

The experience and dedication you deserve

April 20, 2017

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, 2016".

Based on a monthly benefit accrual rate of \$14.75, the valuation indicates that employer contributions for the fiscal year ending June 30, 2019 of \$27,092,000 or \$777.04 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 A. Macdonald, ASA, FCA, MAAA

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President

Cathy Turcot

Principal and Managing Director

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

Edward J. Worbel

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Enclosure



The experience and dedication you deserve



GEORGIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM

REPORT OF THE ACTUARY ON THE VALUATION PREPARED AS OF JUNE 30, 2016





The experience and dedication you deserve

April 20, 2017

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, 2016. Based on a monthly benefit accrual rate of \$14.75, the valuation indicates that annual employer contributions of \$27,092,000 or \$777.04 per active member for the fiscal year ending June 30, 2019 are sufficient to support the benefits of the System.

The results of the valuation reflect that the Board granted a 2% cost-of-living adjustment (COLA) on July 1, 2016 to certain retired members and beneficiaries rather than the 1.50% anticipated cost-of-living adjustments to retired members on July 1, 2016 and on January 1, 2017.

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 2016 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.

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.



April 20, 2017 Board of Trustees Page 2

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 A. Macdonald, ASA, FCA, MAAA

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President

Cathy Turcot

Principal and Managing Director

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

Edward J. World

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GEORGIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM **REPORT OF THE ACTUARY** ON THE VALUATION PREPARED AS OF JUNE 30, 2016

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, 2016 | June 30, 2015 |
|--|-------------------------------|-------------------------------|
| Number of active members | 34,866 | 35,477 |
| Retired members and beneficiaries: Number Annual allowances* | 17,552 \$ 58,167,381 | 16,952 \$ 57,129,963 |
| Deferred Vested Members: Number Annual allowances | 4,628 \$ 11,848,579 | 4,336 \$ 11,225,998 |
| Assets: Market Value Actuarial Value | \$ 803,775,000 834,554,000 | \$ 823,150,000 805,277,000 |
| Unfunded actuarial accrued liability | \$ 154,329,162 | \$ 162,131,708 |
| Blended Amortization period (years) | 21.9 | 22.9 |
| Funded Ratio based on Actuarial Value of Assets | 84.4% | 83.2% |
| For Fiscal Year Ending | June 30, 2019 | June 30, 2018 |
| Actuarially Determined Employer Contribution (ADEC) | | |
| Per active member: Normal** Unfunded Actuarial Accrued Liability | \$ 359.03 418.01 | \$ 357.61 <u>423.31</u> |
| Total | \$ 777.04 | \$ 780.92 |
| Annual Amount: Normal** Unfunded Actuarial Accrued Liability | \$ 12,518,000 14,574,000 | \$ 12,687,000 15,018,000 |
| Total | \$ 27,092,000 | \$ 27,705,000 |

^{*}Does not reflect the COLA granted by the Board on July 1, 2016. **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 2016 session of the General Assembly. There have been no changes since the previous valuation.
- 3. The results of the valuation reflect that the Board granted a 2% cost-of-living adjustment (COLA) on July 1, 2016 to certain retired members and beneficiaries rather than the 1.50% anticipated cost-of-living adjustments to retired members on July 1, 2016 and on January 1, 2017.
- 4. Schedule D of this report outlines the full set of actuarial assumptions used to prepare the current valuation. There have been no changes since the previous valuation. 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, 2016 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 market 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

- 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 34,866 active members.
- Data was provided by the Retirement System for inactive members who are eligible for deferred vested benefits. The valuation included 4,628 deferred vested members with annual allowances totaling \$11,848,579. In addition, there are 46,042 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, 2016, 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, 2016

| GROUP | NUMBER | ANNUAL RETIREMENT ALLOWANCES* | | |
|--|----------------------|-------------------------------------|--|--|
| Service Retirements Disability Retirements | 15,448 1,114 | \$ 50,905,020 5,157,537 | | |
| Beneficiaries of Deceased Members Total | <u>990</u> 17,552 | <u>2,104,824</u> \$ 58,167,381 | | |

^{*}Does not reflect the COLA granted by the Board on July 1, 2016.



SECTION III - ASSETS

 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, 2016, the value of assets credited to the Annuity Savings Fund amounted to \$27,491,000.

(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, 2016, the market value of assets credited to the Pension Accumulation Fund amounted to \$776,284,000.

- 3. As of June 30, 2016, the total market value of assets amounted to \$803,775,000 as reported by the Auditor of the System.
- 4. The actuarial value of assets as of June 30, 2016 was determined to be \$834,554,000 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, 2016.
- 5. 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 market 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, 2016.
- 2. The valuation balance sheet shows that the System has total prospective liabilities of \$1,047,836,959, of which \$609,807,062 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits, and \$438,029,897 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 \$834,554,000 as of June 30, 2016. The difference of \$213,282,959 between the total liabilities and the total present assets represents the present value of contributions to be made in the future. Of this amount, \$9,660,636 is the present value of future contributions expected to be made by or on behalf of members, and the balance of \$203,622,323 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 \$299.91 per active member are required to provide the currently accruing benefits of the System. An additional \$59.12 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 \$49,293,161. When this amount is subtracted from \$203,622,323, 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 \$154,329,162.



