

**COMMONWEALTH OF MASSACHUSETTS  
OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLAN**

**INDEPENDENT AUDITORS' REPORT ON OPEB PLAN SCHEDULES**

**AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2022**

COMMONWEALTH OF MASSACHUSETTS  
OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLAN

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## INDEPENDENT AUDITORS' REPORT

Mr. William McNamara, Comptroller  
Commonwealth of Massachusetts

### **Report on the Audit of the Schedules**

#### ***Opinions***

We have audited the accompanying schedule of employer and nonemployer allocations of the Commonwealth of Massachusetts Postemployment Benefits Other Than Pensions (OPEB) Plan (the Plan) as of and for the fiscal year ended June 30, 2022, and the related notes. We have also audited the totals for the columns titled net OPEB liability, total deferred outflows of resources, total deferred inflows of resources, and total OPEB expense (specified column totals), included in the accompanying schedule of OPEB amounts by employer and nonemployer of the Plan as of and for the fiscal year ended June 30, 2022, and the related notes.

In our opinion, the schedules referred to above present fairly, in all material respects, the employer and nonemployer allocations and ending net OPEB liability, total deferred outflows of resources, total deferred inflows of resources, and total OPEB expense for the total of all participating entities of the Plan as of and for the year ended June 30, 2022, in accordance with accounting principles generally accepted in the United States of America.

#### ***Basis for Opinions***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Schedules section of our report. We are required to be independent of the Plan and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

#### ***Responsibilities of Management for the Schedules***

Management is responsible for the preparation and fair presentation of these schedules in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the schedules that are free from material misstatement, whether due to fraud or error.

#### ***Auditor's Responsibilities for the Audit of the Schedules***

Our objectives are to obtain reasonable assurance about whether the schedules of employer and nonemployer allocations and specified column totals included in the schedule of OPEB amounts by employer and nonemployer are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the schedules of employer and nonemployer allocations and specified column totals included in the schedule of OPEB amounts by employer and nonemployer.

Mr. William McNamara, Comptroller  
Commonwealth of Massachusetts

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the schedule of employer and nonemployer allocations and the specified totals included in the schedule of OPEB amounts by employer and nonemployer, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the schedule of employer and nonemployer allocations and the specified totals included in the schedule of OPEB amounts by employer and nonemployer.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the schedule of employer and nonemployer allocations and the specified totals included in the schedule of OPEB amounts by employer and nonemployer.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

***Other Matter***

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the Commonwealth of Massachusetts as of and for the year ended June 30, 2022, and our report thereon, dated May 31, 2023, expressed an unmodified opinion on those financial statements. The Plan is reported as an OPEB trust fund in the financial statements of the Commonwealth of Massachusetts.

***Restriction on Use***

Our report is intended solely for the information and use of Plan management, the Board of Trustees of the Plan, Plan employers and their auditors, and the Commonwealth of Massachusetts and is not intended to be, and should not be, used by anyone other than these specified parties.



**CliftonLarsonAllen LLP**

Boston, Massachusetts  
July 24, 2023

**COMMONWEALTH OF MASSACHUSETTS  
OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLAN  
SCHEDULE OF EMPLOYER AND NONEMPLOYER ALLOCATIONS  
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2022**

Employer/Nonemployer	Actual Contributions	Employer/ Nonemployer Allocation Percentage
<b><u>Employer:</u></b>		
Commonwealth of Massachusetts.....	\$ 483,856,488	94.90266%
Massachusetts Department of Transportation.....	25,228,264	4.94822%
<b><u>Nonemployer (Commonwealth) attributable to:</u></b>		
Devens Enterprise Commission.....	25,931	0.00509%
Massachusetts PRIM Board.....	734,317	0.14403%
Total for all entities.....	<u>\$ 509,845,000</u>	<u>100.00000%</u>

*See accompanying notes to schedules.*

**COMMONWEALTH OF MASSACHUSETTS  
OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLAN  
SCHEDULE OF OPEB AMOUNTS BY EMPLOYER AND NONEMPLOYER  
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2022**

