



**Commonwealth of Pennsylvania  
Retired Employees Health Program  
GASB Statement Nos. 74 and 75 Valuation Report**

Measurement date of June 30, 2018

Prepared by Deloitte Consulting LLP

October 2018

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# Actuarial Valuation Opinion

This report presents results of the actuarial valuation of the Commonwealth of Pennsylvania's Retired Employees Health Program ("the Plan" or "REHP") measured as of June 30, 2018. In this report, we present disclosure information measured as of June 30, 2018 as required by Government Accounting Standards Board Statement Nos. 74 and 75 (GASB Nos. 74 and 75). In our opinion, this report is complete and accurate and represents fairly the actuarial position of the Plan for the purposes stated herein.

The Commonwealth of Pennsylvania provided the participant data, financial information and plan descriptions used in this valuation. The actuary has analyzed the data and other information provided for reasonableness, but has not independently audited the data or other information provided. The actuary has no reason to believe the data or other information provided is not complete and accurate and knows of no further information that is essential to the preparation of the actuarial valuation.

Actuarial information under GASB Nos. 74 and 75 is for purposes of fulfilling trust and employer financial accounting requirements. The results have been prepared on a basis consistent with our understanding of GASB Nos. 74 and 75 and are based upon assumptions prescribed by the Commonwealth of Pennsylvania. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results reported herein.

In our opinion, all costs, liabilities, rates of interest, and other factors underlying these actuarial computations have been determined on the basis of actuarial assumptions and methods that are each reasonable (or consistent with authoritative guidance) for the purposes herein taking into account the experience of the Plan and future expectations.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operations of the methodology used for these measurements (such as the additional cost or contribution requirements based on the Plan's funded status); and changes in program provisions or applicable law. Our scope for this actuarial valuation did not include analyzing the potential range of such future measurements, and we did not perform that analysis.

The undersigned with actuarial credentials collectively meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

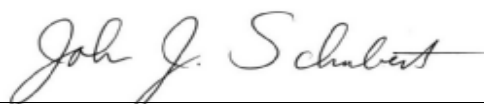
This report was prepared solely for the benefit and internal use of the plan sponsor. This report is not intended for the benefit of any other party and may not be relied upon by any third party for any purpose, and Deloitte Consulting accepts no responsibility or liability with respect to any party other than the plan sponsor.

To the best of our knowledge, no employee of the Deloitte U.S. Firms is an officer or director of the employer. In addition, we are not aware of any relationship between the Deloitte U.S. Firms and the employer that may impair or appear to impair the objectivity of the work detailed in this report.

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# Executive Summary

## Governmental Accounting Requirements and Report Purpose

The Governmental Accounting Standards Board released the Statement of Governmental Accounting Standards Nos. 74 and 75 in June 2015. GASB No. 74 establishes financial reporting requirements for OPEB plans that have assets accumulated in a trust or equivalent arrangement for the purpose of funding OPEB. GASB No. 75 details the reporting and disclosure requirements for employers with payables (OPEB liabilities) to employees of state and local governmental employers through defined benefit OPEB plans that are administered through trusts or equivalent arrangements. The Commonwealth of Pennsylvania adopted GASB No. 74 in the fiscal year ended June 30, 2017 and GASB No. 75 in the fiscal year ended June 30, 2018.

The purpose of this actuarial valuation report is to provide information for the Commonwealth's trust and employer financial reporting. The information provided herein will be used for the fiscal year ended June 30, 2018 GASB No. 74 disclosures and fiscal year ending June 30, 2019 GASB No. 75 disclosures (the Commonwealth has elected to use a measurement date as of the end of the prior fiscal year end for GASB No. 75).

## Summary of Results

The key results for the measurement period ended June 30, 2018 are:

- Net OPEB Liability (NOL) is \$14.7 billion, 375.4% of covered employee payroll.
- Plan Fiduciary Net Position (FNP) as a percentage of Total OPEB Liability (TOL) is 2.2%.
- OPEB Expense/(Income) is \$(0.2) billion.

## Significant Changes from the Previous Actuarial Valuation

For the June 30, 2018 measurement, the liabilities were lower than the previous valuation. In total, there was a decrease in TOL of \$5.3 billion compared to the previous valuation, with the decrease primarily due to the following:

- There was an expected \$0.7 billion increase in TOL due to the passage of time (service cost, interest, benefit payments, retiree contributions);
- The discount rate increased from 3.58% to 3.87%, resulting in a \$0.6 billion decrease in TOL;
- The actual experience over the past year was different than expected, resulting in a \$5.4 billion decrease in TOL. This experience gain was caused primarily by decreases or lower than expected increases in claims costs due to favorable self-insured claims experience, higher than expected EGWP subsidies, higher than expected CVS/ SilverScript formulary rebates, and lower than expected increases in fully-insured rates.

# Background and Comments

## Overview of Plan

The Commonwealth sponsors the Retired Employees Health Program (REHP) for eligible retirees and their dependents to receive subsidized health coverage for the retiree's lifetime.

## Funding Policy

The Commonwealth created the OPEB Investment Pool, a Trust Equivalent Arrangement, during the fiscal year ended June 30, 2008. The Commonwealth plans to contribute \$50 million annually until assets cover the present value of future benefits, subject to annual evaluation.

During the fiscal year ended June 30, 2018, all employing agencies and certain plan members contributed \$300 during the first half of the fiscal year and \$188 during the second half of the fiscal year per biweekly pay period for each current REHP eligible active employee during fiscal year ended June 30, 2018 to the REHP Trust. Certain employing agencies contribute under a separate payment arrangement. Employer contributions made to the REHP Trust, a Trust Equivalent Arrangement, are irrevocable. Plan assets are restricted for use for the provision and administration of REHP retirees' health benefits. Employers maintain no rights of ownership to the assets and the trust.

## Health Care Reform

The Patient Protection and Affordable Care Act ("PPACA") was signed into law on March 23, 2010. The primary objective of the act is to increase the number of Americans with health insurance coverage. There are several provisions within PPACA with potentially significant short- and long-term cost implications for employers. The applicable provisions of PPACA were first accounted for in the July 1, 2010 valuation. On December 18, 2015, the Consolidated Appropriations Act, 2016 became law. This legislation delayed the effective date of the high cost plan excise tax from 2018 to 2020 and made it tax deductible. On January 22, 2018, the Federal Register Printing Savings Act further delayed the effective date from 2020 to 2022. In future years, there may continue to be increased cost impact to the extent the health & welfare program experiences increased utilization due to these changes, all of which are assumed to be in place indefinitely.

The provisions of PPACA considered are as follows:

- Prohibiting lifetime and annual limits on the dollar value of coverage for "essential health benefits"
- Increasing the dependent child age limit to age 26
- Elimination of cost sharing for in-network preventive services
- Reflecting manufacturer discounts available to certain Medicare beneficiaries receiving applicable covered Part D drugs (mostly brand) while in the coverage gap
- Out-of-pocket limit includes both medical and Rx expenses
- Excise tax on "Cadillac Plans" effective in 2022

The impact of applicable provisions except for excise tax, which was valued separately, were incorporated in the per capita claims costs summarized in Appendix D.

