**Pre-Analysis Consensus Plan Template**

For Authors: A pre-analysis consensus plan (PACP) needs to be completed before the first interagency consultation conference call. Once the data for this plan is filled in, a draft version of the PACP will be sent out to the partners one to two weeks before the first interagency consultation conference call. This document will be an integral part of the discussion during the first call. Following the call, edits will be made based on the feedback received, and the revised version will be sent back to the partners for their final approval. Typically, consultative partners will be given one to two weeks to provide their final approval.

How to use this template:

1. To expedite the review process, kindly refrain from modifying any sections of the provided template to ensure consistency.
2. Instead of removing cells, please leave them as "n/a" when there is no answer available for a particular cell or section.
3. When working with tables that have dashed lines, preparers have the flexibility to expand on columns or rows as necessary. Additional columns or rows can be added as needed. However, please refrain from adding or removing columns or rows from the table if the lines are solid.
4. The **maroon** letters included in the template are solely for reference purposes. When filling in the information, feel free to replace them (and change the color to black) accordingly.
5. Populate the table below to prefill the document with the following parameters (Refresh the page by pressing “Ctrl + A” & “F9” for the document to reload):

|  |  |
| --- | --- |
| **Parameter** | **Preparer’s input** |
| MPO | **[MPO Name]**  |
| RTP//MTP | **[RTP//MTP Name]** |
| RTP//MTP Years Covered | **[MTP//RTP Years Covered. E.g., 2023-2050]** |
| TIP | **[TIP Name]** |
| TIP Years Covered | **[TIP Year Covered. E.g., 2023-2026]** |
| Base Year | **[Base Year. E.g., 2017]** |
| Analysis Years | **[Analysis Years. E.g., 2023, 2025, etc.]** |

Note: The conformity determination process timeline for plan update and/or amendment is available [here](https://server.txaqportal.org/storage/uploads/2022/07/18/62d5c64fdb648Conformity-Determination-Process-for-Plan-Update-and-or-Amendment.pdf).

PACP Submission Information

|  |  |
| --- | --- |
| **Prepared by** | El Paso Metropolitan Planning Organization |
| **Meeting Date** | **Purpose of Meeting** |
| 12/8/2023 | Present to the Consultation Partners the Pre-Consensus Plan for review |

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# The purpose of Transportation Conformity Emissions Analysis

Table 1. Reasons for the Transportation Conformity Emissions Analysis (40 CFR § 93.104)

|  |  |  |
| --- | --- | --- |
| **Check****Box** | **Reasons** | **Years Covered** |
|  | **a. New Metropolitan/Regional Transportation Plan (demographics, horizon year, etc.)** |  |
| X | **b. Modify Existing Metropolitan/Regional Transportation Plan (interim year adjustments)** | **[MTP//RTP Years Covered. E.g., 2023-2050]** |
| X | **c. New or Amended Transportation Improvement Program** | **[TIP Year Covered. E.g., 2023-2026]** |
|  | **d. State Implementation Plan (SIP) Requirements** |  |
|  | **e. Newly Designated Non-Attainment Area** |  |
|  | **f. Other** |  |

**Explanation:**

b. The **[MPO Name]** is proposing an amendment to the **[RTP//MTP Name]** Metropolitan Transportation Plan (MTP) and the **[TIP Name]** Transportation Improvement Program (TIP) (approved on November 4, 2022). The Transportation Policy Board (TPB) approved several proposed changes to the **[RTP//MTP Name]** MTP, which will be included in the **[TIP Year Covered. E.g., 2023-2026]** TIP.

Projects are:

1. **MESA PARK DR. FROM I-10 TO DONIPHAN (A126X-CAP)** - Mesa Park project will be replaced with Montecillo Blvd. extension from I-10 to Mesa St. The project description will be the same - Build 4-Lane Divided. The only difference is the alignment. Montecillo Blvd. is connected to Mesa St. approximately half a mile north of Mesa Park Dr. The project will be connected at the same location on the IH-10 end.
2. **DOWNTOWN 10 EXECUTIVE CENTER TO SL478 COPIA (I063X-CAP)** - Project description will be updated to remove the adaptive lane in each direction and detail coding will be updated to follow preferred alternative with proposed frontage roads and ramps. ([https://eptxmpo-my.sharepoint.com/:b:/g/personal/sperez\_elpasompo\_org/EcNy7N1Dn51CjtLuIMpUfzYBOvAAayTc-p8hgUQPi9c8eA?e=z8lrLo](https://eptxmpo-my.sharepoint.com/%3Ab%3A/g/personal/sperez_elpasompo_org/EcNy7N1Dn51CjtLuIMpUfzYBOvAAayTc-p8hgUQPi9c8eA?e=z8lrLo)). Project will be divided in three phases and MPO ID will be updated accordingly.
3. **ST. FRANCIS DRIVE EXTENSION FROM PETE DOMENICI MEMORIAL HWY (NM 136) TO SUNLAND PARK EXTENSION (A606X)** - St. Francis Drive extension project will be replaced with Border Highway Connector with four lane (4LN) principal arterial instead of a two lane (2LN) major collector as it was coded in the RMS 2050. The project limits will also change at the eastern end to McNutt Blvd. (NM 213) instead of Sunland Park Extension.
4. **US 62/180 MONTANA AVE. EXPRESSWAY & FRONTAGE ROADS, PHASE I (F407A-CAP)** - Phase I of Montana Ave. is a project in the previous MTP (Amended Destino 2045 MTP). The project was coded in the 2022 network for the RMS 2050 MTP as a completed project, but it has not been open to the public due to several unforeseen complications. The project will be moved to the 2032 network as a cleanup of the TDM network coding and will now be in the same network year as Phase II (F407B-CAP). Phase II is a project in the RMS 2050 MTP.
5. **I-10 SEG3A from Copia to Paisano (I064X-CAP)** - Project description will be updated to remove the adaptive lane in each direction and model coding will be updated accordingly.
6. **I-10 SEG3B from Paisano to Airway (I065X-CAP)** - Project description will be updated to remove the adaptive lane in each direction and model coding will be updated accordingly.
7. **I-10 SEG1G from Thorn to Executive (I067X-CAP)** - Project description will be updated to remove the adaptive lane in each direction and model coding will be updated accordingly.
8. **I-10 SEG3C from Airway to Yarbrough (I068X-CAP)** -Project description will be updated to remove the adaptive lane in each direction and model coding will be updated accordingly.
9. **I-10 SEG3D1 from Yarbrough to FM659 (I069X-CAP)** - Project description will be updated to remove the adaptive lane in each direction and model coding will be updated accordingly.
10. **I-10 SEG3D2 from FM659 to Eastlake (I070X-CAP)** - Project description will be updated to remove the adaptive lane in each direction and model coding will be updated accordingly.

c. The City of El Paso (1991 city limits) is in non-attainment for particulate matter of 10 microns (Effective on January 6, 1991) and a portion of Doña Ana County near Sunland Park, NM is marginal non-attainment for 2015 Ozone NAAQS (Effective on June 4, 2018). For this conformity determination, regional emissions analysis for Carbon Monoxide (CO) will not be conducted based upon the EPA approval of the El Paso CO Limited Maintenance Plan (LMP) in September 2017. In accordance with CO LMPs a regional emissions analysis for analysis years beyond 2020 is not required. The Travel Demand Model (TDM) has a conformity base year of **[Base Year. E.g., 2017]** and was developed with analysis years of **[Analysis Years. E.g., 2023, 2025, etc.]**. Demographics Control totals for the MPO area have been developed for the stated analysis years based on Texas Demographic Center projections (Table 7). The TIP will cover the Fiscal Years (FY) **[TIP Year Covered. E.g., 2023-2026]**.

# Timeline for the Transportation Conformity Document Development

Table 2. Anticipated Transportation Conformity Timeline

|  |  |  |
| --- | --- | --- |
| **#** | **Task Items** | **Timeframe** |
| 1 | Pre-Analysis Consensus Plan Review and Approval | 12/01/2023 – 01/15/2024 |
| 2 | Travel Model Networks Development and Emissions Analysis | 12/01/2023 - 02/15/2024 |
| 3 | Regional Technical and Policy Board Information | 12/15/2023 - 03/15/2024 |
| 4 | Public Meetings and Comment Period | 02/15/2024 -03/15/2024 |
| 5 | Consultative Partner Review Period | 03/15/2024 - 07/15/2024 |
| 6 | USDOT Air Quality Conformity Determination Anticipated | 07/15/2024 - 9/30/2024 |
| 7 | Lapse of Conformity for MTP and TIP | 11/04/2026 |