- 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 \$418.01 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 <u>UAAL</u> | Remaining Amortization Period (years) | Amortization <u>Payment</u> |
|--------------------------------------|-------------------------------------|---|--------------------------------|
| Transitional | \$174,291,591 | 22 | \$16,415,980 |
| New Incremental 6/30/2014 | (20,728,109) | 23 | (1,918,081) |
| New Incremental 6/30/2015 | 5,710,285 | 24 | 519,922 |
| New Incremental 6/30/2016 | <u>(4,944,605)</u> | 25 | (443,584) |
| Total UAAL | \$154,329,162 | | \$14,574,237 |
| Blended Amortization Period (years) | | | 21.9 |
| UAAL Contribution Rate per active me | mber | | \$418.01 |



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 \$299.91 per active member, or \$10,457,000 based on 34,866 active members as of June 30, 2016.
- 3. An additional \$2,061,000, or \$59.12 per active member, is required to fund the administrative expenses of the System.
- 4. The total normal contribution including administrative expenses is, therefore, \$12,518,000, or \$359.03 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, 2016 valuation is \$14,574,000, or \$418.01 per active member.
- 6. The following table summarizes the employer contribution rates which were determined by the June 30, 2016 valuation and are recommended for use.

ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC) FOR FISCAL YEAR ENDING JUNE 30, 2019

| CONTRIBUTION | PER ACTIVE MEMBER | ANNUAL AMOUNT | | |
|---|---|---|--|--|
| Normal Unfunded Actuarial Accrued Liability Total | \$ 359.03 <u>418.01</u> \$ 777.04 | \$ 12,518,000 <u>14,574,000</u> \$ 27,092,000 | | |

7. Schedule K shows the allocation of the annual required contribution for fiscal year ending June 30, 2019 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, 2016

| GROUP | NUMBER |
|--|---------------|
| Retirees and beneficiaries currently receiving benefits | 17,552 |
| Terminated employees entitled to benefits but not yet receiving benefits | 50,670 |
| Active plan members | <u>34,866</u> |
| Total | 103,088 |

2. The schedule of funding progress is shown below.

SCHEDULE OF FUNDING PROGRESS

(Dollar amounts in thousands)

| Actuarial Valuation <u>Date</u> | 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) |
|---------------------------------------|--|---|------------------------------------|------------------------------|---------------------------|---|
| 6/30/2011 | \$ 719,601 | \$ 885,927 | \$ 166,326 | 81.2% | N/A | N/A |
| 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 |



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

| Year | Actuarially Determined | Percentage |
|--|--|----------------------------------|
| <u>Ending</u> | Employer Contribution (ADEC) | Contributed |
| 6/30/2011 6/30/2012 6/30/2013 6/30/2014 6/30/2015 6/30/2016 | \$ 7,509 15,884 24,829 27,160 28,461 28,580 | 100% 100 100 100 100 |

4. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2016. Additional information as of the latest actuarial valuation follows.

| Valuation date | 6/30/2016 | |
|-------------------------------|------------------------|--|
| Actuarial cost method | Entry age | |
| Amortization method | Level dollar, closed | |
| Remaining amortization period | 21.9 years | |
| Asset valuation method | 5-year smoothed market | |
| Actuarial assumptions: | | |
| Investment rate of return* | 7.50% | |
| Projected salary increases | N/A | |
| Cost-of-living adjustments | 1.50% semi-annually | |

^{*}Includes inflation at 2.75%



SECTION VII – EXPERIENCE

- 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 a decrease of \$7,802,546 in the unfunded actuarial accrued liability (UAAL) from \$162,131,708 to \$154,329,162 during the fiscal year ending June 30, 2016.
- 3. The most significant item contributing to the \$7,802.5 thousand decrease in the UAAL was the \$5,492.0 thousand gain because the Board did not grant the full anticipated COLAs to retired members on July 1, 2016 and January 1, 2017. In addition, the accrued liability contribution was greater than the interest on the prior year UAAL by \$5,234.8 thousand. There were also small gains for pensioner mortality and turnover and retirement. These gains were offset somewhat by valuation asset growth less than expected and losses from new entrants joining the System.

