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April 16, 2020

Mr. James A. Potvin
Executive Director
Employees' Retirement System of Georgia
Two Northside 75, Suite 300
Atlanta, GA 30318-7701

Dear Mr. Potvin:

Enclosed is the "Georgia Employees' Group Term Life Insurance Plan for Post-Retirement Benefits Report of the Actuary on the Valuation Prepared as of June 30, 2019".

The valuation indicates that no employer contribution is required for the fiscal year ending June 30, 2022 on account of life insurance benefits payable under the Plan for members who die after retirement.

Please let us know if there are any questions concerning the report.

Sincerely yours,

Edward J. Koebel

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

Cathy Turcot

Cathy Turcot
Principal and Managing Director

Ben Mobley

Ben Mobley, ASA, FCA, MAAA
Senior Actuary

Cavanaugh Macdonald

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EMPLOYEES'
RETIREMENT SYSTEM
OF GEORGIA

GEORGIA EMPLOYEES' GROUP TERM LIFE INSURANCE PLAN FOR POST-RETIREMENT BENEFITS

REPORT OF THE ACTUARY ON THE VALUATION PREPARED AS OF JUNE 30, 2019

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CONSULTING, LLC
The experience and dedication you deserve

April 16, 2020

Board of Trustees
Employees' Retirement System of Georgia
Two Northside 75, Suite 300
Atlanta, GA 30318-7701

Attention: Mr. James A. Potvin, Executive Director

Members of the Board:

Chapters 47-2 and 47-19 of the Code of Georgia which govern the operation of the Georgia Employees' Group Term Life Insurance Plan provide that the actuary shall make periodic valuations of the contingent assets and liabilities of the Insurance Plan on the basis of regular interest and the tables last adopted by the Board of Trustees. In this report, we have determined liabilities for life insurance benefits payable upon death after retirement (Post-Retirement).

We have determined the liabilities for life insurance benefits payable upon death after retirement. We have submitted the report giving the results of the valuation of the Plan prepared as of June 30, 2019. The report indicates, for post-retirement benefits, there is no employer annual required contribution for the fiscal year ending June 30, 2022.

Effective with the June 30, 2017 valuation, the assumed rate of return will be reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as 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. The assumed rate of return may not decrease below 7.00% net of investment expenses. Since the actual rate of return for the year ending June 30, 2019 was less than 7.30%, the assumed rate of return used in the current valuation remained at 7.30%. Gains and losses are reflected in the unfunded accrued liability. The actuarial assumptions used are in the aggregate reasonably related to the experience under the Plan and to reasonable expectations of anticipated experience under the Plan. In our opinion, the Plan is operating on an actuarially sound basis and the sufficiency of the funds to provide the benefits called for by the Plan may be safely anticipated assuming future actuarially determined contributions (ADC) are contributed when due.

The Plan and the employers are required to comply with the financial reporting requirements of GASB Statements No. 74 and 75. The necessary disclosure information is provided in separate supplemental reports.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the Plan.

Future actuarial results may differ significantly from the current results 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. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Use of these computations for purposes other than meeting these requirements may not be appropriate.

Sincerely yours,

Edward J. Koebel

Cathy Turcot

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

Cathy Turcot
Principal and Managing Director

Ben Mobley

Ben Mobley, ASA, FCA, MAAA
Senior Actuary

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Section I – Summary of Principal Results

1. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below:

Valuation Date	June 30, 2019	June 30, 2018
Active members:		
Number	23,499	26,224
Annual compensation	$ 1,213,173,877	$ 1,323,540,523
Retired members:		
Number	43,534	42,577
Insurance amount	$ 2,029,441,746	$ 1,961,930,489
Terminated Vested members	1,004	1,012
Actuarial Accrued Liability	$ 946,738,469	$ 919,157,264
Fair Value of Assets	$ 1,233,856,000	$ 1,189,462,000
Valuation Interest Rate	7.30%	7.30%
Unfunded Actuarial Accrued Liability	$ (287,117,531)	$ (270,304,736)
Funding Period	N/A*	N/A*
Funded Ratio based on Fair Value of Assets	130.3%	129.4%
For Fiscal Year Ending	**June 30, 2022**	**June 30, 2021**
Annual Required Contribution rates:		
Total Normal Rate	0.34%**	0.34%**
Employee Rates:		
Old Plan Members	0.45%***	0.45%***
New Plan, LRS and JRS Members	0.23%	0.23%
Employer Normal Rate	0.11%	0.11%
Accrued Liability Rate	(0.11)%	(0.11)%
Total Employer Rate	0.00%	0.00%

* If the unfunded actuarial accrued liability is amortized in accordance with the Board's funding policy, the ADEC is less than $0, which is not allowed under the funding policy. Therefore, the accrued liability contribution rate has been set to such that the total ADEC equals $0.

