

ATTACHMENT A

CONSULTATION ON A CONFORMITY ANALYSIS FOR A PROPOSED AMENDMENT TO THE FY 2016-2025 SUN CORRIDOR METROPOLITAN PLANNING ORGANIZATION TRANSPORTATION IMPROVEMENT PROGRAM AND REGIONAL TRANSPORTATION PLAN 2040

The Sun Corridor Metropolitan Planning Organization is conducting consultation on a conformity analysis for an amendment to the FY 2016-2025 Sun Corridor MPO Transportation Improvement Program (TIP) and Sun Corridor MPO Regional Transportation Plan 2040 (RTP). The conformity analysis indicates that the proposed amendment to the TIP and RTP satisfies the criteria specified in the federal transportation conformity rule for a conformity determination. A finding of conformity is therefore supported.

The federal conformity regulations at 40 CFR Parts 51 and 93 specify the criteria and procedures for conformity determinations for transportation plans, programs, and projects and their respective amendments. Under the federal transportation conformity rule, the principal criteria for a determination of conformity for transportation plans and programs are: (1) the TIP and Regional Transportation Plan must pass an emissions budget test with a budget that has been found to be adequate or approved by the U.S. Environmental Protection Agency (EPA) for transportation conformity purposes, or an interim emissions test; (2) the latest planning assumptions and emissions models specified for use in air quality implementation plans must be employed; (3) the TIP and Regional Transportation Plan must provide for the timely implementation of transportation control measures (TCMs) specified in the applicable air quality implementation plans; and (4) consultation.

The current conformity determination for the FY 2016-2025 Sun Corridor MPO Transportation Improvement Program and Sun Corridor MPO Regional Transportation Plan 2040 for the Pinal County PM-10 and PM-2.5 nonattainment areas was made by the Federal Highway Administration and Federal Transit Administration on February 7, 2019. The results of the regional emissions analysis for the Pinal County PM-10 and PM-2.5 nonattainment areas are described below and in Table 1.

Pinal County Nonattainment Areas Regional Emissions Analysis

For the Pinal County PM-10 and PM-2.5 nonattainment areas, there are no adequate or approved motor vehicle emissions budgets for conformity. Therefore, the conformity interim emissions tests were applied. In January 2017, EPA indicated they will not find to be adequate or approve the 2018 emissions budget in the 2015 West Pinal Moderate PM-10 Nonattainment Area SIP prepared by the Arizona Department of Environmental Quality (ADEQ) and submitted to EPA in December 2015. Therefore, the 2018 PM-10 budget in that SIP was not included in this regional emissions analysis.

In selecting analysis years for the interim emissions tests, the transportation conformity rule indicates that the years must be no more than ten years apart, the first year must be no more than five years beyond the year in which the conformity determination is being made, and the last year must be aligned with the transportation plan. The analysis year 2020 is modeled since it meets the requirement that the first year must be no more than five years beyond the year in which the conformity determination is being made. The analysis years 2025 and 2035 are intermediate years that meet the federal conformity requirement that analysis years be no more than ten years apart. The analysis year 2040 is the last horizon year for both the Sun Corridor MPO Regional Transportation Plan 2040 and the 2040 MAG Regional Transportation Plan. Therefore, the action and baseline tests were conducted for PM-10 for the West Pinal PM-10 Nonattainment Area and for PM-2.5 and NO_x for the West Central Pinal PM-2.5 Nonattainment Area for the analysis years of 2020, 2025, 2035, and 2040. For each test, the required emissions estimates were developed using the transportation and emission modeling approaches required under the federal transportation conformity rule.

The Maricopa Association of Governments and the Sun Corridor Metropolitan Planning Organization have coordinated on this amendment for inputs to the transportation model and on the required interagency consultation on the conformity analysis. Both the MAG Metropolitan Planning Area Boundary and the Sun Corridor Metropolitan Planning Area Boundary include portions of the West Pinal PM-10 Nonattainment Area and West Central Pinal PM-2.5 Nonattainment Area. Both nonattainment areas are covered by the boundaries of the two metropolitan planning organizations. Consequently, transportation conformity is required to be demonstrated for both nonattainment areas by both metropolitan planning organizations.

For PM-10, the projected emissions for the action scenario are not greater than the projected emissions for the baseline scenario for each of the years analyzed: 2020, 2025, 2035, and 2040. Since the PM-10 emissions predicted for the action scenarios are not greater than the PM-10 emissions predicted for the baseline scenarios, the conformity

interim emission test is satisfied. It is also reasonable to expect the action emissions would not exceed the baseline emissions for the time periods between the analysis years.

