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### *Overview*

Actuarial Standards of Practice (ASOP) No. 51, issued by the Actuarial Standards Board, provides guidance on assessing and disclosing risks related to pension plan funding. This guidance is binding on all credentialed actuaries practicing in the United States. This standard was issued as final in September 2017 with application to measurement dates on or after November 1, 2018.

The term “risk” frequently has a negative connotation, but from an actuarial perspective, it may be thought of as simply the fact that what actually happens in the real world will not always match what was expected, based on actuarial assumptions. Of course, when actual experience is better than expected, the favorable risk is easily absorbed. The risk of unfavorable experience will likely be unpleasant, and so there is an understandable focus on aspects of risk that are negative.

Risk usually can be reduced or eliminated at some cost. Consumers, for example, buy auto and home insurance to reduce the risk of accidents or catastrophes. Another way to express this concept, however, is that there is generally some reward for assuming risk. Thus, retirement plans invest not just in US Treasury bonds which have almost no risk, but also in equities which are considerably riskier – because they have an expected reward of a higher return that justifies the risk.

Under ASOP 51, the actuary is called on to identify the significant risks to the pension plan and provide information to help those sponsoring and administering the plan understand the implications of these risks. In this section, we identify some of the key risks for the System and provide information to help interested parties better understand these risks.





## Section VIII – Risk Assessment

### **Investment Risk**

The investment return on assets is the most obvious risk – and usually the largest risk – to funding a pension plan. A market value return 10% below the assumed rate for any given year can result in significant contribution increases. However, since this System is well funded, even a negative 2.80% return in one year results in no contribution requirement. Therefore, there is little investment risk at this time.

### **Sensitivity Measures**

Valuations are generally performed with a single set of assumptions that reflects the best estimate of future conditions, in the opinion of the actuary and typically the governing board. Note that under actuarial standards of practice, the set of economic assumptions used for funding must be consistent. To enhance the understanding of the importance of an assumption, a sensitivity test can be performed where the valuation results are recalculated using a different assumption or set of assumptions.

The following tables contains the key measures for the System using the valuation assumption for investment return of 7.20%, along with the results if the assumption were 6.20% or 8.20%. In this analysis, only the investment return assumption is changed. Consequently, there may be inconsistencies between the investment return and other economic assumptions such as inflation or payroll increases. In addition, simply because the valuation results under alternative assumptions are shown here, it should not be implied that CMC believes that either assumption (6.20% or 8.20%) would comply with actuarial standards of practice.

(\$ in thousands)

As of June 30, 2021	Current Discount Rate (7.2%)	-1% Discount Rate (6.2%)	+1% Discount Rate (8.2%)
Accrued Liability	\$25,838	\$28,447	\$23,933
Unfunded Liability	(\$11,240)	(\$8,631)	(\$13,145)
Funded Ratio (AVA)	143.5%	130.3%	154.9%
ADEC	\$0	\$0	\$0
Employer Contribution rate per active member	\$0.00	\$0.00	\$0.00





## Section VIII – Risk Assessment

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### ***Mortality Risk***

The mortality assumption is a significant assumption for valuation results, second only to the investment assumption in most situations. The System's mortality assumption utilizes a mortality table (with separate rates for males and females, as well as different rates by status) and a projection scale for how the mortality table is expected to improve through time.

The future, however, is not known, and actual mortality improvements may occur at a faster rate than expected, or at a slower rate than expected (or even decline). Although changes in mortality will affect the benefits paid, this assumption is carefully studied during the regular experience studies that the System conducts so that incremental changes can be made to smoothly reflect unfolding experience. The last experience investigation was prepared for the five-year period ending June 30, 2019 and based on the results of the investigation, a new mortality table with generational approach to future improvements in mortality was adopted. The next experience investigation will be prepared for the period July 1, 2019 through June 30, 2024.

### ***Contribution Risk***

The System is primarily funded by member and employer contributions to the trust fund, together with the earnings on those accumulated contributions. Each year in the valuation, the Required Contribution Rate is determined, based on the System's funding policy. This rate is the sum of the rates for the normal cost for the plan, the amortization of the UAAL, and the administrative expenses. Since the Required Contribution Rate has always been made and that procedure is expected to continue, there is no Contribution Risk at this time.





## Schedule A – Valuation Balance Sheet

### THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF THE GEORGIA LEGISLATIVE RETIREMENT SYSTEM AS OF JUNE 30, 2021

<b>ACTUARIAL LIABILITIES</b>		
(1)	Present value of prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits	
	- Service and disability benefits	\$ 13,001,449
	- Death and survivor benefits	2,894,739
	- Deferred vested benefits	<u>4,283,169</u>
	Total	\$ 20,179,357
(2)	Present value of prospective benefits payable on account of present active members	<u>8,040,122</u>
(3)	TOTAL ACTUARIAL LIABILITIES	<u>\$ 28,219,479</u>
<b>PRESENT AND PROSPECTIVE ASSETS</b>		
(4)	Actuarial value of assets	\$ 37,078,000
(5)	Present value of total future contributions = (3)-(4)	\$ (8,858,521)
(6)	Present value of future member contributions	1,800,325
(7)	Present value of future employer contributions = (5)-(6)	\$(10,658,846)
(8)	Prospective normal contributions	581,291
(9)	Prospective unfunded actuarial accrued liability contributions = (7)-(8)	<u>(11,240,137)</u>
(10)	TOTAL PRESENT AND PROSPECTIVE ASSETS	<u>\$ 28,219,479</u>





## Schedule B – Development of Actuarial Value of Assets

(1)	Actuarial Value Beginning of Year	\$	34,661,000
(2)	Fair Value End of Year	\$	42,713,000
(3)	Fair Value Beginning of Year	\$	34,568,000
(4)	Cash Flow		
	(a) Contributions	\$	290,000
	(b) Benefit Payments		(1,762,000)
	(c) Administrative Expenses		(311,000)
	(d) Investment Expenses		(17,000)
	(e) Net: (4)(a) + (4)(b) + (4)(c) + (4)(d)	\$	(1,800,000)
(5)	Investment Income		
	(a) Fair Total: (2) – (3) – (4)(e)	\$	9,945,000
	(b) Assumed Rate of Return for Current Year		7.30%
	(c) Amount for Immediate Recognition: [(3) x (5)(b)] + [(4)(a) + (4)(b) + (4)(c)] x (5)(b) x 0.5 – (4)(d)	\$	2,475,000
	(d) Amount for Phased-In Recognition: (5)(a) – (5)(c)		7,470,000
(6)	Phased-In Recognition of Investment Income		
	(a) Current Year: (5)(d) / 5	\$	1,494,000
	(b) First Prior Year		(126,000)
	(c) Second Prior Year		(40,000)
	(d) Third Prior Year		117,000
	(e) Fourth Prior Year		297,000
	(f) Total Recognized Investment Gain	\$	1,742,000
(7)	Actuarial Value End of Year: (1) + (4)(e) + (5)(c) + (6)(f)	\$	37,078,000
(8)	Difference Between Fair & Actuarial Values: (2) – (8)	\$	5,635,000
(9)	Rate of Return on Actuarial Value*		12.44%

\* Calculated assuming cash flow occurs in the middle of the year





## Schedule C – Summary of Receipts and Disbursements

### FAIR VALUE OF ASSETS

	YEAR ENDING	
	June 30, 2021 (\$1,000's)	June 30, 2020 (\$1,000's)
<u>Receipts for the Year</u>		
Contributions:		
Members	\$ 290	\$ 325
Nonemployer	0	0
Employer	0	0
Subtotal	\$ 290	\$ 325
Investment Earnings	9,928	1,824
TOTAL	\$ 10,218	\$ 2,149
<u>Disbursements for the Year</u>		
Benefit Payments	\$ 1,720	\$ 1,795
Refunds to Members	42	21
Administrative Expenses	311	305
TOTAL	\$ 2,073	\$ 2,121
<u>Excess of Receipts over Disbursements</u>	\$ 8,145	\$ 28
<u>Reconciliation of Asset Balances</u>		
Asset Balance as of the Beginning of Year	\$ 34,568	\$ 34,540
Excess of Receipts over Disbursements	8,145	28
Asset Balance as of the End of Year	\$ 42,713	\$ 34,568
Rate of Return*	29.48%	5.42%

\* Calculated assuming cash flow occurs in the middle of the year





## Schedule D – Outline of Actuarial Assumptions and Methods

Actuarial assumptions and methods adopted by the Board December 17, 2020. Valuation interest rate adopted by the Board March 15, 2018.

**VALUATION INTEREST RATE:** 7.20% per annum, compounded annually, net of investment expenses, composed of a 2.50% inflation assumption and a 4.70% real rate of investment return assumption.