## Actuarial Methods and Assumptions

The Commonwealth of Pennsylvania State Employees' Retirement System (SERS) performs experience studies periodically to determine reasonable and appropriate economic and demographic assumptions for purposes of valuing the defined benefit pension plan. The most recent SERS experience study covered the years 2011 through 2015 and was presented to the State Employees' Retirement Board in March 2016. The approved recommendations from that study were used to determine the assumptions for this valuation, where applicable. The inflation assumption was selected by the SERS Board during an April of 2017 meeting based on a review of actual plan experience and the prevalent economic outlook. Consistent with prior valuations, these demographic assumptions assume beginning of year decrements (retirement, withdrawal, death, disability, etc.). In addition, Deloitte periodically reviews actuarial assumptions only applicable to the postemployment medical plan outside of the experience study, such as medical trend rates and age-graded medical rates.

One significant assumption where the recommendation of the experience study is not applicable to this retiree health benefit valuation is the discount rate. Since REHP has insufficient assets to meet next year's projected benefit payments, as prescribed by GASB Nos. 74 and 75, the discount rate will be based on the index rate for 20-year tax-exempt general obligation municipal bond index rate with an average rating of AA/Aa or higher as of the measurement date. The Commonwealth elected to determine the discount rate using the Bond Buyer 20-Bond General Obligation Index. The discount rate is 3.87% as of June 30, 2018 (3.58% as of June 30, 2017).

The treatment of Medicare Part D in this report is consistent with our understanding of the GASB technical bulletin 2006-1 issued in June 2006, which states that Medicare Part D subsidy payments should not be reflected under GASB No. 75.

The actuarial methods and assumptions are described in the appendices of this report.

# Summary of Actuarial Valuation Results

This section provides a summary of the actuarial valuation results for REHP in total. All information is provided as of the measurement date except for the census data. The valuation results as of the June 30, 2017 measurement date were based on December 31, 2016 census data, and valuation results as of the June 30, 2018 measurement date were based on December 31, 2017 census data. All liabilities are net of expected retiree contributions.

Measurement Date	June 30, 2018	June 30, 2017
Total OPEB Liability	\$ 15,015,975	\$ 20,336,764
Plan Fiduciary Net Position	\$ 333,848	\$ 282,429
Net OPEB Liability	\$ 14,682,127	\$ 20,054,335
Plan Fiduciary Net Position As A Percentage Of Total OPEB Liability	2.2%	1.4%
Net OPEB Liability As A Percentage Of Covered Employee Payroll	375.4%	513.9%
Discount Rate	3.87%	3.58%
Participant Counts		
Active Participants	70,374	71,681
Retired Participants*	64,308	63,974
Total	134,682	135,655
Covered Employee Payroll	\$ 3,911,464	\$ 3,902,336

\* Retired participants include retirees, disabled participants, and surviving family members.

# GASB Nos. 74 and 75 Disclosures

GASB Nos. 74 and 75 requires disclosure of notes to the financial statements and required supplementary information that includes information shown in this section. The valuation results as of the June 30, 2017 measurement date were based on December 31, 2016 census data and employer contributions for the fiscal year ended June 30, 2017. The valuation results as of the June 30, 2018 measurement date were based on December 31, 2017 census data and employer contributions for the fiscal year ended June 30, 2018.

For reporting purposes, the associated liabilities, expenses and other disclosure items are reported for different covered populations:

- Most primary government agencies and component units contribute at the retiree health assessment rate.
- One primary government agency and three component units participate under separate contribution arrangements. The agency and the component units contribute the actual fiscal year benefit payments attributable to their respective retirees.
  1. Health Care Cost Containment (FT = 001; BA = 43)
  2. PHEAA (FT = 079; BA = AA)
  3. Philadelphia Regional Port Authority (FT = 140; BA = 88)
  4. Port of Pittsburgh Commission (FT = 141; BA = 88)
- The primary results are presented for REHP in total.



## Schedule of Changes in Net OPEB Liability

(All dollar amounts are in thousands)

	Discount Rate	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a)-(b)
<b>Measurement Date of June 30, 2017</b>	<b>3.58%</b>	<b>\$ 20,336,764</b>	<b>\$ 282,429</b>	<b>\$ 20,054,335</b>
Service Cost		527,110		527,110
Interest		736,947		736,947
Changes In Benefit Terms		-		-
Changes In Assumptions - Discount Rate		(573,020)		(573,020)
Changes In Assumptions - Others		(3,835)		(3,835)
Differences Between Expected And Actual Experience		(5,445,495)		(5,445,495)
Benefit Payments				
Insurance Premiums - Employer Paid	\$ (562,496)			
Insurance Premiums - Retiree Paid	<u>(48,585)</u>			
Total		(611,081)	(611,081)	-
GASB 75 Defined Employer Contributions	\$ 591,796		591,796	(591,796)
Contributions - Employee			-	-
Contributions - Retiree		48,585	48,585	-
Administrative Expenses			(5,232)	5,232
Net Investment Income				
Expected Investment Earnings	\$ 14,716			
Differences Between Projected And Actual Investment Earnings	<u>12,635</u>			
Total			27,351	(27,351)
Net Change		\$ (5,320,789)	\$ 51,419	\$ (5,372,208)
<b>Measurement Date of June 30, 2018</b>	<b>3.87%</b>	<b>\$ 15,015,975</b>	<b>\$ 333,848</b>	<b>\$ 14,682,127</b>
<b>Measurement Date</b>			<b>June 30, 2018</b>	<b>June 30, 2017</b>
Plan Fiduciary Net Position As A Percentage Of Total OPEB Liability			2.2%	1.4%
Covered Employee Payroll			\$3,911,464	\$ 3,902,336
Net OPEB Liability As A Percentage Of Covered Employee Payroll			375.4%	513.9%
<b>Sensitivity of Liability to Changes in Discount Rate</b>			<b>\$ Change</b>	<b>% Change</b>
A one percentage point change in discount rate would have the following effect on Total OPEB Liability as of June 30, 2018:				
1 Percentage Increase (4.87%)			\$ (1,761,971)	-12%
1 Percentage Decrease (2.87%)			\$ 2,138,653	14%
Net OPEB Liability at a one percentage point change in discount rate as of June 30, 2018 is as follows:				<b>Net OPEB Liability</b>
1 Percentage Increase (4.87%)				\$ 12,920,156
1 Percentage Decrease (2.87%)				\$ 16,820,780
<b>Sensitivity of Liability to Changes in Trend Rate</b>			<b>\$ Change</b>	<b>% Change</b>
A one percentage point change in trend rate would have the following effect on Total OPEB Liability as of June 30, 2018:				
1 Percentage Increase (7.20% / 6.90% grading down to 5.1%)			\$ 2,583,801	17%
1 Percentage Decrease (5.20% / 4.90% grading down to 3.1%)			\$ (2,078,687)	-14%
Net OPEB Liability at a one percentage point change in trend rate as of June 30, 2018 is as follows:				<b>Net OPEB Liability</b>
1 Percentage Increase (7.20% / 6.90% grading down to 5.1%)				\$ 17,265,928
1 Percentage Decrease (5.20% / 4.90% grading down to 3.1%)				\$ 12,603,440
<b>Key Assumptions</b>			<b>June 30, 2018</b>	<b>June 30, 2017</b>
Discount Rate			3.87%	3.58%
Investment Rate of Return			5.00%	5.00%
Inflation			2.60%	2.60%
Initial Medical Trend Rate			6.2% / 5.9%	6.0%
Ultimate Medical Trend Rate			4.1%	3.9%
Year Ultimate Trend Rate Reached			2075	2075

## Development of OPEB Expense for Fiscal Year Ending June 30, 2019 (Measurement Year June 30, 2018)

*(All dollar amounts are in thousands)*

<b>Components of OPEB Expense</b>	<b>Measurement Year Ended 06/30/2018</b>	<b>Measurement Year Ended 06/30/2017</b>
Service Cost	\$ 527,110	\$ 617,953
Interest	736,947	633,617
Expected Investment Earnings	(14,716)	(11,265)
Contributions - Employee	-	-
Administrative Expenses	5,232	6,213
Changes In Benefit Terms	-	-
Recognition of Current Period Deferred Outflows and (Inflows)		
Changes in assumptions	(100,497)	(387,216)
Differences between expected and actual experience	(948,693)	-
Differences between expected and actual investment earnings	(2,527)	(4,114)
Recognition of Beginning Deferred Outflows	-	-
Recognition of Beginning Deferred Inflows	(391,330)	-
<b>OPEB Expense</b>	<b>\$ (188,474)</b>	<b>\$ 855,188</b>
<b>Assumptions Used to Determine OPEB Expense</b>	<b>Measurement Year Ended 06/30/2018</b>	<b>Measurement Year Ended 06/30/2017</b>
Discount Rate	3.58%	2.85%
Investment Rate of Return	5.00%	5.00%
Inflation	2.60%	2.60%
Initial Medical Trend Rate	6.0%	6.0%
Ultimate Medical Trend Rate	3.9%	3.9%
Year Ultimate Trend Rate Reached	2075	2075

## Schedule of Deferred Outflows and Deferred Inflows of Resources

*(All dollar amounts are in thousands)*

Measurement Date Established	Initial Amount	Deferred Outflows of Resources as of 06/30/2018	Deferred (Inflows) of Resources as of 06/30/2018**	Initial Years	Remaining Years	Outflows/(Inflows) Recognized in Measurement Year Ended 06/30/2018
Changes In Assumptions						
06/30/2017	\$ (2,228,187)	\$ -	\$ (1,453,755)	3.00 - 8.54	1.00 - 6.54	\$ (387,216)
06/30/2018	\$ (576,855)	\$ -	\$ (476,358)	5.74	4.74	\$ (100,497)
Total		\$ -	\$ (1,930,113)			\$ (487,713)
Differences Between Expected And Actual Plan Experience						
06/30/2017	\$ -	\$ -	\$ -			\$ -
06/30/2018	\$ (5,445,495)	\$ -	\$ (4,496,802)	5.74	4.74	\$ (948,693)
Total		\$ -	\$ (4,496,802)			\$ (948,693)
Net Difference Between Projected And Actual Earnings On Investments						
06/30/2017	\$ (20,568)	\$ -	\$ (12,340)	5.00	3.00	\$ (4,114)
06/30/2018	\$ (12,635)	\$ -	\$ (10,108)	5.00	4.00	\$ (2,527)
Total		\$ -	\$ (22,448)			\$ (6,641)
Contributions subsequent to measurement date*						
To be determined by each participating employer.						
<b>Balance as of 06/30/2018 Measurement Date</b>		<b>\$ -</b>	<b>\$ (6,449,363)</b>			<b>\$ (1,443,047)</b>
* Reflects employer contributions made subsequent to 06/30/2018. This will be recognized as a reduction in Net OPEB Liability next year.						
<b>Deferred Outflows And Deferred (Inflows) Of Resources Will Be Recognized In Expense As Follows:</b>						
<b>Measurement Year Ending:</b>						<b>Outflows/(Inflows)</b>
06/30/2019						\$ (1,443,046)
06/30/2020						(1,443,030)
06/30/2021						(1,443,028)
06/30/2022						(1,328,240)
06/30/2023						(782,566)
Thereafter						(9,453)

## 10-Year Schedule of Net OPEB Liability

*(All dollar amounts are in thousands)*

Measurement Year Ended	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (c)	Plan Fiduciary Net Position As A Percentage Of Total OPEB Liability (d)	Covered Employee Payroll (e)	Net OPEB Liability As A Percentage Of Covered Employee Payroll (f)
			(a)-(b)	(b)/(a)		(c)/(e)
June 30, 2016	\$21,910,888	\$200,596	\$21,710,292	0.9%	N/A	N/A
June 30, 2017	\$20,336,764	\$282,429	\$20,054,335	1.4%	\$3,902,336	513.9%
June 30, 2018	\$15,015,975	\$333,848	\$14,682,127	2.2%	\$3,911,464	375.4%

# Participating Employers Results

The REHP is a single-employer defined-benefit OPEB Plan that is established and sponsored by the Commonwealth. In addition to the Commonwealth agencies, there are several component units that have elected to participate in the REHP. Both GASB 74 and GASB 75 consider a primary government and its component units to be one employer. Hence, if a defined-benefit OPEB plan is used to provide OPEB to the employees of only one employer, the OPEB plan should be classified for financial reporting as a single-employer defined benefit OPEB plan. GASB 75, paragraph 24 requires the Commonwealth as the financial reporting entity to follow the single-employer reporting and disclosure requirements identified in GASB 75, paragraphs 47-58. Further, GASB 75, paragraph 24 requires the component units to follow the cost-sharing employer reporting and disclosure requirements identified in GASB 75, paragraphs 59-98. To satisfy the component unit reporting requirements, a proportionate share was determined for each Commonwealth agency and component unit. For the entities that contribute at the same employer health assessment rate, the proportionate share is based on current year contractually required contributions. For the one Commonwealth agency and three component units that participated under contribution terms unique to their agencies, the proportionate share is based on their subset demographics' Total OPEB Liability.

# Appendices

## Appendix A – Plan Participation Summary

The participant data used in the valuation was provided by the Commonwealth as of December 31, 2017. While the participant data was checked for reasonableness, the data was not audited, and the valuation results presented in this report are dependent upon the accuracy of the participant data provided. The section presents a summary of the basic participant information for the active and retired participants covered under the terms of the Plan.

a. Active Participants	
Total Counts	70,374
Average Age	47.11
Average Service	12.87
b. Retired Participants*	
Counts	
Under Age 65 Non-Medicare	14,294
Under Age 65 Medicare	3,266
Over age 65 Medicare	46,748
Total Counts	64,308
Average Age	70.89
c. Total Participants	
	134,682
d. Inactive Participants Entitled To But Not Yet Receiving Benefits**	
	16,166

Retired Participants by Medicare Status		
	Non-Medicare	Medicare
Single Contracts	4,591	25,295
Family Contracts	9,703	18,881
Split Contracts	5,838	

\* Retired participants include retirees and 2,633 surviving spouses with minimal liability

\*\* These retirees who currently elect to waive their coverage are assumed to remain uncovered in the future; therefore, they are excluded from the valuation.

Distribution of Service Groups by Age Groups									
Age Group	Retired Participants	Active Participants - Years of Service							
		0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
<20	-	11	-	-	-	-	-	-	11
20-24	-	868	19	-	-	-	-	-	887
25-29	-	3,820	881	56	-	-	-	-	4,757
30-34	21	3,134	2,574	1,146	49	-	-	-	6,903
35-39	73	2,241	1,988	2,597	977	42	-	-	7,845
40-44	153	1,759	1,625	2,089	2,024	746	48	-	8,291
45-49	451	1,699	1,561	2,128	2,195	2,051	1,144	84	10,862
50-54	1,728	1,495	1,477	1,903	1,923	1,530	1,713	886	10,927
55-59	4,402	1,302	1,418	1,893	1,908	1,405	1,413	1,594	10,933
60-64	10,732	707	1,078	1,450	1,398	705	559	607	6,504
65-69	15,108	143	325	470	464	196	123	200	1,921
70-74	12,429	14	56	100	111	34	39	63	417
75-79	7,755	-	7	25	25	15	7	16	95
80-84	5,092	1	1	5	2	2	2	3	16
85-89	3,752	-	1	1	-	-	-	3	5
90+	2,612	-	-	-	-	-	-	-	-
<b>Total</b>	<b>64,308</b>	<b>17,194</b>	<b>13,011</b>	<b>13,863</b>	<b>11,076</b>	<b>6,726</b>	<b>5,048</b>	<b>3,456</b>	<b>70,374</b>

## Appendix A – Plan Participation Summary (cont.)

Participant Reconciliation				
	<u>Active</u>	<u>Retirees</u>	<u>Beneficiaries</u>	<u>Total</u>
<b>Beginning of Year (12/31/2016)</b>	71,681	61,394	2,580	135,655
<b>New Hire</b>	3,591	0	0	3,591
<b>Opt-In</b>	1,620	8	0	1,628
<b>New Retiree/Beneficiary</b>	(2,318)	2,318	320	320
<b>Death/Termination/Opt-Out</b>	<u>(4,200)</u>	<u>(2,045)</u>	<u>(267)</u>	<u>(6,512)</u>
<b>End of Year (12/31/2017)</b>	70,374	61,675	2,633	134,682

## Appendix B – Program Provisions Summary

This section summarizes overall eligibility provisions for retiree health coverage, the various plans offered by the Commonwealth.

### Eligibility

Eligible employees who retire from the state and meet one of the following eligibility criteria are eligible to receive REHP benefits

- 25 or more years of service;
- 20 or more years of service and superannuation age – Age 50 for Park Rangers, Capitol Police and certain enforcement officers or 60 for general employees (age 55 or 65 for employees subject to Act 120 of 2010);
- Disability retirement – requires five years of service (no service requirement for enforcement officers).

### Covered Family Members

Spouses and dependents are eligible for subsidized postemployment medical coverage while the retiree is alive. The PPACA, signed into law on March 23, 2010, increased the dependent child age limit to age 26 and applied to the Commonwealth effective January 1, 2011.

### Retiree Contribution\*

Retirement before July 1, 2005: Commonwealth pays full cost.

Retirement after June 30, 2005 and before July 1, 2007: retiree contributions are 1% of final annual salary.

Retirement on or after July 1, 2007 and before July 1, 2011: retiree contributions are 3% for non-Medicare and 1.5% for Medicare of either final gross annual base salary or final average salary, whichever is less.

Retirement on or after July 1, 2011: retiree contributions are 3% of final average salary for non-Medicare and 1.5% of final average salary for Medicare.

Hired on or after August 1, 2003: In addition to the retiree contributions above, non-Medicare retirees who elect the Choice PPO plan are required to pay the incremental cost between the Choice PPO plan and the least expensive plan (LEP) in county of residence through monthly pension deductions (PPO buy-up).

Surviving spouses of deceased retirees may continue to participate in the plan if they pay the full cost of the coverage.

\* Certain bargaining units may have different retiree contribution arrangements

## Appendix B – Program Provisions Summary (cont.)

### Medical Plans

The following tables list the medical plans offered to retirees and provide the basic benefit provisions.

Medical	Benefit Provisions	Eligibility	
<p style="text-align: center;"><b>Basic PPO</b></p>	<p><b><u>In Network</u></b></p> <p>Deductible \$1,200 individual, \$2,400 family</p> <p>Out-of-Pocket Limit (including deductibles and co-pays) \$7,350 individual, \$14,700 family</p> <p>Doctor Office Visits PCP: \$20 co-pay Specialist: \$45 co-pay</p> <p>Inpatient Covered in full (after deductible)</p> <p>Lifetime Maximum None</p> <p><b><u>Out of Network</u></b></p> <p>Deductible \$2,400 individual, \$4,800 family</p> <p>Out-of-Pocket Limit (including deductibles) \$7,350 individual, \$14,700 family</p> <p>Doctor Office Visits PCP: 30% coinsurance (after deductible) Specialist: 30% coinsurance (after deductible)</p> <p>Inpatient 30% coinsurance (after deductible)</p> <p>Lifetime Maximum None</p>	<p>Non-Medicare eligible annuitants retired from the Commonwealth and their eligible dependents.</p>	
	<p style="text-align: center;"><b>Choice PPO</b></p>	<p><b><u>In Network</u></b></p> <p>Deductible \$350 individual, \$700 family</p> <p>Out-of-Pocket Limit (including deductibles and co-pays) \$7,350 individual, \$14,700 family</p> <p>Doctor Office Visits PCP: \$20 co-pay Specialist: \$45 co-pay</p> <p>Inpatient Covered in full (after deductible)</p> <p>Lifetime Maximum None</p> <p><b><u>Out of Network</u></b></p> <p>Deductible \$700 individual, \$1,400 family</p> <p>Out-of-Pocket Limit (including deductibles) \$7,350 individual, \$14,700 family</p> <p>Doctor Office Visits PCP: 30% coinsurance (after deductible) Specialist: 30% coinsurance (after deductible)</p> <p>Inpatient 30% coinsurance (after deductible)</p> <p>Lifetime Maximum None</p>	<p>Non-Medicare eligible annuitants retired from the Commonwealth and their eligible dependents.</p>



## Appendix B – Program Provisions Summary (cont.)

Medical	Benefit Provisions	Eligibility
<b>Custom HMO</b>	<p><b><u>In Network</u></b></p> <p>Deductible: None</p> <p>Out-of-Pocket Limit (including deductible and co-pays): \$7,350 individual, \$14,700 family</p> <p>Doctor Office Visits: PCP: \$5 co-pay Specialist: \$10 co-pay</p> <p>Inpatient: Covered in full</p> <p>Lifetime Maximum: None</p>	Non-Medicare eligible annuitants retired from the Commonwealth and their eligible dependents living within the HMO service area.
<b>Medicare Advantage PPO</b>	<p><b><u>In Network</u></b></p> <p>Deductible: Annual Medicare Part B deductible</p> <p>Out-of-Pocket Limit (including deductible): \$2,500 per person</p> <p>Doctor Office Visits: PCP: \$20 co-pay (after deductible) Specialist: \$30 co-pay (after deductible)</p> <p>Inpatient: Covered in full (after deductible)</p> <p>Lifetime Maximum: None</p> <p><b><u>Out of Network</u></b></p> <p>Deductible: 2 times Annual Medicare Part B deductible</p> <p>Out-of-Pocket Limit (including deductible): \$2,500 per person</p> <p>Doctor Office Visits: 20% coinsurance (after deductible)</p> <p>Inpatient: 20% coinsurance (after deductible)</p> <p>Lifetime Maximum: None</p>	Medicare eligible annuitants retired from the Commonwealth and their eligible dependents.
<b>Medicare Advantage HMO</b>	<p><b><u>In Network</u></b></p> <p>Deductible: None</p> <p>Out-of-Pocket Limit: \$2,500</p> <p>Doctor Office Visits: PCP: \$20 co-pay Specialist: \$30 co-pay</p> <p>Inpatient: Covered in full</p> <p>Lifetime Maximum: None</p>	Medicare eligible annuitants retired from the Commonwealth and their eligible dependents living within the HMO service area.

## Appendix B – Program Provisions Summary (cont.)

### Prescription Drug

The co-payments for all prescriptions covered by the plan are:

Retail (30 day supply): \$12 Generic / \$30 Preferred\* / \$60 Non-Preferred\*

Mail Order or Preferred Pharmacy (90 day supply): \$18 Generic / \$45 Preferred\* / \$90 Non-Preferred\*

Non-Preferred Pharmacy (90 day supply): \$24 Generic / \$60 Preferred\* / \$120 Non-Preferred\*

\*Plus an additional out-of-pocket cost for the difference between brand and generic, if one exists.

### Changes in Plan Provisions

None.

## Appendix C – Actuarial Methods

### Actuarial Cost Method

The Actuarial Cost Method used to determine the Total OPEB Liability is the Entry Age Normal (EAN) method as prescribed by GASB Nos. 74 and 75. This method is in the family of future benefit cost methods, which requires an estimate of the projected benefit payable at retirement to determine costs and liabilities.

The Normal Cost (or Service Cost) is the annual allocation required for each participant from entry date to the assumed retirement date so that the accumulated allocation at retirement is equal to the liability for the projected benefit. The projected benefits are based on estimates of future years of service and projected health benefit costs. The normal cost is developed as a level percent of compensation as prescribed by GASB Nos. 74 and 75.

The Present Value of Future Benefits is equal to the value of the projected benefit payable at retirement discounted back to the participant's current age. Discounts include such items as interest and mortality. The present value of future normal cost allocations is equal to the discounted value of the normal costs allocated from the participant's current age to retirement age.

The difference between the Present Value of Future Benefits and the present value of future normal cost allocations represents the Total OPEB Liability at the participant's current age.

The Total OPEB Liability for participants currently receiving payments is calculated as the actuarial present value of future benefits expected to be paid. No normal cost is allocated for these participants.

### Actuarial Value of Assets

The actuarial value of assets on the valuation date is the market value of assets.

### Financial and Census Data

The Commonwealth of Pennsylvania provided the participant data, financial information and plan descriptions used in this valuation. The actuary has checked the data for reasonableness, but has not independently audited the data. The actuary has no reason to believe the data is not complete and accurate, and knows of no further information that is essential to the preparation of the actuarial valuation.

### Plan Fiduciary Net Position

Market value of assets as of the measurement date.

### Census Date

December 31, 2017 for June 30, 2018 measurements.

### Measurement Date

June 30, 2018 for fiscal year ended June 30, 2018 trust financial statements (GASB No. 74) and for fiscal year ending June 30, 2019 participating employer financial statements (measurement date as of the end of the prior fiscal year end for GASB No. 75).

### Method Changes Since Prior Valuation

None.

## Appendix D – Actuarial Assumptions

### Economic Assumptions

The economic assumptions were selected for consistency with SERS where applicable. The discount rate was selected based on the requirements prescribed in GASB Nos. 74 and 75.

<b>Discount Rate</b>	<p>3.87% as of June 30, 2018</p> <p>3.58% as of June 30, 2017</p> <p>Since REHP has insufficient assets to meet next year's projected benefit payments, as prescribed by GASB Nos. 74 and 75, the discount rate will be based on the index rate for 20-year tax-exempt general obligation municipal bond index rate with an average rating of AA/Aa or higher as of the measurement date. The Commonwealth elected to determine the discount rate using the Bond Buyer 20-Bond General Obligation Index.</p>																																																																
<b>Inflation<sup>1</sup></b>	2.60%																																																																
<b>Payroll Growth<sup>1</sup></b>	2.90%																																																																
<b>Salary Scale<sup>1</sup></b>	<p>The career salary scale shown below includes average increases in the employee salary due to promotions and longevity growth. The average career salary growth is 2.65 percent per year. In addition, it is assumed that the salary schedules will increase by 2.90 percent per year. The scale below does not include the assumed 2.90 percent general salary increase.</p> <p><u>Career Salary Scale for Members</u></p> <table border="1"> <thead> <tr> <th>Completed Years of Service</th> <th>Annual Increase</th> <th>Completed Years of Service</th> <th>Annual Increase</th> </tr> </thead> <tbody> <tr><td>1</td><td>6.00%</td><td>16</td><td>2.10%</td></tr> <tr><td>2</td><td>4.50</td><td>17</td><td>2.05</td></tr> <tr><td>3</td><td>4.00</td><td>18</td><td>2.00</td></tr> <tr><td>4</td><td>3.75</td><td>19</td><td>1.95</td></tr> <tr><td>5</td><td>3.50</td><td>20</td><td>1.90</td></tr> <tr><td>6</td><td>3.25</td><td>21</td><td>1.85</td></tr> <tr><td>7</td><td>3.00</td><td>22</td><td>1.75</td></tr> <tr><td>8</td><td>2.90</td><td>23</td><td>1.65</td></tr> <tr><td>9</td><td>2.80</td><td>24</td><td>1.55</td></tr> <tr><td>10</td><td>2.70</td><td>25</td><td>1.45</td></tr> <tr><td>11</td><td>2.60</td><td>26</td><td>1.25</td></tr> <tr><td>12</td><td>2.50</td><td>27</td><td>1.05</td></tr> <tr><td>13</td><td>2.40</td><td>28</td><td>0.90</td></tr> <tr><td>14</td><td>2.30</td><td>29</td><td>0.85</td></tr> <tr><td>15</td><td>2.20</td><td>30+</td><td>0.80</td></tr> </tbody> </table>	Completed Years of Service	Annual Increase	Completed Years of Service	Annual Increase	1	6.00%	16	2.10%	2	4.50	17	2.05	3	4.00	18	2.00	4	3.75	19	1.95	5	3.50	20	1.90	6	3.25	21	1.85	7	3.00	22	1.75	8	2.90	23	1.65	9	2.80	24	1.55	10	2.70	25	1.45	11	2.60	26	1.25	12	2.50	27	1.05	13	2.40	28	0.90	14	2.30	29	0.85	15	2.20	30+	0.80
Completed Years of Service	Annual Increase	Completed Years of Service	Annual Increase																																																														
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<sup>1</sup> For consistency with the pension plan of which these participants are members, these assumptions are based on those used for the SERS Actuarial Valuation Report as of December 31, 2017 and experience study presented to the Board in March 2016.

## Appendix D – Actuarial Assumptions (cont.)

### Demographic Assumptions

The demographic assumptions were selected for consistency with SERS where applicable. The retiree health specific assumptions were selected based on recent experience.

<b>Mortality<sup>1</sup></b>	<b>Pre-Retirement Mortality:</b>		
	<b>Age</b>	<b>Male</b>	<b>Female</b>
	20	0.04%	0.02%
	25	0.04	0.02
	30	0.05	0.02
	35	0.06	0.03
	40	0.09	0.04
	45	0.13	0.06
	50	0.24	0.09
	55	0.29	0.14
60	0.35	0.24	
	<b>Post Retirement Mortality:</b>		
	<p>Healthy Participants: The RP-2000 Male and Female Combined Healthy Mortality Tables projected (using Projection Scale AA) to 2016 for males and to 2020 for females, and then further adjusted to ensure sufficient margin improvement in certain age ranges. Each table includes a margin for future improvement in life expectancy.</p> <p>Disabled Participants: The RP-2000 Male and Female Disabled Retiree Mortality Tables projected (using Projection Scale AA) to 2021 for males and to 2017 for females. Each table includes a margin for future improvement in life expectancy.</p>		
<b>Disability Incidence<sup>1</sup></b>	<b>Pre-Retirement Disability:</b>		
	<b>Age</b>	<b>Male</b>	<b>Female</b>
	25	0.02%	0.04%
	30	0.06	0.09
	35	0.11	0.14
	40	0.17	0.19
	45	0.30	0.30
	50	0.42	0.45
55	0.55	0.57	

<sup>1</sup> For consistency with the pension plan of which these participants are members, these assumptions are based on those used for the SERS Actuarial Valuation Report as of December 31, 2017 and experience study presented to the Board in March 2016.

## Appendix D – Actuarial Assumptions (cont.)

Withdrawal<sup>1</sup>

### General employees\*:

Age	Male				Female			
	Years of Service				Years of Service			
	0	5	9	14	0	5	9	14
20	24.2%	N/A	N/A	N/A	28.4%	N/A	N/A	N/A
25	18.5	3.0%	2.1%	N/A	22.4	3.7%	2.3%	N/A
30	16.4	3.0	2.1	1.0%	19.2	3.3	2.3	1.7%
35	15.6	2.4	1.3	1.0	15.0	3.2	2.3	1.2
40	15.0	2.4	1.3	1.0	13.4	3.2	1.2	1.0
45	14.4	2.4	0.7	1.1	13.1	2.7	1.2	1.0
50	14.4	2.6	0.7	1.1	13.1	2.7	1.5	1.0
55	14.4	1.9	0.8	0.8	13.1	1.8	1.0	1.6

\* For one primary government agency and three component units with separate contribution arrangements, the assumption is increased by a factor of 2.0 for one year of service or less and increased by 10 percentage points years of service 2 through 9. This assumption was determined based on an analysis of data covering the period from January 1, 2015 to January 1, 2017.

### Hazardous Duty employees:

Years of Service	Rate
0	9.0%
1	4.0
2	3.0
3	3.0
4	2.0
5	1.0
6	1.0
7	0.5
8	0.5
9	0.5
10+	0.2

<sup>1</sup> For consistency with the pension plan of which these participants are members, these assumptions are based on those used for the SERS Actuarial Valuation Report as of December 31, 2017 and experience study presented to the Board in March 2016.

## Appendix D – Actuarial Assumptions (cont.)

### Early Retirement<sup>1</sup>

(based on early retirement as defined by SERS; retirement prior to OPEB eligibility, as described above in Appendix B, will not receive other postemployment benefit)

#### General employees:

##### Hired prior to January 1, 2011:

Age	5 – 14 Years of Credited Service		15 or More Years of Credited Service	
	Male	Female	Male	Female
25	2.0%	3.7%	N/A	N/A
30	1.6	1.9	N/A	N/A
35	1.6	1.9	1.0%	1.2%
40	1.6	1.9	1.0	1.2
45	1.4	1.9	1.0	1.6
50	1.4	1.9	2.0	2.0
55	1.4	1.9	6.0	6.0

##### Hired on or after January 1, 2011:

Age	10 or More Years of Credited Service
35	1.5%
40	1.5
45	1.5
50	2.0
55	5.5
60	5.5
61	6.0
62	20.0
63	10.0
64	15.0

#### Hazardous Duty employees:

1.4% at each age

<sup>1</sup> For consistency with the pension plan of which these participants are members, these assumptions are based on those used for the SERS Actuarial Valuation Report as of December 31, 2017 and experience study presented to the Board in March 2016.

## Appendix D – Actuarial Assumptions (cont.)

### Normal Retirement<sup>1</sup>

(based on normal retirement as defined by SERS; retirement prior to OPEB eligibility, as described above in Appendix B, will not receive other postemployment benefit)

#### General employees:

##### Hired prior to January 1, 2011:

Age	Male	Female
53	20.0%	23.0%
54 – 55	23.0	23.0
56 – 57	24.0	23.0
58	27.0	23.0
59	30.0	25.0
60	25.0	25.0
61	20.0	20.0
62	25.0	25.0
63 – 64	20.0	20.0
65 – 66	25.0	25.0
67 – 70	23.0	23.0
71 – 79	20.0	20.0
80	100.0	100.0

##### Hired on or after January 1, 2011:

Age	Rate
55	15.0%
56	16.0
57	17.0
58	18.0
59	19.0
60	20.0
61	20.0
62	25.0
63	20.0
64	20.0
65	25.0
66 – 79	20.0
80	100.0

#### Hazardous Duty employees:

Age	Rate
50 – 59	10.0%
60 – 64	10.0
65	27.0
66 – 79	32.0
80	100.0

<sup>1</sup> For consistency with the pension plan of which these participants are members, these assumptions are based on those used for the SERS Actuarial Valuation Report as of December 31, 2017 and experience study presented to the Board in March 2016.



## Appendix D – Actuarial Assumptions (cont.)

<b>Spouse Age Difference<sup>1</sup></b>	Females are assumed to be 2 years younger than males.
<b>Participation Rate</b>	100% of employees who currently participate in the active health plan are assumed to elect coverage at retirement. Employees who are eligible for but currently opt out of active health coverage are excluded from the valuation. Retirees who currently elect to waive their coverage are assumed to remain uncovered in the future.
<b>Coverage Level Election Rates</b>	Employees are assumed to maintain their current coverage election when they retire. Current retirees are assumed to continue their current coverage election.
<b>Surviving Spouse Continuing Coverage</b>	45% of spouses are assumed to elect to continue coverage after the retiree's death.

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<sup>1</sup> For consistency with the pension plan of which these participants are members, these assumptions are based on those used for the SERS Actuarial Valuation Report as of December 31, 2017 and experience study presented to the Board in March 2016.