For PM-2.5, the projected emissions for the action scenario are not greater than the projected emissions for the baseline scenario for each of the years analyzed: 2020, 2025, 2035, and 2040. Since the PM-2.5 emissions predicted for the action scenarios are not greater than the PM-2.5 emissions predicted for the baseline scenarios, the conformity interim emission test is satisfied. It is also reasonable to expect the action emissions would not exceed the baseline emissions for the time periods between the analysis years.

For NO_x, the projected emissions for the action scenario are not greater than the projected emissions for the baseline scenario for each of the years analyzed: 2020, 2025, 2035, and 2040. Since the NO_x emissions predicted for the action scenarios are not greater than the NO_x emissions predicted for the baseline scenarios, the conformity interim emission test is satisfied. It is also reasonable to expect the action emissions would not exceed the baseline emissions for the time periods between the analysis years.

Latest Planning Assumptions and Emissions Models

In accordance with federal transportation conformity requirements, the latest planning assumptions and emissions models specified for use in air quality implementation plans were employed for this conformity determination. The latest planning assumptions used for this conformity determination are consistent with the 2017 MAG Conformity Analysis for the FY 2018-2022 Transportation Improvement Program and the 2040 Regional Transportation Plan and the Sun Corridor Metropolitan Planning Organization 2017 Conformity Analysis, except that the most recent available vehicle registration data was used in this conformity analysis. July 2018 vehicle registration data was obtained from the Arizona Department of Transportation (ADOT) for both Maricopa County and Pinal County. In addition, the latest version of the MOVES emissions model, MOVES2014b, was used.

Through the consultation process, it was determined that the “time that the conformity analysis begins” will be the day that the first traffic assignment is submitted for travel demand modeling. All analyses were conducted using the latest planning assumptions and emissions models in force at the time the conformity analysis began on April 3, 2019. A summary of the latest planning assumptions, including population, employment, and vehicle registrations data used in the regional emissions analysis, is provided in Table 2.

Timely Implementation of Transportation Control Measures

A status report on Transportation Control Measures (TCMs) is not required since there are no applicable plans for the West Pinal PM-10 Nonattainment Area and West Central Pinal PM-2.5 Nonattainment Area that contain TCMs. The 2015 West Pinal Moderate PM-10 Nonattainment Area State Implementation Plan (SIP) prepared by ADEQ was submitted to EPA on December 21, 2015. Also, on May 1, 2017, EPA approved SIP revisions that concern particulate matter emissions from construction sites, agricultural activity, and other fugitive dust sources, effective May 31, 2017.

Consultation

In accordance with federal and state rules, the Sun Corridor MPO is required to provide reasonable opportunity for consultation with state air and transportation agencies, local agencies, U.S. Department of Transportation, Environmental Protection Agency, and other interested parties. A 30-day consultation period is being provided on the conformity analysis and the amendment to the FY 2016-2025 Sun Corridor MPO Transportation Improvement Program and Sun Corridor MPO Regional Transportation Plan 2040. Consultation is concluded by notifying the agencies and other interested parties of any approval action taken by the Sun Corridor MPO Executive Board and any comments received during the period of consultation.

TABLE 1. CONFORMITY INTERIM EMISSION (ACTION/BASELINE) TEST RESULTS
(KILOGRAMS/DAY)
PINAL COUNTY NONATTAINMENT AREAS

	PM-10 Nonattainment Area	PM-2.5 Nonattainment Area	
<i>Pollutant</i>	<i>PM-10</i>	<i>PM-2.5</i>	<i>NOx</i>
2020			
- Action	111,924	27	1,164
- Baseline	113,915	28	1,203
2025			
- Action	116,503	22	960
- Baseline	119,772	26	1,286
2035			
- Action	129,498	20	885
- Baseline	133,044	23	1,268
2040			
- Action	137,044	22	1,030
- Baseline	140,484	26	1,566

TABLE 2. LATEST PLANNING ASSUMPTIONS FOR MAG CONFORMITY DETERMINATIONS FOR THE MAG TRANSPORTATION MODELING DOMAIN COVERING MARICOPA AND PINAL COUNTIES

