

5. Onroad Mobile Sources

5.1 Introduction

Onroad mobile source emission estimates have been calculated for particulate matter for the 2002 Periodic Particulate Matter Emissions Inventory. For the purposes of this particulate matter study, the following pollutants were included; PM₁₀, PM_{2.5}, nitrogen oxides (NO_x), sulfur oxides (SO_x), and ammonia (NH₃). PM₁₀ refers to all particles less than or equal to 10 micrometers in diameter, about one seventh the diameter of a human hair. PM_{2.5} refers to particles less than or equal to 2.5 micrometers in diameter. Given the nature of the primary particulates, PM₁₀ and PM_{2.5}, the total fugitive dust emissions from paved and unpaved roads are calculated separately from onroad emissions from other sources (exhaust, tire wear, and brake wear).

The fugitive dust emissions are calculated separately from the remaining onroad factors because fugitive dust is primarily a function of the silt loading on different roadway types and whether a road is paved or unpaved. While calculated using a separate model than exhaust or evaporative emissions, the fugitive dust emissions are included in this report. The remaining onroad emissions are not dependent upon silt loading but may depend upon items such as fuel quality or temperature.

Onroad mobile source emissions are estimated for the portion of PM₁₀ nonattainment area located primarily within Maricopa County (approximately 2,900 square miles) as well as for Maricopa County as a whole. Emission estimates were calculated for the following eight vehicle types: light duty gas vehicles (LDGV), light duty gas trucks of gross vehicle weight under 6000 pounds (LDGT1/LDGT2), light duty gas trucks of gross weight over 6000 pounds (LDGT3/LDGT4), heavy duty gas vehicles (HDGV), light duty diesel vehicles (LDDV), light duty diesel trucks (LDDT), heavy duty diesel vehicles (HDDV), and motorcycles (MC). Emission factors for these vehicle types were calculated using two tools, MOBILE6.2 and AP-42. MOBILE6.2 is the latest version in a series of models developed by the US Environmental Protection Agency (EPA) for the purpose of estimating motor vehicle emission factors. AP-42 is the EPA Compilation of Air Pollutant Emission Factors. AP-42 emission factors were used to calculate fugitive dust emission factors while the MOBILE6.2 model was used to estimate all other emission factors. The resulting emission factors were multiplied by the estimates of vehicle miles of travel (VMT) to generate emission estimates.

Unlike the periodic inventory analyses for carbon monoxide and ozone precursors, there is no "PM season". This report will include annual average day emissions or annual total emissions estimates only and not include any emission estimates for a particulate season.

The main reference sources for preparing the onroad mobile source portion of the inventory were as follows:

- Emission Inventory Requirements for Ozone State Implementation Plans, EPA-450/4-91-010, March 1991,
- Technical Guidance on the Use of MOBILE6 for Emission Inventory Preparation, US EPA, January 2002,
- User's Guide to MOBILE6.1 and MOBILE6.2 (Mobile Source Emission Factor Model), EPA420-R-03-010, August 2003, and

- Procedures for Emission Inventory Preparation Volume IV: Mobile Sources, EPA-450/4-81/026d (Revised), 1992.

5.2 VMT estimation procedure

MAG prepared the 2002 vehicle miles of travel (VMT) estimates for the PM₁₀ nonattainment area and Maricopa County. The source of data for these estimates is the 2002 Highway Performance Monitoring System (HPMS) data (see Appendix 5.1) submitted to the US Department of Transportation, Federal Highway Administration (FHWA) by the Arizona Department of Transportation (ADOT). The ADOT contact person for the HPMS VMT estimates is Mark Catchpole (602-712-8596).

Each year, ADOT coordinates the collection of HPMS data, including the annual average daily traffic (AADT) estimates which are utilized to develop HPMS VMT estimates. ADOT provides the AADT for the state highway system routes including interstates, urban freeways, and principal arterials in Maricopa County. AADTs for other non-local facilities are provided by local jurisdictions. ADOT merges the Maricopa County data with information from other Arizona counties to create the statewide HPMS dataset submitted to FHWA each year.

HPMS contains a number of data elements which describe roadway characteristics and performance for every non-local roadway in Arizona. All non-local roadways have been divided into sections which are 0.3 to 10 miles in length, in accordance with HPMS criteria. These sections are called HPMS universe sections. HPMS contains additional data elements which provide more detailed information on a randomly-selected set of sample sections. The VMT estimates which ADOT submits to FHWA each year are generated from HPMS universe data for all interstates, urban freeways, and principal arterials. Sample section data are expanded to estimate VMT on all other non-local systems.

VMT on local streets in the urbanized portion of Maricopa County is estimated using traffic counts collected on 50 randomly-selected local streets in June-July of 1994. These counts resulted in an AADT of 587 for local roads in the urbanized area. To calculate VMT, this AADT was applied to local road mileage in 1994 obtained from the Maricopa County street centerline coverage. In 1994, an AADT of 150 was assumed for local roads which are in the “donut” area. The “donut” area is an HPMS term referring to the specific area inside the PM₁₀ nonattainment area, but outside the Phoenix urbanized area boundary. Since 1994, the AADTs on local streets have been increased annually on the basis of the rate of population growth in the Maricopa County population; the mileage on local streets is updated annually by the local jurisdictions in Maricopa County.

The 2002 HPMS System Length and Daily Vehicle Travel for individual urbanized areas (in Appendix 5.1) was submitted to FHWA by ADOT in October 2003. This table reported a 2002 average daily VMT (AADT) for the Phoenix urbanized area (#33) of 63.338 million. The HPMS System Length and Daily Travel, Donut Area Data for Individual NAAQS Nonattainment Areas, (in Appendix 5.1), reported a 2002 VMT for the “donut” area (#33) of 6.694 million.

The distribution of VMT by facility type for the PM₁₀ nonattainment area in Table 5.2–1 was derived from the 2002 HPMS data, while the distribution by area type was derived from a MAG

EMME/2 travel demand model run for 2002. The output of this traffic assignment was evaluated using GIS to obtain VMT by area type and facility type for the Phoenix urbanized and “donut” areas. The area type distributions from the EMME/2 assignment were applied to the 2002 HPMS VMT estimates by facility type for the urbanized and “donut” areas to create Table 5.2–1. VMT estimates for all of Maricopa County may be found in Table 5.2–2.

Table 5.2–1. 2002 HPMS VMT by area type and facility type for the PM₁₀ nonattainment area (annual average daily traffic).

Facility type	Area Type					Total
	1	2	3	4	5	
Interstate / Freeway	1,129,051	9,046,583	6,240,489	4,525,653	3,416,224	24,358,000
Principal Arterial / Minor Arterial	1,087,462	8,834,531	9,795,953	6,923,412	3,494,642	30,136,000
Collector	1,046,993	2,727,290	1,694,159	872,616	1,678,942	8,020,000
Local	195,247	1,991,136	2,564,545	1,689,510	1,077,562	7,518,000
Totals:	3,458,753	22,599,540	20,295,146	14,011,191	9,667,370	70,032,000

Notes:

1. Area Type = f(DENSITY of a planning district) where:
 DENSITY = (Population + 2 × Employment) / Area
 For Area Type 1, DENSITY = 20,001+ (Central Business District)
 For Area Type 2, DENSITY = 10,001–20,000 (Outlying Central Business District)
 For Area Type 3, DENSITY = 5,001–10,000 (Mixed Urban)
 For Area Type 4, DENSITY = 1,001–5,000 (Suburban)
 For Area Type 5, DENSITY = 0–1,000 (Rural)
2. Total VMT by facility type is extracted from the appropriate HPMS templates.
3. VMT is split up into Area Types using data from MAG 2002 EMME/2 travel demand modeling results.
4. In some cases, the total VMT estimates may differ slightly from the sum of the component VMT estimates due to rounding. This difference will not exceed one vehicle mile of travel.

