U.S. Department
of Transportation

Federal Transit Administration
Region III
1760 Market Street, Suite 500
Philadelphia, PA 19103
215-656-7100
215-656-7260 (fax)

Federal Highway Administration
DC Division
1200 New Jersey Avenue, SE (E64-455)
Washington, DC 20590
202-493-7020
202-493-7040 (fax)

DEC 13 2018

The Honorable Charles Allen, Chairman
National Capital Region Transportation Planning Board
c/o, Mr. Kanti Srikanth, Director Department of Transportation Planning
Metropolitan Washington Council of Governments
777 North Capital Street, NW, Suite 300
Washington, D.C. 20002-4201

Re: Air Quality Conformity Determination for Visualize 2045 Long-Range Transportation Plan and The FY 2019-2024 Transportation Improvement Program

Dear Chairman Allen:

The 1990 Amendments to the Clean Air Act require transportation air quality conformity determinations for Metropolitan Transportation Plans, Transportation Improvement Programs (TIP), sections of a State Transportation Improvement Program (STIP) covering rural nonattainment/maintenance areas, and projects in areas that are designated as air quality nonattainment and maintenance areas. Section 176 (d) of the Clean Air Act establishes priority requirements for programs supported by the Federal government that target nonattainment or maintenance areas to provide for timely implementation of eligible portions of air quality plans.

On December 12, 2018, in an e-mail to the Federal Highway Administration's (FHWA) District of Columbia Division regarding the review of the 2015 8-Hour Ozone National Ambient Air Quality Standard (NAAQS) Conformity Determination for the Visualize 2045 Long Range Transportation Plan and FY 2019-2024 TIP, the Environmental Protection Agency (EPA) included technical documentation that supports the conformity finding of the Metropolitan Washington Region. The Federal Transit Administration (FTA) and FHWA coordinated the transportation air quality conformity determination submittal with the EPA and are jointly making this air quality conformity determination.

FTA and FHWA find the metropolitan transportation planning process to be continuing, cooperative, and comprehensive among the TPB, the Washington Metropolitan Area Transit Authority (WMATA), the states of Maryland and Virginia, and the District of Columbia in accordance with the requirements of 23 USC 134 and Section 5303 of the Metropolitan Transportation Planning Program (49 USC).

Based on our transportation planning regulatory requirements, our day-to-day involvement, and extensive review of technical analysis reports, and in accordance with the provisions of Section

134(h)(2)(B), Title 23 USC, FTA and FHWA find the financial information needed to support our fiscal constraint determination is complete.

Any questions concerning this determination should be directed to Ms. Sandra Jackson, Community Planner of the FHWA District of Columbia Division, at (202) 493-7031 or Ryan Long, Community Planner of the FTA Region 3 Office, at (215) 656-7051.

Sincerely,

Terry Garcia Crews
Regional Administrator
Federal Transit Administration

Joseph C. Lawson
DC Division Administrator
Federal Highway Administration

Enclosure: EPA Technical Support Documentation

cc: Kwame Arhin, FHWA, MD
Ivan Rucker, FHWA, VA
Daniel Koenig, FTA
Ed Sundra, FHWA, VA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

DEC 06 2018

Mr. Joseph C. Lawson
Division Administrator
Federal Highway Administration
District of Columbia Division
1200 New Jersey Avenue, SE (E64-455)
Washington, D.C. 20006-1103

Dear Mr. Lawson:

The United States Environmental Protection Agency (EPA), Region III has reviewed the 2015 8-hour ozone national ambient air quality standard (NAAQS) conformity determination for the Visualize 2045 Long Range Transportation Plan (LRTP) and the Fiscal Year (FY) 2019-2024 Transportation Improvement Program (TIP) for the Metropolitan Washington Region as adopted by the National Capital Region Transportation Planning Board (TPB) and submitted to EPA by the Federal Highway Administration (FHWA) on October 31, 2018. EPA has reviewed the conformity determinations in accordance with the procedures and criteria of the Transportation Conformity Rule contained in 40 CFR part 93.

EPA's review of the conformity determination indicates that the determination meets the requirements of the Clean Air Act and the applicable regulations promulgated under 40 CFR part 93. Enclosed, please find EPA's detailed evaluation titled "Technical Support Document for the Review of the 2015 8-Hour Ozone National Ambient Air Quality Standard (NAAQS) Conformity Determination for the Visualize 2045 Long Range Transportation Plan (LRTP) and the Fiscal Year (FY) 2019-2024 Transportation Improvement Program (TIP) for the Metropolitan Washington Region." It should be noted that in the technical support document, EPA is deferring to the FHWA on the question of whether the Plan and TIP are fiscally constrained. EPA's concurs on the overall conformity determination based on FHWA determination that the Plan and TIP are fiscally constrained.

