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April 19, 2018

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, 2017".

Based on a monthly benefit accrual rate of \$15.00, which is effective July 1, 2017, the valuation indicates that employer contributions for the fiscal year ending June 30, 2020 of \$29,296,000 or \$825.03 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  
Principal and Consulting Actuary

Cathy Turcot  
Principal and Managing Director

Ben Mobley, ASA, FCA, MAAA  
Senior Actuary

Enclosure

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**EMPLOYEES'**  
**RETIREMENT SYSTEM**  
OF GEORGIA

**GEORGIA PUBLIC SCHOOL EMPLOYEES**  
**RETIREMENT SYSTEM**

**REPORT OF THE ACTUARY ON THE VALUATION**  
**PREPARED AS OF JUNE 30, 2017**





# Cavanaugh Macdonald

CONSULTING, LLC

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April 19, 2018

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, 2017. Based on a monthly benefit accrual rate of \$15.00, which is effective July 1, 2017, the valuation indicates that annual employer contributions of \$29,296,000 or \$825.03 per active member for the fiscal year ending June 30, 2020 are sufficient to support the benefits of the System.

Since the previous valuation, the monthly benefit rate has been increased from \$14.75 to \$15.00 per year of creditable service with an effective date of July 1, 2017. In addition, the results of the valuation reflect that the Board granted a 2% cost-of-living adjustment (COLA) on July 1, 2017 to certain retired members and beneficiaries rather than the 1.50% anticipated cost-of-living adjustments to retired members on July 1, 2017 and on January 1, 2018.

Since the previous valuation, the Board has amended the funding policy to change the long-term assumed rate of return assumption. 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, 2017 was greater than 7.50%, the assumed rate of return used in the current valuation was decreased from 7.50% to 7.40%.

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 2017 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.



April 19, 2018  
Board of Trustees  
Page 2

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,

A handwritten signature in blue ink that reads "Edward J. Koebel".

Edward J. Koebel, EA, FCA, MAAA  
Principal and Consulting Actuary

A handwritten signature in blue ink that reads "Cathy Turcot".

Cathy Turcot  
Principal and Managing Director

A handwritten signature in blue ink that reads "Ben Mobley".

Ben Mobley, ASA, FCA, MAAA  
Senior Actuary



## TABLE OF CONTENTS

<u>Section</u>	<u>Item</u>	<u>Page No.</u>
I	Summary of Principal Results	1
II	Membership	4
III	Assets	5
IV	Comments on Valuation	6
V	Contributions Payable by Employers	8
VI	Accounting Information	9
VII	Experience	11
<u>Schedule</u>		
A	Valuation Balance Sheet	13
B	Development of Actuarial Value of Assets	14
C	Summary of Receipts and Disbursements	15
D	Outline of Actuarial Assumptions and Methods	16
E	Actuarial Cost Method	19
F	Board Funding Policy	20
G	Amortization of UAAL	23
H	Summary of Main Plan Provisions as Interpreted for Valuation Purposes	28
I	Tables of Membership Data	30
J	CAFR Schedules	33
K	Allocation of Contributions	34





## 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, 2017	June 30, 2016
Number of active members	35,509	34,866
Retired members and beneficiaries:		
Number	18,049	17,552
Annual allowances	\$ 59,561,912*	\$ 58,167,381**
Deferred Vested Members:		
Number	4,815	4,628
Annual allowances	\$ 12,336,188	\$ 11,848,579
Assets:		
Fair Value	\$ 868,134,000	\$ 803,775,000
Actuarial Value	865,786,000	834,554,000
<b>Valuation Interest Rate</b>	7.40%	7.50%
Unfunded actuarial accrued liability	\$ 170,148,678	\$ 154,329,162
Blended Amortization period (years)	21.2	21.9
Funded Ratio based on Actuarial Value of Assets	83.6%	84.4%
<b>For Fiscal Year Ending</b>	<b>June 30, 2020</b>	<b>June 30, 2019</b>
<b>Actuarially Determined Employer Contribution (ADEC)</b>		
Per active member:		
Normal***	\$ 370.67	\$ 359.03
Unfunded Actuarial Accrued Liability	<u>454.36</u>	<u>418.01</u>
Total	\$ 825.03	\$ 777.04
Annual Amount:		
Normal***	\$ 13,162,000	\$ 12,518,000
Unfunded Actuarial Accrued Liability	<u>16,134,000</u>	<u>14,574,000</u>
Total	\$ 29,296,000	\$ 27,092,000

\*Does not reflect the COLA granted by the Board on July 1, 2017 or increases in benefit accrual rates after the valuation date.

