

CMAQ Performance Plans

BRTB August 23, 2022



CMAQ Performance Periods



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CMAQ Performance Measures

Performance Area	Measure	
Traffic Congestion (23 CFR Part 490	PHED Measure: Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita	
Subpart G)	Percent of Non-SOV Travel Measure: Percent of Non- Single Occupancy Vehicle (SOV) Travel	
On-Road Mobile Source Emissions (23 CFR Part 490 Subpart H)	Total Emissions Reduction Measure: 2- and 4-year Total Emission Reductions for each applicable criteria pollutant and precursor for all projects funded with CMAQ funds	



FEDERAL REQUIREMENTS FOR CMAQ PROJECT FUNDING

- The CMAQ Program supports two important goals of the U.S. DOT: improving air quality and relieving congestion.
- A CMAQ project must meet three basic criteria: it must be a transportation project, it must generate an emissions reduction, and it must be in or benefit a nonattainment or maintenance area.
- In nonattainment and maintenance areas, the project also must meet the provisions contained in the transportation conformity regulations.
- Lastly, all CMAQ-funded projects need to complete NEPA requirements. Projects are not required to have quantifiable emissions reduction benefits; a qualitative assessment is sufficient.
- All projects awarded annually must be entered into the CMAQ PAS. Data for the CMAQ Emissions Reduction performance measure is taken from the quantified benefits included in the projects listed in the PAS that have been funded in the region.
- Adopted targets reflect the anticipated cumulative emissions reduction to be reported in the CMAQ PAS for new projects over the next four years.

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MPO and Urbanized Area Boundaries





Traffic Congestion - Peak Hour Excessive Delay (PHED): Baltimore UZA Performance



Target: The system should have a PHED per capita less than 22.6h annually (1.883h for each month)





PHED: Baltimore UZA, 2 and 4-Year



Omit 2020 and assume pre-pandemic trends will continue <u>from current performance level</u>. This means the slope of the pre-pandemic trend is shifted to start at observed 2021 levels.

2-Year Target: 14.8 hours 4-Year Target: 15.7 hours





PHED: Aberdeen UZA, 2 and 4-Year







Traffic Congestion - Non-SOV Travel: Baltimore UZA Performance



Data Source: US Census ACS



BRTB 9

Non-SOV Travel: Baltimore UZA, 2-Year



Omit 2020 and look at both long-term trend (2010-2019) and nearer-term trend (2015-2019). Take the average of the 2022 estimates for each forecasted trend.

2-Year Target: 25.3%

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Non-SOV Travel: Baltimore UZA, 4-Year



Omit 2020 and look at both long-term trend (2010-2019) and nearer-term trend (2015-2019). Take the average of the 2024 estimate for each (25.3%) and add a slight improvement (0.2%) to reflect longer term regional goals.

4-Year Target: 25.5%



Non-SOV Travel: Aberdeen UZA, 2 and 4-Year



Omit 2020 and look at the long-term trend (2010-2019) since population, employment, and non-SOV trends have all been very stable over time.

> 2-Year Target: 16.8% 4-Year Target: 16.8%



On-Road Mobile Source Emissions: FFY 2018-2021 Performance



Target vs Actual Emission Reductions 274.33

126.39



12.399

4-Year Actual Reduction

NOx

- Targets
 - Met 2-year and 4-year targets for VOC & NOx
 - 11 Projects with emission reductions, including
 - Adaptive "Smart" Signal Systemization
 - Bus Replacement
 - Baltimore City's Traffic Management Center



7.87

VOC

4-Year Target

300

250

200

Vg/day

100

50

0

On-Road Mobile Source Emissions: FFY 2022-2025 Target Setting



- Historic trends
 - Emission reductions from the FFY 2014-2017 and FFY 2018-2021 performance periods
- Anticipated Programmed CMAQ projects
 - MDOT MTA Battery Electric Buses, Purple Line Crescent Trail; LOTS Ridesharing; LOTS Guaranteed Ride Home
- Adjustments for:
 - Outlier projects omitted
 - Altered commute patterns & COVID rebound
 - Declining emission rates of light duty vehicles

Tools
-MAQONE -FHWA Emissions Calculator Toolkit -TRIMMS

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On-Road Mobile Source Emissions: FFY 2022-2025 Projects and Targets



	Baltimore Re	Baltimore Region Project Descriptions				FFY		
	Battery Ele	ectric Bus Procureme	Transit Improvements		2024/2025			
	Battery Electric	Bus Charging Infrastr	Transit Improvements		2023/2024			
	LOTS R	desharing Program	Ride Sharing		2024			
	LOTS State of Maryland	Guaranteed Ride Ho Region		Ride Sharing	2024			
		2-Year Target (Sum FY22-FY23				4-Year Target (Sum FY22-FY25)		
	State/MPO	Sum of Emissions Benefits (kg/Da VOC NOX			Sum of Emissions VOC	Benefits (kg/Day) NOX		
\triangleleft	BRTB	0.87	6.64		13.63	43.27		
	ТРВ	0.21	1.71		6.24	15.19		
	WILMAPCO	0.04	0.10		0.07	0.18		
	MDOT (statewide)	1.12	8.45		19.94	58.64		



DRAFT 2022 Milestone Dates



Task	Target Date
ICG and TC review Congestion Targets and methodology, and draft Performance Report and Plan	July
ICG and TC endorse targets, Performance Report, and Plan	August
BRTB endorse targets, Performance Report, and Plan	August
BMC submit Performance Report and Plan to MDOT	Late August



For More Information

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