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April 16, 2020

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

Dear Mr Potvin:

Enclosed is a copy of the "Georgia Public School Employees Retirement System Report of the Actuary on the Valuation Prepared as of June 30, 2019".

Based on a monthly benefit accrual rate of $15.50, which is effective July 1, 2019, the valuation indicates that employer contributions for the fiscal year ending June 30, 2022 of $30,891,000 or $888.52 per active member are sufficient to support the benefits of the System.

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

Sincerely yours,

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

Cathy Turcot
Principal and Managing Director

Ben Mobley, ASA, FCA, MAAA
Senior Actuary

Enclosure

Cavanaugh Macdonald

EMPLOYEES' RETIREMENT SYSTEM OF GEORGIA

GEORGIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM

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

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Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

April 16, 2020

Board of Trustees
Georgia Public School Employees Retirement System
Two Northside 75, Suite 300
Atlanta, GA 30318

Attention: Mr. James Potvin, Executive Director

Members of the Board:

Section 47-4-60 of the law governing the operation of the Georgia Public School Employees Retirement System provides that the employer contribution shall be actuarially determined and approved by the Board of Trustees. We have submitted the report giving the results of the actuarial valuation of the System prepared as of June 30, 2019. Based on a monthly benefit accrual rate of $15.50, which is effective July 1, 2019, the valuation indicates that annual employer contributions of $30,891,000 or $888.52 per active member for the fiscal year ending June 30, 2022 are sufficient to support the benefits of the System.

Since the previous valuation, the monthly benefit accrual rate has been increased from $15.25 to $15.50 per year of creditable service with an effective date of July 1, 2019 for members retiring after August 1, 2012. In addition, the results of the valuation reflect that the Board granted a 1.50% cost-of-living adjustment (COLA) on January 1, 2020 to certain retired members and beneficiaries rather than the 1.50% anticipated cost-of-living adjustments to retired members on both July 1, 2019 and on January 1, 2020.

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%.

In preparing the valuation, the actuary relied on data provided by the System. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. Our firm, as actuary, is responsible for all of the actuarial trend data in the financial section of the annual report and the supporting schedules in the actuarial section of the annual report.

In our opinion, the valuation is complete and accurate, and the methodology and assumptions are reasonable as a basis for the valuation. The valuation takes into account the effect of all amendments to the System enacted through the 2019 session of the General Assembly.

The System is funded on an actuarial reserve basis. The actuarial assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The assumptions and methods used for financial reporting purposes meet the parameters set by Actuarial Standards of Practice (ASOPS). The funding objective of the plan is that contribution rates over time will remain level as a dollar per active member. The valuation method used is the entry age normal cost method. The normal contribution rate to cover current cost has been determined as a dollar per active member. Gains and losses are reflected in the total unfunded accrued liability which is being amortized as a level dollar per active member in accordance with the funding policy adopted by the Board.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144
Phone (678) 388-1700 • Fax (678) 388-1730
www.CavMacConsulting.com
Offices in Kennesaw, GA • Bellevue, NE

The Plan and the employers are required to comply with the financial reporting requirements of GASB Statements No. 67 and 68. The necessary disclosure information is provided in separate supplemental reports.

We have provided the following information and supporting schedules for the Actuarial Section of the Comprehensive Annual Financial Report:

- Summary of Actuarial Assumptions
- Schedule of Active Members
- Schedule of Funding Progress
- Schedule of Retirees Added to and Removed from Rolls
- Analysis of Change in Unfunded Accrued Liability
- Solvency Test Results

The System is currently being funded in conformity with the minimum funding standard set forth in Code Section 47-20-10 of the Public Retirement Systems Standards Law and the funding policy adopted by the Board. In our opinion the System is currently operating on an actuarially sound basis. Assuming that contributions to the System are made by the employer from year to year in the future at the rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the System may be safely anticipated.

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 System and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

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

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

Cathy Turcot

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**
Number of active members	34,767	34,953
Retired members and beneficiaries:		
Number	18,928	18,422
Annual allowances	$ 63,862,000*	$ 61,643,670**
Deferred Vested Members:		
Number	5,256	5,063
Annual allowances	$ 13,989,940	$ 13,213,456
Assets:		
Fair Value	$ 941,587,000	$ 914,138,000
Actuarial Value	931,032,000	905,046,000
Valuation Interest Rate	7.30%	7.30%
Unfunded actuarial accrued liability	$ 177,626,248	$ 176,138,242
Blended Amortization period (years)	19.6	20.4
Funded Ratio based on Actuarial Value of Assets	84.0%	83.7%
For Fiscal Year Ending	**June 30, 2022**	**June 30, 2021**
Actuarially Determined Employer Contribution (ADEC)		
Per active member:		
Normal***	$ 389.97	$ 383.77
Unfunded Actuarial Accrued Liability	498.55	482.08
Total	$ 888.52	$ 865.85
Annual Amount:		
Normal***	$ 13,558,000	$ 13,414,000
Unfunded Actuarial Accrued Liability	17,333,000	16,850,000
Total	$ 30,891,000	$ 30,264,000

*Does not reflect the COLA granted by the Board on January 1, 2020 or increases in benefit accrual rates after the valuation date.

**Does not reflect the COLA granted by the Board on July 1, 2018 or increases in benefit accrual rates after June 30, 2018.

***The normal contribution includes administrative expenses.

2. The major benefit and contribution provisions of the System as reflected in the valuation are summarized in Schedule H. The valuation takes into account the effect of amendments of the System enacted through the 2019 session of the General Assembly. Since the previous valuation, the monthly benefit accrual rate has been increased from $15.25 to $15.50 per year of creditable service with an effective date of July 1, 2019 for members retiring after August 1, 2012.
3. The results of the valuation also reflect that the Board granted a 1.50% cost-of-living adjustment (COLA) on January 1, 2020 to certain retired members and beneficiaries rather than the 1.50% anticipated COLAs to retired members on both July 1, 2019 and on January 1, 2020.
4. Schedule D of this report outlines the full set of actuarial assumptions used to prepare the current 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%. The Board Funding Policy is shown in Schedule F.
5. The entry age actuarial cost method was used to prepare the valuation. Schedule E contains a brief description of this method.
6. Comments on the valuation results as of June 30, 2019 are given in Section IV, and further discussion of the contributions is set out in Section V.
7. We have prepared the Solvency Test and Schedule of Retirants Added to and Removed from Rolls for the System's Comprehensive Annual Financial Report. These tables are shown in Schedule J.