** Estimated budgeted administrative expenses are included in the normal contribution rate.

*** 0.22% paid by employer.

Section I – Summary of Principal Results

2. We have determined liabilities separately for life insurance benefits payable upon death in active service (pre-retirement) and those payable upon death after retirement (post-retirement). Separate trusts for pre-retirement life insurance benefits and post-retirement life insurance benefits were established and assets were split during 2007.

3. The major benefit and contribution provisions of the Plan as reflected in the valuation are summarized in Schedule G. There have been no changes since the previous valuation.

4. Schedule C of this report outlines the full set of actuarial assumptions and methods used in the valuation. Effective with the June 30, 2017 valuation, the assumed rate of return will be reduced by 0.10% (10 basis points) from the immediate prior actuarial valuation, as long as 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. The assumed rate of return may not decrease below 7.00% net of investment expenses. Since the actual rate of return for the year ending June 30, 2019 was less than 7.30%, the assumed rate of return used in the current valuation remained at 7.30%. Schedule D contains a brief description of the cost method. Schedule E of the report outlines the funding policy.

5. Comments on the valuation results as of June 30, 2019 are given in Section IV and further discussion of the contribution levels is set out in Section V.

6. We have prepared the Solvency Test for the Plan's Comprehensive Annual Financial Report. This table is shown in Schedule H.

Section II – Membership Data

1. Data regarding the membership of the System for use as a basis for the valuation were furnished by the Retirement System office. The following table shows the number of active members and their annual compensation as of June 30, 2019 on the basis of which the valuation was prepared.

THE NUMBER AND ANNUAL COMPENSATION OF ACTIVE MEMBERS AS OF JUNE 30, 2019

GROUP	NUMBER	ANNUAL COMPENSATION
ERS Old Plan	39	$ 3,095,551
ERS New Plan	23,179	1,182,529,509
Legislative Retirement System	67	1,160,762
Judicial Retirement System	214	26,388,055
Total	23,499	$ 1,213,173,877

2. The following table shows the number of covered retired members on the roll as of June 30, 2019 together with the amount of their insurance in force under the Plan as of that date.

THE NUMBER AND INSURANCE IN FORCE OF COVERED RETIRED MEMBERS ON THE ROLL AS OF JUNE 30, 2019

GROUP	NUMBER*	INSURANCE IN FORCE
Service Retirements	38,131	$ 1,792,703,069
Disability Retirements	5,403	236,738,677
Total	43,534	$ 2,029,441,746

* In addition the valuation includes 1,004 terminated vested members eligible for benefits.

Section III – Assets

1. In 2007, separate trusts were established for pre-retirement life insurance benefits and for post-retirement life insurance benefits and assets were split based on actuarial accrued liabilities. Assets in excess of what were actuarially required were transferred to ERS Survivor Benefit Fund.
2. As of June 30, 2019, the total fair value of assets for post-retirement benefits amounted to $1,233,856,000 as reported by the independent auditor of the Plan. The fair value of assets is used for the June 30, 2019 valuation.
3. Schedule B shows receipts and disbursements of the System for the two years preceding the valuation date and a reconciliation of the fund balances at fair value.

Section IV – Comments on Valuation

1. Schedule A outlines the results of the actuarial valuation for post-retirement life insurance benefits. The valuation was prepared in accordance with the actuarial assumptions set forth in Schedule C.
2. The valuation shows that the Plan has an actuarial accrued liability of $772,656,705 for benefits expected to be paid to current retired and terminated vested members, and $174,081,764 for benefits expected to be paid on account of present active members for death after retirement. The total actuarial accrued liability of the Plan for post-retirement benefits is, $946,738,469. Against these liabilities, the Plan has assets for valuation purposes of $1,233,856,000. Therefore, the unfunded actuarial accrued liability is equal to ($287,117,531).
3. The funding policy adopted by the Board, as shown in Schedule E, provides that the unfunded actuarial accrued liability as of June 20, 2013 (Transitional UAAL) will be amortized as a level dollar amount over a closed 20-year period. In each subsequent valuation all benefit changes, assumption and method changes and experience gains and/or losses that have occurred since the previous valuation will determine a New Incremental UAAL. Each New Incremental UAAL will be amortized as a level dollar amount over a closed 20-year period from the date it is established.
4. The total UAAL contribution rate is (2.61)% of payroll, determined in accordance with the Board's funding policy. However, since this payment would cause the total employer contribution to be less than $0, the final UAAL contribution rate is determined to be (0.11)%.
5. Schedule F of this report shows the amortization schedules for the Transitional UAAL and the New Incremental UAALs.

6. The following table shows the components of the total UAAL and the derivation of the UAAL contribution rate in accordance with the funding policy:

TOTAL UAAL AND UAAL CONTRIBUTION RATE

	Remaining Balance UAAL	Remaining Amortization Period (years)	Amortization Payment
Transitional	$(127,326,279)	14	$(14,822,141)
New Incremental 6/30/2014	(86,830,270)	15	(9,714,932)
New Incremental 6/30/2015	(29,608,999)	16	(3,196,926)
New Incremental 6/30/2016	67,776,267	17	7,086,921
New Incremental 6/30/2017	(52,027,332)	18	(5,284,703)
New Incremental 6/30/2018	(32,839,436)	19	(3,249,153)
New Incremental 6/30/2019	(26,261,482)	20	(2,536,993)
Total UAAL	$(287,117,531)		$(31,717,927)
Estimated Payroll			$1,213,173,877
Calculated UAAL Contribution Rate			(2.61)%
Final UAAL Contribution Rate*			(0.11)%
Blended Amortization Period*			N/A

* If the unfunded actuarial accrued liability is amortized in accordance with the Board's funding policy, the ADEC is less than $0, which is not allowed under the funding policy. Therefore, the accrued liability contribution rate has been set to such that the total ADEC equals $0.

Section V – Contributions

1. The contribution rate of employers consist of a normal contribution rate and an accrued liability contribution rate.
2. The normal contribution rate is calculated as the level dollar which, if applied to each member during the entire period of anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on the member's behalf. On this basis of the valuation, the normal contribution rate is determined to be 0.25% of payroll for post-retirement benefits.
3. An additional contribution of $1,128,191 or 0.09% of payroll is required for administrative expenses for the fiscal year ending June 30, 2022.
4. The total normal contribution rate including administrative expenses is therefore, 0.34% of payroll.
5. The member contribution rate made by or on behalf of ERS Old Plan members is 0.45% of payroll and the member contribution rate made by ERS New Plan members, LRS members and JRS members is 0.23% of payroll. The employer normal contribution rate is determined to be 0.11% of payroll for post-retirement benefits.
6. If the unfunded accrued liability is amortized in accordance with the funding policy the total employer contribution rate would be less than 0%. Since the funding policy also states that the total employer contribution rate cannot be less than 0%, the accrued liability contribution rate for post-retirement benefits is set equal to (0.11%) of active members' payroll and there is no required contribution for the post-retirement benefits.

Section VI – Accounting Information

Governmental Accounting Standards Board (GASB) has issued Statements 74 and 75, which replace Statements 43 and 45. The information required under Statements 74 and 75 were disclosed in separate reports. The following is provided for informational purposes.

1. The schedule of funding progress is shown below.

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Fair Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
6/30/2014	$ 1,037,901,000	$ 788,020,087	$(249,880,913)	131.7%	$ 1,628,712,490	(15.3)%
6/30/2015	1,046,559,000	769,747,017	(276,811,983)	136.0	1,521,740,814	(18.2)
6/30/2016	1,028,541,000	832,369,092	(196,171,908)	123.6	1,442,023,957	(13.6)
6/30/2017*	1,121,251,000	876,585,960	(244,665,040)	127.9	1,394,394,570	(17.6)
6/30/2018*	1,189,462,000	919,157,264	(270,304,736)	129.4	1,323,540,523	(20.4)
6/30/2019	1,233,856,000	946,738,469	(287,117,531)	130.3	1,213,173,877	(23.7)

* Reflects change in assumed rate of return

2. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2019. Additional information as of the latest actuarial valuation follows.

Valuation date	6/30/2019
Actuarial cost method	Entry age
Amortization method	Level dollar open
Remaining amortization period	N/A*
Asset valuation method	Fair Value of Assets
Actuarial assumptions:	
Investment Rate of Return**	7.30%
Projected Salary Increases	
ERS**	3.25 – 7.00%
JRS**	4.50%
LRS	N/A

* The remaining amortization period is infinite.
** Includes inflation at 2.75%.

