

ITEM 8 – Action

May 16, 2018

Visualize 2045 Air Quality Conformity Scope of Work Amendment

Staff Recommendation: Approve changes to the Visualize 2045 Air

Quality Conformity Scope of Work

Issues: None

Background: The board will be asked to amend the Visualize 2045 Air Quality Conformity Scope of Work to respond to two developments that have occurred since the TPB approved the Scope on January 17, 2018. The first update satisfies a requirement related to the 2015 Ozone National Ambient Air Quality Standards (NAAQS), and the second update addresses new financial information related to Washington Metropolitan Area Transit Authority (WMATA) funding.



MEMORANDUM

TO: Transportation Planning Board
FROM: Jane Posey, TPB Transportation Engineer
SUBJECT: Amendments to the Visualize 2045 Air Quality Conformity Scope of Work
DATE: May 16, 2018

The Transportation Planning Board (TPB) will be asked to amend the Visualize 2045 Air Quality Conformity Scope of Work to respond to two developments that have occurred since the TPB approved the Scope on January 17, 2018. The first update satisfies a requirement related to the 2015 Ozone National Ambient Air Quality Standards (NAAQS), and the second update addresses new financial information related to Washington Metropolitan Area Transit Authority (WMATA) funding.

2015 OZONE NAAQS

Earlier this month the Environmental Protection Agency (EPA) announced final non-attainment designations for the 2015 Ozone NAAQS. The Washington DC-MD-VA region was designated “marginal” non-attainment, which is the lowest level of non-attainment. Marginal non-attainment areas have three years to achieve the standard, which means that our region would have an attainment date of 2021. Non-attainment regions are required to conduct a conformity analysis within one year of the effective date of the designations. The conformity analysis of Visualize 2045 will meet the requirement, but with a requirement to analyze the attainment year, TPB staff will have to add 2021 as a forecast year in the Visualize 2045 conformity analysis.

WMATA FUNDING

In March, lawmakers from the District of Columbia, Maryland, and Virginia agreed to jointly provide \$500 million annually for WMATA funding. All three governments have passed legislation to provide dedicated funding sources to support the transit agency. This money will fund WMATA’s capital improvements to ensure the system is in a state of good repair, which will include investments such as the infrastructure and equipment needed to run 8-car trains.

Since 2000, the TPB travel demand model has included a technical adjustment to account for the expectation that future peak period Metrorail ridership in the region’s “core” downtown area will be subject to capacity limitations of the Metrorail system. This so-called “Metrorail transit constraint” was used to account for WMATA’s expressed concern that the Metrorail ridership would exceed peak period capacity in the regional core unless the rail fleet and station infrastructure were expanded to allow for 8-car trains. The recent legislation establishing stable long-term funding will now support WMATA’s plans to implement all 8-car trains during peak periods in the Visualize 2045 Plan. Consequently, TPB staff recommends that the transit constraint be removed from the travel model process.

SCOPE OF WORK AMENDMENT

In order to add the new 2021 analysis year, and to remove the transit constraint, the TPB must amend the Visualize 2045 Air Quality Conformity Scope of Work to reflect these updates. The Scope currently lists a 2020 analysis year, which is included to provide the transit constraint levels for future forecast years. With the removal of the transit constraint, the 2020 analysis year will no longer be necessary, and will be replaced with the 2021 analysis year. This substitution will allow for adherence to the original conformity schedule. The updated Scope, with changes highlighted, is attached.





May 16, 2018

AIR QUALITY CONFORMITY ANALYSIS: VISUALIZE 2045

AMENDED SCOPE OF WORK

I. INTRODUCTION

Projects solicited for the quadrennial update of the region's transportation plan, Visualize 2045, and the FY2019-2024 Transportation Improvement Program (TIP) are scheduled to be finalized at the January 17, 2018 TPB meeting. This work effort addresses requirements associated with attainment of the ozone standard (volatile organic compounds (VOC) and nitrogen oxides (NOx) as 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 FHWA / 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
2. Provide expeditious implementation of TCMs
3. 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 mobile budgets most recently approved or found adequate by the EPA. For the Visualize 2045 conformity assessment there are two possible sets of mobile budgets: 1) the 2009 attainment and 2010 contingency budgets found adequate for use in conformity by EPA in Feb. 2013; or 2) the 2008 Ozone National Ambient Air Quality Standards (NAAQS) Maintenance Plan mobile budgets scheduled to be approved by MWAQC in December and submitted to EPA in early 2018. The budgets found adequate by EPA in 2013 are the most recently approved budgets at the time of the development of this scope of work. However, when the EPA approves or finds adequate the mobile budgets in the 2008 Ozone NAAQS Maintenance Plan, the TPB will immediately be required to use those new budgets. The 2008 Ozone NAAQS Maintenance Plan includes mobile 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	MOVES2014a
Conformity Test	<u>Budget Test</u> : Using mobile budgets most recently approved by EPA. Two possibilities: 1) 2009 attainment and 2010 contingency budgets found adequate for use in conformity by EPA in Feb. 2013; or 2) 2008 Ozone NAAQS Maintenance Plan mobile budgets scheduled to be approved by MWAQC in December and submitted to EPA in early 2018
Vehicle Fleet Data	December 2016 vehicle registration data for all jurisdictions
Geography	8-hour ozone non-attainment area
Network Inputs	Regionally significant projects
Land Activity	Cooperative Forecasts Round 9.1
HOV/HOT	<u>VA</u> : All HOV 2+/HOT 2+ facilities become HOV 3+/HOT 3+ in 2020 and beyond except I-66 inside the Beltway, which will convert to HOT3+ when I-66 outside the Beltway opens <u>MD</u> : All HOV facilities remain HOV2+ through 2045
Transit Constraint	NO Metrorail “capacity constraint” procedures –2020 constrains later years
Analysis Years	2019, 2020, 2021, 2025, 2030, 2040, 2045
Modeled Area	3,722 TAZ System
Travel Demand Model	Version 2.3.70 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 MWAQC, its Technical Advisory Committee, and its Conformity Subcommittee to discuss the Scope of Work, project inputs, and other elements as needed. The TPB will discuss at meetings or forums, as needed, the following milestones:

- Visualize 2045 Technical Inputs Solicitation
- Scope of Work
- Project submissions: documentation and comments
- Conformity analysis: documentation and comments
- Visualize 2045 Performance
- Process: comments and responses

V. WORK TASKS

The work tasks associated with the Visualize 2045 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 Fall 2017
 - Fares current to Fall 2017
3. Prepare 2016 Vehicle Registration Data (VIN data)
 - Coordinate with States to receive raw VIN data
 - Explore updated VIN decoder software options and procure the software that best suits the agency's needs
 - Convert raw VIN data into MOVES input categories/format
4. Review and Update Land Activity files to reflect Round 9.1 Cooperative Forecasts with respect to:
 - Zonal data files
 - Employment Data Census Adjustment
 - Households by auto ownership, size and income
 - Coordination with agencies outside the MWCOG Cooperative Forecast area (BMC, FAMPO, C-SMMPO etc.)
 - Exogenous Travel (external, through trips etc.)

5. Prepare forecast year highway, HOV, and transit networks including regionally significant projects, as follows:
 - 2019, 2020, 2021, 2025, 2030, 2040, and 2045 highway networks
 - 2019, 2020, 2021, 2025, 2030, 2040, and 2045 transit network input files
 - Update highway tolls, as necessary
6. Execute travel demand modeling for years 2019, 2020, 2021, 2025, 2030, 2040, and 2045
7. Derive Mobile Emissions Estimates for years 2019, 2021, 2025, 2030, 2040, and 2045 using inputs from both 2008 Ozone NAAQS attainment SIP mobile budgets and 2008 Ozone NAAQS Maintenance Plan mobile budgets (2 runs per year)
8. Provide emissions reductions estimates for TERMS
9. Summarize key inputs and outputs (VMT, mode share, emissions, etc.) of the conformity determination for use in the Visualize 2045 Performance Analysis
10. Assess conformity and document results in a report
 - Document methods
 - Draft conformity report
 - Forward to technical committees, 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 FOR DEVELOPMENT & ADOPTION OF VISUALIZE 2045

2017	September 20*	TPB is briefed on the draft Solicitation of Technical Inputs document.
	October 18*	TPB releases final Solicitation Document. Transportation agencies begin submitting project information through online database.
	November 17	DEADLINE: Transportation agencies complete online submission of draft inputs.
	December 1	Technical Committee reviews draft Visualize 2045 inputs and draft Scope of Work for the Air Quality Conformity Analysis.
	December 14	Visualize 2045 inputs and draft Scope of Work released for 30-day comment period.
	December 12	TPB staff briefs Metropolitan Washington Air Quality Committee Technical Advisory Committee (MWAQC TAC) on inputs and Scope of Work.
2018	December 20*	TPB is briefed on inputs and draft Scope of Work.
	January 13	Comment period ends.
	January 17*	TPB reviews comments and is asked to approve inputs and draft Scope of Work.
	March 2	DEADLINE: Transportation agencies finalize forms (including Congestion Management Documentation forms where needed) and inputs to the FY 2019-2024 TIP. Submissions must not impact conformity inputs. Note that the deadline for changes affecting conformity inputs was December 14, 2017.
	May 10	Public Forum on the development of the FY 2019-2024 TIP.
	September 7	Technical Committee reviews draft Visualize 2045 and Conformity Analysis.
	September 7	Draft Visualize 2045 Plan, TIP, and Conformity Analysis are released for 30-day comment period at Citizens Advisory Committee (CAC) meeting.
	September 19*	TPB is briefed on the draft Visualize 2045 Plan, TIP, and Conformity Analysis.
	October (TBD)	TPB staff briefs MWAQC TAC on the draft Visualize 2045 Plan, TIP, and Conformity Analysis.
	October 7	Comment period ends.
October 17*	TPB reviews comments and responses to comments, and is presented with the draft Visualize 2045 Plan, TIP, and Conformity Analysis for approval.	

* Regularly scheduled TPB meeting.