

ITEM 8 - Action
February 20, 2013

Approval of Scope of Work for Air Quality Conformity Assessment
for the 2013 CLRP and the FY 2013-2018 TIP

Staff

Recommendation: Approve the enclosed scope of work for the air quality conformity assessment for the 2013 CLRP and FY 2013-2018 TIP.

Issues: None

Background: At the January 20 meeting, the Board was briefed on the draft scope of work for the air quality conformity assessment for the 2013 CLRP and FY 2013-2018 TIP which was released for a 30-day public comment period that ended February 16. The Board will be briefed on the comments received and recommended responses, and asked to approve the scope of work for the air quality conformity assessment for the 2013 CLRP and FY 2013-2018 TIP.

**AIR QUALITY CONFORMITY ASSESSMENT:
2013 CONSTRAINED LONG RANGE PLAN AND THE FY2013-2018 TRANSPORTATION
IMPROVEMENT PROGRAM**

SCOPE OF WORK

I. INTRODUCTION

Projects solicited for the 2013 Constrained Long Range Plan (CLRP) and FY2013-2018 Transportation Improvement Program (TIP) are scheduled to be finalized at the February 20, 2013 TPB meeting. This scope of work reflects the tasks and schedule designed for the air quality conformity assessment leading to adoption of the plan on July 17, 2013. This work effort addresses requirements associated with attainment of the ozone standards (volatile organic compounds (VOC) and nitrogen oxides (NO_x) as ozone precursor pollutants), and fine particles (PM_{2.5}) standards (direct particles and precursor NO_x), as well as maintenance of the wintertime carbon monoxide (CO) standard.

The 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. REQUIREMENTS AND APPROACH

A. Criteria (See Exhibit 1)

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, and
3. Contribute to annual emissions reductions.

Assessment criteria for ozone, CO, and PM_{2.5} are discussed below.

Ozone season pollutants will be assessed by comparing the “action” scenarios to the most recently approved 8-hour ozone area VOC and NO_x mobile emissions budgets. The 2009 Attainment and 2010 Contingency budgets were deemed adequate for use in conformity by EPA in February 2013. These budgets were submitted to EPA by the Metropolitan Washington Air Quality Committee (MWAQC) in 2007 as part of the 8-hour ozone State Implementation Plan (SIP).

The region is in maintenance for mobile source wintertime CO and, as in prior conformity assessments, is required to show that pollutant levels do not exceed the approved budget.

PM_{2.5} pollutants will be assessed both by comparing the “action” scenarios to a 2002 base, and by comparing the pollutant levels to the budgets in the proposed PM_{2.5} Maintenance Plan. PM_{2.5} emissions will be inventoried for yearly totals (instead of on a daily basis as performed for Ozone and CO).

B. Approach (See Table 1 – Summary of Technical Approach)

As in the past, this analysis will include use of the Version 2.3 travel demand model with the 3722 TAZ area system. Changes include the use of updated Cooperative Forecasts, Round 8.2, and the use of the MOVES emissions model.

In addition to the elements below, explicit inputs include: a summary list of major policy and technical input assumptions, shown as Attachment A; and all transportation network elements which were finalized at the February 20, 2013 TPB meeting.

TABLE 1 – Summary of Technical Approach

	Ozone	Wintertime CO	PM_{2.5}
Pollutant:	VOC, NOx	CO	Direct particles, Precursor NOx
Mobile Model: NEW!	MOVES 2010a	MOVES 2010a	MOVES 2010a
Conformity Test:	<u>Budget Test:</u> Using mobile budgets most recently approved by EPA. 2009 attainment and 2010 contingency budgets found adequate for use in conformity by EPA in Feb. 2013. All budgets were set using Mobile6 emissions model and submitted to EPA in 2007.	<u>Budget Test:</u> Using mobile budgets established with the Wintertime CO maintenance plan. All budgets set using Mobile6 emissions model and submitted to EPA in 2007.	<u>Reductions From Base (2002 inventory) Test & Budget Test:</u> With no approved budgets, reduction from base test will be needed; if EPA approves the PM maintenance plan budgets, those budgets must be used.
Emissions Analysis Time-frame:	Daily	Daily	Annual
Vehicle Fleet Data:	2011 vehicle registration data for all jurisdictions		
Geography:	8-hour ozone non-attainment area	DC, Arl., Alex., Mont., Pr. Geo.	8-hr. area less Calvert County
Network Inputs:	Regionally significant projects		
Land Activity:	NEW! Round 8.2		
Modeled Area:	3722 TAZ SYSTEM		
Travel Demand Model:	Version 2.3		

