

**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, 2021

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

INDEPENDENT AUDITORS' REPORT ON OPEB PLAN SCHEDULES

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INDEPENDENT AUDITORS' REPORT

Mr. William McNamara, Comptroller
Commonwealth of Massachusetts

Report on Schedules

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, 2021, 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, 2021, and the related notes.

Management's Responsibility for the Schedule

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; this includes 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.

Auditors' Responsibility

Our responsibility is to express opinions on the schedule of employer and nonemployer allocations and the specified column totals included in the schedule of OPEB amounts by employer and nonemployer based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedule of employer and nonemployer allocations and the specified column totals included in the schedule of OPEB amounts by employer and nonemployer are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedule of employer and nonemployer allocations and the specified column totals included in the schedule of OPEB amounts by employer and nonemployer. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the schedule of employer and nonemployer allocations and the specified column totals included in the schedule of OPEB amounts by employer and nonemployer, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the schedule of employer and nonemployer allocations and the specified column totals included in the schedule of OPEB amounts by employer and nonemployer 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 entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the schedule of employer and nonemployer allocations and the specified column totals included in the schedule of OPEB amounts by employer and nonemployer.

Mr. William McNamara, Comptroller
Commonwealth of Massachusetts

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the schedules referred to above present fairly, in all material respects, the employer and nonemployer allocations, the total net OPEB liability, total deferred outflows of resources, total deferred inflows of resources, and total OPEB expense of the Plan as of and for the fiscal year ended June 30, 2021, in accordance with accounting principles generally accepted in the United States of America.

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 fiscal year ended June 30, 2021, and our report thereon, dated April 28, 2022, expressed unmodified opinions 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 28, 2022

**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, 2021**

Employer/Nonemployer	Actual Contributions	Employer/ Nonemployer Allocation Percentage
<u>Employer:</u>		
Commonwealth of Massachusetts.....	\$ 518,057,979	94.98234%
Massachusetts Department of Transportation.....	26,655,283	4.88706%
<u>Nonemployer (Commonwealth) attributable to:</u>		
Devens Enterprise Commission.....	28,867	0.00529%
Massachusetts PRIM Board.....	683,472	0.12531%
Total for all entities.....	<u>\$ 545,425,601</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, 2021**

Employer/Nonemployer	Deferred Outflows of Resources				Deferred Inflows of Resources					OPEB Expense				
	Net OPEB Liability	Differences Between Expected and Actual Experience	Changes of Assumptions	Changes in Proportion	Total Deferred Outflows of Resources	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 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.....	\$ 15,196,665,663	\$ 387,924,008	\$ 1,276,272,905	\$ 17,038,189	\$ 1,681,235,102	\$ 2,675,097,718	\$ 2,989,414,216	\$ 184,673,207	\$ 66,003,906	\$ 5,915,189,047	\$ 79,896,655	\$ (4,079,813)	\$ 24,563,618	\$ 100,380,460
Massachusetts Department of Transportation.....	781,903,649	19,959,589	65,667,197	64,456,699	150,083,485	137,639,974	153,812,286	9,501,864	18,802,290	319,756,414	4,110,868	2,562,379	-	6,673,247
Nonemployer (Commonwealth) attributable to:														
Deves Enterprise Commission.....	846,792										4,452	16,722	-	21,174
Massachusetts PRIM Board.....	20,048,906										105,407	1,500,712	-	1,606,119
Total nonemployer (Commonwealth of Massachusetts).....	20,895,688	533,403	1,754,898	4,357,719	6,646,020	3,678,308	4,110,498	253,929	1,046,411	9,089,146	109,859	1,517,434	-	1,627,293
Totals.....	\$ 15,999,465,000	\$ 408,417,000	\$ 1,343,695,000	\$ 85,852,607	\$ 1,837,964,607	\$ 2,816,416,000	\$ 3,147,337,000	\$ 194,429,000	\$ 85,852,607	\$ 6,244,034,607	\$ 84,117,282	\$ -	\$ 24,563,618	\$ 108,681,000

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, 2021**

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, 2021, 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
OTHER POST-EMPLOYMENT BENEFIT (OPEB) PLAN
NOTES TO SCHEDULES
AS OF AND FOR THE FISCAL YEAR ENDED JUNE 30, 2021**

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, 2021 (amounts in thousands):

Employer contributions reported in the Statement of Changes in Fiduciary Net Position per the ACFR.....	\$ 569,989
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>(24,563)</u>
Total employer and nonemployer contributions per the Schedule of Employer and Nonemployer Allocations.....	<u>\$ 545,426</u>

NOTE 4 COLLECTIVE NET OPEB LIABILITY

Components of the collective net OPEB liability at June 30, 2021 are as follows (amounts in thousands):

Total OPEB liability.....	\$ 17,910,405
Less:	
Plan fiduciary net position.....	<u>1,910,940</u>
Employers/nonemployers' net OPEB liability.....	<u>\$ 15,999,465</u>
Plan fiduciary net position as a percentage of total OPEB liability.....	<u>10.7%</u>

Actuarial assumptions

The total OPEB liability for the June 30, 2021 measurement date was determined by an actuarial valuation as of January 1, 2021 rolled forward to June 30, 2021, using the following actuarial assumptions:

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NOTES TO SCHEDULES
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1. The annual healthcare cost trend rates were developed based on the most recent published SOA-Getzen trend rate model, version 2021_b. The short-term trend assumptions were based on a review of the plan's historical trend rates during fiscal years 2020 and 2021, 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 2022 and thereafter, based on the plan's long-term inflation assumption and reasonable macro-economic assumptions for the growth of health care expenditures during this period relative to the general economy.

