ITEM 11 - Information
March 16, 2005

Briefing on Draft Scope of Work for the
Air Quality Conformity Assessment for the
2005 Constrained Long Range Plan (CLRP) and the
FY2006-2011 Transportation Improvement Program (TIP)

Staff Recommendation: Receive briefing on comments received and revisions to the scope of work. The Board will be asked to approve the scope of work for the air quality conformity assessment for the 2005 CLRP and the FY 2006-2011 TIP at its April 20 meeting.

Issues: None

Background:

At its February 16, 2005 meeting, the Board was briefed on the scope of work, which was released for public comment and agency review at the TPB Citizens Advisory Committee (CAC) meeting on February 10. It is recommended that the public comment period be extended by releasing the revised scope of work at the March 16 TPB meeting. This extended public comment period will close on April 15, 2005.

The scope of work describes the analytical approach, tasks, and schedule for the air quality conformity assessment necessary for the adoption of the 2005 CLRP and the FY2006-2011 TIP.

MEMORANDUM

March 10, 2005

To: Transportation Planning Board

From: Michael J. Clifford
Systems Planning Applications Director

Subject: Revised Scope of Work for the Air Quality Conformity Assessment of the 2005 Constrained Long Range Plan (CLRP) and the FY2006-2011 Transportation Improvement Program (TIP)

Introduction

The draft scope of work for the air quality conformity assessment, with respect to the 8-hour ozone standard, for the 2005 CLRP and the FY2006-2011 TIP was released for public comment at the February 10, 2005 TPB Citizens Advisory Committee meeting. This memo transmits comment received to date, response to comment, and an updated scope reflecting resulting changes.

Scope of Work

Consistent with the CLRP and TIP project solicitation approved by the TPB at its January meeting, this scope reflects the necessary technical tasks and public comment / interagency consultation requirements to assess conformity, to be performed on a schedule leading to adoption of the plan and program in September 2005.

In December 2004 EPA designated the Washington, DC-MD-VA area as nonattainment for fine particulate matter (particles less than or equal 2.5 micrometers in diameter, called PM2.5). This scope does not address these pollutants, however, as additional guidance required for such a conformity assessment has not yet been issued. This guidance is expected before April 2005. Since the 2005 CLRP and FY2006 TIP will also be subject to conformity with respect to PM 2.5, staff will brief the Board on this topic in the very near future.

Comment / Response

Comment: The transit core area capacity constraint should be changed from 2005 to 2010 (per attached letter from WMATA).
Response: This change has been reflected in the March 9, 2005 revised scope of work (attached).

Next Steps

The Board will receive, as an information item, the scope of work, updated to reflect comments to date, at its March 16, 2005 meeting.

Attachments

February 14, 2005

Mr. Ronald Kirby
Director, Transportation Planning
National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments
777 North Capitol Street, NE, Suite 300
Washington, DC 20002-4239

Dear Mr. Kirby:

For the past number of years, TPB staff has performed the regional air quality conformity analysis with a constraint on Metrorail ridership due to capacity constraints in the core part of the Metrorail system during the peak period. This constraint limited future Metrorail ridership predicted in the model to the levels forecasted for 2005. Any additional riders that the model predicted were "placed back" onto the highway network.

Since this constraint was imposed on the model, the 6000 Series rail cars have been ordered and the Metro Matters program has been adopted, which will purchase 120 more rail cars. With the receipt of these cars, the Metrorail system will have capacity to accommodate ridership growth through 2010. Therefore, we are asking that TPB change the capacity constraint on the core Metrorail system from 2005 to 2010.

We would like to emphasize that this modeling change does not imply that capacity problems on Metrorail are a problem of the past. The rail cars from the Metro Matters funding agreement will keep capacity problems in check until shortly after 2010. In order to avoid the same capacity problems in the 2010 timeframe that were an issue in 2005, more rail cars will have to be purchased beyond the Metro Matters agreement to push the problem beyond 2010.

Thank you very much for the opportunity to provide input on the air quality conformity assumptions. If you have any questions please contact Lora Byala at (202) 962-1749.