Assumption	Source	MAG Models	Next Scheduled Update
Population and Employment	<p>Under the Governor’s Executive Order 2011-04, official County projections are updated every 3 to 4 years. These official projections are used by all agencies for planning purposes. The Arizona Department of Administration (ADOA) prepared a new set of Maricopa County projections based on the 2010-2014 American Community Survey in December 2015. MAG developed a set of subcounty population and employment projections for Maricopa County that are consistent with the ADOA population projections. The MAG Regional Council approved the subcounty socioeconomic projections in June 2016. In addition, Central Arizona Governments (CAG) approved the Pinal County subcounty socioeconomic projections, based on the ADOA Pinal County projections, in June 2016. The MAG Traffic Analysis Zone System was updated and expanded to reflect the latest socioeconomic changes in 2016.</p>	AZ-SMART (UrbanSim/ OPUS)	<p>Under the Governor’s Executive Order 2011-04, official county socioeconomic projections will be developed by the Arizona Department of Administration. The ADOA completed the county level projections in 2018 and MAG is currently preparing subcounty socioeconomic projections for approval by the MAG Regional Council in June 2019.</p>
Traffic Counts	<p>The highway models were validated in 2016 for the 2015 base year, using approximately 3,000 traffic counts collected by MAG in 2014-2015.</p>	TransCAD	<p>Region-wide traffic counts are typically collected by MAG every 2-4 years, if funds are available. MAG has completed main contractual work for the next region-wide traffic counts data collection. MAG is in the process of collecting 2018-2019 regional traffic counts. This work is currently ongoing and scheduled for completion in 2019.</p>

TABLE 2 (CONTINUED). LATEST PLANNING ASSUMPTIONS FOR MAG CONFORMITY DETERMINATIONS FOR THE MAG TRANSPORTATION MODELING DOMAIN COVERING MARICOPA AND PINAL COUNTIES

Assumption	Source	MAG Models	Next Scheduled Update
Vehicle Miles of Travel	<p>The passenger travel demand models were calibrated in 2012-2013 using data from the 2008-2009 home interview survey, 2009 Transearch data, 2010-2011 regional transit on-board survey, 2011 Truck GPS data, and 2012 Airport and ASU surveys. The recalibration effort included a complete update of the regional travel demand model based on the relevant data sets listed above. Trip generation and trip distribution were recalibrated based on the 2008-2009 National Household Travel Survey Arizona Add-On sample and 2006-2009 American Community Survey and Public Use Microdata Sample data sets. Mode choice was recalibrated based on the 2010 on-board survey. The truck model was recalibrated based on the new 2009 Transearch data and 2011 Truck GPS data from ATRI. Special generator sub-models were recalibrated based on 2012 regional airports and ASU travel surveys. The external travel model was recalibrated in 2011 based on the 2008 external travel study. Volume-delay functions were recalibrated in 2012-2013 based on the 2011 commercial speed data. Incremental updates and improvements were introduced to the model to reflect network changes, socioeconomic forecast changes, and changes in the traffic zone system. The model was comprehensively revalidated in 2015-2016 using 2014-2015 traffic counts and speed data. The overall calibration year for the model is 2011 and the latest base year based on a comprehensive validation is 2015.</p>	TransCAD	<p>MAG completed major regional household and establishment travel surveys in FY 2018. The surveys form the basis for a comprehensive model recalibration and update. The recalibration work has started and will continue in FY 2019. MAG is in the process of recalibrating all major modeling components. The model update, re-estimation, recalibration and validation to the new base year 2018 is scheduled for completion in 2019.</p>

TABLE 2 (CONTINUED). LATEST PLANNING ASSUMPTIONS FOR MAG CONFORMITY DETERMINATIONS FOR THE MAG TRANSPORTATION MODELING DOMAIN COVERING MARICOPA AND PINAL COUNTIES

Assumption	Source	MAG Models	Next Scheduled Update
Speeds	The highway models were validated using 50 million traffic speed records purchased from HERE for calendar year 2014 and also compared to a similar data set purchased in 2015.	TransCAD	Travel speed data are purchased periodically to validate the transportation models. MAG also utilizes commercial speed data for future estimation and model calibration purposes. MAG has purchased new speed data required for the ongoing model calibration and validation to the new base year processes. MAG has also collaborated with ADOT and capitalized on ADOT speed data contracts.
Vehicle Registrations	July 2018 vehicle registrations were provided by ADOT.	MOVES2014b	When newer data become available from ADOT.
Implementation Measures	Latest implementation status of commitments in prior SIPs.	N/A	Updated for every conformity analysis.

ATTACHMENT B