8. The funding ratio shown in the Summary of Principal Results is the ratio of the actuarial value of assets to the accrued liability and would be different if based on fair value of assets. The funding 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 payment of the unfunded actuarial accrued liability. In addition, this funding ratio does not have any relationship to measuring sufficiency if the plan had to settle its liabilities.

Section II – Membership

1. Data regarding the membership of the System for use as a basis of the valuation were furnished by the Retirement System office. The valuation included 34,767 active members.

2. Data was provided by the Retirement System for inactive members who are eligible for deferred vested benefits. The valuation included 5,256 deferred vested members with annual allowances totaling $13,989,940 (not including increases in benefit accrual rates after the valuation date). In addition, there are 43,956 inactive non-vested members included in the valuation entitled to a refund of member contributions.

3. The following table shows the number of retired members and beneficiaries on the roll as of June 30, 2019, together with the amount of their annual allowances payable under the System as of that date.

THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF RETIRED MEMBERS AND BENEFICIARIES ON THE ROLL AS OF JUNE 30, 2019

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES*
Service Retirements	16,770	$ 56,455,062
Disability Retirements	1,019	4,911,494
Beneficiaries of Deceased Members	1,139	2,495,444
Total	18,928	$ 63,862,000

*Does not reflect the COLA granted by the Board on January 1, 2020 or increases in benefit accrual rates after the valuation date.

Section III – Assets

1. The retirement law provides for the maintenance of two funds for the purpose of recording the financial transactions of the System; namely, the Annuity Savings Fund and the Pension Accumulation Fund.

   (a) Annuity Savings Fund

   The Annuity Savings Fund is the fund to which are credited all contributions made by members together with regular interest thereon. When a member retires, or if a death benefit allowance becomes payable to his beneficiary, his accumulated contributions are transferred from the Annuity Savings Fund to the Pension Accumulation Fund. The portion of the allowance which these contributions provide is then paid from the Pension Accumulation Fund. On June 30, 2019, the value of assets credited to the Annuity Savings Fund amounted to $29,886,000.

   (b) Pension Accumulation Fund

   The Pension Accumulation Fund is the fund to which all income from investments and all contributions made by employers of members of the System and by the State for members of local retirement funds are credited. All retirement allowance and death benefit allowance payments are disbursed from this fund. Upon the retirement of a member, or upon his death if a death benefit allowance is payable, his accumulated contributions are transferred from the Annuity Savings Fund to this fund to provide the member-contributed portion of the allowance. On June 30, 2019, the fair value of assets credited to the Pension Accumulation Fund amounted to $911,701,000.

2. As of June 30, 2019, the total fair value of assets amounted to $941,587,000 as reported by the Auditor of the System.

3. The actuarial value of assets as of June 30, 2019 was determined to be $931,032,000 based on a 5-year smoothing of investment gains and losses. Schedule B shows the development of the actuarial value of assets as of June 30, 2019.

4. Schedule C 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 of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the System as of June 30, 2019.

2. The valuation balance sheet shows that the System has total prospective liabilities of $1,174,042,265, of which $695,623,607 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits, and $478,418,658 is for the prospective benefits payable on account of present active members. Against these liabilities, the System has total present assets for valuation purposes of $931,032,000 as of June 30, 2019. The difference of $243,010,265 between the total liabilities and the total present assets represents the present value of contributions to be made in the future. Of this amount, $11,335,878 is the present value of future contributions expected to be made by or on behalf of members, and the balance of $231,674,387 represents the present value of future contributions payable by the employers to the Pension Accumulation Fund.

3. The employer's contributions to the System consist of normal contributions and unfunded actuarial accrued liability (UAAL) contributions. The valuation indicates that annual employer normal contributions at the rate of $330.68 per active member are required to provide the currently accruing benefits of the System. An additional $59.29 per active member is required to fund the administrative expenses of the System.

4. Prospective normal contributions (net of expenses) have a present value of $54,048,139. When this amount is subtracted from $231,674,387, which is the present value of the total future contributions to be made by the employers, the result is a prospective unfunded actuarial accrued liability of $177,626,248.

5. The funding policy adopted by the Board, as shown in Schedule F, provides that the unfunded actuarial accrued liability as of June 30, 2013 (Transitional UAAL) will be amortized as a level dollar amount over a closed 25-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 25-year period from the date it is established.
6. The total accrued liability contribution rate is $498.55 per active member, determined in accordance with the Board's funding policy.
7. Schedule G of this report shows the amortization schedules for the Transitional UAAL and New Incremental UAALs.
8. 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	$163,360,988	19	$16,163,032
New Incremental 6/30/2014	(19,539,198)	20	(1,887,586)
New Incremental 6/30/2015	5,410,279	21	511,410
New Incremental 6/30/2016	(4,706,329)	22	(436,120)
New Incremental 6/30/2017	18,232,356	23	1,659,121
New Incremental 6/30/2018	9,388,164	24	840,217
New Incremental 6/30/2019	5,479,988	25	483,019
Total UAAL	$177,626,248		$17,333,093
Blended Amortization Period (years)			19.6
UAAL Contribution Rate per active member			$498.55

Section V – Contributions Payable by Employers

1. The contributions of employers consist of a normal contribution and an unfunded actuarial accrued liability contribution (UAAL) as determined by actuarial valuation.

2. The normal contribution rate is calculated as the level dollar 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. On the basis of the valuation, the normal contribution rate was determined to be $330.68 per active member, or $11,497,000 based on 34,767 active members as of June 30, 2019.

3. An additional $2,061,000, or $59.29 per active member, is required to fund the administrative expenses of the System.

4. The total normal contribution including administrative expenses is, therefore, $13,558,000, or $389.97 per active member.

