



**Cavanaugh Macdonald**  
**CONSULTING, LLC**

*The experience and dedication you deserve*

## **GASB STATEMENT NO. 74 REPORT**

**FOR THE GEORGIA STATE EMPLOYEES POST-EMPLOYMENT**

**HEALTH BENEFIT FUND**

**PREPARED AS OF JUNE 30, 2017**

**SUBMITTED AUGUST 7, 2018**





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

August 7, 2018

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

Dear Members of the Board:

Presented in this report is information to assist the Georgia State 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, 2017. 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, 2016 was used as the basis for much of the information presented as of June 30, 2017 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

August 7, 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*

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**REPORT OF THE ANNUAL GASB STATEMENT NO. 74  
REQUIRED INFORMATION FOR THE  
GEORGIA STATE EMPLOYEES POST-EMPLOYMENT HEALTH BENEFIT FUND  
  
PREPARED AS OF JUNE 30, 2017**

<b>Valuation Date (VD):</b>	June 30, 2016
<b>Prior Measurement Date:</b>	June 30, 2016
<b>Measurement Date (MD):</b>	June 30, 2017
<b>Membership Data as of June 30, 2016:</b>	
Inactive Members or Beneficiaries Currently Receiving Benefits	37,774
Active Members	<u>50,239</u>
Total Membership	88,013
<b>Discount Rate:</b>	
Long-Term Expected Rate of Return	3.88%
Municipal Bond Index Rate at Measurement Date	3.56%
Municipal Bond Index Rate at Prior Measurement Date	3.01%
Year in which Fiduciary Net Position is Projected to be Depleted	2029
Single Equivalent Interest Rate at Measurement Date	3.60%
Single Equivalent Interest Rate at Prior Measurement Date	3.09%
<b>Net OPEB Liability:</b>	
Total OPEB Liability (TOL)	\$4,929,142,428
Fiduciary Net Position (FNP)	<u>854,937,155</u>
Net OPEB Liability (NOL = TOL – FNP)	\$4,074,205,273
FNP as a percentage of TOL	17.34%



## ***Section II – Introduction***

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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, 2017 (the Measurement Date) to assist the Georgia State 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, 2016.

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)*

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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, 2017 was 3.56%. 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 3.60% meets the requirements of GASB 74, as it is our understanding that the Fund is currently invested in fixed income assets and the employer contributions over the last five years are such that, if the pattern continues, the Fund will be depleted in 2029.

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***

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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, 2016, the date of the valuation used to determine the June 30, 2017 Total OPEB Liability.

#### **Membership**

	<b>Number</b>
Inactive Members Or Their Beneficiaries Currently Receiving Benefits	37,774
Inactive Members Entitled To But Not Yet Receiving Benefits	0
Active Members	50,239
Total	88,013

**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, 2017, is presented in the following table.

	<b>Fiscal Year Ending June 30</b>
	<b>2017</b>
Total OPEB Liability	\$ 4,929,142,428
Fiduciary Net Position	<u>854,937,155</u>
Net OPEB Liability	\$ 4,074,205,273
Ratio of Fiduciary Net Position to Total OPEB Liability	17.34%



### ***Section III – Financial Statement Notes (continued)***

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**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, 2017 was determined based on an actuarial valuation prepared as of June 30, 2016, using the following actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017:

<b>Inflation</b>	2.75 percent
<b>Salary increases</b>	
ERS	3.25 – 7.00 percent, including inflation
JRS	4.50 percent, including inflation
LRS	None
<b>Long-term investment rate of return</b>	3.88 percent compounded annually, net of investment expense, and including inflation
<b>Municipal Bond Index Rate</b>	3.56 percent
<b>Year FNP is projected to be depleted</b>	2029
<b>Single Equivalent Interest Rate</b>	3.60 percent
<b>Healthcare cost trend rate</b>	
Pre-Medicare Eligible	7.75%
Medicare Eligible	5.75%
Ultimate trend rate	
Pre-Medicare Eligible	5.00%
Medicare Eligible	5.00%
Year of Ultimate trend rate	2022
<b>Mortality</b>	The RP-2000 Combined Mortality Table projected to 2025 with projection scale BB and set forward 2 years for both males and females is used for the period after service retirement and for dependent beneficiaries. The RP-2000 Disabled Mortality Table projected to 2025 with projection scale BB and set back 7 years for males and set forward 3 years for females is used for the period after disability retirement.



### ***Section III – Financial Statement Notes (continued)***

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The actuarial assumptions used in the June 30, 2016 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.