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 Accrued liability contribution | \$ 12,159.9 (17,394.7) |
| Experience: Valuation asset growth Pensioners' mortality Turnover and retirements New entrants Assumption and method changes Amendments 7/1/2016, 1/1/2017 COLAs Miscellaneous | 841.0 (643.8) (228.2) 2,798.1 0.0 0.0 (5,492.0) <u>157.2</u> |
| Total | \$ (7,802.5) |



SCHEDULE A

VALUATION BALANCE SHEET SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF THE GEORGIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM AS OF JUNE 30, 2016

| | 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 - Death and survivor benefits - Deferred vested benefits Total | \$ | 505,812,579 20,672,098 83,322,385 | \$ 609,807,062 |
| (2) | Present value of prospective benefits payable on account of present active members | | | 438,029,897 |
| (3) | TOTAL ACTUARIAL LIABILITIES | | | <u>\$1,047,836,959</u> |
| | PRESENT AND PROSPECTIVE A | SSI | <u>ETS</u> | |
| (4) | Actuarial value of assets | | | \$ 834,554,000 |
| (5) | Present value of total future contributions = (3)-(4) | \$ | 213,282,959 | |
| (6) | Present value of future member contributions | | | 9,660,636 |
| (7) | Present value of future employer contributions = (5)-(6) | \$ | 203,622,323 | |
| (8) | Prospective normal contributions | | | 49,293,161 |
| (9) | Prospective unfunded actuarial accrued liability contributions = (7)-(8) | | | <u> 154,329,162</u> |
| (10) | TOTAL PRESENT AND PROSPECTIVE ASSETS | | | <u>\$1,047,836,959</u> |



SCHEDULE B

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

| (1) | Actua | rial Value Beginning of Year | \$ | 805,277,000 |
|-----|---|--|----|--------------|
| (2) | Market Value End of Year | | | 803,775,000 |
| (3) | Marke | et Value Beginning of Year | \$ | 823,150,000 |
| (4) | Cash | Flow | | |
| | (a) | Contributions | \$ | 30,505,000 |
| | (b) | Benefit Payments | | (58,368,000) |
| | (c) | Administrative Expenses | | (1,321,000) |
| | (d) | Investment Expenses | | (356,000) |
| | (e) | Net: (4)(a) + (4)(b) + 4(c) + 4(d) | \$ | (29,540,000) |
| (5) | Inves | tment Income | | |
| | (a) | Market Total: (2) – (3) – (4)(e) | \$ | 10,165,000 |
| | (b) | Assumed Rate | | 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) | \$ | 60,998,000 |
| | (d) | Amount for Phased-In Recognition: (5)(a) - (5)(c) | | (50,833,000) |
| (6) | Phase | ed-In Recognition of Investment Income | | |
| | (a) | Current Year: (5)(d) / 5 | \$ | (10,167,000) |
| | (b) | First Prior Year | | (6,085,000) |
| | (c) | Second Prior Year | | 14,071,000 |
| | (d) | Third Prior Year | | 0 |
| | (e) | Fourth Prior Year | | 0 |
| | (f) | Total Recognized Investment Gain | \$ | (2,181,000) |
| (7) | Actuarial Value End of Year: $(1) + (4)(e) + (5)(c) + (6)(f)$ | | \$ | 834,554,000 |
| (8) | Difference Between Market & Actuarial Values: (2) – (7) | | | (30,779,000) |
| (9) | Rate | of Return on Actuarial Value | | 7.39% |



SCHEDULE C

SUMMARY OF RECEIPTS AND DISBURSEMENTS (Market Value)

| | | YEAR E | NDING | i |
|--|-----------|-----------------|-----------|-----------------|
| Receipts for the Year | <u>Jı</u> | une 30, 2016 | | ne 30, 2015 |
| | | (\$1,000's) | (| \$1,000's) |
| Contributions: Members Employer | \$ | 1,925 28,580 | \$ | 1,800 28,461 |
| Subtotal | \$ | 30,505 | \$ | 30,261 |
| Investment Earnings (Net of Investment Expenses) | | 9,809 | | 30,129 |
| TOTAL | \$ | 40,314 | \$ | 60,390 |
| Disbursements for the Year | | | | |
| Benefit Payments | \$ | 57,903 | \$ | 56,972 |
| Refunds to Members | | 465 | | 456 |
| Administrative Expenses | | 1,321 | | 1,545 |
| TOTAL | \$ | 59,689 | \$ | 58,973 |
| Excess of Receipts over Disbursements | \$ | (19,375) | \$ | 1,417 |
| Reconciliation of Asset Balances | | | | |
| Asset Balance as of the Beginning of Year | \$ | 823,150 | \$ | 821,733 |
| Excess of Receipts over Disbursements | | (19,375) | | 1,417 |
| Asset Balance as of the End of Year | \$ | 803,775 | <u>\$</u> | 823,150 |
| Rate of Return | | 1.21% | | 3.73% |



SCHEDULE D

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

Adopted by the Board December 17, 2015.

VALUATION INTEREST RATE: 7.50% per annum, compounded annually, net of investment expenses, composed of a 2.75% inflation assumption and a 4.75% 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:

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



| | А | nnual Rates of | |
|-----|--------------|----------------|------------|
| Age | Dea | th | Disability |
| | <u>Males</u> | <u>Females</u> | |
| 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 |



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 market 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 market value as of June 30, 2013. The amount recognized each year beginning June 30, 2014 is 20% of the difference between market 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

- 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 7.50%), 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

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.



• 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 7.50% 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.

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.



SCHEDULE G

AMORTIZATION OF TRANSITIONAL UAAL

| | | | Annual |
|----------------|---------------|-------------------|----------------|
| | Amortization | Balance of | Amortization |
| Valuation Date | <u>Period</u> | Transitional UAAL | <u>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 |
| 6/30/2017 | 21 | 170,947,481 | 16,415,980 |
| 6/30/2018 | 20 | 167,352,562 | 16,415,980 |
| 6/30/2019 | 19 | 163,488,025 | 16,415,980 |
| 6/30/2020 | 18 | 159,333,647 | 16,415,980 |
| 6/30/2021 | 17 | 154,867,691 | 16,415,980 |
| 6/30/2022 | 16 | 150,066,788 | 16,415,980 |
| 6/30/2023 | 15 | 144,905,818 | 16,415,980 |
| 6/30/2024 | 14 | 139,357,774 | 16,415,980 |
| 6/30/2025 | 13 | 133,393,628 | 16,415,980 |
| 6/30/2026 | 12 | 126,982,170 | 16,415,980 |
| 6/30/2027 | 11 | 120,089,854 | 16,415,980 |
| 6/30/2028 | 10 | 112,680,613 | 16,415,980 |
| 6/30/2029 | 9 | 104,715,679 | 16,415,980 |
| 6/30/2030 | 8 | 96,153,376 | 16,415,980 |
| 6/30/2031 | 7 | 86,948,899 | 16,415,980 |
| 6/30/2032 | 6 | 77,054,087 | 16,415,980 |
| 6/30/2033 | 5 | 66,417,164 | 16,415,980 |
| 6/30/2034 | 4 | 54,982,472 | 16,415,980 |
| 6/30/2035 | 3 | 42,690,178 | 16,415,980 |
| 6/30/2036 | 2 | 29,475,961 | 16,415,980 |
| 6/30/2037 | 1 | 15,270,679 | 16,415,980 |
| 6/30/2038 | 0 | 0 | 0 |



AMORTIZATION OF 2014 INCREMENTAL UAAL

| <u> </u> | | | |
|----------------|---------------|-----------------|----------------|
| | | Balance of | Annual |
| | Amortization | New Incremental | Amortization |
| Valuation Date | <u>Period</u> | UAAL 6/30/2014 | <u>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) |
| 6/30/2017 | 22 | (20,364,636) | (1,918,081) |
| 6/30/2018 | 21 | (19,973,902) | (1,918,081) |
| 6/30/2019 | 20 | (19,553,864) | (1,918,081) |
| 6/30/2020 | 19 | (19,102,322) | (1,918,081) |
| 6/30/2021 | 18 | (18,616,915) | (1,918,081) |
| 6/30/2022 | 17 | (18,095,102) | (1,918,081) |
| 6/30/2023 | 16 | (17,534,154) | (1,918,081) |
| 6/30/2024 | 15 | (16,931,134) | (1,918,081) |
| 6/30/2025 | 14 | (16,282,887) | (1,918,081) |
| 6/30/2026 | 13 | (15,586,023) | (1,918,081) |
| 6/30/2027 | 12 | (14,836,893) | (1,918,081) |
| 6/30/2028 | 11 | (14,031,579) | (1,918,081) |
| 6/30/2029 | 10 | (13,165,866) | (1,918,081) |
| 6/30/2030 | 9 | (12,235,224) | (1,918,081) |
| 6/30/2031 | 8 | (11,234,785) | (1,918,081) |
| 6/30/2032 | 7 | (10,159,312) | (1,918,081) |
| 6/30/2033 | 6 | (9,003,179) | (1,918,081) |
| 6/30/2034 | 5 | (7,760,336) | (1,918,081) |
| 6/30/2035 | 4 | (6,424,280) | (1,918,081) |
| 6/30/2036 | 3 | (4,988,020) | (1,918,081) |
| 6/30/2037 | 2 | (3,444,040) | (1,918,081) |
| 6/30/2038 | 1 | (1,784,262) | (1,918,081) |
| 6/30/2039 | 0 | 0 | 0 |



