Segal Consulting

State of Connecticut Other Post-Employment Benefits Program

Governmental Accounting Standards Board (GASB) Statement No. 74 Accounting Valuation Report for Reporting Date June 30, 2017

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January 5, 2018

Thomas C. Woodruff, PhD
Director
Healthcare Policy & Benefit Services Division
Office of the State Comptroller
55 Elm Street
Hartford, Connecticut 06106-1775

Dear Dr. Woodruff:

We are pleased to submit this Governmental Accounting Standards Board Statement (GASB) No. 74 Accounting Valuation as of June 30, 2017. It contains the disclosure of the Net OPEB Liability (NOL) as of June 30, 2017 to be disclosed in order to comply with GASB 74.

The actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions used in this valuation and described in Section 3, Exhibit I are reasonably related to the experience of and the expectations for the Plan. The actuarial projections are based on these assumptions and the plan of benefits as summarized in Section 3, Exhibit II.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By:

Daniel J. Rhodes, FSA, MAAA	*Theresa A. DeMattie*
Vice President and Consulting Actuary	*Benefits Consultant*

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SECTION 1

EXECUTIVE SUMMARY

SECTION 2

VALUATION RESULTS

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SUPPORTING INFORMATION

Important Information about Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to defining future uncertain obligations of a postretirement health plan. As such, it will never forecast the precise future stream of benefit payments. It is an estimated forecast – the actual cost of the plan will be determined by the benefits and expenses paid, not by the actuarial valuation.

In order to prepare a valuation, Segal Consulting ("Segal") relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. For example, a plan may provide health benefits to post-65 retirees that coordinates with Medicare. If so, changes in the Medicare law or administration may change the plan's costs without any change in the terms of the plan itself. It is important for the State to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by the plan. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is not necessary to have perfect data for an actuarial valuation: the valuation is an estimated forecast, not a prediction. The uncertainties in other factors are such that even perfect data does not produce a "perfect" result. Notwithstanding the above, it is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** Part of the cost of a plan will be paid from existing assets – the balance will need to come from future contributions and investment income. The valuation is based on the asset values as of the valuation date, typically reported by the auditor. Some plans include assets, such as private equity holdings, real estate, or hedge funds that are not subject to valuation by reference to transactions in the marketplace. A snapshot as of a single date may not be an appropriate value for determining a single year's contribution requirement, especially in volatile markets. Plan sponsors often use an "actuarial value of assets" that differs from market value to reflect gradually year-to-year changes in the market value of assets in determining the contribution requirements.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. To determine the future costs of benefits, Segal collects claims, premiums, and enrollment data in order to establish a baseline cost for the valuation measurement, and then develops short- and long-term health care cost trend rates to project increases in costs in future years. This forecast also requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year, as well as forecasts of the plan's benefits for each of those events. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets or, if there are no assets, a rate of return based on a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions the actuary selects within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model necessarily uses approximations and estimates that may lead to significant changes in our results but will have no impact on the actual cost of the plan. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

Given the above, the user of Segal's actuarial valuation (or other actuarial calculations) needs to keep the following in mind:

- The actuarial valuation is prepared for use by the State. It includes information for compliance with accounting standards and for the plan's auditor. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- If the State is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- An actuarial valuation is a measurement at a specific date – it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- Sections of this report include actuarial results that are not rounded, but that does not imply precision.
- Critical events for a plan include, but are not limited to, decisions about changes in benefits and contributions. The basis for such decisions needs to consider many factors such as the risk of changes in plan enrollment, emerging claims experience, health care trend, and investment losses, not just the current valuation results.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The State should look to their other advisors for expertise in these areas.
- While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
- Segal's report shall be deemed to be final and accepted by the State upon delivery and review. The State should notify Segal immediately of any questions or concerns about the final content.

As Segal Consulting has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan.

Purpose

This report presents certain disclosure information for the State of Connecticut (the "State") OPEB plan as of June 30, 2017, required by Governmental Accounting Standards Board (GASB) Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other than Pension Plans.* The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may be significantly different from the results reported here.

Highlights of the Valuation

- The Net OPEB liability (NOL) as of June 30, 2017 is $17,385,688,000.
  - The Net OPEB Liability (NOL) is equal to the difference between the Total OPEB Liability (TOL) and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets. The TOL as of June 30, 2017 is $17,928,030,000 and the Plan Fiduciary Net Position as of June 30, 2017 is $542,342,000, resulting in an NOL of $17,385,688,000.
  - The discount rate used to determine the TOL and NOL was 3.74% as of June 30, 2017 and 3.01% as of June 30, 2016.
- As of June 30, 2017, the ratio of the Plan's Fiduciary Net Position to the Total OPEB Liability (the funded ratio) is 3.03%.
- Please see our OPEB valuation report as of June 30, 2015 for the State of Connecticut, published August 24, 2016, for all assumptions, methodology and plan provisions, except for those noted below. The Accrued Liability was $19,119,581,000 as of July 1, 2015. The liability was expected to increase by $1,777,825,000 due to normal plan operations. The total remaining change was the net effect of the following:

1. The implementation of a Medicare Advantage plan for the State's Medicare-eligible retirees effective January 1, 2018. As noted in our Memorandum dated May 31, 2017, these calculations are based on an average premium rate, effective January 1, 2018, for current retirees of $826 per year for the medical portion of the MA-PD, and $2,747 per year for the prescription portion. Future retirees were valued with the post-2011 plan rates of $713 per year for medical and $2,018 for prescription drug. The calculations account for the rate guarantees proposed by UHC for 2019, and assume costs beyond that point increase with our standard trend assumptions from our valuation report. The impact on liability was a decrease of $5,309,407,000.

2. We also reflected the proposed changes in the SEBAC agreement for non-Medicare retirees. Those changes pertaining to premium shares and health care design changes, affect new retirees on or after October 2, 2017. We have reflected these changes by altering the short term Medical and Drug Cost trend rates for non-Medicare eligible and pre-65 retirees. In addition, we have reviewed the non-Medicare retiree claims experience for the past fiscal year and adjusted our first-year trend assumption to reflect this actual experience. The impact on liability was a decrease of $723,611,000.

3. The discount rate was changed from 5.70% as of June 30, 2015 to 3.01% as of June 30, 2016 and 3.74% as of June 30, 2017. The impact on liability was an increase of $5,228,563,000.