**SALARY INCREASES:** None.

**RATES OF WITHDRAWAL BEFORE SERVICE RETIREMENT:** Representative values of the assumed annual rates of withdrawal before service retirement are as follows:

Age	Annual Rates of
	Withdrawal
25	9.0%
30	9.0
35	9.0
40	10.0
45	11.0
50	9.0
55	8.0
60	8.0
65	8.0

**SERVICE RETIREMENT:** The assumed annual rates of retirement are shown below:

Age	Annual Rate	Age	Annual Rate
60	8%	66	10%
61	8%	67	10%
62	12%	68	10%
63	8%	69	15%
64	8%	70-79	15%
65	10%	80	100%







## Schedule D – Outline of Actuarial Assumptions and Methods

**RATES OF DEATH BEFORE RETIREMENT:** The Pub-2010 General Employee Table, with no adjustments, projected generationally with the MP-2019 scale is used for both males and females while in active service. Representative values of the assumed annual rates of mortality while in active service are as follows:

Age	Annual Rates of Death*					
	Males		Females		Females	
20	0.0370%	0.0130%	45	0.0980%	0.0560%	
25	0.0280	0.0090	50	0.1490	0.0830	
30	0.0360	0.0150	55	0.2190	0.1230	
35	0.0470	0.0230	60	0.3190	0.1860	
40	0.0660	0.0360	65	0.4680	0.2960	

\* Base mortality rates as of 2010 before application of the improvement scale

**RATES OF DEATHS AFTER RETIREMENT:** The Pub-2010 Family of Tables projected generationally with MP-2019 Scale and with further adjustments are used for post-retirement mortality assumptions as follows:

Participant Type	Membership Table	Set Forward (+)/ Setback (-)	Adjustment to Rates
Service Retirees	General Healthy Annuitant	Male: +1; Female: +1	Male: 105%; Female: 108%
Disability Retirees	General Disabled	Male: -3; Female: 0	Male: 103%; Female: 106%
Beneficiaries	General Contingent Survivors	Male: +2; Female: +2	Male: 106%; Female: 105%

Representative values of the assumed annual rates of mortality are as follows:

Age	Annual Rates of Death*					
	Service Retirement		Disability Retirement		Beneficiaries	
	Males	Females	Males	Females	Males	Females
50	0.3371%	0.2516%	1.2576%	1.5720%	0.7918%	0.3843%
55	0.4861	0.3251	1.8725	1.8465	0.9402	0.5334
60	0.6941	0.4493	2.3484	2.0734	1.1978	0.7529
65	1.0532	0.7366	2.7573	2.3914	1.7257	1.1057
70	1.7882	1.2863	3.4536	3.0337	2.7157	1.7000
75	3.1448	2.2799	4.4743	4.2432	4.3036	2.7500
80	5.6427	4.0900	6.0986	6.3674	6.8879	4.6778
85	10.0958	7.6043	8.8220	9.8909	11.3049	8.4315
90	16.9785	13.8596	12.9831	14.4849	18.6083	14.6496

\* Base mortality rates as of 2010 before application of the improvement scale





## **Schedule D – Outline of Actuarial Assumptions and Methods**

**ADMINISTRATIVE EXPENSES:** A constant dollar amount of \$300,000.

**AMORTIZATION METHOD:** Level dollar amortization.

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

**COST-OF-LIVING ALLOWANCE (COLA):** 1.5% semi-annually.

**PERCENT MARRIED:** 90% of active members are assumed to be married with the male three years older than his spouse.

**VALUATION METHOD:** Entry Age Normal actuarial cost method. See Schedule E for a brief description of this method.





## Schedule E – Actuarial Cost Method

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1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 7.20%), of each member's expected benefits at retirement or death is determined, based on age, service and sex. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his terminating with a service, disability or survivor's benefit. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members, beneficiaries and members entitled to deferred vested benefits to obtain the present value of all expected benefits payable from the System on account of the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the System are determined following a level funding approach, and consist of a normal contribution and an unfunded actuarial accrued liability contribution.
3. The normal contribution is determined using the entry age actuarial cost method. Under this method, a calculation is made to determine the level amount which, if applied for the average member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.
4. The unfunded actuarial accrued liability contributions are determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets, from the present value of expected benefits to be paid from the System.





## Schedule F – Board Funding Policy

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### Funding Policy of the LRS Board of Trustees

The purpose of this Funding Policy is to state the overall objectives for the Georgia Legislative Retirement System (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. It is the intent of the LRS Board of Trustees that the Funding Policy outlined herein will remain unchanged until the objectives below are met.

#### I. Funding Objectives

The goal 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 is expected to receive throughout retirement. In meeting this objective, the System will strive to meet the following funding objectives:

- To develop a pattern of contributions expressed as both a total dollar amount and as a dollar amount per active member and measured by valuations prepared in accordance with applicable State laws and the principles of practice prescribed by the Actuarial Standards Board.
- To maintain a stable funded ratio (ratio of actuarial value of assets to actuarial accrued liabilities) that reflects a trend of strong actuarial condition. The long-term objective is to maintain a 100% funded ratio; in the event that the funded ratio falls below 100%, the objective will be to obtain a 100% funded ratio over a reasonable period of future years.
- To maintain adequate asset levels to finance the benefits promised to members and monitor the future demand for liquidity.
- To promote intergenerational equity for taxpayers with respect to contributions required for the benefits provided by the System.

