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GASB STATEMENT NO. 74 REPORT

FOR THE GEORGIA SCHOOL EMPLOYEES POST-EMPLOYMENT

HEALTH BENEFIT FUND

PREPARED AS OF JUNE 30, 2018

Final December 21, 2018





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

December 21, 2018

Georgia Department of Community Health
2 Peachtree Street, N.W., 34th Floor
Atlanta, GA 30303-3159

Dear Members of the Board:

Presented in this report is information to assist the Georgia School Employees Post-employment Health Benefit Fund in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statement No. 74. The information is presented for the one-year period ending June 30, 2018. These calculations have been made on a basis that is consistent with our understanding of these accounting standards.

The annual actuarial valuation performed as of June 30, 2017 was used as the basis for much of the information presented as of June 30, 2018 in this report. The valuation was based upon data furnished by the State pension retirement systems and the Georgia Department of Community Health staff, concerning active, inactive, and retired members along with pertinent claims data and financial information. This information was reviewed for completeness and internal consistency, but was not audited. The valuation results depend on the integrity of the data. If any of the information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

To the best of our knowledge, the information contained in this report is complete and accurate. These calculations were performed by, and under the supervision of, independent consulting actuaries with experience in performing valuations for public retirement systems. In addition, the valuation was prepared in accordance with generally accepted actuarial principles and practices as well as with Actuarial Standards of Practice prescribed by the Actuarial Standards Board.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statement No. 74. The calculation of the plan's liability for this report may not be applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB No. 74 may produce significantly different results.



Georgia Department of Community Health

December 21, 2018

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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 valuations were 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 medical plans and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of each plan.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Alisa Bennett'.

Alisa Bennett, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

A handwritten signature in blue ink, appearing to read 'Ben Mobley'.

Ben Mobley, ASA, FCA, MAAA
Senior Actuary



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Section I – Summary of Principal Results

**REPORT OF THE ANNUAL GASB STATEMENT NO. 74
REQUIRED INFORMATION FOR THE
GEORGIA SCHOOL EMPLOYEES POST-EMPLOYMENT HEALTH BENEFIT FUND

PREPARED AS OF JUNE 30, 2017**

| Valuation Date (VD): | June 30, 2017 |
|--|--------------------|
| Prior Measurement Date: | June 30, 2017 |
| Measurement Date (MD): | June 30, 2018 |
| Membership Data as of June 30, 2017: | |
| Inactive Members or Beneficiaries Currently Receiving Benefits | 81,449 |
| Active Members | <u>175,610</u> |
| Total Membership | 257,059 |
| Discount Rate: | |
| Long-Term Expected Rate of Return | 7.30% |
| Municipal Bond Index Rate at Measurement Date | 3.87% |
| Municipal Bond Index Rate at Prior Measurement Date | 3.56% |
| Year in which Fiduciary Net Position is Projected to be Depleted | 2018 |
| Single Equivalent Interest Rate at Measurement Date | 3.87% |
| Single Equivalent Interest Rate at Prior Measurement Date | 3.58% |
| Net OPEB Liability: | |
| Total OPEB Liability (TOL) | \$13,092,956,161 |
| Fiduciary Net Position (FNP) | <u>383,263,046</u> |
| Net OPEB Liability (NOL = TOL – FNP) | \$12,709,693,115 |
| FNP as a percentage of TOL | 2.93% |



Section II – Introduction

The Governmental Accounting Standards Board (GASB) issued Statement No. 74 (GASB 74), “*Financial Reporting for Postemployment Benefit Plans other than Pension Plans*,” in June 2015. The effective date for reporting under GASB 74 is plan years beginning after June 15, 2016, but early implementation is encouraged. This report has been prepared as of June 30, 2018 (the Measurement Date) to assist the Georgia School Employees Postemployment Benefit Fund (Fund) in better understanding the requirements of GASB 74 and to identify the information to be provided by the Plan’s actuary, Cavanaugh Macdonald Consulting (CMC). Much of the material provided in this report is based on the data, assumptions, and results of the annual actuarial valuation of the Plan as of June 30, 2017.

GASB 74 replaces GASB 43, and represents a significant departure from the requirements of the prior statement. GASB 43 was issued as a “funding friendly” statement that required postemployment benefit plans other than pension plans (OPEB) to report items consistent with the results of the plan’s actuarial valuations, as long as those valuations met certain parameters. GASB 74 basically separates accounting from funding by creating disclosure and reporting requirements that may or may not be consistent with the basis used for funding the Plan.

A major change in GASB 74 is the requirement to determine the Total OPEB Liability (TOL) utilizing the Entry Age Normal actuarial cost method. The Net OPEB Liability (NOL) is then set equal to the TOL minus the Plan’s Fiduciary Net Position (FNP) (basically the market value of assets). The benefit provisions recognized in the calculation of the TOL are summarized in Schedule B.