Please feel free to call Ms. Susan I. Spielberger, Associate Director, Office of Air Program Planning at (215) 814-2180 or Mr. Gregory Becoat, at (215) 814-2036 to discuss this review.

Sincerely,

Cristina Fernandez, Director
Air Protection Division

Enclosure

cc: Kwame Arhin (FHWA, MD)
Sandra Jackson (FHWA, DC)
Ed Sundra, (FHWA, VA)
Daniel Koenig (FTA)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103

DATE: 12/6/18

SUBJECT: Technical Support Document for the Review of the 2015 8-Hour Ozone National Ambient Air Quality Standard (NAAQS) Conformity Determination for the Visualize 2045 Long Range Transportation Plan (LRTP) and the Fiscal Year (FY) 2019-2024 Transportation Improvement Program (TIP) for the Metropolitan Washington Region

FROM: Gregory Becoat
Office of Air Program Planning (3AP30)

TO: Administrative Record of the Environmental Protection Agency (EPA) Review of the 2015 8-Hour Ozone National Ambient Air Quality Standard (NAAQS) Conformity Determination for the Visualize 2045 Long Range Transportation Plan (LRTP) and the Fiscal Year (FY) 2019-2024 Transportation Improvement Program (TIP) for the Metropolitan Washington Region

THRU: Susan I. Spielberger, Associate Director
Office of Air Program Planning (3AP30)

I. Background

The purpose of this document is to review the 2015 8-hour ozone NAAQS Conformity Determination of the FY 2019-2024 TIP and Visualize 2045 LRTP as prepared by the Metropolitan Washington Council of Governments, National Capital Region Transportation Planning Board (TPB). The purpose is to determine whether or not the conformity determination meets the requirements of the Clean Air Act (CAA) and the applicable regulations promulgated thereunder at 40 CFR part 93. On October 31, 2018, EPA Region III received the Metropolitan Washington Region FY 2019-2024 TIP and Visualize 2045 LRTP conformity determination under a cover letter dated October 25, 2018, from the District of Columbia Division of the United States Federal Highway Administration (FHWA).

The amendments to the FY 2019-2024 TIP and Visualize 2045 LRTP were completed in order to demonstrate that mobile source emissions for each analysis year of the long range plan, adhere to all nitrogen oxides (NO_x) and volatile organic compounds (VOCs) emissions budgets. The conformity determination meets the requirements associated with the Metropolitan Washington

Region's new non-attainment designations under EPA's 2015 8-hour ozone NAAQS. The conformity determination was reviewed in accordance with the procedures and criteria of the Transportation Conformity Rule contained in 40 CFR part 93, sections 93.106, 93.108, 93.110, 93.111, 93.112, 93.113(b) and (c), and 93.118.

Transportation conformity is required under section 176(c) of the CAA to ensure that federally supported highway and transit projects, and other activities are consistent with (conform to) the purpose of the state implementation plan (SIP). The CAA requires federal actions in nonattainment and maintenance areas to "conform to" the goals of SIP. This means that such actions will not cause or contribute to violations of a NAAQS; worsen the severity of an existing violation; or delay timely attainment of any NAAQS or any interim milestone. Actions involving FHWA or Federal Transit Administration (FTA) funding or approval are subject to the Transportation Conformity Rule (40 CFR part 93, subpart A). Under this rule, metropolitan planning organizations (MPOs) in nonattainment and maintenance areas coordinate with state air quality and transportation agencies, EPA, FHWA, and FTA to demonstrate that their metropolitan transportation plans and TIPs conform to applicable SIPs. This is typically determined by showing that estimated emissions from existing and planned highway and transit systems are less than or equal to the motor vehicle emission budgets (MVEBs) contained in a SIP.