#### II. Measures of Funding Progress

To track progress in achieving the System's funding objectives, the following measures will be determined 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 assets divided by the actuarial accrued liability, should remain reasonably stable over time, before adjustments for changes in benefits, actuarial methods, and/or actuarial adjustments. The target funded ratio will be 100 percent. In the event that the funded ratio fall below 100%, the targeted funded ratio will be 100% within 20 years of the date the funded ratio first falls below 100%.
- **Unfunded Actuarial Accrued Liability (UAAL)**
  - **Transitional UAAL** – The UAAL established as of the initial valuation date for which this funding policy is adopted shall be known as the Transitional UAAL.
  - **New Incremental UAAL** – Each subsequent valuation will produce a New Incremental UAAL consisting of all benefit changes, assumption and method changes and experience gains and/or losses that have occurred since the previous valuations.
- **UAAL Amortization Period**
  - The transitional UAAL will be amortized over a closed 20-year period beginning on the initial valuation date for which this funding policy is adopted.
  - Each New Incremental UAAL shall be amortized over a closed 20-year period beginning with the year it is incurred.





## Schedule F – Board Funding Policy

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- Effective with the June 30, 2020 valuation date, any New Incremental UAAL which is attributable to the granting of any post-retirement benefit adjustment (PRBA), including COLAs and one-time (non-compounded) payments, shall be amortized over a closed 15-year period. The amortization period shall begin with the year such PRBA is granted by the Board.
- **Employer Contributions**
  - **Employer Normal Contributions** – the contribution determined as of the valuation date each year to fund the employer portion of the annual normal cost of the System based on the assumptions and methods adopted by the Board.
  - In each valuation subsequent to the adoption of this funding policy the required employer contributions will be determined as the summation of the employer Normal Contribution, a contribution for administrative expenses, the amortization cost for the Transitional UAAL and the individual amortization cost for each of the New Incremental UAAL bases.
  - Employer Contributions will be expressed as both a total dollar amount and as a dollar amount per active member. In no event shall the employer contributions be less than \$0.
  - The valuation methodology, including the amortization of the Unfunded Actuarial Accrued Liability (UAAL), would be expected to maintain reasonably stable contributions as a dollar per active member.
  - In no event will the employer contribution as determined above be less than \$0.

### III. Methods and Assumptions

The annual actuarial valuations providing the measures to assess funding progress will utilize the actuarial methods and assumptions last adopted by the Board based upon the advice and recommendations of the actuary. These include the following primary methods and assumptions:

- The actuarial cost method used to develop the benchmarks will be the Entry Age Normal (EAN) actuarial cost method.
- The long-term annual investment rate of return assumption will be:
  - Effective with the June 30, 2013 valuation date, 7.50% net of investment expenses.
  - Effective with the June 30, 2017 valuation date, reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as the following conditions are met:
    - The actual rate of return for the fiscal year ending with the current valuation date exceeds the assumed rate of return from the immediate prior actuarial valuation, and
    - The assumed rate of return does not decrease below 7.00% net of investment expenses.
- The actuarial value of assets will be determined by recognizing the annual differences between actual and expected market value of assets over a five-year period, beginning with the June 30, 2013 actuarial valuation.
  - Prior to the June 30, 2013 valuation, the differences between actual and expected market value of assets were recognized over a seven-year period. For the June 30, 2013 valuation, all then-current deferred gains and losses will be recognized immediately, and the initial new five-year period will begin immediately thereafter.





## Schedule F – Board Funding Policy

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The employer contribution rates determined in an annual actuarial valuation will be at least sufficient to satisfy the annual normal cost of the System and amortize any UAAL as a level dollar amount over a period not to exceed 20 years. However in no event shall the employer contributions be less than \$0.

The actuary shall conduct an investigation into the System's experience at least every five years and utilize the results of the investigation to form the basis for recommended assumptions and methods. Any changes to the recommended assumptions and methods that are approved by the Board will be reflected in this Policy.

### **IV. Funding Policy Progress**

The Board will periodically have actuarial projections of the valuation results performed to assess the current and expected future progress towards the overall funding goals of the System. These periodic projections will provide the expected valuation results over at least a 30-year period. The projected measures of funding progress and the recent historical trend provided in valuations will provide important information for the Board's assessment of the System's funding progress.

