100.76	$41,549.28				$41,618.04	$27,732.60
Number of Active Retirants	2		1	2				1	6

Section VII: Supplemental Disclosure Information

Schedule of Average Benefit Payments

	Years of Credited Service								
	0-9	10-15	16-20	21-24	25	26-29	30	31+	TOTAL
July 1, 2016 to June 30, 2017									
Average Monthly Benefit	$180.95		$609.42	$452.29	$732.45				$434.72
Average Final Salary	$29,821.02		$37,791.24	$28,377.72	$40,932.00				$32,520.12
Number of Active Retirants	2		1	2	1				6
July 1, 2015 to June 30, 2016									
Average Monthly Benefit	$249.59	$349.70	$486.61	$654.27	$522.12			$1,200.33	$527.40
Average Final Salary	$36,599.58	$39,877.51	$35,210.67	$39,774.39	$41,482.12			$42,237.92	$38,850.14
Number of Active Retirants	6	6	4	7	2			3	28
July 1, 2014 to June 30, 2015									
Average Monthly Benefit	$163.64	$739.53	$720.77		$578.67			$1,032.05	$607.33
Average Final Salary	$18,636.25	$68,228.41	$37,911.50		$34,790.50			$42,949.00	$40,911.48
Number of Active Retirants	2	2	2		1			1	8
July 1, 2013 to June 30, 2014									
Average Monthly Benefit		$345.04	$490.81	$472.60		$579.73			$454.01
Average Final Salary		$34,404.37	$34,871.00	$39,300.75		$43,164.50			$36,836.00
Number of Active Retirants		2	2	1		1			6
July 1, 2012 to June 30, 2013									
Average Monthly Benefit	$168.36	$182.74	$462.84	$550.22		$730.99			$320.75
Average Final Salary	$27,924.79	$29,576.45	$36,139.50	$39,580.94		$38,727.25			$32,325.08
Number of Active Retirants	6	7	1	4		2			20

Section VIII: Projection Results

Annual actuarial valuations are performed for SLRP which re-measure the assets and liabilities and the adequacy of the contribution rate. Actuarial projections are also performed every year with sensitivity testing of several factors. SLRP also has experience studies performed every two years to analyze the discrepancies between actuarial assumptions and actual experience and determine if the actuarial assumptions need to be changed. Annual actuarial valuations and projections and periodic experience studies are practical ways to monitor and reassess risk.

As mentioned earlier in the report, the intended purpose of the projection results is to help assess the Plan's funding progress and to provide information to decision makers to help ensure that the applicable pension liabilities and funding mechanisms are managed in a manner that promotes sustainability.

The projection process should be viewed as an enhancement to the actuarial valuation control cycle by providing additional evaluation metrics to assess the need for further, in-depth analysis of the risks to the Plan's sustainability. The actuarial valuation control cycle is a key component of managing a long-term liability whose ultimate value is based upon uncertain future events. As the ultimate value of future cash flows cannot be predicted with certainty, pension liabilities are managed in the short-term through the continuous monitoring of economic and demographic assumptions, with a keen eye on the identification, measurement, and management of risks.

The projection process, like other actuarial modeling, is not intended to provide absolute results. The intended purpose of the projection process is to identify anticipated trends and to compare various outcomes, under a given methodology, rather than predicting certain future events. The results produced by the projection process do not predict the financial condition of the Plan or the Plan's ability to pay benefits in the future and do not provide any guarantee of future financial soundness of the Plan. Because actual experience will not unfold exactly as expected, actual results can be expected to differ from the results presented herein. To the extent actual experience deviates significantly from the assumptions, results could be significantly better or significantly worse than the expected outcome indicated in this report.

Section VIII: Projection Results

SPECIAL ASSUMPTIONS

In addition to the regular valuation assumptions used in performing the annual actuarial valuations of SLRP, additional assumptions must be made that are unique to projections. The first of these is what, if any, change in the overall active membership will be anticipated. For this projection study, it was assumed that the number of active members would remain static over the 30-year projection period.

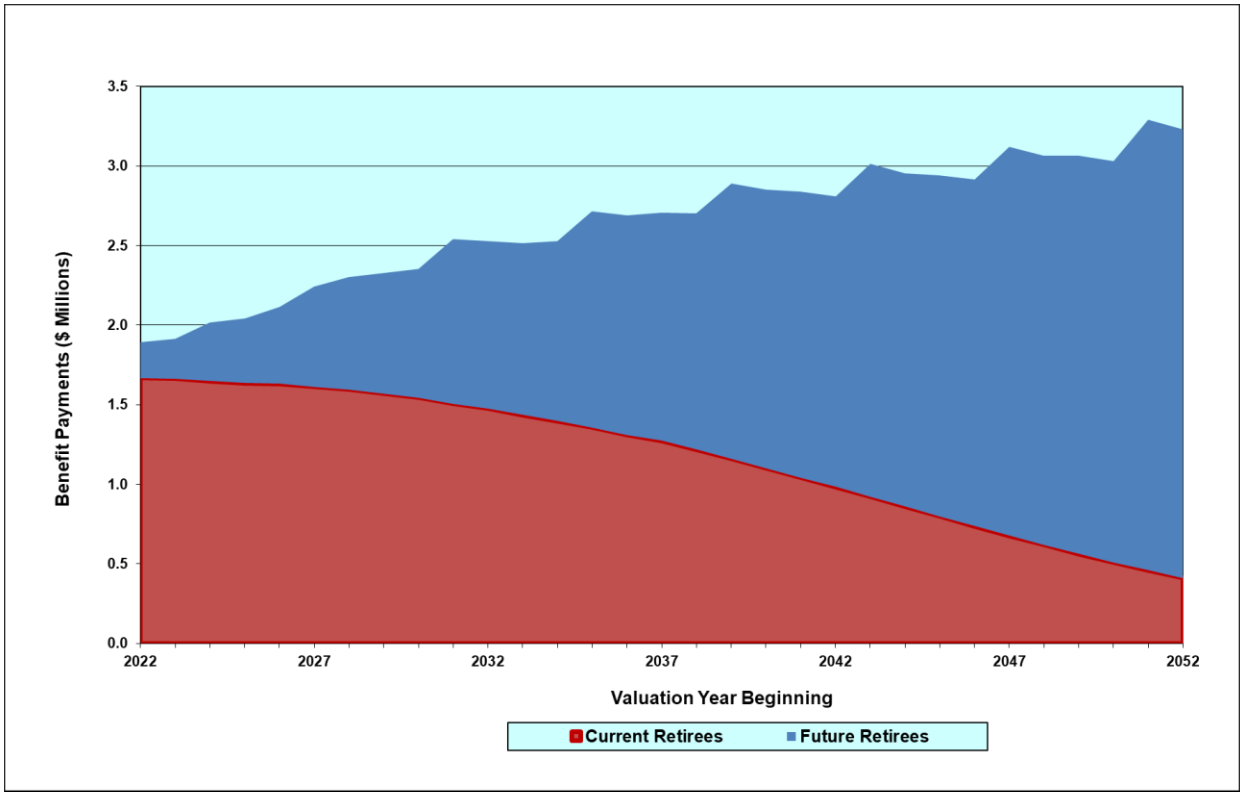
Since we assume active members will leave the system through termination, death, disability, or retirement, we need to make some assumptions as to the composition of new hires that will replace departing members in order to maintain the membership at a constant number. The new entrant profile we developed was based on the new hires over the 4-year period prior to the projection start date of June 30, 2022.

It is important to note that an eligibility service load of 2.50 years was included in the new entrant profile as the census data shows more and more active members in SLRP are entering the Plan with service from the PERS plan. Please also note that the annual compensation for active members of SLRP remained at a higher than normal level for the fiscal year ending June 30, 2022. After discussions with staff, we believe this is increase in payroll should continue, so therefore, we have assumed payroll going forward will follow the salary increase assumptions per our actuarial assumptions. The new entrant profile is summarized in the table below.