Among the assumptions needed for the liability calculation is a Single Equivalent Interest Rate (SEIR), as described by GASB 74. To determine the SEIR, the FNP must be projected into the future for as long as there are anticipated benefits payable under the plan’s provisions applicable to the members and beneficiaries of the Plan on the Measurement Date. If the FNP is not projected to be depleted at any point in the future, the long term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.



Section II – Introduction (continued)

If, however, the FNP is projected to be depleted, the SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate (Municipal Bond Index Rate). The Municipal Bond Index Rate used, if necessary, for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index published by the Board of Governors of the Federal Reserve System. The Municipal Bond Index Rate as of June 30, 2018 was 3.87%. To aid in the calculation of the projected FNP, it is recommended that a funding policy be implemented to project employer contributions. For the purpose of this report, we have determined that a discount rate of 3.87% meets the requirements of GASB 74 since current assets are less than the projected benefit payments for fiscal year 2018.

The sections that follow provide the results of all the necessary calculations, presented in the order laid out in GASB 74 for note disclosure and Required Supplementary Information (RSI).



Section III – Financial Statement Notes

The actuarial related information presented herein will follow the order presented in GASB 74. Paragraph numbers are provided for ease of reference.

Paragraphs 34.a. (1)-(3): This information will be supplied by the Fund.

Paragraph 34.a. (4): The data required regarding the membership of the Fund were furnished by the Georgia Department of Community Health. The following table summarizes the membership of the Fund as of June 30, 2017, the date of the valuation used to determine the June 30, 2018 Total OPEB Liability.

Membership

| | Number |
|--|---------------|
| Inactive Members Or Their Beneficiaries | 81,449 |
| Currently Receiving Benefits | |
| Inactive Members Entitled To But Not Yet | 0 |
| Receiving Benefits | |
| Active Members | 175,610 |
| Total | 257,059 |

Paragraphs 34.a. (5)-(6) and Paragraphs 34.b.-e.: This information will be supplied by the Fund.

Paragraphs 35.a. (1)-(4): As stated earlier, the NOL is equal to the TOL minus the FNP. That result, as of June 30, 2018, is presented in the following table.

| | Fiscal Year Ending June 30 |
|--|-----------------------------------|
| | 2018 |
| Total OPEB Liability | \$ 13,092,956,161 |
| Fiduciary Net Position | <u>383,263,046</u> |
| Net OPEB Liability | \$ 12,709,693,115 |
| Ratio of Fiduciary Net Position to Total OPEB Liability | 2.93% |



Section III – Financial Statement Notes (continued)

Paragraph 35.b.: This paragraph requires information regarding the actuarial assumptions used to measure the TOL. The actuarial assumptions utilized in developing the TOL are outlined in Schedule C. The Total OPEB Liability as of June 30, 2018 was determined based on an actuarial valuation prepared as of June 30, 2017, using the following actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2018:

| | |
|---|---|
| Inflation | 2.75 percent |
| Salary increases | |
| TRS | 3.25 – 9.00 percent, including inflation |
| PSERS | N/A |
| Long-term investment rate of return | 7.30 percent compounded annually, net of investment expense, and including inflation |
| Municipal Bond Index Rate | 3.87 percent |
| Year FNP is projected to be depleted | 2018 |
| Single Equivalent Interest Rate | 3.87 percent |
| Healthcare cost trend rate | |
| Pre-Medicare Eligible | 7.5% |
| Medicare Eligible | 5.5% |
| Ultimate trend rate | |
| Pre-Medicare Eligible | 4.75% |
| Medicare Eligible | 4.75% |
| Year of Ultimate trend rate | |
| Pre-Medicare Eligible | 2028 |
| Medicare Eligible | 2022 |
| Mortality | For TRS members: The RP-2000 White Collar Mortality Table projected to 2025 with projection scale BB (set forward 1 year for males) is used for death after service retirement and beneficiaries. The RP-2000 Disabled Mortality Table projected to 2025 with projection scale BB (set forward two years for males and four years for females) is used for death after disability retirement. |



Section III – Financial Statement Notes (continued)

For PSERS members: 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 projected to 2025 with projection scale BB (set forward 5 years for both males and females) is used for the period after disability retirement.

The actuarial assumptions used in the June 30, 2017 valuation are based on the results of the most recent actuarial experience studies for the pension systems, which covered the five year period ending June 30, 2014 and adopted by the pension Board on November 18, 2015.

As noted in our experience study report, inflation's short-term volatility is illustrated by comparing its average rate over the last 10, 30 and 50 years. Although the 10-year average of 2.31% is lower than the assumed rate, the longer 30, 40 and 50-year averages of 2.79%, 3.94% and 4.25% respectively, are higher than the current rate. The validity of the assumption is, therefore, dependent upon the emphasis one assigns to the short and long-terms. Current economic forecasts suggest lower inflation but are generally looking at a shorter time period than appropriate for our purposes. In the 2014 OASDI Trustees Report, the Chief Actuary for Social Security bases the 75 year cost projections on an intermediate inflation assumption of 2.7% with a range of 1.7% to 3.7%. We consider that range reasonable and use a current price inflation assumption of 2.75%.

