

May/June 2018

Air Quality and Sustainable Transportation Highlights

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



U.S. Department of Transportation
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Announcements and Recent Events

Greenhouse Gas Performance Management Measure Requirement Repealed

On May 22, 2018, the Federal Highway Administration (FHWA) signed a [final rule](#) repealing the performance management measure in 23 CFR 490.507(b) that assessed the percent change in tailpipe carbon dioxide (CO₂) emissions, from the reference year 2017, on the National Highway System (NHS) (also referred to as the Greenhouse Gas (GHG) measure). By repealing the GHG measure, FHWA will no longer require State DOTs and MPOs to undertake administrative activities to establish targets, calculate their progress toward their selected targets, report to FHWA, and determine a plan of action to make progress toward their selected targets if they failed to make significant progress during a performance period. The official record of the final rule is [published in the Federal Register](#) (Docket No. FHWA–2017–0025).

FHWA Publishes Computation Procedures for Travel Time and Non-SOV Performance Measures

To ensure consistency in the determination of significant progress for the National Highway Performance Program and the National Highway Freight Program (see [23 CFR 490.109](#)), FHWA developed the [FHWA Computation Procedure for Travel Time Based and Percent Non-Single Occupancy Vehicle \(non-SOV\) Travel Performance Measures \(May 2018\)](#). FHWA is publishing this document to provide transparency in its calculations and to give State DOTs a frame of reference when establishing their targets.

While the targets for the CMAQ Traffic Congestion measures (Annual Hours of Peak Hour Excessive Delay Per Capita measure (PHED measure) and Non-SOV Travel measure) are not subject to the FHWA significant progress determination, FHWA plans to compute the PHED measure and Non-SOV Travel measure (using the method described in this document) for each applicable urbanized area and plans to make the results available to State DOTs and MPOs to ensure consistency in measure computation.

FHWA Announces the Availability of FY17 CMAQ Project Data

The fiscal year 2017 CMAQ Annual Reporting is complete and project information was posted to the [CMAQ Public Access System](#). These data are available to State DOTs and MPOs alike for use in meeting CMAQ Performance Management baseline development and target setting requirements. For further information please contact Mark Glaze at mark.glaze@dot.gov or (202) 366-4053.

FHWA Releases INVEST Version 1.3

FHWA released INVEST Version 1.3 on Earth Day—April 22, 2018. FHWA’s INVEST (Infrastructure Voluntary Evaluation Sustainability Tool) is a practical, web-based collection of voluntary best practices and criteria designed to help transportation agencies integrate sustainable practices into their projects, plans, and programs. The updates in Version 1.3 reflect some of the feedback received from agencies throughout the US who implemented INVEST Versions 1.0, 1.1, and 1.2 on their programs and projects. All changes to criteria are reflected in the website and the downloadable materials. To see what changed, view the Version 1.3 Summary of Revisions page [here](#).

FHWA Pilot Study Assesses Green Infrastructure Techniques to Protect the Henderson Point Connector (US HWY 90)

The storm surge and waves generated by Hurricane Katrina caused a number of coastal bridge and roadway failures, including the Henderson Point connector that carries US HWY 90 over railroad tracks and a small tidal creek. This particular site was chosen for a pilot project in order to address a key knowledge gap regarding the vulnerability of coastal bridges: the approach embankment and approach spans that pass through critical elevations where damage during extreme storms is likely. This [green infrastructure pilot project](#) seeks to develop a solution that addresses this vulnerability while increasing the resilience of the built and natural systems.

A number of conventional gray adaptation solutions and green infrastructure adaptation options were considered in this study, and a pair of vegetated berms were selected for evaluation as a green infrastructure solution. The [recent FHWA report](#) summarizing the pilot study finds that, for low-elevation bridge spans over land, extending the embankment to higher elevations or using vegetated berms (or similar techniques) could potentially reduce vulnerability to extreme events now and in the future.

FHWA Publishes Summaries of Renewable Energy in Highway Rights of Way Peer Exchanges

FHWA has released two new summaries of FHWA Peer Exchanges discussing issues related to accommodating renewable energy technologies in highway rights-of-way (ROWs) and other State DOT property. Held in February and March 2018, these were the second and third peer exchanges to bring together practitioners to discuss emerging practices related to highway renewable energy. Summaries are available for the following peer exchanges:

- [Salt Lake City, UT](#). Held March 13-14, 2018 with participation from the transportation departments of Arizona, California, Colorado, Hawaii, Nevada, New Mexico, and Utah.
- [St. Louis, MO](#). Held February 27-28, 2018 with participation from the transportation departments of Arkansas, Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Oklahoma, and Tennessee.

For more information, see the [Renewable Energy in Highway Right-of-Way website](#), the [summary report](#), [briefing book](#), and the [quick guide](#) on renewable energy in ROWs.

FHWA Vulnerability Assessment and Adaptation Framework Available for Download

FHWA has now posted an easily downloadable [pdf version](#) of the [Vulnerability Assessment and Adaptation Framework, 3rd Edition](#). The Framework is a manual to help transportation agencies assess and address vulnerability of transportation infrastructure and systems to extreme weather and climate effects. The Framework provides an in-depth and structured process for conducting a vulnerability assessment. For each step, the Framework features examples from assessments conducted by State DOTs, Metropolitan Planning Organizations and others, and it includes links to related resources for additional information.

US Environmental Protection Agency (EPA) Published PM Hotspot FAQs

In June, the EPA published updated [frequently-asked-questions](#) (FAQs) on hotspot analyses for particulate matter (PM). This update provides additional examples of projects that would not need a hotspot analysis based on decisions that have been made in the field.