Age	Average Pay	Percent Male	Weight
30	$42,000	80%	15%
39	$42,000	80%	15%
44	$42,000	80%	26%
53	$43,000	80%	18%
57	$43,000	80%	15%
67	$46,000	80%	11%

Section VIII: Projection Results

For the projection results presented in this section of the report, it was further assumed that the benefit structure as it exists on June 30, 2022 would remain in place for the following 30 years. The following graph shows the projection of benefit payments of SLRP members. The red area of the graph represents the benefit payments for current retirees and the blue area represents the benefit payments for any future retirees. The jagged outline of this blue area is a result of our assumption that most retirements occur every 4 years (after an election year). SLRP currently pays approximately $1.7 million in benefit payments to its retirees but over the 30-year period, that amount is expected to nearly double.



Section VIII: Projection Results

FUTURE MEMBERSHIP

The following chart and graph show the headcounts of active participants and retired members over the projection period. The actives are broken down into those existing as of June 30, 2022 and those who are hired after June 30, 2022. We have assumed the active membership will continue at the current maximum population of 174 active members over the projected period. As can be seen from the chart below, the retiree and deferred vested headcount begins to drop as retiree deaths outnumber new retirees.

Member	2022	2027	2032	2042	2052
Active – Existing Employees	174	113	55	19	3
Active – New Entrants	0	61	119	155	171
Retired/Deferred Vesteds	267	277	283	235	207
Total	441	451	457	409	381

Section VIII: Projection Results

PROJECTION RESULTS

The baseline projection results shown below use the same actuarial assumption as used in the June 30, 2022 actuarial valuation report. In addition, the projection results using different long-term investment return assumptions for future valuations (7.25% and 7.00%) are included.

Baseline Projection Results (7.55%)
($000's)

	2022	2027	2032	2042	2052
Total Payroll	$8,180	$8,960	$9,869	$12,351	$15,871
UAAL	$5,325	$6,361	$6,676	$7,269	$6,687
Normal Cost Rate	2.67%	3.10%	3.40%	3.59%	3.48%
UAAL Rate	4.73%	4.30%	4.00%	3.81%	3.92%
Total Rate	7.40%	7.40%	7.40%	7.40%	7.40%
Funding Ratio	79.6%	77.9%	78.4%	79.2%	83.9%
Amortization Period	22 years	32 years	34 years	27 years	15 years
Cash Flow %	(5.02)%	(5.70)%	(6.11)%	(5.33)%	(4.35)%

Projection Results Assuming 7.25% Long-Term Investment Return
($000's)

	2022	2027	2032	2042	2052
Total Payroll	$8,180	$8,960	$9,869	$12,351	$15,871
UAAL	$6,102	$7,410	$8,301	$10,964	$14,709
Normal Cost Rate	2.67%	3.47%	3.77%	3.97%	3.85%
UAAL Rate	4.73%	3.93%	3.63%	3.43%	3.55%
Total Rate	7.40%	7.40%	7.40%	7.40%	7.40%
Funding Ratio	77.3%	75.0%	73.8%	69.5%	65.6%
Amortization Period	27 years	58 years	Infinite	Infinite	Infinite
Cash Flow %	(5.02)%	(5.79)%	(6.34)%	(5.92)%	(5.39)%

Section VIII: Projection Results

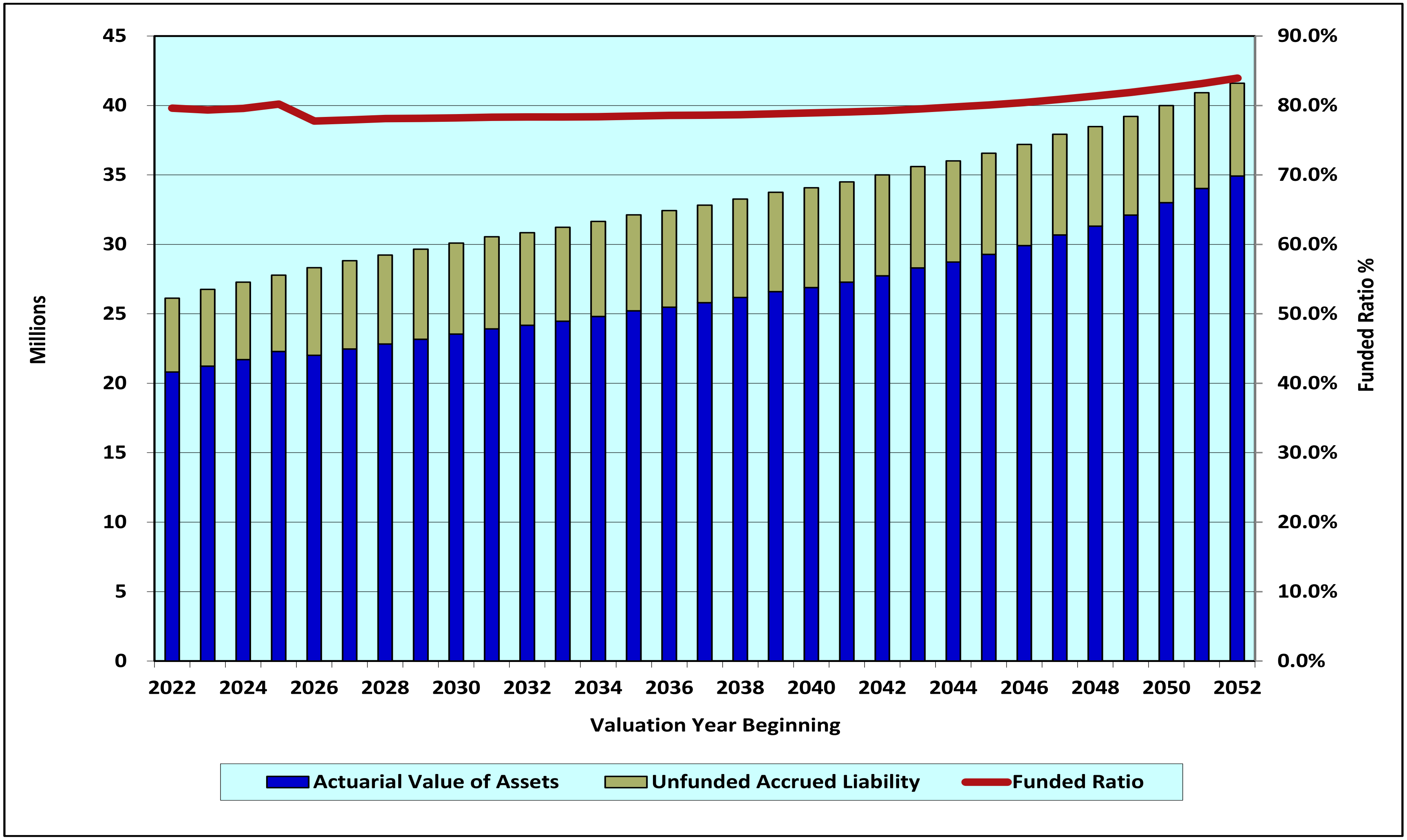
Projection Results Assuming 7.00% Long-Term Investment Return
($000's)

	2022	2027	2032	2042	2052
Total Payroll	$8,180	$8,960	$9,869	$12,351	$15,871
UAAL	$6,754	$8,289	$9,645	$13,921	$20,884
Normal Cost Rate	2.67%	3.77%	4.08%	4.29%	4.17%
UAAL Rate	4.73%	3.63%	3.32%	3.11%	3.23%
Total Rate	7.40%	7.40%	7.40%	7.40%	7.40%
Funding Ratio	75.5%	72.7%	70.2%	62.2%	52.3%
Amortization Period	31 years	Infinite	Infinite	Infinite	Infinite
Cash Flow %	(5.02)%	(5.86)%	(6.54)%	(6.49)%	(6.60)%

The graph that follows shows the projection of the Unfunded Actuarial Accrued Liability (UAAL), Actuarial Value of Assets and the Funded Ratio under the baseline valuation (assuming 7.55%) from the amounts shown in the table on the previous page. As you can see, under the current assumptions, the funded ratio shows relatively flat over the projection period and is below the current 80% goal as of 2042.

Section VIII: Projection Results

Mississippi PERS – SLRP Plan
30 Year Projection of Funded Ratio on Actuarial Asset Value
Based on June 30, 2022 Valuation Results



Section IX: Cash Flow Projections

CASH FLOW PROJECTIONS

The funded ratio is the primary measure of funded status of a pension plan and, thereby, the most common measurement used for drawing conclusions on funding progress. The funded ratio is the ratio of the actuarial value of assets to the actuarial or accrued liability of the system as calculated by the funding method used in developing system contribution levels. When using the funded ratio in assessing trends over several valuations, we recommend that the basis for determining both the assets and liabilities in the ratio are taken into consideration and reasonable efforts are made to adjust the ratio to reflect these differences when they are known. On a consistent basis, an increasing funded ratio would typically indicate progress in meeting the obligations of the system. In most cases, other measures should also be considered in a trend assessment. These may include the trend in the length of the amortization period, the required contribution rate, percentage of required contributions funded, and the unfunded actuarial liability as a percentage of payroll. Focusing solely on any one measure as the indication of funding progress is an over-simplification of a complex and dynamic system.

Another of those additional metrics is an outlook on the cash flow as a percentage of assets for the System. Most retirement systems are funded with an advance-funding mechanism, meaning contributions and investment earnings are earned during a member's active lifetime in order to pay for the benefit payments during his retirement years. Many mature retirement systems, like SLRP, have negative cash flow, where benefit payments paid out of the trust are more than the contributions being collected by employers and employees.

Section IX: Cash Flow Projections

For the fiscal year ending June 30, 2023, we are projecting SLRP to have a negative cash flow of approximately $1.0 Million (benefit payments of $1.9 Million and contributions of $0.9 Million). With a market value of assets of $20.1 Million as of June 30, 2022, the cash flow as a percentage of assets is estimated to be negative 5.02% for the 2023 fiscal year. While the market value of assets is assumed to earn 7.55% each year, the difference between the investment return assumption and the negative cash flow percentage is positive, meaning assets are projected to grow for the 2023 fiscal year. When assets do not earn a positive return enough to cover this negative cash flow percentage, assets are expected to decline for the year. If the negative cash flow percentage does not grow more than the assumed investment return assumption, the System's assets will continue to increase, and sustainability of the plan may be achieved.

The tables on the following pages demonstrate the open group projection of cash flow on the baseline assumption and then a sensitivity analysis, using a one-year return of negative 7.00% for the fiscal year ending June 30, 2023. This demonstrates the projection of this metric if SLRP experiences one significant bad investment year in one of the next five years without a correction in the market. As can be seen from the table on pages 31, the cash flow as a percentage of market value of assets does not at any point get less than negative 6.3% on the baseline assumptions, meaning that SLRP assets should continue to increase as long as all baseline actuarial assumptions are met.

However, if there is a significant negative investment experience in one of the next five years (as seen on the tables on page 32), the negative cash flow will continue to get more negative and the assets will continue to decrease during the projection period.

Section IX: Cash Flow Projections

Mississippi PERS
30-year Open Group Projection of Cash Flow
SLRP Plan
Based on June 30, 2022 Valuation Results

Projection of Cash Flow

Contribution Methodology: Employee and Employer Contributions
Investment Return Methodology: As Programmed

Valuation Year Beginning July 1	Expected Short-term Investment Return	Valuation Annual Payroll	Market Value of Assets July 1	Total Contributions	Projected Benefit Payments	Ratio of Cash Flow to MVA	Expected Investment Return	Net Cash Flow	Market Value of Assets June 30	Valuation Year Ending June 30
2022	7.55%	8,396,435	20,139,000	881,962	(1,892,042)	-5.02%	1,483,058	472,977	20,611,977	2023
2023	7.55%	8,555,665	20,611,977	898,687	(1,912,992)	-4.92%	1,518,611	504,306	21,116,283	2024
2024	7.55%	8,557,330	21,116,283	898,862	(2,015,952)	-5.29%	1,552,876	435,786	21,552,069	2025
2025	7.55%	8,751,582	21,552,069	919,266	(2,041,249)	-5.21%	1,585,597	463,614	22,015,683	2026
2026	7.55%	8,960,010	22,015,683	941,159	(2,113,201)	-5.32%	1,618,745	446,703	22,462,387	2027
2027	7.55%	9,148,585	22,462,387	960,967	(2,240,243)	-5.70%	1,648,496	369,220	22,831,607	2028
2028	7.55%	9,189,410	22,831,607	965,256	(2,300,140)	-5.85%	1,674,311	339,426	23,171,033	2029
2029	7.55%	9,409,522	23,171,033	988,376	(2,325,509)	-5.77%	1,699,855	362,722	23,533,756	2030
2030	7.55%	9,634,835	23,533,756	1,012,043	(2,353,623)	-5.70%	1,727,075	385,495	23,919,250	2031
2031	7.55%	9,869,048	23,919,250	1,036,645	(2,540,490)	-6.29%	1,750,166	246,321	24,165,572	2032
2032	7.55%	9,999,496	24,165,572	1,050,347	(2,525,767)	-6.11%	1,769,817	294,398	24,459,969	2033
2033	7.55%	10,247,521	24,459,969	1,076,400	(2,514,840)	-5.88%	1,793,415	354,974	24,814,944	2034
2034	7.55%	10,505,352	24,814,944	1,103,482	(2,528,956)	-5.74%	1,820,696	395,222	25,210,165	2035
2035	7.55%	10,767,751	25,210,165	1,131,045	(2,713,400)	-6.28%	1,844,720	262,364	25,472,530	2036
2036	7.55%	10,952,859	25,472,530	1,150,488	(2,688,908)	-6.04%	1,866,157	327,737	25,800,267	2037
2037	7.55%	11,234,387	25,800,267	1,180,060	(2,706,654)	-5.92%	1,891,340	364,746	26,165,012	2038
2038	7.55%	11,507,204	26,165,012	1,208,717	(2,701,876)	-5.71%	1,920,117	426,958	26,591,970	2039
2039	7.55%	11,796,815	26,591,970	1,239,137	(2,890,704)	-6.21%	1,946,481	294,915	26,886,885	2040
2040	7.55%	12,041,882	26,886,885	1,264,879	(2,850,699)	-5.90%	1,971,184	385,364	27,272,248	2041
2041	7.55%	12,350,896	27,272,248	1,297,338	(2,836,589)	-5.64%	2,002,005	462,755	27,735,003	2042
2042	7.55%	12,661,612	27,735,003	1,329,976	(2,809,299)	-5.33%	2,039,164	559,841	28,294,844	2043
2043	7.55%	12,987,066	28,294,844	1,364,161	(3,013,030)	-5.83%	2,075,148	426,280	28,721,124	2044
2044	7.55%	13,279,079	28,721,124	1,394,834	(2,954,952)	-5.43%	2,110,622	550,504	29,271,628	2045
2045	7.55%	13,625,331	29,271,628	1,431,205	(2,942,190)	-5.16%	2,154,006	643,021	29,914,649	2046
2046	7.55%	13,973,397	29,914,649	1,467,766	(2,913,680)	-4.83%	2,204,966	759,051	30,673,700	2047
2047	7.55%	14,334,662	30,673,700	1,505,713	(3,119,312)	-5.26%	2,256,059	642,460	31,316,161	2048
2048	7.55%	14,694,129	31,316,161	1,543,471	(3,062,788)	-4.85%	2,308,059	788,742	32,104,903	2049
2049	7.55%	15,078,990	32,104,903	1,583,897	(3,063,369)	-4.61%	2,369,086	889,614	32,994,517	2050
2050	7.55%	15,465,871	32,994,517	1,624,535	(3,031,442)	-4.26%	2,438,942	1,032,035	34,026,552	2051
2051	7.55%	15,870,530	34,026,552	1,667,040	(3,291,203)	-4.77%	2,508,808	884,645	34,911,197	2052
2052	7.55%	16,282,378	34,911,197	1,710,301	(3,228,057)	-4.35%	2,579,543	1,061,787	35,972,984	2053

Section IX: Cash Flow Projections

Mississippi PERS
30-year Open Group Projection of Cash Flow
SLRP Plan
Based on June 30, 2022 Valuation Results

Projection of Cash Flow

Contribution Methodology: Employee and Employer Contributions
Investment Return Methodology: As Programmed

Valuation Year Beginning July 1	Expected Short-term Investment Return	Valuation Annual Payroll	Market Value of Assets July 1	Total Contributions	Projected Benefit Payments	Ratio of Cash Flow to MVA	Expected Investment Return	Net Cash Flow	Market Value of Assets June 30	Valuation Year Ending June 30
2022	-7.00%	8,396,435	20,139,000	881,962	(1,892,042)	-5.02%	(1,373,736)	(2,383,817)	17,755,183	2023
2023	7.55%	8,555,665	17,755,183	898,687	(1,912,992)	-5.71%	1,302,923	288,618	18,043,801	2024
2024	7.55%	8,557,330	18,043,801	898,862	(2,015,952)	-6.19%	1,320,904	203,814	18,247,615	2025
2025	7.55%	8,751,582	18,247,615	919,266	(2,041,249)	-6.15%	1,336,111	214,128	18,461,743	2026
2026	7.55%	8,960,010	18,461,743	941,159	(2,113,201)	-6.35%	1,350,422	178,380	18,640,124	2027
2027	7.55%	9,148,585	18,640,124	960,967	(2,240,243)	-6.86%	1,359,915	80,639	18,720,763	2028
2028	7.55%	9,189,410	18,720,763	965,256	(2,300,140)	-7.13%	1,363,943	29,058	18,749,821	2029
2029	7.55%	9,409,522	18,749,821	988,376	(2,325,509)	-7.13%	1,366,053	28,920	18,778,742	2030
2030	7.55%	9,634,835	18,778,742	1,012,043	(2,353,623)	-7.14%	1,368,072	26,492	18,805,233	2031
2031	7.55%	9,869,048	18,805,233	1,036,645	(2,540,490)	**-8.00%**	1,364,058	(139,787)	18,665,447	2032
2032	7.55%	9,999,496	18,665,447	1,050,347	(2,525,767)	**-7.90%**	1,354,558	(120,861)	18,544,585	2033
2033	7.55%	10,247,521	18,544,585	1,076,400	(2,514,840)	**-7.76%**	1,346,803	(91,638)	18,452,948	2034
2034	7.55%	10,505,352	18,452,948	1,103,482	(2,528,956)	**-7.72%**	1,340,365	(85,109)	18,367,838	2035
2035	7.55%	10,767,751	18,367,838	1,131,045	(2,713,400)	**-8.61%**	1,328,125	(254,231)	18,113,608	2036
2036	7.55%	10,952,859	18,113,608	1,150,488	(2,688,908)	**-8.49%**	1,310,559	(227,861)	17,885,747	2037
2037	7.55%	11,234,387	17,885,747	1,180,060	(2,706,654)	**-8.54%**	1,293,793	(232,801)	17,652,945	2038
2038	7.55%	11,507,204	17,652,945	1,208,717	(2,701,876)	**-8.46%**	1,277,456	(215,703)	17,437,242	2039
2039	7.55%	11,796,815	17,437,242	1,239,137	(2,890,704)	**-9.47%**	1,255,299	(396,267)	17,040,975	2040
2040	7.55%	12,041,882	17,040,975	1,264,879	(2,850,699)	**-9.31%**	1,227,818	(358,002)	16,682,972	2041
2041	7.55%	12,350,896	16,682,972	1,297,338	(2,836,589)	**-9.23%**	1,202,515	(336,735)	16,346,237	2042
2042	7.55%	12,661,612	16,346,237	1,329,976	(2,809,299)	**-9.05%**	1,179,313	(300,010)	16,046,227	2043
2043	7.55%	12,987,066	16,046,227	1,364,161	(3,013,030)	**-10.28%**	1,150,378	(498,490)	15,547,737	2044
2044	7.55%	13,279,079	15,547,737	1,394,834	(2,954,952)	**-10.03%**	1,116,031	(444,087)	15,103,650	2045
2045	7.55%	13,625,331	15,103,650	1,431,205	(2,942,190)	**-10.00%**	1,084,324	(426,661)	14,676,989	2046
2046	7.55%	13,973,397	14,676,989	1,467,766	(2,913,680)	**-9.85%**	1,054,523	(391,392)	14,285,597	2047
2047	7.55%	14,334,662	14,285,597	1,505,713	(3,119,312)	**-11.30%**	1,018,758	(594,841)	13,690,757	2048
2048	7.55%	14,694,129	13,690,757	1,543,471	(3,062,788)	**-11.10%**	977,341	(541,976)	13,148,781	2049
2049	7.55%	15,078,990	13,148,781	1,583,897	(3,063,369)	**-11.25%**	937,899	(541,573)	12,607,208	2050
2050	7.55%	15,465,871	12,607,208	1,624,535	(3,031,442)	**-11.16%**	899,700	(507,207)	12,100,001	2051
2051	7.55%	15,870,530	12,100,001	1,667,040	(3,291,203)	**-13.42%**	853,353	(770,810)	11,329,191	2052
2052	7.55%	16,282,378	11,329,191	1,710,301	(3,228,057)	**-13.40%**	799,101	(718,655)	10,610,536	2053

Section X: Sensitivity Analysis

SENSITIVITY ANALYSIS

Measuring pension obligations and actuarially determined contributions requires the use of assumptions regarding future economic and demographic experience. Whenever assumptions are made about future events, there is risk that actual experience will differ from expected. Actuarial valuations include the risk that actual future measurements will deviate from expected future measurements due to actual experience that is different than the actuarial assumptions. The primary areas of risk in this actuarial valuation are.

- Investment Risk – the potential that actual investment returns will be different than expected.
- Longevity and Other Demographic Risks – the potential that mortality or other demographic experience will be different than expected.
- Interest Rate Risk – To the extent market rates of interest affect the expected return on assets, there is a risk of change to the discount rate which determines the present value of liabilities and actuarial valuation results.
- Contribution Risk – The potential that actual contributions are different than the fixed contribution rates.

Section X: Sensitivity Analysis

Investment Risk

In this section of the report, we will demonstrate the variability in achieving funding goals based on sensitivity around the three key variables listed above. Earlier in this section, we reviewed the projections if the long-term investment return assumption was lowered to rates below 7.55%. In this section, we keep the long-term investment return assumption at 7.55% but review the sensitivity of short-term investment returns as a single year event (and then 7.55% for all years thereafter) and simulate the next 10-year periods of return (and then 7.55% for all years thereafter).

Projected Funded Ratio in 2042

Single Year Event	2022 Valuation	2021 Valuation
• 1.55% for the next fiscal year	65.8%	112.1%
• 3.55% for the next fiscal year	70.3%	118.0%
• 5.55% for the next fiscal year	74.8%	123.9%
• **7.55% for the next fiscal year (Baseline)**	**79.2%**	**129.8%**
• 9.55% for the next fiscal year	83.7%	135.7%
• 11.55% for the next fiscal year	88.2%	141.6%
• 13.55% for the next fiscal year	92.7%	147.5%
• Simulate 2008 loss using -15% for the next fiscal year	28.8%	63.4%
Average Returns over next 10-Year Period (Simulated returns using mean and standard deviations from PERS' Investment Consultant's Capital Market Assumptions)*	**2022 Valuation**	**2021 Valuation**
• 6.00%	53.1%	94.6%
• 7.00%	70.0%	117.3%
• 8.00%	93.0%	147.4%

* *6.00% Average Returns over the next 10-Year Period: 7.04%, 10.32%, 2.25%, 5.45%, 8.52%, 0.00%, 5.44%, 11.49%,-7.04%, 18.53%*
7.00% Average Returns over the next 10-Year Period: 3.61%, 20.67%,-0.02%, 11.58%,-4.84%, 8.13%, 18.10%, 2.04%, 0.83%, 12.67%
8.00% Average Returns over the next 10 Year Period: 9.00%, 9.01%, 16.24%, 4.84%, 16.62%, 6.78%,-3.74%, 6.19%, 18.57%,-1.19%

Section X: Sensitivity Analysis

As can be seen from the projected funded ratios on the table above, the sensitivity of short-term investment returns does have an impact to the funding of SLRP in the long-term, especially another repeat of the Great Recession of 2008. We believe it demonstrates the importance of these continued projection reports and the continued monitoring of this sensitivity analysis because short-term differences in investment returns can have a major impact on the projection of funded ratios.

Section X: Sensitivity Analysis

Demographic Risk

While actual investment returns compared to that assumed is the most critical driver of funding, many other assumptions are used in the actuarial projections to review sensitivity, such as population growth and wage inflation. Variances in these other assumptions over the long-term may also have an impact on the funding of the Plan.