5. The UAAL contribution is the level annual amount which will be sufficient to amortize the UAAL in accordance with the Board's funding policy. The annual UAAL contribution determined on this basis by the June 30, 2019 valuation is $17,333,000, or $498.55 per active member.

6. The following table summarizes the employer contribution rates which were determined by the June 30, 2019 valuation and are recommended for use.

ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC)
FOR FISCAL YEAR ENDING JUNE 30, 2022

CONTRIBUTION	PER ACTIVE MEMBER	ANNUAL AMOUNT
Normal	$ 389.97	$ 13,558,000
Unfunded Actuarial Accrued Liability	498.55	17,333,000
Total	$ 888.52	$ 30,891,000

7. Schedule K shows the allocation of the actuarially determined employer contribution for fiscal year ending June 30, 2022 by school system.

Section VI – Accounting Information

The information required under Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 will be issued in separate reports. The following information is provided for informational purposes only.

1. The following is a distribution of the number of employees by type of membership:

NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF JUNE 30, 2019

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	18,928
Terminated employees entitled to benefits but not yet receiving benefits	49,212
Active plan members	34,767
Total	102,907

2. The schedule of funding progress is shown below.

SCHEDULE OF FUNDING PROGRESS
(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Entry Age (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	$ 765,450	$ 924,365	$ 158,915	82.8%	N/A	N/A
6/30/2015	805,277	967,409	162,132	83.2	N/A	N/A
6/30/2016	834,554	988,883	154,329	84.4	N/A	N/A
6/30/2017*	865,786	1,035,935	170,149	83.6	N/A	N/A
6/30/2018*	905,046	1,081,184	176,138	83.7	N/A	N/A
6/30/2019	931,032	1,108,658	177,626	84.0	N/A	N/A

* Reflects change in assumed rate of return

3. The following shows the schedule of employer contributions (all dollar amounts are in thousands).

Year Ending	Actuarially Determined Employer Contribution (ADEC)	Percentage Contributed
6/30/2014	$ 27,160	100%
6/30/2015	28,461	100
6/30/2016	28,580	100
6/30/2017	26,277	100
6/30/2018	29,276	100
6/30/2019	30,263	100

4. 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, closed
Remaining amortization period	19.6 years
Asset valuation method	5-year smoothed fair
Actuarial assumptions:	
Investment rate of return*	7.30%
Projected salary increases	N/A
Cost-of-living adjustments	1.50% semi-annually

*Includes inflation at 2.75%

Section VII – Experience

1. The last experience investigation was prepared for the five-year period ending June 30, 2014, and based on the results of the investigation various assumptions and methods were revised and adopted by the Board on December 17, 2015. The next experience investigation will be prepared for the period July 1, 2014 through June 30, 2019.

2. The following table shows the estimated gain or loss from various factors that resulted in an increase of $1,488,006 in the unfunded actuarial accrued liability (UAAL) from $176,138,242 to $177,626,248 during the fiscal year ending June 30, 2019.

3. While the increase in the UAAL of $1,488.0 thousand was relatively small, there were many offsetting gains and losses as follows:

   - There was a $12,551.0 thousand loss due to the change in the benefit accrual rate from $15.25 to $15.50 per year of service for retirements after August 1, 2012, and
   - There was a $5,770.0 thousand loss due to asset growth less than expected for the fiscal year ending June 30, 2019.
   - These losses were offset by the $8,832.0 thousand gain because the Board did not grant the full anticipated COLAs to retired members on July 1, 2019 and January 1, 2020,
   - The accrued liability contribution was greater than the interest on the prior year UAAL by $5,445.1 thousand which lowered the UAAL,
   - There was a miscellaneous programming change that resulted in a gain of $4,405.3, and
   - There were also small gains for pensioner mortality and turnover and retirement.

ANALYSIS OF THE CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY
(in thousands of dollars)

ITEM	AMOUNT OF INCREASE/ (DECREASE)
Interest (7.30%) added to previous UAAL	$ 12,858.1
Accrued liability contribution	(18,303.2)
Experience:	
Valuation asset growth	5,770.0
Pensioners' mortality	(1,104.1)
Turnover and retirements	(859.2)
New entrants	3,701.8
Assumption and method changes	0.0
Increase in benefit accrual rate	12,551.0
7/1/2019, 1/1/2020 COLAs	(8,832.0)
Miscellaneous Changes	(4,405.3)
Data Changes	110.9
Total	$ 1,488.0

Section VIII – Risk Assessment

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. To illustrate the magnitude of this risk, based on the current valuation, if the market value return had been 10% below assumed, or negative 2.70% (7.30% minus 10.00%) for the System, there would have been an increase in the expected Required Contribution Amount of approximately $1,580,000.

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 7.30%, along with the results if the assumption were 6.30% or 8.30%. 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. In addition, simply because the valuation results under alternative assumptions are shown here, it should not be implied that Cavanaugh Macdonald Consulting (CMC) believes that either assumption (6.30% or 8.30%) would comply with actuarial standards of practice.

As of June 30, 2019	Current Discount Rate (7.30%)	-1% Discount Rate (6.30%)	+1% Discount Rate (8.30%)
Accrued Liability	$1,108,658,248	$1,232,207,397	$1,004,744,400
Unfunded Liability	$177,626,248	$301,175,397	$73,712,400
Funded Ratio (AVA)	84.0%	75.6%	92.7%
ADEC Rate*	$888.52	$1,222.10	$573.40

*Contribution rates are determined based on the Board's current Funding Policy

Section VIII – Risk Assessment

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 next experience study will be completed for the period July 1, 2014 – June 30, 2019.