Adopted: December 17, 2020





## Schedule G – Amortization of UAAL

### AMORTIZATION OF TRANSITIONAL INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of Transitional UAAL	Expected UAAL Contribution
6/30/2013	20	\$ (4,577,499)	\$ (449,017)
6/30/2014	19	(4,471,795)	(449,017)
6/30/2015	18	(4,358,162)	(449,017)
6/30/2016	17	(4,236,007)	(449,017)
6/30/2017	16	(4,104,691)	(446,099)
6/30/2018	15	(3,962,339)	(443,323)
6/30/2019	14	(3,808,267)	(443,323)
6/30/2020	13	(3,642,948)	(443,323)
<b>6/30/2021</b>	<b>12</b>	<b>(3,465,560)</b>	<b>(440,983)</b>
6/30/2022	11	(3,274,097)	(440,983)
6/30/2023	10	(3,068,849)	(440,983)
6/30/2024	9	(2,848,823)	(440,983)
6/30/2025	8	(2,612,955)	(440,983)
6/30/2026	7	(2,360,104)	(440,983)
6/30/2027	6	(2,089,048)	(440,983)
6/30/2028	5	(1,798,477)	(440,983)
6/30/2029	4	(1,486,984)	(440,983)
6/30/2030	3	(1,153,063)	(440,983)
6/30/2031	2	(795,101)	(440,983)
6/30/2032	1	(411,365)	(440,983)
6/30/2033	0	0	0





## Schedule G – Amortization of UAAL

### AMORTIZATION OF 2014 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2014	Expected UAAL Contribution
6/30/2014	20	\$ (1,152,968)	\$ (113,097)
6/30/2015	19	(1,126,343)	(113,097)
6/30/2016	18	(1,097,722)	(113,097)
6/30/2017	17	(1,066,954)	(112,330)
6/30/2018	16	(1,033,579)	(111,597)
6/30/2019	15	(997,433)	(111,597)
6/30/2020	14	(958,649)	(111,597)
<b>6/30/2021</b>	<b>13</b>	<b>(917,033)</b>	<b>(110,971)</b>
6/30/2022	12	(872,089)	(110,971)
6/30/2023	11	(823,908)	(110,971)
6/30/2024	10	(772,259)	(110,971)
6/30/2025	9	(716,890)	(110,971)
6/30/2026	8	(657,535)	(110,971)
6/30/2027	7	(593,907)	(110,971)
6/30/2028	6	(525,697)	(110,971)
6/30/2029	5	(452,577)	(110,971)
6/30/2030	4	(374,191)	(110,971)
6/30/2031	3	(290,162)	(110,971)
6/30/2032	2	(200,083)	(110,971)
6/30/2033	1	(103,518)	(110,971)
6/30/2034	0	0	0







## Schedule G – Amortization of UAAL

### AMORTIZATION OF 2015 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2015	Expected UAAL Contribution
6/30/2015	20	\$ (460,224)	\$ (45,144)
6/30/2016	19	(449,596)	(45,144)
6/30/2017	18	(438,172)	(44,825)
6/30/2018	17	(425,771)	(44,520)
6/30/2019	16	(412,332)	(44,520)
6/30/2020	15	(397,912)	(44,520)
<b>6/30/2021</b>	<b>14</b>	<b>(382,440)</b>	<b>(44,256)</b>
6/30/2022	13	(365,720)	(44,256)
6/30/2023	12	(347,795)	(44,256)
6/30/2024	11	(328,581)	(44,256)
6/30/2025	10	(307,982)	(44,256)
6/30/2026	9	(285,901)	(44,256)
6/30/2027	8	(262,230)	(44,256)
6/30/2028	7	(236,854)	(44,256)
6/30/2029	6	(209,652)	(44,256)
6/30/2030	5	(180,491)	(44,256)
6/30/2031	4	(149,230)	(44,256)
6/30/2032	3	(115,719)	(44,256)
6/30/2033	2	(79,794)	(44,256)
6/30/2034	1	(41,284)	(44,256)
6/30/2035	0	0	0