Schedule A – Valuation Results

(1)	**ACTUARIAL ACCRUED LIABILITY FOR:**	
	Benefits payable on account of present retired members and terminated vested members	$ 772,656,705
	Benefits payable on account of present active members	174,081,764
	TOTAL ACTUARIAL ACCRUED LIABILITY	$ 946,738,469
(2)	**PRESENT ASSETS FOR VALUATION PURPOSES:**	$1,233,856,000
(3)	**UNFUNDED ACTUARIAL ACCRUED LIABILITY: (1)-(2)**	$ (287,117,531)
(4)	**EMPLOYER NORMAL CONTRIBUTION RATE:**	0.11%
(5)	**ACCRUED LIABILITY CONTRIBUTION RATE:**	(0.11)
(6)	**TOTAL EMPLOYER CONTRIBUTION RATE: (4)+(5)**	0.00%

Schedule B – Summary of Receipts and Disbursements

(Fair Value)

	YEAR ENDING	
Receipts for the Year	**June 30, 2019**	**June 30, 2018**
Insurance Premiums	$ 3,328,000	$ 3,599,000
Other	5,000	0
Investment Earnings	79,193,000	101,542,000
TOTAL	$ 82,526,000	$ 105,141,000
Disbursements for the Year		
Death Benefits	$ 37,416,000	$ 36,249,000
Administration Expense	716,000	681,000
TOTAL	$ 38,132,000	$ 36,930,000
Excess of Receipts over Disbursements	$ 44,394,000	$ 68,211,000
Reconciliation of Asset Balances		
Asset Balance as of the Beginning of Year	$ 1,189,462,000	$ 1,121,251,000
Excess of Receipts over Disbursements	44,394,000	68,211,000
Asset Balance as of the End of Year	$ 1,233,856,000	$ 1,189,462,000
Rate of Return*	6.8%	9.2%

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

Schedule C – Outline of Actuarial Assumptions and Methods

Actuarial assumptions and methods adopted by the Board December 17, 2015. Valuation interest rate adopted by the Board March 15, 2018.

VALUATION INTEREST RATE: 7.30% per annum, compounded annually, net of investment expenses, composed of a 2.75% inflation assumption and a 4.55% real rate of investment return assumption.

SALARY INCREASES: The assumed annual rates of salary increase are as follows:

Members of Employees' Retirement System (ERS)	
Age	**Rate**
20	7.00%
25	6.25
30	5.15
35	4.55
40	4.30
45	4.05
50	3.80
55	3.55
60	3.30
65	3.25

Members of Judicial Retirement System (JRS): 4.50%

No salary increases are assumed for members of the Legislative Retirement System (LRS).

SEPARATIONS BEFORE RETIREMENT: Representative values of the assumed annual rates of separation other than retirement for non-law enforcement officers are as follows. Special rates of separation apply to law enforcement officers.

Annual Rates of Disability				
	ERS Members			
	Non-Law Enforcement		Law	JRS
Age	Males	Females	Enforcement	Members
20	.05%	.02%	.02%	.03%
25	.05	.02	.05	.03
30	.05	.02	.08	.05
35	.05	.02	.16	.08
40	.25	.10	.85	.10
45	.48	.25	1.40	.18
50	.70	.45	2.00	.25
55	1.05	.73	2.70	.45
60				.73
65				1.18

Annual Rates of Withdrawal			
ERS Members – Non-Law Enforcement			
	Years of Service		
Age	0-4	5-9	10 & Over
		Males	
20	35.00%		
25	27.50	15.00%	
30	23.00	11.50	7.50%
35	21.50	10.00	6.00
40	19.50	9.50	4.75
45	18.60	9.00	4.00
50	16.60	7.25	4.25
55	14.50	7.00	4.75
60	14.00	6.00	
65	15.00	10.00	
		Females	
20	30.00%		
25	25.00	17.50%	
30	21.50	12.50	8.25%
35	19.50	10.50	6.00
40	18.25	9.50	5.00
45	16.50	8.00	4.00
50	15.00	7.25	4.25
55	14.00	7.00	4.50
60	14.50	6.25	
65	17.00	11.00	

Annual Rates of Withdrawal				
	ERS Members - Law Enforcement		LRS	JRS
Age	Males	Females	Members	Members
20	15.00%		8.00%	4.00%
25	5.75	4.00%	8.00	4.00
30	5.75	4.00	8.00	4.00
35	5.75	3.75	8.00	4.00
40	5.75	3.00	8.00	6.00
45	5.75	2.00	8.50	4.00
50	5.75	2.00	8.50	3.00
55			9.00	2.50
60			9.00	2.50
65			9.00	2.50

Schedule C – Outline of Actuarial Assumptions and Methods

RETIREMENT: Representative values of the assumed annual rates of service retirement for non-law enforcement officers are as follows. Special retirement rates apply to law enforcement officers.

