

**AIR QUALITY CONFORMITY ANALYSIS
FOR
THE 2013 FEDERAL TRANSPORTATION
IMPROVEMENT PROGRAM (FTIP)
AND
2011 REGIONAL TRANSPORTATION PLAN (RTP)**

**FINAL
ADOPTED
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**MADERA COUNTY TRANSPORTATION COMMISSION
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EXECUTIVE SUMMARY

This report presents the Conformity Analysis for the 2013 Federal Transportation Improvement Program (FTIP) and the 2011 Regional Transportation Plan (RTP). The Madera County Transportation Commission is the designated Metropolitan Planning Organization (MPO) in Madera County, California, and is responsible for regional transportation planning.

The Clean Air Act Section 176(c) (42 U.S.C. 7506(c)) and U.S. Environmental Protection Agency (EPA) transportation conformity regulations (40 CFR 93 Subpart A) require that each new RTP and TIP be demonstrated to conform to the State Implementation Plan (SIP) before the RTP and TIP are approved by the MPO or accepted by the U.S. Department of Transportation (DOT). This analysis demonstrates that the criteria specified in the transportation conformity regulations for a conformity determination are satisfied by the 2013 FTIP and 2011 RTP; a finding of conformity is therefore supported. The 2013 FTIP (consistent with the 2011 RTP) and corresponding Conformity Analysis are scheduled to be approved by the Madera County Transportation Commission Policy Board on July 18, 2012. FHWA/FTA last issued a finding of conformity for the 2011 TIP and 2011 RTP, including amendments, on December 14, 2010.

The 2013 TIP and 2011 RTP have been financially constrained in accordance with the requirements of 40 CFR 93.108 and consistent with the U.S. DOT metropolitan planning regulations (23 CFR Part 450). A discussion of financial constraint and funding sources is included in the appropriate documents.

The applicable Federal criteria or requirements for conformity determinations, the conformity tests applied, the results of the conformity assessment, and an overview of the organization of this report are summarized below.

CONFORMITY REQUIREMENTS

The Federal transportation conformity regulations (40 Code of Federal Regulations Parts 51 and 93) specify criteria and procedures for conformity determinations for transportation plans, programs, and projects and their respective amendments. The Federal transportation conformity regulation was first promulgated in 1993 by the U.S. EPA, following the passage of amendments to the Federal Clean Air Act in 1990. The Federal transportation conformity regulation has been revised several times since its initial release to reflect both EPA rule changes and court opinions. The transportation conformity regulation is summarized in Chapter 1.

The conformity regulation applies nationwide to “all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan” (40 CFR 93.102). Currently, the San Joaquin Valley (or portions thereof) is designated as nonattainment with respect to Federal air quality standards for ozone, and particulate matter under 2.5 microns in diameter (PM_{2.5}); and has a maintenance plan for particulate matter under 10 microns in diameter (PM-10), as well as a maintenance plan for carbon monoxide (CO) for the urbanized/metropolitan areas of Kern, Fresno, Stanislaus and San Joaquin Counties. Therefore, transportation plans and programs for the nonattainment areas for

the Madera County area must satisfy the requirements of the Federal transportation conformity regulation.

Under the transportation conformity regulation, the principal criteria for a determination of conformity for transportation plans and programs are:

- (1) the TIP and RTP must pass an emissions budget test using a budget that has been found to be adequate by EPA for transportation conformity purposes, or an interim emission test;
- (2) the latest planning assumptions and emission models specified for use in conformity determinations must be employed;
- (3) the TIP and RTP must provide for the timely implementation of transportation control measures (TCMs) specified in the applicable air quality implementation plans; and
- (4) interagency and public consultation.

On-going interagency consultation is conducted through the San Joaquin Valley Interagency Consultation Group to ensure Valley-wide coordination, communication and compliance with Federal and California Clean Air Act requirements. Each of the eight Valley MPOs and the San Joaquin Valley Unified Air Pollution Control District (Air District) are represented. The Federal Highway Administration (FHWA), Federal Transit Administration (FTA), the U.S. EPA, the California Air Resources Board (CARB) and Caltrans are also represented on the committee. The final determination of conformity for the TIP and RTP is the responsibility of FHWA, and FTA within the U.S. DOT.

FHWA has developed a Conformity Checklist (included in Appendix A) that contains the required items to complete a conformity determination. Appropriate references to these items are noted on the checklist.

CONFORMITY TESTS

The conformity tests specified in the Federal transportation conformity regulation are: (1) the emissions budget test, and (2) the interim emission test. For the emissions budget test, predicted emissions for the TIP/RTP must be less than or equal to the motor vehicle emissions budget specified in the approved air quality implementation plan or the emissions budget found to be adequate for transportation conformity purposes. If there is no approved air quality plan for a pollutant for which the region is in nonattainment or no emission budget has been found to be adequate for transportation conformity purposes, the interim emission test applies. Chapter 1 summarizes the applicable air quality implementation plans and conformity tests for carbon monoxide, ozone, PM-10, and PM2.5.

RESULTS OF THE CONFORMITY ANALYSIS

A regional emissions analysis was conducted for the years 2014, 2017, 2018 (via interpolation), 2020, 2023, 2025 and 2035 for each applicable pollutant. All analyses were conducted using the latest planning assumptions and emissions models. The major conclusions of the Madera County Transportation Commission Conformity Analysis are:

- For ozone, the total regional on-road vehicle-related emissions (ROG and NOx) associated with implementation of the 2013 FTIP and the 2011 RTP for all years tested are projected to be less than the approved emissions budgets specified in the *2007 Ozone Plan (as revised in 2011)*. The conformity tests for ozone are therefore satisfied.
- For PM-10, the total regional vehicle-related emissions (PM-10 and NOx) associated with implementation of the 2013 FTIP and the 2011 RTP for all years tested are either (1) projected to be less than the approved emissions budgets, or (2) less than the emission budgets using the approved PM-10 and NOx trading mechanism for transportation conformity purposes from the *2007 PM-10 Maintenance Plan*. The conformity tests for PM-10 are therefore satisfied.
- For PM2.5, the total regional on-road vehicle-related emissions associated with implementation of the 2013 FTIP and the 2011 RTP for the analysis years are either (1) projected to be less than the approved emission budgets, or (2) less than the emission budgets using the approved PM2.5 and NOx trading mechanism for transportation conformity purposes from the *2008 PM2.5 Plan (as revised in 2011)*. The conformity tests for PM2.5 for both the 1997 and 2006 standards are therefore satisfied.
- The 2013 FTIP and the 2011 RTP will not impede and will support timely implementation of the TCMs that have been adopted as part of applicable air quality implementation plans. The current status of TCM implementation is documented in Chapter 4 of this report. Since the local SJV procedures (e.g., Air District Rule 9120 Transportation Conformity) have not been approved by EPA, consultation has been conducted in accordance with Federal requirements.

REPORT ORGANIZATION

The report is organized into six chapters. Chapter 1 provides an overview of the applicable Federal and State conformity regulations and requirements, air quality implementation plans, and conformity test requirements. Chapter 2 contains a discussion of the latest planning assumptions and transportation modeling. Chapter 3 describes the air quality modeling used to estimate emission factors and mobile source emissions. Chapter 4 contains the documentation required under the Federal transportation conformity regulation for transportation control measures. Chapter 5 provides an overview of the interagency requirements and the general approach to compliance used by the San Joaquin Valley MPOs. The results of the conformity analysis for the TIP/RTP are provided in Chapter 6.

Appendix F includes public meeting documentation conducted on the 2013 FTIP (consistent with the 2011 RTP) and corresponding Conformity Analysis on June 20, 2012. Comments received on the conformity analysis and responses made as part of the public involvement process are included in Appendix G.

CHAPTER 1: FEDERAL AND STATE REGULATORY REQUIREMENTS

The criteria for determining conformity of transportation programs and plans under the Federal transportation conformity regulation (40 CFR Parts 51 and 93) and the applicable conformity tests for the San Joaquin Valley nonattainment areas are summarized in this section. The Conformity Analysis for the 2013 Federal Transportation Improvement Program (TIP) and the 2011 Regional Transportation Plan (RTP) was prepared based on these criteria and tests. Presented first is a review of the development of the applicable conformity regulation and guidance procedures, followed by summaries of conformity regulation requirements, air quality designation status, conformity test requirements, and analysis years for the Conformity Analysis.

Madera County Transportation Commission (MCTC) is the designated Metropolitan Planning Organization (MPO) for Madera County in the San Joaquin Valley. As a result of this designation, MCTC prepares the TIP, RTP, and associated conformity analyses. The TIP serves as a detailed four year (FFY 2012/13 – 2015/16 programming document for the preservation, expansion, and management of the transportation system. The 2011 RTP has a 2035 horizon that provides the long term direction for the continued implementation of the freeway/expressway plan, as well as improvements to arterial streets, transit, and travel demand management programs. The TIP and RTP include capacity enhancements to the freeway/expressway system commensurate with available funding.

A. FEDERAL AND STATE CONFORMITY REGULATIONS

CLEAN AIR ACT AMENDMENTS

Section 176(c) of the Clean Air Act (CAA, 1990) requires that Federal agencies and MPOs not approve any transportation plan, program, or project that does not conform to the approved State Implementation Plan (SIP). The 1990 amendments to the Clean Air Act expanded Section 176(c) to more explicitly define conformity to an implementation plan to mean:

“Conformity to the plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards; and that such activities will not (i) cause or contribute to any new violation of any standard in any area; (ii) increase the frequency or severity of any existing violation of any standard in any area; or (iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.”

Section 176(c) also provides conditions for the approval of transportation plans, programs, and projects, and requirements that the Environmental Protection Agency (EPA) promulgate conformity determination criteria and procedures no later than November 15, 1991.

FEDERAL RULE

The initial November 15, 1991 deadline for conformity criteria and procedures was partially completed through the issuance of supplemental interim conformity guidance issued on June 7, 1991 for carbon monoxide, ozone, and particulate matter ten microns or less in diameter (PM-10). EPA subsequently promulgated the Conformity Final Rule in the November 24, 1993 *Federal Register* (EPA, 1993). The 1993 Rule became effective on December 27, 1993. The Federal Transportation Conformity Final Rule has been amended several times from 1993 to present. These amendments have addressed a number of items related to conformity lapses, grace periods, and other related issues to streamline the conformity process.

EPA published the Transportation Conformity Rule PM2.5 and PM10 Amendments on March 24, 2010; the rule became effective on April 23, 2010 (EPA, 2010a). This PM amendments final rule amends the conformity regulation to address the 2006 PM2.5 national ambient air quality standard (NAAQS). The final PM amendments rule also addresses hot-spot analyses in PM2.5 and PM10 and carbon monoxide nonattainment and maintenance areas.

On March 14, 2012, EPA published the Transportation Conformity Rule Restructuring Amendments, effective April 13, 2012 (EPA, 2012). The amendments restructure several sections of the rule so that they apply to any new or revised National Ambient Air Quality Standards. In addition, several clarifications to improve implementation of the rule were finalized.

MULTI-JURISDICTIONAL GUIDANCE

EPA issued “multi-jurisdictional” guidance on July 21, 2004 to clarify how nonattainment areas with multiple agencies should conduct conformity determinations based on the changes to the Conformity Rule (EPA, 2004a). This guidance applies to the San Joaquin Valley since there are multiple MPOs within a single nonattainment area. The main principle of the guidance is that one regional emissions analysis is required for the entire nonattainment area. However, separate modeling and conformity documents may be developed by each MPO.

Part 3 of the guidance applies to nonattainment areas that have adequate or approved conformity budgets addressing a particular air quality standard. This Part currently applies to the San Joaquin Valley for carbon monoxide, ozone and PM-10. The guidance allows MPOs to make independent conformity determinations for their plans and TIPs as long as all of the other subareas in the nonattainment area have conforming transportation plans and TIPs in place at the time of each MPO and the Department of Transportation (DOT) conformity determination.

With respect to PM2.5, the Transportation Conformity Rule PM2.5 and PM10 Amendments published on March 24, 2010 effectively incorporates the “multi-jurisdictional” guidance directly into the rule. The Rule allows MPOs to make independent conformity determinations for their plans and TIPs as long as all of the other subareas in the nonattainment area have conforming transportation plans and TIPs in place at the time of each MPO and DOT conformity determination.

DISTRICT RULE

The San Joaquin Valley Unified Air Pollution Control District (Air District) adopted Rule 9120 Transportation Conformity on January 19, 1995 in response to requirements in Section 176(c)(4)(c) of the 1990 Clean Air Act Amendments. Rule 9120 contains the Transportation Conformity Rule promulgated November 24, 1993 verbatim. The Rule provides guidance for the development of consultation procedures and processes at the local level. As required by the Transportation Conformity Rule, Rule 9120 was submitted to EPA on January 24, 1995 as a revision to the State SIP. The rule becomes effective on the date EPA promulgates interim, partial, or final approval in the Federal Register.

To date, the Rule has not received approval by EPA. Section 51.390(b) of the Transportation Conformity Rule states: “Following EPA approval of the State conformity provisions (or a portion thereof) in a revision to the applicable implementation plan, conformity determinations would be governed by the approved (or approved portion of the) State criteria and procedures.” It should also be noted that EPA has changed 40 CFR 51.390 to streamline the requirements for State conformity SIPs. Since a transportation conformity SIP has not been approved for the SJV, the Federal transportation conformity rule still governs.

B. CONFORMITY REGULATION REQUIREMENTS

The Federal regulations identify general criteria and procedures that apply to all transportation conformity determinations, regardless of pollutant and implementation plan status. These include:

- 1) *Conformity Tests* — Sections 93.118 and 93.119 specify emissions tests (budget and interim emissions) that the TIP/RTP must satisfy in order for a determination of conformity to be found. The final transportation conformity regulation issued on July 1, 2004 requires a submitted SIP motor vehicle emissions budget to be found adequate or approved by EPA prior to use for making conformity determinations. The budget must be used on or after the effective date of EPA’s adequacy finding or approval.

- 2) *Methods / Modeling:*

Latest Planning Assumptions — Section 93.110 specifies that conformity determinations must be based upon the most recent planning assumptions in force at the time the conformity analysis begins. This is defined as “the point at which the MPO begins to model the impact of the proposed transportation plan or TIP on travel and/or emissions. New data that becomes available after an analysis begins is required to be used in the conformity determination only if a significant delay in the analysis has occurred, as determined through interagency consultation” (EPA, 2010b). All analyses for the Conformity Analysis were conducted using the latest planning assumptions and emissions models in force at the time the conformity analysis started in February 2012 (see Chapter 2).

Latest Emissions Models — Section 93.111 requires that the latest emission estimation models specified for use in SIPs must be used for the conformity analysis. EMFAC2007 was used in the Conformity Analysis and is documented in Chapter 3. ARB has released EMFAC 11; however, it has not been approved by EPA for use in conformity analysis.

- 3) *Timely Implementation of TCMs* — Section 93.113 provides a detailed description of the steps necessary to demonstrate that the new TIP/RTP are providing for the timely

implementation of TCMs, as well as demonstrate that the plan and/or program is not interfering with this implementation. TCM documentation is included in Chapter 4 of the Conformity Analysis.

- 4) *Consultation* — Section 93.105 requires that the conformity determination be made in accordance with the consultation procedures outlined in the Federal regulations. These include:
- MPOs are required to provide reasonable opportunity for consultation with State air agencies, local air quality and transportation agencies, the USDOT and EPA (Section 93.105(a)(1)).
 - MPOs are required to establish a proactive public involvement process, which provides opportunity for public review and comment prior to taking formal action on a conformity determination (Section 93.105(e)).

The TIP, RTP, and corresponding conformity determinations are prepared by each MPO. Copies of the Draft documents are provided to member agencies and others, including FHWA, Federal Transit Administration (FTA), EPA, Caltrans, CARB, and the Air District for review. Both the TIP and RTP are required to be publicly available and an opportunity for public review and comment is provided. The consultation process for the conformity analysis includes a 30-day comment period followed by a public meeting.

C. AIR QUALITY DESIGNATIONS APPLICABLE TO THE SAN JOAQUIN VALLEY

The conformity regulation (section 93.102) requires documentation of the applicable pollutants and precursors for which EPA has designated the area nonattainment or maintenance. In addition, the nonattainment or maintenance area and its boundaries should be described.

MCTC is located in the federally designated San Joaquin Valley Air Basin. The borders of the basin are defined by mountain and foothill ranges to the east and west. The northern border is consistent with the county line between San Joaquin and Sacramento Counties. The southern border is less defined, but is roughly bounded by the Tehachapi Mountains and, to some extent, the Sierra Nevada range. Conformity for the 2013 FTIP and 2011 RTP includes analysis of existing and future air quality impacts for each applicable pollutant.

