

**DRAFT**

January 8, 2016

Brianne Nadeau  
Chair  
Metropolitan Washington Air Quality Committee  
777 North Capitol Street, NE, Suite 300  
Washington, DC 20002

Dear Chair Nadeau:

I am writing to provide you with the updated inventory of the motor vehicle emissions estimates and the TPB's recommendations for revising the motor vehicle emissions budgets (MVEBs or mobile budgets) for PM2.5 Direct and PM2.5 precursor NOx in the region's PM2.5 Maintenance Plan. The TPB staff has developed these inventories working with MWAQC and state air agency staffs. The TPB understands that the MWAQC is assisting the state air agencies with a revision of the 2013 PM2.5 Maintenance Plan that was previously approved by the US EPA. These emissions inventories were developed at the request of MWAQC staff and are consistent with the TPB's approved FY 2016 Unified Planning Work Program. The attached memorandum, from TPB staff, provides the detailed inventories together with the inputs, assumptions, and methods used in developing the emissions inventories.

The TPB acknowledges that the current (2013) PM2.5 Maintenance Plan contains emissions budgets for PM2.5 Direct and PM2.5 precursor NOx that the TPB has been using for regional air quality conformity analysis since 2013. At the time of the development of the original (2013) PM2.5 Maintenance Plan, the Environmental and Transportation agencies of Maryland, Virginia, and the District of Columbia agreed to update the PM2.5 mobile budgets in 2015, and submit them as a revision to the 2013 PM2.5 Maintenance Plan (as included in Appendix D of the Maintenance Plan). TPB staff has developed the attached inventories in accordance with this agreement and is now providing them to MWAQC for use in the development of updated mobile budgets and revisions to the PM2.5 Maintenance Plan document. I understand that the MWAQC Technical Advisory Committee is currently developing the draft revised Plan document for MWAQC's approval in February 2016 for use in a public comment period and public hearing.

The TPB understands that the PM2.5 Maintenance Plan establishes mobile emissions budgets for the attainment year of 2007, interim year of 2017, and out year of 2025. Once mobile budgets are submitted and found adequate by EPA, the TPB is required to use them to demonstrate conformity of the region's Constrained Long Range Plan (CLRP) and Transportation Improvement Program (TIP). This means that in order for transit and highway improvements supported by the region to move forward, the TPB will be required to show that projected motor vehicle emissions for 2007 through 2016 are less than or equal to the 2007 mobile budgets; emissions for 2017 through 2024 are less than or equal to the 2017 mobile budgets; and emissions for 2025 through 2040 are less than or equal to the 2025 mobile budgets.

The development of the 2013 PM2.5 Maintenance Plan mobile budgets was a lengthy process, involving the formation of a Mobile Budget Task Force, which included representatives from state and local transportation and air agencies. In developing the future year inventories for the 2013 PM2.5 Maintenance Plan, the TPB noted that while motor vehicle emissions are projected to decline much faster from the 2007 levels than from other emission sources (non-road, point and area), there were significant uncertainties in these 2017 and 2025 projections due to potential changes in the technical inputs and the models used to calculate the emissions amounts. The technical inputs include the age

and composition of the vehicle fleet, the travel demand model, and EPA's emissions estimation model. In order to address technical uncertainties due to changes in these aspects of regional transportation plans, the TPB at that time recommended the incorporation of safety margins into the out-year mobile emissions budgets for 2017 and 2025. The use of safety margins is common practice for maintenance plans around the country, and is explicitly provided for in the US EPA Conformity Regulations.

The TPB recommended levels of safety margins were based in part on VIN data sensitivity tests run in 2012, which were designed to assess the potential impact of changes in the mix and age of the region's vehicle fleet. They were also based on TPB's previous experience with changes in EPA's mandated emissions estimating procedures, which had typically resulted in significantly higher estimates from the same set of local inputs. The sensitivity tests and recommended safety margin levels are documented in a June 1, 2012 letter from Ron Kirby, then director of COG's Transportation Planning Department, to the MWAQC chair. MWAQC and the state air agencies agreed with the TPB recommendation, and developed the 2013 Maintenance Plan with a 20 percent safety margin for both PM2.5 Direct and PM2.5 precursor NOx in 2017 and 2025.

Consistent with the 2013 Maintenance Plan, and as provided for in the US EPA Conformity Regulations, the **TPB recommends that the attached mobile emissions inventories be used to revise the 2013 PM2.5 Maintenance Plan, and further, that the motor vehicle emissions budgets for PM2.5 Direct and PM2.5 precursor NOx in 2017 and 2025 include the same 20 percent safety margin** to address inherent uncertainties attributable to changes to the technical inputs and travel/emissions modeling refinements over time. The significant declines projected in both PM2.5 Direct and PM2.5 precursor NOx from the mobile sector, together with other reductions over the 2007 through 2025 period of the maintenance plan, indicate that these safety margins can be included in the Plan while still ensuring the region's maintenance of the National Ambient Air Quality Standards (NAAQS) for PM2.5.

TPB staff would be pleased to provide any technical information or answer any questions that MWAQC members may have concerning these recommendations. The TPB is pleased that the region attained the 1997 NAAQS for PM2.5 in 2007, and has not only maintained this standard, but has further significantly reduced PM2.5 emissions from the mobile sector during this period, and is forecast to do so into the future.

Sincerely,

Timothy Lovain  
Chair  
Transportation Planning Board

Attachment: