BALTIMORE METROPOLITAN PLANNING ORGANIZATION

BALTIMORE REGIONAL TRANSPORTATION BOARD
RESOLUTION #25-7

ADOPTING THE CMAQ PERFORMANCE PLAN FOR THE BALTIMORE AND ABERDEEN URBAN AREAS

WHEREAS, the Baltimore Regional Transportation Board (BRTB) is the designated metropolitan planning organization (MPO) for the Baltimore region, encompassing the Baltimore and Aberdeen Urban Areas, and includes official representatives of the cities of Annapolis and Baltimore, the counties of Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's, as well as representatives of the Maryland Department of Transportation, the Maryland Department of the Environment, the Maryland Department of Planning, the Maryland Transit Administration, and the RTA of Central Maryland; and

WHEREAS, the BRTB, as the MPO for the Baltimore region, has the responsibility under the provisions of the Fixing America's Surface Transportation Act (FAST Act) for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the metropolitan area; and

WHEREAS, the FAST Act continued the implementation of performance-based planning and programming to achieve desired performance outcomes for the multimodal transportation system, including setting targets for future performance by states, providers of public transportation, and MPOs; and

WHEREAS, the Baltimore region is classified as moderate nonattainment for the 2015 Ozone National Ambient Air Quality Standard (NAAQS) and must work to ensure the region maintains conformity with the state's air quality plan; and

WHEREAS, the Congestion Mitigation and Air Quality Improvement (CMAQ) program was created to provide funding for transportation programs and projects that reduce air pollution and mitigate congestion from the transportation system, and this funding is provided to state and local governments to assist them in reaching federal air quality requirements established by the Clean Air Act and its amendments; and

WHEREAS, the Federal Highway Administration (FHWA) issued a final rule establishing three transportation performance measures addressing the Congestion Mitigation and Air Quality Improvement (CMAQ) funding program: (1) Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita; (2) Percent of Non-Single Occupancy Vehicle (SOV) Travel; and (3) Total On-Road Emissions Reduction; and

WHEREAS, MDOT has developed information and targets toward compliance with the law and regulations established for these performance targets; and

WHEREAS, the BRTB adopted MDOT targets for the following performance measures: (1) Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita; (2) Percent of Non-Single Occupancy Vehicle (SOV) Travel; and (3) Total On-Road Emissions Reduction; and

WHEREAS, 23 U.S.C 149(l) requires each MPO serving a transportation management area with a population over 200,000 that includes a nonattainment or maintenance area to develop a CMAQ Performance Plan. In the CMAQ Performance Plan and its biennial updates, the MPO reports their 2- and 4-year targets, describes how they plan to meet their targets, and details their progress toward achieving the targets over the course of the performance period.

NOW, THEREFORE BE IT RESOLVED that the Baltimore Regional Transportation Board as the Metropolitan Planning Organization for the Baltimore region adopts the BRTB CMAQ Second Period Mid-Performance Plan for 2024, (Attachment 1).

I HEREBY CERTIFY that the Baltimore Regional Transportation Board as the Metropolitan Planning Organization for the Baltimore region approved the aforementioned resolution at its August 27, 2024 meeting.

_____ _____

Date

Anthony Russell, Chair
Baltimore Regional Transportation Board

Attachment 1

Baltimore Regional Transportation Board Second Performance Period 2022-2025 CMAQ Mid-Performance Plan

To be addressed by the BRTB in August 2024. To be submitted with the Maryland DOT mid Performance Period Progress Report – October 1, 2024

MPO Name:	**TMA and State(s):**
Baltimore Regional Transportation Board	*Baltimore, MD*
Baltimore Regional Transportation Board	*Aberdeen – Bel Air South, Bel Air North, MD*

Background

This report documents the CMAQ Mid Performance Period Progress Report for the Baltimore Regional Transportation Board, as required by federal regulation. CMAQ is the Congestion Mitigation and Air Quality Improvement Program federal funding category.