## Appendix D – Actuarial Assumptions (cont.)

### Benefit Assumptions

<p><b>Per Capita Claims Costs</b></p>	<p>The per capita claims costs used in the valuation were developed from fully insured premiums, self-insured claims experience, and projected administrative expenses that represent the expected claims costs and administrative expenses for 2018.</p> <p>The first-year per capita claims costs below are on a “net basis” – they reflect plan costs after reduction of total benefit costs for member cost-sharing (deductibles, coinsurance, co-pays, provider savings, Medicare, etc.). These claims were blended based on the current enrollment mix by plan, separately for the non-Medicare eligible and Medicare eligible population, resulting in an average claims cost per member.</p> <p>Average claims costs were age-graded using the retiree age and gender distribution, separately for the non-Medicare eligible and Medicare eligible population. These age-graded claims costs are the basis for projecting the gross cost for each individual, before member contributions for coverage. The aging factors are based on the Society of Actuaries age-curve study “Health Care Costs—From Birth to Death.” Future year per capita costs were projected by applying trend assumptions to the first-year costs.</p> <p>Since the claims costs table below is specific to the experience of the Commonwealth’s retirees (i.e., not blended with employees) separately for non-Medicare and Medicare, there is no implicit subsidy. However, age-graded claims were developed to project the increases in costs related to the average age of the retiree population increasing over time.</p> <table border="1" data-bbox="730 892 1177 1270"> <caption>2018 Annual Per Capita Claims Costs</caption> <thead> <tr> <th>Age</th> <th>Non-Medicare Eligible</th> <th>Medicare Eligible</th> </tr> </thead> <tbody> <tr> <td>45</td> <td>\$ 7,620</td> <td>\$ 2,863</td> </tr> <tr> <td>50</td> <td>9,294</td> <td>2,863</td> </tr> <tr> <td>55</td> <td>11,449</td> <td>2,863</td> </tr> <tr> <td>60</td> <td>14,015</td> <td>2,863</td> </tr> <tr> <td>64</td> <td>16,684</td> <td>2,863</td> </tr> <tr> <td>65</td> <td>N/A</td> <td>2,863</td> </tr> <tr> <td>70</td> <td>N/A</td> <td>3,158</td> </tr> <tr> <td>75</td> <td>N/A</td> <td>3,405</td> </tr> <tr> <td>80</td> <td>N/A</td> <td>3,587</td> </tr> <tr> <td>85</td> <td>N/A</td> <td>3,666</td> </tr> <tr> <td>90</td> <td>N/A</td> <td>3,649</td> </tr> <tr> <td>95</td> <td>N/A</td> <td>3,551</td> </tr> </tbody> </table>	Age	Non-Medicare Eligible	Medicare Eligible	45	\$ 7,620	\$ 2,863	50	9,294	2,863	55	11,449	2,863	60	14,015	2,863	64	16,684	2,863	65	N/A	2,863	70	N/A	3,158	75	N/A	3,405	80	N/A	3,587	85	N/A	3,666	90	N/A	3,649	95	N/A	3,551
Age	Non-Medicare Eligible	Medicare Eligible																																						
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<p><b>Expenses</b></p>	<p>Per Capita Claims Costs were developed to include administrative expenses.</p>																																							

## Appendix D – Actuarial Assumptions (cont.)

<b>Trend Rates</b>	<p>The trend rates illustrated below are used to project age-graded claims and flat rates into future years. Trend rates were developed based on the SOA-Getzen trend rate model version 2018_c (previously version 16_a). The short-term trend assumptions were based on a review of the Commonwealth's historical trend rates during the years 2015 through 2017 and emerging experience, separately for non-Medicare and Medicare benefits. Regression curves were fit to the data to help predict short-term future per capita cost increases. The most recently published SOA-Getzen model was then used to determine the trend rates beginning in 2022 and thereafter, based on the plan's long-term inflation assumption and reasonable macro-economic assumptions for the growth of health care expenditures during this period relative to the general economy.</p> <table border="1" data-bbox="469 537 1198 999"> <thead> <tr> <th rowspan="2">Year</th> <th colspan="2">January 1, 2018 Assumption</th> </tr> <tr> <th>Non-Medicare Benefits</th> <th>Medicare Benefits</th> </tr> </thead> <tbody> <tr> <td>2018</td> <td>6.2%</td> <td>5.9%*</td> </tr> <tr> <td>2019</td> <td>6.1%</td> <td>5.8%*</td> </tr> <tr> <td>2020</td> <td>6.0%</td> <td>5.7%</td> </tr> <tr> <td>2021</td> <td>5.9%</td> <td>5.6%</td> </tr> <tr> <td>2022</td> <td>5.8%</td> <td>5.6%</td> </tr> <tr> <td>2030</td> <td>5.4%</td> <td>5.4%</td> </tr> <tr> <td>2040</td> <td>5.4%</td> <td>5.4%</td> </tr> <tr> <td>2050</td> <td>5.1%</td> <td>5.1%</td> </tr> <tr> <td>2060</td> <td>4.9%</td> <td>4.9%</td> </tr> <tr> <td>2070</td> <td>4.5%</td> <td>4.5%</td> </tr> <tr> <td>2075+</td> <td>4.1%</td> <td>4.1%</td> </tr> </tbody> </table> <p>* Prior to 0.925% adjustment downward in 2018 and 0.925% adjustment upward in 2019 to account for the temporary Health Insurer Fee Waiver that applies to fully-insured plans in 2019.</p>	Year	January 1, 2018 Assumption		Non-Medicare Benefits	Medicare Benefits	2018	6.2%	5.9%*	2019	6.1%	5.8%*	2020	6.0%	5.7%	2021	5.9%	5.6%	2022	5.8%	5.6%	2030	5.4%	5.4%	2040	5.4%	5.4%	2050	5.1%	5.1%	2060	4.9%	4.9%	2070	4.5%	4.5%	2075+	4.1%	4.1%
Year	January 1, 2018 Assumption																																						
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2070	4.5%	4.5%																																					
2075+	4.1%	4.1%																																					
<b>Excise Tax</b>	<p>Effective in the 2022 calendar year, an excise tax on "Cadillac Plans" will apply as a result of PPACA. HMOs and other healthcare insurers, who offer plans with a higher cost than the excise tax threshold, will be charged a 40% tax on the costs exceeding the threshold. Due to the expectation that the medical trend rate will significantly exceed inflation over the long-term, most retiree health plans will be affected by the excise tax at some point in the future. After adjusting the thresholds for the age and gender characteristics of the Commonwealth's policy holders, however, the excise tax is projected to only have a minor impact on the liabilities. Claim costs are projected to exceed the excise tax threshold in year 2034.</p>																																						
<b>Medicare Eligibility</b>	<p>Current Medicare eligible retired participants who are under age 65 are assumed to remain Medicare eligible.</p> <p>All other retirees and spouses (if covered) are assumed to be non-Medicare eligible prior to age 65 and Medicare eligible at age 65.</p>																																						

