



**Commonwealth of Pennsylvania**  
**Retired Pennsylvania State Police Program**  
GASB Statement Nos. 74 and 75 Valuation Report

Measurement date of June 30, 2023  
Prepared by Deloitte Consulting LLP

September 2023

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# Actuarial Valuation Opinion

This report presents results of the actuarial valuation of the Commonwealth of Pennsylvania's Retired Pennsylvania State Police Program ("the Plan" or "RPSP") measured as of June 30, 2023. In this report, we present disclosure information as of June 30, 2023 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.

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.

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.

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.

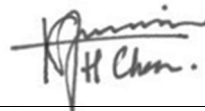
This report was prepared solely for the benefit and internal use of the plan sponsor. This report is not intended for the benefit of any other party and may not be relied upon by any third party for any purpose, and Deloitte Consulting accepts no responsibility or liability with respect to any party 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, 2023 GASB No. 74 disclosures and fiscal year ending June 30, 2024 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, 2023 are:

- Net OPEB Liability (NOL) is \$6.1 billion, 1203.7% of covered employee payroll.
- Plan Fiduciary Net Position (FNP) as a percentage of Total OPEB Liability (TOL) is 2.1%.
- OPEB Expense is \$0.2 billion.

## Significant Changes from the Previous Actuarial Valuation

For the June 30, 2023 measurement, there was a decrease in TOL of \$0.5 billion compared to the previous valuation, with the decrease primarily due to the following:

- There was an expected \$0.2 billion increase in TOL due to the passage of time (service cost, interest, benefit payments, retiree contributions);
- There was a \$0.2 billion decrease in TOL due to changes in actuarial assumptions, driven by the increase in the discount rate from 3.54% to 3.65% and the update to the trend assumption;
- The actual experience over the past year was different than expected, resulting in a \$0.5 billion decrease in TOL. This experience gain was caused primarily by decreases in per capita claims cost due to favorable claims experience.

# Background and Comments

## Overview of Plans

The Commonwealth sponsors the Retired Pennsylvania State Police Program (RPSPP) 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 \$1 million annually until assets cover the present value of future benefits, subject to annual evaluation.

RPSPP employer contribution requirements are established within collective bargaining agreements. During the fiscal year ended June 30, 2023, employing agencies contributed \$1,500 per biweekly pay period for each current RPSPP eligible active employee to the RPSPP Trust. RPSPP plan members are not required to make contributions. Employer contributions made to the RPSPP Trust, a Trust Equivalent Arrangement, are irrevocable. Plan assets are restricted for use for the provision and administration of RPSPP retirees' health benefits. Employers maintain no rights of ownership to the assets and the trust.

The OPEB Investment Pool's target asset allocation as of June 30, 2023 is shown in the table below.

| Asset Class      | Target Allocation |
|------------------|-------------------|
| US Equity        | 42%               |
| Non-US Equity    | 22%               |
| Core Real Estate | 4%                |
| Public REITS     | 4%                |
| Infrastructure   | 4%                |
| Private Equity   | 1%                |
| US Fixed Income  | 22%               |
| Cash Equivalent  | 1%                |
| <b>Total</b>     | <b>100%</b>       |

## 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. On December 20, 2019, the excise tax and the health insurance provider fee for calendar years beginning after December 31, 2020 were repealed.

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

The impact of applicable provisions was incorporated in the per capita claims costs summarized in the Actuarial Assumptions section of this report.

## **Inflation Reduction Act**

The Inflation Reduction Act of 2022 ("IRA") was signed into law on August 16, 2022 and includes provisions to reform Medicare prescription drugs.

The IRA impacts the duration of Medicare Part D Retiree Drug Subsidy ("RDS") payments. Since RDS payments should not be reflected in GASB actuarial valuations, there is no effect on the per capita claims costs assumption in this report.

The IRA's effect on EGWPs is not currently estimable due to the lack of guidance from the Centers for Medicare & Medicaid Services ("CMS") and the unknown effect of prescription drug negotiations.

## **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 2015 through 2019 and was presented to the State Employees' Retirement Board in July 2020. The approved recommendations from that study were used to determine the assumptions for this valuation, where applicable. 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 RPSPP 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 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 3.65% as of June 30, 2023 (3.54% as of June 30, 2022).

The treatment of RDS payments 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 RDS payments should not be reflected under GASB No. 75.

The actuarial methods and assumptions are described in the Basis of the Valuation section of this report.

# Summary of Actuarial Valuation

This section provides a summary of the actuarial valuation results for the plan. All information is provided as of the measurement date except for the census data. The valuation results as of the June 30, 2022 measurement date were based on December 31, 2021 census data, and valuation results as of the June 30, 2023 measurement date were based on December 31, 2022 census data. All liabilities are net of expected retiree contributions.

*(All dollar amounts are in thousands)*

| <b>Measurement Date</b>   | <b>June 30, 2023</b> | <b>June 30, 2022</b> |
|---|----------------------|----------------------|
| Total OPEB Liability  | \$ 6,283,686         | \$ 6,735,063         |
| Plan Fiduciary Net Position   | \$ 135,095           | \$ 120,858           |
| Net OPEB Liability  | \$ 6,148,591         | \$ 6,614,205         |
| Plan Fiduciary Net Position As A Percentage Of Total OPEB Liability | 2.1%                 | 1.8%                 |
| Net OPEB Liability As A Percentage Of Covered Employee Payroll      | 1203.7%              | 1418.2%              |
| Discount Rate   | 3.65%                | 3.54%                |
| Participant Counts  |                      |                      |
| Active Participants   | 4,645                | 4,548                |
| Retired Participants*   | <u>5,472</u>         | <u>5,442</u>         |
| Total   | 10,117               | 9,990                |
| Covered Employee Payroll  | \$ 510,797           | \$ 466,390           |

\* 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, 2022 measurement date were based on December 31, 2021 census data and employer contributions for the fiscal year ended June 30, 2022. The valuation results as of the June 30, 2023 measurement date were based on December 31, 2022 census data and employer contributions for the fiscal year ended June 30, 2023.

## 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, 2022</b>  | <b>3.54%</b>  | <b>\$ 6,735,063</b>      | <b>\$ 120,858</b>               | <b>\$ 6,614,205</b>        |
| Service Cost  |               | 167,479                  |                                 | 167,479                    |
| Interest  |               | 241,339                  |                                 | 241,339                    |
| Changes In Benefit Terms  |               | -                        |                                 | -                          |
| Changes In Assumptions - Discount Rate  |               | (110,366)                |                                 | (110,366)                  |
| Changes In Assumptions - Others   |               | (78,333)                 |                                 | (78,333)                   |
| Differences Between Expected And Actual Experience  |               | (499,888)                |                                 | (499,888)                  |
| Benefit Payments  |               |                          |                                 |                            |
| Insurance Premiums - Employer Paid  | \$ (171,608)  |                          |                                 |                            |
| Insurance Premiums - Retiree Paid   | (1,139)       |                          |                                 |                            |
| Total   |               | (172,747)                | (172,747)                       | -                          |
| GASB 75 Defined Employer Contributions  | \$ 172,426    |                          | 172,426                         | (172,426)                  |
| Contributions - Employee  |               |                          | -                               | -                          |
| Contributions - Retiree   |               | 1,139                    | 1,139                           | -                          |
| Administrative Expenses   |               |                          | (735)                           | 735                        |
| Net Investment Income   |               |                          |                                 |                            |
| Expected Investment Earnings  | \$ 8,161      |                          |                                 |                            |
| Differences Between Projected And Actual Investment Earnings  | 5,993         |                          |                                 |                            |
| Total   |               |                          | 14,154                          | (14,154)                   |
| Net Change  |               | \$ (451,377)             | \$ 14,237                       | \$ (465,614)               |
| <b>Measurement Date of June 30, 2023</b>  | <b>3.65%</b>  | <b>\$ 6,283,686</b>      | <b>\$ 135,095</b>               | <b>\$ 6,148,591</b>        |
| <b>Measurement Date</b>   |               |                          | <b>June 30, 2023</b>            | <b>June 30, 2022</b>       |
| Plan Fiduciary Net Position As A Percentage Of Total OPEB Liability   |               |                          | 2.1%                            | 1.8%                       |
| Covered Employee Payroll  |               |                          | \$ 510,797                      | \$ 466,390                 |
| Net OPEB Liability As A Percentage Of Covered Employee Payroll  |               |                          | 1203.7%                         | 1418.2%                    |
| <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, 2023: |               |                          |                                 |                            |
| One Percentage Increase (4.65%)   |               |                          | \$ (889,149)                    | -14%                       |
| One Percentage Decrease (2.65%)   |               |                          | \$ 1,125,210                    | 18%                        |
| Net OPEB Liability at a one percentage point change in discount rate as of June 30, 2023 is as follows:                     |               |                          |                                 | <b>Net OPEB Liability</b>  |
| One Percentage Increase (4.65%)   |               |                          |                                 | \$ 5,259,442               |
| One Percentage Decrease (2.65%)   |               |                          |                                 | \$ 7,273,801               |
| <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, 2023:    |               |                          |                                 |                            |
| One Percentage Increase (10.1% / 8.1% grading to 4.9%)  |               |                          | \$ 1,206,822                    | 19%                        |
| One Percentage Decrease (8.1% / 6.1% grading to 2.9%)   |               |                          | \$ (939,582)                    | -15%                       |
| Net OPEB Liability at a one percentage point change in trend rate as of June 30, 2023 is as follows:                        |               |                          |                                 | <b>Net OPEB Liability</b>  |
| One Percentage Increase (10.1% / 8.1% grading to 4.9%)  |               |                          |                                 | \$ 7,355,413               |
| One Percentage Decrease (8.1% / 6.1% grading to 2.9%)   |               |                          |                                 | \$ 5,209,009               |
| <b>Key Assumptions</b>  |               |                          | <b>June 30, 2023</b>            | <b>June 30, 2022</b>       |
| Discount Rate   |               |                          | 3.65%                           | 3.54%                      |
| Investment Rate of Return   |               |                          | 6.75%                           | 6.75%                      |
| Inflation   |               |                          | 2.50%                           | 2.50%                      |
| Initial Medical Trend Rate  |               |                          | 9.1% / 7.1%                     | 7.0% / 5.1%                |
| Ultimate Medical Trend Rate   |               |                          | 3.9%                            | 3.9%                       |
| Year Ultimate Trend Rate Reached  |               |                          | 2075                            | 2075                       |



**Development of OPEB Expense for Fiscal Year Ending June 30, 2024  
(Measurement Year June 30, 2023)**

*(All dollar amounts are in thousands)*

| <b>Components of OPEB Expense</b>                             | <b>Measurement Year<br/>Ended 06/30/2023</b> | <b>Measurement Year<br/>Ended 06/30/2022</b> |
|---|--|--|
| Service Cost  | \$ 167,479                                   | \$ 257,982                                   |
| Interest  | 241,339                                      | 184,222                                      |
| Expected Investment Earnings                                  | (8,161)                                      | (9,404)                                      |
| Contributions - Employee                                      | -  | -  |
| Administrative Expenses                                       | 735  | 726  |
| Changes In Benefit Terms                                      | -  | -  |
| Recognition of Current Period Deferred Outflows and (Inflows) |  |  |
| Changes in assumptions  | (28,678)                                     | (276,140)                                    |
| Differences between expected and actual experience            | (75,971)                                     | (13,882)                                     |
| Differences between expected and actual investment earnings   | (1,199)                                      | 5,659  |
| Recognition of Beginning Deferred Outflows                    | 435,639                                      | 429,980                                      |
| Recognition of Beginning Deferred Inflows                     | (522,696)                                    | (344,804)                                    |
| <b>OPEB Expense</b>   | <b>\$ 208,487</b>                            | <b>\$ 234,339</b>                            |
|   |  |  |
| <b>Assumptions Used to Determine OPEB Expense</b>             | <b>Measurement Year<br/>Ended 06/30/2023</b> | <b>Measurement Year<br/>Ended 06/30/2022</b> |
| Assumptions as of Measurement Date*                           | 6/30/2022                                    | 6/30/2021                                    |
| Discount Rate   | 3.54%  | 2.16%  |
| Investment Rate of Return                                     | 6.75%  | 6.75%  |
| Inflation   | 2.50%  | 2.50%  |
| Initial Medical Trend Rate                                    | 7.0% / 5.1%                                  | 6.5% / 5.5%                                  |
| Ultimate Medical Trend Rate                                   | 3.9%   | 4.0%   |
| Year Ultimate Trend Rate Reached                              | 2075   | 2075   |

\* Per Q&A 4.114 and 4.115 of GASB Implementation Guide No. 2017-3, Service Cost and Interest are determined "based on the results of the actuarial valuation that determined the beginning net OPEB liability".