\*\*Does not reflect the COLA granted by the Board on July 1, 2016.

\*\*\*The normal contribution includes administrative expenses.





## Section I – Summary of Principal Results

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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 2017 session of the General Assembly. Since the previous valuation, the monthly benefit rate has been increased from \$14.75 to \$15.00 per year of creditable service with an effective date of July 1, 2017.
3. The results of the valuation also reflect that the Board granted a 2% cost-of-living adjustment (COLA) on July 1, 2017 to certain retired members and beneficiaries rather than the 1.50% anticipated cost-of-living adjustments to retired members on July 1, 2017 and on January 1, 2018.
4. Schedule D of this report outlines the full set of actuarial assumptions used to prepare the current valuation. Since the previous valuation, the Board has amended the funding policy to change the long-term assumed rate of return assumption. 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, 2017 was greater than 7.50%, the assumed rate of return used in the current valuation was decreased from 7.50% to 7.40%. 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, 2017 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





## **Section I – Summary of Principal Results**

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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 35,509 active members.
2. Data was provided by the Retirement System for inactive members who are eligible for deferred vested benefits. The valuation included 4,815 deferred vested members with annual allowances totaling \$12,336,188 (not including increases in benefit accrual rates after the valuation date). In addition, there are 43,373 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, 2017, 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, 2017**

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES*
Service Retirements	15,916	\$ 52,310,466
Disability Retirements	1,075	5,003,046
Beneficiaries of Deceased Members	<u>1,058</u>	<u>2,248,400</u>
Total	18,049	\$ 59,561,912

\*Does not reflect the COLA granted by the Board on July 1, 2017 or increases in benefit accrual rates after the valuation date.





## Section III – Assets

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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, 2017, the value of assets credited to the Annuity Savings Fund amounted to \$27,993,000.
  - (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, 2017, the fair value of assets credited to the Pension Accumulation Fund amounted to \$840,141,000.
2. As of June 30, 2017, the total fair value of assets amounted to \$868,134,000 as reported by the Auditor of the System.
3. The actuarial value of assets as of June 30, 2017 was determined to be \$865,786,000 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, 2017.
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

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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, 2017.
2. The valuation balance sheet shows that the System has total prospective liabilities of \$1,098,866,224, of which \$640,196,819 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits, and \$458,669,405 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 \$865,786,000 as of June 30, 2017. The difference of \$233,080,224 between the total liabilities and the total present assets represents the present value of contributions to be made in the future. Of this amount, \$10,523,898 is the present value of future contributions expected to be made by or on behalf of members, and the balance of \$222,556,326 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 \$312.62 per active member are required to provide the currently accruing benefits of the System. An additional \$58.05 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 \$52,407,648. When this amount is subtracted from \$222,556,326, 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 \$170,148,678.





## Section IV – Comments on Valuation

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 \$454.36 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

	<b>Remaining Balance UAAL</b>	<b>Remaining Amortization Period (years)</b>	<b>Amortization Payment</b>
Transitional	\$170,947,481	21	\$16,287,231
New Incremental 6/30/2014	(20,364,636)	22	(1,902,575)
New Incremental 6/30/2015	5,618,634	23	515,598
New Incremental 6/30/2016	(4,871,867)	24	(439,795)
New Incremental 6/30/2017	<u>18,819,066</u>	25	<u>1,673,487</u>
Total UAAL	\$170,148,678		\$16,133,946
Blended Amortization Period (years)			21.2
UAAL Contribution Rate per active member			\$454.36





## 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 \$312.62 per active member, or \$11,101,000 based on 35,509 active members as of June 30, 2017.
3. An additional \$2,061,000, or \$58.05 per active member, is required to fund the administrative expenses of the System.
4. The total normal contribution including administrative expenses is, therefore, \$13,162,000, or \$370.67 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, 2017 valuation is \$16,134,000, or \$454.36 per active member.
6. The following table summarizes the employer contribution rates which were determined by the June 30, 2017 valuation and are recommended for use.

**ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC)  
FOR FISCAL YEAR ENDING JUNE 30, 2020**

CONTRIBUTION	PER ACTIVE MEMBER	ANNUAL AMOUNT
Normal	\$ 370.67	\$ 13,162,000
Unfunded Actuarial Accrued Liability	<u>454.36</u>	<u>16,134,000</u>
Total	\$ 825.03	\$ 29,296,000

7. Schedule K shows the allocation of the annual required contribution for fiscal year ending June 30, 2020 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, 2017

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	18,049
Terminated employees entitled to benefits but not yet receiving benefits	48,188
Active plan members	<u>35,509</u>
Total	101,746

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)
6/30/2012	\$ 710,915	\$ 895,324	\$ 184,409	79.4%	N/A	N/A
6/30/2013	727,268	910,256	182,988	79.9	N/A	N/A
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

\* Reflects change in assumed rate of return





## Section VI – Accounting Information

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

<u>Year Ending</u>	<u>Actuarially Determined Employer Contribution (ADEC)</u>	<u>Percentage Contributed</u>
6/30/2012	\$ 15,884	100%
6/30/2013	24,829	100
6/30/2014	27,160	100
6/30/2015	28,461	100
6/30/2016	28,580	100
6/30/2017	26,277	100

4. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2017. Additional information as of the latest actuarial valuation follows.

Valuation date	6/30/2017
Actuarial cost method	Entry age
Amortization method	Level dollar, closed
Remaining amortization period	21.2 years
Asset valuation method	5-year smoothed fair
Actuarial assumptions:	
Investment rate of return*	7.40%
Projected salary increases	N/A
Cost-of-living adjustments	1.50% semi-annually

\*Includes inflation at 2.75%





## Section VII – Experience

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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 \$15,819,516 in the unfunded actuarial accrued liability (UAAL) from \$154,329,162 to \$170,148,678 during the fiscal year ending June 30, 2017.
3. The most significant items contributing to the \$15,819.5 thousand increase in the UAAL was the \$15,892.7 thousand loss due to the change in the benefit rate from \$14.75 to \$15.00 per year of service and the \$10,547.5 thousand loss due to the decrease in the assumed rate of return from 7.50% to 7.40%. These losses were offset by the \$6,786.4 thousand gain because the Board did not grant the full anticipated COLAs to retired members on July 1, 2017 and January 1, 2018. In addition, the accrued liability contribution was greater than the interest on the prior year UAAL by \$3,704.2 thousand. There were also small gains for valuation asset growth greater than expected and for pensioner mortality, turnover and retirement; these gains were offset by losses from new entrants joining the System.







## Section VII – Experience

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

ITEM	AMOUNT OF INCREASE/ (DECREASE)
Interest (7.50%) added to previous UAAL	\$ 11,574.7
Accrued liability contribution	(15,278.9)
Experience:	
Valuation asset growth	(3,247.0)
Pensioners' mortality	(308.6)
Turnover and retirements	(879.7)
New entrants	4,334.7
Assumption and method changes	10,547.5
Increase in benefit accrual rate	15,892.7
7/1/2017, 1/1/2018 COLAs	(6,786.4)
Miscellaneous	<u>(29.5)</u>
Total	\$ 15,819.5





## 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, 2017**

<b>ACTUARIAL LIABILITIES</b>		
(1)	Present value of prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits	
-	Service and disability benefits	\$ 527,338,055
-	Death and survivor benefits	22,579,771
-	Deferred vested benefits	<u>90,278,993</u>
	Total	\$ 640,196,819
(2)	Present value of prospective benefits payable on account of present active members	<u>458,669,405</u>
(3)	TOTAL ACTUARIAL LIABILITIES	<u>\$1,098,866,224</u>
<b>PRESENT AND PROSPECTIVE ASSETS</b>		
(4)	Actuarial value of assets	\$ 865,786,000
(5)	Present value of total future contributions = (3)-(4)	\$ 233,080,224
(6)	Present value of future member contributions	10,523,898
(7)	Present value of future employer contributions = (5)-(6)	\$ 222,556,326
(8)	Prospective normal contributions	52,407,648
(9)	Prospective unfunded actuarial accrued liability contributions = (7)-(8)	<u>170,148,678</u>
(10)	TOTAL PRESENT AND PROSPECTIVE ASSETS	<u>\$1,098,866,224</u>