Year	Medicare Benefits	Non- Medicare Benefits
2021.....	4.40%	7.30%
2022.....	4.49%	7.06%
2023.....	4.57%	6.83%
2024.....	4.66%	6.59%
2025.....	4.75%	6.36%
2030.....		5.18%
2040.....		5.18%
2050.....		5.18%
2060.....		4.83%
2070.....		4.38%
2075+.....		4.04%

Getzen long run growth factors assumptions:

- Inflation: 2.5%
 - Real GDP Growth: 1.5%
 - Excess Medical Growth: 1.1%
2. Mortality rate was in accordance with RP 2014 Blue Collar Mortality Table projected with scale MP-2020 from the central year, with females set forward one year.
 3. Participation rates:
 - a. 100% of employees currently electing healthcare coverage are assumed to elect coverage at retirement.
 - 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.

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- 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.....	60.0%	0.0%
HMO.....	12.0%	4.0%

4. Long-term expected rate of return:

The long-term expected rate of return as of June 30, 2021 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, 2021, are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity.....	39.0%	4.8%
Core Fixed Income.....	15.0%	0.3%
Private Equity.....	13.0%	7.8%
Portfolio Completion Strategies.....	11.0%	2.9%
Real Estate.....	10.0%	3.7%
Value Added Fixed Income.....	8.0%	3.9%
Timberland/Natural Resources....	4.0%	4.3%
Total.....	100.0%	

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Discount rates

The discount rate used to measure the OPEB liability as of June 30, 2021, was 2.77%. This rate was based on a blend of the Bond Buyer Index rate of 2.16% 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. The projected "depletion date" when projected benefits are not covered by projected assets is 2041. Therefore, the long-term expected rate of return on plan investments was not applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2021.

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 (1.77%)	Current Discount (2.77%)	1% Increase (3.77%)
\$ 19,007,239	\$ 15,999,465	\$ 13,576,763

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
\$ 13,100,272	\$ 15,999,465	\$ 19,778,087

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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, 2021 (amounts in thousands):

	Year of Deferral	Amortization Period in Years	Balance Ju1y 1, 2020	Additions	Deletions	Balance June 30, 2021
Deferred Outflows of Resources:						
Differences between expected and actual experience.....	2018	5.79	\$ 105,475	\$ -	\$ (37,805)	\$ 67,670
	2019	5.73	465,562	-	(124,815)	340,747
Subtotal.....			571,037	-	(162,620)	408,417
Changes of assumptions.....	2018	5.79	10,362	-	(3,714)	6,648
	2020	5.75	1,693,593	-	(356,546)	1,337,047
Subtotal.....			1,703,955	-	(360,260)	1,343,695
Total deferred outflows of resources.....			\$ 2,274,992	\$ -	\$ (522,880)	\$ 1,752,112
Deferred Inflows of Resources:						
Differences between expected and actual experience.....	2017	5.79	\$ (15,030)	\$ -	\$ 8,396	\$ (6,634)
	2020	5.75	(495,699)	-	104,358	(391,341)
	2021	5.76	-	(2,926,517)	508,076	(2,418,441)
Subtotal.....			(510,729)	(2,926,517)	620,830	(2,816,416)
Changes of assumptions.....	2017	5.79	(740,036)	-	413,427	(326,609)
	2019	5.73	(1,259,697)	-	337,721	(921,976)
	2021	5.76	-	(2,297,649)	398,897	(1,898,752)
Subtotal.....			(1,999,733)	(2,297,649)	1,150,045	(3,147,337)
Net difference between projected and actual earnings on plan investments.....	2017	5.0	(7,999)	-	7,999	-
	2018	5.0	(6,616)	-	3,308	(3,308)
	2019	5.0	13,131	-	(4,377)	8,754
	2020	5.0	61,310	-	(15,327)	45,983
	2021	5.0	-	(307,322)	61,464	(245,858)
Subtotal.....			59,826	(307,322)	53,067	(194,429)
Total deferred inflows of resources.....			\$ (2,450,636)	\$ (5,531,488)	\$ 1,823,942	\$ (6,158,182)

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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	
2022.....	\$ (1,204,480)
2023.....	(876,650)
2024.....	(856,343)
2025.....	(779,297)
2026.....	(689,300)
Total.....	\$ (4,406,070)

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 5.76, 5.75, 5.73, 5.79, and 5.79 years for the years ended 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, 2021 (amounts in thousands):

Service cost.....	\$ 992,669
Interest on the total OPEB liability.....	521,143
Projected earnings on plan investments.....	(104,116)
Administrative expense.....	247
Other additions.....	(200)
Recognition (amortization) of deferred outflows and inflows of resources:	
Changes of assumptions.....	(789,785)
Differences between expected and actual experience.....	(458,210)
Differences between projected and actual earnings on plan investments.....	(53,067)
OPEB expense.....	\$ 108,681