Air Quality + Sustainable Transportation Highlights

U.S. Department of Transportation
Federal Highway Administration

Prepared by the Office of Natural Environment

November / December 2022

Announcements

Transportation Resilience and Durability Case Study Series Feature: Makah Tribe

The Federal Highway Administration maintains a Climate Change Adaptation Case Study Series on its website. The latest addition to the series is a case study focused on the Makah Tribe in Neah Bay, Washington. The case study, "Implementing Regional Resilience Projects: Makah Tribe," highlights the needs of the Tribe because of its exposure to numerous environmental risks including seismic activity, tsunami risk, high winds, intense precipitation, landslides, coastal storms and extreme flooding, and extended summer droughts with limited potable water. These risks are further aggravated by the fact that there is only one road (State Route 112) to the area. The Tribe is actively working on short and long term resilience efforts, including addressing road access, water conservation measures, evacuation plans, alternative energy development and ultimately, permanent community relocation. For more information, please visit the Makah Tribe's website.

FHWA MOVES3 Sensitivity Analysis

The FHWA released a dashboard of results from its MOVES3 Sensitivity Analysis to assess the sensitivity of the latest version of the U.S. Environmental Protection Agency's (EPA's) MOtor Vehicle Emissions Simulator (MOVES), MOVES3, to various inputs. The results of this sensitivity testing may be of interest to those using MOVES to model on road emissions of criteria pollutants, air toxics, and greenhouse gases. Though this sensitivity analysis further emphasizes the importance of using local inputs to generate the most accurate emission inventories, the information provided in this report may help stakeholders prioritize data collection and assist in interpreting results. For more information about the analysis, contact David Kall, (202) 366-6276.

FHWA-HEP-23-009

New Environmental Protection Agency (EPA) Guidance on PM2.5 Limited Maintenance Plan

EPA recently posted its Limited Maintenance Plan (LMP) guidance for Particulate Matter below 2.5 micrometers ($PM_{2.5}$). The document clarifies EPA's guidance for $PM_{2.5}$ maintenance plan submissions by State, local, and tribal air agencies. Unless otherwise stated, this guidance applies for any existing $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS) and for any future $PM_{2.5}$ NAAQS. It also provides information on transportation conformity and general conformity in areas that are considering development of a $PM_{2.5}$ LMP. The LMP is a tool that allows certain nonattainment and maintenance areas to provide for maintenance under CAA section 175A based on an analysis of current and historical air quality data, rather than modeling or emissions projections. Questions about the application of this guidance for specific areas should be addressed to an EPA Regional Office State Implementation Plan (SIP) program contact. See this site for a list of Regional Office contacts. The guidance is now available on EPA's website.

MOVES3 EPA Update Notice

EPA has posted MOVES3.1, a minor revision to MOVES3. MOVES3.1 adds an inspection/maintenance (I/M) program benefit for Class 2b and 3 gasoline trucks with a gross vehicle weight rating of between 8,500 and 14,000 pounds (Regulatory Class 41). With this minor revision, these trucks will now receive the same proportional I/M benefit for exhaust emissions as lower classification gasoline trucks.

EPA recommends you download MOVES3.1 and use this new version if you:

- have not yet used MOVES3,
- are conducting regulatory analyses involving an I/M program that includes gasoline passenger and light commercial trucks (of any regulatory class), such as performance standard modeling for an I/M SIP to demonstrate that an I/M program meets the applicable performance standard (refer to the Performance Standard Modeling guidance), or
- are conducting modeling for other SIP or transportation conformity analyses for an area where the I/M program includes gasoline passenger and light commercial trucks (of any regulatory class).

Otherwise, MOVES3 users can continue to use previous versions of MOVES3. For more information about regulatory uses of MOVES, see the MOVES3 Policy Guidance which applies to all versions of MOVES3.

This update is considered a minor revision, rather than a patch and it will not substantially change onroad criteria emissions rates at the County Scale and it is not considered a new model for SIP or transportation conformity purposes. As noted in the MOVES3 Technical Guidance, modelers should continue to review and update the

relevant I/M coverage inputs to reflect the latest I/M assumptions in regulatory analyses.

Please email the EPA if you have questions.