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, 2016 valuation were based on a review of recent plan experience done concurrently with the June 30, 2016 valuation.

The long-term expected return on plan assets is to be reviewed as asset allocations and/or capital market assumptions change. Several factors should be considered in evaluating the long-term rate of return assumption, including long-term historical data, estimates inherent in current market data, and a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected return, net of investment expense and inflation), as developed by the investment consultant for each major asset class. These ranges should be 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 then adding expected inflation. The capital market assumptions to be developed by the investment consultant may cover a shorter investment horizon and may not be useful in setting the long-term rate of return for funding OPEB plans which are likely to cover a longer timeframe. The assumption is intended to be a long-term assumption and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.

Upon adoption of the long-term rate of return by the Plan, the target asset allocation, as provided by the Plan's investment consultant, are to be summarized in a manner suggested by the following table. The expected real rate of return, as provided by the investment consultant, is 0.094% per month.

<b>Asset Class</b>	<b>Target Allocation</b>
Fixed Income	100.00%
Agency	18.05%
U.S. Treasury	9.27%
Cash	70.40%
Asset Back Securities	2.28%



### **Section III – Financial Statement Notes (continued)**

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*Discount rate (SEIR).* For the purpose of this report, we have determined that a discount rate of 3.60% meets the requirements of GASB 74, as it is our understanding that the Plan will be funded in fixed income assets and the fund is projected to be depleted in 2029.

#### **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	3,367,436,624	4,074,205,273	4,968,826,127

#### **Paragraph 35.b.(2)**

- (a) **Discount rate.** The discount rate used to measure the Total OPEB Liability was 3.60% 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 budgeted and then averaged over the prior 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 2115.
- (f) **Assumed asset allocation:** The target asset allocation, as provided by the investment consultant, are summarized in the following table. The expected real rate of return, as provided by the investment consultant, is 0.094% per month.:



**Section III – Financial Statement Notes (continued)**

Asset Class	Target Allocation
Fixed Income	100.00%
Agency	18.05%
U.S. Treasury	9.27%
Cash	70.40%
Asset Back Securities	2.28%

**(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 3.60 percent, as well as the Net OPEB Liability calculated using a discount rate that is 1-percentage-point lower (2.60 percent) or 1-percentage-point higher (4.60 percent) than the current rate:

	1% Decrease (2.60%)	Current Discount Rate (3.60%)	1% Increase (4.60%)
Net OPEB Liability	4,872,371,420	4,074,205,273	3,437,230,008

**Paragraph 35.c.:** June 30, 2016 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, 2016 through June 30, 2017, 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, 2017, as shown in the following table:



**Section III – Financial Statement Notes (continued)**

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<b>TOL Roll Forward</b>	
(a) TOL as of June 30, 2016*	\$5,197,437,818
(b) Actual Benefit Payments for the Period July 1, 2016 – June 30, 2017	(162,144,513)
(c) Interest on TOL = [(a) x Prior SEIR] - [(b) x Prior SEIR x 0.50]	158,095,696
(d) Service Cost for the Period July 1, 2016 – June 30, 2017 at the End of the Period	119,685,673
(e) Change Due to Change in SEIR	<u>(383,932,246)</u>
(f) TOL Rolled Forward to June 30, 2017 = (a) + (b) + (c) + (d) + (e)	\$4,929,142,428

\* The TOL as of June 30, 2016 used in the roll forward was calculated using the discount rate as of the Prior Measurement Date.



#### ***Section IV – Required Supplementary Information***

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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
<b>Total OPEB Liability</b>										
Service Cost	\$119,685,673									
Interest	158,095,696									
Benefit changes	0									
Difference between expected and actual experience	0									
Changes of assumptions	(383,932,246)									
Benefit payments	(162,144,513)									
Refunds of contributions	0									
<b>Net change in Total OPEB Liability</b>	<b>\$(268,295,390)</b>									
<b>Total OPEB Liability - beginning</b>	<b>\$5,197,437,818</b>									
<b>Total OPEB Liability - ending (a)</b>	<b>\$4,929,142,428</b>									
<b>Plan Fiduciary Net Position</b>										
Contributions – employer	\$498,201,623									
Contribution - non-employer	0									
Contributions – member*	0									
Net investment income	4,695,785									
Benefit payments	(162,144,513)									
Administrative expense	(2,077,117)									
Refund of contributions	0									
Other	0									
<b>Net change in Plan Fiduciary Net Position</b>	<b>\$338,675,778</b>									
<b>Plan Fiduciary Net Position – beginning</b>	<b>\$516,261,377</b>									
<b>Plan Fiduciary Net Position - ending (b)</b>	<b>854,937,155</b>									
<b>Net OPEB Liability - ending (a) - (b)</b>	<b>\$4,074,205,273</b>									



