



April 12, 2018

CMAQ Performance Measures Briefing

CMAQ On-Road Mobile Source Emissions

Performance Based Planning and Programming (PBPP) Subpart H requirements

- **CMAQ On-road Mobile Emissions:** one of three CMAQ performance management measures
 - Applicable to States and MPOs in ozone, PM_{2.5}, PM₁₀ and CO nonattainment and maintenance areas

Measure	Component	MDOT	CAMPO	HEPMPO	TPB	BRTB	WILMAPCO	S/WMPO	C-SMMPO
On-road mobile source emissions reduction (2- & 4-year where applicable)	PM2.5 (2006)						✓		
	Ozone (2008)	✓	N/A	N/A	✓	✓	✓	✓	✓
	CO								
		Due 20-May-18	N/A			Due 16-Nov-18			

- Targets: “Total Emissions Reductions”
 - 2-year and 4-year emissions reductions (kg/day) for CMAQ funded projects for FY2018-FY2021

FHWA Public Access System (PAS)

- Inconsistencies with reporting methodology
 - Only **NEW** projects are to receive emissions benefits

<i>Current FHWA PAS Projects</i>						
Fiscal Year	Number of Projects			Sum of Emissions Benefits (kg/Day)		
	Cont.	New	Total	VOC	NOX	PM2.5
2014	25	3	28	0.41	1.02	0.07
2015	16	9	25	All Projects Qualitative		
2016	18	6	24	22.26	113.48	8.71
2017	15	2	17	4.91	53.24	2.59

2016 – Both New and Continuing Projects received emission benefits

<i>Recommended Changes to FHWA PAS</i>						
Fiscal Year	Number of Projects			Sum of Emissions Benefits (kg/Day)		
	Cont.	New	Total	VOC	NOX	PM2.5
2014	25	3	28	0.44	1.05	0.07
2015	17	8	25	7.35	85.40	5.27
2016	18	6	24	0.61	0.98	0.16
2017	15	2	17	4.91	53.24	2.59

CMAQ, On-Road Mobile Source Emissions – Draft Methodology

- 2 and 4-year targets for cumulative emissions reductions from new CMAQ projects reported in FHWA Public Access System (PAS) for FY2018-FY2021
- The target setting methodology utilizes a combined approach of historic trends and anticipated CMAQ projects by MPO
- The targets are a sum of:
 - SHA - Average emission reductions from FY2014-FY2017
 - MTA - Emission reductions for known MTA projects FY2018-FY2021 (bus replacements)
 - All CMAQ-funded bus replacements occur in the Baltimore region

Historic WILMAPCO CMAQ Projects

CMAQ ID	CMAQ Funding	Total Cost	Project Type	Project Title	Project Description	VOC	NOX	PM2.5	CMAQ Fiscal Year
MD20130009	\$ 70,809	\$ 88,511	Congestion Reduction and Traffic Flow Improvements	SHA MD 273 (Telegraph Road) at MD 213 Proposed Roundabout - PE	Shared Ride Project - Public Program - Park & Ride Lot	PR	PR	PR	2014
MD20120009	\$ 120,000	\$ 150,000	Congestion Reduction and Traffic Flow Improvements	SHA MD 273 (Telegraph Road) at Appleton Road - Proposed Roundabout - Prel Eng	Traffic Flow Project - Congestion Management Systems - Development - Preliminary Engineering only.	PR	PR	PR	2015, 2016, 2017
MD20150008	\$ 1,000,000	\$ 5,489,216	Congestion Reduction and Traffic Flow Improvements	MD 281 at Muddy Lane - Roundabout	Congestion Reduction, Roundabouts	0.03	0.03	0.05	2015, 2016, 2017
MD20130004	\$ (130,876)	\$ (261,752)	Congestion Reduction and Traffic Flow Improvements	SHA MD 279 (Elkton Newark Rd) at MD 545 Proposed Roundabout - PE	Traffic Flow Project - Traffic Engineering - Roundabout - Other	PR	PR	PR	2016
MD20150005	\$ 65,064	\$ 65,064	Congestion Reduction and Traffic Flow Improvements	MD 20 at MD 291 - Roundabout	Congestion Reduction, Roundabouts	PR	PR	PR	2016
MD20160003	\$ 1,937,429	\$ 4,326,242	Congestion Reduction and Traffic Flow Improvements	MD 273 (Telegraph Rd) at Blue Bird Road - Roundabout CO	Traffic Flow Project - Other - MD 273 (Telegraph Road) at Blue Ball Rd - Roundabout CO	0.09	0.27	0.08	2016
MD20130003	\$ (219,032)	\$ (273,790)	Congestion Reduction and Traffic Flow Improvements	MD 273 (Telegraph Rd) at MD 272 - Roundabout CO	Traffic Flow Project - Other - MD 273 (Telegraph Road) at MD 272 - Roundabout CO	PR	PR	PR	2017
Total Emission Benefit (kg/Day)						0.12	0.30	0.13	