## Schedule of Deferred Outflows and Deferred Inflows of Resources

*(All dollar amounts are in thousands)*

| Measurement<br>Date Established  | Initial Amount | Deferred Outflows<br>of Resources as of<br>06/30/2023 | Deferred (Inflows)<br>of Resources as of<br>06/30/2023* | Initial Years | Remaining<br>Years | Outflows/(Inflows)<br>Recognized in<br>Measurement Year<br>Ended 06/30/2023 |
|--|----------------|---|---|---------------|--------------------|---|
| <b>Changes In Assumptions</b>  |                |   |   |               |                    |   |
| 06/30/2018   | \$ (272,746)   | \$ -  | \$ -  | 5.86          | -                  | \$ (40,026)   |
| 06/30/2019   | \$ 296,435     | \$ 50,225   | \$ -  | 6.02          | 1.02               | \$ 49,242   |
| 06/30/2020   | \$ 1,018,439   | \$ 341,735  | \$ -  | 6.02          | 2.02               | \$ 169,176  |
| 06/30/2021   | \$ 839,654     | \$ 441,713  | \$ -  | 6.33          | 3.33               | \$ 132,647  |
| 06/30/2022   | \$ (1,808,717) | \$ -  | \$ (1,256,437)  | 6.55          | 4.55               | \$ (276,140)  |
| 06/30/2023   | \$ (188,699)   | \$ -  | \$ (160,021)  | 6.58          | 5.58               | \$ (28,678)   |
| Total  |                | \$ 833,673  | \$ (1,416,458)  |               |                    | \$ 6,221  |
| <b>Differences Between Expected And Actual Plan Experience</b>   |                |   |   |               |                    |   |
| 06/30/2018   | \$ (202,655)   | \$ -  | \$ -  | 5.86          | -                  | \$ (29,740)   |
| 06/30/2019   | \$ (728,659)   | \$ -  | \$ (123,459)  | 6.02          | 1.02               | \$ (121,040)  |
| 06/30/2020   | \$ (216,290)   | \$ -  | \$ (72,574)   | 6.02          | 2.02               | \$ (35,929)   |
| 06/30/2021   | \$ 494,350     | \$ 260,062  | \$ -  | 6.33          | 3.33               | \$ 78,096   |
| 06/30/2022   | \$ (90,929)    | \$ -  | \$ (63,165)   | 6.55          | 4.55               | \$ (13,882)   |
| 06/30/2023   | \$ (499,888)   | \$ -  | \$ (423,917)  | 6.58          | 5.58               | \$ (75,971)   |
| Total  |                | \$ 260,062  | \$ (683,115)  |               |                    | \$ (198,466)  |
| <b>Net Difference Between Projected And Actual Earnings On Investments</b>                             |                |   |   |               |                    |   |
| 06/30/2019   | \$ (48)        | \$ -  | \$ -  | 5.00          | -                  | \$ (8)  |
| 06/30/2020   | \$ 4,096       | \$ 820  | \$ -  | 5.00          | 1.00               | \$ 819  |
| 06/30/2021   | \$ (29,655)    | \$ -  | \$ (11,862)   | 5.00          | 2.00               | \$ (5,931)  |
| 06/30/2022   | \$ 28,295      | \$ 16,977   | \$ -  | 5.00          | 3.00               | \$ 5,659  |
| 06/30/2023   | \$ (5,993)     | \$ -  | \$ (4,794)  | 5.00          | 4.00               | \$ (1,199)  |
| Total**  |                | \$ 17,797   | \$ (16,656)   |               |                    | \$ (660)  |
| <b>Contributions subsequent to measurement date***</b>   |                |   |   |               |                    |   |
| To be determined by each participating employer.   |                |   |   |               |                    |   |
| <b>Balance as of 06/30/2023 Measurement Date</b>   |                | <b>\$ 1,111,532</b>                                   | <b>\$ (2,116,229)</b>                                   |               |                    | <b>\$ (192,905)</b>   |
| <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>   |
| 06/30/2024   |                |   |   |               |                    | \$ (123,130)  |
| 06/30/2025   |                |   |   |               |                    | (53,588)  |
| 06/30/2026   |                |   |   |               |                    | (176,801)   |
| 06/30/2027   |                |   |   |               |                    | (326,322)   |
| 06/30/2028   |                |   |   |               |                    | (264,163)   |
| Thereafter   |                |   |   |               |                    | (60,693)  |

\* Deferred (Inflows) should be disclosed as positive numbers in the ACFR.

\*\* Per GASB 75 Paragraph 43.b, Deferred outflows of resources and deferred inflows of resources arising from differences between projected and actual OPEB plan investment earnings in different measurement periods should be aggregated and reported as a net deferred outflow of resources related to OPEB or a net deferred inflow of resources related to OPEB. Therefore, a net deferred outflow of \$1,141 is recognized as of 06/30/2023.

\*\*\* Reflects employer contributions made subsequent to 06/30/2023. This will be recognized as a reduction in Net OPEB Liability next year.

## 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          | \$6,746,387              | \$82,532                        | \$6,663,855            | 1.2%  | N/A                          | N/A  |
| June 30, 2017          | \$6,209,658              | \$93,666                        | \$6,115,992            | 1.5%  | \$386,602                    | 1582.0%  |
| June 30, 2018          | \$5,981,598              | \$96,357                        | \$5,885,241            | 1.6%  | \$387,245                    | 1519.8%  |
| June 30, 2019          | \$5,787,345              | \$100,742                       | \$5,686,603            | 1.7%  | \$408,648                    | 1391.6%  |
| June 30, 2020          | \$6,808,752              | \$106,545                       | \$6,702,207            | 1.6%  | \$426,728                    | 1570.6%  |
| June 30, 2021          | \$8,348,248              | \$138,904                       | \$8,209,344            | 1.7%  | \$447,926                    | 1832.7%  |
| June 30, 2022          | \$6,735,063              | \$120,858                       | \$6,614,205            | 1.8%  | \$466,390                    | 1418.2%  |
| June 30, 2023          | \$6,283,686              | \$135,095                       | \$6,148,591            | 2.1%  | \$510,797                    | 1203.7%  |

# Participating Employers Results

The RPSPP is a single-employer defined-benefit OPEB Plan that is established and sponsored by the Commonwealth. There are several employers, all fund types within the primary government, that participate in the RPSPP. The results for each participating employer was provided in a separate excel workbook.

Each fund type and business area's allocated share was determined based on their contractually required contribution towards RPSPP relative to the total population during the period ending on the measurement date. The employer contractually required contribution towards RPSPP is different from the GASB No. 75 defined employer contribution. Each fund type and business area's GASB No. 75 defined employer contribution was determined based on their respective allocated share of the total trust eligible employer contribution during the period ending on the Measurement Date.

# Basis for the Valuation

## Plan Participation Summary

The participant data used in the valuation was provided by the Commonwealth as of December 31, 2022. 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. This section presents a summary of the basic participant information for the active and retired participants covered under the terms of the Plan.

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|                           |              |              |
|---------------------------|--------------|--------------|
| a. Active Participants    |              |              |
| Total Counts              | 4,645        |              |
| Average Age               | 37.75        |              |
| Average Service           | 11.36        |              |
| b. Retired Participants   | Employees*   | Spouses      |
| Counts                    |              |              |
| Under Age 65 Non-Medicare | 3,023        | 2,509        |
| Over Age 65 Non-Medicare  | 388          | 59           |
| Under Age 65 Medicare     | 14           | 79           |
| Over age 65 Medicare      | <u>2,047</u> | <u>1,665</u> |
| Total Counts              | 5,472        | 4,312        |
| Average Age               | 65.73        |              |
| c. Total Participants**   | 10,117       |              |

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\* Employees include retirees and 108 surviving spouses