AASHTO Report Highlights Lessons Learned from Extreme Weather Events

A new AASHTO report, [Resiliency Case Studies: State DOT Lessons Learned](#), presents the results of an examination of recent extreme weather events that have impacted state Departments of Transportation (DOTs) and describes how the state DOTs responded to the challenges associated with the events. The project study team, consisting of American Association of State Highway and Transportation Officials (AASHTO) and WSP staff, interviewed representatives from eight State DOTs to obtain the lessons learned from each event.

The individual state case study findings are compared with each other and cross-cutting (overlapping or similar), lessons learned are identified. The goal of this report is to disseminate the State DOT lessons learned from the most impactful extreme weather events of the last six years and identify how State DOTs can become more resilient in anticipating and responding to future events, especially given the realities of a changing climate and the potential for changing storm patterns. The full report is available [here](#) (pdf).

Health Effects Institute Releases MOSES Study and Data Set

The Multicenter Ozone Study in older Subjects (MOSES) was designed to test whether ozone has short-term cardiovascular effects at and near present-day ambient levels. It evaluated cardiovascular and respiratory outcomes in 87 healthy participants (60 years old on average) who were exposed to 0, 70, or 120 ppb ozone for 3 hours while exercising moderately. For details and a review panel commentary on the study, please visit the [study website](#). All relevant documents and links, including forms to request specimens, can be found [at this link](#). The [research database](#) is publicly accessible.

Texas Department of Transportation (TxDOT) and the Texas A&M Transportation Institute (TTI) Sponsor Resiliency Forum

TxDOT and the TTI conducted a Texas Transportation Resiliency Forum on June 26th in College Station, Texas. The focus of the Forum was on the research efforts of the University of Texas and Texas A&M University on extreme weather effects on ecology, pavements, structures, and communities within the State of Texas. Small group discussions followed the presentations by university researchers on how best to implement resiliency planning and measures to prepare for extreme weather impacts from 500-year flooding, drought, wildfires, and hurricane events. Participants included staff from MPOs, universities, TxDOT, and the FHWA TX Division Office. For additional information, please contact Kirk D. Fauver, Planning and Research Engineer, FHWA Texas Division at 512-536-5952 or kirk.fauver@dot.gov

Meetings, Conferences, and Workshops

TRB Committee on Air Quality (ADC20) 2018 Summer Meeting: July 31-August 1, 2018

The Transportation Research Board (TRB) Committee on Air Quality (ADC20) Summer Meeting will take place July 31-August 1 at the National Academies Keck Center in Washington, DC. Dr. Chris Frey of North Carolina State University will present a keynote talk on his recent landmark assessment of issues facing the transportation air quality field, *Trends in Onroad Transportation Energy and Emissions*. Additional talks on key topics, such as freight, exposure assessment, and innovations in data analysis as well as a fun social outing will complement the committee meeting, with an eye toward strategic opportunities and direction for the committee's future research. The summer meeting is open to all TRB Air Quality Committee members and friends, students, and others in the field. Registration is free, though all participants must RSVP via [this link](#).

Northern Transportation Air Quality Summit: August 7-9, 2018

The Northern Transportation Air Quality Summit will take place in Newark, NJ from August 7-9, 2018. The summit will bring together stakeholders from the transportation and air quality communities to discuss the current and upcoming regulatory environment, new technologies, and current practices. The content is geared toward practitioners in the northern and Mid-Atlantic States involved with public agencies at all levels. Speakers from national and regional agencies and organizations will present on key topics, best practices, and the recent developments in the transportation, planning, and air quality professions. Registration will be available through the North Jersey Transportation Planning Authority via the [agency's website](#).

Training Opportunities

Introduction to Transportation Conformity: In-Person Training

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. One upcoming training is scheduled for July 25-27, 2018 in Newington, CT. For more information and to register, please visit [the course website](#).

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.

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 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.

FHWA Resource Center Training Activities

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

Reminders

- **1997 Ozone NAAQS: South Coast Air Quality Management District v. USEPA Decision.** On February 16, 2018, the D.C. Circuit issued a decision in [South Coast Air Quality Management District v. EPA](#). The decision covers many topics including the revocation of the 1997 ozone NAAQS and associated conformity requirements. Please contact Cecilia Ho at 202-366-9862 or cecilia.ho@dot.gov.
- **Congestion Mitigation and Air Quality Improvement Program (CMAQ) Emission Reductions Calculator.** 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).
- **FHWA White Paper on Nature-Based Solutions for Coastal Highway Resilience.** A recent [FHWA white paper](#), Nature-Based Solutions for Coastal Highway Resilience, serves as an input to an upcoming round of regional peer exchanges on nature-based solutions for coastal highway resilience. For information on the peer exchanges, past webinars, and related resources, please refer to the [Ongoing Research](#) page for the Office of Environment.
- **FHWA Case Studies Highlight Co-Benefits of Multimodal Design.** FHWA released a new set of compiled [Case Studies in Realizing Co-Benefits of Multimodal Roadway Design and Gray and Green Infrastructure](#). This compilation highlights projects that contribute to safe and connected pedestrian and bicycle networks in States and communities throughout the U.S., while promoting resiliency and relieving burdens on stormwater systems through green and gray infrastructure.
- **Alternative Fuels Corridor Second Round Designations.** FHWA recently completed the second round of designations for the Alternative Fuels Corridor program. With the designation of these corridors, FHWA is continuing to establish a national network of alternative fueling and charging infrastructure along national highway system corridors. Visit the [Alternative Fuels Corridor website](#) to learn more.

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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.