# Metropolitan Transportation Plan (MTP) or Regional Transportation Plan (RTP) / Transportation Improvement Program (TIP)

Table 3. MTP or RTP / TIP

|  |  |  |
| --- | --- | --- |
| **Plan / Program Name** | **Years Covered** | **Fiscally Constrained** |
| **[RTP//MTP Name]**  | **[MTP//RTP Years Covered. E.g., 2023-2050]** | N/A |
| **[TIP Name]** | **[TIP Year Covered. E.g., 2023-2026]** | N/A |

## Definition of Regionally Significant Projects (from 40 CFR § 93.101)

A regionally significant project means a transportation project (other than projects that may be grouped in the TIP and/or Statewide Transportation Improvement Program (STIP) or exempt projects as defined in EPA’s transportation conformity regulation [40 CFR § part 93]) is a facility that serves regional transportation needs (such as access to and from the area outside the region; major activity centers in the region; major planned developments such as new retail malls, sports complexes, or employment centers, or transportation terminals) and would normally be included in the modeling of the metropolitan area’s transportation network. At a minimum, this includes all principal arterial highways and all fixed guided way transit facilities that offer a significant alternative to regional highway travel.

# Applicable State Implementation Plan (SIP), related Emissions Budget, and Transportation Control Measures (TCM)

Table 4. Applicable SIP and Emissions Budget(s)

|  |  |  |  |
| --- | --- | --- | --- |
| **SIP** | **Attainment Year** | **Pollutant** | **Emission Budget (TPD)** |
| PM10 SIP | 1994 | PM10 | 12.05 |

Table 5. TCM strategies, if applicable.

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **TCM** | **Strategies** | **Effective Date** |
| 1 | TCM | N/A | N/A |

# Conformity Analysis Years

Per CFR § 93.106(a)(1)(i) – Analysis years cannot be more than 10 years apart.

Table 6. Conformity Analysis Years

|  |  |
| --- | --- |
| **Variable** | **Information** |
| **Baseline Conformity Year, if applicable.1** | **[Base Year. E.g., 2017]** |
| **Attainment Year** | N/A |
| **Analysis Years** | **[Analysis Years. E.g., 2023, 2025, etc.]** |
| **TIP year(s)** | **[TIP Year Covered. E.g., 2023-2026]** |
| **Last Year of Maintenance Plan (if applicable)** | N/A |
| **Other** | N/A |

1If there are no adequate or approved budgets for the nonattainment area, an interim emissions test will be used. Per §93.119(g), the first analysis year may be no more than five years beyond the year in which the determination is being made.

# Demographic Used in Conformity Analysis

Table 7. Demographics

(If using data other than the latest available (i.e., 2020 US Census), please include an explanation.)

| **Variables** | **Forecasting method** |
| --- | --- |
| **Population** | At the transportation analysis zone (TAZ) level, the data was gathered from a mixture of sources, including public domain data sources, published commercial datasets, stakeholder input via the Delphi Process, table-top GIS analysis, and limited field review of the study area. To allocate demographics to the TAZ level, 2017 population and household estimates were developed at the block level. The county control total for household population, group quarter population, and total households are first allocated to the census block group level based on 2017 ACS 5-year block group level data. The block group level group quarter population was directly allocated to the block level based on the 2010 census block level group quarter population. There was a lack of detailed information on growth patterns below the block group level. Therefore, the change in the number of workers living in each block from 2010 to 2017 (reported in the 2010 and 2017 LEHD LODES data set) and the number of households (from 2010 U.S. Census and 2017 ACS 5-year data) were used to estimate changes in the number of households at the block level. To ensure the accuracy of the 2017 household total at the block level, ACS 2017 block group level household data were used as a population control, and accuracy checks were performed to ensure the accuracy of high-growth areas. The population (in households) in each block was estimated multiplying total households by household size (averages from 2010 data). The subarea control totals were used as population growth constraints. The subarea growth in the number of households was derived in proportion to subarea total population growth. |
|
|
|
|
|
| **Employment** | The data was gathered from a mixture of sources, including public domain data sources, published commercial datasets, stakeholder input via the Delphi Process, table-top GIS analysis, and limited field review of the study area. 2017 base year employment was allocated to the TAZ level using the 2017 InfoUSA data. Since the InfoUSA data contains latitude and longitude attributes, the data can be directly aggregated to the TAZ level. To ensure accuracy, an extensive review of the InfoUSA data was conducted. This review focused on the accuracy of the locational information of the businesses and reasonableness of the level of employment presented in the data. Once reviewed and any necessary adjustments made, employment was aggregated to the TAZ level. The subarea employment growth within each subarea by employment type was first developed proportionally to the county level employment growth by employment type. The subarea employment-by-type growth rate was assumed to be the same as the county. |
|
|
|
|
| **Socio-economic** | The development of 2050 demographics adopted a Delphi process to develop subarea control totals. The interim year demographics was developed based on interpolation of base year 2017 and forecast year 2050. As part of the development of reasonable horizon year forecasts for the El Paso TDM at TAZ level, a Delphi Process was conducted to help formulate population and employment projections for the region based on local knowledge. 74 community leaders throughout the El Paso region with expertise in a variety of areas participated as panel members in the El Paso Delphi Process. |
| **Other** | Socioeconomic forecasts to year 2050 were established using the Texas Demographics Center’s control totals and guidelines. Allocation of these control totals down to the TAZ level was done through a Delphi process, considering constraints and opportunities as well as the availability of developable land and existing development density. |

# Travel Demand Model

Table 8. Land-Use Model

|  |  |
| --- | --- |
| **Model Factor** | **Detail and Methodology** |
| **Study Area (sq-mi)** | 1,235 |
| **Traffic Analysis Zones (TAZs)** | 848 |
| **Counties** | El Paso, Doña Ana, Otero |

Table 9. Travel Demand Model

|  |  |
| --- | --- |
| **Model Factor** | **Detail and Methodology** |
| **Model Validation Year** | 2017 |
| **Software** | TransCAD |
| **VMT HPMS Factor** | 1.037120 |
| **Mode Split Method** | Multinomial logit model |
| **Countries Covered by Model** | El Paso County, Southern Doña Ana County, and a portion of Otero County. |
| **Other** | N/A |

Table 10. Seasonal Factor

|  |  |
| --- | --- |
| **Factor** | **Information** |
| **Base Data** | TxDOT El Paso County ATR data |
| **Year of the Base Data** | 2013-2021 |
| **Season** | **Summer** | **Winter** |
| **Seasonal Period** | June, July, August | December, January, February |
| **Adjustment Factor1** | 0.95121 | 1.04215 |

1The adjustment factor converts annual non-summer weekday to seasonal weekday.

Table 11. Hourly Distribution Factors

The hourly factors for the summer and winter weekday scenarios were calculated based on the 2013 to 2021 TxDOT El Paso County data.

|  |  |
| --- | --- |
| **Factor** | **Information** |
| **Season** | Summer | Winter |
| **Hour** | **Hourly Factor** |
| **00:00-1:00** | 0.010870 | 0.009738 |
| **1:00-2:00** | 0.007193 | 0.006638 |
| **2:00-3:00** | 0.005847 | 0.005483 |
| **3:00-4:00** | 0.005844 | 0.005500 |
| **4:00-5:00** | 0.008530 | 0.007734 |
| **5:00-6:00** | 0.019896 | 0.017103 |
| **6:00-7:00** | 0.038152 | 0.036989 |
| **7:00-8:00** | 0.061521 | 0.063226 |
| **8:00-9:00** | 0.062270 | 0.064673 |
| **9:00-10:00** | 0.055350 | 0.056293 |
| **10:00-11:00** | 0.052907 | 0.053356 |
| **11:00-12:00** | 0.054990 | 0.055623 |
| **12:00-13:00** | 0.057999 | 0.058681 |
| **13:00-14:00** | 0.059418 | 0.060490 |
| **14:00-15:00** | 0.061888 | 0.063102 |
| **15:00-16:00** | 0.066163 | 0.068760 |
| **16:00-17:00** | 0.070673 | 0.074209 |
| **17:00-18:00** | 0.072405 | 0.074355 |
| **18:00-19:00** | 0.062246 | 0.063458 |
| **19:00-20:00** | 0.048647 | 0.047775 |
| **20:00-21:00** | 0.039446 | 0.036639 |
| **21:00-22:00** | 0.032954 | 0.030156 |
| **22:00-23:00** | 0.026148 | 0.023498 |
| **23:00-24:00** | 0.018643 | 0.016521 |
| **Total1** | 1.00 | 1.00 |

1The sum of hourly factors over the 24-hour period must add up to 1. Highlight the values in the "Total" row and press the "F9" key to refresh and verify the total sum.