4. The actuarial cost method changed from Projected Unit Credit as of June 30, 2015 to Entry Age Normal as of June 30, 2017. The impact on liability was a decrease of $2,164,921,000.

January 5, 2018

Actuarial Certification

This is to certify that Segal Consulting, a Member of The Segal Group, Inc. has conducted an actuarial valuation of certain benefit obligations of the State of Connecticut's Other Post-employment Benefits Program as of June 30, 2017, in accordance with generally accepted actuarial principles and practices. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statement No. 74 for the determination of the liability for postemployment benefits other than pensions.

The actuarial valuation is based on the plan of benefits verified by the State and reliance on asset, participant, premium, claims and expense data provided by the State or from vendors employed by the State. Segal Consulting does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. Segal, however, does review the data for reasonableness and consistency.

The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may be significantly different from the results reported here. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security at termination of the plan, or determining short-term cash flow requirements.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: retiree group benefits program experience or rates of return on assets differing from that anticipated by the assumptions; changes in 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); and changes in retiree group benefits program provisions or applicable law. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. The scope of the assignment did not include performing an analysis of the potential change of such future measurements except where noted.

The actuarial calculations were directed under my supervision. The signing actuary is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of my knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in my opinion, the assumptions as approved by the State are reasonably related to the experience of and the expectations for the Plan.

Daniel J. Rhodes

Daniel J. Rhodes, FSA, MAAA
Vice President and Consulting Actuary

EXHIBIT 1
Plan Membership

Plan membership: At June 30, 2015, The State's plan membership consisted of the following:

Current retirees, beneficiaries, and dependents	70,776
Current active participants	53,101
Terminated participants entitled but not yet eligible	484
Total	124,361

Note: We have assumed other general information about the Plan will be provided by the State's auditors.

EXHIBIT 2
Net OPEB Liability

The components of the Net OPEB Liability of the State of Connecticut are as follows:

	June 30, 2017
Total OPEB liability	$17,928,030,000
Plan fiduciary net position	542,342,000
Net OPEB Liability	17,385,688,000
Plan fiduciary net position as a percentage of the total OPEB liability*	3.03%

* *These funded percentages are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for or the amount of future contributions.*

Actuarial assumptions. The total OPEB liability was measured by an actuarial valuation as of June 30, 2015 along with the adjustments described in Section 1, page 3, using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Payroll growth rate	3.75%
Discount rate	3.74% as of June 30, 2017 and 3.01% as of June 30, 2016.
Investment rate of return	6.90%
Health care trend rates	
*Medical**	5.00%
*Prescription Drug**	10.00% graded to 5.0% over 5 years
Dental and Part B	5.00%

*Short term rates were altered to reflect proposed changes to Non-Medicare retirees and implementation of the Medicare Advantage plan. (See Section 3, Exhibit I, pages 27-28 for more details.)

EXHIBIT 2 (continued)

Net OPEB Liability

Mortality Rates:

Healthy

SERS, PJERS, JFSMCCRS, ARP, HYBRID, OTHER

RP-2000 Combined Healthy Mortality Table with sex-distinct rates with male rates projected 15 years (set back 2 years) and female rates projected 25 years (set back one year) under Scale AA

STRS

Headcount-Weighted RP-2014 White Collar Mortality Table with employee and annuitant rates blended from ages 50 to 80 projected to year 2020 under Scale BB and further adjusted to grade in increases (5% for females and 8% for males) to rates over ages 80

Disabled

SERS, PJERS, JFSMCCRS, ARP, HYBRID, OTHER

RP-2000 Disabled Retiree Mortality Table with sex-distinct rates using 55% of the male rates for male participants and 80% of the female rates for female participants

STRS

Headcount-Weighted RP-2014 Disabled Retiree Mortality Table projected to 2017 with Scale BB

The above tables were selected based on the most recent pension valuations or experience studies available for each group and were assumed to contain provision appropriate to reasonably reflect future mortality improvement based on a review by the pension actuary of the mortality experience. We have no reason to doubt their applicability here.

Detailed information regarding all actuarial assumptions can be found in Section 3, Exhibit I.

EXHIBIT 3

Determination of Discount Rate and Investment Rates of Return

DEVELOPMENT OF LONG-TERM RATE

We used the same long-term expected rate of return as the one developed by Cavanaugh MacDonald Consulting, LLC in their GASB Statement No. 67 Report for the Connecticut State Employees' Retirement System prepared as of June 30, 2017. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized below:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Large Cap U.S. Equities	21.0%	5.8%
Developed Non-U.S. Equities	18.0	6.6
Emerging Markets (Non-U.S.)	9.0	8.3
Real Estate	7.0	5.1
Private Equity	11.0	7.6
Alternative Investment	8.0	4.1
Fixed Income (Core)	8.0	1.3
High Yield Bonds	5.0	3.9
Emerging Market Bond	4.0	3.7
Inflation Linked Bonds	5.0	1.0
Cash	4.0	0.4

Nature of Assets: The assets are in an irrevocable OPEB trust.

Discount Rate: The discount rate is a blend of the long-term expected rate of return on OPEB Trust assets and a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rate of AA/Aa or higher (3.58% as of June 30, 2017 and 2.85% as of June 30, 2016). The blending is based on the sufficiency of projected assets to make projected benefit payments.

EXHIBIT 4
Sensitivity

Sensitivity of the net OPEB liability to changes in the discount rate. The following presents the NOL of the State of Connecticut as well as what the State of Connecticut's NOL would be if it were calculated using a discount rate that is 1-percentage-point lower (2.74%) or 1-percentage-point higher (4.74%) than the current rate.