AMORTIZATION OF 2015 INCREMENTAL UAAL

| <u> </u> | | | |
|----------------|--------------|-----------------|----------------|
| | | Balance of | Annual |
| | Amortization | New Incremental | Amortization |
| Valuation Date | Period | UAAL 6/30/2015 | <u>Payment</u> |
| 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 | 519,922 |
| 6/30/2018 | 22 | 5,520,110 | 519,922 |
| 6/30/2019 | 21 | 5,414,196 | 519,922 |
| 6/30/2020 | 20 | 5,300,339 | 519,922 |
| 6/30/2021 | 19 | 5,177,943 | 519,922 |
| 6/30/2022 | 18 | 5,046,366 | 519,922 |
| 6/30/2023 | 17 | 4,904,922 | 519,922 |
| 6/30/2024 | 16 | 4,752,869 | 519,922 |
| 6/30/2025 | 15 | 4,589,413 | 519,922 |
| 6/30/2026 | 14 | 4,413,697 | 519,922 |
| 6/30/2027 | 13 | 4,224,802 | 519,922 |
| 6/30/2028 | 12 | 4,021,740 | 519,922 |
| 6/30/2029 | 11 | 3,803,449 | 519,922 |
| 6/30/2030 | 10 | 3,568,786 | 519,922 |
| 6/30/2031 | 9 | 3,316,523 | 519,922 |
| 6/30/2032 | 8 | 3,045,340 | 519,922 |
| 6/30/2033 | 7 | 2,753,819 | 519,922 |
| 6/30/2034 | 6 | 2,440,433 | 519,922 |
| 6/30/2035 | 5 | 2,103,544 | 519,922 |
| 6/30/2036 | 4 | 1,741,388 | 519,922 |
| 6/30/2037 | 3 | 1,352,070 | 519,922 |
| 6/30/2038 | 2 | 933,554 | 519,922 |
| 6/30/2039 | 1 | 483,648 | 519,922 |
| 6/30/2040 | 0 | 0 | 0 |



AMORTIZATION OF 2016 INCREMENTAL UAAL

| ir — | | | |
|----------------|---------------|-----------------|----------------|
| | | Balance of | Annual |
| | Amortization | New Incremental | Amortization |
| Valuation Date | <u>Period</u> | UAAL 6/30/2016 | <u>Payment</u> |
| 6/30/2016 | 25 | (\$4,944,605) | (\$443,584) |
| 6/30/2017 | 24 | (4,871,867) | (443,584) |
| 6/30/2018 | 23 | (4,793,673) | (443,584) |
| 6/30/2019 | 22 | (4,709,614) | (443,584) |
| 6/30/2020 | 21 | (4,619,252) | (443,584) |
| 6/30/2021 | 20 | (4,522,112) | (443,584) |
| 6/30/2022 | 19 | (4,417,686) | (443,584) |
| 6/30/2023 | 18 | (4,305,429) | (443,584) |
| 6/30/2024 | 17 | (4,184,752) | (443,584) |
| 6/30/2025 | 16 | (4,055,025) | (443,584) |
| 6/30/2026 | 15 | (3,915,568) | (443,584) |
| 6/30/2027 | 14 | (3,765,651) | (443,584) |
| 6/30/2028 | 13 | (3,604,491) | (443,584) |
| 6/30/2029 | 12 | (3,431,244) | (443,584) |
| 6/30/2030 | 11 | (3,245,004) | (443,584) |
| 6/30/2031 | 10 | (3,044,795) | (443,584) |
| 6/30/2032 | 9 | (2,829,571) | (443,584) |
| 6/30/2033 | 8 | (2,598,205) | (443,584) |
| 6/30/2034 | 7 | (2,349,487) | (443,584) |
| 6/30/2035 | 6 | (2,082,114) | (443,584) |
| 6/30/2036 | 5 | (1,794,689) | (443,584) |
| 6/30/2037 | 4 | (1,485,707) | (443,584) |
| 6/30/2038 | 3 | (1,153,551) | (443,584) |
| 6/30/2039 | 2 | (796,484) | (443,584) |
| 6/30/2040 | 1 | (412,636) | (443,584) |
| 6/30/2041 | 0 | 0 | 0 |



SCHEDULE H

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 \$14.75 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 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.



Termination Benefit

Eligibility Less than 10 years of creditable service.

Benefit Return of the member's accumulated contributions.

Payment Options Life annuity. Guaranteed payment of accumulated (1)

member contributions.

Joint and survivorship annuity. (2)

(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.

Employer contributions are actuarially determined and By Employers

approved and certified by the Board.