Employer/Nonemployer	Deferred Outflows of Resources						Deferred Inflows of Resources				OPEB Expense			
	Net OPEB Liability	Differences Between Expected and Actual Experience	Changes of Assumptions	Net Differences Between Projected and Actual Investment Earnings on OPEB Plan Investments	Changes in Proportion	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Changes of Assumptions	Changes in Proportion	Total Deferred Inflows of Resources	Proportionate Share of Plan OPEB Expense	Net Amortization of Deferred Amounts from Changes in Proportion	Employer Specific OPEB Expense	Total OPEB Expense
Employer:														
Commonwealth of Massachusetts.....	\$ 12,671,614,400	\$ 233,267,901	\$ 933,306,015	\$ 19,262,394	\$ 5,822,056	\$ 1,191,658,366	\$ 2,097,923,039	\$ 4,386,125,691	\$ 62,578,834	\$ 6,746,627,564	\$ (711,713,039)	\$ (8,466,490)	\$ 150,955,000	\$ (569,224,529)
Massachusetts Department of Transportation.....	660,697,627	12,162,582	48,662,550	1,004,341	58,178,329	120,007,802	109,385,650	239,120,468	6,482,287	354,988,405	(37,108,698)	6,438,602	-	(30,670,096)
Nonemployer (Commonwealth) attributable to:														
Devens Enterprise Commission.....	679,101										(38,142)	9,140	-	(29,002)
Massachusetts PRIM Board.....	19,230,871										(1,080,120)	2,018,747	-	938,627
Total nonemployer (Commonwealth of Massachusetts).....	19,909,972	366,516	1,466,435	30,265	5,862,901	7,726,117	3,296,312	7,205,841	802,165	11,304,318	(1,118,262)	2,027,888	-	909,626
Totals.....	\$ 13,352,221,999	\$ 245,796,999	\$ 983,435,000	\$ 20,297,000	\$ 69,863,286	\$ 1,319,392,285	\$ 2,210,605,001	\$ 4,832,452,000	\$ 69,863,286	\$ 7,112,920,287	\$ (749,939,999)	\$ -	\$ 150,955,000	\$ (598,984,999)

*See accompanying notes to schedules.*

**COMMONWEALTH OF MASSACHUSETTS  
OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLAN  
NOTES TO SCHEDULES  
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2022**

**NOTE 1 PLAN DESCRIPTION**

The Commonwealth administers a single employer defined benefit Other Post-Employment Benefit (OPEB) Plan (the Plan). Benefits are managed by the Group Insurance Commission (GIC) and investments are managed by the Pension Reserves Investment Management (PRIM) Board.

Management of the Plan is vested with a board of trustees, which consists of seven members including the Secretary of Administration and Finance (ANF) (or their designee), the Executive Director of the GIC (or their designee), the Executive Director of the Public Employee Retirement Administration Commission (PERAC) (or their designee), the State Treasurer (or their designee), the Comptroller (or a designee), one person appointed by the Governor and one person appointed by the State Treasurer. The members elect one person to serve as chair of the board. The Plan is administered by the board of trustees and is reported as an OPEB Trust Fund in the Commonwealth's financial statements and does not issue a stand-alone audited financial report.

**Benefits provided** – Under Chapter 32A of the Massachusetts General Laws (MGL) the Commonwealth is required to provide certain health care and life insurance benefits for retired employees of the Commonwealth. Substantially all of the Commonwealth's employees may become eligible for these benefits if they reach retirement age while working for the Commonwealth. Eligible retirees are required to contribute a specified percentage of the health care/benefit costs, which are comparable to contributions required from employees.

Employer and employee contribution rates are set in MGL. The Commonwealth recognizes its share of the costs on an actuarial basis. As of June 30, 2022, the retirees' share of premium costs is between 10% and 20%, depending on the date of hire.

**NOTE 2 BASIS OF PRESENTATION**

The schedule of employer and nonemployer allocations and schedule of OPEB amounts by employer and nonemployer (the Schedules) present amounts that are elements of the financial statements of the Plan or of its participating employers and nonemployer. Accordingly, they do not purport to be a complete presentation of the financial position or changes in financial position of the Plan or its participating employers and the State as a nonemployer. The amounts presented in the Schedules were prepared in accordance with U.S. generally accepted accounting principles. Such preparation requires management of the Plan to make a number of estimates and assumptions related to the reported amounts. Actual results could differ from those estimates.