	1% Decrease in Discount Rate (2.74%)	Current Discount Rate (3.74%)	1% Increase in Discount Rate (4.74%)
State of Connecticut's net OPEB liability as of June 30, 2017	$20,115,969,000	$17,385,688,000	$15,158,837,000

Sensitivity of the net OPEB liability to changes in the healthcare cost trend rates. The following presents the net OPEB liability of the State of Connecticut, as well as what the State of Connecticut's net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage-point lower or 1-percentage-point higher than the current rate:

	1% Decrease	Current Trend Rates	1% Increase
State of Connecticut's net OPEB liability as of June 30, 2017	$14,936,332,000	$17,385,688,000	$20,477,885,000

EXHIBIT 5
Schedule of Changes in Net OPEB Liability – Last Ten Fiscal Years

	Year End June 30,								
	2017	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**
Total OPEB liability									
Service cost	$1,081,923,000								
Interest	849,907,000								
Differences between expected and actual experience	(97,527,000)								
Changes of assumptions	(1,936,042,000)								
Changes of benefit terms	(8,853,455,000)								
Benefit payments	(639,467,000)	(Historical information prior to implementation of GASB 74/75 is not required)							
Net change in Total OPEB Liability	($9,594,661,000)								
Total OPEB Liability - beginning	27,522,691,000								
Total OPEB Liability - ending (a)	$17,928,030,000								
Plan Fiduciary Net Position									
Contributions - employer	$667,401,000								
Contributions - employee	120,783,000								
Net investment income	53,194,000								
Benefit payments	(639,467,000)	(Historical information prior to implementation of GASB 74/75 is not required)							
Other	(187,000)								
Administrative expenses	0								
Net change in Fiduciary Net Position	$201,724,000								
Plan Fiduciary Net Position - beginning	340,618,000								
Plan Fiduciary Net Position - ending (b)	$542,342,000								
Net OPEB liability – ending: (a)-(b)	$17,385,688,000								
Plan's fiduciary net position as a percentage of the total OPEB liability	3.03%	(Historical information prior to implementation of GASB 74/75 is not required)							
Covered-employee payroll	N/A								
Net OPEB liability as a percentage of covered-employee payroll	N/A								

Note: Please enter covered payroll for fiscal 2017

EXHIBIT 5 (continued)

Schedule of Changes in Net OPEB Liability – Last Ten Fiscal Years

Notes to Schedule:

Changes in Assumptions: The discount rate was increased from 3.01% as of June 30, 2016 to 3.74% as of June 30, 2017.

Changes in Plan Provisions: The implementation of Medicare Advantage plan for the State's Medicare-eligible retirees effective January 1, 2018.

The inclusion of the proposed changes in the SEBAC agreement for non-Medicare retirees. Those changes pertaining to premium shares and health care design changes, affect new retirees on or after October 2, 2017.

EXHIBIT 6

Schedule of Contributions – Last Ten Fiscal Years

	Year End June 30,									
	2017	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**
Actuarially determined contribution	$1,043,143,000									
Contributions in relation to the actuarially determined contribution	667,401,000									
Contribution deficiency (excess)	$375,742,000									
Covered-employee payroll	N/A									
Contributions as a percentage of covered-employee payroll	N/A				(Historical information prior to implementation of GASB 74/75 is not required)					

Note: Please enter covered payroll for fiscal 2017.

Notes to Schedule:

Methods and assumptions used to establish actuarially determined contribution rates for fiscal 2017:

Valuation date:	Actuarially determined contribution for fiscal year ending June 30, 2017 was determined with the July 1, 2015 actuarial valuation in conjunction with the plan changes highlighted in Section 3, Exhibit II, page 36.
Measurement date:	June 30, 2015
Actuarial cost method:	Projected Unit Credit Method
Amortization method:	Level percent of growing payroll, closed, 30 years
Remaining amortization period:	22 years as of June 30, 2016
Asset valuation method:	Market value
Investment rate of return:	5.70%
Payroll growth rate:	3.75%
Health Care Cost Trend Rates:	
Medical cost trend rate*	5.00%
Drug cost trend rate*	10.00% graded to 5.0% over 5 years
Dental and Part B trend rates	5.00%
	**Short term rates were altered to reflect proposed changes to Non-Medicare retirees and implementation of the Medicare Advantage plan. (See Section 3, Exhibit I, pages 27-28 for more details.)

EXHIBIT 6 (continued)

Schedule of Contributions – Last Ten Fiscal Years

Mortality Rates:

Healthy

SERS, PJERS, JFSMCCRS, ARP, HYBRID, OTHER

RP-2000 Combined Healthy Mortality Table with sex-distinct rates with male rates projected 15 years (set back 2 years) and female rates projected 25 years (set back one year) under Scale AA

STRS

Headcount-Weighted RP-2014 White Collar Mortality Table with employee and annuitant rates blended from ages 50 to 80 projected to year 2020 under Scale BB and further adjusted to grade in increases (5% for females and 8% for males) to rates over ages 80

Disabled

SERS, PJERS, JFSMCCRS, ARP, HYBRID, OTHER

RP-2000 Disabled Retiree Mortality Table with sex-distinct rates using 55% of the male rates for male participants and 80% of the female rates for female participants

STRS

Headcount-Weighted RP-2014 Disabled Retiree Mortality Table projected to 2017 with Scale BB

The above tables were selected based on the most recent pension valuations or experience studies available for each group and were assumed to contain provision appropriate to reasonably reflect future mortality improvement based on a review by the pension actuary of the mortality experience. We have no reason to doubt their applicability here.

EXHIBIT I
Actuarial Assumptions and Methods

Demographic Assumptions:	The demographic assumptions used in this valuation are the same as those used in the most recent pension valuation report or experience study available, completed by Cavanaugh Macdonald Consulting, LLC. Given that the participants in this Plan are a subset of the participants in the respective pension plans, we have no reason to doubt the reasonableness of these specific assumptions for this valuation.
Data:	Detailed census data, premium data and/or claim experience, and summary plan descriptions for OPEB were provided by the Healthcare Policy & Benefit Services Division of the Office of the State Comptroller. Eligible groups for the Program include State employees covered under the State Employees Retirement System (SERS), State Teachers' Retirement System (STRS), Probate Judges and Employees Retirement System (PJERS), Judges, Family Support Magistrates and Compensation Commissioners Retirement System (JFSMCCRS), Alternative Retirement Program (ARP), and the Hybrid Defined Benefit/Defined Contribution Plan (HYBRID). In addition, there are other State employees not covered under the retirement systems who are eligible for this program (OTHER). Actuarial assumptions that differ by group are noted.
Actuarial Cost Method:	Entry Age Normal – Level Percentage of Payroll
Asset Valuation Method:	Market Value
Measurement Date:	June 30, 2017
Discount Rate:	3.74% as of June 30, 2017 and 3.01% as of June 30, 2016. The discount rate is a blend of the long-term expected rate of return on OPEB Trust assets and a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (3.58% as of June 30, 2017 and 2.85% as of June 30, 2016). The blending is based on the sufficiency of projected assets to make projected benefit payment. Assets as of June 30, 2017, as previously provided from OSC

Expected Rate of Return: 6.90% - consistent with the rate developed in the GASB 67 report for the CSERS prepared as of June 30, 2017 by Cavanaugh MacDonald Consulting, LLC.