\*\* Total participant count excludes dependent spouses

## Plan Participation Summary (cont.)

| Distribution of Service Groups by Age Groups |                      |  |              |            |            |            |            |           |              |
|--|----------------------|--|--------------|------------|------------|------------|------------|-----------|--------------|
| Age Group                                    | Retired Participants | Active Participants - Years of Service |              |            |            |            |            |           | Total        |
|  |                      | 0 - 4                                  | 5 - 9        | 10 - 14    | 15 - 19    | 20 - 24    | 25 - 29    | 30+       |              |
| <20  | -                    | -                                      | -            | -          | -          | -          | -          | -         | -            |
| 20-24  | -                    | 139                                    | -            | -          | -          | -          | -          | -         | 139          |
| 25-29  | -                    | 537                                    | 238          | 1          | -          | -          | -          | -         | 776          |
| 30-34  | 3                    | 263                                    | 679          | 133        | -          | -          | -          | -         | 1,075        |
| 35-39  | 3                    | 112                                    | 289          | 423        | 159        | -          | -          | -         | 983          |
| 40-44  | 7                    | 17                                     | 73           | 153        | 360        | 92         | -          | -         | 695          |
| 45-49  | 78                   | -                                      | 9            | 51         | 167        | 264        | 13         | -         | 504          |
| 50-54  | 1,086                | -                                      | -            | 14         | 71         | 188        | 87         | 10        | 370          |
| 55-59  | 1,177                | -                                      | -            | -          | 18         | 46         | 22         | 15        | 101          |
| 60-64  | 683                  | -                                      | -            | -          | -          | 1          | -          | -         | 1            |
| 65-69  | 340                  | -                                      | -            | -          | -          | -          | -          | 1         | 1            |
| 70-74  | 379                  | -                                      | -            | -          | -          | -          | -          | -         | -            |
| 75-79  | 1,030                | -                                      | -            | -          | -          | -          | -          | -         | -            |
| 80-84  | 495                  | -                                      | -            | -          | -          | -          | -          | -         | -            |
| 85-89  | 132                  | -                                      | -            | -          | -          | -          | -          | -         | -            |
| 90+  | 59                   | -                                      | -            | -          | -          | -          | -          | -         | -            |
| <b>Total</b>                                 | <b>5,472</b>         | <b>1,068</b>                           | <b>1,288</b> | <b>775</b> | <b>775</b> | <b>591</b> | <b>122</b> | <b>26</b> | <b>4,645</b> |

| Participant Reconciliation            |               |                 |                      |              |
|---------------------------------------|---------------|-----------------|----------------------|--------------|
|                                       | <u>Active</u> | <u>Retirees</u> | <u>Beneficiaries</u> | <u>Total</u> |
| <b>Beginning of Year (12/31/2021)</b> | 4,548         | 5,332           | 110                  | 9,990        |
| <b>New Hire</b>                       | 269           | 0               | 0                    | 269          |
| <b>Opt-In</b>                         | 0             | 0               | 0                    | 0            |
| <b>New Retiree/Beneficiary</b>        | (151)         | 151             | 18                   | 18           |
| <b>Death/Termination/Opt-Out</b>      | <u>(21)</u>   | <u>(119)</u>    | <u>(20)</u>          | <u>(160)</u> |
| <b>End of Year (12/31/2022)</b>       | 4,645         | 5,364           | 108                  | 10,117       |

## Program Provisions Summary

This section summarizes overall eligibility provisions for postemployment medical coverage and the various plans offered by the Commonwealth.

Note that in some cases the benefit programs offered to retirees are different based on date of retirement. The provisions shown below summarize the plan designs for the most recent retirees. All older “grandfathered” plan designs are not shown in this document.

### Eligibility

Permanent enlisted employees of the Pennsylvania State Police who retire from the state and meet one of the following eligibility criteria are eligible to receive RPSPP benefits

- Superannuation retirement (excluding vestees) – age 50 (age 55 for employees subject to Act 120 of 2010) with three years of service;
- Retirement with at least 25 years of service;
- Retirement with at least 20 but less than 25 years of service, with at least 10 years of enlisted service with State Police (Military time, civilian service and service with another agency are not considered service with the State Police);
- Disability retirement – no service requirement.

### Covered Family Members

Spouses and dependents are eligible for 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

The Commonwealth pays the full cost of postemployment medical, dental, and Part B coverage while the retiree is alive.

Surviving spouses of deceased retirees may continue to participate in the plan (receive medical, Rx, and Part B coverage, but not dental) if they pay the full cost of the coverage.

### Changes in Program Provisions

None.

# Benefit Provisions Summary

## Medical Plans

This section summarizes the various medical and prescription drug plans offered by the Commonwealth effective January 1, 2023.

| Medical                                     | Benefit Provisions  | Eligibility   |
|---|---|---|
| <b>PPO</b>                                  | <p><b><u>In Network</u></b><br/> Deductible                                 None<br/> Out-of-Pocket Limit                         None<br/> Doctor Office Visits                         PCP: \$15 co-pay<br/> Specialist: \$25 co-pay<br/> Inpatient   Covered in full<br/> Lifetime Maximum                             None</p> <p><b><u>Out of Network</u></b><br/> Deductible                                     \$350 Individual;<br/> \$850 Family<br/> Out-of-Pocket Limit                         \$1,500 Individual;<br/> \$3,000 Family<br/> Coinsurance                                   20%<br/> Inpatient   20%<br/> Lifetime Maximum                             None</p>  | <p>Annuitants retired from the State Police and their eligible dependents. Retirees hired on or after April 21, 2005 may only enroll in the PPOBlue plan.</p> |
| <b>Traditional Plan<br/>(Major Medical)</b> | <p><b><u>Retired prior to 7/1/07</u></b><br/> Deductible                                     \$100 Individual<br/> \$300 Family<br/> Out-of-Pocket Limit (excluding deductible)     \$380 Individual<br/> Coinsurance                                   20%<br/> Inpatient   20%<br/> Lifetime Maximum                             None</p> <p><b><u>Retired on or after 7/1/07 and before 1/13/2018</u></b><br/> Deductible                                     \$250 Individual<br/> \$750 Family<br/> Out-of-Pocket Limit                         \$380 Individual<br/> Coinsurance                                   20%<br/> Inpatient   20%<br/> Lifetime Maximum                             None</p> <p><b><u>Retired on or after 1/13/2018</u></b><br/> Deductible                                     \$250 Individual<br/> \$750 Family<br/> Out-of-Pocket Limit                         \$380 Individual<br/> Coinsurance                                   20% (0% after annual Out-of-Pocket Limit reached)<br/> Inpatient   20% (0% after annual Out-of-Pocket Limit reached)<br/> Lifetime Maximum                             None</p> | <p>Annuitants retired from the State Police and their eligible dependents</p>   |



## Benefit Provisions Summary (cont.)

### Medical Plans (cont.)

|  |  |   |   |
|--|--|---|---|
| <b>Traditional Plan<br/>(Facility Program)</b>     | Deductible<br>Out-of-Pocket Limit<br>Doctor Office Visits<br>Inpatient<br>Lifetime Maximum     | None<br>N/A<br>Not Covered<br>Covered in full<br>N/A                                | Non-Medicare eligible annuitants retired from the State Police and their non-Medicare eligible dependents |
| <b>Traditional Plan<br/>(Professional Program)</b> | Deductible<br>Out-of-Pocket Limit<br>Doctor Office Visits<br><br>Inpatient<br>Lifetime Maximum | None<br>N/A<br>100% (\$25 deductible post-1/12/2018 Retirees)<br>Not Covered<br>N/A | Non-Medicare eligible annuitants retired from the State Police and their non-Medicare eligible dependents |

### Prescription Drug

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

- Retail (30-day supply): \$10 Generic / \$30 Preferred\* / \$50 Non-Preferred\*
- Mail Order (90-day supply): \$20 Generic / \$45 Preferred\* / \$80 Non-Preferred\*

\*Plus the cost difference between the brand and the generic, if one exists.