ERS

	Non-Law Enforcement Old Plan							
Age	**Early Retirement**		**Age 60 or 30 years**		**34 years**		**More than 34 years**	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
50	2.0%	2.0%	7.5%	6.0%	100.0%	100.0%	90.0%	100.0%
52	2.0	2.0	7.5	6.0	100.0	100.0	90.0	100.0
55	3.0	3.5	7.5	10.0	100.0	100.0	75.0	90.0
57	3.5	5.0	10.5	10.0	100.0	100.0	70.0	70.0
60			15.0	20.0	97.5	95.0	40.0	55.0
62			32.0	40.0	97.5	95.0	40.0	65.0
65			35.0	40.0	35.0	40.0	35.0	40.0
67			35.0	35.0	35.0	35.0	35.0	35.0
70			35.0	35.0	35.0	35.0	35.0	35.0
75			100.0	100.0	100.0	100.0	100.0	100.0

	Non-Law Enforcement New Plan and GSEPS				Law Enforcement***
Age	**Early Retirement**		**Normal Retirement**		
	Male	**Female**	**Male***	**Female****	
50	7.0%	4.5%	70.0%	50.0%	
52	7.0	4.5	70.0	45.0	
55	7.0	6.5	60.0	50.0	20.0%
57	8.0	8.0	50.0	40.0	12.0
60			25.0	30.0	30.0
62			40.0	40.0	35.0
65			32.0	35.0	25.0
67			32.0	32.0	25.0
70			30.0	30.0	100.0
75			100.0	100.0	

* An additional 10% for ages below 55 and 20% for ages 55 to 59 are assumed to retire in the first year eligible for unreduced retirement with 30 years of service.

** An additional 20% are assumed to retire in the first year eligible for unreduced retirement with 30 years of service before age 60.

*** In addition, 100% are assumed to retire with 30 years of service on or before age 50 and 75% are assumed to retire with 30 years of service after age 50 but before age 55.

Annual Rates of Retirement		
Age	**LRS**	**JRS**
60	10%	15%
61	10	10
62	15	12
63 – 64	10	10
65 – 66	12	15
67	15	15
68 – 69	12	15
70 – 74	20	25
75	100	100

RATES OF DEATH BEFORE RETIREMENT: The RP-2000 Employee Mortality Table projected to 2025 with projection scale BB 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	Males	Females	Age	Males	Females
20	0.0320%	0.0177%	45	0.1399%	0.1043%
25	0.0349	0.0192	50	0.1983	0.1555
30	0.0412	0.0245	55	0.2810	0.2228
35	0.0717	0.0441	60	0.4092	0.3058
40	0.1001	0.0655	65	0.5600	0.4304

RATES OF DEATHS AFTER RETIREMENT: The RP-2000 Combined Mortality Table projected to 2025 with projection scale BB and set forward 2 years for both males and females is used for the period after service retirement and for dependent beneficiaries. The RP-2000 Disabled Mortality Table projected to 2025 with projection scale BB and set back 7 years for males and set forward 3 years for females is used for the period after disability retirement. There is a margin for future mortality improvement in the tables used by the System. Based on the results of the most recent experience study adopted by the Board on December 17, 2015, the numbers of expected future deaths are 9-12% less than the actual number of deaths that occurred during the study period for service retirements and beneficiaries and for disability retirements. Representative values of the assumed annual rates of mortality after service retirement are as follows:

Age	Males	Females	Age	Males	Females
40	0.1127%	0.0790%	65	1.1300%	0.8994%
45	0.1609	0.1230	70	1.8697	1.5281
50	0.2474	0.1872	75	3.2147	2.5220
55	0.4246	0.2918	80	5.5160	4.1628
60	0.6985	0.4923	85	9.5631	7.1239

Schedule C – Outline of Actuarial Assumptions and Methods

ASSETS: Fair value

ACTUARIAL COST METHOD: Entry Age Normal Actuarial Cost Method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability (UAAL). See Schedule D for a brief description of this method.

ADMINISTRATIVE EXPENSES: Budgeted administrative expenses are added to the normal contribution rate.

Schedule D – Actuarial Cost Method

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 7.30%), 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 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 E – Funding Policy #2 of the SEAD Board of Directors

The purpose of this Funding Policy is to state the overall objectives for the Georgia Employees' Group Term Life Insurance Plan for Post-Retirement Benefits (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 State Employees' Assurance Department Board of Directors 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's beneficiary is expected to receive in the event of the death of the member during the member's retirement. In meeting this objective, the System will strive to meet the following funding objectives:

- To develop a pattern of contribution rates expressed as a percentage of employer payroll 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 at least 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 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 falls 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.
- **Employer Contribution Rate**
    - **Employer Normal Contribution Rate** – the contribution rate 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 contribution rate will be determined as the summation of the employer Normal Contribution Rate, a contribution rate for administrative expenses, the amortization rate

for the Transitional UAAL and the individual amortization rate for each of the New Incremental UAAL bases.
    - In no event shall the employer contribution rate be less than 0%.
    - The valuation methodology, including the amortization of the Unfunded Actuarial Accrued Liability (UAAL), would be expected to maintain reasonably stable contribution rates as a dollar per active member.

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 Projected Unit Credit (PUC) 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 equal to the market value of assets as of the valuation date.

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 the UAAL as a level dollar amount over a period not to exceed 20 years. However in no event shall the employer contribution rate 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 10-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: March 15, 2018

Schedule F – Amortization of UAAL

TRANSITIONAL UAAL

Valuation Date	Amortization Period	Balance of Transitional UAAL	Expected UAAL Contribution
6/30/2013	20	$ (153,044,912)	$ (15,012,511)
6/30/2014	19	(149,510,770)	(15,012,511)
6/30/2015	18	(145,711,566)	(15,012,511)
6/30/2016	17	(141,627,423)	(15,012,511)
6/30/2017	16	(137,236,969)	(14,914,947)
6/30/2018	15	(132,477,558)	(14,822,141)
6/30/2019	**14**	**(127,326,279)**	**(14,822,141)**
6/30/2020	13	(121,798,956)	(14,822,141)
6/30/2021	12	(115,868,138)	(14,822,141)
6/30/2022	11	(109,504,371)	(14,822,141)
6/30/2023	10	(102,676,049)	(14,822,141)
6/30/2024	9	(95,349,259)	(14,822,141)
6/30/2025	8	(87,487,613)	(14,822,141)
6/30/2026	7	(79,052,068)	(14,822,141)
6/30/2027	6	(70,000,728)	(14,822,141)
6/30/2028	5	(60,288,639)	(14,822,141)
6/30/2029	4	(49,867,569)	(14,822,141)
6/30/2030	3	(38,685,760)	(14,822,141)
6/30/2031	2	(26,687,679)	(14,822,141)
6/30/2032	1	(13,813,738)	(14,822,141)
6/30/2033	0	0	0

Schedule F – Amortization of UAAL

2014 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2014	Expected UAAL Contribution
6/30/2014	20	$ (100,370,143)	$ (9,845,527)
6/30/2015	19	(98,052,376)	(9,845,527)
6/30/2016	18	(95,560,777)	(9,845,527)
6/30/2017	17	(92,882,308)	(9,778,710)
6/30/2018	16	(89,976,889)	(9,714,932)
6/30/2019	**15**	**(86,830,270)**	**(9,714,932)**
6/30/2020	14	(83,453,947)	(9,714,932)
6/30/2021	13	(79,831,153)	(9,714,932)
6/30/2022	12	(75,943,894)	(9,714,932)
6/30/2023	11	(71,772,866)	(9,714,932)
6/30/2024	10	(67,297,353)	(9,714,932)
6/30/2025	9	(62,495,127)	(9,714,932)
6/30/2026	8	(57,342,339)	(9,714,932)
6/30/2027	7	(51,813,398)	(9,714,932)
6/30/2028	6	(45,880,843)	(9,714,932)
6/30/2029	5	(39,515,212)	(9,714,932)
6/30/2030	4	(32,684,890)	(9,714,932)
6/30/2031	3	(25,355,955)	(9,714,932)
6/30/2032	2	(17,492,007)	(9,714,932)
6/30/2033	1	(9,053,991)	(9,714,932)
6/30/2034	0	0	0

Schedule F – Amortization of UAAL

2015 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2015	Expected UAAL Contribution
6/30/2015	20	$ (33,048,041)	$ (3,241,755)
6/30/2016	19	(32,284,889)	(3,241,755)
6/30/2017	18	(31,464,501)	(3,218,853)
6/30/2018	17	(30,574,021)	(3,196,926)
6/30/2019	**16**	**(29,608,999)**	**(3,196,926)**
6/30/2020	15	(28,573,531)	(3,196,926)
6/30/2021	14	(27,462,473)	(3,196,926)
6/30/2022	13	(26,270,307)	(3,196,926)
6/30/2023	12	(24,991,114)	(3,196,926)
6/30/2024	11	(23,618,540)	(3,196,926)
6/30/2025	10	(22,145,768)	(3,196,926)
6/30/2026	9	(20,565,483)	(3,196,926)
6/30/2027	8	(18,869,838)	(3,196,926)
6/30/2028	7	(17,050,410)	(3,196,926)
6/30/2029	6	(15,098,164)	(3,196,926)
6/30/2030	5	(13,003,405)	(3,196,926)
6/30/2031	4	(10,755,727)	(3,196,926)
6/30/2032	3	(8,343,970)	(3,196,926)
6/30/2033	2	(5,756,154)	(3,196,926)
6/30/2034	1	(2,979,427)	(3,196,926)
6/30/2035	0	0	0