Since SLRP has a set number of active legislative members and should remain static over the projection period, we have not reviewed the sensitivity around this assumption.

Section X: Sensitivity Analysis

Assumption Risk

We also performed a sensitivity analysis for the wage inflation assumption. As a result of the experience study presented in April 2021, the Board adopted a reduction in the wage inflation assumption from 3.00% to 2.65%, which is 0.25% above the price inflation of 2.40%. Wage inflation is a major component of the underlying salary increase assumptions, as well as the amortization of the Unfunded Accrued Liability which is based on the level percent of payroll amortization methodology.

In the table below, the second scenario lowers the discount rate to 7.30% but does not change the price inflation or wage inflation. The third scenario lowers the price and wage inflation by 0.30% and lowers the discount rate to 7.30%.

Projected Funded Ratio in 2042

Scenario	Price Inflation	Discount Rate	Wage Inflation	2022 Valuation	2021 Valuation
1 - Baseline	2.40%	7.55%	2.65%	**79.2%**	**129.8%**
2	2.40%	7.30%	2.65%	71.1%	117.2%
3	2.10%	7.30%	2.35%	69.1%	116.4%

Section X: Sensitivity Analysis

Contribution Risk

To demonstrate the contribution risk of making the Fixed Contribution Rates (FCR) for SLRP, we have calculated the projected funded ratio if the FCRs were 1% higher or 1% lower than the current rates for all future years.

Projected Funded Ratio in 2042

Change in Fixed Contribution Rate (FCR)	2022 Valuation	2021 Valuation
• Baseline	**79.2%**	**129.8%**
• 1.00% increase in FCR	90.8%	141.1%
• 1.00% decrease in FCR	67.7%	118.4%

Over a long projection period, gains and losses due to population growth and wage inflation assumptions will be relatively concentrated around the expected value of these assumptions. So, the impact of the sensitivity around these baseline assumptions is small when compared to the investment return assumption.

Section XI: Projection Summary

Utilizing the metrics based on the funding policy for PERS and with a fixed contribution rate as a percentage of annual compensation of 7.40% of payroll, the projection results for 2022 for SLRP show that the Plan will have some "Yellow Light" status for two of the three metrics. **While we understand that none of the metrics are in the "Red Light" status, we are concerned with the negative cash flow projections and we recommend to the PERS Board that the Fixed Contribution Rate (FCR) be increased from 7.40% to 8.40% of annual compensation beginning July 1, 2024.**

Metrics	Projection with 7.40% FCR (%)	Status
Funding Ratio in 2042	79.2%	Yellow
Cash Flow as a Percentage of Assets	-6.3%	Yellow
ADC/FCR Ratio from 2022 Valuation	94.3%	Green
ADC/FCR Ratio from 2023 Valuation	98.0%	Green

The table below shows the metrics with an FCR of 8.40% of annual compensation beginning July 1, 2024.

Metrics	Projection with 8.40% FCR (7.55%)	Status
Funded Ratio in 2042	90.8%	Green
Cash Flow as a Percentage of Assets	-5.6%	Green
ADC/FCR Ratio from Valuation	94.3%	Green
ADC/FCR Ratio from 2023 Valuation	86.3%	Green

Schedule A: Development of Actuarial Value of Assets

($ thousands)

	Valuation Date June 30:	2021	2022	2023	2024	2025	2026
A.	Actuarial Value Beginning of Year	$18,472	$19,980				
B.	Market Value End of Year	22,950	20,139				
C.	Market Value Beginning of Year	17,995	22,950				
D.	Cash Flow						
	D1. Contributions	849	852				
	D2. Other Revenue	0	0				
	D3. Benefit Payments	(1,608)	(1,687)				
	D4. Refunds	(6)	0				
	D5. Administrative Expenses	(12)	(12)				
	D6. Net	(777)	(847)				
E.	Investment Income						
	E1. Market Total: B.-C.-D6.	5,732	(1,964)				
	E2. Assumed Rate	7.75%	7.55%				
	E3. Amount for Immediate Recognition	1,365	1,701				
	E4. Amount for Phased-In Recognition	4,367	(3,665)				
F.	Phased-In Recognition of Investment Income						
	F1. Current Year: 0.20*E4.	873	(733)				
	F2. First Prior Year	(169)	873	(733)			
	F3. Second Prior Year	(17)	(169)	873	(733)		
	F4. Third Prior Year	19	(17)	(169)	873	(733)	
	F5. Fourth Prior Year	214	20	(17)	(169)	873	(733)
	F6. Total Recognized Investment Gain	920	(26)	(46)	(29)	140	(733)
G.	Actuarial Value End of Year: A. + D6. + E3. + F6.	$19,980	$20,808				
H.	Difference Between Market & Actuarial Values	$2,970	$(669)	$(623)	$(594)	$(734)	$(1)

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 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. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

Schedule A: Development of Actuarial Value of Assets

	Asset Summary June 30, 2022 ($ in Thousands)	
	Market Value	Actuarial Value
(1) Assets as of June 30, 2021	$22,950	$19,980
(2) Contributions and Misc. Revenue	852	852
(3) Investment Increment	(1,964)	1,675
(4) Benefit Payments	(1,687)	(1,687)
(5) Refunds	0	0
(6) Administrative Expenses	(12)	(12)
(7) Assets as of June 30, 2022 (1)+(2)+(3)+(4)+(5)+(6)	$20,139	$20,808
(8) Net Investment Return [2 x (3)] / [(7) + (1) – (3)]	(8.72)%	8.56%

Schedule B: Statement of Actuarial Assumptions & Methods

The assumptions and methods used in the valuation are based on the results of the experience Investigation for the four-year period ending June 30, 2020, dated April 20, 2021, and adopted by the Board in August 2021.

INTEREST RATE: 7.55% per annum, compounded annually (net of investment expenses only). The expected return on assets consists of 2.40% price inflation and 5.15% real rate of return.

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed rates of separation from active service are as follows:

	Annual Rate of		
	Death*		
Age	Male	Female	Disability**
20	0.0483%	0.0126%	0.04%
25	0.0567	0.0189	0.05
30	0.0630	0.0259	0.07
35	0.0714	0.0350	0.11
40	0.0893	0.0483	0.17
45	0.1218	0.0665	0.23
50	0.1764	0.0917	0.30
55	0.2594	0.1274	0.35
60	0.3980	0.1757	0.40
65	0.6353	0.2429	0.00
70	1.1655	0.4739	0.00
75	2.1389	0.9247	0.00

* Adjusted Base rates.
** 93% are presumed to be non-duty related, and 7% are assumed to be duty related.

WITHDRAWAL AND VESTING: 15% in an election year, 2% in a non-election year.

SERVICE RETIREMENT: 30% in an election year, 2.5% in a non-election year. All members are assumed to retire no later than age 80.

It is assumed that a member will be granted 2.5 years of service credit for unused leave at termination of employment.

SALARY INCREASES: 2.65% per annum, for all ages.

DEATH AFTER RETIREMENT:

*Service Retirees**

Membership Table	Adjustment to Rates	Projection Scale
PubS.H-2010(B) Retiree	Male: 95% up to age 60, 110% for ages 61 to 75, and 101% for ages above 77 Female: 84% up to age 72, 100% for ages above 76	MP-2020

*Contingent Annuitants**

Membership Table	Adjustment to Rates	Projection Scale
PubS.H-2010(B) Contingent Annuitant	Male: 97% for all ages Female: 110% for all ages	MP-2020

*Disabled Retirees**

Membership Table	Adjustment to Rates	Projection Scale
PubG.H-2010 Disabled	Male: 134% for all ages Female: 121% for all ages	MP-2020

* Please note that none of the recommended tables have any setbacks or setforwards.