The San Joaquin Valley is currently designated as nonattainment for the National Ambient Air Quality Standards (NAAQS) for 8-hour ozone (1997 standard), and particulate matter under 2.5 microns in diameter (PM_{2.5}) (1997 and 2006 standards); and has a maintenance plan for particulate matter under 10 microns in diameter (PM-10), as well as a maintenance plan for carbon monoxide (CO) for the urbanized/metropolitan areas of Kern, Fresno, Stanislaus and San Joaquin Counties. State Implementation Plans have been prepared to address carbon monoxide, ozone, PM-10 and PM_{2.5}:

- The 2004 Revision to the California State Implementation Plan for Carbon Monoxide was approved by EPA on November 30, 2005 (effective January 30, 2006).
- The 2007 Ozone Plan (as revised in 2011) was approved by EPA on March 1, 2012 (effective April 30, 2012).

- The 2007 PM-10 Maintenance Plan, which included revisions to the attainment plan, was approved (with minor technical corrections to the conformity budgets) by EPA on November 12, 2008.
- The 2008 PM2.5 Plan (as revised in 2011) was approved by EPA on November 9, 2011 (effective January 9, 2012).

On November 13, 2009, EPA published Air Quality Designations for the 2006 24-hour PM2.5 standard, effective December 14, 2009. Nonattainment areas are required to meet the standard by 2014; transportation conformity applies by December 14, 2010. In the San Joaquin Valley, the 1997 standards (both 24-hour and annual) will continue to apply. It is important to note that the 2006 24-hour PM2.5 nonattainment area boundary for the San Joaquin Valley is exactly the same as the nonattainment area boundary for the 1997 annual standard.

In accordance with the EPA Interim Transportation Conformity Guidance for 2006 PM2.5 NAAQS Nonattainment areas, if a 2006 PM2.5 area has adequate or approved SIP budgets that address the 1997 standards, it must use the budget test. The new attainment year of 2014 must be modeled.

D. CONFORMITY TEST REQUIREMENTS

The conformity (Section 93.109(c)–(k)) rule requires that either a table or text description be provided that details, for each pollutant and precursor, whether the interim emissions tests and/or the budget test apply for conformity. In addition, documentation regarding which emissions budgets have been found adequate by EPA, and which budgets are currently applicable for what analysis years is required.

Specific conformity test requirements established for the San Joaquin Valley nonattainment areas for carbon monoxide, ozone, and particulate matter are summarized below.

Section 93.124(d) of the 1997 Final Transportation Conformity regulation allows for conformity determinations for subregional emission budgets by MPOs if the applicable implementation plans (or implementation plan submission) explicitly indicates an intent to create such subregional budgets for the purpose of conformity. In addition, Section 93.124(e) of the 1997 rules states: "...if a nonattainment area includes more than one MPO, the implementation plan may establish motor vehicle emission budgets for each MPO, or else the MPOs must collectively make a conformity determination for the entire nonattainment area." Each applicable implementation plan and estimate of baseline emissions in the San Joaquin Valley provides motor vehicle emission budgets by county, to facilitate county-level conformity findings.

CARBON MONOXIDE

The urbanized/metropolitan areas of Kern, Fresno, Stanislaus and San Joaquin Counties are classified maintenance for carbon monoxide. The motor vehicle emission budgets for carbon monoxide are specified in the *2004 Revision to the California State Implementation Plan for Carbon Monoxide* in tons per average winter day. EPA published a direct final rulemaking approving the plan on November 30, 2005, effective January 30, 2006.

For carbon monoxide, the Federal transportation conformity regulation requires that the TIP and RTP must pass an emissions budget test with a budget that has been approved by EPA for

transportation conformity purposes. New conformity budgets have been approved for 2003, 2010 and 2018 for portions of the San Joaquin Valley as provided in the following table.

**Table 1-1:
On-Road Motor Vehicle CO Emissions Budgets**

County	2003 Emissions (winter tons/day)	2010 Emissions (winter tons/day)	2018 Emissions (winter tons/day)
Fresno	240	240	240
Kern	180	180	180
San Joaquin	170	170	170
Stanislaus	130	130	130

OZONE

Under the existing conformity regulation, regional emissions analyses for ozone areas must address nitrogen oxides (NOx) and volatile organic compounds (VOC) precursors. It is important to note that in California, reactive organic gases (ROG) are considered equivalent to and are used in place of volatile organic compounds (VOC). The motor vehicle emission budgets for ozone are specified in the 2007 Ozone Plan in tons per average summer day. EPA approved the Plan and conformity budgets (as revised in 2011) on March 1, 2012, effective April 30, 2012.

The SJV was reclassified from a Serious nonattainment area for the 8-hour ozone standard to Extreme effective June 4, 2010. The SIP has identified subarea budgets for each MPO in the nonattainment area. For this Conformity Analysis, the SJV will continue to conduct determinations for subarea emission budgets as established in the applicable implementation plan.

The approved conformity budgets from Table 5 of the EPA Federal Register notice are provided in the table below. These budgets will be used to compare to emissions resulting from the 2013 FTIP and 2011 RTP.

**Table 1-2:
Approved Budgets from the 2007 Ozone Plan (as revised in 2011)
(summer tons/day)**

County	2011		2014		2017		2020		2023	
	ROG	NOx								
Fresno	14.3	36.2	10.7	30.0	9.3	22.6	8.3	17.7	8.0	13.5
Kern (SJV)	12.7	50.3	9.7	42.7	8.7	31.7	8.2	25.1	7.9	18.6
Kings	2.8	10.7	2.1	8.9	1.8	6.7	1.7	5.3	1.6	4.0
Madera	3.4	9.3	2.5	7.7	2.2	5.8	2.0	4.7	1.9	3.6
Merced	5.1	19.9	3.7	16.7	3.2	12.4	2.9	9.9	2.8	7.4
San Joaquin	11.1	24.6	8.4	20.5	7.2	15.6	6.4	12.4	6.3	10.0
Stanislaus	8.5	16.9	6.4	13.9	5.6	10.6	5.0	8.4	4.7	6.4
Tulare	8.8	16.0	6.7	13.2	5.8	10.1	5.3	8.1	4.9	6.2

PM-10

The 2007 PM-10 Maintenance Plan was approved (with minor technical corrections to the conformity budgets) by EPA on November 12, 2008, which contains motor vehicle emission budgets for PM-10 and NOx, as well as a trading mechanism. Motor vehicle emission budgets are established based on average annual daily emissions. The motor vehicle emissions budget for PM-10 includes regional reentrained dust from travel on paved roads, vehicular exhaust, travel on unpaved roads, and road construction.

The conformity budgets from Tables 6 and 7 of the Plan are provided below (including the minor technical corrections) and will be used to compare emissions for each analysis year. CARB subsequently updated the 2005 attainment budgets; these updates are reflected in the table below.

**Table 1-3:
On-Road Motor Vehicle PM-10 Emissions Budgets**
(tons per average annual day)

County	2005		2020	
	PM-10	NOx	PM-10	NOx

Fresno	13.5	59.2	16.1	23.2
Kern ^(a)	12.1	88.3	14.7	39.5
Kings	3.1	16.7	3.6	6.8
Madera	3.6	13.9	4.7	6.5
Merced	6.2	39.4	6.4	12.9
San Joaquin	9.1	42.6	10.6	17.0
Stanislaus	5.6	29.7	6.7	10.8
Tulare	7.3	25.1	9.4	10.9

^(a) Kern County subarea includes only the portion of Kern County within the San Joaquin Valley Air Basin

The PM-10 SIP allows trading from the motor vehicle emissions budget for the PM-10 precursor NOx to the motor vehicle emissions budget for primary PM-10 using a 1.5 to 1 ratio. The trading mechanism allows the agencies responsible for demonstrating transportation conformity in the San Joaquin Valley to supplement the 2005 budget for PM-10 with a portion of the 2005 budget for NOx, and use these adjusted motor vehicle emissions budgets for PM-10 and NOx to demonstrate transportation conformity with the PM-10 SIP for analysis years after 2005. As noted above, EPA approved the 2007 PM-10 Maintenance Plan (with minor technical corrections to the conformity budgets) on November 12, 2008, which includes continued approval of the trading mechanism.

The trading mechanism will be used only for conformity analyses for analysis years after 2005. To ensure that the trading mechanism does not impact the ability to meet the NOx budget, the NOx emission reductions available to supplement the PM-10 budget shall only be those remaining after the NOx budget has been met.

PM2.5

EPA and FHWA have indicated that areas violating both the annual and 24-hour standards for PM2.5 must address both standards in the conformity determination. The San Joaquin Valley currently violates both standards, and the conformity determination includes both analyses. Please note that this includes both the 1997 standards and the 2006 24-hour standard (see discussion under Air Quality Designations Applicable to the San Joaquin Valley above).

The 2008 PM2.5 Plan (as revised in 2011) was approved by EPA on November 8, 2011, which contains motor vehicle emission budgets for PM2.5 and NOx established based on average annual daily emissions, as well as a trading mechanism. The motor vehicle emissions budget for PM2.5 includes directly emitted PM2.5 motor vehicle emissions from tailpipe, brake wear and tire wear. VOC, SOx, ammonia, and dust (from paved roads, unpaved roads, and road construction) were found to be insignificant and not included in the motor vehicle emission budgets for conformity purposes. The conformity budgets from Table 5 of the November 9, 2011 Federal Register are provided below and will be used to compare emissions resulting from the 2013 FTIP and 2011 RTP.

The Clean Air Act requires all states to attain the 1997 PM2.5 standards as expeditiously as practicable beginning in 2010, but by no later than April 5, 2015. States must identify their attainment dates based on the rate of reductions from their control strategies and the severity of the PM2.5 problem. Modeling must be used to verify that the control strategy is as expeditious as

practicable. The 2008 PM2.5 Plan shows that the San Joaquin Valley PM2.5 nonattainment area can attain the annual PM2.5 NAAQS in 2014. The SIP has identified subarea budgets for each MPO in the nonattainment area. For this Conformity Analysis, the SJV will continue to conduct determinations for subarea emission budgets as established in the applicable implementation plan.

**Table 1-4:
On-Road Motor Vehicle PM2.5 Emissions Budgets**
(tons per average annual day)

County	2012		2014	
	PM2.5	NOx	PM2.5	NOx
Fresno	1.5	35.7	1.1	31.4
Kern (SJV)	1.9	48.9	1.2	43.8
Kings	0.4	10.5	0.3	9.3
Madera	0.4	9.2	0.3	8.1
Merced	0.8	19.7	0.6	17.4
San Joaquin	1.1	24.5	0.9	21.6
Stanislaus	0.7	16.7	0.6	14.6
Tulare	0.7	15.7	0.5	13.8

The PM2.5 SIP (as revised in 2011) allows trading from the motor vehicle emissions budget for the PM2.5 precursor NOx to the motor vehicle emissions budget for primary PM2.5 using a 9 to 1 ratio. The trading mechanism allows the agencies responsible for demonstrating transportation conformity in the San Joaquin Valley to supplement the 2014 budget for PM2.5 with a portion of the 2014 budget for NOx, and use these adjusted motor vehicle emissions budgets for PM2.5 and NOx to demonstrate transportation conformity with the PM2.5 SIP for analysis years after 2014. As noted above, EPA approved the 2008 PM2.5 Plan (as revised in 2011) on November 9, 2011, which includes continued approval of the trading mechanism.

The trading mechanism will be used only for conformity analyses for analysis years after 2014. To ensure that the trading mechanism does not impact the ability to meet the NOx budget, the NOx emission reductions available to supplement the PM2.5 budget shall only be those remaining after the NOx budget has been met.

As noted above, the Transportation Conformity Rule PM2.5 and PM10 Amendments published on March 24, 2010 (effective April 23, 2010) allows 2006 PM2.5 areas with adequate or approved 1997 PM2.5 budgets to determine conformity for both of the NAAQS at the same time, using the budget test.

E. ANALYSIS YEARS

The conformity regulation (Section 93.118[b] and [d]) requires documentation of the years for which consistency with motor vehicle emission budgets must be shown. In addition, any interpolation performed to meet tests for years in which specific analysis is not required need to be documented.

For the selection of the horizon years, the conformity regulation requires: (1) that if the attainment year is in the time span of the transportation plan, it must be modeled; (2) the last year

forecast in the transportation plan must be a horizon year; and (3) horizon years may not be more than ten years apart. In addition, the conformity regulation requires that conformity must be demonstrated for each year for which the applicable implementation plan specifically establishes motor vehicle emission budgets.

Section 93.118(b)(2) clarifies that when a maintenance plan has been submitted, conformity must be demonstrated for the last year of the maintenance plan and any other years for which the maintenance plan establishes budgets in the time frame of the transportation plan. Section 93.118(d)(2) indicates that a regional emissions analysis may be performed for any years, the attainment year, and the last year of the plan’s forecast. Other years may be determined by interpolating between the years for which the regional emissions analysis is performed.

**Table 1-5:
San Joaquin Valley Conformity Analysis Years**

Pollutant	Budget Years ¹	Attainment/Maintenance Year	Intermediate Years	RTP Horizon Year
CO	NA	2018	2017/2025	2035
Ozone	2014/2017/2020	2023	2025	2035
PM-10	NA	2020	2025	2035
PM2.5	NA	2014	2017/2025	2035

¹ Budget years that are not in the time frame of the transportation plan are not included as analysis years (e.g., CO 2003 and 2010, Ozone 2008 and 2011, PM-10 2005, PM2.5 2012), although they may be used to demonstrate conformity.

Section 93.118(d)(2) indicates that the regional emissions analysis may be performed for any years in the time frame of the transportation plan provided they are not more than ten years apart and provided the analysis is performed for the attainment year (if it is in the time frame of the transportation plan) and the last year of the plan's forecast period. Emissions in years for which consistency with motor vehicle emissions budgets must be demonstrated, as required in paragraph (b) of this section (i.e., each budget year), may be determined by interpolating between the years for which the regional emissions analysis is performed. For CO, the analysis year 2018 will be interpolated from 2017 and 2025.

For PM2.5, the attainment year is 2014 for both the 1997 and 2006 Standards. On March 8, 2005, EPA issued Guidance for Determining the "Attainment Year" for Transportation Conformity in new 8-hour ozone and PM2.5 Nonattainment Areas (EPA, 2005a). Per CAA section 172(a)(2), all PM2.5 nonattainment areas will have an initial maximum statutory attainment date of April 5, 2010. However, the submitted 2008 PM2.5 Plan shows that the San Joaquin Valley PM2.5 nonattainment area can attain the annual PM2.5 NAAQS in 2014. In addition, the attainment year for the 2006 PM2.5 areas will be 2014. Since this is the same attainment year as the 1997 standards noted above, no changes to the conformity analysis years are required.

CHAPTER 2: LATEST PLANNING ASSUMPTIONS AND TRANSPORTATION MODELING

A. LATEST PLANNING ASSUMPTIONS

The Clean Air Act states that “the determination of conformity shall be based on the most recent estimates of emissions, and such estimates shall be determined from the most recent population, employment, travel, and congestion estimates as determined by the MPO or other agency authorized to make such estimates.” On January 18, 2001, the USDOT issued guidance developed jointly with EPA to provide additional clarification concerning the use of latest planning assumptions in conformity determinations (USDOT, 2001).

According to the conformity regulation, the time the conformity analysis begins is “the point at which the MPO or other designated agency begins to model the impact of the proposed transportation plan or TIP on travel and/or emissions.” The conformity analysis and initial modeling began in February 2012.

Key elements of the latest planning assumption guidance include:

- Areas are strongly encouraged to review and strive towards regular five-year updates of planning assumptions, especially population, employment and vehicle registration assumptions.
- The latest planning assumptions must be derived from the population, employment, travel and congestion estimates that have been most recently developed by the MPO (or other agency authorized to make such estimates) and approved by the MPO.
- Conformity determinations that are based on information that is older than five years should include written justification for not using more recent information. For areas where updates are appropriate, the conformity determination should include an anticipated schedule for updating assumptions.
- The conformity determination must use the latest existing information regarding the effectiveness of the transportation control measures (TCMs) and other implementation plan measures that have already been implemented.

The Madera County Transportation Commission uses the TP+/Cube Base transportation model. The model was validated in 2003 for the 2000 base year. The latest planning assumptions used in the transportation model validation and Conformity Analysis is summarized in Table 2-1.

It is important to note that the San Joaquin Valley has recently completed an ambitious effort to update and improve each of the MPO traffic models. The San Joaquin Valley Model Improvement Plan (MIP) was funded by a grant of \$2.5 million from Proposition 84 money. Although the MIP contract work is complete, the models continue to be refined. It is currently

anticipated that the models and validation/calibration report will be officially adopted as part of the 2014 RTP.

