



Sections discussed in this proposed NPRM for Part 490, National Performance Management Measures, include:

**Subpart A – General Information**

**Subpart E** – Measures to Assess Performance of the National Highway System

**Subpart F** – Measures to Assess Freight Movement on the Interstate System

**Subpart G – Measures to Assess the Congestion Mitigation and Air Quality Improvement Program – Traffic Congestion**

**Subpart H – Measures to Assess the Congestion Mitigation and Air Quality Improvement Program – On-Road Mobile Source Emissions**

Please see the technical fact sheet: *Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and the Congestion Mitigation and Air Quality Improvement Program: Overview of the Proposed Rulemaking* at <http://www.fhwa.dot.gov/tpm/rule.cfm> for additional details on the proposals for:

- Establishing targets
- Schedules for performance and target reporting
- Significant progress assessment process
- Consequences

**Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and the Congestion Mitigation and Air Quality Improvement Program**

**Traffic Congestion (Subpart G) and On-Road Mobile Source Emissions (Subpart H)**

This proposed rulemaking is available in docket number FHWA-2013-0054 at <https://www.regulations.gov>. The public is encouraged to review the proposed rule and submit comments, which will be considered in the process of writing the final rule. This technical fact sheet provides details on the CMAQ Program performance measures, and is part of a series available at <http://www.fhwa.dot.gov/tpm/rule.cfm>.

State DOTs and MPOs would be required to establish targets for the following measures:

|   | Proposed Performance Measures  | Applicability   |
|---|--|---|
| Traffic Congestion (Subpart G)              | Annual Hours of Excessive Delay Per Capita*  | NHS roads in urbanized areas with populations over one million that are, all or in part, designated as nonattainment or maintenance areas for ozone (O <sub>3</sub> ), carbon monoxide (CO), or particulate matter (PM) |
| On-Road Mobile Source Emissions (Subpart H) | 2- and 4-year Total Emission Reductions for each applicable criteria pollutant and precursor | All projects funded by the CMAQ program in areas designated as nonattainment or maintenance for O <sub>3</sub> , CO, or PM for each State or MPA  |

\*Measure pertains to the mainline of the roadway for all applicable roadways.

**Proposed Data Sources for Metric and Measure Calculation**

**Applicable Nonattainment and Maintenance Areas (G and H):**

These areas would be based on the U.S. Environmental Protection Agency's designation of the area under the National Ambient Air Quality Standards at the time when the State DOT Baseline Performance Period Report is due to FHWA.

**Emission Reductions Estimates (H):** Estimated emission reductions for each CMAQ funded project by applicable criteria pollutant and precursor would come from the CMAQ Public Access System.

**Urbanized Areas (G):** The urbanized area population would be based on the most recent US Decennial Census data available at the time the State DOT Baseline Performance Period Report is due to FHWA. The urbanized area boundary would be based on the information in the Highway Performance Monitoring System (HPMS) at the time the Baseline Report is due. The urbanized area population and boundary would apply for the entire performance period.

**Travel Time (G):** Travel time data would come from the National Performance Management Research Data Set (NPMRDS) or an FHWA-approved equivalent data set.

**Traffic Volumes (G):** Traffic volumes would come from continuous hourly traffic volume count stations **or** be estimated using Average Annual Daily Traffic (AADT) when no hourly volume counts exist. State DOTs would report their methodology to FHWA.

## Subpart G: Proposed Traffic Congestion Measure

**Data Reporting Requirements:** By June 15, 2018, and annually thereafter, State DOTs would be required to report the traffic congestion metric for the previous calendar year's data in HPMS.

**Metric:** State DOTs would calculate the Total Excessive Delay for all vehicles traveling through each travel time segment on the NHS within an applicable urbanized area for a full year using the following steps.

Travel Segment Delay would be determined for each 5-minute bin as the difference between the Threshold Travel Time and the Average Travel Time when this difference is greater than zero. Travel Segment Delay should be capped at 300 seconds and none reported for bins where there is no travel time.

To calculate the Total Delay for each bin, multiply the Travel Segment Delay by  $1/12$  of the hourly traffic volume, as a 5-minute bin represents travel conditions for  $1/12$  of an hour. This provides the impact for all users of the segment.

Then calculate the Total Excessive Delay for a given segment (in vehicle-hours) to the nearest thousandth by summing the Total Delays for each bin for a full year.

**Threshold:** A travel time segment is considered to have excessive delay if the travel speed is equal to or slower than the following:

- 35 mph for Interstates, freeways, or expressways
- 15 mph for principal arterials and all other NHS roads

The Threshold Travel Time would be the travel time segment length divided by the threshold speed.

**Measure:** The Annual Hours of Excessive Delay Per Capita would be computed to the nearest tenth for each applicable urbanized area by summing the Total Excessive Delay (vehicle-hours) for all travel time segments and dividing it by the population of the urbanized area. A 2-year target would not need to be established in the initial Baseline Performance Period Report.

## Subpart H: Proposed On-Road Mobile Source Emissions Measure

**Data Reporting Requirements:** State DOTs would enter project information into the CMAQ project tracking system for each CMAQ project funded in the previous fiscal year by March 1 of the following fiscal year.

**Metric:** For each project, calculate the Total Emission Reductions for each applicable criteria pollutant and precursor ( $PM_{2.5}$ ,  $PM_{10}$ , CO, VOC, or  $NO_x$ ) by converting the kg/day data in the CMAQ Public Access System to short tons/year using the following formula:

$$\text{Annual Tons of Emission Reductions}(p)_i = \text{Reductions}(p)_i \times 0.4026$$

Where:

- $p$  = criteria pollutant or precursor
- $i$  = project obligated for CMAQ funding for first time
- $\text{Reductions}_p$  = estimated daily emission reductions for a criteria pollutant or precursor. This is reported in kg/day in the first year the project is operational to the nearest thousandth
- 0.4026 = ratio to convert kg/day to short tons/year
- $\text{Annual Tons of Emission Reductions}(p)_i$  = total annual short tons of reduced emissions for "p" in the first year the project is obligated

**Measure:** The Total Emission Reductions for each of the applicable criteria pollutants and precursors would be computed to the nearest thousandth by summing the Annual Tons of Emission Reductions (short tons/year) for that pollutant for all applicable projects reported to the CMAQ Public Access System for the first two years and all four years of the performance period. State DOTs and MPOs would establish targets and calculate the cumulative Total Emission Reductions for 2- and 4-years in the Mid and Full Performance Period Progress Reports respectively, as applicable.

### Additional Information:

Francine Shaw Whitson  
Team Leader, TPM Programs  
Office of Transportation Performance  
Management  
Federal Highway Administration  
1200 New Jersey Ave., SE  
Washington, DC 20590  
Email:  
PerformanceMeasuresRulemaking@dot.gov  
FSWhitson@dot.gov  
[www.fhwa.dot.gov/tpm/](http://www.fhwa.dot.gov/tpm/)

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Please note:  
The comment period on  
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