Representative values of the assumed rates of death after retirement are as follows:

	Rates of Death After Retirement*					
	Service Retirees		Contingent Annuitants		Disabled Retirees	
AGE	Male	Female	Male	Female	Male	Female
45	0.2983%	0.0983%	0.7692%	0.5104%	1.4660%	1.1919%
50	0.4190%	0.1638%	0.8837%	0.6556%	2.2780%	1.7956%
55	0.5197%	0.2738%	1.0156%	0.7843%	2.9855%	2.1078%
60	0.7771%	0.4578%	1.2397%	1.0131%	3.6475%	2.4684%
65	1.3211%	0.7652%	1.6286%	1.4157%	4.5426%	2.9730%
70	2.1758%	1.2785%	2.4153%	1.9998%	5.8129%	3.8127%
75	3.8566%	2.3659%	3.7209%	3.0052%	7.6661%	5.2683%
80	6.2640%	4.2530%	5.7734%	4.7289%	10.8125%	7.7779%
85	11.0605%	7.3240%	9.2228%	7.8562%	15.7785%	11.9947%
90	17.6902%	12.6470%	14.6577%	13.4530%	22.7224%	17.5353%

* Adjusted Base Rates

Schedule B: Statement of Actuarial Assumptions & Methods

PAYROLL GROWTH: 2.65% per annum, compounded annually.

ADMINISTRATIVE EXPENSES: 0.28% of payroll.

TIMING OF DECREMENTS AND PAY INCREASES: Middle of Year.

ASSUMED INTEREST RATE ON EMPLOYEE CONTRIBUTIONS: 2.00%

MARRIAGE ASSUMPTION: 85% married with the husband three years older than his wife.

MAXIMUM COVERED EARNINGS ASSUMPTION GROWTH: 2.65%

MODIFIED CASH REFUND: Benefits were valued with a six-year certain period for retirees and a five year certain period for active members to estimate the value of the modified cash refund feature.

ASSET VALUATION METHOD: Actuarial value, as developed in Schedule A. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected market value.

AMORTIZATION METHOD: Level Percentage of Payroll Method using 30-year closed amortization periods.

VALUATION METHOD: The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability, or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently 7.55%). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.

The employer contributions required to support the benefits of SLRP are determined following a level funding approach and consist of a normal contribution and an accrued liability contribution.

Under the entry age normal cost method, the actuarial present value of each member's projected benefits is allocated on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial accrued liability. The unfunded actuarial accrued liability represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. The unfunded actuarial accrued liability is calculated each year and reflects experience gains/losses. The accrued liability contribution amortizes the balance of the unfunded actuarial accrued liability over a period of years from the valuation date.

Schedule C: Summary of Main Benefit & Contribution Provisions

The following summary presents the main benefit and contribution provisions of the Plan in effect June 30, 2022 as interpreted in preparing the actuarial valuation.

DEFINITIONS

Average Compensation	Average annual covered earnings of an employee during the four highest years of service. To determine your four highest years, PERS considers these scenarios: • Four highest fiscal years of earned compensation; • Four highest calendar years of earned compensation; • Combination of four highest fiscal and calendar years of earned compensation that do not overlap; or • Final 48 months of earned compensation prior to termination of employment.
Covered Earnings	Gross salary not in excess of the maximum amount on which contributions were required.
Fiscal Year	Year commencing on July 1 and ending June 30.
Eligibility Service	Service while a contributing member of PERS plus additional service as described below. (OLD: Eligibility service" is all service in PERS, including that credited for SLRP service.)
Credited Service	Service while a contributing member of SLRP plus additional service as described below. (OLD: "Creditable service" includes only SLRP service.)
Unused Sick and Vacation Leave	Service credit is provided at no charge to members for unused sick and vacation time that has accrued at the time of retirement. A payment of up to 240 hours of leave may be used the Average Compensation definition.
Additional Service	Additional service credit may be granted for service prior to July 1, 1989, including active duty military service.
Attribution	Attribution period for the normal cost is based on entry into PERS even for members who first participated in SLRP at a later age than PERS.

The maximum covered earnings for employers and employees over the last ten years are as follows:

EMPLOYER AND EMPLOYEE RATES OF CONTRIBUTION AND MAXIMUM COVERED EARNINGS

Fiscal Date From	Fiscal Date To	Employer Rate	Employee Rate	Maximum Covered Earnings
1/1/2012	6/30/2012	7.40%	3.00%	$245,000
7/1/2012	6/30/2013	7.40	3.00	$250,000
7/1/2013	6/30/2014	7.40	3.00	$255,000
7/1/2014	6/30/2015	7.40	3.00	$260,000
7/1/2015	6/30/2017	7.40	3.00	$265,000
7/1/2017	6/30/2018	7.40	3.00	$270,000
7/1/2018	6/30/2019	7.40	3.00	$275,000
7/1/2019	6/30/2020	7.40	3.00	$280,000
7/1/2020	6/30/2021	7.40	3.00	$285,000
7/1/2021	6/30/2022	7.40	3.00	$290,000

BENEFITS

Superannuation Retirement

Condition for Retirement

(a) A retirement allowance is paid upon the request of any member who retires and has attained age 60 and completed at least eight years* of membership service under PERS. A retirement allowance may also be paid upon the completion of at least 25 years of creditable service under PERS for members hired prior to July 1, 2011, or upon the completion of 30 years of creditable service for members hired on or after July 1, 2011.

(b) Any member who withdraws from service prior to his or her attainment of age 60 and who has completed at least eight years* of ,membership service under PERS is entitled to receive, in lieu of a refund of his or her accumulated contributions, a retirement allowance commencing at age 60.

Amount of Allowance

The annual retirement allowance payable to a member who retires under condition (a) above is equal to:

1. A member's annuity which is the actuarial equivalent of the member's accumulated contributions at the time of his or her retirement, plus

2. An employer's annuity which, together with the member's annuity, is equal to 1% of his or her average compensation for each of the first 25 years of creditable service plus 1.25% for each year of creditable service over 25 years.

The minimum allowance is $60 per year of creditable service.

Disability Retirement

Condition for Retirement

A retirement allowance is paid to a member who is totally and permanently disabled, as determined by the Board of Trustees, and has accumulated eight or more years* of membership service under PERS.

* four years for those who entered PERS before July 1, 2007.

Amount of Allowance

For those who were active members prior to July 1, 1992, and did not elect the benefit structure outlined below, the annual disability retirement allowance payable is equal to a superannuation retirement allowance if the member has attained age 60, otherwise it is equal to a superannuation retirement allowance calculated as follows:

1. A member's annuity equal to the actuarial equivalent of his or her accumulated contributions at the time of retirement, plus

2. An employer's annuity equal to the amount that would have been payable had the member continued in service to age 60.

For those who become active members after June 30, 1992, and for those who were active members prior to July 1, 1992, who so elected, the following benefits are payable:

1. A temporary allowance equal to the greater of (a) 40% of average compensation plus 10% for each dependent child up to a maximum of 2, or (b) the member's accrued allowance. This temporary allowance is paid for a period of time based on the member's age at disability, as follows:

Age at Disability	Duration
60 and earlier	to age 65
61	to age 66
62	to age 66
63	to age 67
64	to age 67
65	to age 68
66	to age 68
67	to age 69
68	to age 70
69 and later	one year

For those hired prior to July 1, 2011, the minimum allowance is $60 per year of service credit.

2. A deferred allowance commencing when the temporary allowance ceases equal to the greater of (a) the allowance the member would have received based on service to the termination age of the temporary allowance, but not more than 20% of average compensation, or (b) the member's accrued allowance.

For those hired prior to July 1, 2011, the minimum allowance is $60 per year of service credit.

Effective July 1, 2004, a temporary benefit can be paid out of a member's accumulated contribution balance while the member is awaiting a determination for eligibility for disability benefits. Future disability payments, if any, would be offset by advanced payments made from the member's accumulated contributions.

Accidental Disability Retirement

Condition for Retirement	A retirement allowance is paid to a member who is totally and permanently disabled in the line of performance of duty.
Amount of Allowance	The annual accidental disability retirement allowance is equal to the allowance payable on disability retirement but not less than 25% of average compensation. There is no minimum benefit.

Accidental Death Benefit

Condition for Benefit	A retirement allowance is paid to a spouse and/or dependent children upon the death of an active member in the line of performance of duty.
Amount of Allowance	The annual retirement allowance is equal to 25% of average compensation payable to the spouse and 12-1/2% of average compensation payable to one dependent child or 25% to two or more children until age 19 (23 if a full time student). There is no minimum benefit.