III. CONSULTATION

1. Execute TPB consultation procedures (as outlined in the consultation procedures report adopted by the TPB on May 20, 1998).
2. Participate in meetings of MWAQC, its Technical Advisory Committee and its Conformity Subcommittee to discuss the scope of work activities, TERM development process, and other elements as needed; discuss at TPB meetings or forums, as needed, the following milestones:
 - CLRP & TIP Call for Projects
 - Scope of work
 - TERM proposals
 - Project submissions: documentation and comments
 - Analysis of TERMS, list of mitigation measures
 - Conformity assessment: documentation and comments
 - Process: comments and responses

IV. WORK TASKS

1. Receive project inputs from programming agencies and organize into conformity documentation listings (endorsement of financially constrained project submissions scheduled for February 20, 2013)
 - Project type, limits, NEPA approval, etc.
 - Phasing with respect to forecast years
 - Transit operating parameters, e.g. schedules, service, fares
 - Action scenarios
2. Review and Update Land Activity files to reflect Round 8.2 Cooperative Forecasts
 - Households by auto ownership, population and employment
 - Zonal data files
3. Prepare forecast year highway, HOV, and transit networks
 - Develop 2015, 2017, 2020, 2025, 2030, & 2040 highway networks
 - Prepare 2015, 2017, 2020, 2025, 2030, & 2040 transit network input files
 - Update transit fares and highway tolls, as necessary
4. Prepare 2015 travel and emissions estimates
 - Execute travel demand modeling
 - Calculate emissions (daily for ozone season VOC and NO_x for ozone standard requirements; daily for winter CO; yearly for PM_{2.5} direct particles and precursor NO_x)
5. Prepare 2017 travel and emissions estimates
 - Tasks as in year 2015 analysis

6. Prepare 2025 travel and emissions estimates
 - Tasks as in year 2017 analysis
 - Apply “transit constraint” using 2020 levels
7. Prepare 2030 travel and emissions estimates
 - Tasks as in year 2025 analysis, including transit constraint
8. Prepare 2040 travel and emissions estimates
 - Tasks as in year 2030 analysis, including transit constraint
9. Prepare 2020 travel estimates for transit constraint
10. VDOT Dulles Access Alternatives
 - Modify 2025, 2030, 2040 highway networks
 - Execute travel demand modeling for 2025, 2030, 2040
 - Calculate emissions for 2025, 2030, 2040
11. Identify extent to which plan provides for expeditious implementation of TCMs contained in ozone state implementation plans and emissions mitigation requirements of previous CLRP & TIP commitments (TERMs)
 - Staff will request updated status reports on TERMS from the implementing agencies
 - Staff will review these reports as they are received and update the TERM tracking sheet that was included in the December 19, 2012 air quality conformity report
 - The status reports and the updated TERM tracking sheet will be included in the air quality conformity report.
12. Analyze results of above technical analysis
 - Reductions from 1990 (ozone season VOC and NO_x and winter CO) and 2002 base (PM_{2.5})
 - 8-hour ozone season VOC and NO_x budgets, direct PM_{2.5} and precursor NO_x budgets, and winter CO emissions budgets
 - With oversight from the Technical Committee and the TPB, identify and recommend additional measures should the plan or program fail any test and incorporate measures into the plan
13. 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
 - Address comments and present to TPB for action
 - Finalize report and forward to FHWA, FTA and EPA

V. SCHEDULE

The schedule for the execution of these work activities is shown in Exhibit 2. The time line shows completion of the analytical tasks, preparation of a draft report, public and interagency review, response to comments and action by the TPB on July 17, 2013.

Exhibit 1

Conformity Criteria

All Actions at all times:

Sec. 93.110	Latest planning assumptions.
Sec. 93.111	Latest emissions model.
Sec. 93.112	Consultation.

Transportation Plan:

Sec. 93.113(b)	TCMs.
Sec. 93.118 and/or	Emissions budget and /or Interim
Sec. 93.119	emissions.

TIP:

Sec. 93.113(c)	TCMs.
Sec. 93.118 and/or	Emissions budget and /or Interim
Sec. 93.119	emissions.

Project (From a Conforming Plan and TIP):

Sec. 93.114	Currently conforming plan and TIP.
Sec. 93.115	Project from a conforming plan and TIP.
Sec. 93.116	CO, PM ₁₀ , and PM _{2.5} hot spots.
Sec. 93.117	PM ₁₀ and PM _{2.5} control measures.