EPA designated the Washington, DC-MD-VA Area as a marginal nonattainment area for the 2015 8-hour ozone NAAQS on June 4, 2018 (83 FR 25776) with an effective date of August 3, 2018. The Washington Area currently has MVEBs for the 2008 8-hour ozone NAAQS. On August 8, 2018, EPA found that the 2014, 2025, and 2030 MVEBs for the ozone precursors NOx and VOCs contained in the maintenance plan for the Washington, DC–MD–VA 2008 8-hour ozone NAAQS nonattainment area are adequate for conformity purposes. As a result of EPA's finding, the Metropolitan Washington Region must use the NOx and VOC MVEBs from the submitted maintenance plan in future conformity determinations. The maintenance plan includes two sets of NOx and VOC MVEBs, shown in Table 1 and Table 2 below. The MVEBs shown in Table 1 will be the applicable motor vehicle emissions budgets for this transportation conformity determination. The MVEBs shown in Table 2 add a twenty percent (20%) transportation buffer to the mobile emissions inventory projections for NOx and VOC in 2025 and 2030. The MVEBs shown in Table 2 that include a transportation buffer will be used only as needed in situations where the conformity analysis must be based on different data, models, or planning assumptions, including, but not limited to, updates to demographic, land use, or project-related assumptions, than were used to create the first set of MVEBs in the maintenance plan (Table 1). The technical analyses used to demonstrate compliance with the MVEBs and the need, if any, to use transportation buffers will be fully documented in the conformity analysis and follow the Transportation Planning Board's (TPB) interagency consultation procedures.

Table 1: Tier 1 Mobile Budgets for the Metropolitan Washington Region.[1]

Year	NOx On-Road Emissions tons per day (tpd)	VOC On-Road Emissions (tpd)
Attainment Year 2014 Emissions & Budget	136.8	61.3
Intermediate Year 2025 Emission & Budget	40.7	33.2
Final Year 2030 Emission & Budget	27.4	24.1

Table 2: Tier 2 Mobile Budgets for the Metropolitan Washington Region.[1]

Year	NOx On-Road Emissions (tpd)	VOC On-Road Emissions (tpd)
Attainment Year 2014 Emissions & Budget	**136.8**	**61.3**
Predicted 2025 Emission	40.7	33.2
Transportation Buffer	8.1	6.6
Intermediate Year 2025 Budget	**48.8**	**39.8**
Predicted 2030 Emission	27.4	24.1
Transportation Buffer	5.5	4.8
Final Year 2030 Budget	**32.9**	**28.9**

II. Review of the MOVES2014a Modeling Completed for the Air Quality Conformity Determinations

To run the MOVES2014a model, a run specification (hereafter referred to as "RunSpec") must be created so that appropriate parameters are selected for the modeling run. The RunSpecs were reviewed against the following EPA guidance document: "MOVES2014 and 2014a Technical Guidance: Using MOVES to Prepare Emissions Inventories for State Implementation Plans and Transportation Conformity" (EPA's MOVES2014 guidance). This document provides guidance on the use of the MOVES model to develop inventories for SIPs as well as analysis of emissions for transportation conformity determinations.

TPM submitted emissions analyses for the years 2019, 2021, 2025, 2030, 2040, and 2045. MOVES2014a was utilized to produce emissions for each of the years and NAAQS analyzed. Table 1 presents the parameters that were reviewed for the RunSpecs and each parameter's respective component in the submittal. The RunSpec parameters only differ in the selection of the year for each NAAQS; therefore, Table 1 presents the selections made for all years for the NAAQS. The RunSpecs for the years 2019, 2021, 2025, 2030, 2040, and 2045 were reviewed and found to have followed applicable EPA guidance provided in EPA's MOVES2014 guidance.

[1] The MVEBS with transportation buffers will be used only as needed in situations where the conformity analysis must be based on different data, models, or planning assumptions, including but not limited to updates to demographic, land use, or project-related assumptions, than were used to create the first set of MVEBs in the maintenance plan.

Table 3. RunSpec Reviews for the Ozone NAAQS for Years 2019, 2021, 2025, 2030, 2040, and 2045 for Metropolitan Washington Region.	
Domain/Scale	County scale was selected. This is acceptable for the regional emissions analyses.
Calculation Type	Inventory was selected which is acceptable for a regional emissions analysis.
Time Aggregation Level	Hour was selected. Selection of hourly time aggregation level is necessary for regional emissions analyses.
Calendar Year Of Evaluation	The appropriate calendar year was selected for each RunSpec. MOVES2014a can model years 1990 and 1999-2050.
Month of Evaluation	July was selected to represent a typical summer month.
Type of Day of Evaluation	Weekdays were selected.
Hours of Evaluation	Starting and ending hours create a whole day (from 0-24 hours).
Geographic Bounds	The appropriate county was selected for each run.
Vehicles/Equipment: On-Road Vehicle Equipment	Appropriate combinations of fuels and source use types were made.
Road Type	Selection included all necessary road types.
Pollutants and Processes	NO_x, non-methane hydrocarbons, total gaseous hydrocarbons, $PM_{2.5}$, and VOCs were selected.
On-Road Retrofits	N/A
ROP	N/A
Output Database/Unit Selection	Mass units selected to be grams; energy units selected to be million British Thermal Units (BTU); distance units selected to be miles.
Output Emission Detail in Emission Rate Calculations	Emission detail was selected via user preference which is acceptable because user preference does not affect the modeling outcome.
Advanced Performance Features	N/A