# Emission Modeling

Table 12. Emission Modeling

|  |
| --- |
| **Pollutants Reported** |
| **Pollutants** | PM10, VOC, and NOx | PM10 |
| **Emission Factor Development** |
| **Emission Model Version1** | MOVES4 | MOVES4 |
| **Years Modeled** | **[Base Year. E.g., 2017]**, **[Analysis Years. E.g., 2023, 2025, etc.]** | **[Base Year. E.g., 2017]**, **[Analysis Years. E.g., 2023, 2025, etc.]** |
| **Time periods** | Summer Weekday | Winter Weekday |
| **Functional Class** | Urban restricted, Rural restricted, Urban unrestricted, Rural unrestricted | Urban restricted, Rural restricted, Urban unrestricted, Rural unrestricted |
| **VMT mix** | Four-period, time-of-day VMT mixes for conventional gasoline and diesel source-use type by functional class will be estimated using latest vehicle classification count (2013-2021) and associated year-end registration data. No seasonal adjustments are made for VMT mix. | Four-period, time-of-day VMT mixes for conventional gasoline and diesel source-use type by functional class will be estimated using latest vehicle classification count (2013-2021) and associated year-end registration data. No seasonal adjustments are made for VMT mix. |
| **Speed** | MOVES county scale/emission rates mode will be used to model urban and rural, restricted, and unrestricted access functional class emissions factors for each of the 16 speed bin average speeds (i.e., 2.5 and 5 through 75 at 5 mph increments). | MOVES county scale/emission rates mode will be used to model urban and rural, restricted, and unrestricted access functional class emissions factors for each of the 16 speed bin average speeds (i.e., 2.5 and 5 through 75 at 5 mph increments). |
| **Vehicle Registration** | The latest registration data (year-end 2021) will be used for age distribution. | The latest registration data (year-end 2021) will be used for age distribution. |
| **MOVES External Condition** |
| **Baseline Year, if Applicable** | **[Base Year. E.g., 2017]** | **[Base Year. E.g., 2017]** |
| **Other Years** | **[Analysis Years. E.g., 2023, 2025, etc.]** | **[Analysis Years. E.g., 2023, 2025, etc.]** |
| **Evaluation Month** | July | January |

1The default emission model used is EPA’s MOVES 3.1.0. The latest version of MOVES is MOVES4 (refer to as just MOVES in this document), which was released on September 12, 2023. A 2-year conformity grace period is in effect with the release and ends on September 12, 2025. After this date, MOVES4 must be used for new transportation conformity analyses. The federal register notifying this release is available at: <https://www.federalregister.gov/documents/2023/09/12/2023-19116/official-release-of-the-moves4-motor-vehicle-emissions-model-for-sips-and-transportation-conformity>.