***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	\$4,929,142,428									
Plan Fiduciary Net Position	854,937,155									
Net OPEB Liability	\$4,074,205,273									
Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	17.34%									
Covered payroll	\$2,483,060,000									
Net OPEB Liability as a percentage of covered-employee payroll	164.08%									



## ***Schedule B – Summary of Benefit Provisions Valued***

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### **SUMMARY OF BENEFIT PROVISIONS VALUED** **State Employee 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 the retirement systems listed below. “Old Plan” means the plan applicable to members beginning employment prior to July 1, 1982. “New Plan” means the plan applicable to members employed on or after July 1, 1982 and before January 1, 2009. “GSEPS” means the plan applicable to members employed on or after January 1, 2009.

- Employees’ Retirement System (GSEP Non-Police)
  - Service Retirement: 25 years of service or age 60 with 10 years of service
  - Disability Retirement: 15 years of service
  - Active Death Surviving Spouse: 15 years of service
- Employees’ Retirement System (GSEP Police)
  - Service Retirement: 30 years of service or age 55 with 10 years of service
  - Disability Retirement: 15 years of service
  - Active Death Surviving Spouse: 13 years and 4 months of service
- Employees’ Retirement System (Police)
  - Service Retirement: 30 years of service or age 55 with 10 years of service
  - Disability Retirement: 13 years and 4 months of service
  - Active Death Surviving Spouse: 13 years and 4 months of service
- Employees’ Retirement System (Old & New Plan Non-Police)
  - Service Retirement: 25 years of service or age 60 with 10 years of service
  - Disability Retirement: 13 years and 4 months of service
  - Active Death Surviving Spouse: 13 years and 4 months of service or age 60 with 10 years of service
- Judicial Retirement System
  - Service Retirement: age 60 with 10 years of service
  - Disability Retirement: 4 years of service
  - Active Death Surviving Spouse: 10 years of service
- Legislative Retirement System
  - Service Retirement: age 60 with 8 years of service
  - Disability Retirement: age 60 with 8 years of service
  - Active Death Surviving Spouse: 15 years of service or age 60 with 8 years of service

Retirees from other systems who may be eligible for post-employment benefits other than pensions were included in the valuation if they were included in the DCH census data. Employees with payroll location codes less than 60000 were included in the State Employee OPEB Fund.



***Schedule B – Summary of Benefit Provisions Valued***

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Approximately 7% of these employees are members of the Teachers Retirement System. Information about this System can be found in the GASB 74 report for the School Employee OPEB Fund.

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 10% pay the tobacco surcharge.



***Schedule B – Summary of Benefit Provisions Valued (continued)***

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**2017 Plan Options**

The plan designs offered for the 2017 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, 2017.

**STATE HEALTH BENEFIT PLAN ANNUITANT UNDER 65 RATES  
JANUARY 1 - DECEMBER 31, 2017**

	<b>YOU</b>	<b>YOU + CHILD(REN)</b>	<b>YOU + SPOUSE</b>	<b>YOU + FAMILY</b>
BCBS Gold	\$164.36	\$298.72	\$405.84	\$540.20
BCBS Silver	\$108.49	\$203.74	\$288.51	\$383.76
BCBS Bronze	\$68.96	\$136.54	\$205.50	\$273.08
BCBS HMO	\$130.96	\$241.94	\$335.69	\$446.67
UHC HMO	\$166.23	\$301.91	\$409.78	\$545.45
UHC HDHP	\$51.01	\$106.02	\$167.80	\$222.82
Kaiser HMO	\$138.64	\$255.10	\$352.14	\$468.59

The Medicare Advantage Plan monthly retiree premiums for members with Medicare Parts A and B as of January 1, 2017 are as follows:

<b>Medicare Advantage Plan</b>	<b>Retiree Premium</b>
UHC Standard MA	\$ 25.38
UHC Premium MA	\$ 108.22
BCBSGa Standard MA	\$ 47.51
BCBSGa Premium MA	\$ 135.24



***Schedule B – Summary of Benefit Provisions Valued (continued)***

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

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### **OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS**

