



## **MEMORANDUM**

**TO:** Transportation Planning Board  
**FROM:** Jane Posey, TPB Transportation Engineer  
**SUBJECT:** Updated Motor Vehicle Emissions Budgets (MVEBs)  
**DATE:** October 12, 2023

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The Metropolitan Washington Air Quality Committee (MWAQC) approved new Motor Vehicle Emissions Budgets (MVEBs) in an update to the region's 2008 Ozone Maintenance State Implementation Plan (SIP). The updated MVEBs will be submitted to EPA for approval and, after approval, will be used in the upcoming air quality conformity analysis of Visualize 2050.

### **BACKGROUND**

On January 7, 2021, the U.S. Environmental Protection Agency (EPA) officially released a new version of their Motor Vehicle Emissions Simulator model, MOVES3, and required its use in all State Implementation Plan (SIP) development and transportation conformity analyses by January 2023. National Capital Region Transportation Planning Board (TPB) staff completed sensitivity test runs which showed that, using the same inputs, MOVES3 resulted in significantly higher emissions estimates than did the previous version, MOVES2014b. TPB staff shared these results with the Metropolitan Washington Air Quality Committee Technical Advisory Committee (MWAQC TAC) in September 2022, and informed the committee that, with the change in MOVES models, the region would find it challenging to remain below the current Motor Vehicle Emissions Budgets (MVEBs), which were established in the 2008 ozone maintenance plan. The MWAQC TAC, including representatives of the state air agencies, agreed to update the MVEBs in the 2008 ozone maintenance plan.

### **NEW MVEBS**

MVEBs provide an upper limit on the amount of allowable mobile source emissions that can be generated by the region's long-range transportation plan, which are estimated via MOVES, as part of an air quality conformity analysis. In order to have similar input assumptions used when developing the MVEBs to those used in the air quality conformity analysis, TPB staff worked with the MWAQC TAC to update the region's MVEBs. The updated MVEBs are shown in Table 1 on page 2. MWAQC approved these at its September meeting and the updated MVEBs will be submitted to EPA for approval and, after approved, will be used in the upcoming air quality conformity analysis of Visualize 2050, the region's long-range transportation plan.

**Table 1: Revised Onroad Motor Vehicle Emissions Budgets based on MOVES3.0.4<sup>1</sup>**

<b>Year</b>	<b>VOC Onroad Emissions (tpd)</b>	<b>NOx Onroad Emissions (tpd)</b>
<b>2014 Attainment Year</b>	<b>61.25</b>	<b>136.84</b>
2025 Predicted Emissions without Safety Margin	27.92	46.52
2025 Safety Margin	5.58	9.30
<b>2025 Interim Budget with Safety Margin</b>	<b>33.50</b>	<b>55.82</b>
2030 Predicted Emissions without Safety Margin	21.75	34.26
2030 Safety Margin	4.35	6.85
<b>2030 Final Budget with Safety Margin</b>	<b>26.10</b>	<b>41.11</b>

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<sup>1</sup> State Implementation Plan Revision: Motor Vehicle Emission Budget Revisions Based on the MOVES3 Model Washington DC-MD-VA 2008 Ozone NAAQS Maintenance Plan. Prepared by: Metropolitan Washington Council of Governments for the District Department of Energy and Environment Maryland Department of the Environment Virginia Department of Environmental Quality on behalf of the Metropolitan Washington Air Quality Committee. September 27, 2023. <https://www.mwcog.org/documents/2023/09/27/washington-dc-md-va-2008-ozone-naaqs-maintenance-plan-update-air-quality-air-quality-conformity-ozone/>