Project (Not From a Conforming Plan and TIP):

Sec. 93.113(d)	TCMs.
Sec. 93.114	Currently conforming plan and TIP.
Sec. 93.116	CO, PM ₁₀ , and PM _{2.5} hot spots.
Sec. 93.117	PM ₁₀ and PM _{2.5} control measures.
Sec. 93.118 and/or	Emissions budget and/or Interim
Sec. 93.119	emissions

Sec. 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.

Sec. 93.111 Criteria and procedures: Latest emissions model.

The conformity determination must be based on the latest emission estimation model available.

Sec. 93.112 Criteria and procedures: Consultation.

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.

Sec. 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.

Sec. 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.

Sec. 93.115 Criteria and procedures: Projects from a plan and TIP.

The project must come from a conforming plan and program.

Sec. 93.116 Criteria and procedures: Localized CO, PM₁₀, and PM_{2.5} violations (hot spots).

The FHWA/FTA project must not cause or contribute to any new localized CO, PM₁₀, and/or PM_{2.5} violations or increase the frequency or severity of any existing CO, PM₁₀, and /or PM_{2.5} violations in CO, PM₁₀, and PM_{2.5} nonattainment and maintenance areas.

Sec. 93.117 Criteria and procedures: Compliance with PM₁₀ and PM_{2.5} control measures.

The FHWA/FTA project must comply with PM₁₀ and PM_{2.5} control measures in the applicable implementation plan.

Sec. 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).

Sec. 93.119 Criteria and procedures: Interim emissions in areas without motor vehicle budgets

The FHWA/FTA project must satisfy the interim emissions test(s).

NOTE: See EPA's conformity regulations for the full text associated with each section's requirements.



Schedule for the 2013 Financially Constrained Long-Range Transportation Plan (CLRP) and the FY2013-2018 Transportation Improvement Program (TIP)

*September 19, 2012	TPB is Briefed on Draft Call for Projects
*October 17, 2012	TPB Releases Final Call for Projects - Transportation Agencies Begin Submitting Project Information through On-Line Database
December 14, 2012	<u>DEADLINE:</u> Transportation Agencies Complete On-Line Submission of Draft Project Inputs.
January 11, 2013	Technical Committee Reviews Draft CLRP & TIP Project Submissions and Draft Scope of Work for the Air Quality Conformity Assessment
January 17, 2013	CLRP & TIP Project Submissions and Draft Scope of Work Released for Public Comment
*January 23, 2013	TPB is Briefed on Project Submissions and Draft Scope of Work
February 16, 2013	Public Comment Period Ends
*February 20, 2013	TPB Reviews Public Comments and is asked to Approve Project Submissions and Draft Scope of Work
May 3, 2013	<u>DEADLINE:</u> Transportation Agencies Finalize Congestion Management Documentation Forms (where needed) and CLRP & TIP Forms ¹ . (Submissions must not impact conformity inputs; note that the deadline for changes affecting conformity inputs was February 20, 2013).
June 13, 2013	Draft CLRP & TIP and Conformity Assessment Released for Public Comment at Citizens Advisory Committee (CAC)
*June 19, 2013	TPB Briefed on the Draft CLRP & TIP and Conformity Assessment
July 13, 2013	Public Comment Period Ends
*July 17, 2013	TPB Reviews Public Comments and Responses to Comments, and is Presented the Draft CLRP & TIP and Conformity Assessment for Adoption
*TPB Meeting	

¹ By this date, the CLRP forms must include information on the Planning Factors, Environmental Mitigation, Congestion Management Information, and Intelligent Transportation Systems; separate Congestion Management Documentation Forms (where needed) must also be finalized.



WORK SCOPE ATTACHMENT A

POLICY AND TECHNICAL INPUT ASSUMPTIONS AIR QUALITY CONFORMITY ANALYSIS OF 2011 CLR

1. Land Activity

- Round 8.2 Cooperative Forecasts

2. Policy and Project Inputs

- Highway, HOV, and transit projects and operating parameters
- Financially constrained project submissions to be advanced by the TPB on 2/20/2013

3. Travel Demand Modeling Methods

- Version 2.3 Travel Model
- All HOV facilities at HOV-3 in 2020 & beyond
- Transit “capacity constraint” procedures (2020 constrains later years)

4. Emissions Model and Inputs

- MOVES2010a emissions model
- 2011 Vehicle Registration Data (VIN)

5. Conformity Assessment Criteria

- Emissions budgets for ozone precursors, PM_{2.5} pollutants, and wintertime CO
- Analysis years: 2015, 2017, 2025, 2030, & 2040