CMAQ, On-Road Mobile Source Emissions – Draft MWCOG Targets

Year	Sum of Emissions Benefits (kg/Day)			Reduction Factor			Adjusted Sum of Emissions Benefits (kg/Day)		
	VOC	NOX	PM2.5	VOC	NOX	PM2.5	VOC	NOX	PM2.5
2014	0.00	0.00	0.00	64.94%	63.91%	76.56%	0.00	0.00	0.00
2015	0.03	0.03	0.05	67.04%	72.16%	82.94%	0.02	0.02	0.04
2016	0.09	0.27	0.08	84.61%	81.82%	90.79%	0.08	0.22	0.07
2017	0.00	0.00	0.00	100.00%	100.00%	100.00%	0.00	0.00	0.00
Total							0.10	0.24	0.11
Average							0.02	0.06	0.03



FY Year	Reduction Factor			Sum of Emissions Benefits (kg/Day)		
	VOC	NOX	PM2.5	VOC	NOX	PM2.5
Average '14-'17	100.0%	100.0%	100.0%	0.02	0.06	0.03
2018 Projected	89.5%	88.3%	90.6%	0.02	0.05	0.03
2019 Projected	80.7%	78.1%	83.0%	0.02	0.05	0.02
2020 Projected	72.8%	69.3%	76.6%	0.02	0.04	0.02
2021 Projected	68.4%	63.7%	72.3%	0.02	0.04	0.02
Sum '18-'19				0.04	0.10	0.05
Sum '18-'21				0.07	0.18	0.09

CMAQ, On-Road Mobile Source Emissions – Draft Targets

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	2-Year Target (Sum FY18-FY19)			4-Year Target (Sum FY18-FY21)		
	Sum of Emissions Benefits (kg/Day)			Sum of Emissions Benefits (kg/Day)		
State/MPO	VOC	NOX	PM2.5	VOC	NOX	PM2.5
BRTB	6.59	88.57	-	7.87	123.39	-
TPB	0.10	0.24	-	0.19	0.43	-
WILMAPCO	0.04	0.10	0.05	0.07	0.18	0.09
MDOT (statewide)	6.73	88.91	-	8.14	124.00	-

*C-SMMPO and S/WMPO: MPOs with population < 1,000,000 only require 4-year targets as part of statewide targets

**Based on changes to FHWA Applicability Table

Next Steps

- MDOT and MPOs agree on target setting method – April 2018
- MDOT to send State and **Suggested** MPO targets – May 1st, 2018
- MPOs to review State and **Suggested** MPO targets – May 2018
- MDOT to finalize State targets – May 20th, 2018
- MPOs to report MPO targets to MDOT – June 2018
- MPOs to send CMAQ Performance Plan to MDOT – September 2018
- MDOT to submit State targets and MPO Performance Plans – October 1st, 2018
- **MPO Boards to adopt targets no later than November 16, 2018**

More Information or Questions



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