## Schedule B – Development of Actuarial Value of Assets

### DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

(1)	Actuarial Value Beginning of Year	\$ 834,554,000
(2)	Fair Value End of Year	\$ 868,134,000
(3)	Fair Value Beginning of Year	\$ 803,775,000
(4)	Cash Flow	
	(a) Contributions	\$ 28,361,000
	(b) Benefit Payments	(60,409,000)
	(c) Administrative Expenses	(1,308,000)
	(d) Investment Expenses	<u>(371,000)</u>
	(e) Net: (4)(a) + (4)(b) + 4(c) + 4(d)	\$ (33,727,000)
(5)	Investment Income	
	(a) Fair Total: (2) – (3) – (4)(e)	\$ 98,086,000
	(b) Assumed Rate of Return for Current Year	7.50%
	(c) Amount for Immediate Recognition: [(3) x (5)(b)] + [(4)(a) + 4(b) + 4(c)] x (5)(b) x 0.5 - 4(d)	\$ 59,403,000
	(d) Amount for Phased-In Recognition: (5)(a) - (5)(c)	38,683,000
(6)	Phased-In Recognition of Investment Income	
	(a) Current Year: (5)(d) / 5	\$ 7,737,000
	(b) First Prior Year	(10,167,000)
	(c) Second Prior Year	(6,085,000)
	(d) Third Prior Year	14,071,000
	(e) Fourth Prior Year	<u>0</u>
	(f) Total Recognized Investment Gain	\$ 5,556,000
(7)	Actuarial Value End of Year: (1) + (4)(e) + (5)(c) + (6)(f)	\$ 865,786,000
(8)	Difference Between Fair & Actuarial Values: (2) – (7)	\$ 2,348,000
(9)	Rate of Return on Actuarial Value	7.90%





## Schedule C – Summary of Receipts and Disbursements

### SUMMARY OF RECEIPTS AND DISBURSEMENTS (Fair Value)

<u>Receipts for the Year</u>	YEAR ENDING	
	<u>June 30, 2017</u> (\$1,000's)	<u>June 30, 2016</u> (\$1,000's)
Contributions:		
Members	\$ 2,084	\$ 1,925
Employer	<u>26,277</u>	<u>28,580</u>
Subtotal	\$ 28,361	\$ 30,505
Investment Earnings (Net of Investment Expenses)	<u>97,715</u>	<u>9,809</u>
TOTAL	\$ 126,076	\$ 40,314
<u>Disbursements for the Year</u>		
Benefit Payments	\$ 59,378	\$ 57,903
Refunds to Members	1,031	465
Administrative Expenses	<u>1,308</u>	<u>1,321</u>
TOTAL	\$ 61,717	\$ 59,689
<u>Excess of Receipts over Disbursements</u>	\$ 64,359	\$ (19,375)
<u>Reconciliation of Asset Balances</u>		
Asset Balance as of the Beginning of Year	\$ 803,775	\$ 823,150
Excess of Receipts over Disbursements	<u>64,359</u>	<u>(19,375)</u>
Asset Balance as of the End of Year	<u>\$ 868,134</u>	<u>\$ 803,775</u>
Rate of Return	12.41%	1.21%





## 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:** 7.40% per annum, compounded annually, net of investment expenses, composed of a 2.75% inflation assumption and a 4.65% 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:

Age	Annual Rates of Withdrawal		
	Years of Service		
	0-4	5-9	10 & Over
<b>Males</b>			
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	
<b>Females</b>			
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		Disability
	Death		
	Males	Females	
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

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1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 7.40%), of each member's expected benefits at retirement or death is determined, based on age, service and sex. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his terminating with a service, disability or survivor's benefit. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members, beneficiaries and members entitled to deferred vested benefits to obtain the present value of all expected benefits payable from the System on account of the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the System are determined following a level funding approach, and consist of a normal contribution and an unfunded actuarial accrued liability contribution.
3. The normal contribution is determined using the entry age actuarial cost method. Under this method, a calculation is made to determine the level amount which, if applied for the average member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.
4. The unfunded actuarial accrued liability contributions are determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets, from the present value of expected benefits to be paid from the System.







## Schedule F – Board Funding Policy

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### Funding Policy of the 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

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- **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

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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

<u>Valuation Date</u>	<u>Amortization Period</u>	<u>Balance of Transitional UAAL</u>	<u>Annual Amortization Payment</u>
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
<b>6/30/2017</b>	<b>21</b>	<b>170,947,481</b>	<b>16,287,231</b>
6/30/2018	20	167,310,363	16,287,231
6/30/2019	19	163,404,099	16,287,231
6/30/2020	18	159,208,771	16,287,231
6/30/2021	17	154,702,989	16,287,231
6/30/2022	16	149,863,778	16,287,231
6/30/2023	15	144,666,467	16,287,231
6/30/2024	14	139,084,554	16,287,231
6/30/2025	13	133,089,580	16,287,231
6/30/2026	12	126,650,977	16,287,231
6/30/2027	11	119,735,918	16,287,231
6/30/2028	10	112,309,145	16,287,231
6/30/2029	9	104,332,791	16,287,231
6/30/2030	8	95,766,186	16,287,231
6/30/2031	7	86,565,652	16,287,231
6/30/2032	6	76,684,279	16,287,231
6/30/2033	5	66,071,685	16,287,231
6/30/2034	4	54,673,758	16,287,231
6/30/2035	3	42,432,385	16,287,231
6/30/2036	2	29,285,150	16,287,231
6/30/2037	1	15,165,020	16,287,231
6/30/2038	0	0	0





## Schedule G – Amortization of UAAL

### AMORTIZATION OF 2014 INCREMENTAL UAAL

<u>Valuation Date</u>	<u>Amortization Period</u>	<u>Balance of New Incremental UAAL 6/30/2014</u>	<u>Annual Amortization Payment</u>
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)
<b>6/30/2017</b>	<b>22</b>	<b>(20,364,636)</b>	<b>(1,902,575)</b>
6/30/2018	21	(19,969,044)	(1,902,575)
6/30/2019	20	(19,544,178)	(1,902,575)
6/30/2020	19	(19,087,872)	(1,902,575)
6/30/2021	18	(18,597,799)	(1,902,575)
6/30/2022	17	(18,071,461)	(1,902,575)
6/30/2023	16	(17,506,174)	(1,902,575)
6/30/2024	15	(16,899,056)	(1,902,575)
6/30/2025	14	(16,247,011)	(1,902,575)
6/30/2026	13	(15,546,714)	(1,902,575)
6/30/2027	12	(14,794,596)	(1,902,575)
6/30/2028	11	(13,986,821)	(1,902,575)
6/30/2029	10	(13,119,271)	(1,902,575)
6/30/2030	9	(12,187,521)	(1,902,575)
6/30/2031	8	(11,186,823)	(1,902,575)
6/30/2032	7	(10,112,072)	(1,902,575)
6/30/2033	6	(8,957,791)	(1,902,575)
6/30/2034	5	(7,718,092)	(1,902,575)
6/30/2035	4	(6,386,656)	(1,902,575)
6/30/2036	3	(4,956,693)	(1,902,575)
6/30/2037	2	(3,420,913)	(1,902,575)
6/30/2038	1	(1,771,485)	(1,902,575)
6/30/2039	0	0	0





## Schedule G – Amortization of UAAL

### AMORTIZATION OF 2015 INCREMENTAL UAAL

<u>Valuation Date</u>	<u>Amortization Period</u>	<u>Balance of New Incremental UAAL 6/30/2015</u>	<u>Annual Amortization Payment</u>
6/30/2015	25	\$5,795,541	\$519,922
6/30/2016	24	5,710,285	519,922
<b>6/30/2017</b>	<b>23</b>	<b>5,618,634</b>	<b>515,598</b>
6/30/2018	22	5,518,815	515,598
6/30/2019	21	5,411,610	515,598
6/30/2020	20	5,296,471	515,598
6/30/2021	19	5,172,812	515,598
6/30/2022	18	5,040,003	515,598
6/30/2023	17	4,897,365	515,598
6/30/2024	16	4,744,172	515,598
6/30/2025	15	4,579,643	515,598
6/30/2026	14	4,402,939	515,598
6/30/2027	13	4,213,159	515,598
6/30/2028	12	4,009,335	515,598
6/30/2029	11	3,790,428	515,598
6/30/2030	10	3,555,322	515,598
6/30/2031	9	3,302,818	515,598
6/30/2032	8	3,031,628	515,598
6/30/2033	7	2,740,371	515,598
6/30/2034	6	2,427,561	515,598
6/30/2035	5	2,091,603	515,598
6/30/2036	4	1,730,783	515,598
6/30/2037	3	1,343,264	515,598
6/30/2038	2	927,067	515,598
6/30/2039	1	480,072	515,598
6/30/2040	0	0	0