Table 2-1:
SUMMARY OF LATEST PLANNING ASSUMPTIONS FOR THE MADERA COUNTY TRANSPORTATION COMMISSION CONFORMITY ANALYSIS

Assumption	Year and Source of Data (MPO action)	Modeling	Next Scheduled Update
Population	Base Year: 2001 Department of Finance Projections: Department of Finance (DOF) County Population Projections from 2004 were used for the 2003 model validation.	This data is disaggregated to the TAZ level for input into the TP+/CUBE for the base year validation.	2010 Census Update
Employment	Base Year: Employment Development Department (EDD) published in 2001 was used for the 2000 base year validation. Projections: EDD data is projected to future years based on historical trends.	This data is disaggregated to the TAZ level for input into the TP+/CUBE for the base year validation.	It is anticipated that new EDD data will be included in the next transportation model update.
Traffic Counts	Traffic counts for the year 2000 were collected by MCTC and published by MCTC in the Madera County Traffic Monitoring Program 2001 Annual Report.	TP+/CUBE was validated using these traffic counts.	New 2010 traffic counts will be included in the next transportation model update.
Vehicle Miles of Travel	The 2003 model validation was included in the 2004 RTP, which was approved by the MCTC Policy Board on July 21, 2004.	TP+/CUBE is the transportation model used to estimate VMT in Madera County.	VMT is an output of the transportation model; VMT is affected by the TIP/RTP project updates and is included in each new conformity analysis.
Speeds	In general, Madera County does not have measureable congestion; therefore, posted speed limits are used in the transportation model validation. The model is validated using free flow speeds and common practice speed flow curves. Speed distributions were updated in EMFAC2007, using methodology approved by ARB and with information from the transportation model.	EMFAC2007	Posted speed limits will be updated in the next transportation model validation. No congestion is currently projected; a feedback loop will be included in the next transportation model.
Vehicle Registrations	EMFAC2007 is the most recent model for use in California conformity analyses. Vehicle	EMFAC2007	ARB has released EMFAC 11; However, it has not

	registration data is included by ARB in the model and cannot be updated by the user.		been approved by EPA for use in conformity analysis
State Implementation Plan Measures	Latest implementation status of commitments in prior SIPs.	Emission reduction credits consistent with the SIPs are post-processed via spreadsheets as documented in Ch. 4.	Updated for every conformity analysis.

B. SOCIOECONOMIC DATA

POPULATION, EMPLOYMENT AND LAND USE

The conformity regulation requires documentation of base case and projected population, employment, and land use used in the transportation modeling. USDOT/EPA guidance indicates that if the data is more than five years old, written justification for the use of older data must be provided. In addition, documentation is required for how land use development scenarios are consistent with future transportation system alternatives, and the reasonable distribution of employment and residences for each alternative.

Supporting Documentation:

Population and Employment was forecasted in consultation with local agency planning departments using a zero-sum approach based on the latest available state forecasts for Madera County. Then sub-allocated to regional areas boundaries and traffic analysis zones based upon the adopted local general plans. MCTC used Department of Finance (DOF) latest county-level projections, published in 2001, as the basis for the population forecast. The population and housing data for the base year 2000 was calibrated to 2000 Census Data in 2003. The countywide employment projections were based upon Employment Development Department (EDD) labor statistics published in 2001.

C. TRANSPORTATION MODELING

The San Joaquin Valley Metropolitan Planning Organizations (MPOs) utilize the TP+/Viper traffic modeling software. The Valley TPA regional traffic models consist of traditional four-step traffic forecasting models. They use land use, socioeconomic, and road network data to estimate facility-specific roadway traffic volumes. Each TPA model covers the appropriate county area, which is then divided into hundreds or thousands of individual traffic analysis zones (TAZs). In addition the model roadway networks include thousands of nodes and links. Link types include freeway, freeway ramp, other State route, expressway, arterial, collector, and local collector. Current and future-year road networks were developed considering local agency circulation elements of their general plans, traffic impact studies, capital improvement programs, and the State Transportation Improvement Program. The models use equilibrium, a capacity sensitive assignment methodology, and the data from the model for the emission estimates differentiates between peak and off-peak volumes and speeds. In addition, the model is reasonably sensitive to changes in time and other factors affecting travel choices. The results from model validation/calibration were analyzed for reasonableness and compared to historical trends.

Specific transportation modeling requirements in the conformity regulation are summarized below, followed by a description of how the MCTC transportation modeling methodology meets those requirements.

Madera County does not contain an urbanized area with population greater than 200,000, however a travel demand model has been used by MCTC since 1994 to forecast travel patterns. The model is run on the TP+/Cube Base software platform and covers the entire county, includes 300 traffic analysis zones, and does not include a mode-choice element, feedback loop, or peak-hour component.

TRAFFIC COUNTS

The conformity regulation requires documentation that a network-based travel model is in use that is validated against observed counts for a base year no more than 10 years before the date of the conformity determination. Document that the model results have been analyzed for reasonableness and compared to historical trends and explain any significant differences between past trends and forecasts (for per capita vehicle-trips, VMT, trip lengths mode shares, time of day, etc.).

Supporting Documentation:

The MCTC traffic model currently uses a base year of 2000 and was validated to 120 screenline and cordon counts taken in 2000. The model is operated under the TP+/Cube Base software platform and produces daily forecasts only (no peak period modeling is performed). At the completion of the validation process, all facility types were within acceptable parameters to traffic counts, with total model VMT within 1% of the target VMT.

SPEEDS

The conformity regulation requires documentation of the use of capacity sensitive assignment methodology and emissions estimates based on a methodology that differentiates between peak and off-peak volumes and speeds, and bases speeds on final assigned volumes. In addition, documentation of the use of zone-to-zone travel impedances to distribute trips in reasonable agreement with the travel times estimated from final assigned traffic volumes. Where transit is a significant factor, document that zone-to-zone travel impedances used to distribute trips are used to model mode split. Finally, document that reasonable methods were used to estimate traffic speeds and delays in a manner sensitive to the estimated volume of travel on each roadway segment represented in the travel model.

Supporting Documentation:

Speeds are based on posted speed limits and the data is regularly updated in consultation with local jurisdictions. The MCTC travel forecasting model does not include a feedback loop that uses congested travel times as additional input to the trip distribution step. MCTC will consider including a feedback loop in the next update of the model.

TRANSIT

The conformity regulation requires documentation of any changes in transit operating policies and assumed ridership levels since the previous conformity determination. Document the use of the latest transit fares and road and bridge tolls.

Supporting Documentation:

The Madera County Traffic model does not include a mode choice component.

VALIDATION/CALIBRATION

The conformity regulation requires documentation that the model results have been analyzed for reasonableness and compared to historical trends and explain any significant differences between past trends and forecasts (for per capita vehicle-trips, VMT, trip lengths mode shares, time of day, etc.). In addition, documentation of how travel models are reasonably sensitive to changes in time, cost, and other factors affecting travel choices is required. The use of HPMS, or a locally developed count-based program or procedures that have been chosen to reconcile and calibrate the network-based travel model estimates of VMT must be documented.

Supporting Documentation:

The models were validated by comparing its estimates of base year traffic conditions with base year traffic counts. The base year validations meet standard criteria for replicating total traffic volumes on various road types and for percent error on links. The base year validation also meets standard criteria for percent error relative to traffic counts on groups of roads (screenlines) throughout each county.

For Serious and above nonattainment areas, transportation conformity guidance, Section 93.122(b)(3) of the conformity regulation states:

Highway Performance Monitoring System (HPMS) estimates of vehicle miles traveled (VMT) shall be considered the primary measure of VMT within the portion of the nonattainment or maintenance area and for the functional classes of roadways included in HPMS, for urban areas which are sampled on a separate urban area basis. For areas with network-based travel models, a factor (or factors) may be developed to reconcile and calibrate the network-based travel model estimates of VMT in the base year of its validation to the HPMS estimates for the same period. These factors may then be applied to model estimates of future VMT. In this factoring process, consideration will be given to differences between HPMS and network-based travel models, such as differences in the facility coverage of the HPMS and the modeling network description. Locally developed count-based programs and other departures from these procedures are permitted subject to the interagency consultation procedures.

MCTC's network-based travel model was validated in 2003 using HPMS estimates in the model calibration process.

FUTURE NETWORKS

The conformity regulation requires that a listing of regionally significant projects and federally-funded non-regionally significant projects assumed in the regional emissions analysis be provided in the conformity documentation. In addition, all projects that are exempt must also be documented.

§93.106(a)(2)ii and §93.122(a)(1) requires that regionally significant additions or modifications to the existing transportation network that are expected to be open to traffic in each analysis year be documented for both Federally funded and non-federally funded projects (see Appendix B).

§93.122(a)(1) requires that VMT for non-regionally significant Federal projects is accounted for in the regional emissions analysis. It is assumed that all SJV MPOs include these projects in the transportation network (see Appendix B).

§93.126, §93.127, §93.128 require that all projects in the TIP/RTP that are exempt from conformity requirements or exempt from the regional emissions analysis be documented. In addition, the reason for the exemption (Table 2, Table 3, traffic signal synchronization) must also be documented (see Appendix B). It is important to note that the CTIPs exemption code is provided in response to FHWA direction.

Supporting Documentation:

The build highway networks include qualifying projects based on the DRAFT 2013 Federal Transportation Improvement Program (2013 FTIP) and 2011 Regional Transportation Plan (2011 RTP). Not all of the street and freeway projects included in the TIP/RTP qualify for inclusion in the highway network. Projects that call for study, design, right-of-way acquisition, or non-capacity improvements are not included in the networks. When these projects result in actual facility construction projects, the associated capacity changes are coded into the network as appropriate. Since the networks define capacity in terms of number of through traffic lanes, only construction projects that increase the lane-miles of through traffic are included.

Generally, Valley TPA highway networks include all roadways included in the county or cities classified system. These links typically include all freeways plus expressways, arterials, collectors and local collectors. Highway networks also include regionally significant planned local improvements from Transportation Impact Fee Programs and developer funded improvements required to mitigate the impact of a new development.

Small-scale local street improvements contained in the TIP/RTP are not coded on the highway network. Although not explicitly coded, traffic on collector and local streets is simulated in the models by use of abstract links called “centroid connectors”. These represent local streets and driveways that connect a neighborhood to a regionally-significant roadway. Model estimates of centroid connector travel are reconciled against HPMS estimates of collector and local street travel.

D. TRAFFIC ESTIMATES

A summary of the population, employment, and travel characteristics for the Madera County Transportation Commission transportation modeling area for each scenario in the Conformity Analysis is presented in Table 2-2.

**Table 2-2:
Traffic Network Comparison for Horizon Years Evaluated in Conformity Analysis**

Horizon Year	Total Population (thousands)	Employment (thousands)	Average Weekday VMT (millions)	Total Lane Miles
2014	195	58	6.0	N/A
2017	210	63	6.3	N/A
2020	225	68	7.3	2,219
2023	242	73	8.0	N/A
2025	252	76	8.5	2,246
2035	313	85	9.3	2,314

E. VEHICLE REGISTRATIONS

Madera County Transportation Commission does not estimate vehicle registrations, age distributions or fleet mix. Rather, current forecasted estimates for these data are developed by CARB and included in the EMFAC2007 model found at http://www.arb.ca.gov/msei/onroad/latest_version.htm. EMFAC2007 is the most recent model for use in California conformity analyses. Vehicle registrations, age distribution and fleet mix are developed and included in the model by CARB and cannot be updated by the user. ARB has released EMFAC 11; however, it has not been approved by EPA for use in conformity analysis.

F. STATE IMPLEMENTATION PLAN MEASURES

The air quality modeling procedures and associated spreadsheets contained in Chapter 3 Air Quality Modeling assume emission reductions consistent with the applicable air quality plans. The emission reductions assumed for these committed measures reflect the latest implementation status of these measures. Committed control measures in the applicable air quality plans that reduce mobile source emissions and are used in conformity, are summarized below.

OZONE

Committed control measures in the 2007 Ozone 8-hour Plan (as revised in 2011) that reduce mobile source emissions and are included in the conformity demonstration are shown in Table 2-3.

**Table 2-3:
2007 Ozone Plan Measures Assumed in the Conformity Analysis**

Measure Description	Pollutants
Existing Local Reductions: Rule 9310 (School Buses)	Summer NOx
Existing State Reductions: Carl Moyer	Summer ROG

Program & AB 1493 GHG Standards	Summer NOx
New/Proposed Local Reductions: Rule 9410 (Employer Based Trip Reduction)	Summer ROG Summer NOx

NOTE: This table is consistent with the 2007 8-Hour Ozone Plan (as revised in 2011) which was approved by EPA on March 1, 2012 (effective April 30, 2012).

PM-10

Committed control measures in the EPA approved 2007 PM-10 Maintenance Plan that reduce mobile source emissions and are included in the conformity demonstration are shown in Table 2-4.

**Table 2-4:
2007 PM-10 Maintenance Plan Measures Assumed in the Conformity Analysis**

Measure Description	Pollutants
ARB existing Reflash, Idling, and Moyer	PM-10 annual exhaust NOx annual exhaust
District Rule 8061	PM-10 paved road dust PM-10 unpaved road dust
District Rule 8021 Controls	PM-10 road construction dust

PM2.5

Committed control measures in the 2008 PM2.5 Plan (as revised in 2011) that reduce mobile source emissions and are included in the conformity demonstration are shown in Table 2-5.

**Table 2-5:
2008 PM2.5 Plan Measures Assumed in the Conformity Analysis**

Measure Description	Pollutants
Existing Local Reductions: Rule 9310 (School Buses)	Annual PM2.5 Annual NOx
Existing State Reductions: Carl Moyer Program & AB 1493 GHG Standards	Annual PM2.5 Annual NOx
New/Proposed State Reductions: Smog Check & Truck Model	Annual PM2.5 Annual NOx

NOTE: This table is consistent with the 2008 PM2.5 Plan (as revised in 2011) as approved by EPA on November 9, 2011 (effective January 9, 2012).

CHAPTER 3: AIR QUALITY MODELING

The model used to estimate vehicle exhaust emissions for carbon monoxide, ozone precursors, and particulate matter is EMFAC2007. CARB emission factors for PM-10 have been used to calculate re-entrained paved and unpaved road dust, and fugitive dust associated with road construction. For the Conformity Analysis, model inputs not dependent on the TIP or RTP are consistent with the applicable SIP, which include:

- The 2004 Revision to the California State Implementation Plan for Carbon Monoxide was approved by EPA on November 30, 2005 (effective January 30, 2006).
- The 2007 Ozone Plan (as revised in 2011) was approved by EPA on March 1, 2012 (effective April 30, 2012) The 2007 PM-10 Maintenance Plan, which included revisions to the attainment plan, was approved (with minor technical corrections to the conformity budgets) by EPA on November 12, 2008.
- The 2008 PM2.5 Plan (as revised in 2011) was approved by EPA on November 9, 2011 (effective January 9, 2012).

The conformity regulation requirements for the selection of the horizon years are summarized in Chapter 1; regional emissions have been estimated for the horizon years summarized in Table 1-5.

A. EMFAC2007

The EMFAC model (short for EMISSION FACTOR) is a computer model that can estimate emission rates for motor vehicles for calendar years from 1970 to 2040 operating in California. Pollutant emissions for hydrocarbons, carbon monoxide, nitrogen oxides, particulate matter, lead, sulfur oxides, and carbon dioxide are output from the model. Emissions are calculated for passenger cars, eight different classes of trucks, motorcycles, urban and school buses and motor homes.

EMFAC is used to calculate current and future inventories of motor vehicle emissions at the state, county, air district, air basin, or county within air basin level. EMFAC contains default vehicle activity data that can be used to estimate a motor vehicle emission inventory in tons/day for a specific day, month, or season, and as a function of ambient temperature, relative humidity, vehicle population, mileage accrual, miles of travel and speeds.

Section 93.111 of the conformity regulation requires the use of the latest emission estimation model in the development of conformity determinations. EMFAC2007 is the latest update to the EMFAC model for use by California State and local governments to meet Clean Air Act (CAA, 1990) requirements. On January 18, 2008 EPA announced the availability of this latest version of the California EMFAC model for use in SIP development in California. NOTE: ARB has released EMFAC 11; however, it has not been approved by EPA for use in conformity analysis.

Since the transportation conformity regulation (40 CFR 93.110) requires areas to use the latest information for estimating vehicle activity, EPA approved the CARB methodology for updating

the default vehicle activity data in EMFAC2002 in April 2003. CARB's methodology, "Recommended Methods for Use of EMFAC2002 to Develop Motor Vehicle Emission Budgets and Assess Conformity," explains how vehicle activity data should be updated. This methodology has not been updated for EMFAC2007, but remains applicable. The methodology explains how each parameter associated with vehicle activity was originally developed in EMFAC, how each parameter is related, and how each can be updated when new data becomes available. These relationships are important when adjusting vehicle trips or VMT (vehicle miles traveled). For example, VMT in EMFAC2007 is directly related to vehicle population and mileage accrual rate. Similarly, start and evaporative vehicle emissions are also related to vehicle population levels. If new VMT data is available, CARB suggests modifying the input vehicle population levels, instead of directly inputting new VMT data, so that start and evaporative emissions are revised appropriately. Updated vehicle activity data can also be input to EMFAC using the WIS interface.