Table 5.2–2. 2002 HPMS VMT by area type and facility type for Maricopa County (annual average daily traffic).

Facility type	Area Type					Total
	1	2	3	4	5	
Interstate / Freeway	1,129,051	9,046,583	6,240,489	4,525,653	5,662,224	26,604,000
Principal Arterial / Minor Arterial	1,087,462	8,834,531	9,795,953	6,923,412	3,738,642	30,380,000
Collector	1,046,993	2,727,290	1,694,159	872,616	2,390,942	8,732,000
Local	195,247	1,991,136	2,564,545	1,689,510	1,422,562	7,863,000
Totals:	3,458,753	22,599,540	20,295,146	14,011,191	13,214,370	73,579,000

Notes:

1. For the definition of “Area Type”, see Table 5.2–1, Note 1.
2. VMT is split up into Area Types using data from MAG 2002 EMME/2 travel demand modeling results. All VMT outside of the HPMS urbanized and donut areas were applied to Area Type 5.
3. In some cases, the total VMT estimates may differ slightly from the sum of the component VMT estimates due to rounding. This difference will not exceed one vehicle mile of travel.

The VMT estimates by facility type for all of Maricopa County were developed by the Arizona Department of Transportation, as described in Appendix 5.1. Total VMT estimates by facility type were split into area type using the same methodology as was used for the PM₁₀ non-attainment area.

Roadway silt loading measurements used in the Serious Area PM₁₀ plan reflect three silt loading classifications; freeways, high ADT non-freeways (greater than 5,000 ADT), and low ADT non-freeways (less than 5,000 ADT). Unfortunately, these categories do not correspond directly to the roadway categories used in periodic inventory analyses. For this reason, a conversion table of facility types was needed, with the weighting of each of the three PM₁₀ plan categories to the categories used in the particulate matter periodic inventory. VMT estimates by silt loading category including this weighting may be found in Table 5.2–3.

Table 5.2–3. VMT by silt loading category (percent of VMT in each silt loading category).

HPMS facility type	Silt Loading Category			Total
	0.02 g/m ²	0.067 g/m ²	0.23 g/m ²	
Interstate / Freeway	93.7%	5.4%	0.9%	100%
Principal Arterial / Minor Arterial	1.7%	85.0%	13.3%	100%
Collector	0.0%	40.2%	59.8%	100%
Local	0.0%	0.0%	100.0%	100%

Although HPMS reports vehicle mix data for urban and rural areas of Arizona, there are insufficient classification stations in the Phoenix urbanized area to justify use of this information in calculating VMT by vehicle class. In addition, the HPMS vehicle class data do not discriminate between gas and diesel vehicles. Therefore, MOBILE6.2 model defaults, representing the fraction of total VMT for each vehicle class, were applied to VMT estimates for each facility type and area type.

The MAG Serious Area PM₁₀ Plan groups paved roads into three silt loading categories: freeways, high ADT non-freeways (greater than 5,000 ADT), and low ADT non-freeways (less than 5,000 ADT). These silt loading categories do not correspond on a one to one basis with the paved roadway types considered in the HPMS report. As a result, the table shown above was developed by MAG to indicate how the PM₁₀ plan silt loading categories correspond to the four roadway classifications included in the periodic inventory.

All local roadways are assumed to be in the Low ADT non-freeways (0.23 grams per square meter) category. All roadway links identified in the MAG transportation modeling network as 6 legged arterials are assumed to have “freeway” silt loading (0.02 grams per square meter).

The 0.02 grams per square meter silt loading category is the silt loading assumed in the MAG PM₁₀ plan for roadway links identified as freeways in the MAG transportation modeling networks. The PART5 model and AP-42 equations identify these roadways as having a PM₁₀ reentrained dust factor of 0.16 gram per vehicle mile of travel (VMT) and a PM_{2.5} factor of zero grams per mile.

The 0.067 grams per square meter silt loading category is the silt loading assumed in the MAG PM₁₀ plan for roadway links identified as non-freeways in the MAG transportation modeling networks with average daily traffic of greater than 5,000 vehicles. The PART5 model and AP-42 equations identify these roadways as having a PM₁₀ reentrained dust factor of 0.60 gram per vehicle mile of travel (VMT) and a PM_{2.5} factor of 0.04 grams per mile.

The 0.23 grams per square meter silt loading category is the silt loading assumed in the MAG PM₁₀ plan for roadway links identified as non-freeways in the MAG transportation modeling networks with average daily traffic of less than 5,000 vehicles. The PART5 model and AP-42

equations identify these roadways as having a PM₁₀ reentrained dust factor of 1.59 gram per vehicle mile of travel (VMT) and a PM_{2.5} factor of 0.28 grams per mile.

5.3 Speed estimation procedure

MAG prepared the average daily speeds for the onroad mobile sources portion of the 2002 periodic particulate matter emissions inventory. The average daily speeds were developed from several sources representing the latest planning assumptions for 2002. Vehicle speeds have no effect on the emission factors modeled in the MOBILE6.2 program for the pollutants carbonaceous particulate matter, reentrained dust from paved roads, brake wear, tire wear, ammonia (NH₃) and have only a very slight effect on the pollutants SO₄ and SO₂. Speeds do have significant effect on estimated NO_x emissions which are also included in this inventory. Speeds also have a significant effect on re-entrained dust from unpaved roads, but it is assumed that the vehicle speeds on unpaved roads are 20 miles per hour for all aspects of this inventory. Paved road speed estimates are indicated in Table 5.3–1. Vehicle speeds are not assumed to vary by month.

For the Interstate/Freeway category and for the Principal/Minor Arterial category, the speeds were developed using data in the February 11, 2004 draft report 2002-2003 MAG Regional Travel Time & Travel Speed Study. This report contained data for the functional classifications “HOV”, “Freeway”, “Expressway”, “6 Leg Arterial”, and “Major Arterial”. Speeds for the first three categories were combined through a weighted average to develop the average speed for the Interstate/Freeway category used in the Periodic Inventory. Similarly, the two arterial categories contained in the speed study were combined through a weighted averaging to obtain a Principal Arterial/Minor Arterial category speed. In both of these categories, speeds were unique by area type.

The third facility type included in the periodic inventory is collectors. To develop speed estimates for this facility type, speeds were extracted from the latest 2002 travel demand model run created using the EMME/2 software. In the EMME/2 runs performed by MAG, some traffic links that are classified as “locals” would actually be classified as “collectors” by HPMS. The EMME/2 runs also contain artificial links that are categorized as locals. Since the HPMS collector category includes some EMME/2 collector links and some EMME/2 locals, the EMME/2 speeds for locals and collectors were averaged and the result was used for the HPMS category of collectors. Like the speeds for the Interstate/Freeway and Principal/Minor Arterials categories, the speeds for Collectors were calculated separately for each of the five area types.