## Schedule G – Amortization of UAAL

### AMORTIZATION OF 2016 INCREMENTAL UAAL

<u>Valuation Date</u>	<u>Amortization Period</u>	<u>Balance of New Incremental UAAL 6/30/2016</u>	<u>Annual Amortization Payment</u>
6/30/2016	25	(\$4,944,605)	(\$443,584)
<b>6/30/2017</b>	<b>24</b>	<b>(4,871,867)</b>	<b>(439,795)</b>
6/30/2018	23	(4,792,589)	(439,795)
6/30/2019	22	(4,707,446)	(439,795)
6/30/2020	21	(4,616,002)	(439,795)
6/30/2021	20	(4,517,790)	(439,795)
6/30/2022	19	(4,412,312)	(439,795)
6/30/2023	18	(4,299,028)	(439,795)
6/30/2024	17	(4,177,360)	(439,795)
6/30/2025	16	(4,046,690)	(439,795)
6/30/2026	15	(3,906,350)	(439,795)
6/30/2027	14	(3,755,624)	(439,795)
6/30/2028	13	(3,593,745)	(439,795)
6/30/2029	12	(3,419,887)	(439,795)
6/30/2030	11	(3,233,164)	(439,795)
6/30/2031	10	(3,032,623)	(439,795)
6/30/2032	9	(2,817,241)	(439,795)
6/30/2033	8	(2,585,922)	(439,795)
6/30/2034	7	(2,337,485)	(439,795)
6/30/2035	6	(2,070,664)	(439,795)
6/30/2036	5	(1,784,098)	(439,795)
6/30/2037	4	(1,476,326)	(439,795)
6/30/2038	3	(1,145,779)	(439,795)
6/30/2039	2	(790,771)	(439,795)
6/30/2040	1	(409,493)	(439,795)
6/30/2041	0	0	0





## Schedule G – Amortization of UAAL

### AMORTIZATION OF 2017 INCREMENTAL UAAL

<u>Valuation Date</u>	<u>Amortization Period</u>	<u>Balance of New Incremental UAAL 6/30/2017</u>	<u>Annual Amortization Payment</u>
<b>6/30/2017</b>	<b>25</b>	<b>\$18,819,066</b>	<b>\$1,673,487</b>
6/30/2018	24	18,538,189	1,673,487
6/30/2019	23	18,236,528	1,673,487
6/30/2020	22	17,912,544	1,673,487
6/30/2021	21	17,564,585	1,673,487
6/30/2022	20	17,190,877	1,673,487
6/30/2023	19	16,789,514	1,673,487
6/30/2024	18	16,358,451	1,673,487
6/30/2025	17	15,895,489	1,673,487
6/30/2026	16	15,398,267	1,673,487
6/30/2027	15	14,864,252	1,673,487
6/30/2028	14	14,290,719	1,673,487
6/30/2029	13	13,674,745	1,673,487
6/30/2030	12	13,013,189	1,673,487
6/30/2031	11	12,302,677	1,673,487
6/30/2032	10	11,539,588	1,673,487
6/30/2033	9	10,720,030	1,673,487
6/30/2034	8	9,839,825	1,673,487
6/30/2035	7	8,894,485	1,673,487
6/30/2036	6	7,879,189	1,673,487
6/30/2037	5	6,788,762	1,673,487
6/30/2038	4	5,617,643	1,673,487
6/30/2039	3	4,359,861	1,673,487
6/30/2040	2	3,009,003	1,673,487
6/30/2041	1	1,558,182	1,673,487
6/30/2042	0	0	0







## Schedule H – Summary of Main System Provisions

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### 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 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

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### 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.





## Schedule I – Tables of Membership Data

### NUMBER OF ACTIVE MEMBERS BY AGE AND SERVICE AS OF JUNE 30, 2017

Attained Age	Years of Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	
Under 25	136	324	3	0	0	0	0	0	0	463
25 to 29	231	773	124	3	0	0	0	0	0	1,131
30 to 34	297	1,030	251	87	3	0	0	0	0	1,668
35 to 39	311	1,275	459	215	65	3	0	0	0	2,328
40 to 44	309	1,368	709	503	189	48	1	0	0	3,127
45 to 49	309	1,678	975	829	490	142	53	1	0	4,477
50 to 54	336	1,649	1,184	1,168	832	387	175	63	13	5,807
55 to 59	273	1,741	1,303	1,247	919	562	307	124	63	6,539
60 to 64	193	1,265	1,152	983	560	445	314	176	134	5,222
65 to 69	95	707	751	532	297	159	132	87	71	2,831
70 & Up	37	380	471	514	219	110	65	45	75	1,916
Total	2,527	12,190	7,382	6,081	3,574	1,856	1,047	496	356	35,509