Salary Increases:

SERS, ARP, HYBRID, OTHER Rates are 1% less than table for 2015 and 2016.

Rates vary by years of service as follows:

Years of Service	Rate	Years of Service	Rate
0	10.00%	5	5.75%
1	20.00	6-9	5.50
2	10.00	10-14	5.00
3	6.25	15+	4.00
4	6.00		

STRS Rates vary by years of service as follows:

Years of Service	Rate	Years of Service	Rate
0-1	6.50%	17	4.25%
2-9	6.25	18	4.00
10-11	5.50	19	3.75
12-14	5.00	20	3.50
15	4.75	21+	3.25
16	4.50		

PJERS 4.75%

JFSMCCRS 4.75%

Total Payroll Growth Rate: 3.75%

Mortality Rates:

Healthy

SERS, PJERS, JFSMCCRS, ARP, HYBRID, OTHER

RP-2000 Combined Healthy Mortality Table with sex-distinct rates with male rates projected 15 years (set back 2 years) and female rates projected 25 years (set back one year) under Scale AA

STRS Headcount-Weighted RP-2014 White Collar Mortality Table with employee and annuitant rates blended from ages 50 to 80 projected to year 2020 under Scale BB and further adjusted to grade in increases (5% for females and 8% for males) to rates over ages 80

Disabled

SERS, PJERS, JFSMCCRS, ARP, HYBRID, OTHER

RP-2000 Disabled Retiree Mortality Table with sex-distinct rates using 55% of the male rates for male participants and 80% of the female rates for female participants

STRS Headcount-Weighted RP-2014 Disabled Retiree Mortality Table projected to 2017 with Scale BB

The above tables were selected based on the most recent pension valuations or experience studies available for each group and were assumed to contain provision appropriate to reasonably reflect future mortality improvement based on a review by the pension actuary of the mortality experience. We have no reason to doubt their applicability here.

Termination Rates before Retirement:

SERS

	Rate (%)					
	Mortality		Disability*		Turnover**	
Age	Male	Female	Hazardous	Non-Hazardous	Male	Female
25	0.0297	0.0138	0.0000	0.0100	5.0000	5.0000
35	0.0585	0.0338	0.1500	0.0500	3.0000	3.0000
45	0.1100	0.0705	0.3000	0.1600	2.2000	2.0000
55	0.2154	0.1885	0.6000	0.4000	0.0000	0.0000
65	0.8104	0.7604	1.1000	0.8000	0.0000	0.0000

* *20% of disabilities are assumed to be in-service. Rates cut off at early retirement eligibility.*

** *Represents rates for non-Hazardous participants. Higher select period turnover rates varying by age and gender are used for participants with less than 10 years of service. For Hazardous participants, the male rates are multiplied by 35% and the female rates by 55%.*

STRS

	Rate (%)					
	Mortality		Disability*		Turnover**	
Age	Male	Female	Male	Female	Male	Female
25	0.0412	0.0162	0.0341	0.0500	1.5000	4.0000
35	0.0448	0.0272	0.0341	0.0410	1.5000	3.5000
45	0.0818	0.0622	0.1219	0.1200	1.5900	1.5000
55	0.2800	0.1927	0.5363	0.4380	3.4400	2.5000
65	0.7214	0.4747	0.9604	0.5000	0.0000	0.0000

* *Rates cut off at early retirement eligibility.*

** *Higher select period turnover rates varying by age and gender are used for participants with less than 10 years of service.*

PJERS

	Rate (%)					
	Mortality		Disability*		Turnover	
Age	Male	Female	Male	Female	Male	Female
25	0.0297	0.0138	0.0400	0.0400	5.0000	7.5000
35	0.0585	0.0338	0.0800	0.0800	5.0000	5.0000
45	0.1100	0.0705	0.1900	0.1900	5.0000	5.0000
55	0.2154	0.1885	0.5200	0.5200	5.0000	5.0000
65	0.8104	0.7604	0.0000	0.0000	5.0000	5.0000

* *Rates cut off at early retirement eligibility.*

JFSMCCRS

	Rate (%)					
	Mortality		Disability*		Turnover**	
Age	Male	Female	Male	Female	Male	Female
25	0.0297	0.0138	0.0854	0.0854	0.0000	0.0000
35	0.0585	0.0338	0.1474	0.1474	0.0000	0.0000
45	0.1100	0.0705	0.3595	0.3595	0.0000	0.0000
55	0.2154	0.1885	1.0089	1.0089	0.0000	0.0000
65	0.8104	0.7604	0.0000	0.0000	0.0000	0.0000

* *Rates equal to 30% of the 1975 Social Security Table and cut off at normal retirement eligibility.*

** *No pre-retirement turnover is assumed.*

ARP

	Rate (%)					
	Mortality		Disability*		Turnover**	
Age	Male	Female	Male	Female	Male	Female
25	0.0297	0.0138	0.0100	0.0100	5.0000	5.0000
35	0.0585	0.0338	0.0500	0.0500	3.0000	3.0000
45	0.1100	0.0705	0.1600	0.1600	2.2000	2.0000
55	0.2154	0.1885	0.4000	0.4000	0.0000	0.0000
65	0.8104	0.7604	0.8000	0.8000	0.0000	0.0000

* *Rates cut off at early retirement eligibility.*

** *Higher select period turnover rates varying by age and gender are used for participants with less than 10 years of service.*

OTHER

Age	Rate (%) Mortality Male	Rate (%) Mortality Female	Rate (%) Disability* Male	Rate (%) Disability* Female	Rate (%) Turnover** Male	Rate (%) Turnover** Female
25	0.0297	0.0138	0.0100	0.0100	5.0000	5.0000
35	0.0585	0.0338	0.0500	0.0500	3.0000	3.0000
45	0.1100	0.0705	0.1600	0.1600	2.2000	2.0000
55	0.2154	0.1885	0.4000	0.4000	0.0000	0.0000
65	0.8104	0.7604	0.8000	0.8000	0.0000	0.0000