# MOVES Input

Table 13. MOVES Input Parameters and data source

| **Input Parameter** | **Description** | **Base Data Source** | **Notes** |
| --- | --- | --- | --- |
| **Vehicle Population by Source Type** | Input the number of vehicles in the geographic area which is to be modeled for each vehicle. | TxDMV data (year-end 2021), MOVES defaults for rates runs. | * Local gasoline and diesel-powered source type populations by analysis year is estimated for use external to MOVES in the estimation of county level vehicle starts and source-hours-parked, needed in the external emissions calculations, per TTI’s rates-per-activity, TDM-based method.
* Populations by SUT and fuel type are a function of TxDMV year-end vehicle registration data and VMT mix, and in the case of base and future years, population scaling factors.
 |
| **Fleet Age Distribution by Source Type** | Input that provides the distribution of vehicle counts by age for each calendar year and vehicle type. TxDMV registration data is used to estimate the age distribution of vehicle types up to 31 years.  | TxDMV data (year-end 2021), MOVES defaults for refuse trucks, motor homes, and buses. | * Age distributions will be developed using TxDMV registration data aggregated at the county level for all source types except the single-unit long-haul source types, which will be statewide level.
* Since no 2017 registration data is available for use with the 2017 baseline, the 2021 TxDMV data will be used for the 2017 baseline as well as the future analysis years.
* The distribution of Age fractions should sum up to 1.0 for each source use type for each analysis year.
 |
| **Fleet VMT by HPMS Vehicle Type** | County specific VMT is distributed to 6 HPMS Vehicle types | MOVES defaults for rates runs. | * Local activity estimates are applied in emissions calculations external to MOVES.
 |
| **Road Type VMT distributions** | Fractions of VMT across the four MOVES road types, for each source type. | MOVES defaults for rates runs. | * Local activity estimates are applied in emissions calculations external to MOVES.
* VMT fraction is distributed between the road type and must sum to 1.0 for each source type.
 |
| **Average Speed Distribution** | Input average speed data specific to vehicle type, road type, and time of day/type of day into 16 speed bins.  | MOVES defaults for rates runs. | * Local activity estimates are applied in emissions calculations external to MOVES.
* The sum of speed distribution to all speed bins for each road type, vehicle type, and time/day type would be 1.0.
 |
| **Fuel Supply (****Table** 14**)** | Input to assign existing fuels to counties, months, and years, and to assign the associated market share for each fuel | Combination of MOVES defaults and local information | * For each analysis year and season, the local fuel supply will consist of one conventional gasoline formulation and one biodiesel formulation. (Although only the predominant fuels gasoline and diesel will be modeled, the other MOVES fuel type formulations will be input as required to run the MOVES model.)
 |
| **Fuel Formulation (Table 15)** | Input county specific fuel properties in the MOVES database. | El Paso fuel survey data, Department of Energy (DOE) state-level biodiesel (BD) consumption estimates and MOVES defaults for parameters. | * Conventional gasoline (CG) formulations based on TCEQ’s summer 2017 and summer 2023 (latest available) fuel survey samples from El Paso County.
	+ The 2017 CG properties are actual 2017 averages (fuel grade averages weighted by relative sales volumes).
	+ The Future Years CG properties are latest available actual 2023 averages except with RVP, average sulfur level, and average benzene content set to the “expected” values (MOVES3 defaults, consistent with the pertinent regulatory standards).
* The 2017 diesel sulfur level is the statewide average from TCEQ’s 2017 survey.
	+ Future years diesel sulfur was set to the current expected future year value (6 ppm), which is conservative and consistent with the statewide diesel sulfur average from TCEQ’s latest (2023) survey.
	+ The BD ester volume percentages for 2017 and future years were based on 2017 and the latest available (2023) DOE state-level transportation sector BD consumption estimates.
	+ Fuel subtype IDs 12 and 21 are 10% ethanol-blend gasoline and biodiesel, respectively.
 |
| **Fuel Engine Fraction / Diesel Fraction** | Input fuel engine fractions (i.e., Gasoline vs. Diesel Engines types in the vehicle population) for all vehicle types. | TxDMV year-end 2021 registration data for particular source type diesel fractions; MOVES defaults for other source types. | * Locality-Specific/MOVES default (renormalized with setting CNG fractions to zero).
* TTI developed the evaluation year-specific local diesel fractions for the MOVES single unit and combination truck source use types using the latest TxDMV data, for all analysis years, aggregated to the statewide level.
 |
| **Meteorology** **(Table 16)** | County Specific data on temperature and humidity | Average hourly from weather stations within El Paso County | * The summer and winter season temperature and humidity data are the same values used in the previous MOVES2014aMOVES2014b-based Regional Mobility Strategy 2050 MTP emissions analysis.
* These inputs were based on 2017 El Paso County weather station data, provided by TCEQ, and are consistent with the TCEQ’s latest (2017) El Paso periodic emissions inventory submittal to EPA required under the Air Emissions Reporting Rule [AERR]).
 |
| **I/M Coverage (Table 17)** | Input I/M coverage record for each combination of pollutants, process, county, fuel type, regulatory class and model year is specified using this input. |  | * Begin and end model year (X, Y) define the range of model years covered – where X and Y, respectively, are calculated as YearID – 24, and YearID – 2.
* I/M compliance factor estimates were calculated by TTI using TCEQ 2021 statewide compliance data and MOVES3 I/M compliance factor equation in MOVES3 Technical Guidance (Source: E-mail from Mobile Source Programs Team, values confirmed January 11, 2023, Based on Calendar Year 2021 I/M Program Data); El Paso I/M-program-specific I/M waiver rates and failure rates, and statewide average I/M compliance rates; in combination with MOVES3 regulatory class coverage adjustments.
* The model processes/pollutants affected are start and running exhaust HC, CO, NOx, and tank vapor venting HC; fuel type is gasoline; frequency is annual.
 |