A transportation data template has been prepared to summarize the transportation model output for use in EMFAC 2007. The template includes allocating VMT by speed bin by modeling period, as well as creating a 24-hour VMT percentage by speed bin array for input into EMFAC 2007.

EMFAC was used to estimate exhaust emissions for CO, ozone, PM-10, and PM2.5 conformity demonstrations consistent with the applicable air quality plan. These estimates are further reduced by SIP measures as documented in Chapter 2.

B. ADDITIONAL PM-10 ESTIMATES

PM-10 emissions for reentrained dust from travel on paved and unpaved roads will be calculated separately from roadway construction emissions. It is important to note that with the final approval of the 2007 PM-10 Maintenance Plan, EPA approved a methodology to calculate PM-10 emissions from paved and unpaved roads in future San Joaquin Valley conformity determinations. The Conformity Analysis uses these methodologies and estimates construction-related PM-10 emissions consistent with the 2007 PM-10 Maintenance Plan. The National Ambient Air Quality Standards for PM-10 consists of a 24-hour standard, which is represented by the motor vehicle emissions budgets established in the 2007 PM-10 Maintenance Plan. It is important to note that EPA revoked the annual PM-10 Standard on October 17, 2006. The PM-10 emissions calculated for the conformity analysis represent emissions on an annual average day and are used to satisfy the budget test.

CALCULATION OF REENTRAINED DUST FROM PAVED ROAD TRAVEL

On January 13, 2011 EPA released a new method for estimating re-entrained road dust emissions from cars, trucks, buses, and motorcycles on paved roads. On February 4, 2011, EPA published the *Official Release of the January 2011 AP-42 Method for Estimating Re-Entrained Road Dust from Paved Roads* approving the January 2011 method for use in regional emissions analysis and beginning a two year conformity grace period, after which use of the January 2011 AP-42 method is required (e.g. February 4, 2013) in regional conformity analyses.

The road dust calculations have been updated to reflect this new methodology. More specifically, the emission factor equation and k value (particle size multiplier) have been updated accordingly. CARB default assumptions for roadway silt loading by roadway class, average vehicle weight, and rainfall correction factor remain unchanged. Emissions are estimated for five roadway

classes including freeways, arterials, collectors, local roads, and rural roads. Countywide VMT information is used for each road class to prepare the emission estimates.

CALCULATION OF REENTRAINED DUST FROM UNPAVED ROAD TRAVEL

The base methodology for estimating unpaved road dust emissions is based on a CARB methodology in which the miles of unpaved road are multiplied by the assumed VMT and an emission factor. In the 2007 PM-10 Maintenance Plan, it is assumed that all non-agricultural unpaved roads within the San Joaquin Valley receive 10 vehicle passes per day. An emission factor of 2.0 lbs PM-10/VMT is used for the unpaved road dust emission estimates. Emissions are estimated for city/county maintained roads.

CALCULATION OF PM-10 FROM ROADWAY CONSTRUCTION

Section 93.122(e) of the Transportation Conformity regulation requires that PM-10 from construction-related fugitive dust be included in the regional PM-10 emissions analysis, if it is identified as a contributor to the nonattainment problem in the PM-10 implementation plan. The emission estimates are based on a CARB methodology in which the miles of new road built are converted to acres disturbed, which is then multiplied by a generic project duration (i.e., 18 months) and an emission rate. Emission factors are unchanged from the previous estimates at 0.11 tons PM-10/acre-month of activity. The emission factor includes the effects of typical control measures, such as watering, which is assumed to reduce emissions by about 50%. Updated activity data (i.e., new lane miles of roadway built) is estimated based on the highway and transit construction projects in the TIP/RTP.

PM-10 TRADING MECHANISM

The PM-10 SIP allows trading from the motor vehicle emissions budget for the PM-10 precursor NOx to the motor vehicle emissions budget for primary PM-10 using a 1.5 to 1 ratio. The trading mechanism will be used only for conformity analyses for analysis years after 2005.

C. PM2.5 APPROACH

1997 Standard - EPA and FHWA have indicated that areas violating both the annual and 24-hour standards for PM2.5 must address both standards in the conformity determination. The San Joaquin Valley currently violates both standards, and the conformity determination includes both analyses.

EPA issued guidance for creating annual on-road mobile source emission inventories for PM2.5 in August 2005 (EPA, 2005a). The guidance indicates that all areas currently designated nonattainment for PM2.5 are violating the annual standard for the pollutant. Therefore, in order to be consistent with the standard, PM2.5 nonattainment areas must develop annual emission inventories for the purpose of developing SIP budgets and demonstrating transportation conformity.

2006 Standard – EPA published 2006 24-hour PM2.5 standard Nonattainment area designations on November 13, 2009 with an effective date of December 14, 2009. Conformity to the 2006 24-hour PM2.5 standard will apply December 14, 2010. The 1997 standards will continue to apply as they were not revoked. It is important to note that the 2006 24-hour PM2.5 nonattainment area

boundary for the San Joaquin Valley is exactly the same as the nonattainment area boundary for the 1997 annual standard.

The following PM2.5 approach addresses both the 1997 standards and the 2006 24-hour standard

EMFAC2007 includes data for temperature, relative humidity, and characteristics for gasoline fuel sold that vary by geographic area, calendar year, and month and season. The annual average represents an average of all the monthly inventories. As a result, EMFAC will be run to estimate direct PM2.5 and NOx from motor vehicles for an annual average day that will provide the information for both the annual and 24-hour PM2.5 standards.

EPA guidance indicates that State and local agencies need to consider whether VMT varies during the year enough to affect PM2.5 annual emission estimates. The availability of seasonal or monthly VMT data and the corresponding variability of that data need to be evaluated.

PM2.5 areas that are currently using network based travel models must continue to use them when calculating annual emission inventories. The guidance indicates that the interagency consultation process should be used to determine the appropriate approach to produce accurate annual inventories for a given nonattainment area. Whichever approach is chosen, that approach should be used consistently throughout the analysis for a given pollutant or precursor. The interagency consultation process should also be used to determine whether significant seasonal variations in the output of network based travel models are expected and whether these variations would have a significant impact on PM2.5 emission estimates.

The SJV MPOs all use network based travel models. However, the models only estimate average weekday VMT. The SJV MPOs do not have the data or ability to estimate seasonal variation at this time. Data collection and analysis for some studies are in the preliminary phases and cannot be relied upon for other analyses. Some statewide data for the seasonal variation of VMT on freeways does exist. However, traffic patterns on freeways do not necessarily represent the typical traffic pattern for local streets and arterials.

In many cases, traffic counts are sponsored by the MPOs and conducted by local jurisdictions. While some local jurisdictions may collect weekend or seasonal data, typical urban traffic counts occur on weekdays (Tuesday through Thursday). Data collection must be more consistent in order to begin estimation of daily or seasonal variation.

The SJV MPOs believe that the average annual day calculated from the current traffic models and EMFAC2007 represent the most accurate data available. The MPOs will continue to discuss and research options that look at how VMT varies by month and season according to the local traffic models.

It is important to note that the guidance indicates that EPA expects the most thorough analysis for developing annual inventories will occur during the development of the SIP, taking into account the needs and capabilities of air quality modeling tools and the limitations of available data. Prior to the development of the SIP, State and local air quality and transportation agencies may decide to use simplified methods for regional conformity analyses.

It is important to note that the San Joaquin Valley 2008 PM2.5 Plan has been developed and submitted to EPA. The annual inventory methodology contained in the plan and used to establish

emissions budgets is consistent with the methodology used herein. The regional emissions analyses in PM2.5 nonattainment areas must consider directly emitted PM2.5 motor vehicle emissions from tailpipe, brake wear, and tire wear. In California, areas will use EMFAC2007. As indicated under the Conformity Test Requirements, re-entrained road dust and construction-related fugitive dust from highway or transit projects is not included at this time. In addition, NOx emissions are included; however, VOC, SOx, and ammonia emissions are not.

1997 Standard – The 2008 PM2.5 Plan contains motor vehicle emission budgets for PM2.5 and NOx established based on average annual daily emissions. The motor vehicle emissions budget for PM2.5 includes directly emitted PM2.5 motor vehicle emissions from tailpipe, brake wear and tire wear. VOC, SOx, ammonia, and dust (from paved roads, unpaved roads, and road construction) were found to be insignificant and not included in the motor vehicle emission budgets for conformity purposes.

2006 Standard – In accordance with Transportation Conformity Rule PM2.5 and PM10 Amendments published on March 24, 2010 (effective April 23, 2010) for 2006 PM2.5 NAAQS Nonattainment areas, if a 2006 PM2.5 area has adequate or approved SIP budgets that address the 1997 standards, it must use the budget test to determine conformity for both of the NAAQS at the same time.

PM2.5 TRADING MECHANISM

The PM2.5 SIP (as revised in 2011) allows trading from the motor vehicle emissions budget for the PM2.5 precursor NOx to the motor vehicle emissions budget for primary PM2.5 using a 9 to 1 ratio. The trading mechanism will be used only for conformity analyses for analysis years after 2014.

D. SUMMARY OF PROCEDURES FOR REGIONAL EMISSIONS ESTIMATES

It is important to note that the 2013 FTIP conformity procedures and documentation is fundamentally based on the 2011 TIP/RTP Conformity analysis with various updates as appropriate (e.g., new conformity budgets). Because EMFAC 2007 will continue to be used, previous step-by-step air quality modeling procedures have not been updated; rather, the worksheets have been updated as noted below. These updates were provided for interagency consultation in February 2012. Interagency consultation partners were requested to provide comments or concurrence. EPA concurred with the updated procedures; minor data entry errors were corrected in response to comments received from ARB. Documentation of the conformity analysis is provided in Appendix C, including:

- 2013 adjust_vmt Spreadsheet (updated analysis years only)
- 2013 Conformity EMFAC Spreadsheet (updated analysis years and new line item emission reductions to be consistent with the 2007 8-Hour Ozone Plan as revised in 2011 and 2008 PM2.5 Plan as revised in 2011)
- 2013 Conformity Paved Road Spreadsheet (updated to include January 2011 EPA update to AP-42 methodology)
- 2013 Conformity Unpaved Road Dust Spreadsheet

- 2013 Conformity Construction Spreadsheet
- 2013 Conformity Trading Spreadsheets (PM-10 and PM2.5) (new PM2.5 sheet developed consistent with 2008 PM2.5 Plan as revised in 2011)
- 2013 Conformity Totals Spreadsheet (updated to include new conformity budgets consistent with the 2007 8-Hour Ozone Plan as revised in 2011 and 2008 PM2.5 Plan as revised in 2011 and corresponding EPA approvals)

CHAPTER 4: TRANSPORTATION CONTROL MEASURES

This chapter provides an update of the current status of transportation control measures identified in applicable implementation plans. Requirements of the Transportation Conformity regulation relating to transportation control measures (TCMs) are presented first, followed by a review of the applicable air quality implementation plans and TCM findings for the TIP/RTP.

A. TRANSPORTATION CONFORMITY REGULATION REQUIREMENTS FOR TCMS

The Transportation Conformity regulation requires that the TIP/RTP “must provide for the timely implementation of TCMs in the applicable implementation plan.” The Federal definition for the term “transportation control measure” is provided in 40 CFR 93.101:

“any measure that is specifically identified and committed to in the applicable implementation plan that is either one of the types listed in Section 108 of the CAA [Clean Air Act], or any other measure for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions. Notwithstanding the first sentence of this definition, vehicle technology based, fuel-based, and maintenance-based measures which control the emissions from vehicles under fixed traffic conditions are not TCMs for the purposes of this subpart.”

In the Transportation Conformity regulation, the definition provided for the term “applicable implementation plan” is:

“Applicable implementation plan is defined in section 302(q) of the CAA and means the portion (or portions) of the implementation plan, or most recent revision thereof, which has been approved under section 110, or promulgated under section 110(c), or promulgated or approved pursuant to regulations promulgated under section 301(d) and which implements the relevant requirements of the CAA.”

Section 108(f)(1) of the Clean Air Act as amended in 1990 lists the following transportation control measures and technology-based measures:

- (i) programs for improved public transit;
- (ii) restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles;
- (iii) employer-based transportation management plans, including incentives;
- (iv) trip-reduction ordinances;
- (v) traffic flow improvement programs that achieve emission reductions;
- (vi) fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit service;

- (vii) programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use;
- (viii) programs for the provision of all forms of high-occupancy, shared-ride services;
- (ix) programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place;
- (x) programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas;
- (xi) programs to control extended idling of vehicles;
- (xii) programs to reduce motor vehicle emissions, consistent with title II, which are caused by extreme cold start conditions;
- (xiii) employer-sponsored programs to permit flexible work schedules;
- (xiv) programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity;
- (xv) programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. For purposes of this clause, the Administrator shall also consult with the Secretary of the Interior; and
- (xvi) program to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks.

TCM REQUIREMENTS FOR A TRANSPORTATION PLAN

The EPA regulations in 40 CFR 93.113(b) indicate that transportation control measure requirements for transportation plans are satisfied if two criteria are met:

“(1) The transportation plan, in describing the envisioned future transportation system, provides for the timely completion or implementation of all TCMs in the applicable implementation plan which are eligible for funding under Title 23 U.S.C. or the Federal Transit Laws, consistent with schedules included in the applicable implementation plan.

(2) Nothing in the transportation plan interferes with the implementation of any TCM in the applicable implementation plan.”

TCM REQUIREMENTS FOR A TRANSPORTATION IMPROVEMENT PROGRAM

Similarly, in 40 CFR Section 93.113(c), EPA specifies three TCM criteria applicable to a transportation improvement program:

“(1) An examination of the specific steps and funding source(s) needed to fully implement each TCM indicates that TCMs which are eligible for funding under title 23 U.S.C. or the Federal Transit Laws are on or ahead of the schedule established in the applicable implementation plan, or, if such TCMs are behind the schedule established in the applicable implementation plan, the MPO and DOT have determined that past obstacles to implementation of the TCMs have been identified and have been or are being overcome,

and that all State and local agencies with influence over approvals or funding for TCMs are giving maximum priority to approval or funding of TCMs over other projects within their control, including projects in locations outside the nonattainment or maintenance area;

(2) If TCMs in the applicable implementation plan have previously been programmed for Federal funding but the funds have not been obligated and the TCMs are behind the schedule in the implementation plan, then the TIP cannot be found to conform:

- if the funds intended for those TCMs are reallocated to projects in the TIP other than TCMs, or
- if there are no other TCMs in the TIP, if the funds are reallocated to projects in the TIP other than projects which are eligible for Federal funding intended for air quality improvement projects, e.g., the Congestion Mitigation and Air Quality Improvement Program;

(3) Nothing in the TIP may interfere with the implementation of any TCM in the applicable implementation plan.”

B. APPLICABLE AIR QUALITY IMPLEMENTATION PLANS

Only transportation control measures from applicable implementation plans for the San Joaquin Valley region are required to be updated for this analysis. For the Conformity Analysis, the applicable implementation plans, according to the definition provided at the start of this chapter, are summarized below.

APPLICABLE IMPLEMENTATION PLAN FOR OZONE

The 2007 Ozone Plan (as revised in 2011) was approved by EPA on March 1, 2012 (effective April 30, 2012). However, the Plan does not include TCMs for the San Joaquin Valley.

APPLICABLE IMPLEMENTATION PLAN FOR PM-10

The 2007 PM-10 Maintenance Plan was approved by EPA on November 12, 2008. No new local agency control measures were included in the Plan.

The Amended 2003 PM-10 Plan was approved by EPA on April 28, 2004 (effective June 25, 2004). A local government control measure assessment was completed for this plan. The analysis focused on transportation-related fugitive dust emissions, which are not TCMs by definition. The local government commitments are included in the *Regional Transportation Planning Agency Commitments for Implementation Document, April 2003*.

However, the *Amended 2002 and 2005 Ozone Rate of Progress Plan* contains commitments that reduce ozone related emissions; these measures are documented in the *Regional Transportation Planning Agency Commitments for Implementation Document, April 2002*. These commitments are included by reference in the Amended 2003 PM-10 Plan to provide emission reductions for precursor gases and help to address the secondary particulate problem. Since these commitments are included in the Plan by reference, the commitments were approved by EPA as TCMs.

APPLICABLE IMPLEMENTATION PLAN FOR PM2.5

The 2008 PM2.5 Plan (as revised in 2011) was approved by EPA on November 9, 2011 (effective January 9, 2012). However, the Plan does not include TCMs for the San Joaquin Valley.

C. IDENTIFICATION OF 2002 RACM THAT REQUIRE TIMELY IMPLEMENTATION DOCUMENTATION

As part of the 2004 Conformity Determination, FHWA requested that each SIP (Reasonably Available Control Measure - RACM) commitment containing Federal transportation funding and a transportation project and schedule be addressed more specifically. FHWA verbally requested documentation that the funds were obligated and the project was implemented as committed to in the SIP.

The RTPA Commitment Documents, Volumes One and Two, dated April 2002 (Ozone RACM) were reviewed, using a "Summary of Commitments" table. Commitments that contain specific Federal funding/transportation projects/schedules were identified for further documentation. In some cases, local jurisdictions used the same Federal funding/transportation projects/schedules for various measures; these were identified as combined with ("comb w/") reference as appropriate. A not applicable ("NA") was noted where federally-funded project is vehicle technology based, fuel based, and maintenance based measures (e.g., LEV program, retrofit programs, clean fuels - CNG buses, etc.).

In addition, the RTPA Commitment Document, Volume Three, dated April 2003 (PM-10 BACM) was reviewed, using the Summary of Commitments table. Commitments that contain specific Congestion Mitigation and Air Quality (CMAQ) funding for the purchase and/or operation of street sweeping equipment have been identified. Only one commitment (Fresno - City of Reedley) was identified.

The Project TID Table was developed to provide implementation documentation necessary for the measures identified. Detailed information is summarized in the first five columns, including the commitment number, agency, description, funding and schedule (if applicable).

For each project listed, the TIP in which the project was programmed, as well as the project ID and description have been provided. In addition, the current implementation status of the project has been included (e.g., complete, under construction, etc). MPO staff determined this information in consultation with the appropriate local jurisdiction. Any projects not implemented according to schedule or project changes are explained in the project status column. These explanations are consistent with the guidance and regulations provided in the Transportation Conformity regulation.

Supplemental documentation was provided to FHWA in August and September 2004 in response to requests for information on timely implementation of TCMs in the San Joaquin Valley. The supplemental documentation included the approach, summary of interagency consultation correspondence, and three tables completed by each of the eight MPOs. The Supplemental Documentation was subsequently approved by FHWA as part of the 2004 Conformity Determination.

The Project TID table that was prepared at the request of FHWA for the 2004 Conformity Analysis has been updated in each subsequent conformity analysis (e.g., 8-hour, PM2.5, 2007 and 2009 TIP). This documentation has been updated as part of this Conformity Analysis. A summary of this information is provided in Appendix E.

In March 2005, the SJV MPOs began interagency consultation with FHWA and EPA to address outstanding RACM/TCM issues. In general, criteria were developed to identify commitments that require timely implementation documentation. The criteria were applied to the 2002 RACM Commitments approved by reference as part of the Amended 2003 PM-10 Plan. In April 2006, EPA transmitted final tables that identified the approved RACM commitments that require timely implementation documentation for the Conformity Analysis. Subsequently, an approach to provide timely implementation documentation was developed in consultation with FHWA.

A new 2002 RACM TID Table was prepared in 2006 to address the more general RACM commitments that require additional timely implementation documentation per EPA. A brief summary of the commitment, including finite end dates if applicable, is included for each measure. The MPOs provided a status update regarding implementation in consultation with their member jurisdictions. If a specific project has been implemented, it is included in the Project TID Table under "Additional Projects Identified". This documentation was included in the Conformity Analysis for the 2007 TIP and 2004 RTP (as amended) that was approved by FHWA in October 2006. The 2002 RACM TID Table has been updated part of this Conformity Analysis. A summary of this information is provided in Appendix E.

D. TCM FINDINGS FOR THE TIP AND REGIONAL TRANSPORTATION PLAN

Based on a review of the transportation control measures contained in the applicable air quality plans, as documented in the two tables contained in Appendix E, the required TCM conformity findings are made below:

The TIP/RTP provide for the timely completion or implementation of the TCMs in the applicable air quality plans. In addition, nothing in the TIP or RTP interferes with the implementation of any TCM in the applicable implementation plan, and priority is given to TCMs.

E. RTP CONTROL MEASURE ANALYSIS IN SUPPORT OF 2003 PM-10 PLAN

In May 2003, the San Joaquin Valley MPO Executive Directors committed to conduct feasibility analyses as part of each new RTP in support of the 2003 PM-10 Plan. This commitment was retained in the 2007 PM-10 Maintenance Plan. In accordance with this commitment, MCTC undertook a process to identify and evaluate potential control measures that could be included in the 2011 RTP. The analysis of additional measures included verification of the feasibility of the measures in the PM-10 Plan BACM analysis, as well as an analysis of new PM-10 commitments from other PM-10 nonattainment areas.

A summary of the process to identify potential long-range control measures analysis and results to be evaluated as part of the RTP development was transmitted to the Interagency Consultation (IAC) partners for review. FHWA and EPA concurred with the summary of the long-range control measure approach in September 2009.

The Local Government Control Measures considered in the PM-10 Plan BACM analysis that were considered for inclusion in the 2011 RTP included:

- Paving or Stabilizing Unpaved Roads and Alleys
- Curbing, Paving, or Stabilizing Shoulders on Paved Roads
- Frequent Routine Sweeping or Cleaning of Paved Roads (i.e., funding allocation for the purchase of PM-10 efficient street sweepers for member jurisdictions).

It is important to note that the first three measures considered in the PM-10 Plan BACM analysis (i.e., access points, street cleaning requirements, and erosion clean up) are not applicable for inclusion in the RTP.

With the adoption of each new RTP, the MPOs will consider the feasibility of these measures, as well as identify any other new PM-10 measures that would be relevant to the San Joaquin Valley. MCTC also considered PM-10 commitments from other PM-10 nonattainment areas that had been developed since the previous RTP was approved. Federal websites were reviewed for any PM-10 plans that have been adopted since 2007. New PM-10 plans were developed for Imperial County and Owens Valley (California), Maricopa County and Miami (Arizona), and the Municipality of Guaynabo (Puerto Rico).

Only the Maricopa County PM-10 plan contained any new measures for possible inclusion in the 2011 RTP. In December 2007, the Maricopa Association of Governments (MAG) developed the “Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area,” which contained commitments to reduce PM-10 emissions. The MAG PM-10 Plan contains one new commitment applicable to the San Joaquin Valley, which indicates that the Arizona Department of Transportation (ADOT) would commit to repaving or overlaying paved roads with rubberized asphalt that reduces PM-10 emissions by reducing vehicle tire wear. Overlaying freeways with rubberized asphalt is part of ADOT’s “Quiet Pavement” program to mitigate highway noise. Rubberized asphalt also affects PM-10 emissions, as PM-10 emissions rates from tire wear on rubberized asphalt are 30 to 50 percent lower than on Portland Cement Concrete. Therefore, the ADOT program continues with multiple purposes, which are to reduce PM-10 emissions and to mitigate noise. Therefore, as part of the 2011 RTP, MCTC also considered a commitment to “Repave or overlay paved roads with rubberized asphalt”.

Based on consultation with CARB and the Air District, MCTC considered priority funding allocations in the 2011 RTPs for PM-10 and NO_x emission reduction projects in the post-attainment year timeframe that go beyond the emission reduction commitments made for the attainment year 2010 for the following four measures:

- (1) Paving or Stabilizing Unpaved Roads and Alleys
- (2) Curbing, Paving, or Stabilizing Shoulders on Paved Roads

- (3) Frequent Routine Sweeping or Cleaning of Paved Roads (i.e., funding allocation for the purchase of PM-10 efficient street sweepers for member jurisdictions); and
- (4) Repave or Overlay Paved Roads with Rubberized Asphalt

There is no “new” RTP development with 2013 FTIP. As a result, there is no update to this section with respect to inclusion of additional long-range local government control measures.

CHAPTER 5: INTERAGENCY CONSULTATION

The requirements for consultation procedures are listed in the Transportation Conformity Regulations under section 93.105. Consultation is necessary to ensure communication and coordination among air and transportation agencies at the local, State and Federal levels on issues that would affect the conformity analysis such as the underlying assumptions and methodologies used to prepare the analysis. Section 93.105 of the conformity regulation notes that there is a requirement to develop a conformity SIP that includes procedures for interagency consultation, resolution of conflicts, and public consultation as described in paragraphs (a) through (e). Section 93.105(a)(2) states that prior to EPA approval of the conformity SIP, “MPOs and State departments of transportation must provide reasonable opportunity for consultation with State air agencies, local air quality and transportation agencies, DOT and EPA, including consultation on the issues described in paragraph (c)(1) of this section, before making conformity determinations.” The Air District adopted Rule 9120 Transportation Conformity on January 19, 1995 in response to requirements in Section 176(c)(4)(c) of the Clean Air Act as amended in 1990. Since EPA has not approved Rule 9120 (the conformity SIP), the conformity regulation requires compliance with 40 CFR 93.105 (a)(2) and (e) and 23 CFR 450.

Section 93.112 of the conformity regulation requires documentation of the interagency and public consultation requirements according to Section 93.105. A summary of the interagency consultation and public consultation conducted to comply with these requirements is provided below. Appendix F includes the public meeting process documentation. The responses to comments received as part of the public comment process are included in Appendix G.

A. INTERAGENCY CONSULTATION

Consultation is generally conducted through the San Joaquin Valley Interagency Consultation Group (combination of previous Model Coordinating Committee and Programming Coordinating Group). The San Joaquin Valley Interagency Consultation (IAC) Group has been established by the Valley Transportation Planning Agency's Director's Association to provide a coordinated approach to valley transportation planning and programming (Transportation Improvement Program, Regional Transportation Plan, and Amendments), transportation conformity, climate change, and air quality (State Implementation Plan and Rules). The purpose of the group is to ensure Valley wide coordination, communication and compliance with Federal and California Transportation Planning and Clean Air Act requirements. Each of the eight Valley MPOs and the Air District are represented. In addition, the Federal Highway Administration, Federal Transit Administration, the Environmental Protection Agency, the California Air Resources Board and Caltrans (Headquarters, District 6, and District 10) are all represented. The IAC Group meets approximately quarterly.

The interagency consultation process for the 2013 TIP (consistent with the 2011 RTP), and corresponding Conformity Analysis began on the February 2012 IAC conference call. Discussion topics included the draft schedule, procedures and documentation, including analysis

years. In February 2012, the Draft Conformity Analysis Years and Draft Conformity Procedures were transmitted for IAC. EPA concurred with the former and ARB provided comments on the latter; EPA then concurred with the procedures.

In addition, the CMAQ Policy Threshold Evaluation was transmitted for interagency consultation in April 2012. The San Joaquin Valley MPO CMAQ policy contains language that says the cost-effectiveness threshold will be evaluated with every FTIP; whereas, the policy itself is to be reviewed with every RTP. As part of the 2013 FTIP development, the threshold was reviewed. While the review indicates justification for an increase to \$33/lb., it was recommended that the current threshold of \$30/lb. be retained at this time. No adverse comments were received.

The Draft 2013 FTIP (consistent with 2011 RTP) and corresponding Conformity Analysis were released on May 25, 2012 for a 30-day public comment period, followed by Board adoption on July 18, 2012. Federal approval of the 2013 TIP and Conformity Analysis is anticipated by December 17, 2012.

Interagency consultation with MCTC's member agencies was conducted through monthly Technical Advisory Committee (TAC) meetings, and regular correspondence while developing the, 2013 FTIP, and the corresponding Air Quality Conformity Analysis.

B. PUBLIC CONSULTATION

In general, agencies making conformity determinations shall establish a proactive public involvement process that provides opportunity for public review and comment on a conformity determination for TIPs/RTPs. In addition, all public comments must be addressed in writing.

All MPOs in the San Joaquin Valley have standard public involvement procedures. In general, the TIP/RTP and corresponding conformity analysis are the subject of a public notice and 30-day review period prior to adoption. A public meeting is also conducted prior to adoption and all public comments are responded to in writing. The Appendices contain corresponding documentation supporting the public involvement procedures.

CHAPTER 6: TIP AND RTP CONFORMITY

The principal requirements of the transportation conformity regulation for TIP/RTP assessments are: (1) the TIP and RTP must pass an emissions budget test with a budget that has been found to be adequate by EPA for transportation conformity purposes, or an interim emission test; (2) the latest planning assumptions and emission models must be employed; (3) the TIP and RTP must provide for the timely implementation of transportation control measures (TCMs) specified in the applicable air quality implementation plans; and (4) consultation. The final determination of conformity for the TIP/RTP is the responsibility of the Federal Highway Administration and the Federal Transit Administration.

The previous chapters and the appendices present the documentation for all of the requirements listed above for conformity determinations except for the conformity test results. Prior chapters have also addressed the updated documentation required under the transportation conformity regulation for the latest planning assumptions and the implementation of transportation control measures specified in the applicable air quality implementation plans.

This chapter presents the results of the conformity tests, satisfying the remaining requirement of the transportation conformity regulation. Separate tests were conducted for, 8-hour ozone (ROG and NO_x), PM-10 and PM_{2.5}. The applicable conformity tests were reviewed in Chapter 1. For each test, the required emissions estimates were developed using the transportation and emission modeling approaches required under the transportation conformity regulation and summarized in Chapters 2 and 3. The results are summarized below, followed by a more detailed discussion of the findings for each pollutant. Table 6-1 presents results for ozone (ROG/NO_x), PM-10 (PM-10/NO_x), and PM_{2.5} (PM_{2.5}/NO_x) respectively, in tons per day for each of the horizon years tested.

For ozone, the applicable conformity test is the emissions budget test, using the 2007 Ozone Plan (as revised in 2011) budgets established for ROG and NO_x for an average summer (ozone) season day. EPA approved the Plan and conformity budgets (as revised in 2011) on March 1, 2012, effective April 30. The modeling results for all analysis years indicate that the on-road vehicle ROG and NO_x emissions predicted for each of the “Build” scenarios are less than the emissions budgets. The TIP/RTP therefore satisfy the conformity emissions test for volatile organic compounds and nitrogen oxides.

For PM-10, the applicable conformity test is the emissions budget test, using the 2007 PM-10 Maintenance Plan budgets for PM-10 and NO_x. This Plan was approved (with minor technical corrections to the conformity budgets) by EPA on November 12, 2008. The modeling results for all analysis years indicate that the PM-10 emissions predicted for the “Build” scenarios are less than the emissions budget for 2020. The TIP/RTP therefore satisfy the conformity emissions tests for PM-10.

1997 Standards: For PM_{2.5}, the applicable conformity test is the emission budget test, using budgets established in the 2008 PM_{2.5} Plan. EPA approved the 2008 PM_{2.5} Plan (as revised in

2011) November 9, 2011 (effective January 9, 2012). The modeling results for all analysis years indicate that the on-road vehicle PM2.5 and NOx emissions predicted for the “Build” scenarios are less than the emissions budget. The TIP/RTP therefore satisfy the conformity emissions test for PM2.5 and nitrogen oxides.

2006 Standard: In accordance with Transportation Conformity Rule PM2.5 and PM10 Amendments published on March 24, 2010 (effective April 23, 2010) for 2006 PM2.5 NAAQS Nonattainment areas, if a 2006 PM2.5 area has adequate or approved SIP budgets that address the 1997 standards, it must use the budget test. For PM2.5, the applicable conformity test is the emission budget test, using budgets established in the 2008 PM2.5 Plan (as revised in 2011). EPA approved the 2008 PM2.5 Plan (as revised in 2011) November 9, 2011 (effective January 9, 2012). The modeling results for all analysis years indicate that the on-road vehicle PM2.5 and NOx emissions predicted for the “Build” scenarios are less than the emissions budget. The TIP/RTP therefore satisfy the conformity emissions test for PM2.5 and nitrogen oxides.

As all requirements of the Transportation Conformity regulation have been satisfied, a finding of conformity for the Draft 2013 Federal Transportation Improvement Program and the 2011 Regional Transportation Plan is supported.

**Table 6-1:
Conformity Results Summary**

2013 Conformity Results Summary -- MADERA						
Pollutant	Scenario	Emissions Total		DID YOU PASS?		
		ROG (tons/day)	NOx (tons/day)	ROG	NOx	
Ozone	2014 Budget	2.5	7.7			
	2014	2.4	7.6	YES	YES	
	2017 Budget	2.2	5.8			
	2017	2.0	5.3	YES	YES	
	2020 Budget	2.0	4.7			
	2020	2.0	4.7	YES	YES	
	2023 Budget	1.9	3.6			
	2023	1.9	3.6	YES	YES	
	2025	1.8	3.5	YES	YES	
	2035	1.5	2.6	YES	YES	
PM-10	2020 Budget	4.7	6.5			
	2020	3.0	6.5	YES	YES	
	2020 Budget	4.7	6.5			
	2025	3.3	5.7	YES	YES	
	2020 Budget	4.7	6.5			
	2035	3.8	4.8	YES	YES	
1997 PM2.5 24-Hour & Annual Standards and 2006 24- Hour Standard	2014 Budget	0.3	8.1			
	2014	0.3	8.0	YES	YES	
	2014 Budget	0.3	8.1			
	2017	0.2	4.9	YES	YES	
	Adjusted 2014 Budget	0.4	7.2			
	2025	0.4	3.8	YES	YES	
	Adjusted 2014 Budget	0.4	7.2			
	2035	0.4	3.2	YES	YES	

REFERENCES

CAA. 1990. *Clean Air Act*, as amended November 15, 1990. (42 U. S. C. Section 7401et seq.) November 15, 1990.

EPA. 1993. 40 CFR Parts 51 and 93. *Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs and Projects Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act*. U.S. Environmental Protection Agency. Federal Register, November 24, 1993, Vol. 58, No. 225, p. 62188.

EPA. 2004a. *Companion Guidance for the July 1, 2004, Final Transportation Conformity Rule: Conformity Implementation in Multi-jurisdictional Nonattainment and Maintenance Areas for Existing and New Air Quality Standards*. U.S. Environmental Protection Agency. July 21, 2004.

EPA. 2005a. *Guidance for Creating Annual On-Road Mobile Source Emission Inventories for PM2.5 Nonattainment Areas for Use in SIPs and Conformity*. U.S. Environmental Protection Agency. EPA420-B-05-008. August 2005

EPA, 2010a. 40 CFR Part 93. *Transportation Conformity Rule PM2.5 and PM10 Amendments; Final Rule*. Federal Register, March 24, 2010, Vol. 75, No. 56, p. 14260.

EPA, 2010b. *Transportation Conformity Regulations EPA-420-B-10-006*. March.

EPA, 2012. 40 CFR Part 93. *Transportation Conformity Rule Restructuring Amendments; Final Rule*. Federal Register, March 14, 2012, Vol. 77, No. 50, p. 14979.

USDOT. 2001. *Use of Latest Planning Assumptions in Conformity Determinations*. Memorandum from U.S. Department of Transportation. January 18, 2001.

USDOT. 2001. Federal Highway Administration. *Planning Assistance and Standards*. 23 CFR 450. October 16.

APPENDIX A
CONFORMITY CHECKLIST

CONFORMITY ANALYSIS DOCUMENTATION

FHWA Checklist for MPO TIPs/RTPs

June 27, 2005

40 CFR	Criteria	Page	Comments
§93.102	Document the applicable pollutants and precursors for which EPA designates the area as nonattainment or maintenance. Describe the nonattainment or maintenance area and its boundaries.	Ch. 1 p. 4	
§93.104 (b, c)	Document the date that the MPO officially adopted, accepted or approved the TIP/RTP and made a conformity determination. Include a copy of the MPO resolution. Include the date of the last prior conformity finding.	E.S. p.1	
§93.104 (e)	If the conformity determination is being made to meet the timelines included in this section, document when the new motor vehicle emissions budget was approved or found adequate.	N/A	
§93.106 (a)(2)ii	Describe the regionally significant additions or modifications to the existing transportation network that are expected to be open to traffic in each analysis year. Document that the design concept and scope of projects allows adequate model representation to determine intersections with regionally significant facilities, route options, travel times, transit ridership and land use.	Ch. 2 p. 15, App. B	
§93.108	Document that the TIP/RTP is financially constrained (23 CFR 450).	E.S. p.1	
§93.109 (a, b)	Document that the TIP/RTP complies with any applicable conformity requirements of air quality implementation plans (SIPs) and court orders.	Ch. 1, 2, 3, 4, 5, 6 p.1 ff	
§93.109 (c-k)	Provide either a table or text description that details, for each pollutant and precursor, whether the interim emissions tests and/or the budget test apply for conformity. Indicate which emissions budgets have been found adequate by EPA, and which budgets are currently applicable for what analysis years.	Ch. 1 p.4	
§93.110 (a, b)	Document the use of latest planning assumptions (source and year) at the "time the conformity analysis begins," including current and future population, employment, travel and congestion. Document the use of the most recent available vehicle registration data. Document the date upon which the conformity analysis was begun.	Ch. 2 p. 15	
USDOT/EP A guidance	Document the use of planning assumptions less than five years old. If unable, include written justification for the use of older data. (1/18/02)	Ch. 2 p. 15	
§93.110 (c,d,e,f)	Document any changes in transit operating policies and assumed ridership levels since the previous conformity determination. Document the use of the latest transit fares and road and bridge tolls. Document the use of the latest information on the	Ch. 2 p. 15	

40 CFR	Criteria	Page	Comments
	effectiveness of TCMs and other SIP measures that have been implemented. Document the key assumptions and show that they were agreed to through Interagency and public consultation.		
§93.111	Document the use of the latest emissions model approved by EPA.	Ch. 3 p. 23	
§93.112	Document fulfillment of the interagency and public consultation requirements outlined in a specific implementation plan according to §51.390 or, if a SIP revision has not been completed, according to §93.105 and 23 CFR 450. Include documentation of consultation on conformity tests and methodologies as well as responses to written comments.	Ch. 5 p. 36	
§93.113	Document timely implementation of all TCMs in approved SIPs. Document that implementation is consistent with schedules in the applicable SIP and document whether anything interferes with timely implementation. Document any delayed TCMs in the applicable SIP and describe the measures being taken to overcome obstacles to implementation.	Ch. 4 p. 29, App. E	
§93.114	Document that the conformity analyses performed for the TIP is consistent with the analysis performed for the Plan, in accordance with 23 CFR 450.324(f)(2).	Analysis addresses both documents	
§93.118 (a, c, e) ⁱ	<u>For areas with SIP budgets:</u> Document that emissions from the transportation network for each applicable pollutant and precursor, including projects in any associated donut area that are in the Statewide TIP and regionally significant non-Federal projects, are consistent with any adequate or approved motor vehicle emissions budget for all pollutants and precursors in applicable SIPs.	Ch. 6 p. 38	
§93.118 (b)	Document for which years consistency with motor vehicle emissions budgets must be shown.	Ch. 1 p.4	
§93.118 (d)	Document the use of the appropriate analysis years in the regional emissions analysis for areas with SIP budgets, and the analysis results for these years. Document any interpolation performed to meet tests for years in which specific analysis is not required.	Ch. 6 p. 38	
§93.119 ¹	<u>For areas without applicable SIP budgets:</u> Document that emissions from the transportation network for each applicable pollutant and precursor, including projects in any associated donut area that are in the Statewide TIP and regionally significant non-Federal projects, are consistent with the requirements of the “Action/Baseline”, “Action/1990” and/or “Action/2002” interim emissions tests as applicable.	N/A	
§93.119 (g)	Document the use of the appropriate analysis years in the regional emissions analysis for areas without applicable SIP budgets.	N/A	
§93.119 (h,i)	Document how the baseline and action scenarios are defined for each analysis year.	N/A	
§93.122 (a)(1)	Document that all regionally significant federal and non-Federal projects in the nonattainment/maintenance area are explicitly modeled in the regional emissions analysis. For each project, identify by which analysis it will be open to	Ch. 2 p. 15, App B	

40 CFR	Criteria	Page	Comments
	traffic. Document that VMT for non-regionally significant Federal projects is accounted for in the regional emissions analysis		
§93.122 (a)(2, 3)	Document that only emission reduction credits from TCMs on schedule have been included, or that partial credit has been taken for partially implemented TCMs. Document that the regional emissions analysis only includes emissions credit for projects, programs, or activities that require regulatory action if: the regulatory action has been adopted; the project, program, activity or a written commitment is included in the SIP; EPA has approved an opt-in to the program, EPA has promulgated the program, or the Clean Air Act requires the program (indicate applicable date). Discuss the implementation status of these programs and the associated emissions credit for each analysis year.	Ch. 2 p. 15	
§93.122 (a)(4,5,6)	For nonregulatory measures that are not included in the STIP, include written commitments from appropriate agencies. Document that assumptions for measures outside the transportation system (e.g. fuels measures) are the same for baseline and action scenarios. Document that factors such as ambient temperature are consistent with those used in the SIP unless modified through interagency consultation.	N/A	
§93.122 (b)(1)(i) ⁱⁱ	Document that a network-based travel model is in use that is validated against observed counts for a base year no more than 10 years before the date of the conformity determination. Document that the model results have been analyzed for reasonableness and compared to historical trends and explain any significant differences between past trends and forecasts (for per capita vehicle-trips, VMT, trip lengths mode shares, time of day, etc.).	Ch. 2 p. 15	
§93.122 (b)(1)(ii) ²	Document the land use, population, employment, and other network-based travel model assumptions.	Ch. 2 p. 15	
§93.122 (b)(1)(iii) ²	Document how land use development scenarios are consistent with future transportation system alternatives, and the reasonable distribution of employment and residences for each alternative.	Ch. 2 p. 15	
§93.122 (b)(1)(iv) ²	Document use of capacity sensitive assignment methodology and emissions estimates based on a methodology that differentiates between peak and off-peak volumes and speeds, and bases speeds on final assigned volumes.	Ch. 2 p. 15	
§93.122 (b)(1)(v) ²	Document the use of zone-to-zone travel impedances to distribute trips in reasonable agreement with the travel times estimated from final assigned traffic volumes. Where transit is a significant factor, document that zone-to-zone travel impedances used to distribute trips are used to model mode split.	Ch. 2 p. 15	
§93.122 (b)(1)(vi) ²	Document how travel models are reasonably sensitive to changes in time, cost, and other factors affecting travel choices.	Ch. 2 p. 15	
§93.122 (b)(2) ²	Document that reasonable methods were used to estimate traffic speeds and delays in a manner sensitive to the estimated volume of travel on each roadway segment represented in the travel model.	Ch. 2 p. 15	

40 CFR	Criteria	Page	Comments
§93.122 (b)(3) ²	Document the use of HPMS, or a locally developed count-based program or procedures that have been chosen through the consultation process, to reconcile and calibrate the network-based travel model estimates of VMT.	Ch. 2 p. 15	
§93.122 (d)	In areas not subject to §93.122(b), document the continued use of modeling techniques or the use of appropriate alternative techniques to estimate vehicle miles traveled	N/A	
§93.122 (e, f)	Document, in areas where a SIP identifies construction-related PM10 or PM2.5 as significant pollutants, the inclusion of PM10 and/or PM2.5 construction emissions in the conformity analysis.	Ch. 3 p. 15	
§93.122 (g)	If appropriate, document that the conformity determination relies on a previous regional emissions analysis and is consistent with that analysis.	N/A	
§93.126, §93.127, §93.128	Document all projects in the TIP/RTP that are exempt from conformity requirements or exempt from the regional emissions analysis. Indicate the reason for the exemption (Table 2, Table 3, traffic signal synchronization) and that the interagency consultation process found these projects to have no potentially adverse emissions impacts.	Ch. 2 p. 15, App B	

ⁱ Note that some areas are required to complete both interim emissions tests.

ⁱⁱ 40 CFR 93.122(b) refers only to serious, severe and extreme ozone areas and serious CO areas above 200,000 population

Disclaimers

This checklist is intended solely as an informational guideline to be used in reviewing Transportation Plans and Transportation Improvement Programs for adequacy of their conformity documentation. It is in no way intended to replace or supersede the Transportation Conformity regulations of 40 CFR Parts 51 and 93, the Statewide and Metropolitan Planning Regulations of 23 CFR Part 450 or any other EPA, FHWA or FTA guidance pertaining to transportation conformity or statewide and metropolitan planning. This checklist is not intended for use in documenting transportation conformity for individual transportation projects in nonattainment or maintenance areas. 40 CFR Parts 51 and 93 contain additional criteria for project-level conformity determinations. **Document #46711**

APPENDIX B

TRANSPORTATION PROJECT LISTING

Jurisdiction/Agency	TIP/RTP Project ID	CTIPs Project ID (if available)	Description			Estimated Cost	Exemption Code (per CTIPs - next sheet)
CALTRANS	MAD406002	22100000133	SHOPP - Collision Reduction			\$3,673,000	1.10
CALTRANS	MAD418003	12100000238	CA Route 99 Bridge Enhancements	Aesthetic Bridge Enhancements		\$752,000	4.12
CHOWCITY	MAD313036	22100000295	CATX	Operating Assistance		\$1,321,000	2.01
CHOWCITY	MAD302054	22100000293	Monterey Ave	3rd to 13th Street	Construct Pedestrian Facilities	\$229,000	3.02
CHOWCITY	MAD302048	22100000203	School	Various	Construct Pedestrian Facilities	\$511,000	3.02
CHOWCITY	MAD302052	22100000252	Chowchilla	Roberson Blvd District	Pave alleys	\$352,000	1.10
CHOWCITY	MAD302053	22100000289	Ave 24 1/2	Various	Shoulder Paving	\$300,000	1.04
CHOWCITY	MAD302047	22100000202	CATX	Operating Assistance		\$44,000	2.01
MADCITY	MAD213091	22100000302	DAR	Operating Assistance		\$3,588,000	2.01
MADCITY	MAD213092	22100000303	MAX	Operating Assistance		\$4,014,000	2.01
MADCITY	MAD213093	22100000304	Intermodal Center	Operating Assistance		\$320,000	2.01
MADCITY	MAD202069	22100000284	Tulare St, Cleveland, Raymond Rd	Tulare, Cleveland, Raymond Road	Construct Bike/Ped Facilities	\$336,000	3.02
MADCITY	MAD202046	22100000160	Fresno River Trail	Gateway & UPRR	Construct Bike/Ped Undercrossing	\$534,000	3.02
MADCITY	MAD202068	22100000283	Madera	Purchase and Install 1 CNG Compressor	Fleet Conversion	\$338,000	4.12
MADCITY	MAD202063	22100000245	Cleveland	Schnoor	Dual Left Turn Lanes	\$341,000	1.19
MADCITY	MAD202065	22100000247	Gateway, Central, 3rd, E Streets	Various Locations Bounded by Gateway, Central, 3rd, E St	Construct Pedestrian Facilities	\$315,000	3.02
MADCITY	MAD202066	22100000248	Fresno River Trail - Laurel Street	Laurel Street	Construct Class I Bike Path	\$268,000	3.02
MADCITY	MAD202072	22100000284	Raymond Road	Raymond Road	Shoulder Paving, Curb and Gutter	\$304,000	1.04
MADCITY	MAD202074	22100000315	Cleveland Avenue	Granada Avenue to Schnoor Avenue	Construct Bike/Ped Facilities	\$379,000	3.02
MADCITY	MAD213094	22100000321	MAX Preventative Maintenance	Operating Assistance		\$670,000	2.01
MADCITY	MAD202076	22100000322	Madera	Purchase PM-10 Certified Streetsweeper	Fleet Conversion	\$249,000	4.12
MADCITY	MAD202077	22100000323	Madera Sports Complex	Madera Sports Complex	Pave Road Access Points	\$241,000	1.03
MADCO	MAD102066	22100000313	Childrens Blvd and Peck	Intersection of Childrens Boulevard and Peck	Install Traffic Signal	\$373,000	5.02
MADCO	MAD102065	22100000312	Northbound Road 28	Intersection of Road 28 and Avenue 14 1/2	Left Turn Lane	\$564,000	1.07
MADCO	MAD102064	22100000311	Road 39 and Avenue 12 1/2	Road 39 and Avenue 12 1/2	Install Traffic Signal	\$263,000	5.02
MADCO	MAD102063	22100000310	Avenue 15	Road 29 to Road 36	Shoulder Paving	\$1,017,000	1.04
MADCO	MAD102056	22100000242	Road 30	Avenue 12 to 500 ft. north	Shoulder Paving, Curb and Gutter	\$72,000	1.04
MADCO	MAD102046	22100000161	Avenue 15	SR 41 to Road 36	Shoulder Paving	\$895,000	1.04
MADCO	MAD113041	22100000298	MCC	Operating Assistance		\$1,991,000	2.01
MADCO	MAD102059	22100000249	Road 225	Creek Dr to Road 228	Construct Pedestrian Facilities	\$182,000	3.02
MADCO	MAD102045	22100000156	Road 426	SR 41 to Road 427	Construct Pedestrian Facilities	\$191,000	3.02
MADCO	MAD102061	22100000288	Ave 9	Road 23 to Road 23 1/2	Shoulder Paving	\$99,000	1.04
MADCO	MAD102060	22100000286	Road 23	Ave 8 1/2 to Ave 9 1/2	Shoulder Paving	\$187,000	1.04
MADCO	MAD102057	22100000243	Road 406	Road 400 to 2.5 miles east	Pave dirt roads	\$534,000	1.03
MCTC	MAD517005	12100000065	Planning, Programming and Monitoring			\$600,000	4.01
VAR AGENCIES	MAD410001	22100000036	Caltrans - Highway Bridge Program (HBP) - various locations			\$5,540,000	1.19
VAR AGENCIES	MAD419004	22100000239	Highway Safety Improvement Program (HSIP) - Lump sum program			\$314,000	1.06

APPENDIX C

CONFORMITY ANALYSIS DOCUMENTATION

- 2013 adjust_vmt Spreadsheet (updated analysis years only)
- 2013 Conformity EMFAC Spreadsheet (updated analysis years and new line item emission reductions to be consistent with the 2007 8-Hour Ozone Plan as revised in 2011 and 2008 PM2.5 Plan as revised in 2011)
- 2013 Conformity Paved Road Spreadsheet (updated to include January 2011 EPA update to AP-42 methodology)
- 2013 Conformity Unpaved Road Dust Spreadsheet
- 2013 Conformity Construction Spreadsheet
- 2013 Conformity Trading Spreadsheets (PM-10 and PM2.5) (new PM2.5 sheet developed consistent with 2008 PM2.5 Plan as revised in 2011)
- 2013 Conformity Totals Spreadsheet (updated to include new conformity budgets consistent with the 2007 8-Hour Ozone Plan as revised in 2011 and 2008 PM2.5 Plan as revised in 2011 and corresponding EPA approvals)

Madera CTC 2013 Conformity

Variable	Source										
		2014	2017	2020	2023	2025	2035				
EDP	EMFAC 2007	133,928	144,757	156,462	166,237	173,091	210,079				
EVMT	EMFAC 2007	6,107,059	6,711,048	7,326,504	7,727,762	8,014,774	9,679,190				
MVMT	TPA Model	5,990,943	6,302,655	7,338,969	7,932,984	8,532,830	9,329,011	<=Enter Modeled Daily VMT Here			
N	Calculated	131,382	135,948	156,728	170,652	184,279	202,479	<= Read New Vehicle Population Here			
N = New Population											
EDP = EMFAC Default Population											
MVMT = Modeled VMT											
EVMT = EMFAC Default VMT											

EMFAC Emissions (tons/day)									
MADERA									
Pollutant	Source	Description							
			2014	2017	2020	2023	2025	2035	
Ozone	EMFAC 2007 (Summer Run)	ROG Total Exhaust (All Vehicles Total)	3.04	2.47	2.32	2.17	2.16	1.83	
	Existing Local Reductions	Rule 9310 (School Buses)	0.00	0.00	0.00	0.00	0.00	0.00	
	Existing State Reductions	Carl Moyer Program & AB 1493 GHG Standards	0.00	0.00	0.00	0.00	0.00	0.00	
	New/Proposed Local Reductions	Rule 9410 (Employer Based Trip Reduction)	0.05	0.03	0.04	0.04	0.04	0.04	
	New/Proposed State Reductions	Smog Check, RFG & Truck Model	0.55	0.45	0.33	0.28	0.28	0.28	
		Conformity Total	2.44	1.99	1.95	1.85	1.84	1.51	
Ozone	EMFAC 2007 (Summer Run)	NOx Total Exhaust (All Vehicles Total)	10.49	8.09	7.27	6.55	6.41	5.54	
	Existing Local Reductions	Rule 9310 (School Buses)	0.01	0.02	0.02	0.02	0.02	0.02	
	Existing State Reductions	Carl Moyer Program & AB 1493 GHG Standards	0.02	0.02	0.00	0.00	0.00	0.00	
	New/Proposed Local Reductions	Rule 9410 (Employer Based Trip Reduction)	0.04	0.04	0.03	0.02	0.02	0.02	
	New/Proposed State Reductions	Smog Check & Truck Model	2.80	2.68	2.56	2.91	2.91	2.91	
		Conformity Total	7.62	5.33	4.66	3.60	3.46	2.59	
PM-10	EMFAC 2007 (Annual Run)	PM-10 Total (All Vehicles Total) * includes tire & brake wear			2020		2025	2035	
	ARB	Existing Reflash, Idling, and Moyer (HDI, PFR, Moyer, AB1493, Reflash)			0.57		0.60	0.63	
		Conformity Total			0.57		0.60	0.63	
PM-10	EMFAC 2007 (Annual Run)	NOx Total Exhaust (All Vehicles Total)			7.31		6.44	5.54	
	ARB	Existing Reflash, Idling, and Moyer (HDI, PFR, Moyer, AB1493, Reflash)			0.78		0.78	0.78	
		Conformity Total			6.53		5.66	4.76	
PM2.5	EMFAC 2010 (Annual Run)	PM2.5 Total Exhaust (All Vehicles Total) * includes tire & brake wear			2014	2017		2025	2035
	Existing Local Reductions	Rule 9310 (School Buses)			0	0		0	0
	Existing State Reductions	Carl Moyer Program & AB 1493 GHG Standards			0	0		0	0
	New/Proposed State Reductions	Smog Check & Truck Model			0.17	0.16		0.05	0.02
		Conformity Total			0.30	0.20		0.40	0.40

Paved Road Dust Emissions (tons/day)													
MADERA 2020													
		VTM Daily	VTM (million/year)	Base Emissions (PM10 tpy)	Rain Adj. Emissions (PM10 tpy)	Rain Adj. Emissions (PM10 tons/day)	District Rule 8061/ISR Control Rates	Control-Adjusted Emissions					
Enter Freeway VMT ==>	Freeway	2,520,855	920	70.305	68.221	0.187	0.075	0.173					
Enter Arterial VMT ==>	Arterial	2,512,861	917	116.620	113.162	0.310	0.282	0.223					
Enter Collector VMT ==>	Collector	1,842,366	672	85.503	82.968	0.227	0.407	0.135					
	Urban	124,517	45	43.293	42.009	0.115	0.324	0.078					
Enter Total of Urban and Rural Local VMT Here =>	Rural	338,370	124	508.912	493.823	1.353	0.090	1.231					
	Totals	7,338,969	2,679	824.632	800.183	2.192		1.839					
MADERA 2025													
		VTM Daily	VTM (million/year)	Base Emissions (PM10 tpy)	Rain Adj. Emissions (PM10 tpy)	Rain Adj. Emissions (PM10 tons/day)	District Rule 8061/ISR Control Rates	Control-Adjusted Emissions					
Enter Freeway VMT ==>	Freeway	3,140,313	1,146	87.581	84.985	0.233	0.075	0.215					
Enter Arterial VMT ==>	Arterial	2,723,914	994	126.414	122.666	0.336	0.282	0.241					
Enter Collector VMT ==>	Collector	2,143,138	782	99.461	96.512	0.264	0.407	0.157					
	Urban	141,350	52	49.145	47.688	0.131	0.324	0.088					
Enter Total of Urban and Rural Local VMT Here =>	Rural	384,115	140	577.712	560.584	1.536	0.090	1.398					
	Totals	8,532,830	3,114	940.314	912.435	2.500		2.099					
MADERA 2035													
		VTM Daily	VTM (million/year)	Base Emissions (PM10 tpy)	Rain Adj. Emissions (PM10 tpy)	Rain Adj. Emissions (PM10 tons/day)	District Rule 8061/ISR Control Rates	Control-Adjusted Emissions					
Enter Freeway VMT ==>	Freeway	3,165,608	1,155	88.287	85.669	0.235	0.075	0.217					
Enter Arterial VMT ==>	Arterial	3,093,035	1,129	143.545	139.289	0.382	0.282	0.274					
Enter Collector VMT ==>	Collector	2,416,911	882	112.167	108.841	0.298	0.407	0.177					
	Urban	175,780	64	61.116	59.304	0.162	0.324	0.110					
Enter Total of Urban and Rural Local VMT Here =>	Rural	477,676	174	718.429	697.129	1.910	0.090	1.738					
	Totals	9,329,010	3,405	1123.544	1090.232	2.987		2.516					
DO NOT CHANGE ANY ITEMS BELOW THIS LINE													
MADERA				Road Type		Base EF (lb PM10/ VMT)							
HPMS Local Urban/Rural Percent				Freeway		0.000152818							
From 1998 Assembly of Statistical Reports - Caltrans				Arterial		0.000254296							
26.9% Urban				Collector		0.000254296							
73.1% Rural				Local		0.00190513							
100.0% Total				Rural		0.008241141							
MADERA													
	January	February	March	April	May	June	July	August	September	October	November	December	Total/Average
Rain Days	8.0	7.0	7.0	4.0	2.0	1.0	0	0	1.0	2.0	5.0	6.0	
Total Days	31	28	31	30	31	30	31	31	30	31	30	31	
Rain Reduction Factor	0.94	0.94	0.94	0.97	0.98	0.99	1.00	1.00	0.99	0.98	0.96	0.95	0.970351703

0.97

2013 Conformity Analysis, Madera County

Unpaved Road Dust Emissions Estimates

Unpaved Road Dust Emissions (tons/day)														
MADERA 2020														
		Miles	Vehicle Passes per Day	VMT (1000/year)	Base Emissions (PM10 tpy)	Rain Adj. Emissions (PM10 tpy)	Rain Adj. Emissions (PM10 tons/day)	District Rule 8061/ISR Control Rates	Control-Adjusted Emissions					
	City/County	87.0	10	317.6	317.550	279.891	0.767	0.333	0.511					
MADERA 2025														
		Miles	Vehicle Passes per Day	VMT (1000/year)	Base Emissions (PM10 tpy)	Rain Adj. Emissions (PM10 tpy)	Rain Adj. Emissions (PM10 tons/day)	District Rule 8061/ISR Control Rates	Control-Adjusted Emissions					
	City/County	87.0	10	317.6	317.550	279.891	0.767	0.333	0.511					
MADERA 2035														
		Miles	Vehicle Passes per Day	VMT (1000/year)	Base Emissions (PM10 tpy)	Rain Adj. Emissions (PM10 tpy)	Rain Adj. Emissions (PM10 tons/day)	District Rule 8061/ISR Control Rates	Control-Adjusted Emissions					
	City/County	87.0	10	317.6	317.550	279.891	0.767	0.333	0.511					
DO NOT CHANGE ANY ITEMS BELOW THIS LINE														
	MADERA													
		January	February	March	April	May	June	July	August	September	October	November	December	Total/Average
Rain Days		8.0	7.0	7.0	4.0	2.0	1.0	0	0	1.0	2.0	5.0	6.0	
Total Days		31	28	31	30	31	30	31	31	30	31	30	31	
Rain Reduction Factor		0.74	0.75	0.77	0.87	0.94	0.97	1.00	1.00	0.97	0.94	0.83	0.81	0.88140681

Road Construction Dust						
MADERA						
Description	2020		2025		2035	
	Year	Lane Miles	Year	Lane Miles	Year	Lane Miles
Baseline	2005	2144	2020	2219	2025	2246
Horizon	2020	2,219	2025	2,246	2035	2,314
Difference	15	75	5	27	10	68
Lane Miles per Year		5		5		7
Acres Disturbed		19		21		26
Acre-Months		349		377		475
Emissions (tons/year)		38.400		41.472		52.224
Annual Average Day Emissions (tons)		0.105		0.114		0.143
District Rule 8021 Control Rates		0.290		0.290		0.290
Total Emissions (tons per day)		0.075		0.081		0.102

PM10 Emission Trading Worksheet						
MADERA CONFORMITY ESTIMATES (tons/day)						
	2020		2025		2035	
	PM10	NOx	PM10	NOx	PM10	NOx
Total On-Road Exhaust	0.570	6.530	0.600	5.660	0.630	4.760
Paved Road Dust	1.839		2.100		2.516	
Unpaved Road Dust	0.511		0.511		0.511	
Road Construction Dust	0.075		0.081		0.102	
Total	2.995	6.530	3.292	5.660	3.759	4.760
Difference (2020 Budget - 2020)						
	PM10	NOx				
2020 Budgets	4.7	6.5				
2020	3.0	6.5				
Difference	1.7	0.0				
* 1.5 (Adjustment to NOx Budget)	-2.6					
Difference (2020 Budget - 2025)						
	PM10	NOx				
2020 Budgets	4.7	6.5				
2025	3.3	5.7				
Difference	1.4	0.8				
* 1.5 (Adjustment to NOx Budget)	-2.1					
Difference (2020 Budget - 2035)						
	PM10	NOx				
2020 Budgets	4.7	6.5				
2035	3.8	4.8				
Difference	0.9	1.7				
* 1.5 (Adjustment to NOx Budget)	-1.4					
1:1.5 PM10 to NOx Trading						
	PM10	NOx				
2020 Budget	4.7	6.5				
Adjusted 2020 Budget	N/A	N/A				
2020 Conformity Total	3.0	6.5				
Difference	#VALUE!	#VALUE!				
NOTE: TRADING NOT NECESSARY						
Adjusted 2020 Budget	N/A	N/A				
2025 Conformity Total	3.3	5.7				
Difference	#VALUE!	#VALUE!				
NOTE: TRADING NOT NECESSARY						
Adjusted 2020 Budget	N/A	N/A				
2035 Conformity Total	3.8	4.8				
Difference	#VALUE!	#VALUE!				
NOTE: TRADING NOT NECESSARY						

PM2.5 Emission Trading Worksheet						
MADERA CONFORMITY ESTIMATES (tons/day)						
	2017		2025		2035	
	PM2.5	NOx	PM2.5	NOx	PM2.5	NOx
Total On-Road Exhaust	0.20	4.90	0.40	3.80	0.40	3.20
Difference (2014 Budget - 2017)						
	PM2.5	NOx				
2014 Budgets	0.3	8.1				
2017	0.2	4.9				
Difference	0.1	3.2				
* 9 (Adjustment to NOx Budget)	-0.9					
Difference (2014 Budget - 2025)						
	PM2.5	NOx				
2014 Budgets	0.3	8.1				
2025	0.4	3.8				
Difference	-0.1	4.3				
* 9 (Adjustment to NOx Budget)	0.9					
Difference (2014 Budget - 2035)						
	PM2.5	NOx				
2014 Budgets	0.3	8.1				
2035	0.4	3.2				
Difference	-0.1	4.9				
* 9 (Adjustment to NOx Budget)	0.9					
1:9 PM2.5 to NOx Trading						
	PM2.5	NOx				
2014 Budget	0.3	8.1				
Adjusted 2017 Budget	N/A	N/A				
2017 Conformity Total	0.2	4.9				
Difference	#VALUE!	#VALUE!	NOTE: TRADING NOT NECESSARY			
Adjusted 2025 Budget	0.4	7.2				
2025 Conformity Total	0.4	3.8				
Difference	0.0	3.4	NOTE: FINAL DIFFERENCE MUST BE POSITIVE			
Adjusted 2035 Budget	0.4	7.2				
2035 Conformity Total	0.4	3.2				
Difference	0.0	4.0	NOTE: FINAL DIFFERENCE MUST BE POSITIVE			

2013 Conformity Results Summary -- MADERA

Pollutant	Scenario	Emissions Total		DID YOU PASS?		
		ROG (tons/day)	NOx (tons/day)	ROG	NOx	
Ozone	2014 Budget	2.5	7.7			
	2014	2.4	7.6	YES	YES	
	2017 Budget	2.2	5.8			
	2017	2.0	5.3	YES	YES	
	2020 Budget	2.0	4.7			
	2020	2.0	4.7	YES	YES	
	2023 Budget	1.9	3.6			
	2023	1.9	3.6	YES	YES	
	2025	1.8	3.5	YES	YES	
	2035	1.5	2.6	YES	YES	
PM-10	2020 Budget	4.7	6.5			
	2020	3.0	6.5	YES	YES	
	2020 Budget	4.7	6.5			
	2025	3.3	5.7	YES	YES	
	2020 Budget	4.7	6.5			
	2035	3.8	4.8	YES	YES	
1997 PM2.5 24-Hour & Annual Standards and 2006 24- Hour Standard	2014 Budget	0.3	8.1			
	2014	0.3	8.0	YES	YES	
	2014 Budget	0.3	8.1			
	2017	0.2	4.9	YES	YES	
	Adjusted 2014 Budget	0.4	7.2			
	2025	0.4	3.8	YES	YES	
	Adjusted 2014 Budget	0.4	7.2			
	2035	0.4	3.2	YES	YES	

APPENDIX D

**TIMELY IMPLEMENTATION DOCUMENTATION FOR
TRANSPORTATION CONTROL MEASURES**

<u>RACM Commitment</u>	<u>Agency</u>	<u>Measure Title</u>	<u>Measure Description (not verbatim)</u>	<u>Implementation Status</u>	<u>2013 Conformity Update</u>
				(as of 3/10)	(as of 5/12)
MA3.5	MCTC	Preferential Parking for Carpools and Vanpools	Encourage the establishment of preferential parking for carpools and vanpools annually	MCTC has an ongoing public awareness program that utilizes the GO Madera Newsletter and the MCTC Website. See Project TID Table.	The MCTC Public Awareness program is an ongoing annual program.
MA3.9	MCTC	Encourage merchants and employers to subsidize the cost of transit for employees	Provide outreach services annually	MCTC has an ongoing public awareness program that utilizes the GO Madera Newsletter and the MCTC Website. See Project TID Table.	The MCTC Public Awareness program is an ongoing annual program.
MA5.3	Chowchilla	Reduce Traffic Congestion at Major Intersections	Improve intersecons projected to experience congestion	Chowchilla identified and implemented a traffic signal project on Robertson Blvd. See Project TID Table.	Chowchilla has not identified or implemented any Traffic Signal Projects since the date of the last report March 2010.
MA9.3	Chowchilla	Bicycle/Pedestrian Program	Implement City Bike Plan	Chowchilla identified and implemented a bike lane project on Ave 26. See Project TID Table. Chowchilla has not identified or implemented any Bike/Pedestrian projects since May 2006.	Chowchilla has not identified or implemented any Bike/Pedestrian projects since the date of the last report March 2010.
MA5.3	Madera County	Reduce Traffic Congestion at Major Intersections	Improve intersecons projected to experience congestion	The County has identified and implemented several traffic signal projects since 2002. See Project TID Table. The County identified and implemented a traffic signal project on SR 41. See Project TID Table.	The County identified and implemented two traffic signal projects since the date of the last report March 2010. See Project TID Table.
MA9.3	Madera County	Bicycle/Pedestrian Program	Implement County Bike Plan	The County has identified and implemented several bicycle and pedestrian facilities projects. See Project TID Table. The County identified and implemented two bicycle and pedestrian projects on Road 36. See Project TID Table	The County has identified and implemented one Bike/Pedestrian project since the date of the last report March 2010.
MA5.3	City of Madera	Reduce Traffic Congestion at Major Intersections	Continue intersection improvements to reduce traffic congestion at major intersecons	Madera has identified and implemented several traffic signal projects since 2002. See Project TID Table. Traffic conditions are determined by staff using traffic counts, traffic flow, and accident history. Madera has identified and implemented a traffic signal project on Sunset Ave. See Project TID Table.	Madera has not identified and implemented a traffic signal modification project since the date of last report March 2010. See Project TID Table
MA9.3	City of Madera	Bicycle/Pedestrian Program	Implement City Bike Plan	Madera has identified and implemented several bicycle and pedestrian facilities projects. See Project TID Table. Madera has not identified or implemented any Bike/Pedestrian projects since May 2006.	Madera identified and implemented two Bike/Pedestrian facility project since the date of last report March 2010. See Project TID Table.