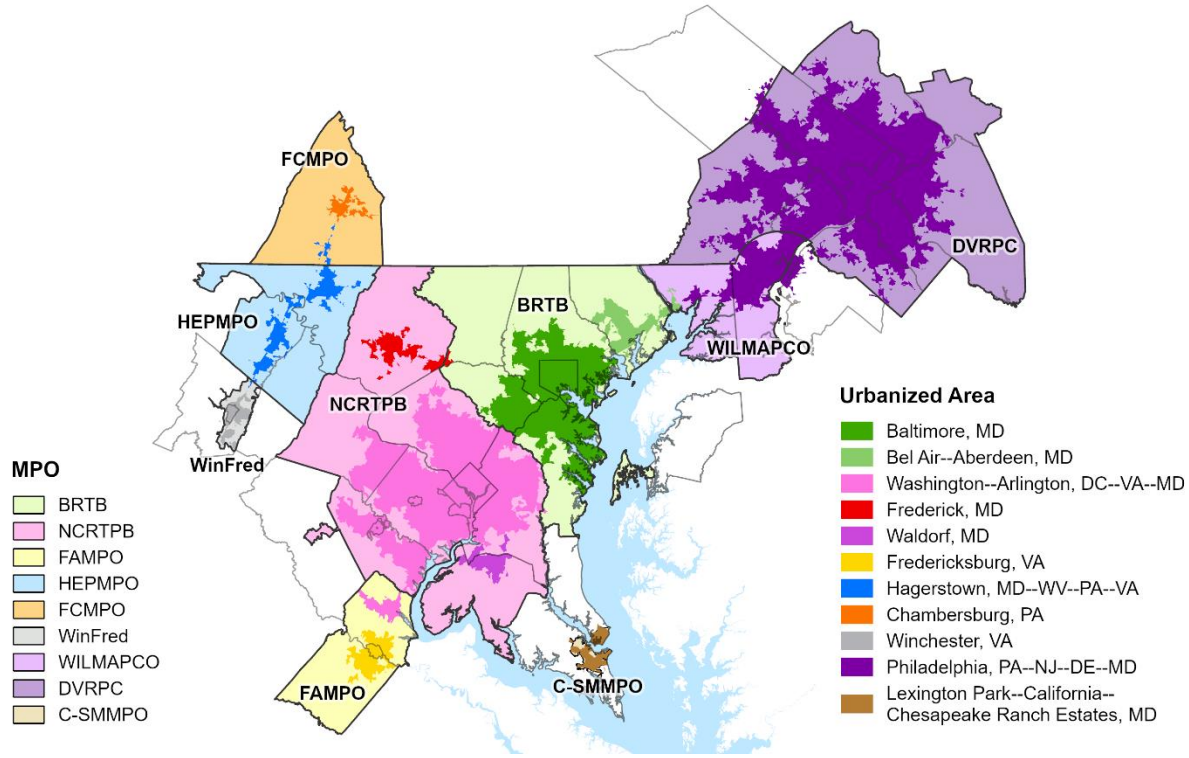
The BRTB is the federally designated metropolitan planning organization for the Baltimore region. *23 CFR 490.107(c) and 23 USC 149(l)* require an MPO to develop a CMAQ Performance Plan, to be submitted as an attachment to the State DOT biennial performance reports for the Baseline, Mid Period and Full Period of each 4-year performance period. On October 1, 2024, the Maryland DOT is required to submit their Mid Performance Period Progress Report for the second performance period, covering Fiscal Years 2022 to 2025. The BRTB requests that this report be attached to the MDOT Mid Performance Period Progress Report. The Baseline Second Period Performance Plan was approved by the BRTB in Resolution #23-5 on August 23, 2022.

The Baltimore region is designated as "moderate" nonattainment for the 2015 8-hour ozone standard. The standard is 0.070 parts per million (ppm). This designation became effective November 7, 2022. The following report describes the progress made within the first two years of the performance period for the MPO performance targets for three CMAQ-related performance measures:

- Peak hour excessive delay (PHED)
- Percent non-single occupancy vehicle (SOV) travel, and
- On-road mobile source emissions reductions from CMAQ-funded projects

The geographic area covered by the PHED and Non-SOV travel performance measures include the Baltimore and Aberdeen – Bel Air urban areas, shown in Figure 1. For the on-road mobile source emissions reduction measure, the area covered is the BRTB MPO planning area.

Figure 1. MPO Boundaries and Urban Areas in Maryland



At this time, the BRTB is required to report the progress made in the first two years of the performance period for two traffic congestion measures, covering the Baltimore Urban Area and the Aberdeen – Bel Air Urban Area, and one on-road mobile source emissions measure, covering the BRTB MPO planning area.

Traffic Congestion Measures: Peak Hour Excessive Delay (PHED)

Two-Year Condition/ Performance

Performance is being reported for the PHED traffic congestion measure, for the Baltimore and Aberdeen – Bel Air urban areas. Performance targets were developed previously for this measure. The targets were coordinated with, and are identical to, the State DOT target for the metropolitan area. A two-year target for PHED was not required, but the MPO has listed one in the table below.

