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**FINAL CONFORMITY ANALYSIS  
FOR THE 2023 FEDERAL TRANSPORTATION IMPROVEMENT  
AND THE 2022 REGIONAL TRANSPORTATION PLAN**

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TULARE COUNTY ASSOCIATION OF GOVERNMENTS

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## EXECUTIVE SUMMARY

This report presents the Draft Conformity Analysis for the 2023 Federal Transportation Improvement Program (2023 FTIP) and the 2022 Regional Transportation Plan (2022 RTP). The Tulare County Association of Governments (TCAG) is the designated Metropolitan Planning Organization (MPO) in Tulare County, California, and is responsible for regional transportation planning.

The 2018 PM<sub>2.5</sub> Plan addressing 1997, 2006 and 2012 PM<sub>2.5</sub> standards was adopted by the San Joaquin Valley Air District on November 15, 2018 and California Air Resources Board on January 24, 2019 and subsequently submitted for EPA review. EPA issued final approval on 2018 PM<sub>2.5</sub> SIP elements that pertain to 2006 24-hour PM<sub>2.5</sub> standard serious area nonattainment on July 22, 2020. On November 26, 2021, EPA published final approval of the moderate area SIP budgets for the 2012 PM<sub>2.5</sub> standard contained in the 2016 Moderate Area PM<sub>2.5</sub> Plan and portions of the 2018 PM<sub>2.5</sub> plan that pertain to the moderate requirements for the 2012 PM<sub>2.5</sub> standard (effective December 27, 2021). Also on November 26, 2021, EPA partially disapproved the original SIP submittal dealing with 1997 annual PM<sub>2.5</sub> nonattainment. In response, CARB submitted a 2021 SIP revision to the 2018 PM<sub>2.5</sub> Plan demonstrating attainment by 2023. Then on January 28, 2022, EPA approved 2018 PM<sub>2.5</sub> Plan portion dealing with the 1997 24-hour PM<sub>2.5</sub> standard and determined that the SJV attained the standard by the December 31, 2020 deadline (effective February 28, 2022). On February 10, 2022, EPA found the 1997 annual PM<sub>2.5</sub> budgets for attainment year 2023 adequate (effective February 25, 2022). Therefore, this conformity analysis incorporates new 2018 PM<sub>2.5</sub> SIP budgets for the 2006 24-hour and 1997 annual and 24-hour PM<sub>2.5</sub> standards.

The remaining components of the 2018 PM<sub>2.5</sub> Plan addressing the 2012 PM<sub>2.5</sub> serious nonattainment area requirements are currently undergoing EPA review. Should EPA act on these additional SIP elements, this conformity analysis includes an “upcoming budget test” to address conformity to the budgets anticipated to be available by end of this year.

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 2023 FTIP and the 2022 RTP; a finding of conformity is therefore supported. The 2023 FTIP, the 2022 RTP, and the corresponding Conformity Analysis were approved by TCAG Policy Board on August 21, 2022. Federal approval is anticipated on or before December 31, 2022. FHWA/FTA last issued a finding of conformity for the 2021 FTIP and the 2018 RTP, as amended if applicable, on August 13, 2021. The 2023 FTIP and the 2022 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<sub>2.5</sub>); and has a maintenance plan for particulate matter under 10 microns in diameter (PM<sub>10</sub>). Therefore, transportation plans and programs for the nonattainment areas for Tulare County area must satisfy the requirements of the Federal transportation conformity regulation. Note that the urbanized/metropolitan areas of Kern, Fresno, Stanislaus and San Joaquin Counties have attained the CO standard and maintained attainment for 20 years. In accordance with Section 93.102(b)(4), conformity requirements for the CO standard stop applying 20 years after EPA approves an attainment redesignation request or as of June 1, 2018. Therefore, future conformity analyses for the TIP and RTP no longer include a CO conformity demonstration.

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 ozone, PM-10, and PM2.5.

## **RESULTS OF THE CONFORMITY ANALYSIS**

A regional emissions analysis was conducted for the years 2022, 2023, 2024, 2025, 2026, 2029, 2031, 2037 and 2046 for each applicable pollutant. All analyses were conducted using the latest planning assumptions and emissions models. The major conclusions of the Conformity Analysis for the 2023 FTIP and 2022 RTP are:

- For 2008 and 2015 8-hour ozone, the total regional on-road vehicle-related emissions (ROG and NOx) associated with implementation of the 2023 FTIP and the 2022 RTP all years tested are projected to be less than the approved emissions budgets specified in the *2018 Updates to the California State Implementation Plan for the San Joaquin Valley* (2018 SIP Update). 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 2023 FTIP and the 2022 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 (as revised in 2015)*. The conformity tests for PM-10 are therefore satisfied.
- For the 1997 24-hour PM2.5 standard, the total regional on-road vehicle-related emissions associated with implementation of the 2023 FTIP and the 2022 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 *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards (2018 PM2.5 Plan)* for the 1997 PM2.5 24-hour serious area requirements (2020 attainment year). The conformity tests for the 1997 24-hour PM2.5 standard are therefore satisfied.

- For the 1997 annual PM2.5 standard, the total regional on-road vehicle-related emissions associated with implementation of the 2023 FTIP and the 2022 RTP for the analysis years are either (1) projected to be less than the adequate emission budgets, or (2) less than the emission budgets using the approved PM2.5 and NOx trading mechanism for transportation conformity purposes from the 2021 revision to the *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards (2018 PM2.5 Plan)* for the 1997 annual PM2.5 serious area requirements (2023 attainment year). The conformity tests for the 1997 annual PM2.5 standard are therefore satisfied.
- For the 2006 24-hour PM2.5 standard, the total regional on-road vehicle-related emissions associated with implementation of the 2023 FTIP and the 2022 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 *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards (2018 PM2.5 Plan)*. The conformity tests for the 2006 PM2.5 standard are therefore satisfied.

For the 2012 annual PM2.5 standard, the total regional on-road vehicle-related emissions associated with implementation of the 2023 FTIP and the 2022 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 *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards (2018 PM2.5 Plan)* for the 2012 PM2.5 moderate area requirements. In addition, this conformity analysis includes an “upcoming budget test” demonstrating conformity to the serious (2025) budgets contained in the 2018 PM2.5 Plan. The conformity tests for the 2012 PM2.5 standard are therefore satisfied. The 2023 FTIP and the 2022 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 E includes public hearing documentation conducted on the 2023 FTIP, the 2022 RTP and the corresponding Conformity Analysis on June 27, 2022. Comments received on the conformity analysis and responses made as part of the public involvement process are included in Appendix F.

## **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 and the 2023 FTIP and 2022 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.

TCAG is the designated Metropolitan Planning Organization (MPO) for Tulare County in the San Joaquin Valley. As a result of this designation TCAG prepares the TIP, RTP, and associated conformity analyses. The TIP serves as a detailed four year (FY 2022/23 – 2025/26) programming document for the preservation, expansion, and management of the transportation system. The 2022 RTP has a 2046 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, 2012a). The amendments restructure several sections of the rule so that they apply to any new or revised NAAQS. In addition, several clarifications to improve implementation of the rule were finalized.

On March 6, 2015, EPA published *Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements* final rule (effective April 6, 2015), which shifted the San Joaquin Valley 2008 Ozone Standard attainment date from December 31, 2032 to July 20, 2032 (EPA, 2015). EPA's March 2015 ozone implementation rule also revoked the 1997 Ozone Standard for transportation conformity purposes. On February 16, 2018, the U.S. Court of Appeals ruled against parts of the EPA's 2015 Ozone Implementation Rule related to the revocation of the 1997 ozone standard and the relevant "anti-backsliding" requirements. However, according to *Transportation Conformity Guidance for the South Coast II Court Decision*, nonattainment areas with existing 2008 ozone conformity budgets are not required to address the 1997 ozone standards for conformity purposes.

On December 6, 2018, EPA published the *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements* final rule, effective February 4, 2019 (EPA, 2018). The rule clarified that nonattainment areas must continue to demonstrate conformity to the 2008 ozone standards.

On August 24, 2016, EPA published its Final Rule titled *Implementing National Ambient Air Quality Standards for Fine Particles: State Implementation Plan Requirements*. According to the implementation rule, areas designated as nonattainment for the 1997 PM2.5 standards, must continue to demonstrate conformity to these standards until attainment (EPA, 2016).

## **MULTI-JURISDICTIONAL GUIDANCE**

EPA reissued Guidance for Transportation Conformity Implementation in Multi-Jurisdictional Nonattainment and Maintenance Areas in July 2012 (EPA, 2012c). This guidance updates and supersedes the July 2004 "multi-jurisdictional" guidance (EPA, 2004a), but does not change the

substance of the guidance on how nonattainment areas with multiple agencies should conduct conformity determinations. 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. The Transportation Conformity Guidance for 2015 Ozone NAAQS Nonattainment Areas released in June 2018 incorporates the 2012 Multi-Jurisdictional Guidance by reference.

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 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 PM<sub>2.5</sub>, the Transportation Conformity Rule – PM<sub>2.5</sub> and PM<sub>10</sub> 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 if 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. In May 2015, the San Joaquin Valley Unified Air Pollution Control District requested ARB to withdraw Rule 9120 from California State Implementation Plan consideration.

In July of 2015, ARB sent a letter to EPA withdrawing Rule 9120 from the California State Implementation Plan. Therefore, EPA can no longer act on the Rule. 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 cannot be approved for the San Joaquin Valley, the Federal transportation conformity rule 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).

*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. EPA has approved EMFAC2017 for conformity use on August 15, 2019 and the final rule started the two-year grace period to transition to the new emissions model for use in conformity demonstrations. Therefore, EMFAC2014 continued to be used in this conformity analysis as documented in Chapter 3. EPA issued a federal register notice on December 14, 2015, formally approving EMFAC2014 for use in conformity determinations. On November 20, 2019, California Air Resources Board (CARB) released “EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicles Rule Part One” for use in regional conformity analyses. On March 12, 2020, EPA concurred on the use of CARB’s EMFAC off-model adjustment factors in conformity demonstrations. On April 30, EPA and NHTSA published SAFE Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (Final SAFE Rule) rolling back federal fuel economy standards. On June 26, 2020, CARB issued a public notice stating that EMFAC adjustments released in November continue to be suitable for conformity purposes. On March 14, EPA issued a final decision rescinding its 2019 waiver withdrawal, therefore EMFAC adjustments will no longer required for regional conformity analyses (CARB guidance still pending at this time). Therefore, the Conformity Analysis for the 2023 FTIP and 2022 RTP does not include SAFE Rule adjustments.

3) *Timely Implementation of TCMs* — Section 93.113 provides a detailed description of the steps necessary to demonstrate that the 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. The conformity analysis is required to be publicly available and an opportunity for public review and comment is provided. TCAG adopted consultation process and policy for conformity analysis includes a 30-day comment period (55-day for the RTP) 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.

TCAG 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. The Conformity Analysis for the 2023 FTIP and 2022 RTP includes analyses 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 Standard (NAAQS) for 8-hour ozone (revoked 1997, 2008 and 2015 standards), particulate matter under 2.5 microns in diameter (PM<sub>2.5</sub>) (1997, 2006 and 2012 standards); and has a maintenance plan for particulate matter under 10 microns in diameter (PM-10). Note that the urbanized/metropolitan areas of Kern, Fresno, Stanislaus and San Joaquin Counties have attained the CO standard and maintained attainment for 20 years. In accordance with Section 93.102(b)(4), conformity requirements for the CO standard stop applying 20 years after EPA approves an attainment redesignation request or as of June 1, 2018. Therefore, future conformity analyses no longer include a CO conformity demonstration.

State Implementation Plans have been prepared to address ozone, PM-10 and PM<sub>2.5</sub>:

- The 2016 Ozone Plan (2008 standard) was adopted by the Air District on June 16, 2016, and subsequently adopted by ARB on July 21, 2016. EPA found the new ozone budgets adequate on June 29, 2017 (effective July 14, 2017). In response to recent court decisions regarding the baseline RFP year, ARB adopted the revised 2008 ozone conformity budgets as part of the *2018 Updates to the California State Implementation Plan* (2018 SIP Update) on October 25, 2018. EPA approved the 2016 Ozone Plan and the budgets on March 25, 2019.

The 2007 PM-10 Maintenance Plan (as revised in 2015) was approved by EPA on July 8, 2016 (effective September 30, 2016).

- The 2016 PM<sub>2.5</sub> Plan and portions of the 2018 PM<sub>2.5</sub> Plan (2012 Standard, moderate) was approved by EPA on November 26, 2021 (effective December 27, 2021).
- The 2018 PM<sub>2.5</sub> Plan was partially approved by EPA on July 22, 2020 (effective as of publication) inclusive of the revised conformity budgets and trading mechanism for the 2006 24-hr PM<sub>2.5</sub> standard. Then on November 26, 2021, EPA partially disapproved the original SIP submittal dealing with 1997 annual PM<sub>2.5</sub> nonattainment. In response, CARB submitted a 2021 revision to the 2018 PM<sub>2.5</sub> Plan demonstrating attainment by 2023. On December 29, 2021, EPA proposed approval of the SIP elements and conformity budgets

that pertain to the 2012 annual PM<sub>2.5</sub> serious area requirements (final action expected by end of the year). Then on January 28, 2022, EPA approved 2018 PM<sub>2.5</sub> Plan portion dealing with the 1997 24-hour PM<sub>2.5</sub> standard and determined that the SJV attained the standard by the December 31, 2020 deadline (effective February 28, 2022). On February 10, 2022, EPA found the 1997 annual PM<sub>2.5</sub> budgets for attainment year 2023 adequate, effective February 25, 2022. It is expected that EPA will act on the remaining SIP elements related to annual 1997 PM<sub>2.5</sub> nonattainment by end of the year including the trading mechanism.

EPA's March 2015 final rule implementing the 2008 Ozone Standard also revoked the 1997 Ozone Standard for transportation conformity purposes. This revocation became effective April 6, 2015. On February 16, 2018, the U.S. Court of Appeals ruled against parts of the EPA's 2015 Ozone Implementation Rule related to the revocation of the 1997 ozone standard and the relevant "anti-backsliding" requirements. However, according to the *Transportation Conformity Guidance for the South Coast II Court Decision*, nonattainment areas with existing 2008 ozone conformity budgets are not required to address the 1997 ozone standards for conformity purposes.

EPA designated the San Joaquin Valley nonattainment area for the 2008 Ozone Standard, effective July 20, 2012. Transportation conformity applies one year after the effective date (July 20, 2013). Federal approval for the eight SJV MPO's 2008 Ozone standard conformity demonstrations was received on July 8, 2013.

On June 4, 2018 EPA published final designations classifying the San Joaquin Valley as "extreme" nonattainment for 2015 ozone with an attainment deadline of 2038, effective August 3, 2018. Transportation conformity applies one year after the effective date or August 3, 2019. It is important to note that the 2015 ozone standard nonattainment area boundary for the San Joaquin Valley is exactly the same as the nonattainment area boundary for the 2008 ozone standard.

On November 13, 2009, EPA published Air Quality Designations for the 2006 24-hour PM<sub>2.5</sub> standard, effective December 14, 2009. Nonattainment areas are required to meet the standard by 2014; transportation conformity began to apply on December 14, 2010. On January 20, 2016 EPA published *Designation of Areas for Air Quality Planning Purposes; California; San Joaquin Valley; Reclassification as Serious Nonattainment for the 2006 PM<sub>2.5</sub> NAAQS* finalizing SJV reclassification to Serious nonattainment effective February 19, 2016. Nonattainment areas are required to meet the standard as expeditiously as practicable, but no later than December 31, 2019. It is important to note that the 2006 24-hour PM<sub>2.5</sub> nonattainment area boundary for the San Joaquin Valley is exactly the same as the nonattainment area boundary for the 1997 annual PM<sub>2.5</sub> standard.

EPA's nonattainment area designations for the new 2012 PM<sub>2.5</sub> standards became effective on April 15, 2015. Conformity for a given pollutant and standard applies one year after the effective date (April 15, 2016). It is important to note that the 2012 PM<sub>2.5</sub> standards nonattainment area boundary for the San Joaquin Valley are exactly the same as the nonattainment area boundary for the 1997 annual PM<sub>2.5</sub> standard.

On July 29, 2016, EPA released its *Final Rule for Implementing National Ambient Air Quality Standards for Fine Particles*. According to the implementation rule, areas designated as nonattainment for the 1997 PM 2.5 standards, must continue to demonstrate conformity to these

standards until attainment. In the San Joaquin Valley, the 1997 standards (both 24-hour and annual) continue to apply.

#### **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 ozone, and particulate matter are summarized below.

Section 93.124(d) of the 1997 Final Transportation Conformity regulation allows for conformity determinations for sub-regional emission budgets by MPOs if the applicable implementation plans (or implementation plan submission) explicitly indicates an intent to create such sub-regional 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.

