APPENDIX A
Scope of Work
Air Quality Conformity Analysis

National Capital Region
Transportation Planning Board

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Transportation Planning Board

May 15, 2024

AIR QUALITY CONFORMITY ANALYSIS: VISUALIZE 2050 & FY 2026-2029 TIP

SCOPE OF WORK

I. INTRODUCTION

The list of projects solicited for the Visualize 2050 National Capital Region Transportation Plan and the FY 2026-2029 Transportation Improvement Program (TIP) is scheduled to be finalized at the May 15, 2024 meeting of the National Capital Region Transportation Planning Board (TPB). This work effort addresses requirements associated with attainment of the ozone National Ambient Air Quality Standards (NAAQS). Volatile organic compounds (VOC) and nitrogen oxides (NOx) are ozone precursor pollutants.

The amended plan must meet air quality conformity regulations: (1) as originally published by the Environmental Protection Agency (EPA) in the November 24, 1993 Federal Register, and (2) as subsequently amended, most recently on March 14, 2012, and (3) as detailed in periodic Federal Highway Administration (FHWA) / Federal Transit Administration (FTA) and EPA guidance. These regulations specify both technical criteria and consultation procedures to follow in performing the assessment.

This scope of work provides a context in which to perform the conformity analyses and presents an outline of the work tasks required to address all regulations currently applicable.

II. FEDERAL REQUIREMENTS

As described in the 1990 Clean Air Act Amendments, conformity is demonstrated if transportation plans and programs:

1. Are consistent with most recent estimates of mobile source emissions budgets
2. Contribute to annual emissions reductions

The federal requirements governing air quality conformity compliance are contained in §93.110 through §93.119 of the Transportation Conformity Regulations (printed April 2012), as follows:

CONFORMITY CRITERIA & PROCEDURES	
All Actions at all times	
§93.110	Latest Planning Assumptions
§93.111	Latest Emissions Model
§93.112	Consultation
§93.113	TCMs
§93.114	Currently conforming Plan and TIP
§93.115	Project from a conforming Plan and TIP
§93.116	CO, PM10 and PM2.5 hot spots
§93.117	PM10 and PM2.5 Control Measures
§93.118 and/or §93.119	Emissions Budget and/or Interim Emissions

§ 93.110 Criteria and procedures: Latest planning assumptions - The conformity determination must be based upon the most recent planning assumptions in force at the time of the conformity determination.

§ 93.111 Criteria and procedures: Latest emissions model - The conformity determination must be based on the latest emission estimation model available.

§ 93.112 Criteria and procedures: Consultation – The conformity must be determined according to the consultation procedures in this subpart and in the applicable implementation plan, and according to the public involvement procedures established in compliance with 23 CFR part 450.

§ 93.113 Criteria and procedures: Timely implementation of TCMs - The transportation plan, TIP, or any FHWA/FTA project which is not from a conforming plan and TIP must provide for the timely implementation of TCMs from the applicable implementation plan.

§93.114 Criteria and procedures: Currently conforming transportation plan and TIP - There must be a currently conforming transportation plan and currently conforming TIP at the time of project approval.

§93.115 Criteria and procedures: Projects from a plan and TIP - The project must come from a conforming plan and program.

§93.116 Criteria and procedures: Localized CO, PM10, and PM2.5 violations (hot spots) -The FHWA/FTA project must not cause or contribute to any new localized CO, PM10, and/or PM2.5 violations or increase the frequency or severity of any existing CO, PM10, and /or PM2.5 violations in CO, PM10, and PM2.5 nonattainment and maintenance areas.

§93.117 Criteria and procedures: Compliance with PM10 and PM2.5 control measures -The FHWA/FTA project must comply with PM10 and PM2.5 control measures in the applicable Implementation Plan.

§93.118 Criteria and procedures: Motor vehicle emissions budget - The transportation plan, TIP, and projects must be consistent with the motor vehicle emissions budget(s).