The schedule of employer and nonemployer allocations are based on actual contributions adjusted for any nonemployer contributions.

The MGLs governing employer contributions to the Plan determine whether entities are billed for OPEB costs. Consequently, the Plan developed an effective contribution methodology which allocates total actual contributions amongst the employers in a consistent manner (based on an employer's share of total covered payroll). Any differences between the effective contribution and an employer's actual contributions are considered a nonemployer contribution from the Commonwealth. According to MGL, certain nonemployer contributions are the legal responsibility of the Commonwealth and have accordingly been reflected on the schedule of employer and nonemployer allocations as special funding situations.

**COMMONWEALTH OF MASSACHUSETTS  
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NOTES TO SCHEDULES  
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2022**

The schedule of OPEB amounts by employer and nonemployer present each employer in sufficient detail to permit each contributing employer as well as each employer considered to be in special funding situation to derive the necessary information for the preparation of their individual financial statements.

For entities considered to be in a 100% special funding situation there is no net OPEB liability recognized. However, the notes to the financial statements for these entities must disclose the portion of the nonemployer contributing entity's total proportionate share of the net OPEB liability and record its portion of OPEB expense as both revenue and OPEB expense.

**NOTE 3 RECONCILIATION TO FINANCIAL STATEMENTS**

*Nonemployer contributions*

The current year employer and nonemployer contributions used in the schedule of employer and nonemployer allocations is a component of the Plan's OPEB Trust Fund financial statements contained in the Commonwealth's Annual Comprehensive Financial Report. The reconciliation of employer and nonemployer contributions is as follows for the fiscal year ended June 30, 2022 (amounts in thousands):

Employer contributions reported in the Statement of Changes in Fiduciary Net Position per the ACFR.....	\$ 660,800
Less:	
Tobacco settlement proceeds deposited by the Commonwealth into the PRIT fund but reported as net OPEB expense in the schedule as they are not used to pay current benefits.....	<u>(24,700)</u>
Excess capital gains tax revenue deposited by the Commonwealth into the PRIT fund but reported as net OPEB expense in the schedule as they are not used to pay current benefits.....	<u>(126,255)</u>
Total employer and nonemployer contributions per the Schedule of Employer and Nonemployer Allocations.....	<u><u>\$ 509,845</u></u>

**NOTE 4 COLLECTIVE NET OPEB LIABILITY**

Components of the collective net OPEB liability at June 30, 2022 are as follows (amounts in thousands):

Total OPEB liability.....	\$ 15,340,605
Less:	
Plan fiduciary net position.....	<u>1,988,383</u>
Employers/nonemployers' net OPEB liability.....	<u><u>\$ 13,352,222</u></u>
Plan fiduciary net position as a percentage of total OPEB liability.....	<u><u>13.0%</u></u>



**COMMONWEALTH OF MASSACHUSETTS  
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NOTES TO SCHEDULES  
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2022**

*Actuarial assumptions*

The total OPEB liability for the June 30, 2022 measurement date was determined by an actuarial valuation as of January 1, 2022 rolled forward to June 30, 2022, using the following actuarial assumptions:

1. The annual healthcare cost trend rates were developed based on the most recently published SOA-Getzen trend rate model, version 2022\_f4. The short-term trend assumptions were based on a review of the plan's historical trend rates during fiscal years 2021 and 2022, along with industry surveys, separately for non-Medicare and Medicare benefits. The industry surveys were used to predict short-term future per capita cost increases. The most recently published SOA-Getzen model was then used to determine the trend rates beginning in 2023 and thereafter, based on the plan's long-term inflation assumption and reasonable macro-economic assumptions for the growth of health care expenditures during this period relative to the general economy.