SCHEDULE I

NUMBER OF ACTIVE MEMBERS BY AGE AND SERVICE AS OF JUNE 30, 2016

| | | 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 | 152 | 320 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 477 |
| 25 to 29 | 268 | 692 | 117 | 4 | 0 | 0 | 0 | 0 | 0 | 1,081 |
| 30 to 34 | 264 | 896 | 309 | 86 | 4 | 0 | 0 | 0 | 0 | 1,559 |
| 35 to 39 | 309 | 1,099 | 484 | 228 | 64 | 0 | 0 | 0 | 0 | 2,184 |
| 40 to 44 | 275 | 1,321 | 820 | 515 | 208 | 57 | 2 | 0 | 0 | 3,198 |
| 45 to 49 | 348 | 1,466 | 1,098 | 891 | 509 | 145 | 59 | 5 | 0 | 4,521 |
| 50 to 54 | 325 | 1,559 | 1,346 | 1,220 | 840 | 401 | 182 | 63 | 12 | 5,948 |
| 55 to 59 | 293 | 1,562 | 1,395 | 1,218 | 886 | 544 | 312 | 136 | 71 | 6,417 |
| 60 to 64 | 191 | 1,140 | 1,195 | 886 | 544 | 386 | 305 | 159 | 122 | 4,928 |
| 65 to 69 | 98 | 652 | 806 | 503 | 296 | 149 | 135 | 81 | 70 | 2,790 |
| 70 & Up | 38 | 272 | 531 | 466 | 205 | 82 | 62 | 44 | 63 | 1,763 |
| Total | 2,561 | 10,979 | 8,106 | 6,017 | 3,556 | 1,764 | 1,057 | 488 | 338 | 34,866 |

Average Age: 52.6 Average Service: 9.2



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 | 1,142 | 2,784,388 | 2,438 |
| 65 – 69 | 3,315 | 9,468,031 | 2,856 |
| 70 – 74 | 3,698 | 11,199,985 | 3,029 |
| 75 – 79 | 3,146 | 10,553,499 | 3,355 |
| 80 – 84 | 2,246 | 8,501,482 | 3,785 |
| 85 – 89 | 1,246 | 5,294,829 | 4,249 |
| 90 – 94 | 508 | 2,385,815 | 4,696 |
| 95 & Over | 147 | 716,991 | 4,877 |
| Total | 15,448 | \$ 50,905,020 | \$ 3,295 |

NUMBER OF BENEFICIARIES AND THEIR BENEFITS BY AGE

| Age | Number of Members | Total Annual Benefits | Average Annual Benefits |
|-----------|----------------------|--------------------------|----------------------------|
| Under 50 | 135 | \$ 176,421 | \$ 1,307 |
| 50 – 54 | 80 | 117,201 | 1,465 |
| 55 – 59 | 80 | 135,373 | 1,692 |
| 60 – 64 | 110 | 231,227 | 2,102 |
| 65 – 69 | 100 | 195,720 | 1,957 |
| 70 – 74 | 131 | 281,856 | 2,152 |
| 75 – 79 | 131 | 309,815 | 2,365 |
| 80 – 84 | 98 | 277,098 | 2,828 |
| 85 – 89 | 74 | 224,697 | 3,036 |
| 90 – 94 | 34 | 109,618 | 3,224 |
| 95 & Over | 17 | 45,798 | 2,694 |
| Total | 990 | \$ 2,104,824 | \$ 2,126 |



NUMBER OF DISABLED RETIREES AND THEIR BENEFITS BY AGE

| Age | Number of Members | Total Annual Benefits | Average Annual Benefits |
|-----------|----------------------|--------------------------|----------------------------|
| Under 50 | 9 | \$ 33,090 | \$ 3,677 |
| 50 – 54 | 45 | 156,943 | 3,488 |
| 55 – 59 | 132 | 512,167 | 3,880 |
| 60 – 64 | 232 | 944,754 | 4,072 |
| 65 – 69 | 222 | 977,739 | 4,404 |
| 70 – 74 | 209 | 1,056,654 | 5,056 |
| 75 – 79 | 156 | 864,447 | 5,541 |
| 80 – 84 | 74 | 398,850 | 5,390 |
| 85 – 89 | 24 | 141,520 | 5,897 |
| 90 – 94 | 8 | 50,228 | 6,279 |
| 95 & Over | 3 | 21,145 | 7,048 |
| Total | 1,114 | \$ 5,157,537 | \$ 4,630 |

NUMBER OF DEFERRED VESTED MEMBERS AND THEIR BENEFITS BY AGE

| Age | Number of Members | Total Annual Benefits | Average Annual Benefits |
|-----------|----------------------|--------------------------|----------------------------|
| Under 35 | 19 | \$ 37,581 | \$ 1,978 |
| 35 – 39 | 71 | 147,865 | 2,083 |
| 40 – 44 | 217 | 484,007 | 2,230 |
| 45 – 64 | 533 | 1,261,144 | 2,366 |
| 50 – 54 | 1,103 | 2,822,497 | 2,559 |
| 55 – 59 | 1,330 | 3,481,054 | 2,617 |
| 60 – 64 | 970 | 2,606,213 | 2,687 |
| 65 – 69 | 291 | 766,878 | 2,635 |
| 70 – 74 | 55 | 138,655 | 2,521 |
| 75 & Over | 39 | 102,685 | 2,633 |
| Total | 4,628 | \$ 11,848,579 | \$ 2,560 |