The PHED targets had been developed by using the baseline PHED, calculated through the RITIS tool, and then projecting future delay. The increasing targets reflected the fact that delay was likely to increase into the near future, despite work the MPO is planning to address it.

The Baltimore Area PHED performance has varied since the baseline year, 2019. The COVID pandemic in 2020 was not included in the analysis because of major differences from trends in all other years. The PHED measure increased from 2022, and hit the target of 14.8 annual hours. In the Aberdeen – Bel Air area, the baseline

was 7.8 hours, which was already above the target of 6.9. The 4 year target is increasing to 8.3 from 6.9. There could have been changes affecting the performance from the 2020 census urban area designation changes.

PHED annual hours	Baltimore Urban Area		Aberdeen - Bel Air Urban Area	
Year	Performance	Target	Performance	Target
2019 (baseline)	20.6		7.8	
2021	13.9		6.9	
2022	12.6		5.8	
2023 (2-yr target)	14.8	14.8	7.4	6.9
2025 (4-yr target)		16.9 (increase from 15.7)		8.3 (increase from 6.9)

Coordination and Target Adjustment

For the PHED measure in both urban areas, MDOT coordinated with the Baltimore MPO on the target setting adjustment decision, justifications for the decision, and responses to the Mid Performance Period Report. The four-year target will be adjusted, increasing from 15.7 to 16.9 in Baltimore and from 6.9 to 8.3 in Aberdeen – Bel Air to better match the updated linear trend forecasts. Some factors may be contributing to an increase in the PHED trend, including the new urban area boundaries from the 2020 census, the collapse of the Key Bridge increasing congestion in the region, and the trend of returning to "pre-pandemic" levels of congestion.

Traffic Congestion Measures: Percent Non-SOV Travel

Two-Year Condition/ Performance

Performance is being reported for the Percent Non-SOV Travel traffic congestion measure, for the Baltimore and Aberdeen – Bel Air urban areas. Performance targets were developed previously for this measure. The targets are identical to the State DOT targets for the metropolitan area.

For the Baltimore Urban Area, the 2- and 4- year targets were set at 25.3%. Since 2019, the non-SOV travel performance has remained relatively constant; however, performance in 2021 and 2022 have exceeded the two-year target.

There are different factors that contribute to achieving these targets. The measure includes all surface modes of transportation that are not SOV, and may include travel avoided by teleworking. There has been an increase in teleworking and hybrid work schedules after the COVID pandemic, which likely is contributing to a greater percent of non-SOV travel.

Coordination and Target Adjustment

For the Non-SOV Travel measure in the Baltimore, MD urban area, the Maryland DOT coordinated with the Baltimore MPO on the target setting adjustment decision, justifications for the decision, and responses to the Mid Performance Period Report. The four-year target will not be adjusted, and both Baltimore and Aberdeen – Bel Air urban areas have exceeded their targets.

% Non-SOV	Baltimore Urban Area		Aberdeen - Bel Air Urban Area	
Year	Performance	Target	Performance	Target
2019 (baseline)	25.4%		16.1%	
2021	27.5%		17.8%	
2022	29%		20.1%	
2023 (2-yr target)		25.3%		16.8%
2025 (4-yr target)		25.3%		16.8%

On-Road Mobile Source Emissions Measures

Two-Year Condition/ Performance

MPOs with a population of more than 1 million, and with designated nonattainment and maintenance areas, were required to develop both 2-year and 4-year quantifiable targets for emission benefits from CMAQ funded projects. This included the Baltimore region which has a population of greater than 1 million, and is nonattainment for the ground-level ozone National Ambient Air Quality Standard (NAAQS).

The targets were developed to address the on-road mobile source emissions measure for the Baltimore region. MDOT created the targets as part of their overall state emission reduction target.

Every year, the Maryland Department of Transportation (MDOT) is required to submit a report to FHWA that includes CMAQ project information and emissions benefits. These reports are made available through the FHWA Public Access System (PAS), accessible at https://fhwaapps.fhwa.dot.gov/cmaq_pub/. This information, along with additional information shared by MDOT staff, was used by the MPO to assess the progress made in reaching the performance targets for on-road mobile source emissions measures in the Baltimore region, for NOx and VOCs. These performance measures assess emissions reduced from CMAQ-funded projects (in kilograms per day).

The following two tables display information on CMAQ Emission Reductions for nitrogen oxides (NOx) and volatile organic compounds (VOC) between 2022 and 2023, and compares it with the established targets.