### Medicare Part B Reimbursement

For employees hired on or after April 21, 1986, the Commonwealth reimburses the cost of Medicare Part B premium.

Employees hired before April 21, 1986 were not required to enroll in Medicare Part B.

### Dental

The basic benefit provisions are:

- Basic diagnostic and preventive work, restorations, endodontics, periodontics, oral surgery and prosthodontics: 100% UCR
- Orthodontics: 70% UCR (dependents under age 19 only)
- Orthodontics lifetime maximum for dependent children: \$1,250

## **Actuarial Methods Summary**

### **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.

### **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, 2022 for June 30, 2023 measurements.

### **Measurement Date**

June 30, 2023 for fiscal year ended June 30, 2023 trust financial statements (GASB No. 74) and for fiscal year ending June 30, 2024 participating employer financial statements (measurement date as of the end of the prior fiscal year end for GASB No. 75).

### **Changes in Methods**

None.

# Actuarial Assumptions Summary

## 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>3.65% as of June 30, 2023</p> <p>3.54% as of June 30, 2022</p> <p>Since RPSPP 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>Long-Term Expected Rate of Return</b> | 6.75%   |                            |                 |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| <b>Inflation<sup>1</sup></b>             | 2.50%   |                            |                 |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| <b>Payroll Growth<sup>1</sup></b>        | 2.80%   |                            |                 |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| <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. In addition to the career salary scale below, it is assumed that the salary schedules will increase by 2.80 percent per year.</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>4.15%</td><td>16</td><td>1.25%</td></tr> <tr><td>2</td><td>3.25</td><td>17</td><td>1.20</td></tr> <tr><td>3</td><td>2.90</td><td>18</td><td>1.15</td></tr> <tr><td>4</td><td>2.70</td><td>19</td><td>1.15</td></tr> <tr><td>5</td><td>2.50</td><td>20</td><td>1.10</td></tr> <tr><td>6</td><td>2.35</td><td>21</td><td>1.00</td></tr> <tr><td>7</td><td>2.15</td><td>22</td><td>0.95</td></tr> <tr><td>8</td><td>2.10</td><td>23</td><td>0.90</td></tr> <tr><td>9</td><td>2.00</td><td>24</td><td>0.85</td></tr> <tr><td>10</td><td>1.60</td><td>25</td><td>0.80</td></tr> <tr><td>11</td><td>1.55</td><td>26</td><td>0.70</td></tr> <tr><td>12</td><td>1.45</td><td>27</td><td>0.60</td></tr> <tr><td>13</td><td>1.40</td><td>28</td><td>0.50</td></tr> <tr><td>14</td><td>1.35</td><td>29</td><td>0.50</td></tr> <tr><td>15</td><td>1.30</td><td>30+</td><td>0.50</td></tr> </tbody> </table> | Completed Years of Service | Annual Increase | Completed Years of Service | Annual Increase | 1 | 4.15% | 16 | 1.25% | 2 | 3.25 | 17 | 1.20 | 3 | 2.90 | 18 | 1.15 | 4 | 2.70 | 19 | 1.15 | 5 | 2.50 | 20 | 1.10 | 6 | 2.35 | 21 | 1.00 | 7 | 2.15 | 22 | 0.95 | 8 | 2.10 | 23 | 0.90 | 9 | 2.00 | 24 | 0.85 | 10 | 1.60 | 25 | 0.80 | 11 | 1.55 | 26 | 0.70 | 12 | 1.45 | 27 | 0.60 | 13 | 1.40 | 28 | 0.50 | 14 | 1.35 | 29 | 0.50 | 15 | 1.30 | 30+ | 0.50 |
| Completed Years of Service               | Annual Increase   | Completed Years of Service | Annual Increase |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 1  | 4.15%   | 16                         | 1.25%           |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 2  | 3.25  | 17                         | 1.20            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 3  | 2.90  | 18                         | 1.15            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 4  | 2.70  | 19                         | 1.15            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 5  | 2.50  | 20                         | 1.10            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 6  | 2.35  | 21                         | 1.00            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 7  | 2.15  | 22                         | 0.95            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 8  | 2.10  | 23                         | 0.90            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 9  | 2.00  | 24                         | 0.85            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 10                                       | 1.60  | 25                         | 0.80            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 11                                       | 1.55  | 26                         | 0.70            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 12                                       | 1.45  | 27                         | 0.60            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 13                                       | 1.40  | 28                         | 0.50            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 14                                       | 1.35  | 29                         | 0.50            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |
| 15                                       | 1.30  | 30+                        | 0.50            |                            |                 |   |       |    |       |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |   |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |    |      |     |      |

<sup>1</sup> For consistency with the pension plan of which these participants are members, these assumptions are based on those disclosed in the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020.

# Actuarial Assumptions Summary (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</b>                        | <p><b>Pre-Retirement Mortality:</b><br/>Pub-2010 General Employee Headcount Weighted Mortality Tables, adjusted for mortality improvements using projection scale MP-2021.</p> <p><b>Post Retirement Mortality:</b><br/>Healthy Participants: Pub-2010 General Healthy Retiree Headcount Weighted Mortality Tables, with rates set forward one year for females, and adjusted for mortality improvements using projection scale MP-2021.<br/>Disabled Participants: Pub-2010 Non-Safety Disabled Retiree Headcount Weighted Mortality Tables, with rates set forward two years for males and females, and adjusted for mortality improvements using projection scale MP-2021.</p> |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
|---|---|------------------|------|--------|------|-------|-------|----|------|------|-----|------|------|----|------|------|-----|------|------|----|------|------|-----|------|------|
| <b>Disability Incidence<sup>1</sup></b> | <p><b>Pre-Retirement Disability:</b></p> <table border="1"> <thead> <tr> <th>Age</th> <th>Male</th> <th>Female</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>0.01%</td> <td>0.02%</td> </tr> <tr> <td>30</td> <td>0.03</td> <td>0.05</td> </tr> <tr> <td>35</td> <td>0.06</td> <td>0.08</td> </tr> <tr> <td>40</td> <td>0.09</td> <td>0.16</td> </tr> <tr> <td>45</td> <td>0.20</td> <td>0.26</td> </tr> <tr> <td>50</td> <td>0.33</td> <td>0.40</td> </tr> <tr> <td>55</td> <td>0.44</td> <td>0.50</td> </tr> </tbody> </table>   | Age              | Male | Female | 25   | 0.01% | 0.02% | 30 | 0.03 | 0.05 | 35  | 0.06 | 0.08 | 40 | 0.09 | 0.16 | 45  | 0.20 | 0.26 | 50 | 0.33 | 0.40 | 55  | 0.44 | 0.50 |
| Age                                     | Male  | Female           |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 25                                      | 0.01%   | 0.02%            |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 30                                      | 0.03  | 0.05             |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 35                                      | 0.06  | 0.08             |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 40                                      | 0.09  | 0.16             |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 45                                      | 0.20  | 0.26             |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 50                                      | 0.33  | 0.40             |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 55                                      | 0.44  | 0.50             |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| <b>Withdrawal<sup>1</sup></b>           | <table border="1"> <thead> <tr> <th>Years of Service</th> <th>Rate</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>9.0%</td> </tr> <tr> <td>1</td> <td>5.0</td> </tr> <tr> <td>2</td> <td>3.0</td> </tr> <tr> <td>3</td> <td>3.0</td> </tr> <tr> <td>4</td> <td>2.0</td> </tr> <tr> <td>5</td> <td>2.0</td> </tr> <tr> <td>6</td> <td>1.0</td> </tr> <tr> <td>7</td> <td>0.6</td> </tr> <tr> <td>8</td> <td>0.6</td> </tr> <tr> <td>9</td> <td>0.6</td> </tr> <tr> <td>10+</td> <td>0.3</td> </tr> </tbody> </table>  | Years of Service | Rate | 0      | 9.0% | 1     | 5.0   | 2  | 3.0  | 3    | 3.0 | 4    | 2.0  | 5  | 2.0  | 6    | 1.0 | 7    | 0.6  | 8  | 0.6  | 9    | 0.6 | 10+  | 0.3  |
| Years of Service                        | Rate  |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 0                                       | 9.0%  |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 1                                       | 5.0   |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 2                                       | 3.0   |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 3                                       | 3.0   |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 4                                       | 2.0   |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 5                                       | 2.0   |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 6                                       | 1.0   |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 7                                       | 0.6   |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 8                                       | 0.6   |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 9                                       | 0.6   |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |
| 10+                                     | 0.3   |                  |      |        |      |       |       |    |      |      |     |      |      |    |      |      |     |      |      |    |      |      |     |      |      |