SCHEDULE J

CAFR SCHEDULES

| GA PSERS: Solvency Test | | | | | | | |
|--------------------------------------|---------------|--------------------|-----------------|-----------|------------|--------------|----------|
| | Actua | rial Accrued Liabi | lity for: | | | | |
| Actuarial | | | Active Members | | | | |
| Valuation | Active Member | Retirants & | (Employer | Valuation | Portion of | of Aggregate | Accrued |
| as of 6/30 | Contributions | Beneficiaries | Funded Portion) | Assets | Liabilitie | s Covered b | y Assets |
| | (1) | (2) | (3) | | (1) | (2) | (3) |
| 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% |
| 2007 | 14,796 | 456,868 | 274,414 | 785,460 | 100% | 100.0% | 100.0% |
| 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 | | | |
| | | | | | | | % Increase | Average |
| | | Annual Allowances | | Annual Allowances | | Annual Allowances | in Annual | Annual |
| Year Ended | Number | (in thousands) | Number | (in thousands) | Number | (in thousands) | Allowances | Allowances |
| 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 |
| June 30, 2007 | 816 | 4,749 | 637 | 2,353 | 13,193 | 46,662 | 5.4% | 3,537 |
| | | | | | | | | |



SCHEDULE K

| System Number | System Name | Contribution |
|------------------|---------------------|--------------|
| | | |
| 1 2 | Appling Atkinson | \$ 50,507 |
| 3 | | 27,973 |
| | Bacon | 30,304 |
| 4 | Baker | 11,655 |
| 5 | Baldwin | 94,798 |
| 6 | Banks | 68,379 |
| 7 | Barrow | 171,724 |
| 8 | Bartow | 224,562 |
| 9 | Ben Hill | 55,169 |
| 10 | Berrien | 47,399 |
| 11 | Bibb | 478,652 |
| 12 | Bleckley | 58,277 |
| 13 | Brantley | 83,919 |
| 14 | Brooks | 52,838 |
| 15 | Bryan | 148,413 |
| 16 | Bulloch | 233,887 |
| 17 | Burke | 120,440 |
| 18 | Butts | 73,818 |
| 19 | Calhoun | 17,872 |
| 20 | Camden | 170,170 |
| 21 | Candler | 38,852 |
| 22 | Carroll | 212,907 |
| 23 | Catoosa | 236,218 |
| 24 | Charlton | 32,635 |
| 25 | Chatham | 379,192 |
| 26 | Chattahoochee | 23,311 |
| 27 | Chattooga | 41,960 |
| 28 | Cherokee | 534,598 |
| 29 | Clarke | 349,664 |
| 30 | Clay | 8,547 |
| 31 | Clayton | 1,045,885 |
| 32 | Clinch | 20,980 |
| 33 | Cobb | 1,770,856 |
| 34 | Coffee | 108,007 |
| 35 | Colquitt | 186,488 |
| 36 | Columbia | 471,658 |
| 37 | Cook | 59,831 |
| 38 | Coweta | 480,206 |
| 39 | Crawford | 42,737 |



| System Number | System Name | Contribution |
|------------------|-------------|--------------|
| 40 | Crisp | \$ 99,460 |
| 41 | Dade | 39,629 |
| 42 | Dawson | 73,818 |
| 43 | Decatur | 130,541 |
| 44 | Dekalb | 1,724,234 |
| 45 | Dodge | 59,054 |
| 46 | Dooly | 49,730 |
| 47 | Dougherty | 318,583 |
| 48 | Douglas | 358,989 |
| 49 | Early | 40,406 |
| 50 | Echols | 12,433 |
| 51 | Effingham | 200,474 |
| 52 | Elbert | 54,392 |
| 53 | Emanuel | 89,359 |
| 54 | Evans | 36,521 |
| 55 | Fannin | 68,379 |
| 56 | Fayette | 309,259 |
| 57 | Floyd | 133,650 |
| 58 | Forsyth | 671,356 |
| 59 | Franklin | 69,933 |
| 61 | Gilmer | 69,933 |
| 62 | Glascock | 14,764 |
| 63 | Glynn | 275,069 |
| 64 | Gordon | 80,034 |
| 65 | Grady | 81,588 |
| 66 | Greene | 49,730 |
| 67 | Gwinnett | 2,743,699 |
| 68 | Habersham | 153,075 |
| 69 | Hall | 424,260 |
| 70 | Hancock | 39,629 |
| 71 | Haralson | 46,622 |
| 72 | Harris | 106,453 |
| 73 | Hart | 75,372 |
| 74 | Heard | 27,196 |
| 75 | Henry | 448,348 |
| 76 | Houston | 588,990 |
| 77 | Irwin | 21,757 |
| 78 | Jackson | 159,292 |