Contribution Risk

The System is primarily funded by 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

VALUATION BALANCE SHEET
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF
THE GEORGIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM
AS OF JUNE 30, 2019

	ACTUARIAL LIABILITIES		
(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	$ 563,937,118	
	- Death and survivor benefits	24,758,130	
	- Deferred vested benefits	106,928,359	
	Total		$ 695,623,607
(2)	Present value of prospective benefits payable on account of present active members		478,418,658
(3)	TOTAL ACTUARIAL LIABILITIES		$1,174,042,265
	PRESENT AND PROSPECTIVE ASSETS		
(4)	Actuarial value of assets		$ 931,032,000
(5)	Present value of total future contributions = (3)-(4)	$ 243,010,265	
(6)	Present value of future member contributions		11,335,878
(7)	Present value of future employer contributions = (5)-(6)	$ 231,674,387	
(8)	Prospective normal contributions		54,048,139
(9)	Prospective unfunded actuarial accrued liability contributions = (7)-(8)		177,626,248
(10)	TOTAL PRESENT AND PROSPECTIVE ASSETS		$1,174,042,265

Schedule B – Development of Actuarial Value of Assets

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

(1)	Actuarial Value Beginning of Year		$	905,046,000
(2)	Fair Value End of Year		$	941,587,000
(3)	Fair Value Beginning of Year		$	914,138,000
(4)	Cash Flow			
	(a)	Contributions	$	32,519,000
	(b)	Benefit Payments		(64,246,000)
	(c)	Administrative Expenses		(1,377,000)
	(d)	Investment Expenses		(391,000)
	(e)	Net: (4)(a) + (4)(b) + 4(c) + 4(d)	$	(33,495,000)
(5)	Investment Income			
	(a)	Fair Total: (2) – (3) – (4)(e)	$	60,944,000
	(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)	$	65,915,000
	(d)	Amount for Phased-In Recognition: (5)(a) - (5)(c)		(4,971,000)
(6)	Phased-In Recognition of Investment Income			
	(a)	Current Year: (5)(d) / 5	$	(994,000)
	(b)	First Prior Year		3,075,000
	(c)	Second Prior Year		7,737,000
	(d)	Third Prior Year		(10,167,000)
	(e)	Fourth Prior Year		(6,085,000)
	(f)	Total Recognized Investment Gain	$	(6,434,000)
(7)	Actuarial Value End of Year: (1) + (4)(e) + (5)(c) + (6)(f)		$	931,032,000
(8)	Difference Between Fair & Actuarial Values: (2) – (7)		$	10,555,000
(9)	Rate of Return on Actuarial Value*			6.65%

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

Schedule C – Summary of Receipts and Disbursements

SUMMARY OF RECEIPTS AND DISBURSEMENTS
(Fair Value)

	YEAR ENDING	
Receipts for the Year	June 30, 2019 ($1,000's)	June 30, 2018 ($1,000's)
Contributions:		
Members	$ 2,256	$ 2,162
Employer	30,263	29,276
Subtotal	$ 32,519	$ 31,438
Investment Earnings (Net of Investment Expenses)	60,553	78,418
TOTAL	$ 93,072	$ 109,856
Disbursements for the Year		
Benefit Payments	$ 63,637	$ 61,820
Refunds to Members	609	701
Administrative Expenses	1,377	1,331
TOTAL	$ 65,623	$ 63,852
Excess of Receipts over Disbursements	$ 27,449	$ 46,004
Reconciliation of Asset Balances		
Asset Balance as of the Beginning of Year	$ 914,138	$ 868,134
Excess of Receipts over Disbursements	27,449	46,004
Asset Balance as of the End of Year	$ 941,587	$ 914,138
Rate of Return*	6.75%	9.20%

* 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, 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.

SEPARATIONS BEFORE SERVICE RETIREMENT: Representative values of the assumed annual rates of separation before service retirement are as follows:

	Annual Rates of Withdrawal		
	Years of Service		
Age	0-4	5-9	10 & Over
		Males	
20	37.0%		
25	28.0	17.0%	
30	25.0	15.0	12.0%
35	23.0	13.0	9.0
40	21.0	12.0	7.5
45	19.0	11.0	6.5
50	17.0	9.0	6.5
55	15.0	9.0	6.0
60	12.0	7.5	
		Females	
20	32.0%		
25	28.0	18.0%	
30	23.0	15.0	10.0%
35	19.0	13.0	10.0
40	17.0	12.0	8.0
45	15.5	10.0	7.0
50	14.0	8.5	6.0
55	12.0	8.0	5.5
60	11.0	7.5	

Schedule D – Outline of Actuarial Assumptions and Methods

Age	Annual Rates of Death: Males	Annual Rates of Death: Females	Annual Rates of Disability
20	0.0320%	0.0177%	0.0000%
25	0.0349	0.0192	0.0000
30	0.0412	0.0245	0.0000
35	0.0717	0.0441	0.0025
40	0.1001	0.0655	0.0110
45	0.1399	0.1043	0.0370
50	0.1983	0.1555	0.0865
55	0.2810	0.2228	0.2250
60	0.4092	0.3058	0.3500
65	0.5600	0.4304	0.0000

RETIREMENT:

Age	Annual Rate	Age	Annual Rate
60	13.0%	68	23.0%
61	13.0	69	26.0
62	22.0	70	27.0
63	17.5	71	27.0
64	17.0	72	27.0
65	28.0	73	27.0
66	27.0	74	27.0
67	23.0	75 & Over	100.0

DEATHS AFTER RETIREMENT: The RP-2000 Blue-Collar Mortality Table projected to 2025 with projection scale BB (set forward 3 years for males and 2 years for females) is used for the period after service retirement and for beneficiaries of deceased members. The RP-2000 Disabled Mortality Table projected to 2025 with projection scale BB (set forward 5 years for both males and 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 9-11% less than the actual number of deaths that occurred during the study period for healthy retirees and 9-11% less than expected under the selected table for disabled retirees. Representative values of the assumed annual rates of mortality for service retirements and beneficiaries are as follows:

Age	Men	Women	Age	Men	Women
40	0.1476%	0.0995%	65	1.4859%	0.9774%
45	0.1974	0.1484	70	2.4262	1.7054
50	0.3057	0.2084	75	3.9830	2.7288
55	0.5644	0.2844	80	6.5238	4.4542
60	0.9575	0.5014	85	10.9551	7.5727

Schedule D – Outline of Actuarial Assumptions and Methods

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

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 value of assets, based on the assumed valuation rate of return. The actuarial value was set equal to the fair value as of June 30, 2013. The amount recognized each year beginning June 30, 2014 is 20% of the difference between fair value and expected actuarial value.

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

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

TERMINATING VESTED MEMBERS: 50% of active vested members who terminate are assumed to elect a refund in lieu of a benefit. Benefits are assumed to begin at age 65.

Schedule E – 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 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

Funding Policy of the PSERS Board of Trustees

The purpose of this Funding Policy is to state the overall objectives for the Public School Employees 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 PSERS 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 an increasing funded ratio (ratio of actuarial value of assets to actuarial accrued liabilities) that reflects a trend of improved actuarial condition. The long-term objective is 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 increase over time, before adjustments for changes in benefits, actuarial methods, and/or actuarial adjustments. The target funded ratio will be 100 percent within 25 years of the valuation date for the first valuation conducted following the adoption of this Policy (i.e. the June 30, 2013 valuation date).
- **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 25 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 25 year period beginning with the year it is incurred.

Schedule F – Board Funding Policy

- **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.

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.

The employer contributions 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 25 years (for the UAAL as of the June 30, 2013 valuation date, and for each successive year of gains and losses incurred in years following the June 30, 2013 valuation date). However in no event shall the employer contributions be less than $0.

Schedule F – Board Funding Policy

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: March 15, 2018

Schedule G – Amortization of UAAL

AMORTIZATION OF TRANSITIONAL UAAL

Valuation Date	Amortization Period	Balance of Transitional UAAL	Annual Amortization Payment
6/30/2013	25	$182,988,036	$16,415,980
6/30/2014	24	180,296,159	16,415,980
6/30/2015	23	177,402,391	16,415,980
6/30/2016	22	174,291,591	16,415,980
6/30/2017	21	170,947,481	16,287,231
6/30/2018	20	167,310,363	16,163,032
6/30/2019	**19**	**163,360,988**	**16,163,032**
6/30/2020	18	159,123,309	16,163,032
6/30/2021	17	154,576,279	16,163,032
6/30/2022	16	149,697,315	16,163,032
6/30/2023	15	144,462,188	16,163,032
6/30/2024	14	138,844,896	16,163,032
6/30/2025	13	132,817,542	16,163,032
6/30/2026	12	126,350,190	16,163,032
6/30/2027	11	119,410,723	16,163,032
6/30/2028	10	111,964,674	16,163,032
6/30/2029	9	103,975,064	16,163,032
6/30/2030	8	95,402,212	16,163,032
6/30/2031	7	86,203,541	16,163,032
6/30/2032	6	76,333,368	16,163,032
6/30/2033	5	65,742,673	16,163,032
6/30/2034	4	54,378,856	16,163,032
6/30/2035	3	42,185,481	16,163,032
6/30/2036	2	29,101,990	16,163,032
6/30/2037	1	15,063,403	16,163,032
6/30/2038	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	Annual Amortization Payment
6/30/2014	25	($21,380,749)	($1,918,081)
6/30/2015	24	(21,066,224)	(1,918,081)
6/30/2016	23	(20,728,109)	(1,918,081)
6/30/2017	22	(20,364,636)	(1,902,575)
6/30/2018	21	(19,969,044)	(1,887,586)
6/30/2019	**20**	**(19,539,198)**	**(1,887,586)**
6/30/2020	19	(19,077,974)	(1,887,586)
6/30/2021	18	(18,583,080)	(1,887,586)
6/30/2022	17	(18,052,059)	(1,887,586)
6/30/2023	16	(17,482,273)	(1,887,586)
6/30/2024	15	(16,870,894)	(1,887,586)
6/30/2025	14	(16,214,883)	(1,887,586)
6/30/2026	13	(15,510,983)	(1,887,586)
6/30/2027	12	(14,755,699)	(1,887,586)
6/30/2028	11	(13,945,280)	(1,887,586)
6/30/2029	10	(13,075,699)	(1,887,586)
6/30/2030	9	(12,142,639)	(1,887,586)
6/30/2031	8	(11,141,466)	(1,887,586)
6/30/2032	7	(10,067,207)	(1,887,586)
6/30/2033	6	(8,914,527)	(1,887,586)
6/30/2034	5	(7,677,702)	(1,887,586)
6/30/2035	4	(6,350,588)	(1,887,586)
6/30/2036	3	(4,926,595)	(1,887,586)
6/30/2037	2	(3,398,651)	(1,887,586)
6/30/2038	1	(1,759,167)	(1,887,586)
6/30039	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	Annual Amortization Payment
6/30/2015	25	$5,795,541	$519,922
6/30/2016	24	5,710,285	519,922
6/30/2017	23	5,618,634	515,598
6/30/2018	22	5,518,815	511,410
6/30/2019	**21**	**5,410,279**	**511,410**
6/30/2020	20	5,293,819	511,410
6/30/2021	19	5,168,858	511,410
6/30/2022	18	5,034,775	511,410
6/30/2023	17	4,890,904	511,410
6/30/2024	16	4,736,530	511,410
6/30/2025	15	4,570,887	511,410
6/30/2026	14	4,393,152	511,410
6/30/2027	13	4,202,442	511,410
6/30/2028	12	3,997,810	511,410
6/30/2029	11	3,778,241	511,410
6/30/2030	10	3,542,642	511,410
6/30/2031	9	3,289,845	511,410
6/30/2032	8	3,018,594	511,410
6/30/2033	7	2,727,542	511,410
6/30/2034	6	2,415,242	511,410
6/30/2035	5	2,080,145	511,410
6/30/2036	4	1,720,586	511,410
6/30/2037	3	1,334,779	511,410
6/30/2038	2	920,808	511,410
6/30/2039	1	476,617	511,410
6/30/2040	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	Annual Amortization Payment
6/30/2016	25	($4,944,605)	($443,584)
6/30/2017	24	(4,871,867)	(439,795)
6/30/2018	23	(4,792,589)	(436,120)
6/30/2019	**22**	**(4,706,329)**	**(436,120)**
6/30/2020	21	(4,613,771)	(436,120)
6/30/2021	20	(4,514,457)	(436,120)
6/30/2022	19	(4,407,893)	(436,120)
6/30/2023	18	(4,293,550)	(436,120)
6/30/2024	17	(4,170,859)	(436,120)
6/30/2025	16	(4,039,213)	(436,120)
6/30/2026	15	(3,897,956)	(436,120)
6/30/2027	14	(3,746,387)	(436,120)
6/30/2028	13	(3,583,754)	(436,120)
6/30/2029	12	(3,409,248)	(436,120)
6/30/2030	11	(3,222,004)	(436,120)
6/30/2031	10	(3,021,090)	(436,120)
6/30/2032	9	(2,805,510)	(436,120)
6/30/2033	8	(2,574,193)	(436,120)
6/30/2034	7	(2,325,990)	(436,120)
6/30/2035	6	(2,059,668)	(436,120)
6/30/2036	5	(1,773,904)	(436,120)
6/30/2037	4	(1,467,279)	(436,120)
6/30/2038	3	(1,138,271)	(436,120)
6/30/2039	2	(785,245)	(436,120)
6/30/2040	1	(406,449)	(436,120)
6/30/2041	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	Annual Amortization Payment
6/30/2017	25	$18,819,066	$1,673,487
6/30/2018	24	18,538,189	1,659,121
6/30/2019	**23**	**18,232,356**	**1,659,121**
6/30/2020	22	17,904,197	1,659,121
6/30/2021	21	17,552,082	1,659,121
6/30/2022	20	17,174,263	1,659,121
6/30/2023	19	16,768,863	1,659,121
6/30/2024	18	16,333,869	1,659,121
6/30/2025	17	15,867,120	1,659,121
6/30/2026	16	15,366,299	1,659,121
6/30/2027	15	14,828,918	1,659,121
6/30/2028	14	14,252,308	1,659,121
6/30/2029	13	13,633,605	1,659,121
6/30/2030	12	12,969,737	1,659,121
6/30/2031	11	12,257,407	1,659,121
6/30/2032	10	11,493,076	1,659,121
6/30/2033	9	10,672,950	1,659,121
6/30/2034	8	9,792,954	1,659,121
6/30/2035	7	8,848,719	1,659,121
6/30/2036	6	7,835,554	1,659,121
6/30/2037	5	6,748,428	1,659,121
6/30/2038	4	5,581,942	1,659,121
6/30/2039	3	4,330,303	1,659,121
6/30/2040	2	2,987,294	1,659,121
6/30/2041	1	1,546,245	1,659,121
6/30/2042	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	Annual Amortization Payment
6/30/2018	25	$9,532,508	$840,217
6/30/2019	**24**	**9,388,164**	**840,217**
6/30/2020	23	9,233,283	840,217
6/30/2021	22	9,067,096	840,217
6/30/2022	21	8,888,777	840,217
6/30/2023	20	8,697,441	840,217
6/30/2024	19	8,492,137	840,217
6/30/2025	18	8,271,846	840,217
6/30/2026	17	8,035,474	840,217
6/30/2027	16	7,781,846	840,217
6/30/2028	15	7,509,704	840,217
6/30/2029	14	7,217,695	840,217
6/30/2030	13	6,904,370	840,217
6/30/2031	12	6,568,172	840,217
6/30/2032	11	6,207,432	840,217
6/30/2033	10	5,820,357	840,217
6/30/2034	9	5,405,026	840,217
6/30/2035	8	4,959,376	840,217
6/30/2036	7	4,481,194	840,217
6/30/2037	6	3,968,104	840,217
6/30/2038	5	3,417,559	840,217
6/30/2039	4	2,826,824	840,217
6/30/2040	3	2,192,965	840,217
6/30/2041	2	1,512,834	840,217
6/30/2042	1	783,054	840,217
6/30/2043	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	Annual Amortization Payment
6/30/2019	**25**	**$5,479,988**	**$483,019**
6/30/2020	24	$5,397,008	$483,019
6/30/2021	23	$5,307,971	$483,019
6/30/2022	22	$5,212,435	$483,019
6/30/2023	21	$5,109,924	$483,019
6/30/2024	20	$4,999,930	$483,019
6/30/2025	19	$4,881,906	$483,019
6/30/2026	18	$4,755,266	$483,019
6/30/2027	17	$4,619,382	$483,019
6/30/2028	16	$4,473,579	$483,019
6/30/2029	15	$4,317,131	$483,019
6/30/2030	14	$4,149,263	$483,019
6/30/2031	13	$3,969,141	$483,019
6/30/2032	12	$3,775,869	$483,019
6/30/2033	11	$3,568,489	$483,019
6/30/2034	10	$3,345,970	$483,019
6/30/2035	9	$3,107,207	$483,019
6/30/2036	8	$2,851,015	$483,019
6/30/2037	7	$2,576,120	$483,019
6/30/2038	6	$2,281,159	$483,019
6/30/2039	5	$1,964,665	$483,019
6/30/2040	4	$1,625,066	$483,019
6/30/2041	3	$1,260,678	$483,019
6/30/2042	2	$869,689	$483,019
6/30/2043	1	$450,157	$483,019
6/30/2044	0	$0	$0

Schedule H – Summary of Main System Provisions

SUMMARY OF MAIN SYSTEM PROVISIONS
AS INTERPRETED FOR VALUATION PURPOSES

The Public School Employees' Retirement System (PSERS) is a cost-sharing multiple employer defined benefit pension plan established by the Georgia General Assembly in 1969 for the purpose of providing retirement allowances and other benefits for public school employees who are not eligible for membership in the Teachers Retirement System of Georgia.

Normal Retirement Benefit	
Eligibility	Age 65 and 10 years of creditable service.
Benefit	Monthly benefit is $15.00 multiplied by years of creditable service for members retiring on or before August 1, 2012 and $15.50 multiplied by years of creditable service for members retiring after August 1, 2012. For members with retirement dates prior to July 1, 2013, a one-time 1.75% increase was made at time of retirement.
Early Retirement Benefit	
Eligibility	Age 60 and 10 years of creditable service.
Benefit	Accrued benefit reduced by 6% for each year member is under age 65.
Disability Retirement Benefit	
Eligibility	15 years of creditable service.
Benefit	Accrued benefit payable immediately.
Deferred Vested Retirement Benefit	
Eligibility	10 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	Death in service and the member is at least age 60 and has at least 10 years of creditable service.
Benefit	Benefit payable to beneficiary under the joint and survivor annuity payment option. If the member dies in service under age 60 or with less than 10 years of creditable service his beneficiary receives a refund of the member's accumulated contributions.

Schedule H – Summary of Main System Provisions

Termination Benefit	
Eligibility	Less than 10 years of creditable service.
Benefit	Return of the member's accumulated contributions.
Payment Options	(1) Life annuity. Guaranteed payment of accumulated member contributions.
	(2) Joint and survivorship annuity.
	(3) Certain and life annuity.
Post-Retirement Adjustments	The Board may from time to time grant a Cost of Living Adjustment.
Contributions	
By Members	Members who joined the System prior to July 1, 2012 contribute $4 per month. Members joining the System on or after July 1, 2012 contribute $10 per month.
By Employers	Employer contributions are actuarially determined and approved and certified by the Board.

NUMBER OF ACTIVE MEMBERS
BY AGE AND SERVICE AS OF JUNE 30, 2019

	Years of Service									
Attained Age	**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**	**Total**
Under 25	133	314	5	0	0	0	0	0	0	452
25 to 29	221	756	112	5	0	0	0	0	0	1,094
30 to 34	300	1,079	284	76	3	0	0	0	0	1,742
35 to 39	309	1,331	468	192	72	2	0	0	0	2,374
40 to 44	288	1,350	615	412	139	37	3	0	0	2,844
45 to 49	276	1,595	883	695	414	140	50	3	0	4,056
50 to 54	310	1,568	1,013	1,016	660	393	125	50	4	5,139
55 to 59	292	1,774	1,238	1,142	938	615	304	164	47	6,514
60 to 64	209	1,393	1,128	989	673	457	292	198	137	5,476
65 to 69	129	781	700	551	279	173	129	105	87	2,934
70 & Up	55	444	484	532	268	143	71	66	79	2,142
Total	2,522	12,385	6,930	5,610	3,446	1,960	974	586	354	34,767

Average Age: 53.0
Average Service: 9.0

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	1,186	2,999,668	2,529
65 – 69	3,219	9,656,831	3,000
70 – 74	4,101	12,797,644	3,121
75 – 79	3,564	11,959,144	3,356
80 – 84	2,545	9,341,231	3,670
85 – 89	1,412	6,053,054	4,287
90 – 94	576	2,764,207	4,799
95 & Over	167	883,283	5,289
Total	16,770	$ 56,455,062	$ 3,366

NUMBER OF BENEFICIARIES AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	153	$ 200,932	$ 1,313
50 – 54	85	143,842	1,692
55 – 59	94	168,132	1,789
60 – 64	110	236,476	2,150
65 – 69	139	301,200	2,167
70 – 74	146	313,452	2,147
75 – 79	158	392,385	2,483
80 – 84	114	322,254	2,827
85 – 89	86	250,966	2,918
90 – 94	35	111,099	3,174
95 & Over	19	54,706	2,879
Total	1,139	$ 2,495,444	$ 2,191

Schedule I – Tables of Membership Data

NUMBER OF DISABLED RETIREES AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	6	$ 21,201	$ 3,534
50 – 54	24	92,580	3,858
55 – 59	119	472,663	3,972
60 – 64	194	821,915	4,237
65 – 69	209	937,002	4,483
70 – 74	160	794,616	4,966
75 – 79	174	965,176	5,547
80 – 84	93	558,396	6,004
85 – 89	32	193,931	6,060
90 – 94	7	45,759	6,537
95 & Over	1	8,255	8,255
Total	1,019	$ 4,911,494	$ 4,820

NUMBER OF DEFERRED VESTED MEMBERS AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 35	12	$ 25,497	$ 2,125
35 – 39	77	160,913	2,090
40 – 44	191	447,104	2,341
45 – 64	545	1,325,312	2,432
50 – 54	1,047	2,749,223	2,626
55 – 59	1,673	4,592,369	2,745
60 – 64	1,154	3,208,668	2,780
65 – 69	373	976,042	2,617
70 – 74	126	350,392	2,781
75 & Over	58	154,420	2,662
Total	5,256	$ 13,989,940	$ 2,662

CAFR SCHEDULES

GA PSERS: 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	$19,109	$695,624	$393,925	$931,032	100%	100.0%	54.9%
2018	18,570	674,222	388,392	905,046	100%	100.0%	54.6%
2017	18,077	640,197	377,661	865,786	100%	100.0%	54.9%
2016	17,413	609,807	361,663	834,554	100%	100.0%	57.3%
2015	17,196	585,471	364,742	805,277	100%	100.0%	55.5%
2014	16,995	566,344	341,026	765,450	100%	100.0%	53.4%
2013	17,016	549,796	343,444	727,268	100%	100.0%	46.7%
2012	16,917	537,284	341,123	710,915	100%	100.0%	45.9%
2011	16,627	532,509	336,790	719,601	100%	100.0%	50.6%
2010	16,361	528,808	330,227	737,406	100%	100.0%	58.2%

All dollar amounts are in thousands.

GA PSERS: Schedule of Retirants Added to and Removed from Rolls

	Added to Rolls		Removed from Rolls		Roll End of Year			
Year Ended	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)	% Increase in Annual Allowances	Average Annual Allowances
June 30, 2019	1,301	$5,319	795	$3,101	18,928	$63,862	3.6%	$3,374
June 30, 2018	1,258	5,436	885	3,354	18,422	61,644	3.5%	3,346
June 30, 2017	1,253	4,322	756	2,927	18,049	59,562	2.4%	3,300
June 30, 2016	1,363	3,927	763	2,890	17,552	58,167	1.8%	3,314
June 30, 2015	1,247	3,482	690	2,679	16,952	57,130	1.4%	3,370
June 30, 2014	1,345	3,749	647	2,604	16,395	56,327	2.1%	3,436
June 30, 2013	1,298	3,803	650	2,738	15,697	55,182	2.0%	3,515
June 30, 2012	1,133	3,192	684	2,834	15,049	54,117	0.7%	3,596
June 30, 2011	1,174	3,168	731	3,072	14,600	53,759	0.2%	3,682
June 30, 2010	1,001	4,494	642	2,666	14,157	53,663	3.5%	3,791