Reduction of NOx (kg/day)	Performance	Target
2-year Target (2022-2023)	73.47	6.64
4-Year Target (2022-2025)	TBD	43.27

Reduction of VOC (kg/day)	Performance	Target
2-year Target (2022-2023)	6.98	0.87
4-Year Target (2022-2025)	TBD	13.63

Projects implemented in the Baltimore region with CMAQ funding have been successful at reducing ozone-forming pollutant emissions in the past two years. As shown in the table above, the funded projects have out-performed the 2 year targets.

Coordination and Target Adjustment

For the CMAQ emissions reduction performance measure in the Baltimore region, the MPO has coordinated with MDOT in determining progress in reaching the target. The BRTB has determined that due to the progress made on the 2-year target, the 4-year target will not be adjusted.

Description of Projects

This CMAQ Mid-Performance Period Report is required to include a description of the projects utilizing CMAQ funding and how these projects have contributed to the achievement of the 2-year targets for traffic congestion and on-road mobile source emissions. The applicable emissions for the BRTB region include ozone precursors, volatile organic compounds (VOCs) and nitrogen oxides (NOx). The attached table describes the projects funded with the CMAQ program in federal fiscal years 2022 and 2023. Continuing projects are noted as having “QA” benefits, denoting the emissions benefits were quantified in previous reporting periods. (New projects for which emissions benefits cannot be quantified may also be denoted as having qualitative “QA” benefits).

Description of Projects funded with CMAQ in the Baltimore Region (FY 2022 and FY 2023)

CMAQ Reporting Year	DOT	Project Type	Project Title	Description	Applicable Pollutant	VOC Benefit	NOx Benefit	Congestion reduction project?
2022	MDOT	Transit Improvements	MTA LTR LRV Mid-Life Overhaul	Transit Project - Facilities Improvements - Other - Perform Upgrades	Ozone	QA	QA	N
2022	MDOT	Congestion Reduction and Traffic Flow Improvements	SHA Inner Harbor East Improvements Parcel D Phase III Enhancement CO	Traffic Flow Project - Congestion Management Systems - Implementation - Inner Harbor East Improvements	Ozone	QA	QA	N
2022 & 2023	MDOT	Transit Improvements	Metro Fleet & Train Control Replacement	Transit Project - Purchase or Modification of Conventionally Fueled Vehicles - Replacement - Bus	Ozone	QA	QA	N
2023	MDOT	Ride Sharing	LOTS State of MD Guaranteed Ride Home - Baltimore Area	The Guaranteed Ride Home program introduced in 2010 to eliminate the barrier to using alternate modes of transportation and commuters' fears of being stranded without transportation in the case of an emergency.	Ozone	QA	QA	Y

2022 & 2023	MDOT	Transit Improvements	Bus Replacement	Replaces buses in MDOT MTA's existing fleet. Procured vehicles will be clean, diesel buses equipped with air-conditioning, electronic destination signs, automatic vehicle locators, and wheelchair lifts. Delivery and inspection costs are included. 93 buses in total will be replaced.	Ozone	QA	QA	N
2022	MDOT	Congestion Reduction and Traffic Flow Improvements	I-695 Baltimore Beltway from I-70 to MD 43 TSMO (CO)	TSMO Design-Build-Construction	Ozone	6.976	73.466	Y
2023	MDOT	Congestion Reduction and Traffic Flow Improvements	Installation of Fiber and Copper Communications System Citywide	Traffic Flow Project - Intelligent Transportation Systems	Ozone	QA	QA	Y

*QA stands for qualitative: emissions were quantified in previous reporting periods

This Plan is also required to include a description of the projects identified for CMAQ funding in the next two years and how these projects will contribute to the achievement of the 4-year targets for traffic congestion and on-road mobile source emissions. The attached table describes the projects to be funded with the CMAQ program in FY 2024 and FY 2025.

Description of Projects to be funded with CMAQ in the Baltimore Region (FY 2024 and FY 2025)

DOT	Project Category	Project Title	Applicable Pollutant	Year Anticipated for CMAQ Obligation
MDOT	Transit Improvements	Battery Electric Bus Procurement	Ozone	2024-2025
MDOT	Transit Improvements	Battery Electric Bus Charging Infrastructure	Ozone	2024-2025
MDOT	Ride Sharing	LOTS Ridesharing Program	Ozone	2024-2025
MDOT	Ride Sharing	LOTS State of Maryland Guaranteed Ride Home - Baltimore Region	Ozone	2024-2025