## Schedule G – Amortization of UAAL

### AMORTIZATION OF 2016 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2016	Expected UAAL Contribution
6/30/2016	20	\$ (854,468)	\$ (83,817)
6/30/2017	19	(834,736)	(83,202)
6/30/2018	18	(813,305)	(82,612)
6/30/2019	17	(790,064)	(82,612)
6/30/2020	16	(765,127)	(82,612)
<b>6/30/2021</b>	<b>15</b>	<b>(738,370)</b>	<b>(82,096)</b>
6/30/2022	14	(709,436)	(82,096)
6/30/2023	13	(678,419)	(82,096)
6/30/2024	12	(645,170)	(82,096)
6/30/2025	11	(609,526)	(82,096)
6/30/2026	10	(571,315)	(82,096)
6/30/2027	9	(530,354)	(82,096)
6/30/2028	8	(486,443)	(82,096)
6/30/2029	7	(439,371)	(82,096)
6/30/2030	6	(388,910)	(82,096)
6/30/2031	5	(334,815)	(82,096)
6/30/2032	4	(276,826)	(82,096)
6/30/2033	3	(214,661)	(82,096)
6/30/2034	2	(148,021)	(82,096)
6/30/2035	1	(76,582)	(82,096)
6/30/2036	0	0	0





## Schedule G – Amortization of UAAL

### AMORTIZATION OF 2017 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2017	Expected UAAL Contribution
6/30/2017	20	\$ (794,740)	\$ (77,366)
6/30/2018	19	(776,185)	(76,796)
6/30/2019	18	(756,050)	(76,796)
6/30/2020	17	(734,446)	(76,796)
<b>6/30/2021</b>	<b>16</b>	<b>(711,264)</b>	<b>(76,294)</b>
6/30/2022	15	(686,181)	(76,294)
6/30/2023	14	(659,293)	(76,294)
6/30/2024	13	(630,469)	(76,294)
6/30/2025	12	(599,569)	(76,294)
6/30/2026	11	(566,444)	(76,294)
6/30/2027	10	(530,935)	(76,294)
6/30/2028	9	(492,868)	(76,294)
6/30/2029	8	(452,061)	(76,294)
6/30/2030	7	(408,316)	(76,294)
6/30/2031	6	(361,422)	(76,294)
6/30/2032	5	(311,150)	(76,294)
6/30/2033	4	(257,260)	(76,294)
6/30/2034	3	(199,489)	(76,294)
6/30/2035	2	(137,559)	(76,294)
6/30/2036	1	(71,169)	(76,294)
6/30/2037	0	0	0





## Schedule G – Amortization of UAAL

### AMORTIZATION OF 2018 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2018	Expected UAAL Contribution
6/30/2018	20	\$ (954,627)	\$ (92,222)
6/30/2019	19	(932,093)	(92,222)
6/30/2020	18	(907,914)	(92,222)
<b>6/30/2021</b>	<b>17</b>	<b>(881,970)</b>	<b>(91,591)</b>
6/30/2022	16	(853,880)	(91,591)
6/30/2023	15	(823,769)	(91,591)
6/30/2024	14	(791,489)	(91,591)
6/30/2025	13	(756,885)	(91,591)
6/30/2026	12	(719,789)	(91,591)
6/30/2027	11	(680,023)	(91,591)
6/30/2028	10	(637,393)	(91,591)
6/30/2029	9	(591,694)	(91,591)
6/30/2030	8	(542,705)	(91,591)
6/30/2031	7	(490,188)	(91,591)
6/30/2032	6	(433,891)	(91,591)
6/30/2033	5	(373,540)	(91,591)
6/30/2034	4	(308,843)	(91,591)
6/30/2035	3	(239,489)	(91,591)
6/30/2036	2	(165,141)	(91,591)
6/30/2037	1	(85,440)	(91,591)
6/30/2038	0	0	0





## Schedule G – Amortization of UAAL

### AMORTIZATION OF 2019 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2019	Expected UAAL Contribution
6/30/2019	20	\$ (742,914)	\$ (71,769)
6/30/2020	19	(725,377)	(71,769)
<b>6/30/2021</b>	<b>18</b>	<b>(706,561)</b>	<b>(71,258)</b>
6/30/2022	17	(686,175)	(71,258)
6/30/2023	16	(664,321)	(71,258)
6/30/2024	15	(640,894)	(71,258)
6/30/2025	14	(615,780)	(71,258)
6/30/2026	13	(588,858)	(71,258)
6/30/2027	12	(559,998)	(71,258)
6/30/2028	11	(529,059)	(71,258)
6/30/2029	10	(495,894)	(71,258)
6/30/2030	9	(460,340)	(71,258)
6/30/2031	8	(422,226)	(71,258)
6/30/2032	7	(381,368)	(71,258)
6/30/2033	6	(337,568)	(71,258)
6/30/2034	5	(290,615)	(71,258)
6/30/2035	4	(240,281)	(71,258)
6/30/2036	3	(186,323)	(71,258)
6/30/2037	2	(128,480)	(71,258)
6/30/2038	1	(66,472)	(71,258)
6/30/2039	0	0	0