Schedule K – Allocation of Contributions

ALLOCATION OF 2021-2022
ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION BY SCHOOL SYSTEM

System Number	System Name	Contribution
1	Appling	$ 59,531
2	Atkinson	33,764
3	Bacon	31,987
4	Baker	9,774
5	Baldwin	109,287
6	Banks	79,078
7	Barrow	208,801
8	Bartow	266,554
9	Ben Hill	63,085
10	Berrien	52,422
11	Bibb	573,981
12	Bleckley	75,524
13	Brantley	95,960
14	Brooks	48,868
15	Bryan	164,375
16	Bulloch	260,335
17	Burke	125,281
18	Butts	81,743
19	Calhoun	17,770
20	Camden	185,700
21	Candler	35,541
22	Carroll	239,899
23	Catoosa	263,000
24	Charlton	31,987
25	Chatham	826,319
26	Chattahoochee	27,544
27	Chattooga	46,203
28	Cherokee	629,957
29	Clarke	393,612
30	Clay	8,885
31	Clayton	1,067,106
32	Clinch	23,990
33	Cobb	2,013,373
34	Coffee	119,061
35	Colquitt	197,250
36	Columbia	557,987
37	Cook	62,196
38	Coweta	541,106
39	Crawford	49,757

Schedule K – Allocation of Contributions

ALLOCATION OF 2021-2022
ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION BY SCHOOL SYSTEM

System Number	System Name	Contribution
40	Crisp	$ 95,071
41	Dade	42,649
42	Dawson	78,189
43	Decatur	139,497
44	Dekalb	1,917,413
45	Dodge	65,750
46	Dooly	43,537
47	Dougherty	359,849
48	Douglas	448,700
49	Early	47,091
50	Echols	13,328
51	Effingham	205,247
52	Elbert	65,750
53	Emanuel	98,625
54	Evans	40,872
55	Fannin	79,078
56	Fayette	337,636
57	Floyd	151,936
58	Forsyth	868,968
59	Franklin	91,517
61	Gilmer	76,412
62	Glascock	16,882
63	Glynn	314,534
64	Gordon	91,517
65	Grady	86,186
66	Greene	52,422
67	Gwinnett	3,113,353
68	Habersham	178,592
69	Hall	449,589
70	Hancock	33,764
71	Haralson	47,091
72	Harris	112,841
73	Hart	95,071
74	Heard	31,987
75	Henry	500,234
76	Houston	687,711
77	Irwin	21,324
78	Jackson	202,581

Schedule K – Allocation of Contributions

ALLOCATION OF 2021-2022
ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION BY SCHOOL SYSTEM

System Number	System Name	Contribution
79	Jasper	$ 58,642
80	Jeff Davis	63,085
81	Jefferson	69,304
82	Jenkins	30,210
83	Johnson	31,098
84	Jones	128,835
85	Lamar	47,091
86	Lanier	31,098
87	Laurens	158,156
88	Lee	151,936
89	Liberty	247,007
90	Lincoln	40,872
91	Long	82,632
92	Lowndes	245,230
93	Lumpkin	95,960
94	Macon	39,983
95	Madison	82,632
96	Marion	29,321
97	McDuffie	94,183
98	McIntosh	29,321
99	Meriwether	98,625
100	Miller	29,321
101	Mitchell	45,314
102	Monroe	137,720
103	Montgomery	20,436
104	Morgan	62,196
105	Murray	103,956
106	Muscogee	654,836
107	Newton	412,271
108	Oconee	148,382
109	Oglethorpe	63,973
110	Paulding	429,153
111	Peach	48,868
112	Pickens	85,297
113	Pierce	51,534
114	Pike	58,642
115	Polk	103,068
116	Pulaski	35,541
117	Putnam	83,520

Schedule K – Allocation of Contributions

ALLOCATION OF 2021-2022
ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION BY SCHOOL SYSTEM

System Number	System Name	Contribution
118	Quitman	$ 10,662
119	Rabun	63,085
120	Randolph	21,324
121	Richmond	650,393
122	Rockdale	334,970
123	Schley	21,324
124	Screven	53,311
125	Seminole	42,649
126	Spalding	241,676
127	Stephens	101,291
128	Stewart	12,439
129	Sumter	122,615
130	Talbot	16,882
131	Taliaferro	6,220
132	Tattnall	76,412
133	Taylor	35,541
134	Telfair	35,541
135	Terrell	40,872
136	Thomas	119,950
137	Tift	98,625
138	Toombs	54,199
139	Towns	35,541
140	Treutlen	19,547
141	Troup	404,274
142	Turner	26,655
143	Twiggs	20,436
144	Union	71,081
145	Upson	129,723
146	Walker	255,004
147	Walton	304,761
148	Ware	158,156
149	Warren	20,436
150	Washington	57,753
151	Wayne	123,504
152	Webster	2,666
153	Wheeler	31,987
154	White	72,858
155	Whitfield	175,037
156	Wilcox	27,544

ALLOCATION OF 2021-2022
ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION BY SCHOOL SYSTEM

System Number	System Name	Contribution
157	Wilkes	$ 55,088
158	Wilkinson	39,983
159	Worth	61,308
205	Bremen	14,216
206	Buford	69,304
207	Calhoun	29,321
209	Carrollton	79,078
210	Cartersville	47,980
212	Chickamauga	21,324
214	Commerce	19,547
216	Dalton	87,963
217	Decatur	95,071
219	Dublin	46,203
221	Gainesville	99,514
224	Jefferson	42,649
226	Marietta	89,740
230	Pelham	20,436
232	Rome	75,524
247	Social Circle	21,324
236	Thomasville	24,878
239	Trion	19,547
240	Valdosta	181,257
241	Vidalia	38,206
	Atlanta Metropolitan College	889
	Furlow Charter School	889
	Georgia Magnet Charter School	889
	Georgia Military College	61,308
	Kipp Metro Atlanta Collaborative Inc	31,098
	School for Arts Infused Learning	2,666
	Scintilla Charter Academy	1,777
	Southwest Georgia Stem Charter School	3,554
	The Globe Academy	889