Table 14. Fuel Supply

E85, CNG and electricity MOVES default IDs will be used, per MOVES3 requirement to run the model, even though those fuel types do not affect the emissions results.

|  |  |  |  |
| --- | --- | --- | --- |
| **Fuel Type** | **Fuel Formulation ID** | **Market Share** | **Market Share CV1** |
| Gasoline | 17101, 17703, 2311, 2373 | 1.0 | N/A |
| Diesel | 30600, 30637 | 1.0 | N/A |

1Market Share CV – the coefficient variation of the market share.

Table 15. Fuel Properties

|  |  |
| --- | --- |
| **Factor** | **Information** |
| **Fuel Type** | Gasoline | Gasoline | Gasoline | Gasoline | Diesel | Diesel |
| **Fuel Formulation ID** | 17101 | 17703 | 2311 | 2373 | 30637 | 30600 |
| **Fuel Subtype ID** | 12 | 12 | 12 | 12 | 21 | 21 |
| **Analysis Year** | 2017 | 2017 | 2020+ | 2020+ | 2017 | 2020+ |
| **Season** | Winter | Summer | Winter | Summer | Summer and Winter | Summer and Winter |
| **RVP** | 11.36 | 6.94 | 11.50 | 7.11 | 0 | 0 |
| **Sulfur Level** | 19.39 | 19.56 | 10.00 | 9.39 | 6.37 | 5.91 |
| **ETOH Volume** | 10.00 | 9.6 | 10.00 | 9.89 | 0 | 0 |
| **MTBE Volume** | 0 | 0 | 0 | 0.00 | 0 | 0 |
| **ETBE Volume** | 0 | 0 | 0 | 0.00 | 0 | 0 |
| **TAME Volume** | 0 | 0 | 0 | 0.00 | 0 | 0 |
| **Aromatic Content** | 21.36 | 26.67 | 22.90 | 27.10 | 0 | 0 |
| **Olefin Content** | 6.66 | 5.50 | 11.14 | 5.62 | 0 | 0 |
| **Benzene Content** | 0.63 | 1.30 | 0.67 | 1.07 | 0 | 0 |
| **e200** | 53.72 | 48.74 | 49.86 | 45.96 | 0 | 0 |
| **e300** | 87.38 | 87.84 | 85.17 | 85.80 | 0 | 0 |
| **Vol to Wt Percent Oxy** | 0.3653 | 0.3653 | 0.3653 | 0.3653 | 0 | 0 |
| **BioDieselEster Volume** | N/A | N/A | N/A | N/A | N/A | N/A |
| **Cetane Index** | N/A | N/A | N/A | N/A | N/A | N/A |
| **PAH Content** | N/A | N/A | N/A | N/A | N/A | N/A |
| **T50** | 192.22 | 206.12 | 199.39 | 207.76 | 0 | 0 |
| **T90** | 309.50 | 306.72 | 320.54 | 315.98 | 0 | 0 |