Sincerely,

Lora Byala

Lora Byala
Office of Business Planning and Project Development

Washington Metropolitan Area Transit Authority

600 Fifth Street, NW
Washington, DC 20001
202/962-1234

By Metrorail:
Judiciary Square—Red Line
Gallery Place-Chinatown—Red, Green and Yellow Lines
By Metrobus:
Routes D1, D3, D6, P6, 70, 71, 80, X2

A District of Columbia, Maryland and Virginia Transit Partnership

AIR QUALITY CONFORMITY ASSESSMENT: 2005 CONSTRAINED LONG RANGE PLAN AMENDMENTS AND FY2006-2011 TRANSPORTATION IMPROVEMENT PROGRAM

SCOPE OF WORK

I. INTRODUCTION

Projects solicited for the 2005 Constrained Long Range Plan (CLRP) and the FY2006-2011 Transportation Improvement Program (TIP) are scheduled to be finalized at the March 16, 2005 TPB meeting. This scope of work reflects the tasks and schedule designed for the air quality conformity assessment leading to adoption of the plan and program in September 2005. This work effort addresses requirements associated with attainment of the 8-hour ozone standard, i.e., volatile organic compounds (VOC) and nitrogen oxides (NOx) precursor pollutants, and maintenance of the wintertime carbon monoxide (CO) standard. This work does not address fine particulate matter (particulates less than or equal to 2.5 micrometers in diameter, called PM 2.5). While EPA has designated much of the Washington MSA as non-attainment for PM 2.5, additional guidance required for a conformity assessment has not yet been issued.

The plan and program 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 July 1, 2004, 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.

The initial air quality conformity assessment of transportation plans and programs under the 8-hour ozone standard was approved by the TPB on January 19, 2005. Consistent with 'interim procedures' (temporary until 8-hour emissions budgets are determined) under the July 1, 2004 EPA regulations, and with concurrence from the Metropolitan Washington Air Quality Committee (MWAQC), the 1-hour ozone standard emissions budgets provided the basis for the emissions budget comparison element of the conformity assessment. These budgets were set by MWAQC and approved by EPA as adequate for conformity under severe area SIP planning requirements. This approach will also be utilized in this current 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.

B. Approach The analytical approach is similar to that applied and documented in the January 19, 2005 air quality conformity assessment of the 2004 CLRP and the FY2005-2010 TIP. In addition to the highlighted 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 will be finalized at the March 16, 2005 TPB meeting.

1. The use of 8-hour ozone standard 'interim' mobile source emissions budgets (i.e., retaining Stafford County in both budgets and emissions estimates), and approved wintertime CO emissions budget.

2. Regionally significant projects

3 Round 7 Cooperative Forecasts

4. Expanded cordon (2191 zone) networks and model set (Methodology as described in the Metropolitan Washington Council of Governments, COG/TPB Travel Forecasting Model, Version 2.1 D #50, Report.

5. MOBILE6.2 model emission factors, consistent with the procedures utilized to establish the VOC and NOx mobile source emissions budgets, with I/M program specification updates to be provided by the DC, Maryland, and Virginia air management agencies, and other input parameters, as necessary.

6. Refinements developed as part of the SIP work which established the emissions budgets include: use of 2002 vehicle registration data for all jurisdictions; updated VMT mix procedures using national trends in vehicle fleet characteristics together with local data on light duty versus heavy duty vehicle use; updated databases for public transit and school buses, park and ride lot use, and travel on local roads; and post-processor estimation

7. MSA-based geography

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:

- Project solicitation
- 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 March 16, 2005)

   - Project type, limits, NEPA approval, etc.
   - Phasing with respect to forecast years
   - Transit operating parameters, e.g. schedules, service, fares
   - Action scenarios

2. Utilize Round 7 Cooperative Forecasts

   - Households by auto ownership, population and employment
   - Zonal data files

3. Update 2002 base conditions to reflect new Mobile6.2 input parameters

4. Prepare forecast year highway, HOV, and transit networks

   - Update highway database
   - Update GIS highway network
   - Filter database to create 2010, 2020, and 2030 highway networks
   - Rebuild networks for modeling
   - Update / edit transit files
   - Update fares, as necessary

5. Prepare 2010 ozone attainment year travel and emissions estimates

   - Execute travel demand modeling
   - Develop and apply Mobile6.2 emission factors (ozone season and winter CO season)
   - Calculate emissions

6. Prepare 2020 CLRP conditions

- Tasks as in year 2010 analysis
- Apply “transit constraint” using 2010 levels

7. Prepare 2030 CLRP conditions

   - Tasks as in year 2020 analysis

8. Identify extent to which TIP and plan provide for expeditious implementation of TCMs contained in state implementation plans and emissions mitigation requirements of previous TIP and CLRP commitments (TERMs)

   - In the CLRP / TIP solicitation document staff identified previous TCM and TERM commitments and requested a status report from the implementing agencies
   - Staff will review these reports as they are received and update the TERM tracking sheet that was included in the January 19, 2005 air quality conformity report
   - The status reports and the updated TERM tracking sheet will be included in the air quality conformity report.