Year	Medicare Benefits	Non- Medicare Benefits
2022.....	5.00%	7.60%
2023.....	6.80%	9.11%
2024.....	6.79%	8.82%
2025.....	4.99%	6.72%
2026.....	4.99%	6.43%
2031.....		4.97%
2041.....		4.78%
2051.....		4.62%
2061.....		4.53%
2071.....		4.15%
2075+ .....		3.94%

Getzen long run growth factors assumptions:

- Inflation: 2.5%
  - Real GDP Growth: 1.4%
  - Excess Medical Growth: 1.0%
2. Mortality rate was in accordance with RP 2014 Blue Collar Mortality Table projected with scale MP-2020 with females set forward one year.
  3. Participation rates:
    - a. 100% of employees currently electing healthcare coverage are assumed to elect coverage at retirement.

**COMMONWEALTH OF MASSACHUSETTS  
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- b. 35% of employees currently opting out of active employee health coverage are assumed to elect to enroll in retiree coverage.
- c. 85% of current and future vested terminated participants will elect health care benefits at age 55, or if later, the participant's current age.
- d. Retirees who currently elect to waive their coverage are assumed to remain uncovered in the future.
- e. 100% of spouses are assumed to elect to continue coverage after the retiree's death.
- f. Current non-Medicare eligible retirees and spouses (if covered) under age 65 who are in a POS/PPO plan are assumed to move to an Indemnity plan if they are Medicare eligible at 65. All others are assumed to remain in their currently elected product type (Indemnity/POS/PPO/HMO).

Future retirees are assumed to enroll in the existing plans in the same proportion as the current retiree mix, as show in the table below. These proportions are established separately for non-Medicare and Medicare coverage for each product type.

	Retirement Age	
	Under 65	Age 65 +
Indemnity.....	28.0%	96.0%
POS/PPO.....	62.0%	0%
HMO.....	10.0%	4.0%

4. Long-term expected rate of return:

The long-term expected rate of return as of June 30, 2022 was 7.00%. Investment assets of the Plan are held by the Pension Reserves Investment Trust (PRIT) Fund. The long-term expected rate of return on OPEB Plan investments was determined using a building-block method in which best-estimate ranges of expected future rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future rates of return by the target asset allocation percentage. Best estimates of geometric rates of return for each major asset class included in the PRIT Fund's target asset allocation as of June 30, 2022, are summarized in the following table:

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Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity.....	38.0%	4.2%
Core Fixed Income.....	15.0%	0.5%
Private Equity.....	15.0%	7.3%
Portfolio Completion Strategies.....	10.0%	2.7%
Real Estate.....	10.0%	3.3%
Value Added Fixed Income.....	8.0%	3.7%
Timberland/Natural Resources.....	4.0%	3.9%
Total.....	<u>100.0%</u>	

***Discount rates***

The discount rate used to measure the OPEB liability as of June 30, 2022, was 4.30%. This rate was based on a blend of the Bond Buyer Index rate of 3.54% as of the measurement date and the long-term expected rate of return on plan investments of 7.00%. The plan's fiduciary net position was not projected to be available to make all projected future benefit payments for current plan members. Based on the stated assumptions and the projection of cash flows, the Plan's Fiduciary Net Position and future contributions were not sufficient to finance the future benefit payments of the current plan members. Therefore, the long-term expected rate of return on SRBT investments was applied to projected benefit payments through year 2042 and the municipal bond rate was applied to all remaining future years to determine the Total OPEB Liability.

***Sensitivity analysis of the net OPEB liability to changes in the discount rate***

The following presents the net OPEB liability of the Commonwealth calculated using the discount rate, as well as what the net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate (amounts in thousands):

1% Decrease 3.30%	Current Discount 4.30%	1% Increase 5.30%
<u>\$ 15,576,808</u>	<u>\$ 13,352,222</u>	<u>\$ 11,524,887</u>

***Sensitivity analysis of the net OPEB liability to changes in the healthcare cost trend rate***

The following presents the net OPEB liability of the Commonwealth, as well as what the net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current healthcare cost trend rate (amounts in thousands):

1% Decrease	Current Rate	1% Increase
<u>\$ 11,192,984</u>	<u>\$ 13,352,222</u>	<u>\$ 16,085,558</u>