The fourth of the HPMS facility types is local roadways. The MOBILE6.2 model assumes a set speed of 12.9 miles per hour for local roadways. This speed was incorporated into the current analysis for all local roadways, regardless of area type.

Table 5.3–1. Average daily speeds (mph) for the 2002 periodic emissions inventory.

Facility type:	Area Type *				
	1	2	3	4	5
Interstate / Freeway	59.7	60.3	63.2	64.8	64.2
Principal Arterial / Minor Arterial	30.3	34.4	36.1	39.0	42.6
Collector	18.2	19.1	24.4	24.7	28.2
Local	12.9	12.9	12.9	12.9	12.9

* For the definition of “Area Type”, see Table 5.2–1, Note 1.

5.4 Monthly VMT factors

In this inventory, the emission factor estimates for NO_x were estimated independently for each month, with month-specific meteorological and fuel data. Since average daily VMT varies by month, and the number of days in each month varies, these monthly average emission factors were weighted to more appropriately represent an annual average emission factor.

Average daily VMT estimate factors were developed from the 1998 MAG Regional Congestion Study and the monthly factors are as follows:

Table 5.4-1. Average daily VMT estimate factors by month.

Month	Avg daily VMT estimate factor	Month	Avg daily VMT estimate factor
January	0.98	July	0.94
February	1.03	August	0.96
March	1.03	September	0.99
April	1.03	October	1.02
May	0.99	November	1.02
June	0.98	December	1.04

These factors indicate, as an example, that an average day in February has three percent more traffic than an average month while an average day in June has two percent less traffic than average. Separately, the different number of days in a month will effect the weighting of monthly emission factors to an annual average. For instance, if each month had the same number of days, each monthly emission factor would be equally weighted by 1/12 (0.0833). Since each month does not have the same number of days, the monthly emission factors are weighted accordingly, with January being weighted 31/365 (0.0849), February being weighted 28/365 (0.0767), etc. Combining the two sets of adjustments, the February emission factors would be weighted by 1.03 * 0.0767 in the development of the annual emission factors.

These weightings are applied by the FORTRAN program "NEIProgram", which was created by MAG. NEIProgram reads in the individual MOBILE6.2 output files for all twelve months and for the I/M versus non-I/M scenarios. NEIProgram weighs those 24 sets of MOBILE6.2 output files to a single set of annual average emission factors. The complete source code for NEIProgram may be found in Appendix 5.6.

This weighting is not needed for the calculation of PM₁₀, PM_{2.5}, SO_x, and NH₃ emissions because those pollutants are not affected by meteorological conditions and fuel settings the same way as NO_x. For those pollutants, a single MOBILE6.2 run was used to develop annual average emission factors.

5.5 Emission factor estimation procedure

5.5.1 Emission factor model

PM₁₀, PM_{2.5}, SO₂, NH₃, and oxides of nitrogen (NO_x) vehicle exhaust emission factors were calculated using MOBILE6.2. The PM₁₀ and PM_{2.5} non-exhaust components of tire wear and brake wear were also estimated using MOBILE6.2. The PM₁₀ and PM_{2.5} estimates include the components lead, elemental carbon from diesel exhaust, organic carbon from diesel exhaust, sulfate portion, and carbon portion of gasoline exhaust. Reentrained dust emission factors were developed using equations found in the EPA AP-42 emission factor database and the EPA PART5 model. AP-42 is the common name for the EPA Compilation of Air Pollutant Emission Factors. MOBILE6.2 is the latest version in a series of models developed by the US EPA for the purpose of estimating motor vehicle emission factors. The MOBILE6.2 runs were executed by the Maricopa Association of Governments. The contact person for the MOBILE6.2 emission estimates is Roger Roy (602-254-6300).

While most types of emission factors (exhaust, evaporative, tire wear, etc) were calculated using the EPA MOBILE6.2 model, fugitive dust from paved and unpaved roads were calculated using equations found in AP-42, Fifth Edition. Specifically, sections 13.2.1 and 13.2.2 describe calculations for fugitive dust from paved and unpaved roads, respectively.

The calculations for paved road fugitive dust emissions are related to silt loading values on road surfaces. Consistent with the Serious Area PM₁₀ Plan, paved roads were split into three silt loading levels; freeways at a silt loading of 0.02 grams per square meter, high ADT non-freeways at 0.067 grams per square meter, and low ADT non-freeways at 0.23 grams per square meter. All local roadways were assumed to fall into the low ADT non-freeway category. All roadway links categorized as 6 legged arterials (portions of Grand Avenue) were assumed to be in the high ADT non-freeway category. These silt loading estimates are consistent with the raw silt loading estimates from the serious area PM₁₀ plan, and resulted in raw emission factors as follows; freeways 0.16 grams per VMT, high ADT non-freeways at 0.60 grams per VMT, and low ADT non-freeways at 1.59 grams per VMT. These factors were further adjusted to take into account the reduced road silt loading resulting from continuing PM₁₀ efficient street sweeper purchases, consistent with the Serious Area PM₁₀ Plan. This resulted in emission factors on freeways of 0.157 grams per VMT, high ADT non-freeways at 0.596 grams per VMT, and low ADT non-freeways at 1.586 grams per VMT.

The percent of each HPMS roadway category (weighted on a VMT basis) in each silt loading category may be found in Table 5.2–3. The net paved road fugitive dust emission factors, after VMT weighting, for each of the HPMS categories are 0.19 grams per mile for Interstate/Freeway/Expressway, 0.72 grams per mile for Principal and Minor Arterials, 1.19 grams per mile for Collectors, and 1.59 grams per mile for Locals. For PM_{2.5}, those factors are 0.00, 0.07, 0.18, and 0.28 grams per mile, respectively. Combining these emission factors with the VMT estimates in Tables 5.2–1 and 5.2–2 results in the emission totals shown in Table 5.5–1.

For unpaved roads, emission factors were derived from the latest AP-42 equation. Consistent with the Serious Area PM₁₀ plan, the fugitive dust PM₁₀ emission factor from unpaved roads is 573.91 grams per vehicle mile. The PM_{2.5} emission factor is 85.95 grams per vehicle mile. The equation to calculate unpaved road fugitive dust emissions may be found at the web site <http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s0202.pdf>. Combining these emission factors

with the VMT estimates from the Serious Area PM₁₀ Plan results in the emissions totals shown in Table 5.5–2. The Serious Area PM₁₀ Plan included estimates of unpaved road VMT estimates for the PM₁₀ nonattainment area. In order to grow these VMT estimates to reflect all of Maricopa County, the ratio of estimated Local VMT in the nonattainment area versus Maricopa County (a ratio of 1.046) was used, as derived from Tables 5.2–1 and 5.2–2. The equation and input values assumed in the modeling of the emission factors for unpaved roads may be found in Appendix 5.2.

The emission factors not related to fugitive dust were calculated using MOBILE6.2. Two MOBILE6.2 runs were executed for an annual average day (24-hour period) reflecting vehicles registered locally (subject to the I/M program) and those not registered locally (not participating in the I/M program). Twenty four MOBILE6.2 runs were executed reflecting each month of the year and the presence or absence of the I/M program. Of the pollutants modeled for this study, the presence or lack of an I/M program only effects the modeled emission factors for NO_x. Refer to Appendix 5.2 for portions of the actual input and output files.