§93.119 Criteria and procedures: Interim emissions in areas without motor vehicle budgets - The FHWA/FTA project must satisfy the interim emissions test(s).

Assessment Criteria:

Ozone season pollutants will be assessed by comparing the forecast year pollutant levels to the EPA-approved mobile emissions budgets in the 2008 Ozone NAAQS Maintenance Plan. The 2008 Ozone NAAQS Maintenance Plan includes mobile emissions budgets for 2014 (attainment year), 2025 (intermediate year), and 2030 (out year). The 2014 budgets will be used for any analysis year between 2014 and 2024, the 2025 budgets will be used for any analysis year between 2025 and 2029, and the 2030 budgets will be used for any analysis year beyond 2029.

III. POLICY AND TECHNICAL APPROACH

The table below summarizes the key elements of the Policy & Technical Approach:

Pollutants	Ozone Season VOC and NOx
Emissions Model	MOVES4
Conformity Test	Budget Test: Using EPA approved mobile emissions budgets from the 2008 Ozone NAAQS Maintenance Plan
Vehicle Fleet Data	December 2023 vehicle registration data
Geography	8-hour ozone non-attainment area
Network Inputs	Regionally significant projects
Land Activity	Cooperative Forecasts Round 10
HOV/HOT	VA: I-66, I-95, I-395, and I-495 are all HOT3+; all HOV facilities will be HOV2+ through 2050 MD: HOV facility on US 50 will remain HOV2+ through 2050; HOV facility on I-270 will convert from HOV2+ to HOT3+ when additional lanes are added;
Roadway Restrictions	Roadway restrictions, such as truck prohibitions, are reflected in the travel model network using information supplied by the Departments of Transportation
Analysis Years	2025, 2026, 2030, 2040, 2045, and 2050
Modeled Area	6,800 square mile area with 3,722 Transportation Analysis Zones (TAZs)
Travel Demand Model	Gen2/Version 2.4 or latest

IV. CONSULTATION

The TPB adheres to the specifications of the consultation procedures (as outlined in the consultation procedures report adopted by the TPB on May 20, 1998). The TPB will participate in meetings of the Metropolitan Washington Air Quality Committee (MWAQC), its Technical Advisory Committee (MWAQC-TAC), and its Conformity Subcommittee to discuss the Scope of Work, project inputs, and other elements as needed.

V. WORK TASKS

The work tasks associated with the air quality conformity analysis are as follows:

1. Receive project inputs from programming agencies and organize into conformity documentation listings by:
   - Project type, limits, etc.
   - Phasing with respect to forecast years
   - Transit operating parameters, e.g., schedules, service

2. Update Travel Model Base Transit Service to reflect:
   - Service current to December 2023
   - Fares current to May 2024

3. Determine Characteristics of the Motor Vehicle Fleet by Preparing 2023 Vehicle Registration/Vehicle Identification Number (VIN) Data
   - Purchase VIN decoding software
   - Set up and test VIN decoding software
   - Collect and decode VIN data for the District, Maryland, and Virginia

4. Review and Update Land Activity files to reflect Round 10 Cooperative Forecasts:
   - Develop zonal data files
   - Ensure consistent definition of employment throughout the modeled area by applying the "employment definition adjustment factors" to the land activity forecasts.
   - Estimate households by auto ownership, size and household income (done as part of the travel model)
   - Coordinate with agencies outside the MWCOG Cooperative Forecast area, e.g., the Baltimore Metropolitan Council (BMC), the Fredericksburg Area Metropolitan Planning Organization (FAMPO), and the Calvert-St. Mary's Metropolitan Planning Organization (C-SMMPO).
   - Develop trip tables for exogenous/residual travel: 1) through vehicle trips; 2) external-to-internal and internal-to-external vehicle trip ends; 3) taxi, visitor/tourist and school vehicle trips; and 4) airport-passenger auto-driver trips.

5. Prepare forecast-year highway and transit networks including regionally significant projects, as follows:
   - 2025, 2026, 2030, 2040, 2045, and 2050 highway networks
   - 2025, 2026, 2030, 2040, 2045, and 2050 transit network input files
   - Update highway tolls and transit fares as necessary

6. Execute travel demand modeling for years 2025, 2026, 2030, 2040, 2045, and 2050

7. Derive mobile emissions estimates for years 2025, 2026, 2030, 2040, 2045, and 2050 using inputs from the 2008 Ozone NAAQS Maintenance Plan mobile budgets

8. Summarize key inputs and outputs (VMT, mode share, emissions, etc.) of the conformity determination

9. Assess conformity and document results in a report

    - Document methods
    - Draft conformity report
    - Forward to technical and policy committees
    - Make available for public and interagency consultation
    - Receive comments
    - Respond to comments and present to TPB for action
    - Finalize report and forward to FHWA, FTA, and EPA

SCHEDULE:

Timeframe		Activity
	January – February 2024	• Preliminary inputs due December 29 for the LRTP and Air Quality Conformity (AQC) analysis for staff review and coordination. • Staff will review and compile the conformity table showing changes. Staff to send draft table with changes to agencies for review on February 1. Agencies to provide corrections by February 15. • TPB member agencies submit technical corrections to preliminary inputs and updates based on TPB/interagency consultation to produce final inputs for comment period. • Final project inputs for Visualize 2050 and AQC analysis due to TPB staff for inclusion in comment period documentation on February 15. • TPB staff will reconcile draft financial analysis results and produce preliminary financial plan to reflect project submissions.
	March 2024	• March 1 - The TPB Technical Committee will review the draft financial plan; projects proposed for inclusion in the conformity analysis, and the draft AQC scope of work. Public comment period starts March 1 on projects and AQC scope of work. • The TPB will receive a briefing on the draft inputs to the plan/AQC analysis and the draft AQC scope of work and the draft financial plan. • Public comment period runs March 1 through March 30 on inputs to the plan/AQC analysis and AQC scope of work. MWAQC TAC will review this information during its March meeting.
	April 2024	• The TPB will receive a summary of the public comments on the draft inputs to the plan and AQC analysis; agencies sponsoring the projects will have the opportunity to discuss and advise staff on responses. • The TPB will review responses to comments and updates to inputs to the plan and scope of work for the AQC analysis.
	Early 2024	• EPA anticipated to find new Motor Vehicle Emissions Budgets (MVEBs) in the updated 2008 ozone maintenance plan adequate for use in air quality conformity analyses.
	May 2024	• The TPB will be asked to accept the comments and approve the inputs and scope, authorizing staff to begin analysis. • Continue financial analysis: (May 2024-March 2025) final revisions, report production
	May 2024	• TPB staff commence Air Quality Conformity technical analysis after TPB approval
	Winter 2024	• Transportation Improvement Program (TIP) inputs due for the FY 2026-2029 TIP January 26, 2025. • TPB staff complete financial plan: final revisions, report production.

		• TPB staff complete Air Quality Conformity technical analysis and draft report. • TPB staff draft performance analysis for the plan and TIP.
	April 2025	• Public comment period on the plan, TIP and the results of AQC analysis for the updated plan and FY 2026-2029 TIP from April 1 – April 30 • The TPB Technical Committee and MWAQC and MWAQC TAC will review the draft results of AQC analysis for the updated plan and FY 2026-2029 TIP during their meetings. • The TPB will receive a briefing on the draft results of the AQC analysis for the plan and TIP.
	May 2025	• The TPB will receive a summary of the comments received on the analysis, plan and TIP; the agencies sponsoring the projects will have the opportunity to advise staff on responses to comments.
	June 2025	• The TPB will be asked to approve the results of the AQC analysis and adopt the updated plan and the FY 2026-2029 TIP.