**COMMONWEALTH OF MASSACHUSETTS  
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AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2022**

**NOTE 5 DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES**

The following table summarizes the changes in both deferred outflows and deferred inflows of resources excluding employer specific amounts (changes in proportion) for the year ended June 30, 2022 (amounts in thousands):

	Year of Deferral	Amortization Period in Years	Balance Ju1y 1, 2021	Additions	Deletions	Balance June 30, 2022
<b>Deferred Outflows of Resources:</b>						
Differences between expected and actual experience.....	2018	5.79	\$ 67,670	\$ -	\$ (37,804)	\$ 29,866
	2019	5.73	340,747	-	(124,816)	215,931
Subtotal.....			408,417	-	(162,620)	245,797
Changes of assumptions.....	2018	5.79	6,648	-	(3,714)	2,934
	2020	5.75	1,337,047	-	(356,546)	980,501
Subtotal.....			1,343,695	-	(360,260)	983,435
Net difference between projected and actual earnings on plan investments.....	2018	5.0	(3,308)	-	3,308	-
	2019	5.0	8,754	-	(4,377)	4,377
	2020	5.0	45,983	-	(15,327)	30,656
	2021	5.0	(245,858)	-	61,464	(184,394)
	2022	5.0	-	212,073	(42,415)	169,658
Subtotal.....			(194,429)	212,073	2,653	20,297
Total deferred outflows of resources.....			\$ 1,557,683	\$ 212,073	\$ (520,227)	\$ 1,249,529
<b>Deferred Inflows of Resources:</b>						
Differences between expected and actual experience.....	2017	5.79	\$ (6,634)	\$ -	\$ 6,634	\$ -
	2020	5.75	(391,341)	-	104,358	(286,983)
	2021	5.76	(2,418,441)	-	508,076	(1,910,365)
	2022	5.74	-	(16,054)	2,797	(13,257)
Subtotal.....			(2,816,416)	(16,054)	621,865	(2,210,605)
Changes of assumptions.....	2017	5.79	(326,609)	-	326,609	-
	2019	5.73	(921,976)	-	337,721	(584,255)
	2021	5.76	(1,898,752)	-	398,897	(1,499,855)
	2022	5.74	-	(3,328,161)	579,819	(2,748,342)
Subtotal.....			(3,147,337)	(3,328,161)	1,643,046	(4,832,452)
Total deferred inflows of resources.....			\$ (5,963,753)	\$ (3,344,215)	\$ 2,264,911	\$ (7,043,057)

**COMMONWEALTH OF MASSACHUSETTS  
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NOTES TO SCHEDULES  
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2022**

Amounts reported as deferred outflows and inflows of resources related to OPEB will be recognized in the collective OPEB expense as follows (amounts in thousands):

Fiscal Year Ending June 30	
2023.....	\$ (1,416,852)
2024.....	(1,396,544)
2025.....	(1,319,498)
2026.....	(1,229,501)
2027.....	<u>(431,133)</u>
Total.....	<u>\$ (5,793,528)</u>

***Changes in proportion***

The previous amounts do not include employer specific deferred outflows and deferred inflows of resources related to changes in proportion. These amounts should be recognized (amortized) by each employer over the average of the expected remaining service lives of all plan members, which is 5.74, 5.76, 5.75, 5.73, 5.79, and 5.79 years for the years ended 2022, 2021, 2020, 2019, 2018, and 2017, respectively.

**NOTE 6 COLLECTIVE OPEB EXPENSE**

The following table shows the components of OPEB expense, excluding employer specific OPEB expense for changes in proportion, as of June 30, 2022 (amounts in thousands):

Service cost.....	\$ 774,039
Interest on the total OPEB liability.....	510,542
Projected earnings on plan investments.....	(138,947)
Administrative expense.....	240
Other additions.....	(175)
Recognition (amortization) of deferred outflows and inflows of resources:	
Changes in assumptions.....	(1,282,786)
Differences between expected and actual experience.....	(459,245)
Differences between expected and actual investment earnings.....	<u>(2,653)</u>
OPEB expense.....	<u>\$ (598,985)</u>