III. EPA's Evaluation

For MVEBs to be approvable, they must meet, at a minimum, EPA's adequacy criteria found at 40 CFR 93.118(e)(4). EPA's adequacy criteria are: (1) the submitted control strategy implementation plan was endorsed by the Governor or designee and was subject to a state public hearing; (2) consultation among federal, state, and local agencies occurred; full implementation plan documentation was provided to EPA; and EPA's stated concerns, if any, were addressed before the control strategy implementation plan was submitted; (3) the MVEBs are clearly identified and precisely quantified; (4) the MVEBs, when considered together with all other emissions sources, are consistent with applicable requirements for maintenance; (5) the MVEBs are consistent with and clearly related to the emissions inventory and the control measures in the submitted control strategy implementation plan; and (6) revisions to previously submitted maintenance plans explain

and document any changes to previously submitted budgets and control measures, impacts on point and area source emissions, any changes to established safety margins, and reasons for the changes (including the basis for any changes related to emission factors or estimates of vehicle miles traveled).

For all areas where transportation conformity applies, Table 1 – Conformity Criteria, found in 40 CFR 93.109(b), lists the conformity criteria that apply for transportation plans, TIPs, and projects in 40 CFR 93.110 through 93.119. A transportation plan or TIP conformity determination must include a regional emissions analysis that meets the requirements of 40 CFR 93.122. This regional emissions analysis must use the latest planning assumptions (40 CFR 93.110); use the latest emissions model (40 CFR 93.111); and pass the appropriate conformity test – the budget test and/or the interim emissions test(s) (40 CFR 93.118 and 93.119). In addition, other requirements must be met and documented in the transportation plan and TIP conformity determination including interagency consultation and public participation (40 CFR 93.112) and timely implementation of Transportation Control Measures (TCMs) in approved SIPs (40 CFR 93.113). Table 4 below demonstrates how the document prepared by TPB satisfies the requirements for conformity determinations.

Table 4. EPA's Evaluation of the Conformity Determination of the Plan Submitted by the District of Columbia Division Office of the Federal Highway Administration on Behalf of TPB to EPA on October 31, 2018.

CRITERIA APPLICABLE TO PLAN AND/OR TIP			
SECTION OF 40 CFR PART 93	CRITERIA	Y/N	COMMENTS
93.106(a)(1)	Are the horizon years correct?	Y	The years chosen for the 2008 8-hour ozone conformity analyses are appropriate horizon years based on 40 CFR 93.118 (Criteria and procedures: Motor vehicle emissions budget).
93.106(a)(2)(i)	Does the plan quantify and document the demographic and employment factors influencing transportation demand?	Y	The conformity determination summarized: population, employment, and household data for the Metropolitan Washington, DC area which was utilized in this analysis. These forecasts were based upon the Cooperative Forecasts Round 9.1.
93.106(a)(2)(ii)	Is the highway and transit system adequately described in terms of the regionally significant additions or modifications to the existing transportation network which the transportation plan envisions	Y	Appendix B of the Air Quality Conformity Analysis document includes regionally significant additions or modification projects. The project list includes transit, highway, and high occupancy vehicle (HOV)/high occupancy toll (HOT) projects.

	to be operational in the horizon years?		
93.108	Is the transportation plan fiscally constrained?	Y	EPA is deferring to TPB and the State of Maryland, the Commonwealth of Virginia, and the District of Columbia transportation agencies who have determined that the plan is fiscally constrained.
93.110	Is the conformity determination based upon the latest planning assumptions?		
	(a) Is the conformity determination, with respect to all other applicable criteria in 40 CFR §§93.111 - 93.119, based upon the most recent planning assumptions in force at the time of the conformity determination?	Y	(a & b) The latest planning assumptions have been utilized. The latest planning assumptions include the Cooperative Forecasts Round 9.1, which includes forecasts for population and employment data. The latest travel time changes were used in the travel demand model version 2.3.70 or latest.
	(b) Are the assumptions derived from the estimates of current and future population, employment, travel, and congestion most recently developed by the MPO or other designated agency and is the conformity based upon the latest assumptions about current and future background concentrations?		
	(c) Are any changes in the transit operating policies (including fares and service levels) and assumed transit ridership discussed in the determination?		(c) Charges made by each transit provider as well as updated charges were used for future analyses and are located in Appendix B of the conformity document.
	(d) Does the conformity determination include reasonable assumptions about transit service and increases in transit fares and road and bridge tolls over time?		(d) Reasonable assumptions are discussed in Appendix B of the conformity determination document
	(e) Does the conformity determination use the latest		(e) All of the TCMs listed in the 1-hour and 8-hour ozone SIPs for the Metropolitan