* *Rates cut off at early retirement eligibility.*

** *Higher select period turnover rates varying by age and gender are used for participants with less than 10 years of service.*

HYBRID

Age	Rate (%) Mortality Male	Rate (%) Mortality Female	Rate (%) Disability* Male	Rate (%) Disability* Female	Rate (%) Turnover** Male	Rate (%) Turnover** Female
25	0.0297	0.0138	0.0100	0.0100	5.0000	5.0000
35	0.0585	0.0338	0.0500	0.0500	3.0000	3.0000
45	0.1100	0.0705	0.1600	0.1600	2.2000	2.0000
55	0.2154	0.1885	0.4000	0.4000	0.0000	0.0000
65	0.8104	0.7604	0.8000	0.8000	0.0000	0.0000

* *Rates cut off at early retirement eligibility.*

** *Higher select period turnover rates varying by age and gender are used for participants with less than 10 years of service.*

Actives' Retirement Rates

SERS (Tier I, II, IIA), HYBRID

Hazardous			Non-Hazardous			
Age	First Year Eligible	Subsequent Years	Age	First Year Eligible for Reduced	First Year Eligible for Unreduced	Subsequent Years
<45	18.0%	10.0%	55	7.5%	15.0%	12.5%
45-48	25.0	10.0	56-59	5.0	15.0	12.5
49-59	10.0	10.0	60	5.0	25.0	12.5
60-69	25.0	15.0	61	15.0	25.0	15.0
70-79	100.0	20.0	62	10.0	10.0	30.0
80+	100.0	100.0	63	35.0	35.0	25.0
			64	45.0	45.0	25.0
			65-69	65.0	65.0	25.0
			70-79	100.0	100.0	20.0
			80+	100.0	100.0	100.0

SERS (Tier III), HYBRID

Hazardous			Non-Hazardous			
Age	First Year Eligible	Subsequent Years	Age	First Year Eligible for Reduced	First Year Eligible for Unreduced	Subsequent Years
<50	18.0%	10.0%	58-59	5.0%	7.5%	5.0%
50-59	25.0	10.0	60	5.0	12.5	12.5
60-69	10.0	10.0	61	10.0	15.0	15.0
70-79	100.0	20.0	62	10.0	10.0	30.0
80+	100.0	100.0	63	10.0	35.0	25.0
			64	10.0	45.0	25.0
			65-69	25.0	65.0	25.0
			70-79	25.0	100.0	20.0
			80+	100.0	100.0	100.0

STRS

	Unreduced		Proratable		Reduced	
Age	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
50	27.50%	27.50%	--	--	1.00%	1.00%
51	27.50	27.50	--	--	1.00	1.25
52	27.50	27.50	--	--	1.00	1.75
53	27.50	27.50	--	--	2.00	2.25
54	27.50	27.50	--	--	3.00	2.75
55	38.50	27.50	--	--	4.00	4.75
56	38.50	27.50	--	--	6.00	6.25
57	38.50	27.50	--	--	7.00	6.75
58	38.50	27.50	--	--	8.00	7.25
59	38.50	27.50	--	--	11.00	8.50
60	22.00	27.50	6.00%	5.50%	--	--
61	25.30	27.50	6.00	6.50	--	--
62	25.30	27.50	9.00	7.50	--	--
63	27.50	27.50	11.00	7.50	--	--
64	27.50	27.50	10.00	8.00	--	--
65	36.30	32.50	13.00	12.50	--	--
66-67	27.50	32.50	20.00	12.50	--	--
68	27.50	32.50	20.00	12.00	--	--
69	27.50	32.50	30.00	14.50	--	--
70-73	100.00	32.50	30.00	14.50	--	--
74-79	100.00	32.50	30.00	18.00	--	--
80+	100.00	100.0	100.00	100.00	--	--

PJERS

Age	Rate
50-61	5.0%
62-64	10.0
65-69	20.0
70+	100.0

JFSMCCRS

50% are assumed to retire at the later of age 65 and 10 years of service with 100% at age 70

ARP

Age	First Year Eligible	Subsequent Years
55-59	15.0%	12.5%
60	25.0	12.5
61	25.0	15.0
62	10.0	30.0
63	35.0	25.0
64	45.0	25.0
65-69	65.0	25.0
70-79	100.0	20.0
80+	100.0	100.0

OTHER

Age	First Year Eligible for Reduced	First Year Eligible for Unreduced	Subsequent Years
55	7.5%	15.0%	12.5%
56-59	5.0	15.0	12.5
60	5.0	25.0	12.5
61	15.0	25.0	15.0
62	10.0	10.0	30.0
63	35.0	35.0	25.0
64	45.0	45.0	25.0
65-69	65.0	65.0	25.0
70-79	100.0	100.0	20.0
80+	100.0	100.0	100.0

Inactive Vesteds' Retirement Rates: 100% are assumed to retire at first eligibility for normal retirement

Unknown Data for Participants: Same as those exhibited by participants with similar known characteristic. If not specified, participants are assumed to be female.

For this valuation, 1,520 active members were reported with missing compensation.

Spousal coverage was set for current retirees based on their medical tier.

For retirees with spousal coverage who did not have demographic data available, the assumption for the respective active group was used.

Current retirees missing date of retirement were assumed to retire before June 1, 2009 and therefore receive the prescription drug benefit for retirements prior to June 1, 2009. New retirees missing date of retirement were assumed to retire after June 1, 2009.

HYBRID members were assumed to elect the SERS tier available at their original date of hire.

Current employee Trust Fund balances for employees missing balance information and hired before July 1, 2013 were estimated to be equal to two years of contributions of 3% of current salary (discounted by the payroll growth assumption to the year of contribution) per year.

Inactive vested participants missing service were assumed to terminate as of January 1, 2013 and for those missing service we calculated employment service between their date of hire and their termination date.

75% of actives missing medical plan or dental plan information were assumed to be in a plan that paid contributions.

We assumed STRS retirees paying a percentage of the Early Retirement Premium would reach Normal Retirement Age at age 60. Similarly, we assumed SERS retirees paying a percentage of the Early Retirement Premium would reach Normal Retirement Age at age 62.

Continuation of Medical and Dental Benefits after Retiree's Death: For retiree medical and dental benefits, we assumed that 64% of current and future retired members have medical and dental benefits that continue after the retiree's death, and 36% have medical and dental benefits that stop upon the retiree's death.