RACM Commitment	Agency	Commitment Description	Commitment Schedule	Commitment Funding	TIP	TIP Project ID	Project Description	Implementation Status		2013 Conformity Update	
								(as of 3/10)	(as of 5/12)	(as of 3/10)	(as of 5/12)
MA 3.1	MCTC	Commute Solutions		Funding is allocated through the annual budget process.			MCTC agrees to act as an information resource for employers within Madera County for the Commute Solutions Program. MCTC will promote the program by providing information to employers with fifty or greater employees on an annual basis.	The Commute Solutions Program is not programmed in the TIP. MCTC expanded our efforts through the newsletter, which has regular articles documenting the benefits of alternative commuting methods. Over 300 subscribers (including every Madera business with 30 or more employees) receive each newsletter. MCTC continues to provide commute solutions information through the Public Awareness Program.		MCTC continues to provide commute solutions information through the Public Awareness Program. In November of 2010 MCTC joined the California Vanpool Authority as a sponsor of the CalVans program.	
MA 14.1 (MA 11.2, MA 11.6, MA 13.3, 13.4, TCM3.)	MCTC	Area wide Public Awareness Programs		Funding is allocated through the annual budget process and documented in MCTC's OWP. \$40,000 will be budgeted for the first year of implementation.			MCTC agrees to expand public outreach by implementation of this measure through a new work element entitled "Public Awareness Program." This program will be developed during the first year of implementation and will include the following activities: Development of public outreach tools (i.e., website, newsletter, etc.); Rideshare promotion; Providing resources for the Commute Solutions program to employers; Promotion of alternative modes of transportation (i.e., bicycle, pedestrian, transit, and rail); Encouraging telecommuting and the use of teleconferencing; Encouraging other emission reduction behavior modifications (i.e., voluntary limiting of idling, engine retrofits, and implementation of incentive programs). This measure is an expansion of previous accomplishments through participation in the Rideshare Program with COFCG.	Public awareness programs are not programmed in the TIP. MCTC expanded public outreach by developing a newsletter and website. Newsletters can be downloaded from the following address: http://www.maderactc.org/news.html . Additionally, MCTC developed a Public Participation Plan, which was approved in May 2004. The MCTC Public Awareness Program is an ongoing annual program.		The MCTC Public Awareness Program is an ongoing annual program.	
MA 5.2	City of Madera	Cleveland Avenue	not specified	not specified	2002	MAD217004	In City of Madera; reconstruct & widen existing 2 lane street to provide raised median, bike lane, sidewalks, & install 2 traffic signals.	4 intersections on Cleveland Ave. were upgraded to improve traffic flow. 2 intersections were revised to accommodate left/right turn lanes and 2 intersections received new signals. The timing of each signal was optimized. This project was completed in October 2003. Traffic volumes on the corridor will continue to be monitored and final signal coordination will be done in the future, when warranted. The City of Madera reviews its signal systems (4 or more contiguous) in accordance with the FTIP CMAQ programming cycle. Signal coordination is not warranted on Cleveland Ave. at this time.		The City of Madera reviews its signal systems (4 or more contiguous in accordance with the FTIP CMAQ programming cycle). Signal coordination is not warranted on Cleveland Ave. at this time.	
		Gateway Drive: coordinate five signals	not specified	not specified	2002	MAD202045	In Madera, Gateway Drive from 4th Street to Olive Avenue: signal coordination	Project Completed November 2005.		Complete	
MA 5.9	City of Madera	Bus Pullouts in Curbs for passenger Loading	31-Mar-02	Funding is allocated through the annual budget process and through the regular project programming cycle			Bus pullout project scheduled at intersection of W. Cleveland and N. Schnoor Avenues.	This project was not included in the TIP. The bus pullout project on the N.W. corner of Cleveland and Schnoor was locally funded and completed in June 2002.		Complete	

ADDITIONAL PROJECTS IDENTIFIED								
MA3.5	MCTC	Preferential Parking for Carpools and Vanpools		Funding is allocated through the annual budget process.		Encourage the establishment of preferential parking for carpools and vanpools annually	The Preferential Parking Outreach Program is not programmed in the TIP. The MCTC website and newsletters have regular articles documenting the benefits of alternative commuting methods. Over 500 subscribers (including every Madera business with 30 or more employees) receive each newsletter. MCTC continues to provide Preferential Parking, Vanpool, and Carpool information through the Public Awareness Program.	MCTC continues to provide Preferential Parking, Vanpool, and Carpool information through the Public Awareness Program.
MA3.9	MCTC	Encourage merchants and employers to subsidize the cost of transit for employees		Funding is allocated through the annual budget process.		Provide outreach services annually	The Transit Subsidy Outreach Program is not programmed in the TIP. The MCTC website and newsletters have regular articles documenting the benefits of alternative commuting methods. Over 500 subscribers (including every Madera business with 30 or more employees) receive each newsletter. MCTC continues to provide Transit Subsidy information through the Public Awareness Program.	MCTC continues to provide Transit Subsidy Information through the Public Awareness Program. In November of 2010 MCTC joined the California Vanpool Authority as a sponsor of the CalVans program.
MA5.3	City of Chowchilla	Reduce Traffic Congestion at Major Intersections	Local		N/A	Installed traffic signal at intersection of Robertson Blvd/SR 233 and 11th Street.	Project Completed Summer 2007.	Complete
MA9.3	City of Chowchilla	Bicycle/Pedestrian Program	Local		N/A	In Chowchilla, Class II Bike lane on Avenue 26 from Road 16 1/2 to Fig Tree Road	Project Completed September 2002.	Complete
MA5.3	Madera County	Reduce Traffic Congestion at Major Intersections	Local		N/A	In Coarsegold, installed traffic signal at Chukchansi Casino	Project Completed in 2002.	Complete
			Local		N/A	In Madera Ranchos, installed traffic signal at Road 36/Avenue 12	Project Completed in 2002.	Complete
			Local		N/A	In Oakhurst, installed traffic signal at Road 427/Road 426	Project Completed in 2002.	Complete
			Local		N/A	Installed traffic signal at Road 200/SR 41	Project Completed November 2007.	Complete
			SHOPP		N/A	Installed traffic signals at SR 99/Ave 12	Project Completed in 2009.	Complete
			SHOPP		N/A	Installed traffic signal at SR 41/Yosemite Springs Parkway	Project Completed in May 2009	Complete
			HSIP		N/A	Installed traffic signal at Lanes Bridge Dr./Childrens Blvd	Project Completed August 2009.	Complete
			Local		N/A	Installed traffic signal at SR 41/Road 415	Project Completed September 2009.	Complete
			Local		N/A	Installed traffic signal and right through lane at SR 41/Road 200	Project Completed in 2010	Complete
			Local		N/A	Installed traffic signal at Avenue 12 and Road 36	Project Completed in 2011	Complete
			Local		N/A	Installed Signal in Madera County at Avenue 12 overcrossing	Project Completed in 2010	Complete
MA9.3	Madera County	Bicycle/Pedestrian Program	Local		N/A	Class II bicycle lanes on Road 427	Project Completed July 2002.	Complete
			Local		N/A	In Oakhurst, Constructed sidewalks on SR41	Project Completed January 2003.	Complete
			Local		N/A	Constructed sidewalks on Road 26 at Ave 17	Project Completed January 2004.	Complete
			Local		N/A	Class II Bicycle Lanes on RD 26 from Madera city limits to Ave 17	Project Completed November 2005.	Complete
			Local		N/A	Constructed sidewalks on Road 36 at Ave 12	Project Completed September 2006.	Complete
			Local		N/A	Class II Bicycle Lanes on Road 36 North of Ave 12	Project Completed September 2006.	Complete
			Local		N/A	Constructed Bicycle Lanes and Pedestrian Walkways at Desmond and Nishimoto Schools in Madera county	Project Completed in 2011	Complete
MA5.3	City of Madera	Reduce Traffic Congestion at Major Intersections	Local		N/A	In Madera, installed traffic signal at Olive/Gateway	Project Completed June 2002.	Complete
			Local		N/A	In Madera, installed traffic signal at Olive/Stadium	Project Completed February 2004.	Complete
			Local		N/A	In Madera, installed traffic signal at Schnoor/Foxglove	Project Completed June 2004.	Complete
			Local		N/A	In Madera, installed traffic signal at Schnoor/Sunset		Complete
			Local		N/A	In Madera, traffic signal modifications at Stadium Rd./Pecan Ave.	Project Completed September 2008.	Complete
MA9.3	City of Madera	Bicycle/Pedestrian Program	Local		N/A	Class I Bike Path- Fresno River Trail - Schnoor to Granada	Project completed in 2002.	Complete
			Local		N/A	Class I Bike Path- Fresno River Trail - Granada to Westberry	Project completed in 2005.	Complete
			Local		N/A	Class II Bike Lane - Cleveland Ave from Sharon to Raymond	Project completed in 2005.	Complete
			Local		N/A	Class II Bike Lane - Stadium Road n/o Pecan	Project completed in 2005.	Complete
			Local		N/A	Fresno River Trail Undercrossing at D & Lake Street	Project completed August 2008.	Complete
			Local		N/A	Fresno River Trail Bike and Pedestrian Trail, Cals 1 Bike and Undercrossing	Project completed in 2010	Complete
			Local		N/A	Schnoor Bridge Fresno River Traller	Project completed in 2012	Complete

APPENDIX E

PUBLIC MEETING PROCESS DOCUMENTATION

**NOTICE OF PUBLIC HEARING ON THE
DRAFT 2013 FEDERAL TRANSPORTATION IMPROVEMENT PROGRAM
AND
CORRESPONDING DRAFT CONFORMITY ANALYSIS
AND EXTENSION OF COMMENT PERIOD TO JULY 2, 2012**

NOTICE IS HEREBY GIVEN that the Madera County Transportation Commission (MCTC) will hold a public hearing on June 20, 2012 at 3 p.m. at the MCTC Board Room at 2001 Howard Road, Suite 201, Madera, CA 93637 regarding the Draft 2013 Federal Transportation Improvement Program (2013 FTIP) and corresponding Draft Conformity Analysis for the 2013 FTIP and 2011 Regional Transportation Plan (RTP). The purpose of this combined public hearing is to receive public comments on these documents.

- The 2013 FTIP is a near-term listing of capital improvement and operational expenditures utilizing federal and state monies for transportation projects in Madera County during the next four years.
- The Conformity Analysis contains the documentation to support a finding that the (2013 FTIP) and 2011 RTP meet the air quality conformity requirements for ozone and particulate matter.

This public notice also satisfies the program or projects (POP) requirements of the Federal Transit Administration (FTA) Urbanized Area Formula Program, Section 5307. If no comments are received on the proposed POP, the proposed transit program (funded with FTA 5307 dollars) will be the final program.

Individuals with disabilities may call MCTC (with 3-working-day advance notice) to request auxiliary aids necessary to participate in the public hearing. Translation services are available (with 3-working-day advance notice) to participants speaking any language with available professional translation services.

A concurrent 30-day public review and comment period will commence on June 1, 2012 and conclude on July 2, 2012. The draft documents are available for review at the MCTC office, located at 2001 Howard Road, Suite 201, Madera, CA 93637 or on the MCTC Website at <http://www.maderactc.org>.

Public comments are welcomed at the hearing, or may be submitted in writing by 3:00 PM, July 2, 2012 to the address below.

After considering the comments, the documents will be considered for adoption, by resolution, by the MCTC Policy Board at a regularly scheduled meeting to be held on July 18, 2012. The documents will then be submitted to state and federal agencies for approval.

Contact Person: Derek Winning, Deputy Director
 Madera County Transportation Commission
 2001 Howard Road, Suite 201
 Madera, CA 93637
 (559) 975-9465
 derek@maderactc.org

BEFORE
THE COMMISSIONERS OF THE MADERA COUNTY TRANSPORTATION COMMISSION
COUNTY OF MADERA, STATE OF CALIFORNIA

DRAFT
Resolution No. 12-##

In the matter of)
APPROVAL OF THE 2013 FTIP AND)
CORRESPONDING AIR QUALITY)
CONFORMITY ANALYSIS)
_____)

WHEREAS, the Madera County Transportation Commission (MCTC) is a Regional Transportation Planning Agency and a Metropolitan Planning Organization, pursuant to State and Federal designation; and

WHEREAS, federal planning regulations require Metropolitan Planning Organizations to prepare and adopt a long range a Regional Transportation Plan (RTP) for their region; and

WHEREAS, federal planning regulations require that Metropolitan Planning Organizations prepare and adopt a Federal Transportation Improvement Program (FTIP) for their region; and

WHEREAS, the 2013 Federal Transportation Improvement Program (2013 FTIP) has been prepared to comply with Federal and State requirements for local projects through a cooperative process between the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the State Department of Transportation (Caltrans), principal elected officials of general purpose local governments and their staffs, and public owner operators of mass transportation services acting through the Madera County Transportation Commission forum and general public involvement; and

WHEREAS, the 2013 FTIP program listing is consistent with: 1) the 2011 Regional Transportation Plan, 2) the 2012 State Transportation Improvement Program; and 3) the Corresponding Conformity Analysis; and

WHEREAS, the 2013 FTIP contains the MPO's certification of the transportation planning process assuring that all federal requirements have been fulfilled; and

WHEREAS, the 2013 FTIP meets all applicable transportation planning requirements per 23 CFR Part 450.

WHEREAS, projects submitted in the 2013 FTIP must be financially constrained and the financial plan affirms that funding is available; and

WHEREAS, the 2013 FTIP and 2011 RTP includes a new Conformity Analysis; and

WHEREAS, the MPO must demonstrate conformity per 40 CFR Part 93 for the FTIP and RTP; and

WHEREAS, the 2013 FTIP and 2011 RTP do not interfere with the timely implementation of the Transportation Control Measures; and

WHEREAS, the 2013 FTIP and 2011 RTP conforms to the applicable SIPs; and

WHEREAS, the documents have been widely circulated and reviewed by MCTC advisory committees representing the technical and management staffs of the member agencies; representatives of other governmental agencies, including State and Federal; representatives of special interest groups; representatives of the private business sector; and residents of Madera County consistent with public participation process adopted by MCTC; and

WHEREAS, a public hearing was conducted on June 20, 2012 to hear and consider comments on the 2013 FTIP and Corresponding Conformity Analysis; and

NOW, THEREFORE, BE IT RESOLVED, that MCTC adopts the 2013 FTIP, and Corresponding Conformity Analysis.

BE IT FURTHER RESOLVED, that the MCTC finds that the 2013 FTIP and 2011 RTP are in conformity with the requirements of the Federal Clean Air Act Amendments and applicable State Implementation Plans for air quality.

The foregoing resolution was adopted this 18th day of July, 2012 by the following vote:

Commissioner Rodriguez voted:	_____
Commissioner Dominici voted:	_____
Commissioner Wheeler voted:	_____
Commissioner Poythress voted:	_____
Commissioner Frazier voted:	_____
Commissioner Hebert voted:	_____

Chairman, Madera County Transportation Commission

Executive Director, Madera County Transportation Commission

APPENDIX F

RESPONSE TO PUBLIC COMMENTS

NOTE: No comments were received with respect to the Draft Conformity Analysis for the 2013 Federal Transportation Program and 2011 Regional Transportation Plan.