

Air Quality and Sustainable Transportation Highlights

*Prepared by the Office of Natural Environment
Federal Highway Administration*



U.S. Department of Transportation
Federal Highway Administration

biennial Table of Contents

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Announcements and Recent Events

FHWA Publishes Applicability Determination for the CMAQ Traffic Congestion and CMAQ On-Road Mobile Source Emissions Measure

FHWA published the [Applicability Determination for the CMAQ Traffic Congestion and CMAQ On-Road Mobile Source Emissions Measures](#). These performance measures are required for certain State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) under the Moving Ahead for Progress in the 21st Century (MAP-21) Act and the Fixing America’s Surface Transportation (FAST) Act. As required in 23 CFR Part 490, FHWA published the first biennial applicability determination using nonattainment and maintenance area information and urbanized area data as of October 1, 2017. The determination applies to the first performance period for these measures. State DOTs and MPOs who complete their 20-year maintenance plans before October 1, 2019, may request to be removed from applicability at the midpoint of the performance period; otherwise, the next applicability determination will be made on October 1, 2021.

FHWA Office of Environment Releases New Landing Page for the CMAQ Performance Measures

The FHWA Office of Environment and Natural Resources (HEPN) created a [new website](#) to publish information specific to the CMAQ Traffic Congestion and CMAQ On-Road Mobile Source Emissions measures. The new page includes links to the relevant legislation and regulations, quick access points to the data sources for the measures, and a number of resources specific to the CMAQ measures, including definitions, presentations, and other materials. Any future guidance or materials related to the performance measures will be linked via this site. The new page is live and accessible at [this link](#).

EPA Clarifies Interpretations of Exempt Projects under Transportation Conformity

EPA, in consultation with FHWA, recently clarified its interpretations of exempt projects in an effort to ensure national consistency in how transportation conformity requirements are implemented:

- [Road diets](#): Are exempt under 40 CFR 93.126, Table 2, Exempt Projects. If a road diet is part of a state’s Highway Safety Improvement Program, the road diet is exempt under the item,

“Highway Safety Improvement Program implementation.” If not, a road diet could be still be exempt under the item, “Projects that correct, improve, or eliminate a hazardous location or feature.”

- Auxiliary lanes: If an auxiliary lane is less than 1 mile in length, it can be considered exempt under 40 CFR 93.126, Table 2, as “Projects that correct, improve, or eliminate a hazardous location or feature.”
- Ramp metering: Ramp metering projects are also exempt, under 40 CFR 93.126, Table 2, as “Projects that correct, improve, or eliminate a hazardous location or feature.”

Note: 40 CFR 93.105(c)(1)(iii) anticipates that the interagency consultation procedures will include a specific process to evaluate “whether projects ... should be treated as non-exempt in cases where potential adverse emissions impacts may exist for any reason.” If any project labeled exempt has potential adverse emissions impacts, refer to the governing interagency consultation procedures for the process to evaluate whether it should be treated as non-exempt. Questions on these clarifications can be directed to the local FHWA Division Office or EPA Regional Office.

FHWA Receives Nominations for Alternative Fuel Corridor (AFC) Designations

The 2017 Alternative Fuels Corridor (AFC) request for designation nominations was released on September 22, 2017. The due date for all nominations was COB November 30, 2017. FHWA received 24 nominations and is currently working with the Department of Energy’s (DOE) National Renewable Energy Lab (NREL) to analyze and verify the nomination information. Corridor designations will be announced in early 2018. For questions or more information on the nomination process please contact Diane Turchetta at 202-493-0158 or diane.turchetta@dot.gov.

FHWA Publishes Post-Hurricane Sandy Transportation Resilience Study of NY, NJ, and CT

This study aimed to identify the impacts of October 2012's Hurricane Sandy (and to a lesser extent, earlier storms including Hurricane Irene) on transportation assets within the greater NY- NJ - CT metropolitan region. In addition, the study assessed the vulnerability of those assets to the impacts of extreme weather events and the possible future impacts of a changing climate and identified adaptation strategies to increase the resilience of the transportation system. The final report, [the Post-Hurricane Sandy Transportation Resilience Study of NY, NJ, and CT](#), was released in October and details study findings. FHWA also held a [webinar](#) on the study results as part of the Resilience Webinar Series outlined below.

FHWA Case Study Report Showcases Practices for Sustainable Rest Area Design and Operations

[Sustainable Rest Area Design and Operations](#) describes practices that transportation departments have pursued at their rest areas, including green building design, changing operations procedures, using on-site renewable energy, tracking rest area performance and educating the public about sustainability. The report includes case study examples from Florida, North Carolina, Colorado, Georgia, and Vermont.