Participation and Coverage Election: 100% of current active and inactive vested participants are assumed to elect coverage.

Health Enhancement Program Election: 100% of future retirees were assumed to elect to participate in the Health Enhancement Program.

Dependents: Demographic data was available for spouses of current retirees. The percentage of future retirees electing coverage and assumed age differences between husbands and wives are shown below:

	Percentage Electing Spousal Coverage	Age of Spouse
SERS	80%	Females 3 years younger than males
STRS	85% of males; 75% of females	Females 3 years younger than males
PJERS	100%	Females 3 years younger than males
JFSMCCRS	80%	Females 3 years younger than males
ARP	100%	Females same age as males
HYBRID	80%	Females 3 years younger than males
OTHER	80%	Females 3 years younger than males

Per Capita Cost Development:

Self-Funded (Medical and Drug Plan)

Per capita claims costs were based on actual paid retiree claim experience from the Conifer data warehouse for the period March 1, 2014 through February 29, 2016. Prescription drug claims include offsets for rebates. Claims were separated by plan and adjusted as follows:

- paid claims were multiplied by a factor to yield an estimate of incurred claims,
- total claims were divided by the number of adult members to yield a per capita claim,
- the per capita claim was trended to the midpoint of the valuation year at assumed trend rates, and
- the per capita claim was adjusted for the effect of any plan changes.

Per capita claims for each plan year were then combined by taking a weighted average. The weights used in this average account for a number of factors including each plan year's volatility of claims experience and distance to the valuation year. Actuarial factors were then applied to the weighted average cost to estimate individual retiree and spouse costs by age and by gender.

Fully Insured Medicare Advantage Plan — Medicare Advantage – Prescription Drug rates were provided by United Healthcare.

Fully Insured Dental Plan — Per capita costs were based on actual premium rates effective July 1, 2015.

Administrative Expenses — Administrative expenses were based on UHC and Anthem's access fees furnished by the State.

Per Capita Health Costs: Dental claims costs for the valuation year are $445. The annual per capita cost for Medicare Part B reimbursement for the plan year beginning July 1, 2015 is assumed to be $1,259. Based on the implementation of a Medicare Advantage plan for the State's Medicare-eligible retirees effective January 1, 2018. The annual per-capita cost for over-65 *current* retirees and spouses is $826 per year for the medical portion and $2,747 per year for the prescription portion. *Future* retirees were valued with the post-2011 plan rates of $713 per year for medical and $2,018 per year for prescription drug. Medical and prescription drug claims costs for the valuation year, excluding assumed expenses, are shown in the table below for pre-65 retirees and for spouses at selected ages. These costs are net of deductibles and other benefit plan cost sharing provisions. Prescription drug costs for retirees who retired before June 1, 2009 are approximately 7% higher than the cost shown below for ages under age 65.

	Medical				Prescription Drug			
	Retiree		Spouse		Retiree		Spouse	
Age	Male	Female	Male	Female	Male	Female	Male	Female
50	$8,499	$9,681	$5,937	$7,773	$2,620	$2,984	$1,830	$2,396
55	10,094	10,421	7,944	8,998	3,111	3,212	2,449	2,773
60	11,988	11,233	10,635	10,436	3,695	3,462	3,278	3,216
64	13,753	11,916	13,425	11,746	4,239	3,673	4,138	3,620

Health Care Cost Trend Rates: Health care trend measures the anticipated overall rate at which health plan costs are expected to increase in future years. The rates shown below are "net" and are applied to the net per capita costs shown above. The trend shown for a particular plan year is the rate that is applied to that year's cost to yield the next year's projected cost.

Year Ending June 30,	Retirees <65 Medical	Retiree 65+ Medical	Retirees <65 Prescription Drug	Retirees 65+ Prescription Drug	Dental	Medicare Part B
2016	-1.45%	0.00%	1.81%	0.00%	5.00%	5.00%
2017	3.88%	0.00%	3.31%	0.00%	5.00%	5.00%
2018	4.07%	0.00%	0.50%	7.50%	5.00%	5.00%
2019	4.63%	2.50%	8.53%	11.20%	5.00%	5.00%
2020	4.63%	5.00%	3.69%	6.00%	5.00%	5.00%
2021	4.63%	5.00%	3.68%	5.00%	5.00%	5.00%
2022	4.63%	5.00%	3.66%	5.00%	5.00%	5.00%
2023	4.63%	5.00%	3.64%	5.00%	5.00%	5.00%
2024	4.63%	5.00%	3.62%	5.00%	5.00%	5.00%
2025+	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%

*Short term rates were altered to reflect proposed changes to Non-Medicare retirees and implementation of the Medicare Advantage plan. Ultimate trend was used to trend backward for purpose of Entry Age Normal Cost Method.

The trend rate assumptions were developed using Segal's internal guidelines, which are established each year using data sources such as the 2015 Segal Health Trend Survey, internal client results, trends from other published surveys prepared by the S&P Dow Jones Indices, consulting firms and brokers, and CPI statistics published by the Bureau of Labor Statistics.

Retiree Contributions: An average contribution of $174 was used for plans requiring contributions in the valuation year. An average contribution of $356 was used in the valuation year for dental benefits. Early Retiree Premiums were based on an average premium of $14,271 in the valuation year. These apply to pre-65 retirees.

Retiree Contribution Increase Rate: Contributions for dental benefits are assumed to increase at 5.00% per year. An annual increase in required retiree contributions for non-Medicare medical and prescription drugs was assumed, as shown below.

Year Ending June 30,	Rate (%)
2016	-0.64%
2017	3.74%
2018	3.18%
2019	5.61%
2020	4.40%
2021	4.39%
2022	4.39%
2023	4.38%
2024	4.38%
2025+	5.00%

*Short term rates were altered to reflect proposed changes to Non-Medicare retirees and implementation of the Medicare Advantage plan. Ultimate trend was used to trend backward for purpose of Entry Age Normal Cost Method.

Administrative Expenses: An administrative expense load of $250 per participant remaining level through June 30, 2018 and increasing at 3.00% per year thereafter was added to projected incurred medical claim costs in developing the benefit obligations.

Plan Design: Development of plan liabilities was based on the substantive plan of benefits in effect as described in Exhibit III.

Assumption Changes since Prior Valuation: The discount rate was changed from 5.70% to a blended discount rate calculated in accordance with GASB Statement No. 74 (3.74% as of June 30, 2017 and 3.01% as of June 30, 2016).

EXHIBIT II

Summary of Plan Provisions

This exhibit summarizes the major benefit provisions as included in the valuation. To the best of our knowledge, the summary represents the substantive plans as of the measurement date. It is not intended to be, nor should it be interpreted as, a complete statement of all benefit provisions.

Eligibility:	Retired and receiving a Normal, Early, Disabled, or Pre-retirement Survivor pension from the following Retirement Plan. • SERS – State Employees Retirement System. • JFSMCCRS – Judges, Family Support Magistrates, and Compensation Commissioners Retirement System. • PJERS – Probate Judges and Employees Retirement System. • STRS – State Teachers' Retirement System. • ARP – Alternate Retirement System. • HYBRID – Hybrid Defined Benefit/Defined Contribution Plan In addition, there are a small number of "Other" State employees who are not covered by the retirement systems above but who are eligible for OPEB benefits. Employees with less than 10 years of service as of July 1, 2009, must have 10 years of service to receive retiree medical benefits. In addition, an employee must have a combined age plus service of 75 years to receive retiree medical benefits unless they retire directly from active service. New employees must have 15 years of service to receive retiree medical benefits.
Benefit Types:	Medical, prescription drug, dental, life insurance. Prescription drug and medical benefits for Medicare-eligible retirees are provided through a Medicare Advantage Prescription Drug (MA-PD) plan. The State also reimburses the Medicare Part B premium for Medicare-eligible retirees. Probate judges, probate employees, and terminated vested participants are not eligible for life insurance. Teachers and terminated vested participants are not eligible for pre-retirement death benefits.

Duration of Coverage: Lifetime

Spouse Benefits: Same benefits as for retirees except no life insurance. Spousal coverage is for life if the spouse receives a survivor pension from their retirement system; otherwise coverage ends at the retiree's death.

Retiree Contributions:

Medical, Rx, and Dental: The monthly retiree contributions used were provided in a schedule supplied by the Office of the State Comptroller.

Health Enhancement Program: Individuals who retire after October 1, 2011, and who decline participation in the Health Enhancement Program, or who are removed from the program, must pay an additional $100 per month in premium share.

Early Retiree Premiums

Individuals who elect early retirement will be charged the greater of the retiree contribution described above and a percentage of the premium (as described on the following page) until they reach their normal retirement date, or age 65, whichever is earlier. The percentages will also be applied to individuals who are eligible for a deferred vested benefit that elect to receive their pension benefits before age 65. If the participant has fewer than 15 years of service, 15 years is used. If the participant has more than 25 years of service, 25 years is used. If the participant retires more than 5 years early, 5 years is used. The premium is capped at 25% of the person's actual pension benefit.

		Years Retired Early				
		5	4	3	2	1
Years of Service	15	40.00%	32.00%	24.00%	16.00%	8.00%
	16	37.00%	29.60%	22.20%	14.80%	7.40%
	17	34.00%	27.20%	20.40%	13.60%	6.80%
	18	31.00%	24.80%	18.60%	12.40%	6.20%
	19	28.00%	22.40%	16.80%	11.20%	5.60%
	20	25.00%	20.00%	15.00%	10.00%	5.00%
	21	22.00%	17.60%	13.20%	8.80%	4.40%
	22	19.00%	15.20%	11.40%	7.60%	3.80%
	23	16.00%	12.80%	9.60%	6.40%	3.20%
	24	13.00%	10.40%	7.80%	5.20%	2.60%
	25	10.00%	8.00%	6.00%	4.00%	2.00%

Employee Contributions:

Current active employees pay a percentage of their pay into the Retiree Health Care Trust Fund for pre-funding of OPEB benefits.

All employees hired after July 1, 2009, or with fewer than five years of service as of July 1, 2010, are contributing 3.0% of their salaries to the Fund, for a period of 10 years or until their retirement, whichever is sooner.

All employees not paying into the Fund as of June 30, 2013, began paying a contribution at that time. The contribution was 0.5% for the year beginning July 1, 2013, increasing to 2.0% for the year beginning July 1, 2014, and to 3.0% for the year beginning July 1, 2015. Contributions will continue for a period of 10 years or until the employee retires, whichever is sooner.

Contributions are refundable to employees who leave State employment prior to completing 10 years of service.

Effective July 1, 2017, the State will begin to contribute into the Retiree Health Care Trust Fund an amount equal to the amount contributed by employees each year.

Benefit Descriptions:

Medical (Anthem or UnitedHealthcare)

Point of Service	**In-Network**	**Out-Of-Network**
Deductible	$350/person, up to $1,400/family*	$300/person, up to $900/family
Member Coinsurance	None	80%
Out-of-pocket Maximum (not incl. ded.)	$2,000/$4,000 single/family	$2,000/$4,000 single/family
Office Visit Copay	$15**	Deductible and coinsurance
*Emergency Room Copay****	$35 (waived if admitted)	$35 (waived if admitted)

Point of Enrollment, Out of Area	**Participating Provider**
Deductible	$350/person, up to $1,400/family*
Member Coinsurance	None
Out-of-pocket Maximum (not incl. ded.)	$2,000/$4,000 single/family
Office Visit Copay	$15**
Emergency Room Copay	$35 (waived if admitted)

* Waived for post-October 2011 retirees enrolled in Health Enhancement Program.
** $5 copay for retirees who retired prior to July 1, 1999.
*** Emergency room copay increases to $250 for those retiring after October 2, 2017, per SEBAC agreement.

Prescription Drug (CVS Caremark)*

Retirement Date Prior to 5/1/2009	**30-Day Supply Retail or 90-Day Supply Mail**
Generic	$3
Brand-name (no generic available)	$6
Brand-name (with generic available)	$3 plus difference between brand and generic cost

Retirement Date 6/1/2009 to 10/1/2011	**30-Day Supply Retail or 90-Day Supply Mail**
Generic	$5
Preferred brand-name	$10
Non-preferred brand-name	$25 ($10 if non-preferred is medically necessary

Retirement Date 10/2/2011 or Later* **	**Non-Maintenance Drug (30-Day Supply)**	**Maintenance Drug (90-day Supply*)**
Generic	$5	$5
Preferred brand-name	$20	$10
Non-preferred brand-name	$35	$25
Mail Order Program	N/A	Mandatory for under-65 retirees; optional for over-65 retirees.

