



**METROPOLITAN
TRANSPORTATION
COMMISSION**

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Memorandum

TO: Air Quality Conformity Task Force

DATE: January 21, 2010

FR: Ashley Nguyen

W.I.:

RE: Proposed Approach to Conformity Analysis for the 2011 Transportation Improvement Program, Including PM_{2.5} Conformity

MTC staff is preparing to develop the 2011 Transportation Improvement Program (TIP). The conformity analysis for the 2011 TIP will include for the first time an analysis for PM_{2.5}, for which the Bay Area was recently designated as a non-attainment area. The latest conformity analysis is included in the report "Final Transportation Air Quality Conformity Analysis for the Transportation 2035 Plan and 2009 Transportation Improvement Program/Amendment #09-06", which was approved by FHWA/FTA on May 29, 2009. MTC will not add any new projects to the 2011 TIP that were not previously analyzed. However, because the previous analysis did not include PM_{2.5} and because some projects may change completion dates requiring analysis under a new horizon year, MTC is proposing to conduct a new regional emissions analysis for the 2011 TIP conformity determination.

MTC staff seeks the Conformity Task Force's review of the proposed approach to conform the 2011 TIP and re-conform the Transportation 2035 Plan in accordance with federal conformity regulations.

PM_{2.5} Requirements

The Bay Area's designation as nonattainment was published in the Federal Register on November 13, 2009 and takes effect on December 14, 2009. This designation requires by December 14, 2010 a new conformity determination using an "interim emissions test", consistent with Section 93.119 of the Transportation Conformity Regulations. This requirement is achieved by demonstrating one of the following:

1. "Build/No-Build Test". Emissions for each analysis year in the "Action" scenario are less than or equal to emissions from the "Baseline" scenario;
2. "Baseline Year Test". Emissions for each analysis year for the "Action" are less than or equal to the level of emissions in the year 2002¹.

The "Baseline" scenario includes:

- All in-place regionally significant highway and transit facilities, services and activities;
- All ongoing travel demand management or transportation system management activities; and
- Completion of all regionally significant projects, regardless of funding source, which are 1) currently under construction or are undergoing right-of-way acquisition, 2) come from the first year of the previously conforming transportation plan or TIP, or 3) have completed the NEPA process.

¹ An updated version of the Transportation Conformity Regulations is expected to be published by early 2010. The baseline year will change either to 2005 or 2008 at this time.

The “Action” scenario includes:

- All facilities, services, and activities in the “Baseline” scenario;
- Completion of all TCMs and regionally significant projects specifically identified in the proposed transportation plan which will be operational or in effect in the analysis year;
- All travel demand management programs and transportation system management activities adopted or funded since the last conformity determination;
- All travel demand management programs and transportation system management activities which have been modified since the last conformity determination;
- Completion of all expected regionally significant highway and transit projects which are not from a conforming transportation plan and TIP; and
- Completion of all expected regionally significant non-FHWA/FTA highway and transit projects that have clear funding sources and commitments leading toward their implementation and completion by the analysis year.

In addition to a new regional conformity determination, the new PM_{2.5} designation will require project sponsors to undergo interagency consultation for PM_{2.5} hot-spot analyses for certain projects beginning December 14, 2010 (**see Agenda Item #1 for more details**). MTC will also need to work with the Bay Area Air Quality Management District (BAAQMD) to develop a State Implementation Plan (SIP) for PM_{2.5} by December 14, 2012, which will include a motor vehicle emissions budget and Transportation Control Measures (TCMs).

Analysis Approach

MTC is seeking initial input on the proposed conformity approach at this Conformity Task Force meeting. MTC will review the approach with the Conformity Task Force again when we present the draft conformity analysis in May/June 2010. Key aspects of the conformity analysis are as follows:

1. **Regional Emissions Analysis:** MTC will conduct a new regional emissions analysis to conform the 2011 TIP and re-conform the Transportation 2035 Plan. A new analysis is necessary because:
 - The previous analysis did not include PM_{2.5}; and
 - Some projects in the STIP are anticipated to be delayed and may change the appropriate analysis year for some projects. These changes will not be finalized until May 2010.
2. **Latest Planning Assumptions:** MTC will use the latest planning assumptions, including:
 - The socio-economic/land use forecast series *Projections 2009* developed and adopted by the Association of Bay Area Governments (ABAG) in March 2009. ABAG staff prepares master databases at the 1,405 census tract-level, and MTC staff then disaggregates these tract-level forecasts to MTC’s 1,454 travel analysis zone system. A report on Projections 2009 data, at the MTC 34 superdistrict and nine county level, is available at MTC’s FTP site:
ftp://ftp.abag.ca.gov/pub/mtc/planning/ZoneData/Proj2009/Proj2009_Data_Summary.pdf
 - Updated travel demand forecasts using MTC’s latest validated version of the BAYCAST model with the most up to date highway and transit networks. Some minor changes from the Transportation 2035 networks are expected due to delay of projects in the STIP. These changes will be presented to the Task Force at the May/June 2010 meeting.
 - Updated pricing assumptions, which will be presented to the Task Force at the May/June 2010 meeting.
 - VMT estimates used in the EMFAC2007 emission model will be consistent with the California Air Resources Board’s (CARB) recommended adjustment methods.
3. **Latest Emissions Model:** MTC will use EMFAC2007, which is the latest approved set of motor vehicle emission rates from CARB. MTC will apply EMFAC2007 model system, in “BURDEN”

mode, to produce emission estimates. While EMFAC2010 is currently under development, it is not anticipated to be required for new conformity determinations until early 2011.

4. Emissions Budget/Interim Emissions:

- **Ozone:** MTC will use the 1-hour motor vehicle emissions budget from the *2001 Ozone Attainment Plan* as the 8-hour motor vehicle emissions budget to demonstrate conformity with the 8-hour ozone standard. The ozone budget for ROG and NO_x will be compared to quantified emissions for analysis years 2015, 2025, and 2035.
- **Carbon Monoxide (CO):** MTC will use the CO motor vehicle emissions budget from the 2004 Revision to the *California State Implementation Plan for Carbon Monoxide, Updated Maintenance Plan for Ten Federal Planning Areas* to determine conformity with the CO standard. The CO budget will be compared to projected emissions for analysis years 2015, 2018 (the CO horizon year), 2025, and 2035.
- **PM_{2.5}:** MTC is proposing to use the “Build/No-Build” interim emission test to demonstrate conformity with the 24-hour PM_{2.5} standard. Consistent with EPA’s Interim Guidance published November 2009, MTC will quantify emissions for both directly emitted PM_{2.5} and NO_x and compare the build and no-build scenarios for analysis years 2015, 2025, and 2035. The analysis will be carried out using inputs for the winter season, during which the Bay Area experiences its highest levels of PM_{2.5} concentrations. MTC will present documentation regarding the projects proposed for inclusion in the Build and No Build scenarios, based on their regulatory definitions described above, at the May/June 2010 task force meeting.

5. Transportation Control Measure (TCM) Implementation: The motor vehicle emissions estimates for ROG and NO_x will include the effects of TCMs A-E in the 2001 Ozone Attainment Plan. These TCMs are now fully implemented.

6. Financial Constraint: The 2011 TIP will be financially constrained based on revenue estimates from the State at the time of its preparation. No financial changes are proposed for the Transportation 2035 Plan, so the Plan remains financially constrained in accordance with federal requirements.

7. Interagency and Public Consultation: MTC will conduct the appropriate agency and public consultation for the 2011 TIP and conformity analysis.

Draft Schedule

Below is a proposed draft schedule for review and approval of the 2011 TIP and conformity analysis.

Activity	Timeline
Conformity Task Force Reviews Proposed Conformity Approach	January 2010
MTC Staff Conducts Technical Analysis & Report Preparation	Thru May/June 2010
MTC's Programming and Allocations Committee (PAC) Approves the Date to Release Draft 2011 TIP and Draft Conformity Analysis	July 14, 2010
Conformity Task Force Reviews Administrative Draft Conformity Analysis	Mid/Late July 2010
Start of 30-Day Public Review of Draft 2011 TIP and Draft Conformity Analysis	August 6, 2010
Public Hearing of Draft 2011 TIP and Draft Conformity Analysis	September 8, 2010
Conformity Task Force Reviews Proposed Final 2011 TIP and Proposed Final Conformity Analysis (Includes Response to Comments)	September 2010
PAC Approves Final 2011 TIP and Final Conformity Analysis	October 13, 2010
Commission Approves Final 2011 TIP and Final Conformity Analysis	October 27, 2010
Caltrans Reviews and Approves FSTIP	November 14, 2010
FHWA/FTA Approves Conformity Determination	By December 14, 2010