USDOT Summer Internships Available

Do you know a rising college junior or senior, or a graduate student interested in a career in transportation? FHWA participates in USDOT’s Student Transportation Internship Program for Diverse Groups (STIPDG). If you know any students that are interested in applying for the 2018 program, please

visit the [STIPDG program website](#). The student application period is now open and will close January 19, 2018.

FHWA Seeking Resilience and Durability Pilot Projects

FHWA is seeking to partner with State Departments of Transportation (State DOTs), Metropolitan Planning Organizations (MPOs), Federal Lands Management Agencies (FLMAs), and Tribes to deploy resilience and durability solutions to current and future extreme weather events. FHWA is looking for pilots projects that addressing topics such as integrating resilience and durability into agency practices, using available tools and resources to assess the vulnerability and risk of transportation projects or systems, and deploying a resilience solution and monitoring performance. Agencies interested in participating in the pilot program should submit a letter of interest to FHWA by February 9, 2018. Visit FHWA's [Resilience Pilots webpage](#) for more details.

An informational webinar for potential applicants will be held on January 4, 2018 at 2 pm Eastern. To register, please visit this [link](#).

FHWA Resilience Webinar Series Recordings Posted

FHWA concluded a webinar series that presented the results of recent resilience related research. Three webinars in September and October focused on the [Synthesis of Approaches for Addressing Resilience in Project Development](#) report, with discussions of addressing resilience in project development ([recording](#)), transportation engineering related to coastal and riverline flooding ([recording](#)), and transportation engineering related to pavement/soils and mechanical/electrical issues ([recording](#)). A fourth webinar featured the Post-Hurricane Sandy Transportation Resilience Study ([recording](#)), and two webinars in November focused on results of pilot projects on green infrastructure techniques for coastal highway resilience ([November 2 webinar recording](#), and [November 9 webinar recording](#)). The final webinar of the series presented FHWA's 2017 update to the Vulnerability Assessment Resilience Framework ([recording](#)).

FHWA CMAQ Toolkit Updated with Carpool and Vanpool Analysis

FHWA is continuing to develop a series of tools to provide technical support for the implementation of the Congestion Mitigation and Air Quality Improvement (CMAQ) Program. FHWA recently released a Carpool/Vanpool module as part of the tool kit, for use in estimating benefits from carpool and vanpool programs. The other available tools that provide reliable emissions benefit calculations include Traffic Flow Improvements, Advanced Diesel Truck/Engine Technologies, and Alternative Fuels and Vehicles. All of these tools are available for use on the [FHWA CMAQ Emissions Calculator Toolkit](#) webpage.

TRB's Recent Transportation Research Record Focuses on Air Quality Studies

The Transportation Research Board's (TRB) Transportation Research Record: Journal of the Transportation Research Board, No. 2627 consists of 11 papers that explore air quality in transportation. The papers provide new research on a number of air quality topics, including emissions modeling for a wide range of vehicle classes (light-duty gasoline to heavy-duty trucks), odd-even day traffic restrictions, transit emissions, microtrip modeling, and the air quality impacts of turboroundabouts. The full list of study titles and the report download are available from TRB at [this link](#).

Meetings, Conferences, and Workshops

TRB Air Quality Committee (ADC20) Hosting Three Workshops at TRB Annual Meeting, January 7-11, 2018

The Air Quality Committee of TRB (ADC20) will be hosting three workshops at the TRB Annual Meeting in January, in addition to an open committee meeting. The workshops take place on Sunday, January 7 and Thursday, January 11. They include: Fresh Air from Future Freight Transportation: Smart, Sustainable, and Sensible (Sunday, 9am-12pm); Implications of Technological and Societal Changes for Air Quality Policy and Regulations: Do We Have Adequate Tools to Know? (Thursday, 8am-12pm) and Innovative Uses of Traffic Data for Air Quality and Noise Analysis (Thursday, 8am-12pm). If you will be attending TRB Annual Meeting, be sure to join one of these workshops!

A full schedule of Energy and Environment Section events is available via TRB at [this link](#).

NCSE's 18th National Conference and Global Forum on Science, Policy, and the Environment, January 23-24, 2018

The National Council for Science and the Environment (NCSE) is hosting its 18th national conference and global forum on the theme of “The Science, Business, and Education of Sustainable Infrastructure: Building Resilience in a Changing World.” The conference convenes national leaders in science, policy, and the environment and facilitates productive conversations on a rotating theme each year. The conference will be held in Washington DC. More information is available at [this link](#).

