

September/October 2019

Air Quality and Sustainable Transportation Highlights

*Prepared by the Office of Natural Environment
Federal Highway Administration (FHWA)*



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Announcements and Recent Events

FHWA Issues Implementation Guide on Nature-Based Solutions for Coastal Resilience

[Implementation Guide: Nature-Based Solutions for Coastal Highway Resilience](#) is designed to help transportation practitioners understand how and where nature-based solutions can be used to improve the resilience of coastal roads and bridges. Upfront, it summarizes the potential flood-reduction benefits and co-benefits of these strategies. From there, the guide follows the steps in the project delivery process, providing guidance on how to consider nature-based solutions in the planning process, how to conduct a site assessment to determine whether nature-based solutions are appropriate, key engineering and ecological design considerations, permitting approaches, construction considerations, and monitoring and maintenance strategies.

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

FHWA published the [Mid-Point 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 490.105(e)(8)(iii) and (e)(9)(v), FHWA published the updated October 1, 2017 applicability tables to reflect changes that occurred after October 1, 2017 and on or before October 1, 2019, as of the mid-point of the first performance period. States and MPOs have been excluded from CMAQ performance requirements, in whole or in part, at the midpoint of the performance period due to areas reaching attainment status (or achieving their 20-year maintenance plan). The next applicability determination will be made on October 1, 2021.

Congestion Mitigation and Air Quality Improvement Program (CMAQ) Emission Reductions Calculator Toolkit

The FHWA is continuing to develop a series of tools to provide technical support for the implementation of the CMAQ Program. This CMAQ Emission Reductions Calculator is offered as an additional resource to assist DOTs, MPOs, and project sponsors in the project justification process. All modules are available on the FHWA [CMAQ Emissions Calculator Toolkit](#) webpage. For more information, please contact Mark Glaze (Mark.Glaze@dot.gov or 202-366-4053).

Most recently, the *Traffic Flow Improvement* and *Advanced Diesel Technologies Tools* were updated. FHWA is also working to extend the Project Evaluation Years to 2030, as some of the earlier tool's Project Evaluation Years currently end at 2020. The toolkit is accessible [here](#).

Southern Transportation and Air Quality Summit Materials Now Available

Agenda information, the participant handbook, and presentation materials from the 2019 Southern Transportation and Air Quality Summit (STAQS), held August 20-21, 2019 in Louisville, KY, are now available from [the Kentucky Transportation Cabinet website](#). Materials include presentation materials from both days of the workshop on topics like forecasting air quality impacts, air pollution and asthma, discussion of the Volkswagen settlement funds, intelligent transportation systems, FHWA initiatives and pilots, and CMAQ performance measures, among many others. The site also includes conference photos and the "Green Quiz" questions and answers from the conference. See the [STAQS page](#) for all materials and information.

National Governor's Association (NGA) White Paper Summarizes State Practices in Transportation Electrification

The National Governor's Association's (NGA) recent white paper, *Transportation Electrification: States Rev Up*, summarizes findings from four regional workshops held between November 2018 and April 2019 to discuss increasing electrification of the transportation system. The workshops engaged 40 States across the country and included officials from governors' offices, multiple State agencies and departments, and experts from the private sector, academia, Federal agencies and research and policy organizations. The paper finds that despite strong interest in electrification and substantial investment to date, States are facing challenges moving beyond low adoption rates. The main challenges include lack of consumer awareness and education, limited charging infrastructure and associated range anxiety, high upfront costs for EVs, inequitable access due to the high upfront costs, and uncertain transportation revenue. The summary report is available directly [at this link](#) (pdf). For each workshop's agenda and slides, please visit [NGA's website](#).

FHWA Webinar on Changes in Appendix W

On Tuesday, December 3, 2019 at 1:00 PM ET the FHWA Resource Center Air Quality Team and the Air Quality and Transportation Conformity Team in the Office of Natural Environment (HEPN) will host a webinar on the relevant sections of EPA's Final Rule, 40 CFR Part 51 Appendix W, "Guideline on Air Quality Models", especially those that are related to the use of air quality dispersion models for hot-spot analysis for highway projects located in CO, PM_{2.5} and PM₁₀ nonattainment and maintenance areas.

The webinar is designed for the FHWA staff in the air quality discipline as well as state DOT and other practitioners that are responsible for conducting hot-spot analyses for conformity purposes. The webinar

will cover the changes in Appendix W relevant to the applications for highway projects; the changes that will be implemented on January 17, 2020; and the modeling tools affected. Please connect to the event:

- <https://connectdot.connectsolutions.com/airqualitytst/>
- Teleconference Number: 888-675-2535
- Participant Passcode: 9142818
- No registration is necessary, just log on to the webroom with your name.
- Limited to first 100 participants

If you have any questions about the webinar, please contact David Kall at david.kall@dot.gov or (202) 366-6276, or Michael Claggett at michael.claggett@dot.gov or (505) 870-0105.

Meetings, Conferences, and Workshops

TRB Conference on Health and Active Transportation, December 11-12, 2019

TRB is sponsoring the [Conference on Health and Active Transportation](#) on December 11-12, 2019 in Washington, DC. This conference will explore opportunities in quantifying the health effects of transportation policies, infrastructure, and travel behavior. It also intends to raise awareness of opportunities to integrate health and health equity into transportation planning across all levels (including planning for active transportation). Contact Bernardo Kleiner at BKleiner@nas.edu or Gary Jenkins at GJenkins@nas.edu for more information.