Average Age: 52.6  
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	1,178	2,839,190	2,410
65 – 69	3,216	9,211,293	2,864
70 – 74	3,888	11,752,367	3,023
75 – 79	3,261	10,852,191	3,328
80 – 84	2,379	8,837,659	3,715
85 – 89	1,304	5,533,840	4,244
90 – 94	528	2,474,544	4,687
95 & Over	162	809,382	4,996
Total	15,916	\$ 52,310,466	\$ 3,287

### NUMBER OF BENEFICIARIES AND THEIR BENEFITS BY AGE

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	148	\$ 189,924	\$ 1,283
50 – 54	91	144,100	1,584
55 – 59	82	133,934	1,633
60 – 64	114	248,125	2,177
65 – 69	117	214,931	1,837
70 – 74	135	295,528	2,189
75 – 79	140	349,362	2,495
80 – 84	109	295,735	2,713
85 – 89	74	229,838	3,106
90 – 94	30	95,325	3,178
95 & Over	18	51,598	2,867
Total	1,058	\$ 2,248,400	\$ 2,125





## 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	8	\$ 30,638	\$ 3,830
50 – 54	34	116,000	3,412
55 – 59	140	537,428	3,839
60 – 64	201	812,405	4,042
65 – 69	217	953,261	4,393
70 – 74	193	970,601	5,029
75 – 79	164	906,040	5,525
80 – 84	85	471,268	5,544
85 – 89	25	152,207	6,088
90 – 94	5	35,914	7,183
95 & Over	3	17,284	5,761
Total	1,075	\$ 5,003,046	\$ 4,654

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

Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 35	15	\$ 29,419	\$ 1,961
35 – 39	75	158,686	2,116
40 – 44	199	440,828	2,215
45 – 64	525	1,239,194	2,360
50 – 54	1,122	2,852,787	2,543
55 – 59	1,446	3,797,972	2,627
60 – 64	997	2,661,835	2,670
65 – 69	316	851,978	2,696
70 – 74	75	187,274	2,497
75 & Over	45	116,215	2,583
Total	4,815	\$ 12,336,188	\$ 2,562





## Schedule J – CAFR Schedules

### CAFR SCHEDULES

#### GA PSERS: Solvency Test

Actuarial Valuation as of 6/30	Actuarial Accrued Liability for:			Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
	Active Member Contributions	Retirants & Beneficiaries	Active Members (Employer Funded Portion)		(1)	(2)	(3)
	(1)	(2)	(3)				
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%
2009	15,862	506,659	300,711	769,618	100%	100.0%	82.2%
2008	15,285	469,601	286,064	791,855	100%	100.0%	100.0%

*All dollar amounts are in thousands.*

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

Year Ended	Added to Rolls		Removed from Rolls		Roll End of Year		% Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)		
June 30, 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
June 30, 2009	886	5,290	575	2,260	13,798	51,835	6.2%	3,757
June 30, 2008	899	4,514	605	2,371	13,487	48,805	4.6%	3,619





## Schedule K – Allocation of Annual Required Contribution

### ALLOCATION OF 2019-2020 ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM

System Number	System Name	Contribution
1	Appling	\$ 56,102
2	Atkinson	29,701
3	Bacon	30,526
4	Baker	12,375
5	Baldwin	93,228
6	Banks	76,728
7	Barrow	192,232
8	Bartow	234,309
9	Ben Hill	55,277
10	Berrien	53,627
11	Bibb	527,194
12	Bleckley	61,877
13	Brantley	87,453
14	Brooks	54,452
15	Bryan	151,806
16	Bulloch	253,284
17	Burke	120,454
18	Butts	79,203
19	Calhoun	19,801
20	Camden	174,906
21	Candler	41,252
22	Carroll	216,983
23	Catoosa	239,259
24	Charlton	33,001
25	Chatham	790,379
26	Chattahoochee	25,576
27	Chattooga	43,727
28	Cherokee	575,871
29	Clarke	376,214
30	Clay	9,900
31	Clayton	1,086,565
32	Clinch	22,276
33	Cobb	1,878,594
34	Coffee	113,854
35	Colquitt	196,357
36	Columbia	513,994
37	Cook	67,652
38	Coweta	517,294
39	Crawford	48,677





## Schedule K – Allocation of Annual Required Contribution

### ALLOCATION OF 2019-2020 ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM

System Number	System Name	Contribution
40	Crisp	\$ 108,904
41	Dade	39,601
42	Dawson	71,778
43	Decatur	138,605
44	Dekalb	1,812,592
45	Dodge	66,827
46	Dooly	49,502
47	Dougherty	340,738
48	Douglas	381,989
49	Early	43,727
50	Echols	11,550
51	Effingham	208,733
52	Elbert	60,227
53	Emanuel	94,053
54	Evans	38,776
55	Fannin	75,078
56	Fayette	336,612
57	Floyd	144,380
58	Forsyth	736,752
59	Franklin	75,903
61	Gilmer	74,253
62	Glascok	15,676
63	Glynn	300,311
64	Gordon	85,803
65	Grady	87,453
66	Greene	52,802
67	Gwinnett	2,868,630
68	Habersham	169,131
69	Hall	454,592
70	Hancock	40,426
71	Haralson	47,027
72	Harris	114,679
73	Hart	85,803
74	Heard	30,526
75	Henry	481,818
76	Houston	650,124
77	Irwin	23,101
78	Jackson	164,181







## Schedule K – Allocation of Annual Required Contribution

### ALLOCATION OF 2019-2020 ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM

System Number	System Name	Contribution
79	Jasper	\$ 61,877
80	Jeff Davis	55,277
81	Jefferson	70,128
82	Jenkins	28,876
83	Johnson	27,226
84	Jones	121,279
85	Lamar	52,802
86	Lanier	29,701
87	Laurens	147,680
88	Lee	145,205
89	Liberty	231,008
90	Lincoln	38,776
91	Long	74,253
92	Lowndes	233,484
93	Lumpkin	92,403
94	Macon	42,902
95	Madison	75,078
96	Marion	28,876
97	McDuffie	94,053
98	McIntosh	41,252
99	Meriwether	91,578
100	Miller	27,226
101	Mitchell	45,377
102	Monroe	132,830
103	Montgomery	18,976
104	Morgan	58,577
105	Murray	101,479
106	Muscogee	611,347
107	Newton	413,340
108	Oconee	133,655
109	Oglethorpe	55,277
110	Paulding	400,965
111	Peach	44,552
112	Pickens	75,903
113	Pierce	58,577
114	Pike	61,877
115	Polk	111,379
116	Pulaski	30,526
117	Putnam	80,028





## Schedule K – Allocation of Annual Required Contribution

### ALLOCATION OF 2019-2020 ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM

System Number	System Name	Contribution
118	Quitman	\$ 9,900
119	Rabun	63,527
120	Randolph	27,226
121	Richmond	720,251
122	Rockdale	308,561
123	Schley	15,676
124	Screven	52,802
125	Seminole	34,651
126	Spalding	254,109
127	Stephens	94,878
128	Stewart	16,501
129	Sumter	116,329
130	Talbot	15,676
131	Taliaferro	8,250
132	Tattnall	68,478
133	Taylor	33,001
134	Telfair	36,301
135	Terrell	37,126
136	Thomas	114,679
137	Tift	95,704
138	Toombs	52,802
139	Towns	32,176
140	Treutlen	14,851
141	Troup	341,563
142	Turner	27,226
143	Twiggs	20,626
144	Union	62,702
145	Upson	122,930
146	Walker	238,434
147	Walton	277,210
148	Ware	141,905
149	Warren	16,501
150	Washington	54,452
151	Wayne	127,880
152	Webster	3,300
153	Wheeler	23,101
154	White	67,652
155	Whitfield	186,457
156	Wilcox	27,226





## Schedule K – Allocation of Annual Required Contribution

### ALLOCATION OF 2019-2020 ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM

System Number	System Name	Contribution
157	Wilkes	\$ 50,327
158	Wilkinson	37,951
159	Worth	65,177
205	Bremen	14,851
206	Buford	60,227
207	Calhoun	32,176
209	Carrollton	69,303
210	Cartersville	44,552
212	Chickamauga	19,801
214	Commerce	18,976
216	Dalton	99,004
217	Decatur	80,853
219	Dublin	42,902
221	Gainesville	101,479
224	Jefferson	37,126
226	Marietta	100,654
230	Pelham	22,276
232	Rome	70,128
247	Social Circle	21,451
236	Thomasville	22,276
239	Trion	18,976
240	Valdosta	181,507
241	Vidalia	33,001
	Atlanta Metropolitan College	825
	Furlow Charter School	1,650
	Georgia Magnet Charter School	3,300
	Georgia Military College	61,052
	Kipp Metro Atlanta Collaborative Inc	29,701
	Savannah Classical Acad Charter School	1,650