Schedule F – Amortization of UAAL

2016 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2016	Expected UAAL Contribution
6/30/2016	20	$ 73,301,181	$ 7,190,273
6/30/2017	19	71,608,496	7,137,545
6/30/2018	18	69,769,980	7,086,921
6/30/2019	**17**	**67,776,267**	**7,086,921**
6/30/2020	16	65,637,013	7,086,921
6/30/2021	15	63,341,593	7,086,921
6/30/2022	14	60,878,608	7,086,921
6/30/2023	13	58,235,825	7,086,921
6/30/2024	12	55,400,119	7,086,921
6/30/2025	11	52,357,406	7,086,921
6/30/2026	10	49,092,575	7,086,921
6/30/2027	9	45,589,412	7,086,921
6/30/2028	8	41,830,518	7,086,921
6/30/2029	7	37,797,224	7,086,921
6/30/2030	6	33,469,500	7,086,921
6/30/2031	5	28,825,852	7,086,921
6/30/2032	4	23,843,218	7,086,921
6/30/2033	3	18,496,851	7,086,921
6/30/2034	2	12,760,200	7,086,921
6/30/2035	1	6,604,773	7,086,921
6/30/2036	0	0	0

Schedule F – Amortization of UAAL

2017 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2017	Expected UAAL Contribution
6/30/2017	20	$ (54,689,758)	$ (5,323,907)
6/30/2018	19	(53,412,894)	(5,284,703)
6/30/2019	**18**	**(52,027,332)**	**(5,284,703)**
6/30/2020	17	(50,540,624)	(5,284,703)
6/30/2021	16	(48,945,387)	(5,284,703)
6/30/2022	15	(47,233,697)	(5,284,703)
6/30/2023	14	(45,397,054)	(5,284,703)
6/30/2024	13	(43,426,336)	(5,284,703)
6/30/2025	12	(41,311,756)	(5,284,703)
6/30/2026	11	(39,042,811)	(5,284,703)
6/30/2027	10	(36,608,234)	(5,284,703)
6/30/2028	9	(33,995,932)	(5,284,703)
6/30/2029	8	(31,192,932)	(5,284,703)
6/30/2030	7	(28,185,313)	(5,284,703)
6/30/2031	6	(24,958,138)	(5,284,703)
6/30/2032	5	(21,495,379)	(5,284,703)
6/30/2033	4	(17,779,839)	(5,284,703)
6/30/2034	3	(13,793,064)	(5,284,703)
6/30/2035	2	(9,515,255)	(5,284,703)
6/30/2036	1	(4,925,166)	(5,284,703)
6/30/2037	0	0	0

Schedule F – Amortization of UAAL

2018 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2018	Expected UAAL Contribution
6/30/2018	20	$ (33,633,354)	$ (3,249,153)
6/30/2019	**19**	**(32,839,436)**	**(3,249,153)**
6/30/2020	18	(31,987,562)	(3,249,153)
6/30/2021	17	(31,073,501)	(3,249,153)
6/30/2022	16	(30,092,713)	(3,249,153)
6/30/2023	15	(29,040,328)	(3,249,153)
6/30/2024	14	(27,911,119)	(3,249,153)
6/30/2025	13	(26,699,478)	(3,249,153)
6/30/2026	12	(25,399,387)	(3,249,153)
6/30/2027	11	(24,004,389)	(3,249,153)
6/30/2028	10	(22,507,557)	(3,249,153)
6/30/2029	9	(20,901,456)	(3,249,153)
6/30/2030	8	(19,178,109)	(3,249,153)
6/30/2031	7	(17,328,958)	(3,249,153)
6/30/2032	6	(15,344,819)	(3,249,153)
6/30/2033	5	(13,215,838)	(3,249,153)
6/30/2034	4	(10,931,441)	(3,249,153)
6/30/2035	3	(8,480,283)	(3,249,153)
6/30/2036	2	(5,850,191)	(3,249,153)
6/30/2037	1	(3,028,102)	(3,249,153)
6/30/2038	0	0	0