Also noted in our experience study report for TRS members, for service retirements and beneficiaries we recommended use of the RP-2000 White Collar Mortality Table with future mortality improvement projected to 2025 with the Society of Actuaries' projection scale BB set forward one year for males. For disability retirements, we recommended the use of the RP-2000 Disabled Mortality Table with future mortality improvement projected to 2025 with Society of Actuaries' projection scale BB set forward two years for males and four years for females for TRS members. The use of the recommended post-retirement mortality assumption would result in an overall 9.75% margin in the current experience to recognize future mortality improvement, which we believe provides sufficient margin.

As noted in our experience study report for PSERS members, overall, the number of actual deaths among all retirements and beneficiaries was greater than the number of deaths expected during the period under investigation. We recommended the RP-2000 Blue-Collar Mortality Table for service retirements and beneficiaries but in order to provide an additional margin for anticipated mortality improvement, we recommended projecting the table to 2025 with projection scale BB and setting the table forward 3 years for males and 2 years for females. For the period after disability retirement, we recommended the RP-2000 Disabled Mortality Table projected to 2025 with scale BB set forward 5 years for both males and females for PSERS members.

Although an updated mortality table and mortality improvement scale have been published by the Society of Actuaries (SOA), the SOA did not include public sector data in the development



Section III – Financial Statement Notes (continued)

of these new tables and relied on private sector data only. The SOA is currently reviewing mortality for the public sector and may issue new tables in time for the next experience study.

The remaining actuarial assumptions (e.g., initial per capita costs, health care cost trends, rate of plan participation, rates of plan election, etc.) used in the June 30, 2017 valuation were based on a review of recent plan experience done concurrently with the June 30, 2017 valuation. Since the previous valuation, the trend rates, the morbidity factors and the participation and tobacco use assumption were changed. The full set of actuarial assumptions used can be found in Schedule C.

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected nominal returns, net of pension plan investment expense and the assumed rate of inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

| Asset Class | Target Allocation | Long-Term Expected Real Rate of Return* |
|------------------------------|--------------------------|--|
| Fixed Income | 30.00% | -0.50% |
| Domestic Stocks - Large Cap | 37.20% | 9.00% |
| Domestic Stocks - Mid Cap | 3.40% | 12.00% |
| Domestic Stocks - Small Cap | 1.40% | 13.50% |
| Int'l Stocks - Developed Mkt | 17.80% | 8.00% |
| Int'l Stocks - Emerging Mkt | 5.20% | 12.00% |
| Alternatives | 5.00% | 10.50% |
| Total | 100.00% | |

**Net of inflation*



Section III – Financial Statement Notes (continued)

Discount rate (SEIR). For the purpose of this report, we have determined that a discount rate of 3.87% meets the requirements of GASB 74, since current assets are less than the expected benefit payments for fiscal year 2018.

Paragraph 35.b.(1)

Sensitivity analysis: disclosure of the sensitivity of the Net OPEB Liability to changes in the healthcare cost trend rate. The following presents the Net OPEB Liability of the Fund, calculated using the current healthcare trend rates, as well as the Net OPEB Liability calculated using healthcare trend rates that are 1-percentage-point lower or 1-percentage-point higher than the current rates:

| | 1% Decrease | Current Healthcare Trend Rate | 1% Increase |
|--------------------|----------------|-------------------------------------|----------------|
| Net OPEB Liability | 10,685,141,320 | 12,709,693,115 | 15,296,995,697 |

Paragraph 35.b.(2)

- (a) **Discount rate.** The discount rate used to measure the Total OPEB Liability was 3.87% percent.
- (b) **Projected cash flows:** The projection of cash flows used to determine the discount rate assumed that plan contributions from members and the State of Georgia will be made at the current level as averaged over the last five years.
- (c) **Long term rate of return:** The long-term expected rate of return on OPEB plan investments will be determined based on the allocation of assets by asset class and by the mean and variance of real returns as determined by the investment advisor.
- (d) **Municipal bond rate:** the discount rate determination will use a municipal bond rate to the extent the Fund is projected to run out of money before all benefits are paid.
- (e) **Periods of projected benefit payments:** Projected future benefit payments for all current plan members were projected through 2118.
- (f) **Assumed asset allocation:** The target asset allocation, as provided by the investment consultant, are summarized in the following table.

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected nominal returns, net of pension plan investment expense and the assumed rate of inflation) are



Section III – Financial Statement Notes (continued)

developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

| Asset Class | Target Allocation | Long-Term Expected Real Rate of Return* |
|------------------------------|-------------------|---|
| Fixed Income | 30.00% | -0.50% |
| Domestic Stocks - Large Cap | 37.20% | 9.00% |
| Domestic Stocks - Mid Cap | 3.40% | 12.00% |
| Domestic Stocks - Small Cap | 1.40% | 13.50% |
| Int'l Stocks - Developed Mkt | 17.80% | 8.00% |
| Int'l Stocks - Emerging Mkt | 5.20% | 12.00% |
| Alternatives | 5.00% | 10.50% |
| Total | 100.00% | |