## Appendix D – Actuarial Assumptions (cont.)

<p><b>Coverage</b></p>	<p>Current retirees are assumed to remain in their currently elected plan.</p> <p>Current employees are assumed to enroll at retirement in the same proportion as the current retiree mix. These proportions are established separately for non-Medicare and Medicare coverage.</p> <p>The table below shows the enrollment percentage by plan.</p> <table border="1" data-bbox="630 464 1284 1016"> <thead> <tr> <th data-bbox="630 464 1024 489"><b>Non-Medicare</b></th> <th data-bbox="1024 464 1284 489"><b>Adult Member Enrollment</b></th> </tr> </thead> <tbody> <tr> <td data-bbox="630 489 1024 514">Highmark Basic PPO</td> <td data-bbox="1024 489 1284 514">17.4%</td> </tr> <tr> <td data-bbox="630 514 1024 539">Aetna Choice PPO</td> <td data-bbox="1024 514 1284 539">72.0%</td> </tr> <tr> <td data-bbox="630 539 1024 564">Aetna HMO SE Region</td> <td data-bbox="1024 539 1284 564">0.5%</td> </tr> <tr> <td data-bbox="630 564 1024 590">Aetna HMO Central Region</td> <td data-bbox="1024 564 1284 590">1.9%</td> </tr> <tr> <td data-bbox="630 590 1024 615">Aetna HMO Western Region</td> <td data-bbox="1024 590 1284 615">2.0%</td> </tr> <tr> <td data-bbox="630 615 1024 640">Geisinger HMO NE Region</td> <td data-bbox="1024 615 1284 640">6.2%</td> </tr> <tr> <th data-bbox="630 695 1024 720"><b>Medicare</b></th> <th data-bbox="1024 695 1284 720"><b>Adult Member Enrollment</b></th> </tr> <tr> <td data-bbox="630 720 1024 745">Aetna Medicare PPO</td> <td data-bbox="1024 720 1284 745">74.3%</td> </tr> <tr> <td data-bbox="630 745 1024 770">Aetna Medicare PPO ESA</td> <td data-bbox="1024 745 1284 770">2.2%</td> </tr> <tr> <td data-bbox="630 770 1024 795">Aetna Medicare HMO In State</td> <td data-bbox="1024 770 1284 795">0.7%</td> </tr> <tr> <td data-bbox="630 795 1024 821">Aetna Medicare HMO Out of State</td> <td data-bbox="1024 795 1284 821">0.1%</td> </tr> <tr> <td data-bbox="630 821 1024 846">Geisinger MHMO Central PA</td> <td data-bbox="1024 821 1284 846">4.8%</td> </tr> <tr> <td data-bbox="630 846 1024 871">Geisinger MHMO Northeastern PA</td> <td data-bbox="1024 846 1284 871">3.1%</td> </tr> <tr> <td data-bbox="630 871 1024 896">UPMC MHMO</td> <td data-bbox="1024 871 1284 896">12.4%</td> </tr> <tr> <td data-bbox="630 896 1024 921">UPMC MHMO FLEX</td> <td data-bbox="1024 896 1284 921">0.1%</td> </tr> <tr> <td data-bbox="630 921 1024 947">CBC Blue Journey</td> <td data-bbox="1024 921 1284 947">2.2%</td> </tr> <tr> <td data-bbox="630 947 1024 972">CBC Out of State Parts A &amp; B</td> <td data-bbox="1024 947 1284 972">0.2%</td> </tr> </tbody> </table>	<b>Non-Medicare</b>	<b>Adult Member Enrollment</b>	Highmark Basic PPO	17.4%	Aetna Choice PPO	72.0%	Aetna HMO SE Region	0.5%	Aetna HMO Central Region	1.9%	Aetna HMO Western Region	2.0%	Geisinger HMO NE Region	6.2%	<b>Medicare</b>	<b>Adult Member Enrollment</b>	Aetna Medicare PPO	74.3%	Aetna Medicare PPO ESA	2.2%	Aetna Medicare HMO In State	0.7%	Aetna Medicare HMO Out of State	0.1%	Geisinger MHMO Central PA	4.8%	Geisinger MHMO Northeastern PA	3.1%	UPMC MHMO	12.4%	UPMC MHMO FLEX	0.1%	CBC Blue Journey	2.2%	CBC Out of State Parts A & B	0.2%
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<p><b>Changes in Assumptions</b></p>	<p>The discount rate was increased from 3.58% to 3.87%.</p> <p>Per capita claims costs were updated based on changes in the underlying claims and benefit provisions.</p> <p>The trend rates were updated based on the SOA-Getzen trend rate model version 2018_c. The short-term trend assumptions were based on a review of the Commonwealth's historical trend rates during the years 2015 through 2017 and emerging experience, separately for non-Medicare and Medicare benefits.</p>																																				

## Appendix E - Rationale for Assumptions

<b>Discount Rate</b>	GASB 74 and 75 require that the discount rate be based on the yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher. This valuation report will serve as the basis for the Commonwealth's trust and employer financial reporting disclosure requirements under GASB Nos. 74 and 75. Accordingly, the discount rate used to determine the June 30, 2018 benefit obligation is based on the 20-year Bond Buyer GO Index.
<b>Inflation, Payroll Growth, Salary Scale, Mortality, Disability Incidence, Withdrawal, Early and Normal Retirement</b>	Consistent with the assumptions used for the SERS Actuarial Valuation Report as of December 31, 2017 and experience study presented to the Board in March 2016. The inflation assumption was selected by the SERS Board during an April of 2017 meeting based on a review of actual plan experience and the prevalent economic outlook.

## Appendix F - Glossary

Brief explanations of terms used in this report:

### **Annual OPEB Expense**

The change in Net OPEB Liability less the change in the Deferred Outflows of Resources plus the change in the Deferred Inflows of Resources.

### **Collective deferred outflows of resources and deferred inflows of resources related to OPEB**

Deferred outflows of resources and deferred inflows of resources related to OPEB arising from certain changes in the collective net OPEB liability or collective total OPEB liability.

### **Covered Employee Payroll**

Annual compensation paid (or expected to be paid) to active employees covered by an OPEB plan, in aggregate.

### **Implicit Rate Subsidy**

Many post-employment health plans charge the same premium rates for all participants in a non-Medicare plan regardless of their age. This single premium rate is called a blended premium rate because it blends the expected claims of both active and retired participants. Retirees are generally older than the average participant in a non-Medicare plan, which means they are expected to generate higher claims than the average participant of the plan; therefore, they are receiving a subsidy even if they pay 100% of the blended premium rate because they would be paying less in premiums than their expected claims costs. This subsidy is referred to as the "Implicit Rate Subsidy".

### **Net OPEB liability (NOL)**

The liability of employers and nonemployer contributing entities to plan members for benefits provided through a defined benefit OPEB plan that is administered through a trust that meets the criteria of the GASB Statements.

### **Normal Cost or Service Cost**

The portion of the Total Present Value of Future Benefits attributed to employee service during the current fiscal year by the actuarial cost method. These terms are used interchangeably.

### **Other Postemployment Benefits (OPEB)**

Retiree health care benefits and post-employment benefits provided separately from a pension plan (excluding termination offers and benefits).

### **Plan Fiduciary Net Position (FNP)**

Set equal to the market value of assets as of the measurement date

### **Present Value of Future Benefits (PVFB)**

The value, as of the valuation date, of the projected benefits payable to all members for their accrued service and their expected future service, discounted to reflect the time value (present value) of money and adjusted for the probabilities of retirement, withdrawal, death and disability.

## Appendix F – Glossary (cont.)

### **Total OPEB liability (TOL)**

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service in conformity with the GASB Statements. The total OPEB liability is the liability of employers and nonemployer contributing entities to plan members for benefits provided through a defined benefit OPEB plan that is not administered through a trust that meets the criteria of the GASB Statements.