

## **ITEM 8 – Action**

October 17, 2012

Approval of Scope of Work for an Additional Air Quality Conformity Analysis to Respond to the EPA Redesignation of the Washington Region under the 2008 Ozone National Ambient Air Quality Standards (NAAQS)

**Staff Recommendation:** Approve the scope of work for the 2015 forecast year air quality conformity analysis of the 2012 CLRP and FY2013-2018.

**Issues:** None

**Background:** On May 21, 2012, EPA issued the final designation for the 2008 Ozone National Ambient Air Quality Standards (NAAQS), with the Washington Metropolitan Area designated as marginal nonattainment. This designation requires a new air quality conformity analysis of the Washington region's 2012 CLRP and FY 2013-2018 TIP that will include the region's new 2015 attainment year. The analysis must be completed before July 20, 2013. At the September 19 meeting, the Board was briefed on the draft scope of work for the 2015 forecast year air quality conformity analysis of the 2012 CLRP and FY2013-2018 TIP. On September 13 the scope of work was released for a 30-day public comment period that will end on October 13.

**AIR QUALITY CONFORMITY ASSESSMENT:  
2012 CONSTRAINED LONG RANGE PLAN  
AND THE FY2013-2018 TRANSPORTATION IMPROVEMENT PROGRAM  
2015 FORECAST YEAR  
SCOPE OF WORK**

## **I. INTRODUCTION**

EPA's final rule designating nonattainment areas for the 2008 ozone national ambient air quality standards (NAAQS) was published in the *Federal Register* on May 21, 2012 and is effective July 20, 2012. The Washington, DC-MD-VA region has been designated as a marginal non-attainment area. The attainment date for the 2008 ozone NAAQS for marginal non-attainment areas is December 31, 2015. All non-attainment areas must make a conformity determination within one year of the effective date of the initial non-attainment designation. This deadline is July 20, 2013. The recently approved conformity analysis of the 2012 CLRP and FY2013-2018 TIP satisfies the requirements of the deadline established, except for an analysis of the 2015 attainment year. In order to meet this requirement, staff will complete an analysis of the 2015 forecast year for the 2012 CLRP.

Project inputs and technical assumptions for the 2012 CLRP and FY2013-2018 TIP conformity analysis were approved at the February 15, 2012 TPB meeting. Emissions analyses for the following forecast years have been completed: 2007, 2017, 2020, 2030, and 2040. The analysis of the 2015 forecast year will complete the requirements for the initial conformity determination with regard to the 2008 ozone NAAQS.

As with all conformity determinations, 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 analysis of the 2015 forecast year 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<sub>2.5</sub> are discussed below.

Ozone season pollutants will be assessed by comparing the "action" scenarios to the 8-hour ozone area 2008 Reasonable Further Progress (RFP) VOC and NO<sub>x</sub> emissions budgets which were deemed adequate for use in conformity by EPA in September 2009. There is no change to this because areas designated non-attainment for the 2008 ozone NAAQS are required to use any existing adequate or approved SIP motor

vehicle budgets for a prior ozone NAAQS when determining conformity for the 2008 ozone NAAQS until budgets for the 2008 ozone NAAQS are either found adequate or are approved.

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<sub>2.5</sub> pollutants will be assessed both by comparing the “action” scenarios to a 2002 base and by comparing the pollutant levels to the budgets submitted by the MWAQC to EPA in April, 2008. PM<sub>2.5</sub> 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)

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 15, 2012 TPB meeting.

**TABLE 1 – Summary of Technical Approach**

	<b>Ozone</b>	<b>Wintertime CO</b>	<b>PM<sub>2.5</sub></b>
<b>Pollutant:</b>	VOC, NO <sub>x</sub>	CO	Direct particles, Precursor NO <sub>x</sub>
<b>Emissions Assessment Criteria:</b>	8-hour 2008 Reasonable Further Progress (RFP) ozone budgets	Approved wintertime CO emissions budget	Reductions from base 2002 inventory
<b>Emissions Analysis Time-frame:</b>	Daily	Daily	Annual
<b>Geography:</b>	8-hour ozone non-attainment area	DC, Arl., Alex., Mont., Pr. Geo.	8-hr. area less Calvert County
<b>Network Inputs:</b>	Regionally significant projects		
<b>Land Activity:</b>	Round 8.1		
<b>Modeled Area:</b>	3722 TAZ SYSTEM		
<b>Travel Demand Model:</b>	Version 2.3		
<b>Mobile Model:</b>	MOBILE6.2 emissions factors, consistent with the procedures utilized to establish the VOC and NO <sub>x</sub> mobile source emissions budgets	MOBILE6.2 Consistent with procedures used to establish the budget	MOBILE6.2 ‘Seasonal’ approach, consistent with procedures used to establish the budget
<b>Emissions Factor Refinements:</b>	2011 vehicle registration data for all jurisdictions		