Ordinary Death Benefit

Condition for Benefit	Upon the death of a member who has completed at least eight years* of membership service, a benefit is payable, in lieu of a refund of the member's accumulated contributions, to his or her spouse, if said spouse has been married to the member for not less than one year. * four years for those who entered the system before July 1, 2007.
Amount of Allowance	The annual retirement allowance payable to the lawful spouse of a vested member who dies is equal to the greater of (i) the allowance that would have been payable had the member retired and elected Option 2, reduced by an actuarially determined factor based on the number of years the member lacked in qualifying for unreduced benefits, or (ii) a lifetime benefit equal to 20% of the deceased member's average compensation, but not less than $25 per month.

In addition, a benefit is payable to dependent children until age 19 (23 if a full time student). The benefit is equal to the greater of 5% of average compensation or $25 per month for each dependent child up to 3.

Return of Contributions

Upon the withdrawal of a member without a retirement benefit, his or her contributions are returned to him or her, together with accumulated regular interest thereon.

Upon the death of a member before retirement, his or her contributions, together with the full accumulated regular interest thereon, are paid to his or her designated beneficiary, if any, otherwise, to his or her estate provided no other survivor benefits are payable.

Effective July 1, 2016, the interest rate on employee contributions shall be calculated based on the money market rate as published by the Wall Street Journal on December 31 of each preceding year with a minimum rate of one percent and a maximum rate of five percent.

Normal Form of Benefit

The normal form of benefit is an allowance payable during the life of the member with the provision that upon his or her death the excess of his or her total contributions at the time of retirement over the total retirement annuity paid to him or her will be paid to his or her designated beneficiary.

Optional Benefits

A member upon retirement may elect to receive his or her allowance in one of the following forms which are computed to be actuarially equivalent to the applicable retirement allowance.

Option 1. Reduced allowance with the provision that if the pensioner dies before he receives the value of the member's annuity as it was at the time of retirement, the balance shall be paid to his or her beneficiary.

Option 2. Upon his or her death, his or her reduced retirement allowance shall be continued throughout the life of, and paid to, his or her beneficiary.

Option 3. Upon his or her death, 50% of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary and the other 50% of his or her reduced retirement allowance to some other designated beneficiary.

Option 4. Upon his or her death, 75% of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.

Option 4A. Upon his or her death, 50% of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.

Option 4B. A reduced retirement allowance shall be continued throughout the life of the pensioner, but with the further guarantee of payment to the pensioner or his or her beneficiary for a specified number of years certain.

Option 4C. A member may elect any option with the added provision that the member shall receive, so far as possible, the same total amount annually (considering both SLRP and Social Security benefits) before and after the earliest age at which the member becomes eligible for a Social Security benefit. This option was only available to those who retired prior to July 1, 2004.

A member who elects Option 2, Option 4 or Option 4A at retirement may revert to the normal form of benefit if the designated beneficiary predeceases the retired member or if the member divorces the designated beneficiary.

A member who elects the normal form of benefit or Option 1 at retirement may select Option 2, Option 4 or Option 4A to provide beneficiary protection to a new spouse if married at retirement.

A member who has at least 28 years of creditable service* under PERS can select a partial lump-sum option at retirement. Under this option, the retiree has the option of taking a partial lump-sum distribution equal to either 12, 24, or 36 times the base maximum monthly benefit. With each lump-sum amount, the base maximum monthly benefit will be actuarially reduced. A member selecting the partial lump-sum option may also select any of the regular options except Option 1, the prorated single-life annuity, and Option 4-C, the Social Security leveling provision. The benefit is then calculated using the new reduced maximum benefit as a starting point in applying the appropriate option factors for the reduction.

*or at least age 63 with four years of membership service for those who entered PERS before July 1, 2007.

Post-Retirement Adjustments In Allowances

The allowances of retired members are adjusted annually by an amount equal to (a) 3% of the annual retirement allowance for each full fiscal year of retirement prior to the year in which the member reaches age 55, plus (b) 3% compounded for each year thereafter beginning with the fiscal year in which the member turns age 55*.

*Age 60 for members hired on or after July 1, 2011.

A prorated portion of the annual adjustment will be paid to the member, beneficiary, or estate of any member or beneficiary who is receiving the annual adjustment in a lump sum, but whose benefits are terminated between July 1 and December 1.

CONTRIBUTIONS

Members currently contribute 3.00% of covered earnings. The employer contributes 7.40% of covered earnings.

Schedule D: Detailed Tabulations of the Data

RECONCILIATION OF DATA RECEIVED FROM PERS

Reconciliation of Data received from PERS	Active File			Pensioner File			Total
	Active	Inactive	Deferred Vested	Retirees	Disableds	Survivors	
From PERS	177	24	36	188	1	46	472
Return to Active				(1)			(1)
Refunded							
Deceased				(3)		(1)	(4)
Deceased with Beneficiary				(1)		1	
Certain Period End							
Inactive							
Deferred Vested	(1)		1				
Duplicate*	(2)						(2)
Retired							
For Valuation	174	24	37	183	1	46	465

*Also included in Pensioner File

STATUS RECONCILIATION FROM 2021 TO 2022

	Actives	Retirees	Disableds	Survivors	Deferred Vested	Inactive	Total
As of June 30, 2021	173	186	1	46	33	29	468
Retirement		1			(1)		
Disabled							
Death with Survivor		(1)		1			
Terminated Def Vest	(1)				5	(4)	
Terminated NonVest							
Rehired	1	(1)					
Refunded							
Death No Survivor	(1)	(2)		(1)		(1)	(5)
Benefit Ended							
Removed/Cleanup							
New	2						2
As of June 30, 2022	174	183	1	46	37	24	465

Schedule D: Detailed Tabulations of the Data

Retirants & Beneficiaries as of June 30, 2022
Tabulated by Year of Retirement

Valuation Year of Retirement Ending June 30	No.	Total Annual Benefits, excluding COLA	COLA	Total Annual Benefits	Average Monthly Total Benefit
2022	1	$1,481	$0	$1,481	$123
2021	5	27,933	407	28,340	472
2020	26	210,543	10,964	221,507	710
2019	7	41,467	2,757	44,224	526
2018	6	30,647	3,355	34,002	472
2017	6	32,976	4,562	37,538	521
2016	23	152,794	24,265	177,059	642
2015	4	35,146	6,713	41,859	872
2014	5	21,980	5,519	27,499	458
2013	15	59,095	15,701	74,796	416
2012	29	179,630	54,964	234,594	674
2011	3	5,193	1,893	7,086	197
2010	4	18,656	7,111	25,767	537
2009	5	25,467	10,844	36,311	605
2008	15	69,142	31,244	100,386	558
2007	1	4,417	2,264	6,681	557
2006	6	21,944	12,509	34,453	479
2005	5	15,970	9,531	25,501	425
2004	15	72,210	47,886	120,096	667
2003	0	0	0	0	0
2002	3	9,092	6,973	16,065	446
2001	8	23,099	19,220	42,319	441
2000	9	36,114	33,775	69,889	647
1999	4	21,645	19,445	41,090	856
1998	2	4,590	4,198	8,788	366
1997	3	9,560	9,253	18,813	523
1996	4	8,562	8,817	17,379	362
1995	1	1,058	1,224	2,282	190
1994	0	0	0	0	0
1993	6	19,383	23,789	43,172	600
1992	8	30,819	38,916	69,735	726
1991	0	0	0	0	0
1990	1	2,203	3,304	5,507	459
TOTAL	230	$1,192,816	$421,403	$1,614,219	$585

Schedule D: Detailed Tabulations of the Data

Schedule of Retired Members by Type of Retirement

Benefits Payable June 30, 2022

Amount of Original Monthly Benefit	Number of Rets.	Ret Type 1*	Ret Type 2*	Ret Type 3*
$1 – $100	15	14		1
101 – 200	35	29		6
201 – 300	37	33		4
301 – 400	43	32		11
401 – 500	27	16	1	10
501 – 600	16	9		7
601 – 700	18	16		2
701 – 800	12	10		2
801 – 900	8	7		1
901 – 1,000	8	8		
Over 1,000	11	9		2
Totals	230	183	1	46

<u>*Type of Retirement</u>
1 – Retirement for Age & Service
2 – Disability Retirement
3 – Survivor Payment