The emission factors estimated with these runs were combined to reflect the actual proportions of vehicles subject to the specified levels of inspection. The term “I/M vehicles” denotes vehicles which are required to undergo an emission test and/or inspection under the Arizona Vehicle Inspection/Maintenance Program. It is important to note that participation in the I/M program is required for all vehicles registered in the nonattainment area, with the exception of certain model year and vehicle types. However, it is assumed that of the vehicles which are of an age and type subject to an I/M program, only 91.7 percent of the vehicles operating within the nonattainment area participate in the I/M program. The remaining 8.3 percent do not participate in the program. These percentages reflect the implementation of the control measures “Tougher Registration Enforcement” and “Expansion of Area A Boundaries”, described in the Revised MAG 1999 Serious Area Carbon Monoxide Plan for the Maricopa County Nonattainment Area, MAG, March 2001. In the absence of any additional data, this percentage split is assumed to apply directly to VMT as well.

In order to accurately reflect the state of the I/M program in the modeling area, several MOBILE6.2 runs were performed and the emission factors from those runs were weighted together. Refer to Appendix 5.2 for portions of the actual input and output files. The specific model run inputs to the MOBILE6.2 model were are listed and described in the following section.

Table 5.5–1. Paved road fugitive dust emissions.

Facility type	Total VMT by facility type	
	Nonattainment area	Maricopa County
Interstate / Freeway	24,358,000	26,604,000
Principal Arterial / Minor Arterial	30,136,000	30,380,000
Collector	8,020,000	8,732,000
Local	7,518,000	7,863,000
Emission factors by facility type (g/mile)		
	PM₁₀	PM_{2.5}
Interstate / Freeway	0.19	0.00
Principal Arterial / Minor Arterial	0.72	0.07
Collector	1.19	0.18
Local	1.59	0.28
Total emissions (kg/yr)		
	PM₁₀	PM_{2.5}
Nonattainment area	47,823	5,658
Maricopa County	49,822	5,900

Table 5.5–2. Unpaved road fugitive dust emissions.

Facility type	Total VMT by facility type	
	Nonattainment area	Maricopa County
Very low ADT unpaved roads	4,520	4,728
Low ADT unpaved roads	33,914	35,471
High ADT unpaved roads	1,157	1,211
Emission factors by facility type (g/mile)		
	PM₁₀	PM_{2.5}
All unpaved road types	573.91	85.95
Total Emissions (kg/yr)		
	PM₁₀	PM_{2.5}
Nonattainment area	22,722	3,403
Maricopa County	23,765	3,559

5.5.2 Development of MOBILE6.2 model inputs

The inputs to MOBILE6.2 are grouped into three categories: Header inputs, run inputs, and scenario inputs. The input values used in the MOBILE6.2 runs are specified and explained below. Humidity was not used as an input to these runs. After reviewing the MOBILE6.2 guidance on the use of humidity (see page 7 of <http://www.epa.gov/otaq/models/mobile6/m6techgd.pdf>), inputting specific humidity values would be appropriate for the development of an annual average emissions inventory of this type.

For several inputs (mostly fuel and meteorology related), there are separate inputs for an annual analysis versus a monthly analysis. For these inputs, the annual analysis value is listed first, followed by a description of the monthly values.

Header Section

1. **MOBILE6 INPUT FILE:** indicates that the MOBILE6.2 input file is a regular command file rather than a batch file.

2. **PARTICULATES:** indicates that emissions estimates for particulate matter are desired as output from the model.

Run Data Section

1. **NO REFUELING:** indicates that refueling emissions are excluded from the MOBILE6.2 outputs. Refueling emissions are included in the Area Sources chapter of the 2002 ozone precursors inventory.

2. **I/M PROGRAM: 1 1977 2050 1 T/O LOADED IDLE** indicates the program start and end dates, frequency of testing, and test type. There are five components of the I/M program modeled; a loaded idle test for heavy duty gasoline vehicles (shown in the example in Appendix 5.2), a transient idle test (I/M240 modeled as a surrogate for the I/M147 test) for light duty cars and trucks through model year 1995, a loaded idle test for light duty cars and trucks of model years 1967 to 1980, an on-board diagnostic (OBD) exhaust test for model year 1996 and newer vehicles, and an OBD evaporative test for the same vehicles. The remaining four occurrences of this command are as follows:

I/M PROGRAM: 2 1977 2050 2 T/O IM240 - relating to the transient idle I/M240 program modeled as a surrogate for the I/M147 program.

I/M PROGRAM: 3 1977 2050 1 T/O LOADED IDLE - relating to the loaded idle program for model year 1967-1980 light duty cars and trucks.

I/M PROGRAM: 4 2001 2050 2 T/O OBD I/M - relating to the exhaust portion of the OBD test.

I/M PROGRAM: 5 2001 2050 2 T/O EVAP OBD & GC - relating to the evaporative and gas cap portion of the OBD test.

3. **I/M MODEL YEARS: 1 1967 2050** indicates the first and last model years affected by the given component of the I/M program. The inputs shown above indicate that model years 1967 and newer are tested by component 1 of the I/M program. The remaining four occurrences of this command are as follows:

I/M MODEL YEARS: 2 1981 1995 -relating to the transient idle I/M240 program modeled as a surrogate for the I/M147 program.

I/M MODEL YEARS: 3 1967 1980 -relating to the loaded idle program for model year 1967-1980 light duty cars and trucks.

I/M MODEL YEARS: 4 1996 2050 -relating to the exhaust portion of the OBD test.

I/M MODEL YEARS: 5 1996 2050 -relating to the evaporative and gas cap portion of the OBD test.

4. **I/M VEHICLES: 1 11111 22222222 2** indicates that for the first component of the I/M program (1), the five vehicle categories LDGV, LDGT1, LDGT2, LDGT3, and LDGT4

are not subject to this portion of the I/M program (indicated by “1”) while HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B, and gasoline buses are covered (indicated by “2”). The remaining four occurrences of this command are all identical and are as follows:

I/M VEHICLES: 2 22222 11111111 1 indicates that the remaining eligible vehicle classes are subject to the transient idle I/M240 program modeled as a surrogate for the I/M147 program. This selection of vehicle classes is also applied to the remaining three portions of the I/M program.

5. **I/M STRINGENCY: 1 28.0** indicates that the initial test failure rate for pre-1981 LDGVs and pre-1984 LDGTs is 28.0 percent. This stringency rate is also applied to the remaining portions of the I/M program.
6. **I/M COMPLIANCE: 1 97.0** indicates that the fraction of the total vehicle fleet subject to the I/M program that passes the I/M test or receives a waiver is 97.0 percent. This compliance rate is also applied to the remaining portion of the I/M program.
7. **I/M WAIVER RATES: 1 1.3 1.0** indicates that the fraction of vehicles that fail the I/M program is 1.3 for pre-1981 model years and 1.0 percent for 1981 and later model years. These waiver rates are also applied to the remaining portion of the I/M program.
8. **I/M GRACE PERIOD: 1 5** indicates that vehicles less than 5 years old are exempted from the I/M program. This exemption is identical for all portions of the I/M program.
9. **I/M CUTPOINTS: 2 CUTcmp02.d** indicates that MOBILE6.2 reads the external data file “CUTcmp02.d” for the I/M cutpoint values for HC, CO, and NOX. There are 25 values for each vehicle class and pollutant, for the most recent 25 model years, starting with the youngest vehicle. This data is only input for the I/M240 program. The file CUTcmp03.d was used for the October through December 2002 analyses as these are closer to a January 2003 scenario than a July 2002 scenario.
10. **ANTI-TAMP PROGRAM : 87 75 80 22222 22222222 2 11 097. 22111222** indicates the nature of the anti-tampering program. Specifically, this portion of the anti-tampering program began in 1987 and covers model year vehicles 1975 to 1980. Vehicle classes subject to the inspection (indicated by a “2”) include LDGV, LDGT1, LDGT2, LDGT3, LDGT4, HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B, and gasoline powered buses. The test is performed annually. The test has a 97 percent compliance rate. The parameters tested include air pump disablement, catalyst removal, evaporative system disablement, PCV system disablement, and missing gas cap. The parameters not tested are fuel inlet restrictor disablement, tailpipe lead deposit test, and EGR disablement. A second data line indicates that the same test is also performed on model year 1981 to 1995 vehicles, but with the LDGV, LDGT1, LDGT2, LDGT3, and LDGT4 classes omitted because those vehicles are subject to the transient I/M or OBD test.
11. **REG DIST: 02reg02.d** indicates that vehicle registration distributions by age for the 16 composite vehicle types are read by MOBILE6.2 from an external data file, called

02reg02.d. The raw data upon which the registration distributions and diesel fractions are based may be found in Appendix 5.3. The file 02reg03.d was used for the months October through December as these months are closer to a January 2003 scenario than a July 2002 scenario.

- 12 DIESEL FRACTIONS:** indicates the user-supplied diesel sales fractions. This input is followed by 350 fractional values representing the fraction of the 14 vehicle classes internally examined by MOBILE6.2 and 25 most recent model years that are diesel vehicles. As an example, the first value, 0.0050, indicates that for the most recent model year of light duty vehicles, 0.5 percent of the vehicles sold are diesel.

Scenario Section

- 1. SCENARIO RECORD:** Allows the user to enter a name to identify the scenario being run.
- 2. PARTICULATE EF:** Indicates that the EPA default files provided for base particulate emission factors were used.
- 3. PARTICULATE SIZE: 10.0** indicates that the emission factors are desired for particulate matter of 10 micrometers and smaller. Particulate matter emitted with particle sizes larger than this were ignored. Particulate matter of sizes 2.5 micrometers and smaller were also examined.
- 4. DIESEL SULFUR: 310.0** indicates that average diesel fuel sulfur content for the modeled scenario is 310 parts per million. This estimate is the onroad fuel sulfur levels used by the Western Regional Air Partnership for a 2002 analysis.
- 5. CALENDAR YEAR: 2002** was input for the annual average day analysis. For the months of January through September 2002, the calendar year 2002 was also chosen. For the months of October through December, the calendar year 2003 was chosen because a January 2003 scenario more closely matches those months than a January 2002 scenario.
- 6. EVALUATION MONTH: 7** indicates that the month modeled was July. The months April through September were run with this setting while the remaining months, January through March and October through December, were processed with the evaluation month set to January. January and July are the only settings allowed for the evaluation month.
- 7. ALTITUDE:1** indicates the geographic area modeled was low altitude.
- 8. MIN/MAX TEMPERATURE: 64. 88.** provides the model with the daily minimum and maximum temperatures for the average annual day modeled. Of the pollutants modeled in this report, the temperatures input to the model only effect the modeled emission factors for NOX. For the monthly analyses used to estimate NOX emissions, temperatures were derived from the appropriate Sky Harbor Airport Local Climatological Data (LCD) reports. Meteorological data used in this analysis may be found in Appendix 5.4.

9. **AVERAGE SPEED: (area/facility type specific)** indicates to MOBILE6.2 the average speed to be modeled for each facility type and area type combination. All facility and area type combinations with unique speeds will be modeled in this manner. Please see Table 5.3–1 for the speeds modeled for each roadway type combination.
10. **VMT BY FACILITY: allfwy.def** indicates to MOBILE6.2 that the external file allfwy.def is to be referenced for the ratio of VMT by hour by facility type. The file allfwy indicates that all VMT is occurring on the MOBILE6.2 facility type freeways for use in developing the emission factors for the periodic inventory functional classifications Interstates/Freeways/Expressways. Similarly, the external file allart.def is called when estimating the emission factors for the arterials or collectors, and allloc.def is called when estimating the emission factors for the periodic inventory category locals.
11. **FUEL RVP: 7.8** indicates that the average Reid Vapor Pressure of the gasoline sold during this time period is 7.8 pounds per square inch. This estimate is based upon raw gasoline data provided by the Arizona Department of Weights and Measures. Specifically, this value represents the average RVP of 793 samples collected in 2002. Monthly RVP estimates were derived from the Arizona Department of Weights and Measures data table for use in the monthly MOBILE6.2 analyses incorporated into this analysis. Monthly fuel qualities, including RVP, sulfur content, and ethanol content, are summarized in Appendix 5.7.
12. **FUEL PROGRAM: 4** Indicates that the model is to be run with user-supplied gasoline sulfur levels. The following four lines include 32 numbers, the first 16 listing the average gasoline sulfur value in parts per million for the years 2000 through 2015 and the second 16 indicate the maximum gasoline sulfur content vehicles of model year 2000 through 2015 will be exposed. For the purposes of this analysis, the gasoline data from 2002 were examined and the average sampled sulfur values during that time period were entered for all time periods. Similarly, the gasoline data for all of 2002 was examined and the maximum sulfur value during that time period was entered for each model year of 2000 through 2015. Those values were 52.5 for average sulfur content and 338.0 ppm for a maximum sulfur content. For the monthly MOBILE6.2 analyses incorporated into this analysis, the average monthly sulfur content from the Arizona Department of Weights and Measures data table were used for the average sulfur value while the 338.0 ppm estimate was used for each month as the maximum sulfur content.
13. **OXYGENATED FUELS: 0.500 0.500 0.019 0.031 1** indicates that the 50 percent of the gasoline sold during the time period modeled used MTBE as an oxygenate and 50 percent of the gasoline used ethanol as an oxygenate. The average MTBE content was 1.9 percent by weight and the average ethanol content was 3.1 percent by weight. The number “1” indicates that no RVP waiver has been granted to allow for the “splash” blending of ethanol oxygenates. Since the Arizona Department of Weights and Measures did not collect oxygenate data for the first three months of 2002, this estimate was based upon the average of the gasolines used in the periodic ozone (summer season) and periodic carbon monoxide (winter season) inventories. For the monthly MOBILE6.2 analyses incorporated into this analysis, the average monthly oxygenate content from the Arizona Department of Weights and Measures data table were used, with the exception of

January through March 2003. For those months, an average of the months November and December were used.

5.5.3 Model outputs

MOBILE6.2 was executed with the inputs described above to obtain composite emission factors in grams per mile (g/mi) for exhaust PM₁₀, PM_{2.5}, NO_x, SO₂, and NH₃. These values were obtained for the eight vehicle classes described in section 5.1 for the various speeds as described in item 6 of the Scenario section. The emission factors generated for the 2002 ozone season are presented in the following section. Representative output runs are contained in Appendix 5.2. These values were then used in developing emission estimates.

5.5.4 Summary of emission factors

Refer to Tables 5.5–1 through 5.5–10 for the emission factors developed for each vehicle class, facility, and area type.