<sup>1</sup> For consistency with the pension plan of which these participants are members, these assumptions are based on those disclosed in the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020.

## Actuarial Assumptions Summary (cont.)

| <p><b>Early Retirement<sup>1</sup></b><br/>(based on early retirement as defined by SERS; retirement prior to OPEB eligibility, as described above in the Program Provisions Summary section, will receive no postemployment health benefit)</p>   | <p>1.5% at each age</p>   |         |       |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
|--|---|---------|-------|-----|------|----|-------|---------|-------|----|------|----|------|---------|------|----|------|----|------|---------|------|---------|------|---------|------|----|------|----|-------|---------|------|--|--|------------------|------|----------|------|----------|------|---------|------|---------|------|-----|-------|
| <p><b>Normal Retirement<sup>1</sup></b><br/>(based on normal retirement as defined by SERS; retirement prior to OPEB eligibility, as described above in the Program Provisions Summary section, will receive no postemployment health benefit)</p> | <p><b>State Police with less than 19 years of service</b></p> <table border="1"> <thead> <tr> <th>Age</th> <th>Rate</th> <th>Age</th> <th>Rate</th> </tr> </thead> <tbody> <tr> <td>49</td> <td>10.0%</td> <td>62 – 64</td> <td>20.0%</td> </tr> <tr> <td>50</td> <td>15.0</td> <td>65</td> <td>23.0</td> </tr> <tr> <td>51 – 54</td> <td>10.0</td> <td>66</td> <td>30.0</td> </tr> <tr> <td>55</td> <td>12.0</td> <td>67 – 68</td> <td>25.0</td> </tr> <tr> <td>56 – 58</td> <td>10.0</td> <td>69 – 79</td> <td>20.0</td> </tr> <tr> <td>59</td> <td>12.0</td> <td>80</td> <td>100.0</td> </tr> <tr> <td>60 – 61</td> <td>16.0</td> <td></td> <td></td> </tr> </tbody> </table> <p><b>State Police with at least 19 years of service</b></p> <table border="1"> <thead> <tr> <th>Years of Service</th> <th>Rate</th> </tr> </thead> <tbody> <tr> <td>19* – 23</td> <td>7.5%</td> </tr> <tr> <td>24* – 25</td> <td>60.0</td> </tr> <tr> <td>26 – 35</td> <td>25.0</td> </tr> <tr> <td>36 – 39</td> <td>40.0</td> </tr> <tr> <td>40+</td> <td>100.0</td> </tr> </tbody> </table> | Age     | Rate  | Age | Rate | 49 | 10.0% | 62 – 64 | 20.0% | 50 | 15.0 | 65 | 23.0 | 51 – 54 | 10.0 | 66 | 30.0 | 55 | 12.0 | 67 – 68 | 25.0 | 56 – 58 | 10.0 | 69 – 79 | 20.0 | 59 | 12.0 | 80 | 100.0 | 60 – 61 | 16.0 |  |  | Years of Service | Rate | 19* – 23 | 7.5% | 24* – 25 | 60.0 | 26 – 35 | 25.0 | 36 – 39 | 40.0 | 40+ | 100.0 |
| Age  | Rate  | Age     | Rate  |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| 49   | 10.0%   | 62 – 64 | 20.0% |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| 50   | 15.0  | 65      | 23.0  |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| 51 – 54  | 10.0  | 66      | 30.0  |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| 55   | 12.0  | 67 – 68 | 25.0  |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| 56 – 58  | 10.0  | 69 – 79 | 20.0  |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| 59   | 12.0  | 80      | 100.0 |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| 60 – 61  | 16.0  |         |       |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| Years of Service   | Rate  |         |       |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| 19* – 23   | 7.5%  |         |       |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| 24* – 25   | 60.0  |         |       |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| 26 – 35  | 25.0  |         |       |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| 36 – 39  | 40.0  |         |       |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| 40+  | 100.0   |         |       |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| <p><b>Spouse Age Difference<sup>2</sup></b></p>  | <p>Females are assumed to be 2 years younger than males for those missing spouse age information.</p>   |         |       |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| <p><b>Participation Rate</b></p>   | <p>All eligible employees are required to participate in the active health plan and are assumed to elect coverage at retirement.<br/>Retirees who currently elect to waive their coverage are assumed to remain uncovered in the future.</p>  |         |       |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| <p><b>Coverage Level Election Rates</b></p>  | <p>Employees are assumed to maintain their current coverage election when they retire.<br/>Current retirees are assumed to continue their current coverage election.</p>  |         |       |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |
| <p><b>Surviving Spouse Continuing Coverage</b></p>   | <p>45% of spouses are assumed to elect to continue coverage after the retiree's death.</p>  |         |       |     |      |    |       |         |       |    |      |    |      |         |      |    |      |    |      |         |      |         |      |         |      |    |      |    |       |         |      |  |  |                  |      |          |      |          |      |         |      |         |      |     |       |

<sup>1</sup> For consistency with the pension plan of which these participants are members, these assumptions are based on those disclosed in the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020.

<sup>2</sup> For consistency with the pension plan of which these participants are members, this assumption is based on the assumption disclosed in the Commonwealth of Pennsylvania SERS Actuarial Valuation Report as of December 31, 2022.

# Actuarial Assumptions Summary (cont.)

## Benefit Assumptions

### Per Capita Claims Costs

The per capita claims costs used in the valuation were developed from self-insured claims experience and projected administrative expenses that represent the expected claims costs and administrative expenses for 2023.