Schedule D: Detailed Tabulations of the Data

Schedule of Retired Members by Type of Option
Benefits Payable June 30, 2022

Amount of Original Monthly Benefit	Number of Rets.	Life	Option 1	Option 2	Option 3	Option 4	Option 4A	Option 4B	Option 4C*	PLSO* 1 Year	PLSO* 2 Years	PLSO* 3 Years
$1 – $100	15	6		6				3	1			1
101 – 200	35	16	1	16		1		1				5
201 – 300	37	16	1	13	2	1	2	2		1		2
301 – 400	43	23		11			2	7		2		7
401 – 500	27	13	1	8	2			3		1	2	5
501 – 600	16	5		5	3		1	2			1	6
601 – 700	18	9		7			1	1			2	2
701 – 800	12	6		5		1				1	1	2
801 – 900	8	4		2		1	1					3
901 – 1,000	8	2	1	3				2			1	2
Over 1,000	11	6		2		1	1	1		2	1	3
Totals	230	106	4	78	7	5	8	22	1	7	8	38

<u>Option Selected</u>

Life	-	Return of Contributions
Opt. 1	-	Return of Value of Member's Annuity
Opt. 2	-	100% Survivorship
Opt. 3	-	50%/50% Dual Survivorship
Opt. 4	-	75% Survivorship
Opt. 4A	-	50% Survivorship
Opt. 4B	-	Years Certain & Life
Opt. 4C	-	Social Security Leveling*
Opt. 5	-	Pop-Up
PLSO	-	Partial Lump Sum* (Reflects reduced monthly benefit)

*Included in other options

Schedule D: Detailed Tabulations of the Data

Retirant and Beneficiary Information June 30, 2022
Tabulated by Attained Ages

Attained Age	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20								
20 – 24								
25 – 29								
30 – 34								
35 – 39								
40 – 44								
45 – 49								
50 – 54	1	$9,315			2	$13,964	3	$23,279
55 – 59	5	$34,172			4	$30,897	9	$65,069
60 – 64	14	$85,670			3	$26,811	17	$112,481
65 – 69	35	$227,539	1	$8,880	2	$21,177	38	$257,596
70 – 74	47	$303,321			10	$74,088	57	$377,409
75 – 79	36	$266,479			4	$37,967	40	$304,446
80 – 84	28	$189,337			10	$71,968	38	$261,305
85 – 89	12	$86,652			7	$48,808	19	$135,460
90 – 94	4	$39,449			4	$29,175	8	$68,624
95								
96								
97								
98								
99								
100 & Over	1	$8,545					1	$8,545
Totals	183	$1,250,479	1	$8,880	46	$354,855	230	$1,614,214

Average Age: 74.5 years
Average Age at Retirement: 61.9 years

Schedule D: Detailed Tabulations of the Data

Total Active Member Data as of June 30, 2022
Tabulated by Attained Ages and Years of Service

Attained Age	Completed Years of Service									Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Over	No.	Payroll
Under 25											$ -
25 to 29		2								2	90,419
30 to 34	1	3	2							6	274,372
35 to 39		3	3							6	271,567
40 to 44		10	3	4						17	747,802
45 to 49		12	2	5	2	1				22	1,026,804
50 to 54		2	11	12	1					26	1,198,701
55 to 59		10	9	9	1	2				31	1,501,059
60 to 64	1	5	4	5	3	2	1			21	1,000,446
65 to 69		2	5	4	2		3		2	18	834,950
70 & Over		3	1	7	4		4	2	4	25	1,233,553
Total Count	2	52	40	46	13	5	8	2	6	174	$ 8,179,673

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 56.6 years
Benefit Service: 10.7 years
Eligibility Service: 16.0 years
Annual Pay: $47,010

Schedule E: Analysis of Financial Experience

Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
($ Thousands)

Type of Activity	$ Gain (or Loss) For Year Ending 6/30/2022	$ Gain (or Loss) For Year Ending 6/30/2021
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	$ 38.7	$ 10.3
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	11.7	12.8
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	5.3	10.6
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(97.2)	(186.5)
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	94.1	(846.9)
New Members. Additional unfunded actuarial accrued liability will produce a loss.	(60.6)	(65.1)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	198.0	884.0
Death After Retirement. If retirants live longer than assumed, there is a loss. If not as long, a gain.	(63.3)	63.1
Other. Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, etc.	14.4	25.4
Gain (or Loss) During Year From Financial Experience	$ 141.1	$ (92.3)
Non-Recurring Items. Adjustments for plan amendments, software changes, assumption changes, or method changes.	0.0	(364.7)
Composite Gain (or Loss) During Year	$ 141.1	$ (457.0)

Schedule F: Funding Policy of the SLRP Board of Trustees

The purpose of the funding policy is to state the overall funding goals for the System, the benchmarks that will be used to measure progress in achieving those goals, and the methods and assumptions that will be employed to develop the benchmarks. The policy refers to pension benefits and does not address retiree healthcare benefits that may be provided under statute in the future. In addition to periodic reviews of this policy, the Board will amend the policy if retiree healthcare benefits become payable.

I. Funding Goals

The objective in requiring employer and member contributions to the System is to accumulate sufficient assets during a member's employment to fully finance the benefits the member receives throughout retirement. In meeting this objective, the System will strive to meet the following funding goals:

- To maintain an increasing ratio of system assets to accrued liabilities and reach an 80 percent minimum funded ratio in 2042;
- To maintain adequate asset levels to finance the benefits promised to members;
- To develop a pattern of stable contribution rates when expressed as a percentage of member payroll as measured by valuations prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board, with a minimum employer contribution equal to the normal cost determined under the Entry Age Normal funding method;
- To provide intergenerational equity for taxpayers with respect to system costs; and
- To fund benefit improvements through increases in contribution rates in accordance with Article 14, § 272A, of the Mississippi Constitution.

II. Benchmarks

To track progress in achieving the previously outlined funding goals, the following benchmarks will be measured annually as of the actuarial valuation date (with due recognition that a single year's results may not be indicative of long-term trends):

- **Funded ratio** – The funded ratio, defined as the actuarial value of system assets divided by the System's actuarial accrued liability, should be increasing over time, before adjustments for changes in benefits, actuarial methods, and/or actuarial assumptions, with a target of at least 80 percent in 2042. If the projected funded ratio is less than 75 percent in 2042, a contribution rate increase will be determined that is sufficient to generate a funded ratio of 85 percent in 2042. If a funded ratio of 100 percent or more is attained and is projected to remain above 100 percent for the ensuing 30 years, a reduced contribution pattern will be established provided the projected funded ratio remains at or above 100 percent in every future year.
- **Contribution rate history** – Employer and member contribution rates should be level from year to year when expressed as a percent of active member payroll unless the projected funded ratio reaches a level that triggers a change in contribution rates. The initial employer contribution rates for the Supplemental Legislative Retirement Plan (SLRP) set under this policy as revised October 23, 2012, was 7.40 percent of active member payroll effective July 1, 2013.
- **Unfunded Actuarial Accrued Liability (UAAL) amortization period** – The amortization period for the System's UAAL should be declining over time.

III. Methods and Assumptions

The actuarial funding method used to develop the benchmarks will be entry age normal. The method used to develop the actuarial value of assets will recognize the underlying market value of the assets by spreading each year's unanticipated investment income (gains and losses) over a five-year smoothing period (20 percent per year), as adopted by the Board.

The actuarial assumptions used will be those last adopted by the Board based upon the advice and recommendation of the System's actuary. The actuary shall conduct an investigation into the system's experience at least every two years on a rolling four year basis, and utilize the results of the investigation to form the basis for those recommendations.

The Board will have an audit of the System's actuarial valuation results conducted by an independent actuary at least every six years. The purpose of such a review is to provide a critique of the reasonableness of the actuarial methods and assumptions in use and the resulting actuarially computed liabilities and contribution rates.

IV. Funding Policy Review

The funding policy components and triggers will be reviewed annually following the annual actuarial valuation and in conjunction with the annual projection report and will be amended as necessary following each experience investigation conducted by the Board.

Schedule G: 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 series of payments is called on actuarial equivalent of another series of payments if the two series have the same actuarial present value.

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.

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 are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets.

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.