California EMFAC Announcement and Grace periods

The Environmental Protection Agency (EPA) has announced availability of the latest version of the California EMFAC (short for EMission FACtor) model for use in State Implementation Plan (SIP) development and transportation conformity in California. The grace periods are 2 years for regional (Plan/Transportation Improvement Program) and 1 year for project level (hot-spot analysis) conformity. EMFAC2021 is the latest update to the EMFAC model for use by California State and local governments to meet Clean Air Act (CAA) requirements. The new model, which is based on new and improved data and new and amended regulations in California, calculates air pollution emissions factors for passenger cars, trucks, motorcycles, motor homes, and buses. Because the EMFAC model is used only in California, this notice does not affect the applicability of the Motor Vehicle Emissions Simulator (MOVES) model for users in other states. EPA's approval of the EMFAC2021 emissions model and EMFAC2017 adjustment factors for SIP, conformity purposes, and applicable CAA purposes as described in this notice is effective November 15, 2022. Copies of the official version of the EMFAC2021 model and the EMFAC2017 adjustment factors, including technical support documents, are available on the California Air Resources Board (CARB) website.

Resources and Training

National Highway Institute (NHI) In-Person Resilience Course

NHI recently posted a new in-person course focused on planning and designing highway projects to be more resilient to changing climate conditions. It is a 2.5 day course in inland areas, or 3 day course in coastal areas, and includes material on climate science, tools and methods for assessing future conditions and addressing them in project development, and consideration in a range of engineering disciplines: inland flooding, costal hydraulics, pavements and geohazards. The target audience includes engineering, project planning and environmental staff; the series is also relevant to regional planners, asset managers, and others seeking to integrate climate change considerations into their practices. Fees related to the course would be eligible under

the PROTECT Formula Program. For more information about the NHI In-Person Resilience Course, please contact Robert Kafalenos.

In-person course: Addressing Climate Resilience in Highway Project Development and Preliminary Design (NHI 142085)

National Highway Institute (NHI) Resilience Virtual Training Courses

The National Highway Institute (NHI) recently released four one-hour web-based courses focused on resilience to climate change and extreme weather events. The four courses provide an introduction to past and expected future environmental conditions, future sea levels, climate datasets and modeling tools for temperature and precipitation change, system level vulnerability assessment, and methods for conducting project-level resilience assessments. The target audience includes engineering, project planning and environmental staff; the series is also relevant to regional planners, asset managers, and others seeking to integrate climate change considerations into their practices.

- FHWA-NHI-142081 Understanding Past, Current and Future Climate Conditions
- FHWA-NHI-142082 Introduction to Temperature and Precipitation Projections
- FHWA-NHI-142083 Systems Level Vulnerability Assessments
- FHWA-NHI-142084 Adaptation Analysis for Project Decision Making

FHWA Resource Center Environment, Air Quality & Realty Team Training Activities

FHWA's Resource Center Environment, Air Quality & Realty Team is available to offer EPA's Motor Vehicle Emission Simulator MOVES and other trainings. Please contact Mike Roberts, for additional information or to discuss scheduling a training.

Training Available for PM Hot-spot Analysis

The FHWA Resource Center has developed a training course to cover the PM hot-spot requirement under the transportation conformity rule. This three-day course provides detailed, hands-on instruction on how to complete a quantitative PM hot-spot analysis in accordance with EPA's guidance. The 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. The course includes class discussion and numerous hands-on exercises, including a hypothetical project that will be carried through the course as an example of a quantitative PM hot-spot analysis. Contact Chris Dresser if you have questions related to this training course.

FHWA Web-Based Transportation Conformity Training

Several web-based transportation conformity training opportunities are available on-demand from FHWA's conformity training website (under "Web-based Training"). This page includes a new webinar recording for “Introduction to MOVES3 for Non-Modelers.” 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.

FHWA CMAQ 101 Training

FHWA posted a 22-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. For more information about the CMAQ program, please contact Mark Glaze.

FHWA NEPA Air Quality Analysis for Highway Projects

The FHWA Resource Center Environment, Air Quality & Realty Team periodically conducts a series of training sessions on National Environmental Policy Act (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. If you are interested in this training, please contact George Noel.

FHWA Web-Based TNM Training

FHWA has created a Traffic Noise Model (TNM) Playlist on its YouTube Channel. These short-format videos demonstrate how to install TNM, complete basic tasks in the software, and provide details on specific features. Additional videos will be added throughout the year. Additional TNM Training materials are available on the FWHA Noise Training Website. For technical assistance with TNM please contact TNMHelp@dot.gov.

NHI No Cost Highway Traffic and Construction Noise Course

FHWA’s Planning, Environment, and Realty office and the National Highway Institute (NHI), in cooperation with the Resource Center and Division Offices, have updated and launched a web-based Traffic Noise Training Course. This on-demand, web-based training was a previously multi-day, instructor-led course. This course is now available on the NHI website at no cost and provides a comprehensive overview of all aspects of the highway traffic noise program. The courses are available on the NHI website by searching for “highway noise” and locating course codes 142086 – 142094.

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

Past issues of the Air Quality and Sustainability Highlights are available on FHWA's Air Quality website and Sustainability website

FHWA-HEP-23-009