*Net of inflation

(g): Sensitivity analysis: This paragraph requires disclosure of the sensitivity of the Net OPEB Liability to changes in the discount rate. The following presents the Net OPEB Liability, calculated using the discount rate of 3.87 percent, as well as the Net OPEB Liability calculated using a discount rate that is 1-percentage-point lower (2.87 percent) or 1-percentage-point higher (4.87 percent) than the current rate:

| | 1% Decrease (2.87%) | Current Discount Rate (3.87%) | 1% Increase (4.87%) |
|--------------------|------------------------|----------------------------------|------------------------|
| Net OPEB Liability | 14,840,936,459 | 12,709,693,115 | 10,991,068,353 |



Section III – Financial Statement Notes (continued)

Paragraph 35.c.: June 30, 2017 is the actuarial valuation date upon which the TOL is based. The result was rolled forward using standard actuarial techniques to the measurement date. The roll forward calculation adds the normal cost (also called the service cost) for the period July 1, 2017 through June 30, 2018, subtracts the actual benefit payments for the same period and then applies the expected investment rate of return for the period. If applicable, actuarial gains and losses arising from benefit changes, the differences between estimates and actual experience, and changes in assumptions or other inputs are reconciled to the TOL as of the Measurement Date. The procedure was used to determine the TOL as of June 30, 2018, as shown in the following table:

| TOL Roll Forward | |
|--|------------------------|
| (a) TOL as of June 30, 2017* | \$14,279,644,305 |
| (b) Actual Benefit Payments for the Period July 1, 2017 – June 30, 2018 | (364,817,814) |
| (c) Interest on TOL = [(a) x Prior SEIR] - [(b) x Prior SEIR x 0.50] | 504,681,027 |
| (d) Service Cost for the Period July 1, 2017 – June 30, 2018 at the End of the Period | 521,134,528 |
| (e) Change Due to Experience | (341,373,142) |
| (f) Change Due to Change in Assumptions | <u>(1,506,312,743)</u> |
| (g) TOL Rolled Forward to June 30, 2018 = (a) + (b) + (c) + (d) + (e) | \$13,092,956,161 |

* The TOL as of June 30, 2017 used in the roll forward was calculated using the discount rate as of the Prior Measurement Date.



Section IV – Required Supplementary Information

There are several tables of Required Supplementary Information (RSI) that need to be included in the Plan's financial statements. Paragraph numbers are provided for ease of reference.

Paragraphs 36.a.-b.: The required tables of schedules are provided in Schedule A.

Paragraph 36.c.: No actuarially determined contribution is calculated for either employers or nonemployer contributing entities.

Paragraph 36.d. and 37: The required schedule presenting the annual money-weighted rates of return is to be supplied by the Plan.

Paragraph 38: No actuarially determined contribution is calculated for either employers or nonemployer contributing entities.



Schedule A – Required Supplementary Information

**SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY
GASB 74 Paragraph 36.a.**

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|--|-------------------------|--------------------------|------|------|------|------|------|------|------|------|
| Total OPEB Liability | | | | | | | | | | |
| Service Cost | \$557,769,672 | \$521,134,528 | | | | | | | | |
| Interest | 452,024,327 | 504,681,027 | | | | | | | | |
| Benefit changes | 0 | 0 | | | | | | | | |
| Difference between expected and actual experience | 0 | (341,373,142) | | | | | | | | |
| Changes of assumptions | (1,262,290,993) | (1,506,312,743) | | | | | | | | |
| Benefit payments | (383,556,270) | (364,817,814) | | | | | | | | |
| Refunds of contributions | 0 | 0 | | | | | | | | |
| Net change in Total OPEB Liability | \$(636,053,264) | \$(1,186,688,144) | | | | | | | | |
| Total OPEB Liability - beginning | \$14,915,697,569 | \$14,279,644,305 | | | | | | | | |
| Total OPEB Liability - ending (a) | \$14,279,644,305 | \$13,092,956,161 | | | | | | | | |
| Plan Fiduciary Net Position | | | | | | | | | | |
| Contributions – employer | \$521,407,903 | \$518,290,365 | | | | | | | | |
| Contribution - non-employer | 0 | 0 | | | | | | | | |
| Contributions – member* | 0 | 0 | | | | | | | | |
| Net investment income | 1,147,877 | 4,563,373 | | | | | | | | |
| Benefit payments* | (383,556,270) | (364,817,814) | | | | | | | | |
| Administrative expense | (4,726,741) | (4,457,431) | | | | | | | | |
| Refund of contributions | 0 | 0 | | | | | | | | |
| Other | 0 | 0 | | | | | | | | |
| Net change in Plan Fiduciary Net Position | \$134,272,769 | \$153,578,493 | | | | | | | | |
| Plan Fiduciary Net Position – beginning | \$95,411,784 | \$229,684,553 | | | | | | | | |
| Plan Fiduciary Net Position - ending (b) | 229,684,553 | 383,263,046 | | | | | | | | |
| Net OPEB Liability - ending (a) - (b) | \$14,049,959,752 | \$12,709,693,115 | | | | | | | | |
| *Benefit payments are net of member contributions and include claims related expenses. | | | | | | | | | | |