| | | I |
|------------------|----------------------|--------------------|
| System Number | System Name | Contribution |
| 79 | , | \$ 49,730 |
| 80 | Jasper Jeff Davis | 54,392 |
| 81 | Jefferson | 69,156 |
| 82 | Jenkins | 27,973 |
| 83 | Johnson | · · |
| 84 | Jones | 24,865 120,440 |
| 85 | Lamar | 52,061 |
| 86 | Lanier | 25,642 |
| 87 | | 136,758 |
| 88 | Laurens | · · |
| 89 | Lee Liberty | 135,981 227,670 |
| 90 | Lincoln | · · |
| | | 34,189 |
| 91 | Long | 62,940 |
| 92 | Lowndes | 223,785 |
| 93 | Lumpkin | 83,142 |
| 94 | Macon | 45,068 |
| 95 | Madison | 60,609 |
| 96 | Marion | 23,311 |
| 97 | McDuffie | 85,474 |
| 98 | McIntosh | 42,737 |
| 99 | Meriwether | 83,919 |
| 100 | Miller | 26,419 |
| 101 | Mitchell | 39,629 |
| 102 | Monroe | 122,771 |
| 103 | Montgomery | 17,095 |
| 104 | Morgan | 58,277 |
| 105 | Murray | 100,237 |
| 106 | Muscogee | 585,105 |
| 107 | Newton | 365,982 |
| 108 | Oconee | 135,981 |
| 109 | Oglethorpe | 52,838 |
| 110 | Paulding | 370,644 |
| 111 | Peach | 42,737 |
| 112 | Pickens | 76,926 |
| 113 | Pierce | 59,054 |
| 114 | Pike | 59,831 |
| 115 | Polk | 109,562 |
| 116 | Pulaski | 30,304 |
| 117 | Putnam | 76,149 |



| System | | |
|--------|-------------|--------------|
| Number | System Name | Contribution |
| 118 | Quitman | \$ 8,547 |
| 119 | Rabun | 57,500 |
| 120 | Randolph | 27,973 |
| 121 | Richmond | 622,403 |
| 122 | Rockdale | 279,732 |
| 123 | Schley | 17,095 |
| 124 | Screven | 52,838 |
| 125 | Seminole | 34,189 |
| 126 | Spalding | 237,772 |
| 127 | Stephens | 90,136 |
| 128 | Stewart | 15,541 |
| 129 | Sumter | 116,555 |
| 130 | Talbot | 14,764 |
| 131 | Taliaferro | 7,770 |
| 132 | Tattnall | 69,156 |
| 133 | Taylor | 32,635 |
| 134 | Telfair | 31,858 |
| 135 | Terrell | 32,635 |
| 136 | Thomas | 99,460 |
| 137 | Tift | 96,352 |
| 138 | Toombs | 48,176 |
| 139 | Towns | 28,750 |
| 140 | Treutlen | 16,318 |
| 141 | Troup | 291,387 |
| 142 | Turner | 18,649 |
| 143 | Twiggs | 18,649 |
| 144 | Union | 59,054 |
| 145 | Upson | 111,116 |
| 146 | Walker | 225,339 |
| 147 | Walton | 254,089 |
| 148 | Ware | 118,886 |
| 149 | Warren | 14,764 |
| 150 | Washington | 53,615 |
| 151 | Wayne | 121,217 |
| 152 | Webster | 4,662 |
| 153 | Wheeler | 17,872 |
| 154 | White | 64,494 |
| 155 | Whitfield | 184,934 |
| 156 | Wilcox | 25,642 |



| System | | |
|--------|--------------------------------------|--------------|
| Number | System Name | Contribution |
| 157 | Wilkes | \$ 45,068 |
| 158 | Wilkinson | 38,852 |
| 159 | Worth | 55,946 |
| 205 | Bremen | 12,433 |
| 206 | Buford | 58,277 |
| 207 | Calhoun | 31,081 |
| 209 | Carrollton | 66,048 |
| 210 | Cartersville | 40,406 |
| 212 | Chickamauga | 17,872 |
| 214 | Commerce | 16,318 |
| 216 | Dalton | 96,352 |
| 217 | Decatur | 73,818 |
| 219 | Dublin | 46,622 |
| 221 | Gainesville | 87,028 |
| 224 | Jefferson | 40,406 |
| 226 | Marietta | 91,690 |
| 230 | Pelham | 23,311 |
| 232 | Rome | 69,933 |
| 247 | Social Circle | 20,203 |
| 236 | Thomasville | 22,534 |
| 239 | Trion | 14,764 |
| 240 | Valdosta | 170,947 |
| 241 | Vidalia | 31,858 |
| | Atlanta Metropolitan College | 777 |
| | Furlow Charter School | 777 |
| | Georgia Magnet Charter School | 3,108 |
| | Georgia Military College | 53,615 |
| | Kipp Metro Atlanta Collaborative Inc | 28,750 |
| | | |