Table 16. Hourly Meteorological Data

|  |  |
| --- | --- |
| **Factor** | **Information** |
| **County/Area(s)** | El Paso County, Southern Doña Ana County, and a portion of Otero County. | El Paso County, Southern Doña Ana County, and a portion of Otero County. | El Paso County, Southern Doña Ana County, and a portion of Otero County. | El Paso County, Southern Doña Ana County, and a portion of Otero County. |
| **Season** | Summer | Summer | Winter | Winter |
| **Hour** | **Temperature (oF)** | **Relative Humidity (%)** | **Temperature (oF)** | **Relative Humidity (%)** |
| **00:00-1:00** | 79.77 | 42.73 | 48.57 | 45.01 |
| **1:00-2:00** | 78.51 | 45.05 | 47.44 | 46.81 |
| **2:00-3:00** | 77.31 | 47.11 | 46.44 | 48.65 |
| **3:00-4:00** | 76.27 | 49.05 | 45.46 | 50.32 |
| **4:00-5:00** | 75.38 | 50.63 | 44.62 | 51.63 |
| **5:00-6:00** | 74.47 | 52.45 | 43.71 | 53.29 |
| **6:00-7:00** | 73.96 | 53.51 | 43.08 | 54.26 |
| **7:00-8:00** | 75.19 | 51.26 | 43.39 | 52.85 |
| **8:00-9:00** | 77.54 | 46.95 | 45.76 | 48.11 |
| **9:00-10:00** | 80.13 | 42.42 | 48.91 | 43.16 |
| **10:00-11:00** | 82.81 | 37.98 | 52.31 | 38.25 |
| **11:00-12:00** | 85.38 | 33.88 | 55.29 | 34.22 |
| **12:00-13:00** | 87.54 | 30.66 | 57.39 | 31.80 |
| **13:00-14:00** | 89.27 | 28.03 | 59.07 | 29.61 |
| **14:00-15:00** | 90.68 | 25.90 | 60.29 | 27.94 |
| **15:00-16:00** | 91.85 | 24.01 | 60.83 | 27.40 |
| **16:00-17:00** | 92.09 | 24.18 | 60.37 | 28.06 |
| **17:00-18:00** | 91.62 | 24.77 | 58.77 | 30.20 |
| **18:00-19:00** | 90.74 | 25.75 | 56.88 | 32.70 |
| **19:00-20:00** | 89.02 | 28.24 | 55.16 | 35.17 |
| **20:00-21:00** | 86.68 | 32.05 | 53.66 | 37.07 |
| **21:00-22:00** | 84.78 | 34.61 | 52.16 | 39.26 |
| **22:00-23:00** | 82.97 | 37.00 | 50.77 | 41.34 |
| **23:00-24:00** | 81.28 | 40.04 | 49.58 | 42.97 |

Table 17. I/M Inputs

|  |  |
| --- | --- |
| **Factor** | **I/M Information** |
| **Test Standards Description** | Two-mode, 2500RPM/Idle Test | Evaporative GasCap Check | Exhaust OBD Check  | Evaporative GasCap and OBD Check |
| **Test Standards ID** | 12 | 41 | 51 | 45 |
| **Year ID** | 2017 | 2017 | 2017, 2022, 2032, 2040, 2050 | 2017, 2022, 2032, 2040, 2050 |
| **I/M Program ID** | N/A | N/A | N/A | N/A |
| **Pollutant Process ID** | N/A | N/A | N/A | N/A |
| **Source Use Type** | 21, 31, 32 | 21, 31, 32 | 21, 31, 32 | 21, 31, 32 |
| **Begin Model Year** | X | X | X | X |
| **End Model Year** | 1995 | 1995 | Y | Y |
| **I/M Compliance** | 21 – 94.00% 31 – 90.35%32 – 70.74%  | 21 – 94.00% 31 – 90.35% 32 – 70.74%  | 21 – 94.00% 31 – 90.35% 32 – 70.74%  | 21 – 94.00% 31 – 90.35% 32 – 70.74%  |

Source use type: 21 – Passenger Car, 31 – Passenger Truck, 32 – Light Commercial Truck

Table 18. MOVES Emissions Factor Post-Processing to be Performed by County and Year

|  |  |  |
| --- | --- | --- |
| **Strategy and Post-processing Result** | **Analysis Year** | **Counties** |
| **Texas Low Emission Diesel Fuel (TxLED)** | All years | N/A |

Table 19. Emission Controls Used for Conformity Credit

|  |  |  |
| --- | --- | --- |
| **Emission Reduction Strategy and Years Covered** | **Modeling or Post-Processing Approach** | **Analysis Year** |
| **Intersection Improvements** | N/A | N/A |
| **Transit Service** | N/A | N/A |
| **High Occupancy Vehicle/Managed Lanes** | N/A | N/A |
| **Park-n-Ride Lots** | N/A | N/A |
| **Vanpools** | N/A | N/A |
| **Grade Separations** | N/A | N/A |
| **Traffic Signal Improvements** | N/A | N/A |
| **Intelligent Transportation Systems** | N/A | N/A |
| **Clean Vehicle Commitments** | N/A | N/A |
| **Bicycle/Pedestrian Facilities** | N/A | N/A |
| **Employer Trip Reduction Programs** | N/A | N/A |
| **Sustainable Development** | N/A | N/A |
| **Public Education/Ozone Season Fare Reduction** | N/A | N/A |