Schedule A – Required Supplementary Information (continued)

**SCHEDULE OF THE NET OPEB LIABILITY
GASB 74 Paragraph 36.b.**

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|---|------------------|------------------|------|------|------|------|------|------|------|------|
| Total OPEB Liability | \$14,279,644,305 | \$13,092,956,161 | | | | | | | | |
| Plan Fiduciary Net Position | 229,684,553 | 383,263,046 | | | | | | | | |
| Net OPEB Liability | \$14,049,959,752 | \$12,709,693,115 | | | | | | | | |
| Plan Fiduciary Net Position as a percentage of the Total OPEB Liability | 1.61% | 2.93% | | | | | | | | |
| Covered payroll | \$10,086,189,000 | \$10,516,260,733 | | | | | | | | |
| Net OPEB Liability as a percentage of covered-employee payroll | 139.30% | 120.86% | | | | | | | | |



Schedule B – Summary of Benefit Provisions Valued

SUMMARY OF BENEFIT PROVISIONS VALUED

School Personnel OPEB Fund Eligibility

The following summary gives the main participation, benefit and contribution provisions of the Plan as interpreted in preparing the actuarial valuation.

Retiree medical eligibility is attained when an employee retires, and is immediately eligible to draw a retirement annuity from any of these systems:

- Teachers Retirement System
 - Service Retirement: 25 years of service or age 60 with 10 years of service
 - Disability Retirement: 10 years of service
 - Active Death Surviving Spouse: 10 years of service
- Public School Employees Retirement System
 - Service Retirement: age 60 with 10 years of service
 - Disability Retirement: 15 years of service
 - Active Death Surviving Spouse: age 60 with 10 years of service

TRS eligibility requirements were assumed for members in the Other category of the School Fund. Employees with payroll location codes greater than 60000 were included in the School Personnel OPEB Fund. Employees with payroll location codes less than 60000 were included in the State Employee OPEB Fund even if they participate in the Teachers Retirement System. Information regarding the State Employee OPEB Fund can be found under separate cover.

Coverage starts immediately at retirement, provided the retiree makes proper premium payments or has the premiums deducted from the annuity check. If elected, dependent coverage starts on the same day as retiree coverage. A change from single to family coverage as a retiree is allowed only with a qualified change in status.

A tobacco surcharge of \$80 per month is charged to those tobacco users not participating in the Medicare Advantage plans. Of the retirees not participating in the Medicare Advantage plans, it is assumed that 2.5% pay the tobacco surcharge.



Schedule B – Summary of Benefit Provisions Valued

2018 Plan Options

The plan designs offered for the 2018 plan year are as follows:

For Medicare-eligible members

- UnitedHealthcare Medicare Advantage (MA) Plan Options (Standard and Premium)
- Blue Cross and Blue Shield of Georgia (BCBSGa) Medicare Advantage (MA) Plan Options (Standard and Premium)

Non-MA Plan Options

- BCBSGa Gold, Silver, Bronze Health Reimbursement Arrangement (HRA) Plan Options
- BCBSGa, Kaiser Permanente (KP) and UnitedHealthcare Health Maintenance Organization (HMO) Plan Options
- UnitedHealthcare High Deductible Health Plan (HDHP)

Premiums

Retiree premiums vary based on plan election, dependent coverage, Medicare eligibility and election. Premiums shown are monthly and are effective January 1, 2019.

STATE HEALTH BENEFIT PLAN ANNUITANT UNDER 65 RATES JANUARY 1 - DECEMBER 31, 2019

| | YOU | YOU + CHILD(REN) | YOU + SPOUSE | YOU + FAMILY |
|---------------|------------|-------------------------|---------------------|---------------------|
| Anthem Gold | \$168.73 | \$307.13 | \$418.09 | \$556.50 |
| Anthem Silver | \$110.89 | \$208.80 | \$296.62 | \$394.54 |
| Anthem Bronze | \$72.45 | \$143.46 | \$215.91 | \$286.92 |
| Anthem HMO | \$135.65 | \$250.90 | \$348.63 | \$463.89 |
| UHC HMO | \$172.56 | \$313.65 | \$426.14 | \$567.22 |
| UHC HDHP | \$58.03 | \$118.94 | \$185.62 | \$246.54 |
| Kaiser HMO | \$142.71 | \$262.59 | \$362.49 | \$482.37 |

The Medicare Advantage Plan monthly retiree premiums for members with Medicare Parts A and B as of January 1, 2018 are as follows. The Fund pays the Medicare Part B late enrollment penalty for members who were required to pay the penalty when the Medicare Advantage plans were first implemented. Future retirees are required to enroll in Medicare Part B when first eligible to avoid the penalty, or be responsible for paying the late enrollment penalty if applicable.

| Medicare Advantage Plan | Retiree Premium |
|--------------------------------|------------------------|
| UHC Standard MA | \$ 25.38 |
| UHC Premium MA | \$ 128.22 |
| BCBSGa Standard MA | \$ 44.88 |
| BCBSGa Premium MA | \$ 155.81 |



Schedule B – Summary of Benefit Provisions Valued

For active employees with less than 5 years of service, premiums will be subject to the service based schedule shown below.

CONTRIBUTIONS (Actives with less than five years of service as of January 1, 2012): The Health Benefit Fund will pay a portion of the blended contribution rate for the Bronze Plan or the UHC Standard MA Plan based on the retirees' service at retirement. The retiree or spouse will pay the remainder of the premium for the chosen plan, not less than the premium paid by those with more than five years of service as of January 1, 2012.

| Service at Retirement | Health Benefit Fund's Share of Contribution Rate | | Retiree's Share of Contribution Rate | |
|-----------------------|--|--------|--------------------------------------|--------|
| | Retiree | Spouse | Retiree | Spouse |
| 30 and above | 75% | 55% | 25% | 45% |
| 29 | 72% | 53% | 28% | 47% |
| 28 | 69% | 51% | 31% | 49% |
| 27 | 66% | 49% | 34% | 51% |
| 26 | 63% | 47% | 37% | 53% |
| 25 | 60% | 45% | 40% | 55% |
| 24 | 57% | 43% | 43% | 57% |
| 23 | 54% | 41% | 46% | 59% |
| 22 | 51% | 39% | 49% | 61% |
| 21 | 48% | 37% | 52% | 63% |
| 20 | 45% | 35% | 55% | 65% |
| 19 | 42% | 33% | 58% | 67% |
| 18 | 39% | 31% | 61% | 69% |
| 17 | 36% | 29% | 64% | 71% |
| 16 | 33% | 27% | 67% | 73% |
| 15 | 30% | 25% | 70% | 75% |
| 14 | 27% | 23% | 73% | 77% |
| 13 | 24% | 21% | 76% | 79% |
| 12 | 21% | 19% | 79% | 81% |
| 11 | 18% | 17% | 82% | 83% |
| 10 | 15% | 15% | 85% | 85% |
| 9 and below | 0% | 0% | 100% | 100% |



Schedule C – Statement of Actuarial Assumptions and Methods

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

VALUATION DATE: June 30, 2017

DISCOUNT RATE: 3.87% per annum, compounded annually, net of expenses

AFFORDABLE CARE ACT: The impact of the Affordable Care Act (ACA) was addressed in this valuation. Review of the information currently available did not identify any specific provisions of the ACA that are anticipated to significantly impact results. While the impact of certain future provisions such as the excise tax on high-value health insurance plans (if applicable), mandated benefits and participation changes due to the individual mandate should be recognized in the determination of liabilities, overall future plan costs and the resulting liabilities are driven by amounts employers and retirees can afford (i.e., trend). The trend assumption forecasts the anticipated increase to initial per capita costs, taking into account health care cost inflation, increases in benefit utilization, plan changes, government-mandated benefits and technological advances. Given the uncertainty regarding the ACA's implementation (e.g., the impact of excise tax on high-value health insurance plans, changes in participation resulting from the implementation of state-based health insurance exchanges), continued monitoring of the ACA's impact on the Plan's liability will be required.

ANNUAL EXPECTED MEDICAL/RX CLAIMS (AGE ADJUSTED TO AGE 65):

PRE-MEDICARE

Following is a chart detailing expected claims for pre-65 retirees blended based on assumed plan elections and normalized to age 65.

| Pre-Medicare* | \$ 12,625 |
|---------------|-----------|

*Retirees selecting one of the HRA plans will also receive annual credits to use for eligible medical expenses. For 2017, the credits are \$400 for the Gold Plan, \$200 for the Silver Plan and \$100 for the Bronze plan. For members participating in the BCBSGa or UnitedHealthcare plans, wellness credits up to \$480 are available to those completing certain wellness requirements. It is assumed that 50% of eligible plan participants receive the additional wellness credits.



Schedule C – Statement of Actuarial Assumptions and Methods

MEDICARE ELIGIBLE

Effective January 1, 2010, the Medicare Advantage Plans are mandatory for Medicare-eligible retirees to receive the State subsidy.

The Medicare Advantage Plan monthly retiree premiums for members with Medicare Parts A and B as of January 1, 2018 are as follows:

| Medicare Advantage Plan | Retiree Premium |
|-------------------------|-----------------|
| UHC Standard MA | \$ 25.38 |
| UHC Premium MA | \$ 128.22 |
| BCBSGa Standard MA | \$ 44.88 |
| BCBSGa Premium MA | \$ 155.81 |

Following is a chart detailing expected claims costs for Medicare Advantage Plan retirees blended based on assumed plan elections and normalized to age 65. It is assumed that 95% of retirees will choose UHC plans and 5% of retirees will choose BCBSGa plans. It is further assumed that 40% choose a Premium plan and 60% choose a Standard plan.