Registration Open for 2020 Transportation Research Board Annual Meeting

The [Transportation Research Board \(TRB\) 99th Annual Meeting](#) will be held January 12–16, 2020, at the Walter E. Washington Convention Center, in Washington, D.C. The information-packed program is expected to attract transportation professionals from around the world. The meeting program will cover all transportation modes, with presentations and workshops, addressing topics of interest to policy makers, administrators, practitioners, researchers, and representatives of government, industry, and academic institutions. A number of sessions and workshops will focus on the spotlight theme for the 2020 meeting: *A Century of Progress: Foundation for the Future*.

Details regarding the more than 100 specialty workshops are [available online](#) now. These workshops take place on the first and last day of the meeting. The full 2020 program, including information on Air Quality Committee (ADC20) meetings and events will be posted in November 2019. The FHWA Air Quality/Noise team and the STAR team will be sponsoring booths at the Exhibit Hall.

Training Opportunities

Introduction to Transportation Conformity: In-Person Trainings

The National Transit Institute (NTI) is offering in-person training opportunities covering its “Introduction to Transportation Conformity” course. This 2.5 day course will present basic information about conformity requirements and the relationship of the transportation and air quality planning processes in order to prepare agency staff (Federal, State and local) to participate in interagency consultation and work effectively in resolving conformity issues. For more information, please visit [the NTI registration website](#).

FHWA Resource Center Training Activities

FHWA's Resource Center Air Quality Technical Services Team is available to offer MOVES and other trainings. More information about Resource Center training opportunities is available from the contacts listed at the [Resource Center website](#).

Project Level Training for Quantitative PM Hot-Spot Analyses

The US Environmental Protection Agency (EPA) has developed a three-day training course on completing quantitative PM hot-spot analyses according to EPA's "[Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas](#)" (PM Hot-spot Guidance). This course is geared towards State and local agency staff who will be completing these analyses, as well as those who may be reviewing, approving, or otherwise assessing hot-spot analyses. Previous modeling experience is not necessary, although familiarity with MOVES and air quality dispersion modeling may be helpful. There is no registration fee for this course. Details are available on [the EPA website](#).

Additional Web-Based Transportation Conformity Training

As a reminder, several web-based transportation conformity training opportunities are available on-demand from [FHWA's conformity training website](#) (under "Web-based Training"). These training opportunities range in level of detail from a short 27-minute video providing a high-level basic overview of transportation conformity to a detailed set of 32 self-directed training modules. Recordings of two webinars are available: basic transportation conformity overview (June 12, 2018, 70 minutes) and basic MOVES emissions model training (June 18, 2018, 42 minutes).

The target audience for these training materials are FHWA staff and State and local transportation partners (MPOs and State DOTs) who are either new to or would like a refresher training on the conformity process. For questions, please contact David Kall, at david.kall@dot.gov, or 202-366-6276.

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](#). 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.

MySQL Training for MOVES Model Users

Two MySQL 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 Michael Claggett at michael.claggett@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.

Reminders

- **2015 8-Hour Ozone Non-Attainment Area Maps.** The [2015 NAAQS nonattainment area maps](#) are now available on the FHWA Office of Planning, Environment and Realty (HEP) Air Quality Transportation Conformity website. The maps show the boundaries for nonattainment areas under the 2015 8-Hour Ozone standard, which applies to 52 areas across the country. More information on the 2015 NAAQS is available via the US Environmental Protection Agency (EPA) [here](#).
- **Computation Procedures for Non-SOV and Total Emissions Reduction Performance Measures.** FHWA released two public documents, [FHWA Computation Procedure for Travel Time Based and Percent Non-Single Occupancy Vehicle \(non-SOV\) Travel Performance Measures \(May 2018\)](#), and [Computation Guidance for Congestion Mitigation and Air Quality Improvement \(CMAQ\) Program Total Emissions Reduction Measure](#) to provide transparency in its calculations and to give State DOTs a frame of reference when establishing their targets through the FHWA Performance Management Form (PMF). A companion to the total emissions reduction document is also a [new reporting tool](#) in the CMAQ Public Access System.
- **RLINE in AERMOD.** An updated version of the [AERMOD Modeling System](#) (dated 19191) was posted to the SCRAM website and replaces the previous version (dated 18081). Specifically, the AERMET and AERMOD executables, source code, documentation, and test cases have been revised. With this update, the EPA is releasing the [AERMOD Modeling System Development and Update Plan](#) and announcing the AERMOD development website, which contains the Development Plan and the AERMOD development white papers.
- **NCHRP Tool to Estimate Emission Reductions.** The National Cooperative Highway Research Program (NCHRP) recently released a spreadsheet-based tool to estimate emissions reductions for 16 CMAQ project types (NCHRP 25-25, Task 108). The tool is intended to simplify the process of estimating emission reductions for users with limited air quality modeling experience or limited availability of data. The [project report](#) and the [tool itself](#) are available for download via TRB.

Contacts

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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.