The first-year per capita claims costs below are on a “net basis” – they reflect plan costs after reduction from the total benefit costs of the member cost-sharing (deductibles, coinsurance, co-pays, provider savings, Medicare, etc.). These claims were blended based on the current year enrollment mix by plan (see Coverage section below), separately for the non-Medicare eligible and Medicare eligible population and inclusive of dental benefits, resulting in an average claims cost per member.

#### **Medical Plan Costs**

Average medical claims costs were developed based on 2023 retiree rates and age-graded using the retiree age and gender distribution, separately for the non-Medicare eligible and Medicare eligible population. These age-graded claims 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.

Since the medical portion of the claims costs table below is specific to the experience of the Commonwealth’s retirees (i.e., not blended with active 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 aging for retirees, spouses, and surviving spouses.

For non-Medicare eligible retirees hired on or after April 21, 2005, the non-Medicare medical portion of the curve below is multiplied by a factor of 0.912 to reflect a difference in participation rates.

#### **Dental Plan Costs**

Average Dental claims costs were developed based on 2023 premiums and age-graded using the total covered population, so the age-graded rates for a retiree-only group would composite to a higher cost appropriate for that relatively older group, resulting in an implicit subsidy. These age-graded claims are the basis for projecting the gross cost for each individual for coverage. The aging factors were derived from a study of active and retired member dental costs by age performed for the January 1, 2023 valuation. Future year per capita costs were projected by applying trend assumptions to the first-year costs.

Costs for child coverage were developed for all members, based on retiree claims data from 2019-2022. The age-graded rates were loaded to reflect this child coverage.

The table below shows total annual per capita claims costs, inclusive of dental benefits, separately for the non-Medicare eligible and Medicare eligible population.

| <b>2023 Annual Per Capita Claims Costs</b> |                              |                                 |  |
|--|------------------------------|---------------------------------|--|
| <b>Age</b>                                 | <b>Non-Medicare Eligible</b> | <b>Medicare Part A Eligible</b> | <b>Medicare Part A &amp; B Eligible*</b> |
| 45   | \$ 10,346                    | \$ 21,887                       | \$ 11,199                                |
| 50   | 12,574                       | 21,941                          | 11,253                                   |
| 55   | 15,413                       | 21,981                          | 11,293                                   |
| 60   | 18,876                       | 22,111                          | 11,423                                   |
| 64   | 22,434                       | 22,203                          | 11,515                                   |
| 65   | 23,424                       | 22,203                          | 11,515                                   |
| 70   | 28,102                       | 23,524                          | 12,518                                   |
| 75   | 33,180                       | 25,230                          | 13,319                                   |
| 80   | 38,283                       | 26,521                          | 13,730                                   |
| 85   | 43,356                       | 27,607                          | 13,912                                   |
| 90   | 47,784                       | 27,967                          | 13,730                                   |
| 95   | 50,181                       | 26,955                          | 13,156                                   |

\*The Medicare Part A&B Eligible Per Capita Claims Cost displayed above includes the annual value of Part B premium reimbursements, which is only applicable for retirees hired on or after April 21, 1986.

### Expenses

Per Capita Claims Costs were developed to include administrative expenses.

## Actuarial Assumptions Summary (cont.)

### Trend Rates

The trend rates illustrated below are used to project age-graded claims and flat rates into future years.

- The 2023 to 2026 trend assumptions are based on a review of industry surveys and the Commonwealth's emerging experience. This review was done separately for non-Medicare plans by plan type, Medicare plans by plan type, and the dental plan.
- The short-term trend rates also reflect an estimated impact of recent general inflation. Recent CPI-U peaked in June 2022 at 9.1%. Based on historical information available regarding how general inflation impacts medical inflation, 60% of the increase in general inflation (over the long-term assumption of 2.50%) is assumed to be reflected in higher medical costs. Based on historical observations of CPI-U for medical care lagging general CPI-U, this increase is spread out over a two-year period in the 2023 and 2024 trend assumptions.
- The SOA-Getzen model version 2023\_1f was used to determine the trend assumptions beginning in 2027 and thereafter, based on the Commonwealth's long-term inflation assumption and reasonable Getzen model default macro-economic assumptions for the growth of health care expenditures during this period relative to the general economy.

| Year  | January 1, 2023 Assumption |                   |
|-------|----------------------------|-------------------|
|       | Non-Medicare Benefits      | Medicare Benefits |
| 2023  | 9.1%                       | 7.1%              |
| 2024  | 8.8%                       | 7.1%              |
| 2025  | 7.0%                       | 5.4%              |
| 2026  | 6.7%                       | 5.3%              |
| 2027  | 6.4%                       | 5.2%              |
| 2030  | 5.4%                       | 4.9%              |
| 2040  | 4.5%                       |                   |
| 2050  | 4.4%                       |                   |
| 2060  | 4.4%                       |                   |
| 2070  | 4.1%                       |                   |
| 2075+ | 3.9%                       |                   |

### Medicare Eligibility

Current non-Medicare eligible retirees and spouses (if covered) over age 65 are assumed to remain non-Medicare eligible.

Current Medicare eligible retirees and spouses under age 65 are assumed to remain Medicare eligible.

Current Medicare eligible retirees hired before April 21, 1986 are assumed to be eligible for Medicare Part A only.

Current non-Medicare eligible retirees under age 65 and hired before April 21, 1986 and all actives hired before April 21, 1986 are assumed to be split with 70% eligible for Medicare Part A only and 30% not eligible for Medicare. This is based on recent experience, which shows that 70% of pre-1986 hires are able to gain Medicare eligibility through a spouse or prior employment.

Current Medicare eligible spouses (if covered) are assumed to be eligible for Part B based on spousal Part B data provided by the Commonwealth.

Current non-Medicare eligible spouses (if covered) are assumed to have the same Medicare Part B status as the retiree.

All other retirees are assumed to be non-Medicare eligible prior to age 65 and Medicare eligible at age 65, unless their spouse is over age 65 and non-Medicare eligible.

## Actuarial Assumptions Summary (cont.)

| <p><b>Coverage</b></p>               | <p>Current retirees are assumed to remain in their currently elected plan, as summarized below.</p> <p>Current employees are assumed to enroll at retirement in the same proportion as the current year retiree mix. These proportions are established separately for non-Medicare and Medicare coverage.</p> <p>Retirees hired on or after April 21, 2005 may only enroll in the PPOBlue plan.</p> <p>The table below shows the current year enrollment percentage by plan.</p> <table border="1"> <thead> <tr> <th colspan="2"><b>Non-Medicare</b></th> <th colspan="2"><b>Adult Member Enrollment</b></th> </tr> </thead> <tbody> <tr> <td>Traditional</td> <td></td> <td>20.0%</td> <td></td> </tr> <tr> <td>PPO</td> <td></td> <td>80.0%</td> <td></td> </tr> <tr> <th colspan="2"><b>Medicare</b></th> <th colspan="2"><b>Adult Member Enrollment</b></th> </tr> <tr> <td>Traditional with Part A</td> <td></td> <td>39.0%</td> <td></td> </tr> <tr> <td>Traditional with Part A&amp;B</td> <td></td> <td>38.0%</td> <td></td> </tr> <tr> <td>PPO with Part A</td> <td></td> <td>14.0%</td> <td></td> </tr> <tr> <td>PPO with Part A&amp;B</td> <td></td> <td>9.1%</td> <td></td> </tr> </tbody> </table>   | <b>Non-Medicare</b>            |  | <b>Adult Member Enrollment</b> |  | Traditional |  | 20.0% |  | PPO |  | 80.0% |  | <b>Medicare</b> |  | <b>Adult Member Enrollment</b> |  | Traditional with Part A |  | 39.0% |  | Traditional with Part A&B |  | 38.0% |  | PPO with Part A |  | 14.0% |  | PPO with Part A&B |  | 9.1% |  |
|--------------------------------------|--|--------------------------------|--|--------------------------------|--|-------------|--|-------|--|-----|--|-------|--|-----------------|--|--------------------------------|--|-------------------------|--|-------|--|---------------------------|--|-------|--|-----------------|--|-------|--|-------------------|--|------|--|
| <b>Non-Medicare</b>                  |  | <b>Adult Member Enrollment</b> |  |                                |  |             |  |       |  |     |  |       |  |                 |  |                                |  |                         |  |       |  |                           |  |       |  |                 |  |       |  |                   |  |      |  |
| Traditional                          |  | 20.0%                          |  |                                |  |             |  |       |  |     |  |       |  |                 |  |                                |  |                         |  |       |  |                           |  |       |  |                 |  |       |  |                   |  |      |  |
| PPO                                  |  | 80.0%                          |  |                                |  |             |  |       |  |     |  |       |  |                 |  |                                |  |                         |  |       |  |                           |  |       |  |                 |  |       |  |                   |  |      |  |
| <b>Medicare</b>                      |  | <b>Adult Member Enrollment</b> |  |                                |  |             |  |       |  |     |  |       |  |                 |  |                                |  |                         |  |       |  |                           |  |       |  |                 |  |       |  |                   |  |      |  |
| Traditional with Part A              |  | 39.0%                          |  |                                |  |             |  |       |  |     |  |       |  |                 |  |                                |  |                         |  |       |  |                           |  |       |  |                 |  |       |  |                   |  |      |  |
| Traditional with Part A&B            |  | 38.0%                          |  |                                |  |             |  |       |  |     |  |       |  |                 |  |                                |  |                         |  |       |  |                           |  |       |  |                 |  |       |  |                   |  |      |  |
| PPO with Part A                      |  | 14.0%                          |  |                                |  |             |  |       |  |     |  |       |  |                 |  |                                |  |                         |  |       |  |                           |  |       |  |                 |  |       |  |                   |  |      |  |
| PPO with Part A&B                    |  | 9.1%                           |  |                                |  |             |  |       |  |     |  |       |  |                 |  |                                |  |                         |  |       |  |                           |  |       |  |                 |  |       |  |                   |  |      |  |
| <p><b>Changes in Assumptions</b></p> | <ul style="list-style-type: none"> <li>• The discount rate was increased from 3.54% to 3.65%.</li> <li>• Per capita claims costs were updated based on changes in the underlying claims and benefit provisions.</li> <li>• Dental per capita claim cost age-grading was updated to include consideration of 2022 dental experience.</li> <li>• The trend rates were updated based on the SOA-Getzen trend rate model version 2023_1f. The short-term trend assumptions were based on industry surveys and the Commonwealth's emerging experience, separately for non-Medicare and Medicare benefits and inclusive of dental benefits. In addition, a short-term adjustment in 2023 and 2024 was made to account for a recent sharp increase in general inflation.</li> </ul>   |                                |  |                                |  |             |  |       |  |     |  |       |  |                 |  |                                |  |                         |  |       |  |                           |  |       |  |                 |  |       |  |                   |  |      |  |
| <p><b>Model Use</b></p>              | <p>Actuarial Standard of Practice No. 56 – Modeling requires disclosure of certain information regarding the actuary's use of models when issuing actuarial reports for work performed on or after October 1, 2020. For this valuation, the liability calculations were determined using industry-leading defined benefit valuation software developed and maintained by a third-party vendor. The model was designed specifically for the measurement of defined benefit pension and postretirement medical plan liabilities and the actuary has updated the applicable parameters for the specific plan provisions and assumptions selected for this valuation.</p> <p>An Excel-based model that calculates a long-term rate of return on assets using a target asset allocation and publicly available capital market assumptions by asset class were used to assess the reasonableness of the long-term rate of return assumption.</p> <p>The medical inflation trend rate assumptions were set using the Getzen Model of Long-Run Medical Cost Trends ("Getzen Model"), which adds transparency to the economic assumptions behind medical and prescription drug trends. The Getzen Model is an excel based projection of expected growth rates in medical premiums and expenditures from 2027 to 2102. Development of the model was sponsored by the Society of Actuaries, and it is used primarily in the estimation of reportable liabilities for retiree health benefits in accordance with FASB and GASB standards. It projects medical care cost increases and the health share of GDP for the next 75 years using linked formulas and assumptions developed by the author, Professor Thomas Getzen, with the assistance of a Society of Actuaries project oversight group.</p> |                                |  |                                |  |             |  |       |  |     |  |       |  |                 |  |                                |  |                         |  |       |  |                           |  |       |  |                 |  |       |  |                   |  |      |  |



## Rationale for Assumptions

|   |   |
|---|---|
| <b>Discount Rate</b>  | <p>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, 2023 benefit obligation is based on the 20-year Bond Buyer GO Index.</p>  |
| <b>Long-Term Expected Rate of Return</b>  | <p>The expected return in the OPEB Investment Pool is based on a building block method incorporating the underlying inflation assumption and expected real returns and investment expenses. The selected rate was supported by analyzing the target asset allocation and benchmark return expectations from publicly available sources as of June 30, 2023.</p>   |
| <b>Inflation, Payroll Growth, Salary Scale, Disability Incidence, Withdrawal, Early and Normal Retirement</b> | <p>Assumptions updated to be consistent with assumptions recommended by the Commonwealth of Pennsylvania SERS 2015-2019 experience study and adopted by the Board in July 2020.</p>   |
| <b>Mortality</b>  | <p>The annuitant, survivor, and disabled participant base mortality table is consistent with the Commonwealth of Pennsylvania SERS 2015-2019 experience study, with the exception of using a headcount-weighted instead of an amount-weighted mortality table.</p> <p>The PUB-2010 tables were released by the Retirement Plans Experience Committee ("RPEC") of the Society of Actuaries ("SOA") in January 2019. The PUB-2010 tables represent a complete benchmark of U.S. public pension plan mortality experience. The plan does not have fully credible pre-retirement mortality experience, so the Pub-2010 General Employees Headcount-Weighted Mortality Tables were used for the pre-retirement mortality assumption.</p> <p>Beginning in 2015, the SOA RPEC has released an annual update to the mortality improvement scale, with each of these scales reflecting an additional year of Social Security Administration ("SSA") data. RPEC did not release an update to Mortality Improvement Scale MP-2021 due to the impact of the COVID-19 pandemic on 2020 Social Security data. Therefore, Scale MP-2021 incorporates the most current information available from the Social Security Administration ("SSA"), extended further by RPEC using a methodology similar to that used by SSA.</p> |

## 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 non-employer 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).

### **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.

### **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 non-employer 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.