	existing information regarding the effectiveness of Transportation Control Measures (TCMs) and other implementation plan measures which have already been implemented? (f) Are key assumptions specified and included in the draft documents and supporting materials used for the interagency and public consultation required by 40 CFR §93.105?		Washington, DC area were implemented. The latest information regarding TCMs and other implementation plan measures effectiveness has been used. (f) Supporting documents are provided in the conformity determination document. This document was available for interagency consultation and public consultation.
93.111	Is the conformity determination based upon the latest emissions model?	Y	This conformity determination used MOVES2014a, which is the latest emissions model.
93.112	Did the MPO make the conformity determination according to the consultation procedures of the conformity rule or the state's conformity SIP?	Y	Consultation procedures were followed in accordance with the TPB consultation procedures. These procedures are based on the procedures of the state conformity SIP. **Interagency Consultation:** The TPB has consulted with all appropriate agencies. This includes the District of Columbia Department of the Environment, Maryland Department of the Environment, Maryland Department of Transportation, Maryland Office of Planning, Virginia Department of Environmental Quality, Virginia Department of Transportation, Federal Highway Administration, EPA, and county

			representatives of the counties of the Metropolitan Washington, DC area. **Public Consultation:** The TPB has provided opportunities for public comment on the Conformity Determination. On September 7, 2018, the TPB released for public comment for 30 days, the draft air conformity analysis for the TIP and CLRP. On October 17, 2018, the TPB responded to comments received during the public comment period and approved the air quality conformity analysis of the Visualize 2045 plan and FY 2019-2024 TIP.
93.113(b) and 93.113(c)	Are TCM's being implemented in a timely manner.	Y	All the TCMs listed in the 1-hour and 8-hour ozone SIPs for the Metropolitan Washington, DC area were implemented. The latest information regarding TCMs and other implementation plan measures effectiveness has been used. Documentation regarding the timely implementation of each project was included as Attachment G of the Conformity Analysis document.
93.118	For areas with SIP Budgets: Does the Transportation Plan and/or TIP meet the required emission reduction test?	Y	On August 8, 2018, EPA declared adequate the mobile emissions budgets for the years 2014, 2025, and 2030 MVEBs for the ozone precursors NOx and VOCs contained in the maintenance plan for the Washington, DC–MD–VA 2008 8-hour ozone NAAQS. Therefore, these mobile budgets are the applicable budgets to be used in this conformity determination for the 2015 8-hour ozone NAAQS and are in tons/day (tpd). 2014 Budgets: 61.3 tpd (VOC) 136.8 tpd (NO_x) — 2019 Analysis: 42.5 tpd (VOC) 72.9 tpd (NO_x) 2014 Budgets: 61.3 tpd (VOC) 136.8 tpd (NO_x) — 2021 Analysis: 38.0 tpd (VOC) 58.6 tpd (NO_x) 2025 Budgets: 39.8 tpd (VOC) 48.8 tpd (NO_x) — 2025 Analysis: 34.2 tpd (VOC) 42.3 tpd (NO_x) 2030 Budgets: 28.9 tpd (VOC) 32.9 tpd (NO_x) — 2030 Analysis: 24.3 tpd (VOC) 27.9 tpd (NO_x)

			2030 Budgets: 28.9 tpd (VOC) 32.9 tpd (NO_x) 2030 Budgets: 28.9 tpd (VOC) 32.9 tpd (NO_x)	2040 Analysis: 18.4 tpd (VOC) 19.3 tpd (NO_x) 2045 Analysis: 18.4 tpd (VOC) 19.5 tpd (NO_x)

IV. CONCLUSION

Pursuant to FHWA's October 31, 2018 request, EPA has reviewed the 2015 8-hour ozone NAAQS conformity determination for the FY 2019-2024 TIP and Visualize 2045 LRTP prepared by the Metropolitan Washington Council of Governments, National Capital Region TPB for the Washington DC-MD-VA Area. EPA has determined that the conformity determination for the 2015 8-hour ozone NAAQS for the Washington DC-MD-VA Area meets the requirements of the CAA and the applicable regulations promulgated at 40 CFR part 93 as long as FHWA determines that the TIP and plan demonstrate fiscal constraint.