## Schedule G – Amortization of UAAL

### AMORTIZATION OF 2020 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2020	Expected UAAL Contribution
6/30/2020	20	\$ (986,040)	\$ (95,256)
<b>6/30/2021</b>	<b>19</b>	<b>(962,764)</b>	<b>(94,552)</b>
6/30/2022	18	(937,531)	(94,552)
6/30/2023	17	(910,481)	(94,552)
6/30/2024	16	(881,484)	(94,552)
6/30/2025	15	(850,399)	(94,552)
6/30/2026	14	(817,075)	(94,552)
6/30/2027	13	(781,353)	(94,552)
6/30/2028	12	(743,058)	(94,552)
6/30/2029	11	(702,006)	(94,552)
6/30/2030	10	(657,998)	(94,552)
6/30/2031	9	(610,822)	(94,552)
6/30/2032	8	(560,249)	(94,552)
6/30/2033	7	(506,035)	(94,552)
6/30/2034	6	(447,917)	(94,552)
6/30/2035	5	(385,615)	(94,552)
6/30/2036	4	(318,827)	(94,552)
6/30/2037	3	(247,231)	(94,552)
6/30/2038	2	(170,479)	(94,552)
6/30/2039	1	(88,202)	(94,552)
6/30/2040	0	0	0





## Schedule G – Amortization of UAAL

### AMORTIZATION OF 2021 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2021	Expected UAAL Contribution
6/30/2021	20	\$ (2,474,175)	\$ (237,187)
6/30/2022	19	(2,415,128)	(237,187)
6/30/2023	18	(2,351,830)	(237,187)
6/30/2024	17	(2,283,975)	(237,187)
6/30/2025	16	(2,211,234)	(237,187)
6/30/2026	15	(2,133,255)	(237,187)
6/30/2027	14	(2,049,662)	(237,187)
6/30/2028	13	(1,960,050)	(237,187)
6/30/2029	12	(1,863,987)	(237,187)
6/30/2030	11	(1,761,006)	(237,187)
6/30/2031	10	(1,650,612)	(237,187)
6/30/2032	9	(1,532,268)	(237,187)
6/30/2033	8	(1,405,404)	(237,187)
6/30/2034	7	(1,269,406)	(237,187)
6/30/2035	6	(1,123,616)	(237,187)
6/30/2036	5	(967,329)	(237,187)
6/30/2037	4	(799,789)	(237,187)
6/30/2038	3	(620,187)	(237,187)
6/30/2039	2	(427,653)	(237,187)
6/30/2040	1	(221,257)	(237,187)
6/30/2041	0	0	0





## Schedule H – Summary of Main System Provisions

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### AS INTERPRETED FOR VALUATION PURPOSES

The Georgia Legislative Retirement System (LRS) is a cost-sharing multiple employer defined benefit pension plan established by the Georgia General Assembly in 1979 for the purpose of providing retirement allowances and other benefits for all members of the Georgia General Assembly.

#### Normal Retirement Benefit

Eligibility	Age 65 and 8 years of creditable service or age 62 and 8 years of membership service (for eligible purposes, 4 legislative terms are equivalent to 8 years of membership service).
Benefit	Monthly benefit is \$36 multiplied by years of creditable service. For members with retirement dates prior to July 1, 2013, a one-time 1.75% increase is made at time of retirement.

#### Early Retirement Benefit

Eligibility	Age 60 and 8 years of membership service.
Benefit	Accrued benefit reduced by 5% for each year member is under age 62.

#### Disability Retirement Benefit

No special benefit. Benefit is same as early or normal retirement.

#### Involuntary Retirement Benefit

N/A

#### Deferred Vested Retirement Benefit

Eligibility	8 years of creditable service. Member contributions not withdrawn.
Benefit	Accrued benefit deferred to age 65 or reduced benefit payable at age 60.

#### Death Benefit

Eligibility	If less than 15 years of creditable service, a refund of accumulated contributions. If at least 15 years of creditable service or eligible for retirement, the benefit below.
Benefit	Benefit equal to retirement benefit immediately prior to death under 100% joint and survivorship option.







## Schedule H – Summary of Main System Provisions

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### Termination Benefit

Eligibility

Termination with less than 8 years of creditable service.

Benefit

Return of the member's accumulated contributions.

### Payment Options

- (1) Life annuity. Guaranteed payment of accumulated member contributions.
- (2) 100% joint and survivorship annuity.
- (3) 50% joint and survivorship annuity.

### Post-Retirement Adjustments

The Board may from time to time grant a Cost of Living Adjustment.

### Contributions

By Members

Members contribute 8 ½ % of salary.

By Employers

Employer contributions are actuarially determined and approved and certified by the Board to the legislative fiscal officer.





## Schedule I – Tables of Membership Data

### NUMBER OF ACTIVE MEMBERS BY AGE AND SERVICE AS OF JUNE 30, 2021

Attained Age	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 & Up	
Under 25										
25 to 29		2								2
30 to 34	3	2	3							8
35 to 39	3	5	5	1						14
40 to 44	7	12	4		1					24
45 to 49	5	12	5	2						24
50 to 54	5	5	10	2	2					24
55 to 59	3	7	11	3	1					25
60 to 64	3	6	9	4	4	4	1			31
65 to 69	2	7	6	9	5	4				33
70 & Up		2	4	7	5	4	3	2	4	31
Total	31	60	57	28	18	12	4	2	4	216

Average Age: 55.9  
Average Service: 8.7





## Schedule I – Tables of Membership Data

### NUMBER OF RETIRED MEMBERS AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	0	\$ 0	\$ 0
50 - 54	0	0	0
55 - 59	0	0	0
60 - 64	13	70,032	5,387
65 - 69	38	203,939	5,367
70 - 74	41	236,728	5,774
75 - 79	52	337,037	6,481
80 - 84	40	241,099	6,027
85 - 89	22	136,841	6,220
90 - 94	5	61,650	12,330
95 & Over	3	32,034	10,678
Total	214	\$ 1,319,360	\$ 6,165

### NUMBER OF BENEFICIARIES AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	1	\$ 1,601	\$ 1,601
50 - 54	0	0	0
55 - 59	3	15,965	5,322
60 - 64	1	5,100	5,100
65 - 69	5	21,858	4,372
70 - 74	7	27,045	3,864
75 - 79	16	102,617	6,414
80 - 84	10	66,496	6,650
85 - 89	8	49,145	6,143
90 - 94	9	78,347	8,705
95 & Over	4	52,354	13,089
Total	64	\$ 420,528	\$ 6,571





## Schedule I – Tables of Membership Data

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### NUMBER OF DEFERRED VESTED MEMBERS AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 45	5	\$ 22,464	\$ 4,493
45-49	10	41,976	4,198
50-54	17	74,232	4,367
55-59	21	117,000	5,571
60-64	24	116,459	4,852
65-69	4	19,044	4,761
70 & Over	0	0	0
Total	81	\$ 391,175	\$ 4,829





## Schedule J –Annual Comprehensive Financial Report Schedules

GA LRS: Solvency Test							
Actuarial Valuation as of 6/30	Actuarial Accrued Liability for:			Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retirants & Beneficiaries	Active Members (Employer Funded Portion)		(1)	(2)	(3)
	(1)	(2)	(3)				
2021	\$3,628	\$20,179	\$2,031	\$37,078	100.0%	100.0%	100.0%
2020	4,007	18,936	2,600	34,661	100.0%	100.0%	100.0%
2019	3,664	19,204	2,846	34,153	100.0%	100.0%	100.0%
2018	3,862	19,048	2,995	33,871	100.0%	100.0%	100.0%
2017	3,543	19,382	2,749	32,913	100.0%	100.0%	100.0%
2016	3,630	19,202	2,701	32,171	100.0%	100.0%	100.0%
2015	3,287	19,873	2,530	31,635	100.0%	100.0%	100.0%
2014	3,430	19,006	2,477	30,538	100.0%	100.0%	100.0%
2013	2,951	19,623	2,330	29,481	100.0%	100.0%	100.0%
2012	3,185	19,200	2,581	28,990	100.0%	100.0%	100.0%

All dollar amounts are in thousands.

GA LRS: Schedule of Retirants Added to and Removed from Rolls									
Year Ended	Added to Rolls		Removed from Rolls		Roll End of Year		% Increase in Annual Allowances	Average Annual Allowances	
	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)			
June 30, 2021	30	\$ 207	21	\$ 157	278	\$ 1,740	3.0%	\$6,259	
June 30, 2020	14	95	14	123	269	1,690	-1.6%	6,283	
June 30, 2019	14	82	12	96	269	1,718	-0.8%	6,386	
June 30, 2018	11	57	7	56	267	1,732	0.4%	6,489	
June 30, 2017	13	80	6	74	263	1,731	0.3%	6,582	
June 30, 2016	9	58	13	111	256	1,725	-3.0%	6,738	
June 30, 2015	13	87	12	112	260	1,778	-1.4%	6,838	
June 30, 2014	6	30	7	61	259	1,803	-1.7%	6,961	
June 30, 2013	32	200	15	140	260	1,834	3.4%	7,054	
June 30, 2012	10	66	11	82	243	1,774	-0.9%	7,300	