* If enrolled in Health Enhancement Program, copay for drugs prescribed for certain chronic conditions will be waived or reduced to $0/$5/$12.50.

** Prescription drug copays increase to $5/$10/$25/$40 for those retiring after October 2, 2017, per SEBAC agreement.

Dental

	CIGNA Basic	CIGNA Enhanced	CIGNA DHMO
Deductible	None	$25/$75 single/family	None
Annual Maximum	$500* for periodontics	$3,000	None
*Exam and X-rays**	Covered at 100%	Covered at 100%	Covered at 100%
Simple Restoration			
Fillings	Covered at 80%	Covered at 80%	Covered w/ copay
Oral Surgery	Covered at 67%	Covered at 80%	Covered w/ copay
Major Restoration			
Crowns	Covered at 67%	Covered at 67%	Covered w/ copay
Dentures, Fixed Bridges	Not covered	Covered at 50%	Covered w/ copay
Implants	Not covered	Covered at 50% (up to $500)	Covered w/ copay
Orthodontia	Not covered	$1,500 lifetime maximum per person	Covered w/ copay

** If enrolled in the Health Enhancement Program, annual dental cleaning (up to two) and unlimited periodontal care provided.*

Life Insurance	Pay-related coverage, equal to 50% of the basic coverage amount immediately before retirement. The basic coverage amount is a function of the employee's salary and the position held by the employee. The minimum post-retirement coverage amount is $10,000 for employees with 25 or more years of service. For retirees with less than 25 years of service, the above coverage amount is proportionately reduced based on years of service, and has no minimum amount of coverage. Members who retire under the hazardous duty provisions of C.G.S. 5-173 receive coverage equal to 50% of the basic coverage amount immediately before retirement, regardless of the number of years of service. Retired members who are totally and permanently disabled before age 60 receive coverage equal to 100% of the basic coverage amount.
Plan Changes since Prior Valuation:	The implementation of a Medicare Advantage plan for the State's Medicare-eligible retirees effective January 1, 2018. The inclusion of the proposed changes in the SEBAC agreement for non-Medicare retirees. Those changes pertaining to premium shares and health care design changes, affect new retirees on or after October 2, 2017.

EXHIBIT III

Definition of Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or Actuarial Assumptions:	The estimates on which the cost of the Plan is calculated including: (a) Investment return — the rate of investment yield that the Plan will earn over the long-term future; (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates; (c) Retirement rates — the rate or probability of retirement at a given age; (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.
Total OPEB Liability:	Present value of all future benefit payments for current retirees and active employees taking into account assumptions about demographics, turnover, mortality, disability, retirement, health care trends, and other actuarial assumptions.
Service Cost:	The amount of contributions required to fund the benefit allocated to the current year of service.
Actuarially Determined Contribution:	A target or recommended contribution to an OPEB plan for the reporting period based on the most recent measurement available.
Valuation Date:	The date at which the actuarial valuation is performed
Covered Employee Payroll:	The payroll of the employees that are provided OPEB benefits

Discount Rate:	The single rate of return, that when applied to all projected benefit payments results in an actuarial present value that is the sum of the following: (1) the actuarial present value of projected benefit payments projected to be funded by plan assets using a long term rate of return, and (2) the actuarial present value of projected benefit payments that are non included in (1) using a yield or index rate for 20 year tax exempt general obligation municipal bonds with an average rating of AA/Aa or higher
Entry Age Actuarial Cost Method:	An actuarial cost method where the present value of the projected benefits for an individual is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age
Healthcare Cost Trend Rates:	The rate of change in per capita health costs over time
Net OPEB Liability:	The Total OPEB Liability less the Plan Net Fiduciary Position
Plan Net Fiduciary Position:	Market Value of Assets
Real Rate of Return:	The rate of return on an investment after removing inflation

EXHIBIT IV

Accounting Requirements

The Governmental Accounting Standards Board (GASB) issued Statement Number 74 – *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans,* and Statement Number 75 – *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions.* Under these statements, all state and local government entities that provide other post-employment benefits (OPEB) are required to report the cost of these benefits on their financial statements. The accounting standards supplement cash accounting, under which the expense for postemployment benefits is equal to benefit and administrative costs paid on behalf of retirees and their dependents (*i.e.*, a pay-as-you-go basis).

The statements cover postemployment benefits of health, prescription drug, dental, vision and life insurance coverage for retirees; long-term care coverage, life insurance and death benefits that are *not* offered as part of a pension plan; and long-term disability insurance for employees. The benefits valued in this report are limited to those described in Exhibit II, which are based on those provided under the terms of the substantive plan in effect at the time of the valuation and on the pattern of sharing costs between the employer and plan members. The projection of benefits is not limited by legal or contractual limits on funding the plan unless those limits clearly translate into benefit limits on the substantive plan being valued.

The new standards introduce an accrual-basis accounting requirement, thereby recognizing the employer cost of postemployment benefits over an employee's career. The standards also introduce a consistent accounting requirement for both pension and non-pension benefits.

The total cost of providing postemployment benefits is projected, taking into account assumptions about demographics, turnover, mortality, disability, retirement, health care trends, and other actuarial assumptions. These assumptions are summarized in Exhibit I. This amount is then discounted to determine the Total OPEB Liability. The Net OPEB Liability (NOL) is the difference between the Total OPEB Liability and market value of assets in the Plan, called the Net Plan Fiduciary Position.

Once the NOL is determined, the Annual OPEB Expense is determined as the change in NOL from the prior year with deferred recognition of certain elements, In addition, Required Supplementary Information (RSI) must be reported, including historical information about the Net OPEB liability and the Contributions made to the Plan. Exhibit III contains a definition of terms as well as more information about GASB 74/75 concepts.

The calculation of an accounting obligation does not, in and of itself, imply that there is any legal liability to provide the benefits valued, nor is there any implication that the Employer is required to implement a funding policy to satisfy the projected expense.

Actuarial calculations reflect a long-term perspective, and the methods and assumptions use techniques designed to reduce short-term volatility in accrued liabilities and the actuarial value of assets, if any.

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and the actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.