5.5.5 Emission estimates

MOBILE6.2 was used to generate emission factors for vehicle class, facility, and area type. Daily VMT (DVMT) for an annual average day (Tables 5.2–1 and 5.2–2) was then multiplied by the VMT mix by vehicle class and the appropriate onroad emission factor to calculate onroad emission estimates on a kilogram per day (kg/day) basis. VMT mix refers to the fraction of total onroad vehicle miles of travel from a particular vehicle type. For example, since the EPA MOBILE6.2 model estimates that 45.1 percent of onroad VMT was from light duty gasoline vehicles, the VMT Mix value for LDGVs is 0.451. An example calculation for ammonia is given below, reflecting light duty gasoline vehicles on interstates, freeways, and expressways in area type 1 (see Table 5-4J):

$$\begin{aligned}
 \text{NH}_3 \text{ emissions} &= \text{DMVT} \times \text{VMT mix} \times \text{VOC emission factor} \div \text{unit conversion factor} \\
 (\text{kg/day}) & & & (\text{g/mi}) & & (\text{g/kg}) \\
 &= 1,129,051 \times 0.451 \times 0.1002 \div 1,000 \\
 &= 51 \text{ kg NH}_3/\text{day}
 \end{aligned}$$

$$\begin{aligned}
 \text{NH}_3 \text{ emissions} &= \text{NH}_3 \text{ emissions} \div \text{unit conversion factor} \\
 (\text{lb/day}) & & (\text{kg/day}) & & (\text{kg/lb}) \\
 &= 51 \text{ kg} \div 0.4536 \\
 &= 112 \text{ lb NH}_3/\text{day}
 \end{aligned}$$

Tables 5.5–3 through 5.5–7 show daily VMT data, associated speed estimates, MOBILE6.2 emission factors, and the calculated PM₁₀, PM_{2.5}, NO_x, SO₂, and NH₃ emissions for each vehicle class, facility, and area type for the PM₁₀ nonattainment area. Similarly, Tables 5.5–8 through 5.5–12 show daily VMT data, associated speed estimates, MOBILE6.2 emission factors, and the calculated PM₁₀, PM_{2.5}, NO_x, SO₂, and NH₃ emissions for each vehicle class, facility, and area type for all of Maricopa County.

Calculations for and brake wear, tire wear were much simpler and involved the multiplication of the total VMT for the area examined by a single emission factor that does not vary by facility type, vehicle type, or speed. For brake wear, the emission factor is 0.0125 grams per mile of PM₁₀ and 0.0053 grams per mile of PM_{2.5}. For tire wear, the emission factor is 0.0097 grams per mile of PM₁₀ and 0.0024 grams per mile of PM_{2.5}.

Table 5.5–3. Daily PM₁₀ emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (excludes fugitive dust).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
INTERSTATE, FREEWAY, and EXPRESSWAY	LDGV with VMT mix of 45.1%	1	59.7	0.0050	1,129,051	5.6	2.5
		2	60.3	0.0050	9,046,583	45.0	20.4
		3	63.2	0.0050	6,240,489	31.0	14.1
		4	64.8	0.0050	4,525,653	22.5	10.2
		5	64.2	0.0050	3,416,224	17.0	7.7
	LDGT1 with VMT mix of 28.2%	1	59.7	0.0061	1,129,051	4.3	1.9
		2	60.3	0.0061	9,046,583	34.3	15.6
		3	63.2	0.0061	6,240,489	23.7	10.7
		4	64.8	0.0061	4,525,653	17.2	7.8
		5	64.2	0.0061	3,416,224	13.0	5.9
	LDGT2 with VMT mix of 11.2%	1	59.7	0.0107	1,129,051	3.0	1.3
		2	60.3	0.0107	9,046,583	23.8	10.8
		3	63.2	0.0107	6,240,489	16.4	7.5
		4	64.8	0.0107	4,525,653	11.9	5.4
		5	64.2	0.0107	3,416,224	9.0	4.1
	HDGV with VMT mix of 3.6%	1	59.7	0.0673	1,129,051	6.0	2.7
		2	60.3	0.0673	9,046,583	47.8	21.7
		3	63.2	0.0673	6,240,489	33.0	14.9
		4	64.8	0.0673	4,525,653	23.9	10.8
		5	64.2	0.0673	3,416,224	18.0	8.2
LDDV with VMT mix of 0.2%	1	59.7	0.1700	1,129,051	0.9	0.4	
	2	60.3	0.1700	9,046,583	7.5	3.4	
	3	63.2	0.1700	6,240,489	5.1	2.3	
	4	64.8	0.1700	4,525,653	3.7	1.7	
	5	64.2	0.1700	3,416,224	2.8	1.3	
LDDT with VMT mix of 2.2%	1	59.7	0.1256	1,129,051	6.8	3.1	
	2	60.3	0.1256	9,046,583	54.1	24.5	
	3	63.2	0.1256	6,240,489	37.3	16.9	
	4	64.8	0.1256	4,525,653	27.1	12.3	
	5	64.2	0.1256	3,416,224	20.4	9.3	
HDDV with VMT mix of 9.1%	1	59.7	0.3597	1,129,051	81.4	36.9	
	2	60.3	0.3597	9,046,583	652.0	295.8	
	3	63.2	0.3597	6,240,489	449.8	204.0	
	4	64.8	0.3597	4,525,653	326.2	148.0	
	5	64.2	0.3597	3,416,224	246.2	111.7	
MC with VMT mix of 0.5%	1	59.7	0.0206	1,129,051	0.3	0.1	
	2	60.3	0.0206	9,046,583	2.1	1.0	
	3	63.2	0.0206	6,240,489	1.4	0.7	
	4	64.8	0.0206	4,525,653	1.0	0.5	
	5	64.2	0.0206	3,416,224	0.8	0.4	

Table 5.5–3. Daily PM₁₀ emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (excludes fugitive dust) (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
		1	30.3	0.0051	1,087,462	5.5	2.5
PRINCIPAL	LDGV	2	34.4	0.0050	8,834,531	43.9	19.9
ARTERIAL	with VMT	3	36.1	0.0050	9,795,953	48.7	22.1
&	mix of	4	39.0	0.0050	6,923,412	34.4	15.6
MINOR	45.1%	5	42.6	0.0050	3,494,642	17.4	7.9
ARTERIAL		1	30.3	0.0062	1,087,462	4.2	1.9
	LDGT1	2	34.4	0.0061	8,834,531	33.5	15.2
	with VMT	3	36.1	0.0061	9,795,953	37.2	16.9
	mix of	4	39.0	0.0061	6,923,412	26.3	11.9
	28.2%	5	42.6	0.0061	3,494,642	13.3	6.0
		1	30.3	0.0108	1,087,462	2.9	1.3
	LDGT2	2	34.4	0.0107	8,834,531	23.3	10.5
	with VMT	3	36.1	0.0107	9,795,953	25.8	11.7
	mix of	4	39.0	0.0107	6,923,412	18.2	8.3
	11.2%	5	42.6	0.0107	3,494,642	9.2	4.2
		1	30.3	0.0673	1,087,462	5.7	2.6
	HDGV	2	34.4	0.0673	8,834,531	46.7	21.2
	with VMT	3	36.1	0.0673	9,795,953	51.7	23.5
	mix of	4	39.0	0.0673	6,923,412	36.6	16.6
	3.6%	5	42.6	0.0673	3,494,642	18.5	8.4
		1	30.3	0.1700	1,087,462	0.9	0.4
	LDDV	2	34.4	0.1700	8,834,531	7.3	3.3
	with VMT	3	36.1	0.1700	9,795,953	8.1	3.7
	mix of	4	39.0	0.1700	6,923,412	5.7	2.6
	0.2%	5	42.6	0.1700	3,494,642	2.9	1.3
		1	30.3	0.1256	1,087,462	6.5	2.9
	LDDT	2	34.4	0.1256	8,834,531	52.8	24.0
	with VMT	3	36.1	0.1256	9,795,953	58.6	26.6
	mix of	4	39.0	0.1256	6,923,412	41.4	18.8
	2.2%	5	42.6	0.1256	3,494,642	20.9	9.5
		1	30.3	0.3597	1,087,462	78.4	35.6
	HDDV	2	34.4	0.3597	8,834,531	636.8	288.8
	with VMT	3	36.1	0.3597	9,795,953	706.0	320.3
	mix of	4	39.0	0.3597	6,923,412	499.0	226.4
	9.1%	5	42.6	0.3597	3,494,642	251.9	114.3
		1	30.3	0.0207	1,087,462	0.3	0.1
	MC	2	34.4	0.0206	8,834,531	2.0	0.9
	with VMT	3	36.1	0.0206	9,795,953	2.3	1.0
	mix of	4	39.0	0.0206	6,923,412	1.6	0.7
	0.5%	5	42.6	0.0206	3,494,642	0.8	0.4