### **III. CONSULTATION**

1. Execute TPB consultation procedures (as outlined in the consultation procedures report adopted by the TPB on May 20, 1998).
2. Discuss at TPB meetings or forums, as needed, the following milestones:
  - Scope of work
  - Conformity assessment: documentation and comments
  - Process: comments and responses

### **IV. WORK TASKS**

1. Prepare forecast year highway, HOV, and transit networks
  - Develop 2015 highway network
  - Prepare 2015 transit network input files
2. Prepare 2015 travel and emissions estimates
  - Execute travel demand modeling
  - Develop Mobile6.2 emission factors with new 2011 vehicle registration data
  - Calculate emissions (daily for ozone season VOC and NO<sub>x</sub> for ozone standard requirements; daily for winter CO; yearly for PM<sub>2.5</sub> direct particles and precursor NO<sub>x</sub>)
3. Analyze results of above technical analysis
  - Comparison to 8-hour ozone season 2008 RFP budgets (ozone season VOC and NO<sub>x</sub>)
  - Reductions from a 2002 base inventory (PM<sub>2.5</sub>)
  - Comparison to approved budgets (Wintertime CO)
4. 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 December 19, 2012.

# Exhibit 1

## Conformity Criteria

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### 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 <sub>10</sub> , and PM <sub>2.5</sub> hot spots.
Sec. 93.117	PM <sub>10</sub> and PM <sub>2.5</sub> 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 <sub>10</sub> , and PM <sub>2.5</sub> hot spots.
Sec. 93.117	PM <sub>10</sub> and PM <sub>2.5</sub> control measures.
Sec. 93.118 and/or	Emissions budget and/or Interim
Sec. 93.119	emissions

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### **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, PM<sub>10</sub>, and PM<sub>2.5</sub> violations (hot spots).**

The FHWA/FTA project must not cause or contribute to any new localized CO, PM<sub>10</sub>, and/or PM<sub>2.5</sub> violations or increase the frequency or severity of any existing CO, PM<sub>10</sub>, and /or PM<sub>2.5</sub> violations in CO, PM<sub>10</sub>, and PM<sub>2.5</sub> nonattainment and maintenance areas.

**Sec. 93.117 Criteria and procedures: Compliance with PM<sub>10</sub> and PM<sub>2.5</sub> control measures.**

The FHWA/FTA project must comply with PM<sub>10</sub> and PM<sub>2.5</sub> 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 2015 Forecast Year Analysis  
2012 Financially Constrained Long-Range Transportation Plan (CLRP) and the FY2013-  
2018 Transportation Improvement Program (TIP)**

September 13, 2012	Draft Scope of Work is Released for Public Comment
*September 19, 2012	TPB is Briefed on Draft Scope of Work
October 13, 2012	Public Comment Period Ends
*October 17, 2012	TPB Reviews Public Comments and is asked to Approve Draft Scope of Work
November 15, 2012	Draft Conformity Assessment Released for Public Comment at Citizens Advisory Committee (CAC)
*November 21, 2012	TPB Briefed on the Conformity Assessment
December 15, 2012	Public Comment Period Ends
*December 19, 2012	TPB Reviews Public Comments and Responses to Comments, and is Presented the Draft CLRP & TIP and Conformity Assessment for Adoption
*TPB Meeting	



## **WORK SCOPE ATTACHMENT A**

### **POLICY AND TECHNICAL INPUT ASSUMPTIONS AIR QUALITY CONFORMITY ANALYSIS OF 2012 CLRP & FY2013-2018 TRANSPORTATION IMPROVEMENT PROGRAM**

#### 1. Land Activity

- Round 8.1 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 2/15/2012

#### 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 Factors

- Use MOBILE6.2 emissions factors incorporating 2011 vehicle registration data
- Seasonal PM<sub>2.5</sub> factors for total directly emitted particles and precursor NO<sub>x</sub>

#### 5. Emissions Modeling Methods / Credits

- Yearly PM<sub>2.5</sub> emissions (total PM<sub>2.5</sub> and precursor NO<sub>x</sub>) using seasonal traffic adjustments and above emissions factors
- Offline emissions analyses

#### 6. Conformity Assessment Criteria

- Emissions budgets for ozone precursors, PM<sub>2.5</sub> pollutants, and wintertime CO
- Analysis years: 2007, 2015, 2017, 2020, 2030, & 2040