**VALUATION DATE:** June 30, 2016

**DISCOUNT RATE:** 3.60% 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 provisions such as the excise tax on high-value health insurance plans beginning in 2020 (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*	\$ 11,677

\*Retirees selecting one of the HRA plans will also receive annual credits to use for eligible medical expenses. For 2016, 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***

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### **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, 2017 are as follows:

<b>Medicare Advantage Plan</b>	<b>Retiree Premium</b>
UHC Standard MA	\$ 25.38
UHC Premium MA	\$ 108.22
BCBSGa Standard MA	\$ 47.51
BCBSGa Premium MA	\$ 135.24

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 75% of retirees will choose UHC plans and 25% of retirees will choose BCBSGa plans. It is further assumed that 42% choose a Premium plan and 58% choose a Standard plan.

Medicare Advantage*	\$ 1,531

\*An adjustment is made for current retirees with no Medicare Part A coverage.

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

<b>Year</b>	<b>Pre-65 Retiree Claims Trend</b>	<b>Post-65 Retiree Claims Trend</b>
2016	7.75%	5.75%
2017	7.00%	5.50%
2018	6.50%	5.25%
2019	6.00%	5.00%
2020	5.50%	5.00%
2021	5.25%	5.00%
2022 and beyond	5.00%	5.00%



***Schedule C – Statement of Actuarial Assumptions and Methods***

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**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 20	0.00%
20 – 24	0.65%
25 – 29	0.65%
30 – 34	1.25%
35 – 39	1.90%
40 – 44	2.50%
45 – 49	3.25%
50 – 54	4.15%
55 – 59	4.50%
60 – 64	5.25%
65 – 69	3.75%
70 – 74	3.15%
75 – 79	2.50%
80 – 84	1.25%
85 – 89	0.65%
90 and over	0.00%

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

	State
Participation if currently participating in health coverage	100%
Participation if currently waiving health coverage	0%
Spouse Coverage	40%

**ACTUARIAL VALUE OF ASSETS:** Market Value



***Schedule C – Statement of Actuarial Assumptions and Methods***

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**State Employee OPEB Fund Members Participating in the  
Employees Retirement System of Georgia**

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**SEPARATIONS BEFORE RETIREMENT:** The RP-2000 Employee Mortality Table projected to 2025 with projection scale BB is used for both males and females while in active service. Representative values of the assumed annual rates of separation other than retirement for non-law enforcement officers are as follows. Special rates of retirement, disability and termination apply to law enforcement officers.

Age	Annual Rates of			
	<u>Death</u>		<u>Disability</u>	
	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
20	0.0320%	0.0177%	0.05%	0.02%
25	0.0349	0.0192	0.05	0.02
30	0.0412	0.0245	0.05	0.02
35	0.0717	0.0441	0.05	0.02
40	0.1001	0.0655	0.25	0.10
45	0.1399	0.1043	0.48	0.25
50	0.1983	0.1555	0.70	0.45
55	0.2810	0.2228	1.05	0.73
60	0.4092	0.3058	--	--
65	0.5600	0.4304	--	--
69	0.6518	0.5390	--	--



***Schedule C – Statement of Actuarial Assumptions and Methods***

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



**Schedule C – Statement of Actuarial Assumptions and Methods**

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

Age	Old Plan							
	Early Retirement		Age 60 or 30 years		34 years		More than 34 years	
	Male	Female	Male	Female	Male	Female	Male	Female
55	3.0%	3.5%	7.5%	10.0%	100.0%	100.0%	75.0%	90.0%
56	3.0	5.0	7.5	10.0	100.0	100.0	70.0	70.0
57	3.0	5.0	10.5	10.0	100.0	100.0	70.0	70.0
58	4.5	5.0	14.0	14.0	97.5	100.0	70.0	65.0
59	6.0	5.0	17.5	16.0	97.5	95.0	70.0	65.0
60			15.0	20.0	97.5	95.0	40.0	55.0
62			32.0	40.0	97.5	95.0	40.0	65.0
64			20.0	25.0	90.0	90.0	15.0	50.0
66			35.0	40.0	35.0	40.0	35.0	40.0
68			35.0	25.0	35.0	25.0	35.0	25.0
70			35.0	35.0	35.0	35.0	35.0	35.0
75			100.0	100.0	100.0	100.0	100.0	100.0