Table 5.5–3. Daily PM₁₀ emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (excludes fugitive dust) (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
COLLECTOR		1	18.2	0.0054	1,046,993	5.6	2.5
	LDGV	2	19.1	0.0054	2,727,290	14.6	6.6
	with VMT	3	24.4	0.0053	1,694,159	8.9	4.0
	mix of	4	24.7	0.0053	872,616	4.6	2.1
	45.1%	5	28.2	0.0052	1,678,942	8.7	3.9
		1	18.2	0.0063	1,046,993	4.1	1.9
	LDGT1	2	19.1	0.0063	2,727,290	10.7	4.8
	with VMT	3	24.4	0.0063	1,694,159	6.6	3.0
	mix of	4	24.7	0.0063	872,616	3.4	1.6
	28.2%	5	28.2	0.0062	1,678,942	6.5	2.9
		1	18.2	0.0109	1,046,993	2.8	1.3
	LDGT2	2	19.1	0.0109	2,727,290	7.3	3.3
	with VMT	3	24.4	0.0108	1,694,159	4.5	2.0
	mix of	4	24.7	0.0108	872,616	2.3	1.1
	11.2%	5	28.2	0.0108	1,678,942	4.5	2.0
		1	18.2	0.0671	1,046,993	5.5	2.5
	HDGV	2	19.1	0.0671	2,727,290	14.4	6.5
	with VMT	3	24.4	0.0672	1,694,159	8.9	4.1
	mix of	4	24.7	0.0672	872,616	4.6	2.1
	3.6%	5	28.2	0.0672	1,678,942	8.9	4.0
		1	18.2	0.1700	1,046,993	0.9	0.4
	LDDV	2	19.1	0.1700	2,727,290	2.2	1.0
	with VMT	3	24.4	0.1700	1,694,159	1.4	0.6
	mix of	4	24.7	0.1700	872,616	0.7	0.3
	0.2%	5	28.2	0.1700	1,678,942	1.4	0.6
	1	18.2	0.1256	1,046,993	6.3	2.8	
LDDT	2	19.1	0.1256	2,727,290	16.3	7.4	
with VMT	3	24.4	0.1256	1,694,159	10.1	4.6	
mix of	4	24.7	0.1256	872,616	5.2	2.4	
2.2%	5	28.2	0.1256	1,678,942	10.0	4.6	
	1	18.2	0.3597	1,046,993	75.5	34.2	
HDDV	2	19.1	0.3597	2,727,290	196.6	89.2	
with VMT	3	24.4	0.3597	1,694,159	122.1	55.4	
mix of	4	24.7	0.3597	872,616	62.9	28.5	
9.1%	5	28.2	0.3597	1,678,942	121.0	54.9	
	1	18.2	0.0208	1,046,993	0.2	0.1	
MC	2	19.1	0.0208	2,727,290	0.6	0.3	
with VMT	3	24.4	0.0207	1,694,159	0.4	0.2	
mix of	4	24.7	0.0207	872,616	0.2	0.1	
0.5%	5	28.2	0.0207	1,678,942	0.4	0.2	

Table 5.5–3. Daily PM₁₀ emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (excludes fugitive dust) (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
LOCAL		1	12.9	0.0054	195,247	1.0	0.5
	LDGV	2	12.9	0.0054	1,991,136	10.7	4.8
	with VMT	3	12.9	0.0054	2,564,545	13.8	6.2
	mix of	4	12.9	0.0054	1,689,510	9.1	4.1
	45.1%	5	12.9	0.0054	1,077,562	5.8	2.6
		1	12.9	0.0063	195,247	0.8	0.3
	LDGT1	2	12.9	0.0063	1,991,136	7.8	3.5
	with VMT	3	12.9	0.0063	2,564,545	10.1	4.6
	mix of	4	12.9	0.0063	1,689,510	6.6	3.0
	28.2%	5	12.9	0.0063	1,077,562	4.2	1.9
		1	12.9	0.0109	195,247	0.5	0.2
	LDGT2	2	12.9	0.0109	1,991,136	5.3	2.4
	with VMT	3	12.9	0.0109	2,564,545	6.9	3.1
	mix of	4	12.9	0.0109	1,689,510	4.5	2.1
	11.2%	5	12.9	0.0109	1,077,562	2.9	1.3
		1	12.9	0.0671	195,247	1.0	0.5
	HDGV	2	12.9	0.0671	1,991,136	10.5	4.8
	with VMT	3	12.9	0.0671	2,564,545	13.5	6.1
	mix of	4	12.9	0.0671	1,689,510	8.9	4.0
	3.6%	5	12.9	0.0671	1,077,562	5.7	2.6
		1	12.9	0.1700	195,247	0.2	0.1
	LDDV	2	12.9	0.1700	1,991,136	1.6	0.7
	with VMT	3	12.9	0.1700	2,564,545	2.1	1.0
	mix of	4	12.9	0.1700	1,689,510	1.4	0.6
	0.2%	5	12.9	0.1700	1,077,562	0.9	0.4
	1	12.9	0.1256	195,247	1.2	0.5	
LDDT	2	12.9	0.1256	1,991,136	11.9	5.4	
with VMT	3	12.9	0.1256	2,564,545	15.3	7.0	
mix of	4	12.9	0.1256	1,689,510	10.1	4.6	
2.2%	5	12.9	0.1256	1,077,562	6.4	2.9	
	1	12.9	0.3597	195,247	14.1	6.4	
HDDV	2	12.9	0.3597	1,991,136	143.5	65.1	
with VMT	3	12.9	0.3597	2,564,545	184.8	83.8	
mix of	4	12.9	0.3597	1,689,510	121.8	55.2	
9.1%	5	12.9	0.3597	1,077,562	77.7	35.2	
	1	12.9	0.0208	195,247	0.0	0.0	
MC	2	12.9	0.0208	1,991,136	0.5	0.2	
with VMT	3	12.9	0.0208	2,564,545	0.6	0.3	
mix of	4	12.9	0.0208	1,689,510	0.4	0.2	
0.5%	5	12.9	0.0208	1,077,562	0.3	0.1	

Table 5.5-4. Daily PM_{2.5} emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (excludes fugitive dust.