| | |
|--------------------|----------|
| | |
| Medicare Advantage | \$ 1,525 |



Schedule C – Statement of Actuarial Assumptions and Methods

HEALTH CARE COST TREND RATES: Following is a chart detailing trend assumptions:

| Year | Pre-65 Retiree Claims Trend | Post-65 Retiree Claims Trend |
|-----------------|--------------------------------|---------------------------------|
| 2017 | 7.50% | 5.500% |
| 2018 | 7.25% | 5.375% |
| 2019 | 7.00% | 5.250% |
| 2020 | 6.75% | 5.125% |
| 2021 | 6.50% | 5.000% |
| 2022 | 6.25% | 4.750% |
| 2023 | 6.00% | 4.750% |
| 2024 | 5.75% | 4.750% |
| 2025 | 5.50% | 4.750% |
| 2026 | 5.25% | 4.750% |
| 2027 | 5.00% | 4.750% |
| 2028 and beyond | 4.75% | 4.750% |

AGE RELATED MORBIDITY: Per capita costs are adjusted to reflect expected cost changes related to age. The increase to the net incurred claims was assumed to be:

| Participant Age | Annual Increase |
|-----------------|--------------------|
| Under 30 | 0.00% |
| 30 – 34 | 1.00% |
| 35 – 39 | 1.50% |
| 40 – 44 | 2.00% |
| 45 – 49 | 2.60% |
| 50 – 54 | 3.30% |
| 55 – 59 | 3.60% |
| 60 – 64 | 4.20% |
| 65 – 69 | 3.00% |
| 70 – 74 | 2.50% |
| 75 – 79 | 2.00% |
| 80 – 84 | 1.00% |
| 85 – 89 | 0.50% |
| 90 and over | 0.00% |



Schedule C – Statement of Actuarial Assumptions and Methods

ANTICIPATED PARTICIPATION: Representative values of the assumed annual rates of member participation and spouse coverage by future retirees are as follows:

| | School |
|--|--------|
| Member Participation*: | |
| If 5 years of service on 1/1/2012 | 95% |
| If less than 5 years of service on 1/1/2012: | |
| Years of Service at Retirement: | |
| 30+ | 95% |
| 25-29 | 90% |
| 20-24 | 80% |
| 15-19 | 65% |
| 10-14 | 50% |
| Under 10 | 20% |
| Spouse Coverage: | |
| If retiree had 5 years of service on 1/1/2012 | 40% |
| If retiree had less than 5 years of service on 1/1/2012: | |
| Years of Retiree Service at Retirement: | |
| 30+ | 32% |
| 25-29 | 30% |
| 20-24 | 26% |
| 15-19 | 20% |
| 10-14 | 18% |
| Under 10 | 8% |

* Active employees currently waiving health coverage are assumed to join the plan at a later date at the rate of 20% and then participate in the same pattern as current participating members.

ACTUARIAL VALUE OF ASSETS: Market Value



Schedule C – Statement of Actuarial Assumptions and Methods

**School Personnel OPEB Fund Members Participating in the
Teachers Retirement System of Georgia**

SERVICE RETIREMENT:

| <u>AGE</u> | Annual Rate | | | |
|------------|---|---|---|---|
| | Male | | Female | |
| | Less than 30 <u>years of</u> <u>service</u> | 30 or more <u>years of</u> <u>service</u> | Less than 30 <u>years of</u> <u>service</u> | 30 or more <u>years of</u> <u>service</u> |
| 50 | 3.5 % | 60.0 % | 3.0 % | 55.0 % |
| 55 | 5.0 | 40.0 | 5.5 | 37.0 |
| 60 | 20.0 | 36.0 | 25.0 | 43.0 |
| 61 | 18.0 | 32.0 | 25.0 | 43.0 |
| 62 | 26.0 | 36.0 | 25.0 | 43.0 |
| 63 | 22.0 | 33.0 | 25.0 | 43.0 |
| 64 | 22.0 | 32.0 | 25.0 | 43.0 |
| 65 | 30.0 | 30.0 | 31.0 | 31.0 |
| 66 | 32.0 | 32.0 | 33.0 | 33.0 |
| 67 | 30.0 | 30.0 | 30.0 | 30.0 |
| 68 | 30.0 | 30.0 | 30.0 | 30.0 |
| 69 | 28.0 | 28.0 | 30.0 | 30.0 |
| 70 | 30.0 | 30.0 | 30.0 | 30.0 |