#### **OZONE (2008 AND 2015 STANDARDS)**

The San Joaquin Valley currently violates both the 2008 and 2015 ozone standards; thus the conformity determination includes all corresponding analyses (see discussion under Air Quality Designations Applicable to the San Joaquin Valley above). Under the existing conformity regulations, regional emissions analyses for ozone areas must address nitrogen oxides (NO<sub>x</sub>) 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).

EPA’s final rule implementing the 2008 ozone standard also revoked the 1997 ozone standard for transportation conformity purposes. This revocation became effective April 6, 2015. Current federal guidance does not require 2008 ozone nonattainment areas to address the 1997 ozone standard for conformity purposes.

On March 25, 2019, EPA published a final rule approving the 2008 ozone conformity budgets and the *2018 Updates to the California State Implementation Plan*. The EPA final rule identified both reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>) subarea budgets in tons per average summer day for each MPO in the nonattainment area.

In accordance with Section 93.109(c)(2) of the conformity rule and the 2015 Ozone Transportation Conformity Guidance, if a 2015 ozone nonattainment area has adequate or approved SIP budgets that address the 2008 ozone standard, it must use the budget test until new 2015 ozone standard budgets are found adequate or approved. It is important to note that the boundaries for the 2015 ozone standard and 2008 ozone standard are identical. In addition, the 2015 Ozone Implementation Rule did not revoke 2008 standard requirements. Consequently, for this conformity analysis, the SJV MPOs will conduct demonstrations for both 2008 and 2015 ozone standards using subarea emissions budgets as established in the *2018 Updates to the California State Implementation Plan*.

The conformity budgets from Table 1 of the March 25, 2019 Federal Register are provided in Table 1-1 below. These budgets will be used to compare to emissions resulting from the 2023 FTIP and the 2022 RTP.

**Table 1-1:**  
**On-Road Motor Vehicle 2008 and 2015 Ozone Standard Emissions Budgets**  
 (summer tons/day)

County	2020		2023		2026		2029		2031	
	ROG	NOx								
Fresno	6.7	23.9	5.5	14.1	4.9	13.2	4.5	12.4	4.2	12.1
Kern (SJV)	5.4	20.9	4.5	14.5	4.2	14.4	4.0	14.3	3.9	14.3
Kings	1.2	4.5	1.0	2.7	0.9	2.6	0.8	2.6	0.8	2.6
Madera	1.5	4.3	1.1	2.7	1.0	2.5	0.9	2.4	0.8	2.3
Merced	2.2	8.8	1.7	6.0	1.5	5.9	1.3	5.6	1.2	5.4
San Joaquin	4.7	11.2	3.9	7.4	3.5	7.0	3.1	6.6	2.8	6.3
Stanislaus	3.1	8.8	2.6	5.6	2.2	4.9	2.0	4.5	1.8	4.3
Tulare	3.0	7.6	2.4	4.6	2.1	4.0	1.8	3.7	1.7	3.5

<sup>(a)</sup> Note that 2008 ozone budgets were established by rounding up each county's emissions totals to the nearest tenth of a ton.

## PM-10

The 2007 PM-10 Maintenance Plan (as revised in 2015) was approved by EPA on July 8, 2016 (effective September 30, 2016), 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 re-entrained dust from travel on paved roads, vehicular exhaust, travel on unpaved roads, and road construction. The conformity budgets from Table 2 of the August 12, 2016 Federal Register are provided below and will be used to compare emissions for each analysis year.

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 July 8, 2016, 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.

**Table 1-2:  
On-Road Motor Vehicle PM-10 Emissions Budgets**  
(tons per average annual day)

County	2020 <sup>(b)</sup>	
	PM-10	NOx
Fresno	7.0	25.4
Kern <sup>(a)</sup>	7.4	23.3
Kings	1.8	4.8
Madera	2.5	4.7
Merced	3.8	8.9
San Joaquin	4.6	11.9
Stanislaus	3.7	9.6
Tulare	3.4	8.4

<sup>(a)</sup>Kern County subarea includes only the portion of Kern County within the San Joaquin Valley Air Basin.

<sup>(b)</sup>Note that EPA did not take action on the 2005 budgets of the 2007 PM10 Maintenance Plan (as revised in 2015). These budgets are not in the timeframe of this conformity analysis.

## **PM2.5**

EPA and FHWA have indicated that areas violating both the annual and 24-hour standards for PM2.5 must address all standards in the conformity determination. The San Joaquin Valley currently violates both the 1997 annual and 24-hour and 2012 annual PM2.5 standards and the 2006 24-hour PM2.5 standards; thus the conformity determination includes all corresponding analyses (see discussion under Air Quality Designations Applicable to the San Joaquin Valley above).

The 2016 PM2.5 Plan addressing moderate area requirements for the 2012 PM2.5 standard was adopted by the San Joaquin Valley Air District on September 15, 2016. The 2018 PM2.5 Plan addressing 1997, 2006 and 2012 PM2.5 standards was adopted by the San Joaquin Valley Air District on November 15, 2018 and California Air Resources Board on January 24, 2019, and subsequently submitted for EPA review together with the 2016 Moderate PM2.5 Plan and reclassification to serious request. On July 22, 2020, EPA published final rule approving SIP

elements that pertain to 2006 24-hour PM<sub>2.5</sub> standard serious area nonattainment (effective as of publication). On December 29, 2021, EPA proposed approval of the SIP elements and conformity budgets that pertain to the 2012 annual PM<sub>2.5</sub> standards (final action expected by end of the year). Then on January 28, 2022, EPA approved 2018 PM<sub>2.5</sub> Plan portion dealing with the 1997 24-hour PM<sub>2.5</sub> standard and determined that the SJV attained the standard by the December 31, 2020 deadline (effective February 28, 2022).

While EPA partially disapproved the original SIP submittal dealing with 1997 annual PM<sub>2.5</sub> nonattainment on November 26, 2021, CARB has submitted the 2021 revision to the 2018 PM<sub>2.5</sub> Plan in the same month demonstrating attainment by 2023. On February 10, 2022, EPA found the 1997 annual PM<sub>2.5</sub> budgets adequate, effective February 25, 2022. It is expected that EPA will act on the remaining SIP elements related to the annual 1997 PM<sub>2.5</sub> standards, including the trading mechanism, by end of the year. Therefore, this analysis includes conformity tests to all new budgets contained in the 2018 PM<sub>2.5</sub> Plan and its 2021 revision.

Given that EPA may act on the remaining components of the 2018 PM<sub>2.5</sub> Plan prior to federal approval of the 2022 RTP and 2023 FTIP conformity analysis, the new transportation conformity budgets addressing the 2012 serious PM<sub>2.5</sub> standards are also included in this conformity analysis (“upcoming budget test”).

#### *1997 (24-hour and annual) Standards*

The 2018 PM<sub>2.5</sub> Plan contains motor vehicle emission budgets for PM<sub>2.5</sub> and NO<sub>x</sub> established based on average annual daily emissions, as well as a trading mechanism. The motor vehicle emissions budget for PM<sub>2.5</sub> includes directly emitted PM<sub>2.5</sub> motor vehicle emissions from tailpipe, brake wear and tire wear. VOC, SO<sub>x</sub>, 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 applicable conformity budgets are provided in Table 1-3

for the 1997 annual and 24-hour PM2.5 standards and will be used to compare emissions resulting from the 2023 FTIP and the 2022 RTP.

**Table 1-3:  
 On-Road Motor Vehicle 1997 (24-hour and annual) PM2.5 Standard Emissions Budgets**  
 (tons per average annual day)

County	2020		2023	
	PM2.5	NOx	PM2.5	NOx
Fresno	0.9	25.3	0.8	15.1
Kern (SJV)	0.8	23.3	0.7	13.3
Kings	0.2	4.8	0.2	2.8
Madera	0.2	4.2	0.2	2.5
Merced	0.3	8.9	0.3	5.3
San Joaquin	0.6	11.9	0.6	7.6
Stanislaus	0.4	9.6	0.4	6.1
Tulare	0.4	8.5	0.4	5.2

The 2018 PM2.5 SIP includes a trading mechanism that 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 6.5 to 1 ratio on an annual basis and a 2 to 1 ratio on a 24-hr basis. The trading mechanism allows the agencies responsible for demonstrating transportation conformity in the San Joaquin Valley to supplement the applicable budget for PM2.5 with a portion of the applicable corresponding budget for NOx and use these adjusted motor vehicle emissions budgets for PM2.5 and NOx to demonstrate transportation conformity with the 2018 PM2.5 SIP. 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. The trading mechanism for the 24-hour annual PM2.5 was approved by EPA on January 28, 2022. Final action on the trading mechanism for the 1997 annual PM2.5 standard is expected by end of the year.

*2012 Annual PM2.5 Standard (Moderate)*

On November 26, 2021, EPA published final approval of the moderate area SIP budgets for the 2012 PM2.5 standard contained in the 2016 Moderate Area PM2.5 Plan and portions of the 2018 PM2.5 plan that pertain to the moderate requirements for the 2012 PM2.5 standard. The approval also included reclassification to serious. On December 29, 2021, EPA proposed approval of the SIP elements and conformity budgets that pertain to the 2012 annual PM2.5 serious area requirements (final action expected by end of the year). Until the new 2012 serious area PM2.5 standard budgets are found adequate or approved, the SJV will conduct conformity determination for the 2012 annual PM2.5 standard using budgets established in the 2018 PM2.5 Plan for moderate nonattainment. The conformity budgets from the November 26, 2021 Federal Register are provided in Table 1-4 will be used to compare emissions resulting from 2023 FTIP and 2022 RTP.

**Table 1-4:  
On-Road Motor Vehicle 2012 (annual) PM2.5 Standard Emissions Budgets (Moderate)**  
(tons per average annual day)

County	2022	
	PM2.5	NOx
Fresno	0.9	21.2
Kern (SJV)	0.8	19.4
Kings	0.2	4.1
Madera	0.2	3.5
Merced	0.3	7.6
San Joaquin	0.6	10.0
Stanislaus	0.4	8.1
Tulare	0.4	6.9

The 2018 PM2.5 SIP includes a trading mechanism that 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 6.5 to 1 ratio on an annual basis. The trading mechanism allows the agencies responsible for demonstrating transportation conformity in the San Joaquin Valley to supplement the applicable budget for PM2.5 with a portion of the applicable corresponding budget for NOx and use these adjusted motor vehicle emissions budgets for PM2.5 and NOx to demonstrate transportation conformity with the 2018 PM2.5 SIP.

*2006 24-Hour PM2.5 Standard*

The 2018 PM2.5 Plan addressing 1997, 2006 and 2012 PM2.5 standards was adopted by the San Joaquin Valley Air District on November 15, 2018, and California Air Resources Board on January 24, 2019. On March 27, EPA published a proposed rule approving portions of the 2018 PM2.5 Plan, including the 2006 PM2.5 conformity budgets and trading mechanism. Final rule on sections that pertain to 2006 24-hour PM2.5 standard serious area nonattainment was published on July 22, 2020. Therefore, the conformity analysis for the 2021 FTIP and 2018 RTP incorporates new transportation conformity budgets and the new attainment year of 2024 for 2006 24-hour PM2.5 standards.

The 2018 PM2.5 Plan for the 2006 PM2.5 standard contains motor vehicle emission budgets for PM2.5 and NOx established based on average winter 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 the March 27, 2020 Federal Register, Table 14 are provided in Table 1-5 below and will be used to compare emissions resulting from the 2023 FTIP and the 2022 RTP.

**Table 1-5**  
**On-Road Motor Vehicle 2006 24-Hour PM2.5 Standard Emissions Budgets**  
 (tons per average winter day)

County	2020		2023		2024	
	PM2.5	NOx	PM2.5	NOx	PM2.5	NOx
Fresno	0.9	25.9	0.8	15.5	0.8	15.0
Kern (SJV)	0.8	23.8	0.7	13.6	0.7	13.4
Kings	0.2	4.9	0.2	2.9	0.2	2.8
Madera	0.2	4.4	0.2	2.6	0.2	2.5
Merced	0.3	9.1	0.3	5.5	0.3	5.3
San Joaquin	0.6	12.3	0.6	7.9	0.6	7.6
Stanislaus	0.4	9.8	0.4	6.2	0.4	6.0
Tulare	0.4	8.7	0.4	5.3	0.4	5.1

The 2018 PM2.5 SIP includes a trading mechanism that 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 2 to 1 ratio on a 24-hour, wintertime basis. The trading mechanism allows the agencies responsible for demonstrating transportation conformity in the San Joaquin Valley to supplement the applicable budget for PM2.5 with a portion of the applicable corresponding 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.

*“Upcoming Budget Test” for the 2012 Annual PM2.5 Standards (Serious)*

The 2018 PM2.5 Plan 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 budgets for serious 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. On December 29, 2021, EPA proposed approval of the SIP elements and conformity budgets that pertain to the 2012 annual PM2.5 standards, serious area requirements (final action expected by end of the year). The 2018 PM2.5 SIP conformity budgets from the December 29, 2021 Federal Register are provided in Table 1-6 below to address serious nonattainment requirements. These budgets will be used to compare emissions resulting from the 2023 FTIP and the 2022 RTP. Should EPA act on these budgets prior to federal approval of this conformity analysis, the budgets below will apply.

**Table 1-6:  
On-Road Motor Vehicle 2012 (annual) PM2.5 Standard Emissions Budgets (Serious)**  
(tons per average annual day)

County	2022		2025	
	PM2.5	NOx	PM2.5	NOx
Fresno	0.9	21.2	0.8	14.3
Kern (SJV)	0.8	19.4	0.8	12.8
Kings	0.2	4.1	0.2	2.7
Madera	0.2	3.5	0.2	2.3
Merced	0.3	7.6	0.3	5.0
San Joaquin	0.6	10.0	0.6	6.9
Stanislaus	0.4	8.1	0.4	5.6
Tulare	0.4	6.9	0.4	4.7

The 2018 PM2.5 SIP includes a trading mechanism that 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 6.5 to 1 ratio on an annual basis. The trading mechanism allows the agencies responsible for demonstrating transportation conformity in the San Joaquin Valley to supplement the applicable budget for PM2.5 with a portion of the applicable corresponding budget for NOx, and use these adjusted motor vehicle emissions budgets for PM2.5 and NOx to demonstrate transportation conformity with the 2018 PM2.5 SIP. 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.

**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.

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. Table 1-7 below provides a summary of conformity analysis years that apply to this conformity analysis.

**Table 1-7:  
 San Joaquin Valley Conformity Analysis Years**

<b>Pollutant</b>	<b>Budget Years<sup>1</sup></b>	<b>Attainment/ Maintenance Year</b>	<b>Intermediate Years</b>	<b>RTP Horizon Year</b>
2008 and 2015 Ozone	2020/2023/2026/2029	2031/2037 <sup>2</sup>	NA	2046
PM-10	NA	2020	2022/2029/2037	2046
1997 24-hour PM2.5	NA	2020	2023/2029/2037	2046
1997 Annual PM2.5	NA	2023	2029/2037	2046
2012 Annual PM2.5 (moderate)	NA	2022	2025/2029/2037	2046
2006 24-hour PM2.5	2020/2023	2024	2031/2037	2046
Upcoming 2012 Annual PM2.5 (serious)	2022	2025	2029/2037	2046

<sup>1</sup>Budget years that are not in the time frame of the transportation plan/conformity analysis are not included as analysis years (e.g., 2020), although they may be used to demonstrate conformity. Some of the early RFP year budgets were not acted on by EPA since they were not applicable.

<sup>2</sup>2031 is the attainment year for the 2008 ozone standard. 2037 is the attainment year for the 2015 ozone standard.

For the 2008 ozone standard, the San Joaquin Valley has been classified as an extreme nonattainment area with an attainment date of July 20, 2032. In accordance with the March 2015 *Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements* final rule, the attainment year of 2031 must be modeled. When using the budget test, the attainment year of the 2008 ozone standard must be analyzed (i.e. 2031).

For the 2015 ozone standard, the San Joaquin Valley has been classified as an extreme nonattainment area with an attainment date of August 3, 2038. In accordance with the December 2018 final rule, *Implementation of the 2015 National Ambient Air Quality Standards for Ozone: Nonattainment Area State Implementation Plan Requirements*, the attainment year of 2037 must be modeled. When using the budget test, the attainment year of the 2015 ozone standard must be analyzed (i.e. 2037).

The Clean Air Act requires all states to attain the 1997 PM<sub>2.5</sub> standards as expeditiously as practicable beginning in 2010, but by no later than April 5, 2010, unless EPA approves an attainment date extension. States must identify their attainment dates based on the rate of reductions from their control strategies and the severity of the PM<sub>2.5</sub> problem. The 2018 PM<sub>2.5</sub> SIP addresses attainment of the 1997 24-hour PM<sub>2.5</sub> standard (serious) by 2020 and was approved by EPA on January 28, 2022 (effective February 28, 2022). The attainment year is not in the timeframe of this conformity analysis. On February 10, 2022, EPA found the serious area 1997 annual PM<sub>2.5</sub> budgets for attainment year 2023 adequate (effective February 25, 2022). Therefore, attainment year 2023 must be modeled.

On January 20, 2016, EPA finalized reclassification of the San Joaquin Valley to Serious nonattainment for the 2006 24-hour PM<sub>2.5</sub> Standard. On August 16, 2016, the 2012 PM<sub>2.5</sub> Plan was approved by EPA, effective September 30, 2016, inclusive of new conformity budgets and trading mechanism for the 2006 24-hour PM<sub>2.5</sub> standard with a requirement to attain the standard as expeditiously as practicable and no later than December 31, 2019. In 2019, CARB submitted an attainment deadline extension request as part of the 2018 PM<sub>2.5</sub> Plan. Final rule on 2018 PM<sub>2.5</sub> SIP sections that pertain to 2006 24-hour PM<sub>2.5</sub> standard Serious area nonattainment was released on July 22, 2020. The attainment year of 2024 must be modeled.

On January 15, 2015, EPA classified the San Joaquin Valley as Moderate nonattainment for the 2012 PM<sub>2.5</sub> Standards. On November 26, 2021, EPA issued final rule approving of the Moderate Area 2016 PM<sub>2.5</sub> Plan, portions of the 2018 PM<sub>2.5</sub> SIP pertaining to moderate nonattainment of the 2012 PM<sub>2.5</sub> standards, and the reclassification request to serious nonattainment. The San Joaquin Valley 2018 PM<sub>2.5</sub> Plan includes serious area budgets for the 2012 PM<sub>2.5</sub> standards with an attainment deadline of 2025; therefore, the attainment year 2025 must be modeled.

## **CHAPTER 2: LATEST PLANNING ASSUMPTIONS AND TRANSPORTATION MODELING**

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 emissions modeling began in April 2021.

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.

TCAG uses the CUBE/VOYAGER (VMIP2) transportation model. The model was validated in 2017 for the 2015 base year. The latest planning assumptions used in the transportation model validation and Conformity Analysis is summarized in Table 2-1.

**Table 2-1:  
 Summary of Latest Planning Assumptions for the Tulare County Association of  
 Governments Conformity Analysis**

<b>Assumption</b>	<b>Year and Source of Data (MPO action)</b>	<b>Modeling</b>	<b>Next Scheduled Update</b>
Population	Base Year: Department of Finance (2015)  Projections: Department of Finance (2021)  Approved by TCAG Governing Board in July 2022.	This data is disaggregated to the TAZ level for input into CUBE/Voyager (VMIP2) for the base year validation.	New data from the Department of Finance is expected to be adopted by TCAG in 2026.
Employment	Base Year: Employment Development Department (2015), InfoUSA (2015), and Woods and Poole (2017)  Projections:  Employment Development Department (2021) and Caltrans (2019)	This data is disaggregated to the TAZ level for input into CUBE/Voyager (VMIP2) for the base year validation.	New data from the Employment Development Department, InfoUSA, and Woods and Poole is anticipated to be included in the next transportation model update in 2026.
Traffic Counts	Approximately 150 traffic counts were collected annually.	CUBE/Voyager (VMIP2) was validated using these traffic counts.	Traffic counts are updated continuously, if funds are available.
Vehicle Miles of Travel	The 2017 transportation model validation for the 2015 base year was approved by the TCAG Board in August 2018.  New 2022 base year ABM validation expected to be approved by TCAG Board in 2026.	Cube/Voyager (VMIP2) is the transportation model used to estimate VMT in Tulare County. 2015 HPMS data was used for validation.	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.

Assumption	Year and Source of Data (MPO action)	Modeling	Next Scheduled Update
Speeds	<p>The 2017 transportation model validation was based on Caltrans Performance Measurement System (PeMS), in addition to TCAG survey data of peak and off-peak speeds, and a TCAG Travel Time Study for SR 198 &amp; 190.</p> <p>Speed distributions were updated in EMFAC2014, using methodology approved by ARB and with information from the transportation model.</p>	<p>Cube/Voyager (VMIP2) includes a feedback loop that assures congested speeds are consistent with travel speeds.</p> <p>EMFAC2014</p>	<p>A speed study will be conducted every five years, if adequate funds are available.</p>

**A. 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, 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.

MPO	Transportation Model	Base Year Validation	Year Completed	Population	Employment	Traffic Counts	Speeds	Periods	Feedback Loop
TCAG	CUBE (VMIP2)	2015 Projections -->	2017	DOF 2015 DOF 2017	EDD 2015 / InfoUSA 2015 DOF 2017	2015-2016	Caltrans PeMS/TCAG 2014-2016	AM/MD/PM/OP	Yes

**Population:** TCAG utilized the California Department of Finance (DOF) as the primary county-level forecasting reference for a base population and future projections, to be within 3% of the latest DOF projections required by SB375. A linear growth rate with the population interpolated for each year was applied using the DOF forecasts through the planning horizon year of 2042.

**Employment:** Employment estimates and projections used included the California Employment Development Department (EDD), InfoUSA, and Woods & Poole. Control totals were derived from these projections and used in the development of Envision Tomorrow scenarios and travel demand model socio-economic detail inputs.

The EDD data established control totals for the base and future years of employment and employment categories. Next, the InfoUSA data provided geocoded information to distribute the information geographically. InfoUSA data was adjusted to EDD's control totals and reclassified to fit the categories of the model. This allowed for the distribution of employees to the Traffic Analysis Zones (TAZ). To test proportions and make adjustments where needed between EDD and InfoUSA, Woods & Poole was used, which provides historical employment data. Woods & Poole also helped complete the InfoUSA dataset, as InfoUSA has some gaps in its data in regards to employers not required to pay taxes (schools, fire stations, post offices, etc.),

**Land Use:** Land use and socioeconomic data was derived from the above sources and joined to the TAZ level for determining trip generation, vehicle availability, and mode choice. The housing forecasts are based on DOF data for the base year, and projected using a Planning Center Study from 2012 conducted for the San Joaquin Valley, which included population, birth rates, net migration, housing, construction, and school enrollment. A linear growth rate for households was then determined by adjusting to a persons per household ratio that was reasonable based on Planning Center study projections.

Future land use patterns were created using a GIS plugin called Envision Tomorrow, a suite of scenario planning tools that tests different land use and transportation options. Utilizing input and coordination with local agencies, parcel data information, city and county general plans, zoning maps, projected outputs in housing and population from the DOF and the Planning Center, and projected employment from the EDD, InfoUSA, and Woods & Poole, scenarios were built to spatially represent alternative future growth patterns. This allowed for a deeper analysis into the study area, allowing the user to measure the scenario's influence on density, land use, housing, sustainability, transportation, and economic conditions. Although Envision Tomorrow was not yet used to measure VMT, it was consistent with population and employment projections, and produced richer metrics for comparison amongst scenarios.

## **B. TRANSPORTATION MODELING**

The San Joaquin Valley Metropolitan Planning Organizations (MPOs) utilize the CUBE Transportation and Land Use Modeling Suite software (Citilabs, Inc.). Most of the Valley MPO regional traffic models consist of traditional four-step traffic forecasting models. Some are transitioning to activity-based models implemented on the CUBE platform. The four-step models use land use, socioeconomic, and road network data to estimate facility-specific roadway traffic volumes. Each MPO 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 TCAG transportation modeling methodology meets those requirements.

**Trip Generation:** this first step calculates person or truck trip ends using trip generation rates established during model calibration. This step also uses demographics to determine household passenger vehicle availability.

**Trip Distribution:** this step estimates how many trips travel from one zone to any other zone. The distribution is based on the number of trip ends generated in each of the two zones, and on factors that relate the likelihood of travel between any two zones to the impedance between the two zones such as distance, cost, time, and varies by accessibility to passenger vehicles, transit, and non-vehicular modes.

**Mode Choice:** this step uses demographics and the comparison of distance, time, cost, and access to between modes to estimate the proportions of the total person trips using drive-alone or shared-ride passenger auto, transit, walk, or bike for travel between zones.

**Trip Assignment:** in the final step, vehicle trips or transit trips from one zone to another zone are assigned to specific travel routes between the zones on the network.

## **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 model was estimated and calibrated to reflect the base year travel conditions of 2015 and validated to the year of 2017, with 232 directional counts collected regionally between 2014 and 2016. Weekday traffic counts were compared to the model assigned volume for total vehicle trips. The overall Daily model/count ratio is 1.06.

Daily Model/Count by Functional Class		
Functional Class	M/C	# Locations
Freeway	1.01	4
Highway\Expressway	0.99	3
Arterial	0.77	224
Collector	NA	0

RMSE by Daily Volume Groups		
Count Volume	Guideline	Model
> 50,000	< 21%	14%
25,000 - 49,999	< 22%	27%
10,000 - 24,999	< 25%	31%
5,000 - 9,999	< 29%	46%
2,500 - 4,999	< 36%	55%
1,000 - 2,499	< 47%	72%
< 1,000	< 60%	182%

Daily Model/Count by Functional Class		
Functional Class	M/C	# Locations
Freeway	1.01	4
Highway\Expressway	0.99	3
Arterial	0.77	224
Collector	NA	0

RMSE by Daily Volume Groups		
Count Volume	Guideline	Model
> 50,000	< 21%	14%
25,000 - 49,999	< 22%	27%
10,000 - 24,999	< 25%	31%
5,000 - 9,999	< 29%	46%
2,500 - 4,999	< 36%	55%
1,000 - 2,499	< 47%	72%
< 1,000	< 60%	182%

**Trip Making and Travel Patterns:** Available 2010 Census Journey-to-Work data, 2010-2012 California Household Travel Survey (CHTS) data, and National Cooperative Highway Research Program (NCHRP) recommended trip rates were used to verify, and as needed, modify the TCAG model trip generation rates. The table below shows the resultant trips by purpose compared with the Caltrans survey data:

Purpose	Total (All Modes)	
	CHTS	Model
HBW	16%	14%
HBO	59%	61%
NHB	26%	24%
Total (All Purposes)	100%	100%

## **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:*

The 2017 transportation model validation was based on Caltrans Performance Measurement System (PeMS), in addition to TCAG survey data of peak and off-peak speeds, and a TCAG Travel Time Study for SR 198 & 190.

The valley traffic models include a feedback loop that uses congested travel times as an input to the trip distribution step. The feedback loop ensures that the congested travel speeds used as input to the air pollution emission models are consistent with the travel speeds used throughout the traffic model process. The travel model is validated to counts using input average free flow speeds and common practice speed flow curves which are used to estimate congested speeds and travel times. Then, a feedback loop is implemented with the intent to ensure that the congested travel impedances (times) used for final traffic assignment and as input to the air quality analysis are consistent with the travel impedances used throughout the model process. The feedback loop is considered to converge when the travel times that result from the congested travel speeds after traffic assignment compare closely with the travel times used as input to the trip distribution process. Travel impedances from zone to zone are used to distribute trips to model mode split.

Through Iteris' iPeMS web-based software using "Big Data" from Here Corporation, speed limits, free flow speed, historical average speeds, and percentage of free flow, along with a time series report and confidence rate score on selected corridors, were available. TCAG used this data to help determine free flow speeds and common practice speed flow curves in the future.

## **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:*

As part of VMIP 2, the highway network was based on a true shape centerline file in a geodatabase and updated variables to reflect the master network from the RTP/SCS. The transit lines were also updated to match the more detailed highway network and are contained in the geodatabase. The benefits of this are more accurate mapping and distances, easy linkage and comparisons to speed

data, and inclusion of local streets for sub-TAZ level analysis. In addition, the GIS network contains many variables to complement those already part of the travel model network, including auto, HOV, transit, truck, bike, and walk accessibility designations. The transit assignment includes the following variables: transit networks, transit attributes (mode, operator, vehicle type), transit access links, fares, user classes, and transfer and wait rules. Higher frequency transit and infill developments lead to increased transit ridership in the future. The mode choice model reflects the household travel survey, as shown in the table below.

Drove Alone		Shared Ride 2		Shared Ride 3+		Transit		Walk		Bike		Other	
CHTS	Model	CHTS	Model	CHTS	Model	CHTS	Model	CHTS	Model	CHTS	Model	CHTS	Model
80%	81%	9%	8%	5%	7%	0.3%	0.8%	5%	3%	1%	1%	0%	0%
24%	25%	28%	30%	31%	30%	0.5%	1.5%	13%	8%	1%	1%	3%	4%
42%	40%	27%	26%	18%	17%	0.3%	0.9%	12%	13%	0%	2%	1%	0%
37%	37%	25%	26%	24%	23%	0.4%	1.2%	11%	9%	1%	2%	2%	2%

## 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 (screen-lines) 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.*

As shown in the table below, the TCAG regional model forecasts of VMT for the 2015 base year validation were within 3% of the relevant year of Caltrans Highway Performance Monitoring System (HPMS) data as tabulated in the Assembly of Statistical Reports for the selected base year.

<b>Evaluation</b>			
<b>Criterion</b>	<b>HPMS</b>	<b>Model</b>	<b>% Deviation</b>
+3%	10,062,200	10,336,790	2.7%

**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 2021 FTIP and the 2018 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, 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 MPO 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 which 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.

### C. TRAFFIC ESTIMATES

A summary of the population, employment, and travel characteristics for the TCAG 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**

<b>Horizon Year</b>	<b>Total Population</b>	<b>Employment</b>	<b>Average Weekday VMT (millions)</b>	<b>Total Lane Miles</b>
2022	488,517	188,434	10.7	4,169
2023	492,169	189,635	10.8	N/A
2024	496,119	190,913	10.9	N/A
2025	500,134	192,262	11.0	N/A
2026	504,072	193,701	11.0	N/A
2029	516,453	198,177	11.3	4,291
2031	524,352	201,187	11.4	N/A
2037	542,129	209,124	11.8	4,342
2046	567,383	218,846	12.2	4,423

### D. VEHICLE REGISTRATIONS

TCAG 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 EMFAC2014 model ([http://www.arb.ca.gov/msei/onroad/latest\\_version.htm](http://www.arb.ca.gov/msei/onroad/latest_version.htm)). Vehicle registrations, age distribution and fleet mix are developed and included in the model by CARB and cannot be updated by the user. While EPA issued final approval for EMFAC2017 use in conformity demonstrations on August 15, 2019, the Conformity Analysis for the 2023 FTIP and the 2022 RTP relies on EMFAC2014 since the analysis began in July 2021, in line with the grace period established in the Final Rule. EPA issued a federal register notice on December 14, 2015 formally approving EMFAC2014 for conformity.

## **E. 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**

No committed control measures are included in the 2016 Ozone Plan.

### **PM-10**

Committed control measures in the EPA approved 2007 PM-10 Maintenance Plan that reduce mobile source emissions are shown in Table 2-3. However, reductions from these control measures were not applied to this conformity analysis because they were not needed to demonstrate conformity.

**Table 2-3:  
2007 PM-10 Maintenance Plan Measures Assumed in the Conformity Analysis**

<b>Measure Description</b>	<b>Pollutants</b>
ARB existing Reflash, Idling, and Moyer	PM-10 annual exhaust NOx annual exhaust
District Rule 8061: Paved and Unpaved Roads	PM-10 paved road dust PM-10 unpaved road dust
District Rule 8021 Controls: Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities	PM-10 road construction dust

NOTE: State reductions from the Carl Moyer, Reflash and Idling have been included in EMFAC2014.

### **PM2.5**

No committed control measures are included in the 2016 PM2.5 Plan and the 2018 PM2.5 Plan.

## **CHAPTER 3: AIR QUALITY MODELING**

The model used to estimate vehicle exhaust emissions for ozone precursors and particulate matter is EMFAC2014. CARB emission factors for PM10 have been used to calculate re-entrained paved and unpaved road dust, and fugitive dust associated with road construction. For this conformity analysis, model inputs not dependent on the TIP or RTP are consistent with the applicable SIPs, which include:

- The 2016 Ozone Plan (2008 standard) was adopted by the Air District on June 16, 2016 and subsequently adopted by the ARB on July 21, 2016. EPA found the new ozone budgets adequate on June 29, 2017 (effective July 14, 2017). In response to recent court decisions regarding the baseline RFP year, ARB adopted the revised 2008 ozone conformity budgets as part of the 2018 Updates to the California State Implementation Plan Update on October 25, 2018. EPA approved the budgets and the plan on March 25, 2019.
- The 2007 PM-10 Maintenance Plan (as revised in 2015) was approved by EPA on July 8, 2016 (effective September 30, 2016).
- The 2016 PM2.5 Plan and portions of the 2018 PM2.5 Plan (2012 Standard, moderate) was approved by EPA on November 26, 2021 (effective December 27, 2021).
- The 2018 PM2.5 Plan was partially approved by EPA on July 22, 2020 (effective as of publication) inclusive of the revised conformity budgets and trading mechanism for the 2006 24-hr PM2.5 standard. Then on November 26, 2021, EPA partially disapproved the original SIP submittal dealing with 1997 annual PM2.5 nonattainment. In response, CARB submitted a 2021 revision to the 2018 PM2.5 Plan demonstrating attainment by 2023. On December 29, 2021, EPA proposed approval of the SIP elements and conformity budgets that pertain to the 2012 annual PM2.5 serious area requirements (final action expected by end of the year). Then on January 28, 2022, EPA approved 2018 PM2.5 Plan portion dealing with the 1997 24-hour PM2.5 standard and determined that the SJV attained the standard by the December 31, 2020 deadline (effective February 28, 2022). On February 10, 2022, EPA found the 1997 annual PM2.5 budgets for attainment year 2023 adequate, effective February 25, 2022. It is expected that EPA will act on the remaining SIP elements related to annual 1997 PM2.5 nonattainment by end of the year, including the trading mechanism.

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 1-6.

## **A. EMFAC2014**

The EMFAC model (short for EMISSION FACTOR) is a computer emissions modeling software that estimates emission rates for motor vehicles for calendar years from 2000 to 2050 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, light, heavy, and medium-duty trucks, motorcycles, 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 MPO level. EMFAC contains default vehicle activity data that can be used to estimate a motor vehicle emissions inventory in tons/day for a specific year and season, and as a function of ambient temperature, relative humidity, vehicle population, mileage accrual, miles of travel, and vehicle speeds.

Section 93.111 of the conformity regulation requires the use of the latest emission estimation model in the development of conformity determinations. On December 30, 2014, ARB released EMFAC2014, which is the latest update to the EMFAC model for use by California State and local governments to meet Clean Air Act (CAA, 1990) requirements. Nearly a year later, on December 14, 2015, EPA announced the availability of this latest version of the California EMFAC model for use in SIP development in California. EMFAC2014 was required for conformity analysis on or after December 14, 2017.

On March 1, 2018 ARB released an update to the EMFAC model – EMFAC2017v1.0.2. The model was submitted for EPA review in the fall of 2018 and EPA published final approval of EMFAC for conformity use on August 15, 2019. The announcement set a grace period of 2 years before EMFAC2017 is required for use in new regional emissions analyses. The conformity analysis for the 2023 FTIP and the 2022 RTP began in July 2021, before the EMFAC2017 grace period expired; therefore this analysis relies on EMFAC2014 for all conformity tests.

On January 15, 2021 ARB released the latest update to the EMFAC model – EMFAC2021v1.0.0. EPA has not yet approved EMFAC2021 for regional conformity use.

On September 27, 2019, the United States Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA) published the “Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program” (effective November 26, 2019). The Part One Rule revoked California’s authority to set its own greenhouse gas emissions standards, which were incorporated in EMFAC2014 emissions model. On November 20, 2019, California Air Resources Board (CARB) released “EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicles Rule Part One” for use in regional conformity analyses. On March 12, 2020, EPA concurred on the use of CARB’s EMFAC off-model adjustment factors in conformity demonstrations. On April 30, EPA and NHTSA published SAFE Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (Final SAFE Rule) rolling back federal fuel economy standards. On June 26, 2020 CARB issued a public notice stating that EMFAC adjustments released in November continue to be suitable for conformity purposes. On March 14,

EPA issued a final decision rescinding its 2019 waiver withdrawal, therefore EMFAC adjustments will no longer be needed for regional conformity analyses (CARB guidance is still pending). Therefore, the Conformity Analysis for the 2023 FTIP and 2022 RTP does not include SAFE Rule adjustments.

A transportation data template has been prepared to summarize the transportation model output for use in EMFAC 2014. The template includes allocating VMT by speed bin by hour of the day. EMFAC2014 was used to estimate exhaust emissions for ozone, PM-10, and PM2.5 conformity demonstrations consistent with the applicable air quality plan. Note that the statewide SIP measures documented in Chapter 2 are already incorporated in the EMFAC2014 model as appropriate.

## **B. ADDITIONAL PM-10 ESTIMATES**

PM-10 emissions for re-entrained 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 NO<sub>x</sub> 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. PM<sub>2.5</sub> APPROACH**

EPA and FHWA have indicated that areas violating both the annual and 24-hour standards for PM<sub>2.5</sub> must address all standards in the conformity determination. The San Joaquin Valley currently violates both the 1997 and 2012 annual PM<sub>2.5</sub> standards, and the 1997 and 2006 24-hour PM<sub>2.5</sub> standards; thus the conformity determination includes analyses to all PM<sub>2.5</sub> standards.

The following PM<sub>2.5</sub> approach addresses the 1997 (annual and 24-hour), the 2012 (annual), and the 2006 (24-hour) standards:

EMFAC2014 incorporates data for temperature and relative humidity that vary by geographic area, calendar year and season. The annual average represents an average of all the monthly inventories. A winter average represents an average of the California winter season (October through February). EMFAC will be run to estimate direct PM<sub>2.5</sub> and NO<sub>x</sub> emissions from motor vehicles for an annual or winter average day as described below.

EPA guidance indicates that State and local agencies need to consider whether VMT varies during the year enough to affect PM<sub>2.5</sub> annual emission estimates. The availability of seasonal or monthly VMT data and the corresponding variability of that data need to be evaluated.

PM<sub>2.5</sub> 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 PM<sub>2.5</sub> emission estimates.

The SJV MPOs 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 EMFAC2014 represent the most accurate VMT 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.

The regional emissions analyses in PM<sub>2.5</sub> nonattainment areas must consider directly emitted PM<sub>2.5</sub> motor vehicle emissions from tailpipe, brake wear, and tire wear. In California, areas will use EMFAC2014. 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, NO<sub>x</sub> emissions are included; however, VOC, SO<sub>x</sub>, and ammonia emissions are not.

*1997 24-Hour and Annual Standards* –The portions of the 2018 PM<sub>2.5</sub> Plan dealing with the 1997 24-hour standard was approved by EPA on January 28, 2022 (effective February 28, 2022) and contain motor vehicle emission budgets for PM<sub>2.5</sub> and NO<sub>x</sub> established based on average annual daily emissions. The 1997 annual PM<sub>2.5</sub> transportation conformity budgets for annual average PM<sub>2.5</sub> and NO<sub>x</sub> emissions were found adequate by EPA on February 19, 2022 (effective February 25, 2022). The annual inventory methodology contained in the 2018 PM<sub>2.5</sub> Plan was used to

establish emissions budgets is consistent with the methodology used herein. The motor vehicle emissions budget for PM<sub>2.5</sub> includes directly emitted PM<sub>2.5</sub> motor vehicle emissions from tailpipe, brake wear and tire wear. VOC, SO<sub>x</sub>, 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 24-Hour Standard* – On March 27, 2020, EPA proposed approval of portions of the 2018 PM<sub>2.5</sub> Plan that pertain to the 2006 24-hour PM<sub>2.5</sub> standard, including granting attainment deadline extension to 2024. This portion of the 2018 PM<sub>2.5</sub> Plan was finalized on July 22, 2020, effective as of publication. The 2018 PM<sub>2.5</sub> Plan contains motor vehicle emission budgets for PM<sub>2.5</sub> and NO<sub>x</sub> established based on average winter daily emissions. The winter inventory methodology contained in the 2018 PM<sub>2.5</sub> Plan and used to establish emissions budgets is consistent with the methodology used herein. The motor vehicle emissions budget for PM<sub>2.5</sub> include directly emitted PM<sub>2.5</sub> motor vehicle emissions from tailpipe, brake wear and tire wear. VOC, SO<sub>x</sub>, 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.

*2012 Annual Standard* – On November 26, 2021, EPA issued final approval of the 2016 Moderate Area PM<sub>2.5</sub> Plan and the portions of the 2018 PM<sub>2.5</sub> plan that pertain to the moderate requirements for the 2012 PM<sub>2.5</sub> standard. The approval also included reclassification to serious. On December 29, 2021, EPA proposed approval of the SIP elements and conformity budgets that pertain to the 2012 annual PM<sub>2.5</sub> serious area requirements (final action expected by end of the year). Until the new 2012 serious area PM<sub>2.5</sub> standard budgets are found adequate or approved, the SJV will conduct conformity determination for the 2012 annual PM<sub>2.5</sub> standard using budgets established in the 2018 PM<sub>2.5</sub> and 2018 PM<sub>2.5</sub> Plan for moderate nonattainment. The 2018 PM<sub>2.5</sub> Plan contains motor vehicle emission budgets for PM<sub>2.5</sub> and NO<sub>x</sub> established based on average annual daily emissions. The annual inventory methodology contained in the 2018 PM<sub>2.5</sub> Plan and used to establish emissions budgets is consistent with the methodology used herein. The motor vehicle emissions budget for PM<sub>2.5</sub> include directly emitted PM<sub>2.5</sub> motor vehicle emissions from tailpipe, brake wear and tire wear. VOC, SO<sub>x</sub>, 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.

If EPA does not act on the serious area 2012 PM<sub>2.5</sub> budgets, the moderate area annual PM<sub>2.5</sub> budgets will continue to be used in this conformity analysis. However, if the new conformity budgets are approved or found adequate, the “upcoming budget test” addresses conformity to new conformity budgets.

### **1997 AND 2012 ANNUAL PM<sub>2.5</sub> TRADING MECHANISM**

The 2018 PM<sub>2.5</sub> Plan budgets and trading mechanism will also be used in this conformity analysis for moderate and serious 2012 PM<sub>2.5</sub> and serious 1997 PM<sub>2.5</sub> standards, as needed. The 2016 PM<sub>2.5</sub> Plan and 2018 PM<sub>2.5</sub> Plan allow trading for 2012 PM<sub>2.5</sub> from the motor vehicle emissions budget for the PM<sub>2.5</sub> precursor NO<sub>x</sub> to the motor vehicle emissions budget for primary annual PM<sub>2.5</sub> using a 6.5 to 1 ratio. No trading mechanism for 1997 annual PM<sub>2.5</sub> is currently available, but final EPA action is expected by end of the year.

## **2006 and 1997 24-HOUR PM2.5 TRADING MECHANISM**

On July 22, 2020, EPA partially approved the 2018 PM2.5 SIP including the 2006 PM2.5 standard trading mechanism that allows trading from the motor vehicle emissions budget for the PM2.5 precursor NOx to the motor vehicle emissions budget for primary PM-2.5 using a 2 to 1 ratio. Then on January 28, 2022, EPA approved 1997 24-hour PM2.5 SIP elements contained in the 2018 PM2.5 Plan, inclusive of the inter-pollutant trading mechanism with the same 2 to 1 ratio. This trading mechanism will be used for the 2006 and 2012 24-hour PM2.5 standard conformity analysis, as needed.

## **D. SUMMARY OF PROCEDURES FOR REGIONAL EMISSIONS ESTIMATES**

New step-by-step air quality modeling instructions were developed for SJV MPO use with EMFAC2014. These instructions were originally provided for interagency consultation in May 2016 and were last updated in September 2020. EPA, FHWA, and ARB concurred.

Documentation of the Conformity Analysis for the 2023 FTIP and 2022 RTP is provided in Appendix C, including:

- 2022 RTP Conformity EMFAC Spreadsheet
- 2022 RTP Conformity Paved Road Spreadsheet
- 2022 RTP Conformity Unpaved Road Dust Spreadsheet
- 2022 RTP Conformity Construction Spreadsheet
- 2022 RTP Conformity Totals Spreadsheet

## **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 this 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 2016 Ozone Plan does not include new TCMs for the San Joaquin Valley.

### **APPLICABLE IMPLEMENTATION PLAN FOR PM-10**

The 2007 PM-10 Maintenance Plan (as revised in 2015) was approved by EPA on July 8, 2016 (effective September 30, 2016). No new local agency control measures were included in the Plan.

The Amended 2003 PM-10 Plan was approved by EPA on May 26, 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 2018 PM2.5 Plan does not include any additional 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. This documentation has been updated as part of this Conformity Analysis. A summary of this information is provided in Appendix D.

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 as part of this Conformity Analysis. A summary of this information is provided in Appendix D.

## **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 D, 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, TCAG undertook a process to identify and evaluate potential control measures that could be included in the 2022 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 2022 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)
- Repave or Overlay Paved Roads with Rubberized Asphalt

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. TCAG 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 approved since 2016. New PM-10 plans that have been reviewed include:

- A. Owens Valley, CA Serious PM-10 Nonattainment Area SIP, submitted June 9, 2016 (EPA approval effective April 12, 2017). Road dust was determined to be below de minimis thresholds and no mobile source control measures were adopted.
- B. Juneau’s Mendenhall Valley, AK PM-10 Limited Maintenance Plan submitted July 22, 2020 (EPA approval effective November 24, 2021). The maintenance plan control measures included optimizing sanding and de-icing materials to minimize entrainment, spring street sweeping, and paving of dirt roads. No additional measures were identified for the LMP to continue attainment of the NAAQS. Contingency measures include paving of dirt roads and stabilization of unpaved shoulders.
- C. Wallula, WA Second PM-10 Maintenance Plan submitted November 22, 2019 (EPA approval effective June 1, 2020). The plan relies on fugitive dust controls from livestock operations.
- D. Eagle River, AK PM-10 Nonattainment Plan submitted on November 10, 2020 (EPA approval effective December 9, 2021) The plan control measures include paving gravel roads with recycle asphalt product.
- E. Pinehurst, ID PM-10 Limited Maintenance Plan submitted September 29, 2017 (EPA approval effective October 11, 2018). The plan primarily relies on control strategies for residential wood smoke. No additional PM-10 dust measures are included.

Based on review of commitments from other PM-10 nonattainment areas that have been developed since the previous RTP, no additional on-road fugitive dust controls measures are available for consideration.

Based on consultation with CARB and the Air District, TCAG considered priority funding allocations in the 2022 RTP for PM-10 and NOx 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

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.

CMAQ funding has been utilized in the past by TCAG agencies to fund numerous projects for implementation of Measures 1 through 3 above. Currently, projects using ATP funds can conceivably use the funds for stabilizing shoulders and adding curbs which would address Measure

2. The use of rubberized asphalt is at the discretion of the agencies responsible for specific overlay projects; various funding sources, including state, federal, and local measure money, have been and will continue to be utilized for implementation of Measure 4 so long as those funds are available. Requests for funding Measure 1 types of projects have not been brought to TCAG and presumably most, if not all, unpaved road needs have been met. On new or relatively small projects, agencies will likely use local and/or measure funds for these projects.

## **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 E includes the public meeting process documentation. The responses to comments received as part of the public comment process are included in Appendix F.

### **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 draft boilerplate conformity document was distributed for interagency consultation on March 17, 2022. Comments received have been addressed and incorporated into this version of the analysis.

In addition, the CMAQ Policy Threshold Evaluation was transmitted for interagency consultation in May, 2021. No changes to the CMAQ Policy were recommended. 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 2023 FTIP development, the threshold was reviewed. The review indicated that a threshold should be increased to \$63/lb. No adverse comments were received

The Conformity Analysis for the 2023 FTIP and 2022 RTP was developed in consultation with TCAG local partner agencies, including member jurisdictions, Caltrans, and local transit agencies.

The 2023 FTIP, 2022 RTP, and corresponding conformity analysis and environmental document were released on May 20, 2022 for a 55-day public comment period, followed by adoption on August 15, 2022. Federal approval is anticipated on or before December 31, 2022.

Transit providers in Tulare County are represented on the TCAG Technical Advisory Committee which makes recommendations on the FTIP, RTP and corresponding 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 FTIPs/RTPs. In addition, all public comments must be addressed in writing.

All MPOs in the San Joaquin Valley have standard public involvement procedures. TCAG has an adopted consultation process and policy for conformity analysis which includes a minimum 30-day public notice and comment period followed by a public hearing. 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.

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## **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 ozone, PM-10 and PM2.5 (1997 and 2012 PM2.5 standards, and 2006 24-hour PM2.5 standards). 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<sub>x</sub>), PM-10 (PM-10/NO<sub>x</sub>), and PM2.5 (PM2.5/NO<sub>x</sub>) respectively, in tons per day for each of the horizon years tested.

### Ozone:

For 2008 and 2015 8-hour ozone, the applicable conformity test is the emissions budget test, using the *2018 Updates to the California State Implementation Plan* budgets for the San Joaquin Valley established for ROG and NO<sub>x</sub> for an average summer (ozone) season day. EPA approved the plan and the budgets on March 25, 2019. The modeling results for all analysis years indicate that the on-road vehicle ROG and NO<sub>x</sub> 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.

### PM-10:

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<sub>x</sub>. This Plan revisions including conformity budgets was approved by EPA on July 8, 2016 (effective September 30, 2016). 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 24-Hour and Annual PM2.5 Standards:

For 1997 PM2.5 Standards, the applicable conformity test is the emission budget test, using budgets established in the 2018 PM2.5 Plan. EPA approved 2018 PM2.5 Plan elements pertaining to the 1997 24-hour and 1997 annual PM2.5 standards on January 28 and February 10, 2022, respectively. 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. However, if the 2018 PM2.5 Plan conformity budgets are approved or found adequate, the “upcoming budget test” demonstrates conformity to the new 1997 PM2.5 budgets. The TIP/RTP therefore satisfy the conformity emissions test for PM2.5 and nitrogen oxides.

2006 PM2.5 Standard:

On July 22, 2020, EPA approved portions of the 2018 PM2.5 Plan that pertain to the 2006 24-hour PM2.5 standard, including new transportation conformity budgets and trading mechanism. For the 2006 PM2.5 standard, the applicable conformity test is the emission budget test, using approved budgets established in the 2018 PM2.5 Plan. 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.

2012 PM2.5 Standard:

On November 26, 2021, EPA issued final approval of the 2016 Moderate Area PM2.5 Plan and portions of the 2018 PM2.5 plan that pertain to the moderate requirements for the 2012 PM2.5 standard. The approval also included reclassification to serious. On December 29, 2021, EPA proposed approval of the SIP elements and conformity budgets that pertain to the 2012 annual PM2.5 serious area requirements (final action expected by end of the year). Until the new 2012 serious area PM2.5 standard budgets are found adequate or approved, the SJV will conduct conformity determination for the 2012 annual PM2.5 standard using budgets established in the 2018 PM2.5 and 2018 PM2.5 Plan for moderate nonattainment.

For the 2012 PM2.5 standards, the applicable conformity test is the emissions budget test, using moderate area budgets. 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. However, if the serious 2018 PM2.5 Plan conformity budgets are approved or found adequate, the “upcoming budget test” also demonstrates conformity to the new 2012 PM2.5 budgets. 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 2023 FTIP and the 2022 RTP is supported.

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

Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		ROG (tons/day)	NOx (tons/day)	ROG	NOx
2008 and 2015 Ozone	2023 Budget	2.4	4.6		
	2023	2.3	4.5	YES	YES
	2026 Budget	2.1	4.0		
	2026	2.0	3.9	YES	YES
	2029 Budget	1.8	3.7		
	2029	1.8	3.5	YES	YES
	2031 Budget	1.7	3.5		
	2031	1.6	3.2	YES	YES
	2037	1.3	2.8	YES	YES
	2046	1.1	2.6	YES	YES

Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM-10 (tons/day)	NOx (tons/day)	PM-10	NOx
PM-10	2020 Budget	3.4	8.4		
	2022	2.5	6.4	YES	YES
	2020 Budget	3.4	8.4		
	2029	2.6	3.6	YES	YES
	2020 Budget	3.4	8.4		
	2037	2.5	2.9	YES	YES
	2020 Budget	3.4	8.4		
	2046	2.6	2.7	YES	YES

PM-10	Total On-Road Exhaust		Paved Road Dust		Unpaved Road Dust		Road Construction Dust		Total	
	PM-10	Nox	PM-10	Nox	PM-10	Nox	PM-10	Nox	PM-10	Nox
2022	0.680	6.358	0.901		0.757		0.160		2.5	6.4
2029	0.683	3.552	0.948		0.757		0.262		2.6	3.6
2037	0.698	2.895	0.990		0.757		0.096		2.5	2.9
2046	0.716	2.684	1.026		0.757		0.135		2.6	2.7

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Standard	Analysis Year	Emissions Total	
		PM2.5 (tons/day)	NOx (tons/day)
1997 24-Hour PM2.5 Standard	2020 Budget	0.4	8.5
	2023	0.3	4.7
	2020 Budget	0.4	8.5
	2029	0.3	3.6
	2020 Budget	0.4	8.5
	2037	0.3	2.9
	2020 Budget	0.4	8.5
	2046	0.3	2.7

DID YOU PASS?	
PM2.5	NOx
YES	YES

Standard	Analysis Year	Emissions Total	
		PM2.5 (tons/day)	NOx (tons/day)
1997 Annual PM2.5 Standard	2023 Budget	0.4	5.2
	2023	0.3	4.7
	2023 Budget	0.4	5.2
	2029	0.3	3.6
	2023 Budget	0.4	5.2
	2037	0.3	2.9
	2023 Budget	0.4	5.2
	2046	0.3	2.7

DID YOU PASS?	
PM2.5	NOx
YES	YES

Standard	Analysis Year	Emissions Total	
		PM2.5 (tons/day)	NOx (tons/day)
2006 PM2.5 Winter 24-Hour Standard	2023 Budget	0.4	5.3
	2023	0.3	4.9
	2024 Budget	0.4	5.1
	2024	0.3	4.6
	2024 Budget	0.4	5.1
	2031	0.3	3.5
	2024 Budget	0.4	5.1
	2037	0.3	3.0
	2024 Budget	0.4	5.1
	2046	0.3	2.8

DID YOU PASS?	
PM2.5	NOx
YES	YES

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Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM2.5 (tons/day)	NOx (tons/day)	PM2.5	NOx
2012 Annual PM2.5 Standard (Moderate)	2022 Budget	0.4	6.9		
	2022	0.3	6.4	YES	YES
	2022 Budget	0.4	6.9		
	2025	0.3	4.3	YES	YES
	2022 Budget	0.4	6.9		
	2029	0.3	3.6	YES	YES
	2022 Budget	0.4	6.9		
	2037	0.3	2.9	YES	YES
	2025 Budget	0.4	6.9		
	2046	0.3	2.7	YES	YES

**UPCOMING BUDGET TEST**

(Note: EPA Action is Pending as of This Analysis; The 2012 PM2.5 Moderate Budget Test Above Will be Used if EPA Doesn't Determine Adequacy or Approval of the New Serious Area Budgets before Federal Approval of the 2022 RTP Conformity Analysis)

Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM2.5 (tons/day)	NOx (tons/day)	PM2.5	NOx
2012 Annual PM2.5 Standard (Serious)	2022 Budget	0.4	6.9		
	2022	0.3	6.4	YES	YES
	2025 Budget	0.4	6.9		
	2025	0.3	4.3	YES	YES
	2025 Budget	0.4	6.9		
	2029	0.3	3.6	YES	YES
	2025 Budget	0.4	6.9		
	2037	0.3	2.9	YES	YES
	2025 Budget	0.4	6.9		
	2046	0.3	2.7	YES	YES

## REFERENCES

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Memorandum from U.S. Department of Transportation. January 18, 2001.

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450. October 16.

**APPENDIX A**

**CONFORMITY CHECKLIST**

## CONFORMITY ANALYSIS DOCUMENTATION

### Checklist for MPO TIPs/RTPs January 2018

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.	Chapter 1, pgs. 5-8	
§93.102 (b)(2)(iii)	PM10 areas: document whether EPA or state has found VOC and/or NOx to be a significant contributor or if the SIP establishes a budget	Chapter 1, pgs. 10-11	
§93.102 (b)(2)(iv)	PM2.5 areas: document if both EPA and the state have found that NOx is <b>not</b> a significant contributor or that the SIP does <b>not</b> establish a budget (otherwise, conformity applies for NOx)	Chapter 1, pgs. 10-11	
§93.102 (b)(2)(v)	PM2.5 areas: document whether EPA or state has found VOC, SO2, and/or NH3 to be a significant contributor or if the SIP establishes a budget	Chapter 1, pg. 13	
§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 made by DOT.	ES pg. 1; Appendix E	
§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	Document that horizon years are no more than 10 years apart ((a)(1)(i)). Document that the first horizon year is no more than 10 years from the based year used to validate the transportation demand planning model ((a)(1)(ii)). Document that the attainment year is a horizon year, if in the timeframe of the plan ((a)(1)(iii)). Describe the regionally significant additions or modifications to the existing transportation network that are expected to be open to traffic in each analysis year ((a)(2)(ii)). 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.	Chapter 1, pg. 16	

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<b>40 CFR</b>	<b>Criteria</b>	<b>Page</b>	<b>Comments</b>
§93.108	Document that the TIP/RTP is fiscally constrained (23 CFR 450).	ES pg. 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.	ES pgs 2-3	
§93.109 (c.)	Provide either a table or text description that details, for each pollutant, precursor and applicable standard, whether the interim emissions test(s) 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.	Chapter 1, pgs. 10-19	
§93.109(e)	CO or PM10: Document if the area has a limited maintenance plan and from where that information comes	Chapter 1, pg. 11	
§93.109(f)	Document if motor vehicle emissions are an insignificant contributor and in what SIP that determination is found	Chapter 1, pg. 15	
§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.	Chapter 2, pgs. 20-31	
EPA-DOT guidance	Document the use of planning assumptions less than five years old. If unable, include written justification for the use of older data. (December 2008 guidance,)	Chapter 2, pgs. 20-31	
§93.110 (c,d,e,f)	Document any changes in transit operating policies and assumed ridership levels since the previous conformity determination (c). Document the assumptions about transit service, use of the latest transit fares, and road and bridge tolls (d). Document the use of the latest information on the effectiveness of TCMs and other SIP measures that have been implemented (e). Document the key assumptions and show that they were agreed to through Interagency and public consultation (f).	Chapter 2, pgs. 20-31	
§93.111	Document the use of the latest emissions model approved by EPA. If the previous model was used and the grace period has ended, document that the analysis began before the end of the grace period.	Chapter 3, pgs. 31-33	
§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	Chapter 5, pgs. 45-46	

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<b>40 CFR</b>	<b>Criteria</b>	<b>Page</b>	<b>Comments</b>
	§93.105 and 23 CFR 450. Include documentation of consultation on conformity tests and methodologies as well as responses to written comments.		
§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.	Chapter 4, pgs. 38-44 Appendix D	
§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).	ES pg. 1	
For Areas with SIP Budgets:			
§93.118, §93.124	Document what the applicable budgets are, and for what years. Document if there are subarea budgets established, and for which areas (93.124(c)). Document if there is a safety margin established, and what are the budgets with the safety margin included. (93.124(a)). Document if there has been any trading among budgets, and if so, which SIP establishes the trading mechanism, and how it is used in the conformity analysis (93.124(b)). If there is more than one MPO in the area, document whether separate budgets are established for each MPO (93.124(d)).	Chapter 1, pgs. 10-19	
§93.118 (a, c, e)	Document that emissions from the transportation network for each applicable pollutant and precursor, including projects in any associated donut area that are in the 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.	Chapter 6, pgs. 47-51	
§93.118 (b)	Document for which years consistency with motor vehicle emissions budgets must be shown.	Chapter 1, pg. 17	
§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.	Chapter 6, pgs. 47-51	
For Areas without Applicable SIP Budgets:			
§93.119	<u>Document whether the area must meet just one or both interim emissions tests. If both, document that</u>	Chapter 6, pgs. 47-51	

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40 CFR	Criteria	Page	Comments
	it is the “less than” form of these tests (i.e., §93.119(b)(1) and (c)(1) vs. (b)(2), (c)(2), and (d)).		
§93.119 <sup>i</sup> (a, b, c, d)	Document that emissions from the transportation network for each applicable pollutant and precursor, including projects in any associated donut area that are in the TIP and regionally significant non-Federal projects, are consistent with the requirements of the “Action/Baseline” or “Action/Baseline Year” emissions tests as applicable.	Chapter 6, pgs. 47-51	
§93.119 (e)	Document the appropriate baseline year.	Chapter 6, pgs. 47-51	
§93.119 (f)	Document the use of appropriate pollutants and if EPA or the state has made a finding that a particular precursor or component of PM10 is significant or insignificant.	Chapter 1, pgs. 4-19	
§93.119 (g)	Document the use of the appropriate analysis years in the regional emissions analysis for areas without applicable SIP budgets.	Chapter 3, pgs. 31-37	
§93.119 (h, i)	Document how the baseline and action scenarios are defined for each analysis year.	Chapter 2 pgs. 20-30	
For All Areas Where a Regional Emissions Analysis Is Needed			
§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 year it will be open to traffic. Document that VMT for non-regionally significant Federal projects is accounted for in the regional emissions analysis	Chapter 2, pgs. 20-30	
§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 (a)(2).  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 (a)(3).	Chapter 2, pgs. 20-30	
§93.122 (a)(4,5,6,7)	For nonregulatory measures that are not included in the transportation plan and TIP, include written commitments from appropriate agencies (a)(4).	Chapter 6, pgs. 47-48	

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<b>40 CFR</b>	<b>Criteria</b>	<b>Page</b>	<b>Comments</b>
	Document that assumptions for measures outside the transportation system (e.g. fuels measures) are the same for baseline and action scenarios (a)(5). Document that factors such as ambient temperature are consistent with those used in the SIP unless modified through interagency consultation (a)(6). Document the method(s) used to estimate VMT on off-network roadways in the analysis (a)(7).		
§93.122 (b)(1)(i) <sup>ii</sup>	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.).	Chapter 2, pgs. 20-31	
§93.122 (b)(1)(ii) <sup>ii</sup>	Document the land use, population, employment, and other network-based travel model assumptions.	Chapter 2, pgs. 20-31	
§93.122 (b)(1)(iii) <sup>ii</sup>	Document how land use development scenarios are consistent with future transportation system alternatives, and the reasonable distribution of employment and residences for each alternative.	Chapter 2, pgs. 20-31	
§93.122 (b)(1)(iv) <sup>ii</sup>	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.	Chapter 2, pgs. 20-31	
§93.122 (b)(1)(v) <sup>ii</sup>	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.	Chapter 2, pgs. 20-31	
§93.122 (b)(1)(vi) <sup>ii</sup>	Document how travel models are reasonably sensitive to changes in time, cost, and other factors affecting travel choices.	Chapter 2, pgs. 20-31	
§93.122 (b)(2) <sup>ii</sup>	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.	Chapter 2, pgs. 20-31	
§93.122 (b)(3) <sup>ii</sup>	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.	Chapter 2, pgs. 20-31	
§93.122 (d)	In areas not subject to §93.122(b), document the continued use of modeling techniques or the use of	Chapter 2, pgs. 20-31	

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<b>40 CFR</b>	<b>Criteria</b>	<b>Page</b>	<b>Comments</b>
	appropriate alternative techniques to estimate vehicle miles traveled		
§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.	Chapter 2, pgs. 20-31	
§93.122 (g)	If appropriate, document that the conformity determination relies on a previous regional emissions analysis and is consistent with that analysis, i.e. that:	Chapter 2, pgs. 20-31	
	(g)(1)(i): the new plan and TIP contain all the projects that must be started to achieve the highway and transit system envisioned by the plan	Chapter 2, pgs. 20-31	
	(g)(1)(ii): all plan and TIP projects are included in the transportation plan with design concept and scope adequate to determine their contribution to emissions in the previous determination;	Chapter 2, pgs. 20-31	
	(g)(1)(iii): the design concept and scope of each regionally significant project in the new plan/TIP are not significantly different from that described in the previous;	Chapter 3, pgs 31-37	
	(g)(1)(iv): the previous regional emissions analysis meets 93.118 or 93.119 as applicable	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.	Appendix B	

<sup>i</sup> Note that some areas are required to complete both Interim emissions tests.

<sup>ii</sup> 40 CFR 93.122(b) refers only to serious, severe and extreme ozone areas and serious CO areas above 200,000 population. Also note these procedures apply in any areas where the use of these procedures has been the previous practice of the MPO (40 CFR 93.122(d)).

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.

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**APPENDIX B**  
**TRANSPORTATION PROJECT LISTING**

### Regionally Significant Projects Listing

RTP Project ID	Jurisdiction/ Agency	Facility Name/Rte	Project Limits	Type of Improvement	Open to Traffic	Year(s) Modeled										Estimated Cost (\$1,000's)
						2022	2023	2024	2025	2026	2029	2031	2037	2042	2046	
TUL12-111	Caltrans	SR 99	30.6/35.2 Tulare/Tagus - Prosperity Ave to 1.2m S of Ave 280	Widen existing roadway	2023		x	x	x	x	x	x	x	x	x	\$85,713
CT-RTP07-004	Caltrans	SR 99	25.2/30.6 Tulare - Avenue 200 to Prosperity Ave	Widen existing roadway	2029						x	x	x	x	x	\$152,264
CT-RTP22-001	Caltrans	SR 99	0.0/13.5 Near Earlimart, County Line Rd to .7 mi north of Court Ave*	Widen existing roadway	2029						x	x	x	x	x	\$109,235
CT-RTP07-005	Caltrans	SR 99	13.5/25.2 .7 mi north of Court Ave to Avenue 200	Widen existing roadway	2042									x	x	\$268,580
TUL12-122	Caltrans	SR 65	10.9/15.6 Terra Bella - Ave 88 to Ave 124	Widen existing roadway	2035								x	x	x	\$55,486
CT-RTP11-001	Caltrans	SR 65	29.5/32.3 Near Lindsay-from Hermosa Rd to Ave 244	Widen existing roadway	2034								x	x	x	\$84,454
CT-RTP07-008	Caltrans	SR 190	13.2/15.0 Porterville - Westwood to Rte 65	Widen existing roadway	2035								x	x	x	\$24,117

**Regionally Significant Projects Listing**

RTP Project ID	Jurisdiction/ Agency	Facility Name/Rte	Project Limits	Type of Improvement	Open to Traffic	Year(s) Modeled										Estimated Cost (\$1,000's)
						2022	2023	2024	2025	2026	2029	2031	2037	2042	2046	
CT-RTP07-011	Caltrans	SR 99	SR-99 at Caldwell Avenue	Major I/C improvements	2026					x	x	x	x	x	x	\$54,600
CT-RTP07-013	Caltrans	SR 99	SR-99 at Agri Center (Commercial)	Construct new I/C	2024			x	x	x	x	x	x	x	x	\$66,800
CT-RTP07-014	Caltrans	SR 99	SR-99 at Paige Ave.	Major I/C improvements	2029						x	x	x	x	x	\$66,817
CT-RTP07-021	Caltrans	SR 198	SR-198 at Road 148	Construct new I/C	2046										x	\$101,383
CT-RTP07-022	Caltrans	SR 190	SR-190 at Main Street	Major I/C improvements	2037								x	x	x	\$73,262
PO-RTP14-001	Porterville	Westwood St	South of Orange Ave to South of Tule River	Widen existing road/bridge	2037								x	x	x	\$15,174
PO-RTP18-002	Porterville	Newcomb St	North of Tule River to south of Poplar Ditch	New crossing over SR190/Tule	2035								x	x	x	\$67,665



**Regionally Significant Projects Listing**

RTP Project ID	Jurisdiction/ Agency	Facility Name/Rte	Project Limits	Type of Improvement	Open to Traffic	Year(s) Modeled										Estimated Cost (\$1,000's)
						2022	2023	2024	2025	2026	2029	2031	2037	2042	2046	
TUL20-103	Tulare Co.	Avenue 280	Brundage (Farmersville) to Elberta (Exeter)	Widen existing roadway	2028						x	x	x	x	x	\$25,674

**Federally Funded Non-Regionally Significant Project Listing**

No Projects

**Exempt Project Listing**

Agency	MPO ID	CTIPS ID	Project Title	Project Description	Total Project Cost (in \$1,000s)	Exemption Description	Exemption Code
Dinuba	TUL20-001	21500000765	City of Dinuba Alta and Kamm Roundabout	In the City of Dinuba at the intersection of Alta Avenue and Kamm Avenue; construct new roundabout.	\$4,012	Intersection channelization projects.	5.01
Porterville	TUL20-004	21500000774	City of Porterville Plano and College Roundabout	In City of Porterville at intersection of S. Plano Street and E. College Avenue; construct roundabout.	\$8,386	Intersection channelization projects.	5.01
Dinuba	TUL12-144	21500000615	Dinuba Safety Improvements	Install flush median, edgeline and centerline, and Class II and Class III bicycle facilities.	\$1,912	Safety Improvement Program.	1.06
Tulare County	TUL12-144	21500000615	Avenue 144 and Road 96 Intersection	Convert intersection to roundabout.	\$2,973	Safety Improvement Program.	1.06
Tulare County	TUL12-144	21500000615	Piedra Drive	Upgrade Existing Guardrail System.	\$421	Safety Improvement Program.	1.06
Tulare County	TUL16-500	21500000726	Road 160 Sidewalk Improvements, Ivanhoe	In community of Ivanhoe: on Road 160 between Avenue 328 and Avenue 332; construct curb, gutter, sidewalk, ADA ramps, drive approaches, asphalt concrete paveouts, and drainage improvements.	\$1,575	Bicycle and pedestrian facilities.	3.02
Porterville	TUL16-500	21500000726	Butterfield Stage Corridor (W. North Grand Avenue to College Avenue)	In the City of Porterville, on the Butterfield Stage Corridor alignment between W. North Grand Avenue and College Avenue; development of an active transportation corridor (approximately 3.9 miles in length) to include solar lighting, water stations, wayfinding, benches, controlled lighted crossing systems.	\$7,750	Bicycle and pedestrian facilities.	3.02

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Caltrans	TUL16-500	21500000726	Ivanhoe Safe Routes to School	In Tulare County and the community of Ivanhoe from Avenue 327 to just north of the State Route 216 and Avenue 328 intersection; construction of pedestrian and bicycle improvements including sidewalks, a shared-use path, railroad crossings, bicycle amenities, and transit facilities.	\$1,788	Bicycle and pedestrian facilities.	3.02
Tulare County	TUL16-500	21500000726	Tipton Sidewalk Improvements Project	In the community of Tipton, on Evans Road between Avenue 152 and Lerda Avenue, and along Woods Avenue between Thompson Road and Newman Road; construction of curb & gutter, sidewalk, curb ramps, drive approaches, asphalt concrete paveouts, crossing-surface improvements, and pedestrian related drainage improvements.	\$3,430	Bicycle and pedestrian facilities.	3.02
Tulare County	TUL11-120	21500000549	Bridge No. 46C0004, Co Rd D112, Over North Branch Tule River, 1.1 Mi N Of Ave 160.	Replace 2 Lane Bridge with a 2 Lane Bridge	\$3,015	Pavement resurfacing and/or rehabilitation.	1.10
Tulare County	TUL11-120	21500000549	Bridge No. 46C0013, Road D112, Over Bates Slough, South Of Ave 196.	Replace 2 Lane Bridge with 2 Lane Bridge	\$1,620	Pavement resurfacing and/or rehabilitation.	1.10
Tulare County	TUL11-120	21500000549	Bridge No. 46C0025, Ave 152, Over Tule River, 1.25 Mi W Of Rd 224.	Replace 2 Lane Bridge with 2 Lane Bridge	\$18,327	Pavement resurfacing and/or rehabilitation.	1.10
Tulare County	TUL11-120	21500000549	Bridge No. 46C0133, Mountain 109, Over White River, 8 Mi Se Fountain Springs.	Replace 1 Lane Bridge with 2 Lane Bridge. No added lane capacity.	\$4,065	Pavement resurfacing and/or rehabilitation.	1.10
Tulare County	TUL11-120	21500000549	Bridge No. 46C0162, Balch Park Road, Over Rancheria Creek, 3.41 Mi E Of Balch Park.	Replace 1 Lane Bridge with 2 lane bridge. No added lane capacity.	\$3,315	Pavement resurfacing and/or rehabilitation.	1.10

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Tulare County	TUL11-120	21500000549	Bridge No. 46C0195, M348, Over S Fk Kaweah River, 11.10 Mi Se Of M347.	Replace 1 lane bridge with 1 lane bridge..	\$5,156	Pavement resurfacing and/or rehabilitation.	1.10
Tulare County	TUL11-120	21500000549	Bridge No. 46C0196, M375A Mnrl King Rd Over East Fork Kaweah River, 6.68 Mi E Of Sr 198.	Replace 2 Lane Bridge as 2 Lane Bridge	\$11,155	Pavement resurfacing and/or rehabilitation.	1.10
Tulare County	TUL11-120	21500000549	Bridge No. 46C0219, Ave 424, Over Traver Canal, 0.25 Mi East Of Rd 64.	Replace 2 lane bridge with 2 lane bridge.	\$3,024	Pavement resurfacing and/or rehabilitation.	1.10
Tulare County	TUL11-120	21500000549	Bridge No. 46C0263, Avenue 174 Over Friant-Kern Canal, 0.3 Mi West Of Road 232.	Replace 2 Lane Bridge with 2 Lane Bridge	\$4,257	Pavement resurfacing and/or rehabilitation.	1.10
Tulare County	TUL11-120	21500000549	Bridge No. 46C0340, Ave 428, Over Sand Creek, 0.25 Mi E Of Sr 63.	Replace 2 Lane Bridge with 2 Lane Bridge	\$3,025	Pavement resurfacing and/or rehabilitation.	1.10
Tulare County	TUL11-120	21500000549	Bridge No. 46C0345, Ave 392 Over Sand Creek, 0.4 Mi E Of Road 108.	Replace 2 Lane Bridge with 2 Lane Bridge	\$2,495	Pavement resurfacing and/or rehabilitation.	1.10
Tulare County	TUL11-120	21500000549	Bridge No. 46C0353, Avenue 376, Over Traver Canal, 0.25 Mi E Of Road 40.	Replace 2 Lane Bridge with 2 Lane Bridge	\$1,700	Pavement resurfacing and/or rehabilitation.	1.10
Tulare County	TUL11-120	21500000549	Bridge No. 46C0360, Road 204, Over Wutchumna Ditch, 0.1 Mi S Of Ave 336.	Replace 2 Lane Bridge with 2 Lane Bridge.	\$1,869	Pavement resurfacing and/or rehabilitation.	1.10
Tulare County	TUL11-120	21500000549	Bridge No. Pm00148, Bridge Preventive Maintenance Program (Bpmp)	Various bridges in the County of Tulare. Plan List for Group 1	\$1,224	Pavement resurfacing and/or rehabilitation.	1.10

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Tulare County	TUL11-120	21500000549	Bridge No. Pm00149, Bridge Preventive Maintenance Program (Bpmp)	Various bridges in the County of Tulare. Plan List for Group 5.	\$4,567	Pavement resurfacing and/or rehabilitation.	1.10
Visalia	TUL18-000	21500000753	Goshen-Visalia Corridor Improvement Project	In the City of Visalia, along Goshen Avenue alignment between Camp Drive and Giddings Street; reconstruction of a 6 mile Class I multi-use trail	\$101	Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action.	4.05
Visalia	TUL21-000	21500000781	City of Visalia Traffic Signal Interconnect Project	In the City of Visalia, on Houston Avenue between Demaree Street and Giddings Street, on Demaree Street between Campus Avenue and Caldwell Avenue, and on Ben Maddox Way between Goshen Avenue and St. John's Parkway; install fiber optic cable within existing traffic signal conduit.	\$1,265	Intersection signalization projects at individual intersections.	5.02
Visalia	TUL21-000	21500000781	Burke Street and St. John's Parkway Traffic Signal	At the intersection of Burke Street and St. John's Parkway; installation of traffic signal and connection to signal interconnect network at Ben Maddox Way and St. John's Parkway	\$750	Intersection signalization projects at individual intersections.	5.02
Visalia	TUL21-000	21500000781	Akers Street Traffic Signal Interconnect Plan	Preparation and implementation of traffic signal coordination plans for the signalized intersections of Akers and Hillsdale and Akers and Cypress to operate in conjunction with the Caltrans traffic signals at Akers and Mineral King and Akers and Noble Avenue.	\$80	Intersection signalization projects at individual intersections.	5.02
TCRTA	TUL16-204	21500000727	TCRTA Operating Assistance	Transit operating assistance for Tulare County Regional Transit Agency using FTA 5307	\$28,000	Operating assistance to transit agencies.	2.01
Visalia	TUL16-204	21500000727	Visalia Transit Operating Assistance	Transit operating assistance for Visalia City Transit using FTA 5307	\$24,000	Operating assistance to transit agencies.	2.01

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TCRTA	TUL16-204	21500000727	TCRTA Operating Assistance	Transit operating assistance for Tulare County Regional Transit Agency using FTA 5311	\$10,000	Operating assistance to transit agencies.	2.01
Caltrans	TUL12-175	21500000501	Pavement Resurfacing and/or Rehabilitation-SHOPP Roadway Preservation	In and near Visalia, from Route 198 to east of North McAuliff Street. Rehabilitate roadway by replacing distressed asphalt, provide non-motorized transportation facilities and bring Americans with Disabilities Act (ADA) facilities to current standards.	\$26,300	Pavement resurfacing and/or rehabilitation.	1.10
Caltrans	TUL12-175	21500000501	Pavement Resurfacing and/or Rehabilitation-SHOPP Roadway Preservation	Near Visalia, from Route 198 to Fresno County line at various locations. Rehabilitate drainage systems.	\$18,978	Pavement resurfacing and/or rehabilitation.	1.10
Caltrans	TUL12-175	21500000501	Pavement Resurfacing and/or Rehabilitation-SHOPP Roadway Preservation	Near Earlimart, from County line Road Overcrossing to 0.7 mile north of Court Avenue Overcrossing. Rehabilitate roadway, construct median concrete barrier, replace signs, rehabilitate drainage systems, upgrade Transportation Management System (TMS) elements, and replace signs.	\$74,335	Pavement resurfacing and/or rehabilitation.	1.10
Caltrans	TUL12-175	21500000501	Pavement Resurfacing and/or Rehabilitation-SHOPP Roadway Preservation	In the city of Tulare, from Paige Avenue to Prosperity Avenue Overcrossing. Rehabilitate roadway, upgrade lighting and Transportation Management System (TMS) elements, replace signs, rehabilitate drainage systems, and enhance highway worker safety.	\$37,390	Pavement resurfacing and/or rehabilitation.	1.10
Caltrans	TUL12-175	21500000501	Pavement Resurfacing and/or Rehabilitation-SHOPP Roadway Preservation	In and near the city of Tulare, from 0.7 mile north of Avenue 152 Overcrossing to Fresno County line (PM 20.2/R53.939) at various locations. Rehabilitate drainage systems.	\$17,970	Pavement resurfacing and/or rehabilitation.	1.10
Caltrans	TUL12-175	21500000501	Pavement Resurfacing and/or Rehabilitation-SHOPP Roadway Preservation	In Tulare County, from Kings County line to east of Sequoia National Park Boundary at various locations. Rehabilitate drainage systems.	\$23,484	Pavement resurfacing and/or rehabilitation.	1.10

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Caltrans	TUL12-175	21500000501	Pavement Resurfacing and/or Rehabilitation-SHOPP Roadway Preservation	In Visalia, from south of Caldwell Avenue to Route 198. Rehabilitate pavement, upgrade Transportation Management System (TMS) elements, replace signs, and upgrade facilities to Americans with Disabilities Act (ADA) standards.	\$19,235	Pavement resurfacing and/or rehabilitation.	1.10
Tulare	TUL13-700	21500000624	K Street Reconstruction	In the City of Tulare, from the south side of the intersection of K Street and Paige Avenue to the south side of the intersection of K Street and Olsen Avenue, as well as the Blackstone Avenue cul-de-sac on the east side of K Street; reconstruct roadway.	\$7,626	Pavement resurfacing and/or rehabilitation.	1.10
Visalia	TUL13-700	21500000624	Tulare Avenue Rehabilitation	In the City of Visalia, on Tulare Avenue from Demaree Avenue to Roeben Street; rehabilitate roadway	\$3,286	Pavement resurfacing and/or rehabilitation.	1.10
Visalia	TUL16-205	21500000741	Visalia City Transit Bus Purchases	Purchase of four (4) new buses to replace existing Visalia City Transit buses	\$4,400	Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet.	2.10
TCRTA	TUL16-205	21500000741	TCRTA Transit Bus Purchases	Purchase of new buses to replace existing TCRTA buses	\$3,680	Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet.	2.10
Porterville	TUL16-205	21500000741	Porterville City Transit Bus Purchases	Purchase of three (3) new electric buses for Porterville City Transit	\$2,748	Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet.	2.10
Visalia	TUL16-205	21500000741	Visalia City Transit Bus Purchases	Purchase 2 Electric Buses for Visalia City Transit	\$1,956	Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet.	2.10

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Caltrans	TUL12-170	21500000381	Safety Improvements-SHOPP Collision Reduction Program	Near Kingsburg, from east of Madsen Avenue to Road 56. Install centerline rumble strips, replace Transportation Management System (TMS) elements and upgrade striping, pavement markings, and roadside signs.	\$4,270	Safety Improvement Program.	1.06
Caltrans	TUL12-170	21500000381	Safety Improvements-SHOPP Collision Reduction Program	Near Porterville, from 0.1 mile west to 0.1 mile east of Rockford Road. Construct roundabout.	\$10,100	Safety Improvement Program.	1.06
Caltrans	TUL20-003	21500000773	State Route 190 and Plano Street Roundabout	In City of Porterville at intersection of State Route 190 and S. Plano Street; construct roundabout.	\$8,386	Intersection channelization projects.	5.01
Caltrans	TUL18-102	21500000759	State Route 190 and Westwood Roundabout and Operational Improvements	Near Porterville: at the intersection of State Route 190 and Westwood Avenue; construct a roundabout and intersection improvements.	\$8,960	Interchange reconfiguration projects.	5.04
Woodlake	TUL21-001	21500000782	State Route 245 and Cajon Avenue Roundabout	In the City of Woodlake at the intersection of State Route 245 and Cajon Avenue; construct new roundabout.	\$4,551	Intersection channelization projects.	5.01

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**APPENDIX C**

**CONFORMITY ANALYSIS DOCUMENTATION**

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**EMFAC Emissions (tons/day)**

**Tulare**

<u>Pollutant</u>	<u>Source</u>	<u>Description</u>						
Ozone 2008 and 2015 standards (2016 Ozone SIP)	EMFAC 2014 (Summer Run)	ROG Total Exhaust (All Vehicles Total)	2023	2026	2029	2031	2037	2046
			2.27	1.96	1.74	1.59	1.26	1.07
		<b>Conformity Total</b>	2.30	2.00	1.80	1.60	1.30	1.10
Ozone 2008 and 2015 standards (2016 Ozone SIP)	EMFAC 2014 (Summer Run)	NOx Total Exhaust (All Vehicles Total)	4.48	3.85	3.41	3.19	2.79	2.59
		<b>Conformity Total</b>	4.50	3.90	3.50	3.20	2.80	2.60
PM-10 (2007 Maintenance SIP)	EMFAC 2014 (Annual Run)	PM-10 Total (All Vehicles Total) * includes tire & brake wear	2022	2029	2037	2046		
			0.68	0.68	0.70	0.72		
		<b>Conformity Total</b>	0.68	0.68	0.70	0.72		
PM-10 (2007 Maintenance SIP)	EMFAC 2014 (Annual Run)	NOx Total Exhaust (All Vehicles Total)	6.36	3.55	2.90	2.68		
		<b>Conformity Total</b>	6.36	3.55	2.90	2.68		
PM2.5 24-hour 1997 standard (2018 PM2.5 SIP)	EMFAC 2014 (Annual Run)	PM2.5 Total Exhaust (All Vehicles Total) * includes tire & brake wear	2023	2029	2037	2046		
			0.28	0.28	0.29	0.29		
		<b>Conformity Total</b>	0.30	0.30	0.30	0.30		
PM2.5 24-hour 1997 standard (2018 PM2.5 SIP)	EMFAC 2014 (Annual Run)	NOx Total Exhaust (All Vehicles Total)	4.69	3.55	2.90	2.68		
		<b>Conformity Total</b>	4.70	3.60	2.90	2.70		

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			2023	2029	2037	2046	
PM2.5 Annual 1997 standard (2018 PM2.5 SIP)	EMFAC 2014 (Annual Run)	PM2.5 Total Exhaust (All Vehicles Total) * includes tire & brake wear	0.28	0.28	0.29	0.29	
		<b>Conformity Total</b>	0.30	0.30	0.30	0.30	
PM2.5 Annual 1997 standard (2018 PM2.5 SIP)	EMFAC 2014 (Annual Run)	NOx Total Exhaust (All Vehicles Total)	4.69	3.55	2.90	2.68	
		<b>Conformity Total</b>	4.70	3.60	2.90	2.70	
			2023	2024	2031	2037	2046
PM2.5 24-hour 2006 standard (2018 PM2.5 SIP)	EMFAC 2014 (Winter Run)	PM2.5 Total Exhaust (All Vehicles Total) * includes tire & brake wear	0.28	0.28	0.28	0.29	0.29
		<b>Conformity Total</b>	0.30	0.30	0.30	0.30	0.30
PM2.5 24-hour 2006 standard (2018 PM2.5 SIP)	EMFAC 2014 (Winter Run)	NOx Total Exhaust (All Vehicles Total)	4.84	4.58	3.41	2.96	2.74
		<b>Conformity Total</b>	4.90	4.60	3.50	3.00	2.80
			2022	2025	2029	2037	2046
PM2.5 Annual 2012 standard Moderate Area 2018 PM2.5 SIP)	EMFAC 2014 (Annual Run)	PM2.5 Total Exhaust (All Vehicles Total) * includes tire & brake wear	0.29	0.28	0.28	0.29	0.29
		<b>Conformity Total</b>	0.30	0.30	0.30	0.30	0.30
PM2.5 Annual 2012 standard Moderate Area 2018 PM2.5 SIP)	EMFAC 2014 (Annual Run)	NOx Total Exhaust (All Vehicles Total)	6.36	4.22	3.55	2.90	2.68
		<b>Conformity Total</b>	6.40	4.30	3.60	2.90	2.70

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**UPCOMING BUDGET TEST**

**(Note: EPA Action is Pending as of This Analysis; The 2012 PM2.5 Moderate Budget Test Above Will be Used if EPA Doesn't Determine Adequacy or Approval of the New Serious Area Budgets before Federal Approval of the 2022 RTP Conformity Analysis)**

			2022	2025	2029	2037	2046
PM2.5 Annual 2012 standard (Serious Area 2018 PM2.5 SIP)	EMFAC 2014 (Annual Run)	PM2.5 Total Exhaust (All Vehicles Total) * includes tire & brake wear	0.29	0.28	0.28	0.29	0.29
		<b>Conformity Total</b>	<b>0.30</b>	<b>0.30</b>	<b>0.30</b>	<b>0.30</b>	<b>0.30</b>
PM2.5 Annual 2012 standard (Serious Area 2018 PM2.5 SIP)	EMFAC 2014 (Annual Run)	NOx Total Exhaust (All Vehicles Total)	6.36	4.22	3.55	2.90	2.68
		<b>Conformity Total</b>	<b>6.40</b>	<b>4.30</b>	<b>3.60</b>	<b>2.90</b>	<b>2.70</b>

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2022 RTP Conformity Analysis Results Summary – Tulare

Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		ROG (tons/day)	NOx (tons/day)	ROG	NOx
2008 and 2015 Ozone	2023 Budget	2.4	4.6		
	2023	2.3	4.5	YES	YES
	2026 Budget	2.1	4.0		
	2026	2.0	3.9	YES	YES
	2029 Budget	1.8	3.7		
	2029	1.8	3.5	YES	YES
	2031 Budget	1.7	3.5		
	2031	1.6	3.2	YES	YES
	2037	1.3	2.8	YES	YES
	2046	1.1	2.6	YES	YES
Standard	Analysis Year	Emissions Total		DID YOU PASS?	
PM-10		PM-10 (tons/day)	NOx (tons/day)	PM-10	NOx
	2020 Budget	3.4	8.4		
	2022	2.5	6.4	YES	YES
	2020 Budget	3.4	8.4		
	2029	2.6	3.6	YES	YES
	2020 Budget	3.4	8.4		
	2037	2.5	2.9	YES	YES
	2020 Budget	3.4	8.4		
	2046	2.6	2.7	YES	YES

PM-10	Total On-Road Exhaust		Paved Road Dust		Unpaved Road Dust		Road Construction Dust		Total	
	PM-10	Nox	PM-10	Nox	PM-10	Nox	PM-10	Nox	PM-10	Nox
2022	0.680	6.358	0.901		0.757		0.160		2.5	6.4
2029	0.683	3.552	0.948		0.757		0.262		2.6	3.6
2037	0.698	2.895	0.990		0.757		0.096		2.5	2.9
2046	0.716	2.684	1.026		0.757		0.135		2.6	2.7

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Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM2.5 (tons/day)	NOx (tons/day)	PM2.5	NOx
1997 24-Hour PM2.5 Standard	2020 Budget	0.4	8.5		
	2023	0.3	4.7	YES	YES
	2020 Budget	0.4	8.5		
	2029	0.3	3.6	YES	YES
	2020 Budget	0.4	8.5		
	2037	0.3	2.9	YES	YES
	2020 Budget	0.4	8.5		
	2046	0.3	2.7	YES	YES

Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM2.5 (tons/day)	NOx (tons/day)	PM2.5	NOx
1997 Annual PM2.5 Standard	2023 Budget	0.4	5.2		
	2023	0.3	4.7	YES	YES
	2023 Budget	0.4	5.2		
	2029	0.3	3.6	YES	YES
	2023 Budget	0.4	5.2		
	2037	0.3	2.9	YES	YES
	2023 Budget	0.4	5.2		
	2046	0.3	2.7	YES	YES

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Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM2.5 (tons/day)	NOx (tons/day)	PM2.5	NOx
2006 PM2.5 Winter 24- Hour Standard	2023 Budget	0.4	5.3		
	2023	0.3	4.9	YES	YES
	2024 Budget	0.4	5.1		
	2024	0.3	4.6	YES	YES
	2024 Budget	0.4	5.1		
	2031	0.3	3.5	YES	YES
	2024 Budget	0.4	5.1		
	2037	0.3	3.0	YES	YES
	2024 Budget	0.4	5.1		
	2046	0.3	2.8	YES	YES

Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM2.5 (tons/day)	NOx (tons/day)	PM2.5	NOx
2012 Annual PM2.5 Standard (Moderate)	2022 Budget	0.4	6.9		
	2022	0.3	6.4	YES	YES
	2022 Budget	0.4	6.9		
	2025	0.3	4.3	YES	YES
	2022 Budget	0.4	6.9		
	2029	0.3	3.6	YES	YES
	2022 Budget	0.4	6.9		
	2037	0.3	2.9	YES	YES
	2025 Budget	0.4	6.9		
	2046	0.3	2.7	YES	YES

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**UPCOMING BUDGET TEST**

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Standard	Analysis Year	Emissions Total		DID YOU PASS?	
		PM2.5 (tons/day)	NOx (tons/day)	PM2.5	NOx
2012 Annual PM2.5 Standard (Serious)	2022 Budget	0.4	6.9		
	2022	0.3	6.4	YES	YES
	2025 Budget	0.4	6.9		
	2025	0.3	4.3	YES	YES
	2025 Budget	0.4	6.9		
	2029	0.3	3.6	YES	YES
	2025 Budget	0.4	6.9		
	2037	0.3	2.9	YES	YES
	2025 Budget	0.4	6.9		
	2046	0.3	2.7	YES	YES

**Road Construction Dust**

**TULARE**

Description	2022		2029		2037		2046	
	Year	Lane Miles	Year	Lane Miles	Year	Lane Miles	Year	Lane Miles
	Baseline	2005	3986	2022	4168.61	2029	4291.15	2037
Horizon	2022	4,169	2029	4,291	2037	4,342	2046	4,423
Difference	17	183	7	123	8	51	9	81
Lane Miles per Year		11		18		6		9
Acres Disturbed		42		68		25		35
Acre-Months		750		1222		447		629
Emissions (tons/year)		82.497		134.444		49.200		69.154
Annual Average Day Emissions (tons)		0.226		0.368		0.135		0.189
District Rule 8021 Control Rates		0.290		0.290		0.290		0.290
<b>Total Emissions (tons per day)</b>		<b>0.160</b>		<b>0.262</b>		<b>0.096</b>		<b>0.135</b>

Tulare County Association of Governments (TCAG)  
 Final Conformity Analysis for the 2023 FTIP and 2022 RTP

**Paved Road Dust Emissions (tons/day)**

**TULARE 2022**

	VMT Daily	VMT (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	3,893,237	1,421	108.580	105.379	0.289	0.267
Enter Arterial VMT ==>	Arterial	6,412,890	2,341	297.616	288.844	0.791	0.568
Enter Collector VMT ==>	Collector	372,780	136	17.300	16.790	0.046	0.027
	Urban	19,296	7	6.709	6.511	0.018	0.012
Enter Total of Urban and Rural Local VMT Here =>	Rural	7,137	3	10.734	10.417	0.029	0.026
	Totals	10,705,339	3,907	440.939	427.942	1.172	0.901

**TULARE 2029**

	VMT Daily	VMT (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	4,103,744	1,498	114.451	111.077	0.304	0.281
Enter Arterial VMT ==>	Arterial	6,724,475	2,454	312.077	302.878	0.830	0.596
Enter Collector VMT ==>	Collector	430,808	157	19.993	19.404	0.053	0.032
	Urban	19,777	7	6.876	6.673	0.018	0.012
Enter Total of Urban and Rural Local VMT Here =>	Rural	7,315	3	11.001	10.677	0.029	0.027
	Totals	11,286,118	4,119	464.398	450.710	1.235	0.948

**TULARE 2037**

	VMT Daily	VMT (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	4,281,381	1,563	119.405	115.885	0.317	0.294
Enter Arterial VMT ==>	Arterial	7,004,093	2,556	325.053	315.472	0.864	0.621
Enter Collector VMT ==>	Collector	486,651	178	22.585	21.919	0.060	0.036
	Urban	20,140	7	7.002	6.796	0.019	0.013
Enter Total of Urban and Rural Local VMT Here =>	Rural	7,449	3	11.203	10.873	0.030	0.027
	Totals	11,799,713	4,307	485.249	470.946	1.290	0.990

**TULARE 2046**

	VMT Daily	VMT (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	4,430,525	1,617	123.564	119.922	0.329	0.304
Enter Arterial VMT ==>	Arterial	7,253,418	2,647	336.624	326.702	0.895	0.643
Enter Collector VMT ==>	Collector	529,782	193	24.587	23.862	0.065	0.039
	Urban	20,597	8	7.161	6.950	0.019	0.013
Enter Total of Urban and Rural Local VMT Here =>	Rural	7,618	3	11.457	11.120	0.030	0.028
	Totals	12,241,939	4,468	503.394	488.556	1.339	1.026

Tulare County Association of Governments (TCAG)  
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**Unpaved Road Dust Emissions (tons/day)**

**TULARE 2022**

	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	128.6	10	469.4	469.390	414.047	1.134	0.333	0.757

**TULARE 2029**

	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	128.6	10	469.4	469.390	414.047	1.134	0.333	0.757

**TULARE 2037**

	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	128.6	10	469.4	469.390	414.047	1.134	0.333	0.757

**TULARE 2046**

	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	128.6	10	469.4	469.390	414.047	1.134	0.333	0.757

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**APPENDIX D**

**TIMELY IMPLEMENTATION DOCUMENTATION FOR  
TRANSPORTATION CONTROL MEASURES**

**Tulare County Association of Governments  
RACM Timely Implementation Documentation**

<b>Agency</b>	<b>RACM Commitment</b>	<b>Measure Title</b>	<b>Measure Description (not verbatim)</b>	<b>Implementation Status (as of February 2021)</b>	<b>Conformity Analysis for the 2023 FTIP and 2022 RTP (as of May 2022)</b>
TCAG	TU3.3	Employer Rideshare Program Incentives	TCAG Outreach program through 2006	Commitment complete.	Commitment complete.
Exeter	TU9.5	Encouragement of Bicycle Travel	Implement projects that fund, construct, or promote pedestrian and bicycle facilities.	Commitment complete	Commitment complete
Farmersville	TU1.5	Expansion of Public Transportation Systems	Seek opportunities to ensure more frequent stops of Orange Line in City and encourage ridership by making bus schedules available at City Hall and reminders on utility bills in 2002	Commitment complete.	Commitment complete.
Farmersville	TU5.5	Removal of On-Street Parking	Consider removing on-street parking on Visalia Road and some in downtown during FY 2002/03	Commitment complete.	Commitment complete.

**Tulare County Association of Governments  
RACM Timely Implementation Documentation**

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Farmersville	TU5.9	Bus Pullouts in Curbs for Passenger Loading	Consider bus pull out on Visalia Road and Downtown during FY 2002/03	Commitment complete.	Commitment complete.
Farmersville	TU5.16	Adaptive traffic signals and signal timing	New traffic signals will have adaptive traffic signals and signal timing as they are installed	The proposed traffic signal at Road 168 and Avenue 288 (Walnut Avenue) is still proposed in the future when an additional school is constructed. The existing Farmersville Boulevard/Avenue 288 (Walnut Avenue) traffic signal is still to be modified. The project is in design and should go to bid in late 2020 or early 2021.	Commitment complete.
Lindsay	TU1.7	Free transit during special events	Trolley rides will be given during the annual Chili Cook-off celebration through October 2005	Commitment complete.	Commitment complete.

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Lindsay	TU5.3	Reduce Traffic Congestion at Major Intersections	Five pedestrian corridor projects by Fall 2003	Commitment complete.	Commitment complete.
Lindsay	TU5.4	Site-Specific Transportation Control Measures	Five pedestrian corridor projects by Fall 2003	Commitment complete.	Commitment complete.
Lindsay	TU6.1	Park and Ride Lots	Continue to use and maintain two park and ride lots from 2002 - 2005	Commitment complete.	Commitment complete.
Lindsay	TU7.3	Involve school districts to encourage walking to school	Five pedestrian corridor projects by Fall 2003	Commitment complete.	Commitment complete.
Lindsay	TU9.2	Encouragement of Pedestrian Travel	Five pedestrian corridor projects by Fall 2003	Commitment complete.	Commitment complete.
Lindsay	TU9.3	Bicycle/Pedestrian Program	Five pedestrian corridor projects by Fall 2003	Commitment complete.	Commitment complete.
Lindsay	TU9.5	Encouragement of Bicycle Travel	Five pedestrian corridor projects by Fall 2003	Commitment complete.	Commitment complete.
Lindsay	TCM4	Bicycle Programs	Five pedestrian corridor projects by Fall 2003	Commitment complete.	Commitment complete.
Porterville	TU1.2	Transit Access to Airports	Provide demand response transit to and from the airport through at least 2007.	Porterville COLT continues to provide this service.	Porterville COLT continues to provide this service.

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Porterville	TU1.6	Transit Service Improvements in Combination with Park-and-Ride Lots and Parking Management	Create a bus stop adjacent to a proposed new Park-and-Ride lot prior to end of 2003.	Commitment Complete	Commitment complete.
Porterville	TU1.7	Free transit during special events	Provide free shuttle bus service during the Sutton Iris Farm Festival through at least 2006.	Commitment complete.	Commitment complete.
Porterville	TU5.4	Site-Specific Transportation Control Measures	Construct left turn lanes at designated intersections by 2003.	Commitment complete.	Commitment complete.
Porterville	TU5.9	Bus Pullouts in Curbs for Passenger Loading	Construct one bus pull-out on Olive Avenue at Westwood; construct others as needed.	The bus pullout located at Olive and Westwood has been completed. The City has also completed bus turnouts at Olive and Plano, as well as at Putnam and Pearson. The City will be evaluating improving other bus stops with available funding.	The city continues to evaluate improvements to bus stops.
Porterville	TU5.16	Adaptive traffic signals and signal timing	Adaptive traffic signals will be installed on designated corridors in the City by 2003.	Commitment complete.	Commitment complete.

**Tulare County Association of Governments  
RACM Timely Implementation Documentation**

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Porterville	TU9.5	Encouragement of Bicycle Travel	Hold dedication ceremonies for future phases of Tule River Parkway that encourage public use of bikeways through 2003.	Commitment complete.	Commitment complete.
Porterville	TU10.2	Bike Racks on Buses	Equip new buses with bike racks through at least 2006.	Commitment complete.	Commitment complete.
Porterville	TCM3	Rideshare Programs	Publish an article in "The Pen" that encourages rideshare within the City. Implementation by FY 2002/03.	Commitment complete.	Commitment complete.
Tulare	TU1.1	Regional Express Bus Program	Provide regional express bus service to connect with other transit services through at least 2007.	The Tulare InterModal Express (TIME) fixed route service continues to provide connections to Visalia Transit and TCaT.	The Tulare InterModal Express (TIME) fixed route service continues to provide connections to Visalia Transit and TCaT.
Tulare	TU1.2	Transit Access to Airports	Provide transit access to local airports through connection with other transit lines through at least 2007.	The TIME fixed route service continues to provide connections to Visalia Transit which provides service to the Visalia Municipal Airport and the Fresno Airport (via the V-Line).	The TIME fixed route service continues to provide connections to Visalia Transit which provides service to the Visalia Municipal Airport and the Fresno Airport (via the V-Line).

**Tulare County Association of Governments  
RACM Timely Implementation Documentation**

<b>Agency</b>	<b>RACM Commitment</b>	<b>Measure Title</b>	<b>Measure Description (not verbatim)</b>	<b>Implementation Status (as of February 2021)</b>	<b>Conformity Analysis for the 2023 FTIP and 2022 RTP (as of May 2022)</b>
Tulare	TU1.5	Expansion of Public Transportation Systems	Provide for the expansion and enhancement of existing transit services within the City through Unmet Needs and updating the City's Transit Development Plan.	The City continues to participate in the Unmet Needs Process. The City continues to implement the 2014 Short Range Transit Plan.	The City continues to participate in the Unmet Needs Process. The City continues to implement the 2014 Short Range Transit Plan.
Tulare	TU1.6	Transit Service Improvements in Combination with Park-and-Ride Lots and Parking Management	The City will provide of adequate parking at transit facilities as park-and-ride lots. Implementation from 1999 through FY 2002/03.	Commitment complete.	Commitment complete.
Tulare	TU1.7	Free transit during special events	Provide free transit service during special events through at least 2007.	Commitment complete.	Commitment complete.
Tulare	TU1.9	Increase parking at transit centers or stops	Encourage transit convenience by providing additional parking at transit centers. Implementation from 1999 through FY 2002/03.	Commitment complete.	Commitment complete.
Tulare	TU5.4	Site-Specific Transportation Control Measures	Install additional traffic signals as warranted.	See Project TID Table	See Project TID Table
Tulare	TU5.9	Bus Pullouts in Curbs for Passenger Loading	Provide bus pull-outs for passenger loading and unloading.	See Project TID Table	See Project TID Table

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Tulare	TU5.16	Adaptive traffic signals and signal timing	Install adaptive and emergency vehicle pre-emptive traffic signals.	Commitment Complete.	Commitment complete.
Tulare	TU10.2	Bike Racks on Buses	Encourage pedestrian and bicycle travel as an alternative to automobile travel.	The city continues to evaluate potential for additional pedestrian and bicycle projects.	The city continues to evaluate potential for additional pedestrian and bicycle projects.
Tulare	TU15.2	Pedestrian and Bicycle Overpasses Where Safety Dictates	Install pedestrian and bicycle over crosses where safety concerns dictate through at least 2007.	Commitment Complete.	Commitment complete.
Tulare	TU5.6	Reversible Lanes	Implement reversible parking on arterial streets to improve traffic flow.	The City continues to implement reversible parking on arterial streets during the annual World Ag Expos.	The City continues to implement reversible parking on arterial streets during the annual World Ag Expos.
Visalia	TU1.2	Transit Access to Airports	Provide a fixed route transit service to the local airport.	Route 10 continues to provide transportation to the Visalia Airport upon request. The V-Line connects riders to the Fresno Airport.	Route 10 continues to provide transportation to the Visalia Airport upon request. The V-Line connects riders to the Fresno Airport.
Visalia	TU1.5	Expansion of Public Transportation Systems	Expand / enhance transit services through the Short Range Transit Plan.	Visalia Transit continues to implement the approved Short Range Transit Plan.	Visalia Transit continues to implement the approved Short Range Transit Plan.
Visalia	TU1.7	Free transit during special events	Provide free trolley service during special events.	The Visalia Trolley continues to provide free service during special events.	The Visalia Trolley continues to provide free service during special events.

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Visalia	TU3.3	Employer Rideshare Program Incentives	Provide employee incentives for carpooling, walking, biking to work.	The City of Visalia continues to provide incentives to all employees who carpool, bike, or walk to work.	The City of Visalia continues to provide incentives to all employees who carpool, bike, or walk to work.

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*Tulare County Association of Governments (TCAG)  
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Visalia	TU5.2	Coordinate Traffic Signal Systems	Continue to expand the City's coordinated traffic signal system.	<p>The Traffic Management Center has been constructed and the signal interconnect project along Center Avenue, Giddings Street, and Murray Avenue has been completed. The City of Visalia has completed the latest projects for the installation of battery backup systems and emergency vehicle preemption. The City has an ongoing project to install battery backup systems and emergency vehicle preemption equipment on all existing intersections. The construction of new traffic signals includes the battery backup system, emergency vehicle preemption equipment, and the installation of additional conduits to provide for future connection to the City of Visalia's communication network.</p>	<p>The City of Visalia continues to install battery backup systems and emergency vehicle preemption equipment on all existing intersections. The next round of installation of battery backup systems and emergency equipment on existing traffic signals will begin in the summer of 2022.</p> <p>The Caldwell Ave. from Akers St. to Shady St. Project for roadway improvements has been designed to include signal interconnect along this segment and construction is expected to begin in fall of 2022.</p> <p>The project to install signal interconnect in Ben Maddox Way from Goshen Ave. to Tulare Ave. from Ben Maddox Way to Lovers Lane has been designed and construction will begin in fall of 2022.</p> <p>The project to install signal interconnect in 3 locations, along Ben Maddox Way, Houston Ave. and Demaree St., construction will begin summer of 2023.</p>
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					<p>The construction of new traffic signals includes the battery backup system, emergency vehicle preemption equipment, installation of additional conduits, and other equipment to facilitate future connection to the City of Visalia's communication network.</p>

**Tulare County Association of Governments  
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Visalia	TU5.3	Reduce Traffic Congestion at Major Intersections	Continue to make use of turn lanes, signalization, and median dividers for traffic control.	<p>The City of Visalia continues to evaluate and prioritize intersections to determine the appropriate traffic control measure to be implemented.</p> <ol style="list-style-type: none"> <li>1. The improvements to the intersection of Demaree Street at Goshen Avenue have been completed in August 2019.</li> <li>2. The construction of the new traffic signals at the intersections of County Center Street at Houston Avenue and Riggin Avenue at Mooney Boulevard were completed in July 2019.</li> <li>3. The intersections of County Center Street at Riggin Avenue and Giddings Street at Riggin Avenue will begin construction in the beginning of 2021.</li> </ol>	<p>The City completed the installation of traffic signals at the intersections of Giddings St. at Riggin Ave., County Center at Riggin Ave., in February 2022.</p> <p>A traffic signal and roadway improvements is in the design stage for the intersection of Shirk St. at Walnut Ave and Shirk St. at Doe Ave. Construction is expected to begin in 2023.</p> <p>The modification of the traffic signal and roadway improvements at the intersection of Visalia Parkway at Mooney Blvd. are in the design stage with construction to begin by the end of 2022.</p> <p>The existing in-pavement vehicle detection will be replaced with video detection at the intersections of Plaza Drive at Riggin Ave. and Ferguson Ave. at Plaza Drive by the end of 2022.</p>

Visalia	TU5.4	Site-Specific Transportation Control Measures	Implement geometric traffic control procedures	<p>The City of Visalia continues to implement various geometric traffic control measures based on the evaluation of the intersections and roadway segments within the City of Visalia:</p> <ol style="list-style-type: none"> <li>1. The City is currently in the right of way acquisition phase as part of the design for the roadway improvements in Caldwell Avenue between Akers Street and Shady Street. The improvements include the installation of a center median. Construction is expected to begin in 2021.</li> <li>2. The City will begin construction of the traffic signals at the intersections of County Center Street at Riggin Avenue and Giddings Street at Riggin Avenue in 2021. Each intersection will provide protected left turn movements and thru/right turn lanes.</li> <li>3. SR-198/Akers Street Interchange Improvement Project has been completed which added dual left turn lanes in Akers Street for the north bound and south bound directions.</li> </ol>	<p>The Caldwell Avenue between Akers Street and Shady Steet for roadway improvements includes the installation of center median islands and bicycle lanes. Construction is expected to begin in Fall 2022.</p> <p>The City completed the installation of traffic signals at the intersections of Giddings St. at Riggin Ave., County Center at Riggin Ave., in February 2022.</p> <p>The roundabout at the intersection of Tulare Avenue and Santa Fe Street was completed in April 2021. This project updated the intersection from stop traffic to a yield control and corrected the offset intersection through the roundabout geometry.</p> <p>The Riggin Ave. Widening from Akers St. to Demaree St. Project will widen the road, add additional traffic lanes and bike lanes. Construction is expected to begin in fall 2022.</p> <p>Construction at the intersection of St. John’s Parkway and Burke St. for a new traffic signal and interconnect will begin in Summer of 2023.</p>
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				<p>4. The construction of the roundabout at the intersection of Tulare Avenue and Santa Fe Street will begin construction in December 2020. The roundabout will add operational efficiencies, improve congestion management, and correct the existing offset geometric configuration.</p>	<p>The Shirk Widening at Mill Creek Project will extend the existing creek culvert, add lanes within the existing right-of-way, and add bike lanes. Construction is expected to begin in late summer of 2023.</p> <p>The Riggin Ave. from Kelsey St. to Shirk St. will be widened from a 2-lane undivided roadway to a 4-lane divided roadway. This project will incorporate center median with landscaping and a protected bike facility. Construction is expected to begin in 2023.</p> <p>The Riggin Ave. from Mooney Blvd. to Conyer St. will be widened from a 2-lane undivided roadway to a 4-lane divided roadway. This project will incorporate protected bike facilities. Construction is expected to begin in 2023.</p> <p>The Caldwell Avenue from Santa Fe to Lovers Lane Project for roadway improvements includes additional lanes and median islands. A Class IV bike lane is included. Construction is expected to begin the summer of 2024.</p>
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Visalia	TU9.5	Encouragement of Bicycle Travel	Expand the City's existing bicycle system; work with TCAG on outreach for bicycle programs	<p>The City of Visalia continually performs pavement rehabilitation projects which includes restriping new or existing bike lanes to further expand the bike network.</p> <p>1. Walnut Ave between Santa Fe St and Ben Maddox St will be restriped to accommodate a buffered class II bike lane; one of the first of its kind as a City Project, this will be an on street connector between the Santa Fe Class 1 trail to the Packwood Class 1 Trail. Expected completion by May 2021.</p> <p>2. Tulare Ave between Cotta St and Demaree St will be rehabilitated. This will include restriping of the existing bike lane to further improve and expand the bicycle network. Expected to begin construction Fall of 2021.</p> <p>3. Ferguson Ave between Demaree St and Mooney Blvd was rehabilitated which included the restriping of the existing Class II bike lanes. Expected completion November 2020.</p>	<p>Walnut Ave. Class IV bike lane was completed in March of 2022.</p> <p>Tulare Ave. between Cotta St. and Demaree St. will rehabilitate the roadway and incorporate parking protected Class IV bike lanes. Construction is anticipated in the Fall of 2022.</p> <p>Packwood Creek Trail between Crumal St. and Cedar St. was completed in March of 2022.</p> <p>The Greenway Trail between Mineral King Ave. and Mill Creek will be completed in September of 2022.</p> <p>The Caldwell Avenue from Akers to Shady Project for roadway improvements will include installation of bicycle lanes. Construction is expected to begin in Fall of 2022.</p> <p>The Caldwell Avenue from Santa Fe to Lovers Lane Project for roadway improvements includes additional lanes and median islands. A Class IV bike lane is included. Construction is</p>
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					<p>expected to begin the summer of 2024.</p> <p>The Shirk Widening at Mill Creek Project will extend the existing creek culvert, add lanes within the existing right-of-way, and add bike lanes. Construction is expected to begin in late summer of 2023.</p>

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Visalia	TU10.2	Bike Racks on Buses	Continue to provide bike racks on transit buses.	Numerous buses have been purchased for transit services in the City of Visalia. All buses come equipped with bike racks.	Numerous buses have been purchased for transit services in the City of Visalia. All buses come equipped with bike racks.
Visalia	TCM1	Traffic Flow Improvements	Continue to identify projects that improve traffic flow through the City's 5-Year Capitol Improvement Program	This measure has been implemented through the City's Circulation Element.	This measure has been implemented through the City's Circulation Element.
Visalia	TCM2	Public Transit	Implement Short Range Transit Plan to enhance and expand transit services.	Implementation continues as warranted.	Implementation continues as warranted.
Visalia	TCM4	Bicycle Programs	Continue to seek funding for, and implement bicycle improvements and programs.	The City continues to seek funding for and evaluate bike plan implementation. Implementation is ongoing.	The City continues to seek funding for and evaluate bike plan implementation. Implementation is ongoing.
Woodlake	TU1.5	Expansion of Public Transportation Systems	Expansion and enhancement of existing public transit through at least 2007.	Commitment Complete. Implementation continues.	Commitment Complete. Implementation continues.
Woodlake	TU3.5	Preferential Parking for Carpools and Vanpools	The City of Woodlake will designate preferential parking for carpools and vanpools at City locations through at least 2007.	Commitment Complete. Implementation continues.	Commitment Complete. Implementation continues.

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Woodlake	TU5.8	On-Street Parking Restrictions	Restrict parking where it impacts traffic safety through at least 2007.	Commitment Complete. No additional parking restrictions have been identified.	Commitment Complete. No additional parking restrictions have been identified.
Woodlake	TU5.19	Internet provided road and route information	Post scheduled road construction on City website through at least 2007.	Commitment Complete. Implementation continues.	Commitment Complete. Implementation continues.
Woodlake	TU7.13	Land use/air quality guidelines	Encourage high density development around transportation centers and the downtown through at least 2007.	Commitment Complete. Implementation ongoing.	Commitment Complete. Implementation continues.
Woodlake	TU7.14	Incentives for cities with good development practices	Require new development and major reconstruction to provide energy efficient lighting through at least 2007.	Commitment Complete. Implementation ongoing.	Commitment Complete. Implementation continues.
Woodlake	TU14.2	Special Event Controls	Reduce mobile source emissions from special event centers through at least 2007.	Commitment Complete.	Commitment complete.
Woodlake	TU14.3	Land Use/Development Alternatives	Promote high-density residential and commercial development in downtown area through at least 2007.	See Measure 7.13	See Measure 7.13

**Tulare County Association of Governments  
 RACM Timely Implementation Documentation**

<b>Agency</b>	<b>RACM Commitment</b>	<b>Measure Title</b>	<b>Measure Description (not verbatim)</b>	<b>Implementation Status (as of February 2021)</b>	<b>Conformity Analysis for the 2023 FTIP and 2022 RTP (as of May 2022)</b>
Woodlake	TU14.5	Evaluation of the Air Quality Impacts of New development and Mitigation of Adverse Impacts	Evaluate air quality impacts from new development using CEQA/NEPA process through at least 2007.	Commitment complete. Implementation ongoing.	Commitment complete. Implementation ongoing.
Woodlake	TCM1	Traffic Flow Improvements	Investigate the feasibility of regional cross valley rail and a number of signal and corridor improvements.	Signal improvements continue to be unwarranted.	Signal improvements continue to be unwarranted.

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**APPENDIX E**

**PUBLIC MEETING PROCESS DOCUMENTATION**

**APPENDIX F**

**RESPONSE TO PUBLIC COMMENTS**

No written or oral comments were received on the Draft Conformity Analysis for the 2023 FTIP and 2022 RTP.