9. Coordinate / analyze emissions reductions associated with CMAQ and similar projects

   - Obtain project-specific emissions reductions from programming agencies
   - Summarize VOC and NOx reductions for each milestone year
   - With oversight from the Travel Management Subcommittee, propose and analyze additional measures for their emissions benefits, costs, cost effectiveness, and other evaluation criteria

10. Analyze results of above technical analysis

    - Reductions from 1990 and 2002 base
    - VOC, NOx and CO emissions budgets
    - With oversight from the Travel Management Subcommittee, the Technical Committee and the TPB, identify and recommend additional measures should the plan or program fail any test and incorporate

11. Assess conformity and document results in a report

    - Document methods
    - Draft conformity report
    - Forward to technical committees, policy committees, and EPA
    - 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 contained within the air quality conformity schedule 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 September 21, 2005.

Exhibit 1

Table 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 or Sec. 93.119	Emissions budget and/or Interim emissions.
TIP:	
Sec. 93.113(c)	TCMs.
Sec. 93.118 or Sec. 93.119	Emissions budget and/or Interim 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 and PM10 hot spots.
Sec. 93.117	PM10 and PM2.5 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 and PM10 hot spots.
Sec. 93.117	PM10 and PM2.5 control measures.
Sec. 93.118 or Sec. 93.119	Emissions budget and/or Interim 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 and PM10 violations (hot spots).

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

Sec. 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.

Sec. 93.118 Criteria and procedures: Motor vehicle emissions budget.

The transportation plan, TIP, and project not from a conforming transportation plan and TIP must be consistent with the motor vehicle emissions budget(s) in the applicable implementation plan (or implementation plan submission).

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

The transportation plan, TIP, and project not from a conforming transportation plan and TIP must satisfy the interim emissions test(s) as described in 93.109(c) through (1).

NOTE: See EPA's July 1, 2004 conformity regulations for the full text associated with each section's requirements.

Exhibit 2

PROPOSED YEAR 2005 CLRP AND FY 2006-2011 TIP AIR QUALITY CONFORMITY SCHEDULE

*December 15, 2004	TPB Reviews Draft Solicitation Document
*January 19, 2005	TPB Releases Final Solicitation Document
February 4, 2005	DEADLINE: Implementing Agencies Complete Electronic Submissions of Project Information to staff -- including CMS, CLRP, and TIP Data.
February 10, 2005	CLRP and TIP Project Submissions for inclusion in the Air Quality Conformity Analysis and Draft Scope of Work Released for Public Comment and Inter-Agency Review
*February 16, 2005	TPB Reviews Project Submissions and Scope of Work
March 12, 2005	Public Comment Period Ends for Project Submissions and Scope of Work
*March 16, 2005	TPB Reviews Public Comments, Approves Project Submissions for inclusion in the Air Quality Conformity Analysis for CLRP and TIP and Scope of Work
*June 15, 2005	TPB Receives Briefing on Draft Air Quality Conformity Determination, CLRP and TIP Documents
*July 20, 2005	TPB Releases Draft Air Quality Conformity Determination, Draft Year 2005 CLRP, and Draft FY 2006-2011 TIP for Public Comment and Inter-Agency Review
September 9, 2005	Public Comment Period Ends for Draft Documents
*September 21, 2005	TPB Reviews Public Comments on Draft Documents, Approves Responses to Comments, and Adopts the Air Quality Conformity Determination, the Year 2005 CLRP and FY 2006-2011 TIP

*TPB Meeting

WORK SCOPE ATTACHMENT A

3/09/05

POLICY AND TECHNICAL INPUT ASSUMPTIONS
AIR QUALITY CONFORMITY ANALYSIS OF 2005 CLRP AND FY2006-2011 TIP

1. Land Activity
   - Round 7 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 3/16/2005

3. Travel Demand Modeling Methods

   - Version 2.1 D #50 Travel Model
   - All HOV facilities at HOV-3 in 2010
   - Transit "capacity constraint" procedures (2010 constrains later years)

4. Emission Factors

   - Emission factors methods as originally developed and applied in the severe area ozone SIP: MOBILE6, 2002 registration data, VMT mix specific to each analysis year
   - Enhanced I/M in DC, MD, and VA, using updated state-specified program specifications
   - No oxygenated fuels assumed for wintertime carbon monoxide conditions
   - Updates to input parameters consistent with Mobile6.2 guidance

5. Emissions Modeling Methods / Credits

   - Updated post-processor methods as developed for the 2004 CLRP conformity assessment
   - Offline emissions analyses

6. Conformity Assessment Criteria

   - 7/01/04 EPA conformity regulations stating the transportation conformity rule amendments for the 8-hour ozone standards; use of interim mobile source emissions budgets
   - Analysis years: 2010, 2020, and 2030