Schedule C – Statement of Actuarial Assumptions and Methods

**School Personnel OPEB Fund Members Participating in the
Teachers Retirement System of Georgia**

SEPARATION BEFORE SERVICE RETIREMENT:

| <u>Age</u> | <u>Death*</u> | <u>Disability</u> | Annual Rate of | | |
|---------------|---------------|-------------------|---------------------------------------|------------|------------|
| | | | <u>Withdrawal</u> Years of Service | | |
| | | | <u>0-4</u> | <u>5-9</u> | <u>10+</u> |
| <u>Male</u> | | | | | |
| 20 | 0.0320% | 0.0135% | 25.00% | - | - |
| 25 | 0.0349 | 0.0135 | 17.00 | 12.00% | - |
| 30 | 0.0412 | 0.0210 | 13.50 | 7.00 | 8.00% |
| 35 | 0.0717 | 0.0330 | 13.50 | 6.00 | 3.00 |
| 40 | 0.1001 | 0.0550 | 13.00 | 6.00 | 2.50 |
| 45 | 0.1399 | 0.0900 | 12.00 | 6.00 | 2.30 |
| 50 | 0.1983 | 0.1700 | 11.00 | 5.50 | 2.50 |
| 55 | 0.2810 | 0.3000 | 11.00 | 5.50 | 3.00 |
| 60 | 0.4092 | - | 12.00 | 5.50 | - |
| 64 | 0.5330 | - | 13.00 | 6.50 | - |
| <u>Female</u> | | | | | |
| 20 | 0.0177% | 0.0100% | 28.00% | - | - |
| 25 | 0.0192 | 0.0130 | 13.50 | 16.00% | - |
| 30 | 0.0245 | 0.0140 | 13.50 | 8.00 | 6.00% |
| 35 | 0.0441 | 0.0190 | 13.00 | 7.00 | 3.50 |
| 40 | 0.0655 | 0.0390 | 11.00 | 6.50 | 3.00 |
| 45 | 0.1043 | 0.0650 | 10.50 | 6.00 | 2.30 |
| 50 | 0.1555 | 0.1400 | 10.00 | 5.00 | 2.40 |
| 55 | 0.2228 | 0.3400 | 10.00 | 5.00 | 2.75 |
| 60 | 0.3058 | - | 10.50 | 5.50 | - |
| 64 | 0.4015 | - | 13.00 | 6.50 | - |

* The RP-2000 Employee Mortality Table projected to 2025 with projection scale BB is used for death prior to service retirement.



Schedule C – Statement of Actuarial Assumptions and Methods

**School Personnel OPEB Fund Members Participating in the
Teachers Retirement System of Georgia**

DEATHS AFTER RETIREMENT: The RP-2000 White Collar Mortality Table projected to 2025 with projection scale BB (set forward 1 year for males) is used for death after service retirement and beneficiaries. The RP-2000 Disabled Mortality Table projected to 2025 with projection scale BB (set forward two years for males and four years for females) is used for death 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 November 18, 2015, the numbers of expected future deaths are 8-11% 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 death after service retirement and after disability retirement are shown below:

| <u>Age</u> | <u>Annual Rate of Death After</u> | | | |
|------------|-----------------------------------|----------------|------------------------------|----------------|
| | <u>Service Retirement</u> | | <u>Disability Retirement</u> | |
| | <u>Males</u> | <u>Females</u> | <u>Males</u> | <u>Females</u> |
| 40 | 0.0889% | 0.0598% | 2.0938% | 0.6911% |
| 45 | 0.1352 | 0.0942 | 2.3306 | 0.9865 |
| 50 | 0.2136 | 0.1474 | 2.9279 | 1.4019 |
| 55 | 0.3478 | 0.2281 | 3.4400 | 1.6567 |
| 60 | 0.5197 | 0.3638 | 3.5881 | 1.9670 |
| 65 | 0.9071 | 0.6397 | 3.8275 | 2.6129 |
| 70 | 1.4666 | 1.1229 | 4.7566 | 3.6157 |
| 75 | 2.5894 | 1.9017 | 6.3153 | 5.0131 |
| 80 | 4.5768 | 3.1857 | 8.3527 | 6.9358 |
| 85 | 8.0034 | 5.4864 | 10.9122 | 9.6851 |
| 90 | 15.1656 | 9.5675 | 17.2787 | 15.3358 |
| 95 | 25.0467 | 16.0813 | 27.1263 | 21.4644 |



Schedule C – Statement of Actuarial Assumptions and Methods (continued)

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 | | |
| | <u>0-4</u> | <u>5-9</u> | <u>10 & Over</u> |
| <u>Males</u> | | | |
| 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 | |
| <u>Females</u> | | | |
| 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 C – Statement of Actuarial Assumptions and Methods (continued)

| Age | Annual Rates of | | |
|-----|-----------------|----------------|------------|
| | Death | | 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 |



Schedule C – Statement of Actuarial Assumptions and Methods (continued)

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 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 | Males | Females | Age | Males | Females |
|-----|---------|---------|-----|---------|---------|
| 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 – Actuarial Cost Method

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 3.87% for disclosure), of each participant's expected retiree health benefit at retirement or death based on his age and service. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the probability of his terminating with a service, disability or survivor's benefit. The present value of the expected benefits payable on account of the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Plan on account of the present group of participants and beneficiaries.
2. The service cost is determined using the "entry age normal" method. Using this method, a calculation is made to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of each participant during the entire period of his anticipated covered service, would be required in addition to the contributions of the participant to meet the cost of all benefits payable on his behalf.
3. The present value of future unfunded accrued liability contributions is determined by subtracting the present value of prospective normal contributions together with the current assets held, from the present value of expected benefits to be paid from the Plan.