

# Conformity Transition to MOVES2010



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# MOVES2010

## Notice of Availability

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- The Clean Air Act (CAA) requires EPA to regularly update its mobile source emissions models
- March 2, 2010 – EPA official release of the MOVES2010 Motor Vehicle Emissions Model for regional emissions inventories in SIPs and regional transportation conformity analyses (75 FR 9411-9414)
- MOVES 2010 Officially replaces MOBILE6.2 for estimating on-road mobile source emissions

# When Should MOVES2010 Be Used for SIP and Transportation Conformity Analyses?

- EPA believes MOVES2010 should be used in SIP development as expeditiously as possible
- Notice of Availability establishes a two-year grace period before MOVES2010 emission model is required to be used in new regional emissions analyses for transportation conformity determinations
  - Circumstances when grace period could be shorter than 2 years?
- MOVES2010 not approved for project-level transportation conformity hot-spot analyses at this time

# MOVES2010 vs. MOBILE6.2

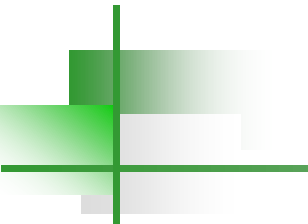
- EPA performed comparison of MOVES2010 emissions to MOBILE6.2 emissions using approximate local data for several different urban counties each with varying inputs such as fleet age, fuel specs and other input factors.

## RESULTS

- *For volatile organic compounds (VOCs):*
  - MOVES2010 Emissions are Lower than MOBILE6.2
- *For oxides of nitrogen (NO<sub>x</sub>):*
  - MOVES2010 Emissions are Higher than MOBILE6.2
- *For PM<sub>2.5</sub>:*
  - MOVES2010 Emissions are Higher than MOBILE 6.2

# How will MOVES2010 Impact Your Future Transportation Plan & TIP Conformity?

- **STEP 1: Examine MOBILE6 based Motor Vehicle Emissions Budgets (MVEBs)**
  - **DURING** the conformity grace period, areas should examine current MOBILE based budgets through the interagency consultation group process to identify impacts of modeling conformity with MOVES2010.
- **STEP 2: Determine the Need for SIP or Transportation Plan/TIP Revisions**
  - **DURING** the conformity grace period, areas should consider whether the SIP and budgets should be revised with MOVES2010 or if transportation plans and TIPs should be revised.



# Troubleshooting Options for MOVES2010 Conformity

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- Establish new MOVES2010 based MVEBs
- Add “Safety Margin” emissions to MVEBs
- Examine transportation projects in TIPs and transportation plans

# Establish New MOVES2010 MVEBs

- **What do states need to submit to show SIP continues to meet applicable requirement?**
  - SIP revisions based on MOVES must continue to demonstrate that applicable requirements are being met (ie. RFP, attainment or maintenance)
  - Level of effort depends on how MOVES affects motor vehicle emissions & whether or not non-motor vehicle inventories require updating

# Establish New MOVES2010 MVEBs

- **Use of Latest Planning Assumptions**
  - Required by CAA section 172(c) and EPA's SIP regulation at 40 CFR 51.112(a)
  - Latest planning assumptions can include VMT, fleet mix, speeds, etc.
  - States must consider growth and control strategy assumptions for non-motor vehicle sources in SIP

\*\* EPA & DOT joint "Guidance for the Use of Latest Planning Assumptions in Transportation Conformity,

<http://www.epa.gov/otaq/stateresources/transconf/policy/420b08901.pdf>

# Establish New MOVES2010 MVEBs

- Areas can revise on-road budgets and motor vehicle emissions inventories using MOVES without revising other source categories IF:

The SIP continues to meet applicable requirements when previous motor vehicle emissions inventories are replaced

**AND**

The state can document that growth and control strategy assumptions for other sources continue to be valid

# Safety Margin

- A **Safety Margin** is the amount by which the total projected emissions from all sources of a given pollutant are less than the total emissions that would satisfy the applicable requirements for reasonable further progress, attainment, or maintenance.
- States will need to remodel the on-road mobile inventory with MOVES to assess whether or not excess emissions exist with the updated model prior to allocating them to the MVEBs.

# Safety Margin: Example

THE 2016 MVEBs FOR THE PORTLAND 8-HOUR OZONE NONATTAINMENT AREA (57 TOWNS)  
 [Emissions expressed in tons per summer weekday (tpswd)]

	2005 VOC	2005 NO <sub>x</sub>	2016 VOC	2016 O <sub>x</sub>
Point .....	3.669	8.210	4.627	10.118
Area .....	33.433	5.207	38.118	5.596
Mobile:				
Nonroad .....	17.401	10.556	13.146	5.545
Locomotives .....	0.015	0.423	0.013	0.342
Onroad .....	22.476	46.776	11.032	16.098
Total Inventory .....	76.994	71.172	66.936	37.699
Total Safety Margin .....	.....	.....	10.058	33.473
MVEB:				
Onroad .....	22.476	46.776	11.032	16.098
Plus Safety Margin applied to MVEB .....	.....	.....	5.627	16.739
Total MVEB .....	.....	.....	16.659	32.837
Safety Margin Remaining .....	.....	.....	4.431	16.734

# Ways to Expedite MOVES2010 MVEBs

- Early coordination with the EPA Regional Office and interagency consultation partners
- Parallel processing of SIP/MVEBs in SIP and adequacy processes
- EPA interim approvals of MOBILE6-based MVEBs (more later)

# EPA's Adequacy Process

- State submits a control strategy SIP to EPA with a motor vehicle emission budget.
- EPA notifies public of submittal by posting a notice on EPA's Office of Transportation and Air Quality website <http://www.epa.gov/otaq/stateresources/transconf/currrips.htm>, as well as notify interested parties who had previously identified their interest to EPA's Regional Office.
- A 30-day comment period for submission of public comment to EPA.
- Re-start of the 30 day comment period if there is a request within 15-days of the posting (only if an electronic copy of the SIP is not available).

## EPA's Adequacy Process (cont.)

- At close of comment period, EPA will issue its adequacy finding & response to comments by posting on EPA's Office of Transportation and Air Quality website <http://www.epa.gov/otaq/stateresources/transconf/pastsips.htm>
- EPA will announce the adequacy finding in the Federal Register (effective 15 days after publication).

# Removal of MVEB's Adequacy vs. Approval

- Adequate MVEBs can be replaced by another adequate MVEB
- A SIP-approved MVEB can only be modified or replaced by an approved MVEB

## Exception

- An approved budget can be replaced by an adequate budget if EPA's approval of the initial budget specifies that the budgets being approved may be replaced in the future by new adequate budgets (40 CFR 93.118(e)(1))
  - Option for transition from MOBILE6 to MOVES2010

# Examine TIPs and Transportation Plans

- State and local transportation planners can examine their transportation plans and TIPs to identify potential changes that can result in emission reductions for a certain budget year.
  - Project mix and project timing
  - Emission reduction measures

Examples: HOV lanes, transit investments, signal timing, on-road retrofit projects, repowering or scrapping old trucks, supporting idling reduction at truck stops, using cleaner fuels, etc.

# Useful Web Sites

- The Green Book Nonattainment Areas for Criteria Pollutants:  
<https://epa.gov/oar/oaqps/greenbk/>
- State Implementation Plan Status and Information:  
<http://www.epa.gov/air/urbanair/sipstatus/>
- Online State Implementation Plan Processing Manual:  
<http://icode.pes.com/sipman/>
- EPA's Office of Transportation and Air Quality Conformity website:  
<http://www.epa.gov/otaq.stateresources/transconf/index.htm>



# Contact Information

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