Training Opportunities

CMAQ 101 Training

The FHWA posted a 27-minute YouTube video on the CMAQ program. The video provides a basic introduction to the program, how CMAQ funds are distributed to states, and the types of projects eligible for the CMAQ program. The training is available via the FHWA’s YouTube channel [here](#). For more information about the CMAQ program, please contact Mark Glaze at mark.glaze@dot.gov or (202) 366-4053.

FHWA NEPA Air Quality Analysis for Highway Projects

The FHWA Resource Center Planning and Air Quality team will be conducting a series of training sessions on NEPA Air Quality Analysis for Highway Projects. The training includes sessions on project-level applications appropriate for managers and practitioners, as well as hands-on sessions intended for modelers. Please note this is not a general MOVES training course, but is focused on project-level applications. It is not intended to address regional applications, such as SIP emissions inventories or regional (plan and TIP) conformity analyses. If you are interested in this training, please contact Michael Claggett at michael.claggett@dot.gov.

MOVES2014a Training Materials

The U.S. EPA posted [updated training materials and schedule](#) for the MOVES2014a two-day hands-on training course. On its [training materials](#) webpage, the U.S. EPA also posted an abbreviated version of the MOVES2014a course materials used as a one-day training course. MOVES users who did not attend a previous hands-on training session can use the “MOVES2014 Training Materials” as a self-taught course.

MySQL Training for MOVES Model Users

Two training opportunities are available for MOVES model users. A three-hour webinar provides an introduction to MySQL Query Browser and MOVES interface. A six-hour training over two days will enable users to do MySQL programming and to write their own MySQL scripts and to manipulate MySQL databases including MOVES input and outputs. For more information or to schedule training, please contact Paul Heishman at Paul.Heishman@dot.gov.

Air Quality Planning Web Course Available at No Cost

The National Highway Institute (NHI) Air Quality Planning web-based training series is designed for transportation practitioners. It includes four modules: Clean Air Act Overview (FHWA-NHI-142068), State Implementation Plan (SIP) and Transportation Control Measure (TCM) Requirements and Policies (FHWA-NHI-142069), SIP Development Process (FHWA-NHI-142070), and Transportation Conformity (FHWA-NHI-142071). All courses are free. For more information, visit the [NHI website](#) and search “Air Quality Planning,” or look for the specific course number. Please contact Karen Perritt at (202) 366-9066, or Karen.Perritt@dot.gov with any questions or comments.

FHWA Resource Center Training Activities

FHWA’s Resource Center Air Quality Technical Services Team is available to offer MOVES training, and information is available at the [Resource Center website](#).

Reminders

- **U.S. EPA 2017 Trends Report “Our Nation’s Air” Available**

The latest [annual trends report](#) from the U.S. EPA summarizes trends in air quality for six National Ambient Air Quality Standard (NAAQS) pollutants, for visibility, and for emissions of 187 hazardous pollutants. Interactive graphics, web-based maps with location-enabled search, direct links to data sources, and a summary brochure are all available on the [report website](#).

- **2017 Carbon Monoxide (CO) Categorical Hot-spot Finding**

The 2017 CO categorical hot-spot finding is [now available](#). This finding updates and supersedes the February 2014 finding and uses the latest version of the MOVES emissions model, MOVES2014a.

- **MOVES Model Review Work Group**

The U.S. EPA’s Federal Advisory Committee Act [MOVES Model Review Work Group](#) continues to provide input on the development of the next official version of MOVES, expected to be released in 2018 at the earliest.

- **FHWA Synthesis Report on Resilience in Project Development.**

Federal Highway Administration (FHWA) published a report, [Synthesis of Approaches for Addressing Resilience in Project Development](#), which incorporates lessons learned and innovations from recent FHWA studies and pilot projects. As part of this effort, FHWA and its partners conducted a series of additional [Engineering Assessments](#) for specific transportation asset types and disciplines.

- **Photovoltaic Noise Barriers Report Summarizes the Opportunity and Potential for Energy-Producing Noise Barriers on Highways**

A [recent FHWA report](#) summarizes current practices in photovoltaic noise barriers (PVNBs) globally and discusses the potential benefits of PVNBs in place of, or in addition to, existing noise barriers.

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Past issues of the *Air Quality and Sustainability Highlights* are available on FHWA’s website:

http://www.fhwa.dot.gov/environment/air_quality/conformity/highlights/ or
<https://www.fhwa.dot.gov/environment/sustainability/newsletter/>.

Please e-mail Victoria.Martinez@dot.gov with any suggestions for future issues.