Age	New Plan and GSEPS			
	Early Retirement		Normal Retirement	
	Male	Female	Male*	Female**
55	7.0%	6.5%	60.0%	50.0%
56	7.0	7.0	60.0	40.0
57	8.0	8.0	50.0	40.0
58	9.0	9.0	45.0	40.0
59	11.0	12.0	35.0	40.0
60			25.0	30.0
62			40.0	40.0
64			25.0	27.0
66			32.0	35.0
68			25.0	25.0
70			30.0	30.0
75			100.0	100.0

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

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



### *Schedule C – Statement of Actuarial Assumptions and Methods*

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

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



***Schedule C – Statement of Actuarial Assumptions and Methods***

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**State Employee OPEB Fund Members Participating in the  
Georgia Judicial Retirement System**

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

Age	Annual Rates of			
	Withdrawal	Death		Disability
		Males	Females	
20	4.0%	.032%	.018%	.03%
25	4.0	.035	.019	.03
30	4.0	.041	.025	.05
35	4.0	.072	.044	.08
40	6.0	.100	.066	.10
45	4.0	.140	.104	.18
50	3.0	.198	.156	.25
55	2.5	.281	.223	.45
60	2.5	.409	.306	.73
65	2.5	.560	.430	1.18

**RETIREMENT:** The assumed annual rates of retirement are shown below.

<u>Age</u>	<u>Annual Rates of Retirement</u>
60	15%
61	10
62	12
63 – 64	10
65 – 69	15
70 – 74	25
75	100



***Schedule C – Statement of Actuarial Assumptions and Methods***

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**DEATHS AFTER RETIREMENT:** Since the System has minimal post-retirement mortality experience, the System uses the same mortality tables used for the Employees' Retirement System of Georgia. The RP-2000 Combined Mortality Table projected to 2025 with projection scale BB and set forward 2 years for both males and females is used for the period after retirement and for dependent beneficiaries. For the period after disability retirement, the RP-2000 Disabled Mortality Table projected to 2025 with projection scale BB and set back 7 years for males and set forward 3 years for females is used. There is a margin for future mortality improvement in the tables used by the System. Based on the results of the most recent experience study adopted by the Board on December 17, 2015, the numbers of expected future deaths are 9-12% less than the actual number of deaths that occurred during the study period for healthy retirees and 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	0.113%	0.079%	65	1.130%	0.899%
45	0.161	0.123	70	1.870	1.528
50	0.247	0.187	75	3.215	2.522
55	0.425	0.292	80	5.516	4.163
60	0.699	0.492	85	9.563	7.124



***Schedule C – Statement of Actuarial Assumptions and Methods***

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**State Employee OPEB Fund Members Participating in the  
Georgia Legislative Retirement System**

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

Age	Annual Rates of		
	Withdrawal	Death	
		Males	Females
20	8.0%	.032%	.018%
25	8.0	.035	.019
30	8.0	.041	.025
35	8.0	.072	.044
40	8.0	.100	.066
45	8.5	.140	.104
50	8.5	.198	.156
55	9.0	.281	.223
60	9.0	.409	.306
65	9.0	.560	.430

**SERVICE RETIREMENT:** The assumed annual rates of retirement are shown below:

Age	Annual Rate	Age	Annual Rate
60	10%	66	12%
61	10%	67	15%
62	15%	68	12%
63	10%	69	12%
64	10%	70-74	20%
65	12%	75	100%

**DEATHS AFTER RETIREMENT:** Since the System has minimal post-retirement mortality experience, the System uses the same mortality tables used for the Employees' Retirement System of Georgia. The RP-2000 Combined Mortality Table projected to 2025 with projection scale BB and set forward 2 years for both males and females is used for the period after service retirement and for dependent beneficiaries. Since there are no disability retirements in the System, there are no disability mortality rates utilized at this time. 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



***Schedule C – Statement of Actuarial Assumptions and Methods***

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by the Board on December 17, 2015, the numbers of expected future deaths are 9-12% less than the actual number of deaths that occurred during the study period for healthy retirees.

Representative values of the assumed annual rates of mortality after service retirement are as follows:

Age	Males	Females	Age	Males	Females
40	.113%	.079%	65	1.130%	.899%
45	.161	.123	70	1.870	1.528
50	.247	.187	75	3.215	2.522
55	.425	.292	80	5.516	4.163
60	.699	.492	85	9.563	7.124

Note: Approximately 7% of State Employee OPEB Fund members participate in the Georgia Teachers Retirement System. Assumptions for these members can be found in the GASB 74 report for the School Employee OPEB Fund.



#### ***Schedule D – Actuarial Cost Method***

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1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 3.60% 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.