

## ***Tasks & Assumptions for the Conformity Determination of the 2005-2009 TIP & 2004 Plan***

August 26, 2004

The following proposed technical work tasks, consultation procedures, and assumptions will be used for conducting the mandated air quality conformity determination of the 2005-2009 Baltimore Metropolitan Transportation Improvement Program (TIP) and the 2004 Baltimore Regional Transportation Plan. In light of the importance of review of conformity issues, these proposed tasks and assumptions have been assessed through the interagency consultation process for transportation and air quality activities in the Baltimore area, including the Metropolitan Planning Organization (MPO) and state air and transportation agencies, in a forum to include interested stakeholders.

### **I. Introduction**

The Clean Air Act, as amended in 1990, requires MPOs for regions in nonattainment of National Ambient Air Quality Standards (NAAQSs) to perform technical analyses to demonstrate that regional transportation plans and programs conform with regional plans for achieving air quality goals. These analyses must be conducted in accordance with the technical requirements and consultation procedures published in the November 24, 1993 Federal Register and as subsequently amended.

In the Baltimore region, which is designated as a “severe” nonattainment area for the 1-hour ozone standard and a “moderate” nonattainment area for the 8-hour ozone standard, conformity analyses of transportation plans and programs are conducted by the Baltimore Regional Transportation Board (BRTB), as the designated MPO for the region. The regional Interagency Consultation Group (ICG), which includes voting membership of the BRTB and the Maryland Departments of the Environment (MDE) and Transportation (MDOT), facilitates regular and continuous communication and coordination of all conformity efforts and activities. The Baltimore Metropolitan Council serves as professional staff to the BRTB and the ICG.

In determining conformity, BMC staff applies a regional travel demand forecasting model to specified horizon year scenarios to assess the transportation system’s travel and speed effects of implementing the region’s transportation plans and programs. MDE then applies horizon year specific vehicle emission factors from an emissions estimator model to outputs from the travel demand forecasting analysis to estimate the emission effects of the projected transportation system usage and performance characteristics. This conformity analysis determines whether regional transportation plans and programs are consistent with State Implementation Plan (SIP) air quality goals.

While Section II below outlines the expected methodology to be used for the upcoming conformity, the ICG recognizes that the exact assumptions will be determined based on available information “at the time that conformity begins”. The ICG has defined “the time that conformity begins” to be the time at which travel modeling begins, as the first step to generating emissions estimates for selected analysis years. The date of this specific activity, and the corresponding assumptions, will be documented in the draft conformity document, available for public review. The ICG feels that this letter (and its web posting) provides an opportunity for

early review of expected assumptions by all interagency consultation agencies, including those responsible for approval, and for the general public.

## **II. Criteria and Approach**

### II.A. Criteria

Conformity is demonstrated if transportation plans and programs are consistent with motor vehicle emission budgets established in the SIP and also provide expeditious implementation of Transportation Control Measures (TCM) committed to in SIPs. The federal regulations effective December 1993, as amended, contain the requirements on which this conformity determination is based.

### II.B. Approach

The following approach, approved by the ICG members at their August 24, 2004 meeting, will be used to demonstrate conformity for the 2005-2009 TIP and 2004 BRTP.

Please note the ICG determined that a combined 1-hour and 8-hour conformity test would be appropriate for the region based on the Transportation Conformity Rule Amendments, effective August 2, 2004.

**Emissions Budgets:** On October 27, 2003 EPA approved the motor vehicle emissions budgets in the 1-hour ozone attainment plan. On February 13, 2004, EPA approved the Rate-of-Progress (ROP) budgets for the 1-hour ozone standard for 2005. For conformity purposes, the ROP budgets will be used for the 2005 horizon year and the attainment budgets will be used for all subsequent outyears. PLEASE NOTE that the Baltimore region will be testing for the 1-hour and 8-hour ozone standards using the 1-hour ozone budgets, as described in the Conformity Rule Amendments and in EPA's Companion Guidance dated July 21, 2004.

2005  
2010, 2020, 2030

**55.05 tons/day VOC and 144.50 tons/day NOx. (ROP budgets)**  
**55.30 tons/day VOC and 146.90 tons/day NOx. (Attainment budgets)**

**Horizon Years:**

- 2005 (1-hour ozone attainment date)
- 2010 (8-hour ozone attainment date)
- 2020 (test scenario no later than 10 years from previous horizon year)
- 2030 (date for full implementation of long-range plan)

**Travel Demand  
Modeling Method:**

Methodology developed for a 2000 Validation (Task Report 04-01), including:

- New Truck & Commercial Vehicle Models
- Revised Transportation Analysis Zone Structure
- Equilibrium Assignment Methodology

**Mobile Emission  
Development:**

- MOBILE6.2 model
- 2002 motor vehicle fleet registration data & VMT mix

**Socioeconomic**

- Assumptions:** Based on Round 6-A Cooperative Regional Forecasts for employment, households, and population
- Extended to 2030
  - Regularly scheduled update by jurisdictions
  - Expected to be endorsed by MPO members at December 2004 meeting

### **Planning**

- Assumptions:** “Action scenario” (build) projects – Projects must meet federal regulatory criteria that they come from the financially constrained regional transportation plan and the 2005-2009 TIP, with project staging as endorsed by the MPO.

### **Network**

- Development:** Five regional transportation networks developed: 2000 existing network and action (build) networks for 2005, 2010, 2020, and 2030 horizon years.

## **III. Work Tasks**

The tasks and subtasks involved in the 2005-2009 TIP conformity analysis process are listed below. Attachment I displays the steps and timeframe for completing the 2004 Plan. Attachment II displays the timeframe for completing the work tasks associated with the conformity analysis of the TIP and Plan. Attachment III outlines the expected public involvement tasks associated with the Conformity Determination.

- A. Receive project inputs from programming agencies and organize into conformity documentation listings
  - 1. Project type, limits, etc.
  - 2. Phasing with respect to horizon years
  - 3. Action scenarios
- B. Prepare 2005 TIP Action scenario travel and emissions estimates
  - 1. Code, edit, and build highway and transit networks
  - 2. Execute travel demand modeling
  - 3. Estimate emissions
- C. Prepare 2010 Plan Action scenario  
(Steps as listed in B.)
- D. Prepare 2020 Plan Action scenario  
(Steps as listed in B.)
- E. Prepare 2030 Plan Action scenario  
(Steps as listed in B.)
- F. Identify and assess VOC and/or NO<sub>x</sub> emission effects associated with non-modelable activities
  - 1. Implemented strategies – extent of continued benefits for horizon years from previously implemented strategies

2. Programmed – CMAQ-funded TIP projects, non-CMAQ federally-funded TIP projects, and non-federally funded TIP projects
3. Planned – Projects included in the region's long-range plan between 2009 and 2030

- G. Assess analytical results
  1. Compare emissions results with motor vehicle emissions budgets
- H. Identify TIP contribution to SIP goals and previous TIP and Plan commitments
  1. Identify previous emission reduction commitments (emission reduction strategies and/or transportation control measures) and request status reports from implementing agencies
- I. Assess and document conformity results
  1. Document approach and methodology
  2. Draft conformity report
  3. Present to Technical Committee, Citizens Advisory Committee, and BRTB, consultation agencies, and general public
  4. Receive comments
  5. Address comments and present to BRTB for action/endorsement
  6. Finalize report and forward to FHWA, FTA, and EPA

Please contact Regina Aris, ICG Chair, with any questions or comments, at 410-732-9572 or [raris@baltometro.org](mailto:raris@baltometro.org).