



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<sub>2.5</sub>, PM<sub>10</sub> 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)		N/A	N/A			✓		
	Ozone (2008)	✓			✓	✓	✓	✓	✓
	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
<b>Total Emission Benefit (kg/Day)</b>						<b>0.12</b>	<b>0.30</b>	<b>0.13</b>	

# 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

<b>DRAFT</b>	<b>2-Year Target (Sum FY18-FY19)</b>			<b>4-Year Target (Sum FY18-FY21)</b>		
	<b>Sum of Emissions Benefits (kg/Day)</b>			<b>Sum of Emissions Benefits (kg/Day)</b>		
<b>State/MPO</b>	<b>VOC</b>	<b>NOX</b>	<b>PM2.5</b>	<b>VOC</b>	<b>NOX</b>	<b>PM2.5</b>
<b>BRTB</b>	6.59	88.57	-	7.87	123.39	-
<b>TPB</b>	0.10	0.24	-	0.19	0.43	-
<b>WILMAPCO</b>	0.04	0.10	0.05	0.07	0.18	0.09
<b>MDOT (statewide)</b>	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 1<sup>st</sup>, 2018
- MPOs to review State and **Suggested** MPO targets – May 2018
- MDOT to finalize State targets – May 20<sup>th</sup>, 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 1<sup>st</sup>, 2018
- **MPO Boards to adopt targets no later than November 16, 2018**



# More Information or Questions



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