Schedule F – Amortization of UAAL

2019 INCREMENTAL UAAL

Valuation Date	Amortization Period	Balance of New Incremental UAAL 6/30/2019	Expected UAAL Contribution
6/30/2019	**20**	**$ (26,261,482)**	**$ (2,536,993)**
6/30/2020	19	(25,641,579)	(2,536,993)
6/30/2021	18	(24,976,421)	(2,536,993)
6/30/2022	17	(24,262,707)	(2,536,993)
6/30/2023	16	(23,496,892)	(2,536,993)
6/30/2024	15	(22,675,172)	(2,536,993)
6/30/2025	14	(21,793,467)	(2,536,993)
6/30/2026	13	(20,847,397)	(2,536,993)
6/30/2027	12	(19,832,265)	(2,536,993)
6/30/2028	11	(18,743,027)	(2,536,993)
6/30/2029	10	(17,574,275)	(2,536,993)
6/30/2030	9	(16,320,205)	(2,536,993)
6/30/2031	8	(14,974,587)	(2,536,993)
6/30/2032	7	(13,530,739)	(2,536,993)
6/30/2033	6	(11,981,490)	(2,536,993)
6/30/2034	5	(10,319,146)	(2,536,993)
6/30/2035	4	(8,535,451)	(2,536,993)
6/30/2036	3	(6,621,546)	(2,536,993)
6/30/2037	2	(4,567,926)	(2,536,993)
6/30/2038	1	(2,364,392)	(2,536,993)
6/30/2039	0	0	0

Schedule G – Summary of Main Plan Provisions

AS INTERPRETED FOR VALUATION PURPOSES

Eligibility for Coverage	Membership in the Employees' Retirement System of Georgia (ERS), the Georgia Legislative Retirement System (LRS) or the Judicial Retirement System (JRS). ERS new entrants on and after January 1, 2009 and JRS and LRS new entrants on and after July 1, 2009 are excluded from membership.
Premiums	
Before Retirement	ERS Old Plan Members (Hired before July 1, 1982) Member pays 0.45% of monthly salary. State picks up 0.22% of the member premium. ERS New Plan Members (Hired on or after July 1, 1982 and before January 1, 2009), LRS Members and JRS Members Member pays 0.23% of monthly salary. All ERS and LRS members pay the above premiums. If the member is not covered under the Group Term Life Insurance (GTLI) Plan, employee contributions with interest are refunded upon termination of State employment. Otherwise, no premiums are refundable. Participation is voluntary for JRS Members.
After Retirement	If employed prior to April 1, 1964 or reemployed after April 1, 1964 with creditable service established for the period prior to April 1, 1964, the member pays ½ of 1% of the monthly salary payable the last month preceding retirement. If employed after April 1, 1964 with no creditable service established for the period prior to April 1, 1964, the member pays no premium.
Coverage	The amount of insurance is 18 times monthly earnable compensation (frozen at age 60). For a member with no creditable service prior to April 1, 1964, the amount decreases from age 60 by ½ of 1% per month until age 65, at which point the member will be covered for 70% of the age 60 coverage. The insurance amount for a retiree with creditable service prior to April 1, 1964 is the full amount of insurance in effect on the date of retirement. The insurance amount for a service retiree who retires before July 1, 1998 with no creditable service prior to April 1, 1964 is 40% of the amount of insurance at age 60 or at termination, if earlier.

The insurance amount for a disability retiree who retires before July 1, 1998 with no creditable service prior to April 1, 1964 is 18 times earnable compensation at retirement, reduced to 40% of such amount at age 60.

The insurance amount for a service retiree who retires on or after July 1, 1998 with no creditable service prior to April 1, 1964 is 70% of the amount of insurance at age 60 or at termination, if earlier.

The insurance amount for a disability retiree who retires on or after July 1, 1998 with no creditable service prior to April 1, 1964 is 18 times earnable compensation at retirement, reduced to 70% of such amount at age 60.

Schedule H – CAFR Schedule

GA SEAD Post-retirement: Solvency Test

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for: Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Members (Employer Funded Portion) (3)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets (1)	(2)	(3)
2019	$0	$772,657	$174,082	$1,233,856	N/A	100.0%	100.0%
2018	0	735,214	183,943	1,189,462	N/A	100.0%	100.0%
2017	0	693,118	183,468	1,121,251	N/A	100.0%	100.0%
2016	0	652,291	180,078	1,028,541	N/A	100.0%	100.0%
2015	0	621,426	148,321	1,046,559	N/A	100.0%	100.0%
2014	0	621,502	166,518	1,037,901	N/A	100.0%	100.0%
2013	0	586,228	168,558	907,831	N/A	100.0%	100.0%
2012	0	528,165	176,452	818,284	N/A	100.0%	100.0%
2011	0	503,327	175,093	807,893	N/A	100.0%	100.0%
2010	0	516,633	174,368	680,449	N/A	100.0%	93.9%

All dollar amounts are in thousands.