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
INTERSTATE, FREEWAY, and EXPRESSWAY	LDGV with VMT mix of 45.1%	1	59.7	0.0046	1,129,051	5.2	2.3
		2	60.3	0.0046	9,046,583	41.4	18.8
		3	63.2	0.0046	6,240,489	28.5	12.9
		4	64.8	0.0046	4,525,653	20.7	9.4
		5	64.2	0.0046	3,416,224	15.6	7.1
	LDGT1 with VMT mix of 28.2%	1	59.7	0.0056	1,129,051	3.9	1.8
		2	60.3	0.0056	9,046,583	31.5	14.3
		3	63.2	0.0056	6,240,489	21.7	9.9
		4	64.8	0.0056	4,525,653	15.8	7.2
		5	64.2	0.0056	3,416,224	11.9	5.4
LDGT2 with VMT mix of 11.2%	1	59.7	0.0087	1,129,051	2.4	1.1	
	2	60.3	0.0087	9,046,583	19.4	8.8	
	3	63.2	0.0087	6,240,489	13.4	6.1	
	4	64.8	0.0087	4,525,653	9.7	4.4	
	5	64.2	0.0087	3,416,224	7.3	3.3	
HDGV with VMT mix of 3.6%	1	59.7	0.0569	1,129,051	5.0	2.3	
	2	60.3	0.0569	9,046,583	40.4	18.3	
	3	63.2	0.0569	6,240,489	27.9	12.6	
	4	64.8	0.0569	4,525,653	20.2	9.2	
	5	64.2	0.0569	3,416,224	15.3	6.9	
LDDV with VMT mix of 0.2%	1	59.7	0.1567	1,129,051	0.9	0.4	
	2	60.3	0.1567	9,046,583	6.9	3.1	
	3	63.2	0.1567	6,240,489	4.7	2.2	
	4	64.8	0.1567	4,525,653	3.4	1.6	
	5	64.2	0.1567	3,416,224	2.6	1.2	
LDDT with VMT mix of 2.2%	1	59.7	0.1159	1,129,051	6.2	2.8	
	2	60.3	0.1159	9,046,583	49.9	22.6	
	3	63.2	0.1159	6,240,489	34.4	15.6	
	4	64.8	0.1159	4,525,653	25.0	11.3	
	5	64.2	0.1159	3,416,224	18.9	8.6	
HDDV with VMT mix of 9.1%	1	59.7	0.3325	1,129,051	75.2	34.1	
	2	60.3	0.3325	9,046,583	602.7	273.4	
	3	63.2	0.3325	6,240,489	415.8	188.6	
	4	64.8	0.3325	4,525,653	301.5	136.8	
	5	64.2	0.3325	3,416,224	227.6	103.2	
MC with VMT mix of 0.5%	1	59.7	0.0143	1,129,051	0.2	0.1	
	2	60.3	0.0143	9,046,583	1.5	0.7	
	3	63.2	0.0143	6,240,489	1.0	0.5	
	4	64.8	0.0143	4,525,653	0.7	0.3	
	5	64.2	0.0143	3,416,224	0.5	0.2	

Table 5.5-4. Daily PM_{2.5} emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (excludes fugitive dust) (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
		1	30.3	0.0047	1,087,462	5.1	2.3
PRINCIPAL	LDGV	2	34.4	0.0046	8,834,531	40.4	18.3
ARTERIAL	with VMT	3	36.1	0.0046	9,795,953	44.8	20.3
&	mix of	4	39.0	0.0046	6,923,412	31.7	14.4
MINOR	45.1%	5	42.6	0.0046	3,494,642	16.0	7.2
ARTERIAL		1	30.3	0.0056	1,087,462	3.8	1.7
	LDGT1	2	34.4	0.0056	8,834,531	30.8	14.0
	with VMT	3	36.1	0.0056	9,795,953	34.1	15.5
	mix of	4	39.0	0.0056	6,923,412	24.1	10.9
	28.2%	5	42.6	0.0056	3,494,642	12.2	5.5
		1	30.3	0.0088	1,087,462	2.4	1.1
	LDGT2	2	34.4	0.0087	8,834,531	18.9	8.6
	with VMT	3	36.1	0.0087	9,795,953	21.0	9.5
	mix of	4	39.0	0.0087	6,923,412	14.8	6.7
	11.2%	5	42.6	0.0087	3,494,642	7.5	3.4
		1	30.3	0.0568	1,087,462	4.8	2.2
	HDGV	2	34.4	0.0568	8,834,531	39.4	17.9
	with VMT	3	36.1	0.0569	9,795,953	43.7	19.8
	mix of	4	39.0	0.0569	6,923,412	30.9	14.0
	3.6%	5	42.6	0.0569	3,494,642	15.6	7.1
		1	30.3	0.1567	1,087,462	0.8	0.4
	LDDV	2	34.4	0.1567	8,834,531	6.7	3.0
	with VMT	3	36.1	0.1567	9,795,953	7.4	3.4
	mix of	4	39.0	0.1567	6,923,412	5.3	2.4
	0.2%	5	42.6	0.1567	3,494,642	2.7	1.2
		1	30.3	0.1159	1,087,462	6.0	2.7
	LDDT	2	34.4	0.1159	8,834,531	48.8	22.1
	with VMT	3	36.1	0.1159	9,795,953	54.1	24.5
	mix of	4	39.0	0.1159	6,923,412	38.2	17.3
	2.2%	5	42.6	0.1159	3,494,642	19.3	8.7
		1	30.3	0.3325	1,087,462	72.5	32.9
	HDDV	2	34.4	0.3325	8,834,531	588.6	267.0
	with VMT	3	36.1	0.3325	9,795,953	652.7	296.0
	mix of	4	39.0	0.3325	6,923,412	461.3	209.2
	9.1%	5	42.6	0.3325	3,494,642	232.8	105.6
		1	30.3	0.0144	1,087,462	0.2	0.1
	MC	2	34.4	0.0143	8,834,531	1.4	0.6
	with VMT	3	36.1	0.0143	9,795,953	1.6	0.7
	mix of	4	39.0	0.0143	6,923,412	1.1	0.5
	0.5%	5	42.6	0.0143	3,494,642	0.6	0.3

Table 5.5–4. Daily PM_{2.5} emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (excludes fugitive dust) (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
COLLECTOR		1	18.2	0.0050	1,046,993	5.2	2.4
	LDGV	2	19.1	0.0050	2,727,290	13.6	6.1
	with VMT	3	24.4	0.0049	1,694,159	8.3	3.7
	mix of	4	24.7	0.0048	872,616	4.2	1.9
	45.1%	5	28.2	0.0048	1,678,942	8.0	3.6
		1	18.2	0.0058	1,046,993	3.8	1.7
	LDGT1	2	19.1	0.0058	2,727,290	9.8	4.5
	with VMT	3	24.4	0.0057	1,694,159	6.0	2.7
	mix of	4	24.7	0.0057	872,616	3.1	1.4
	28.2%	5	28.2	0.0057	1,678,942	6.0	2.7
		1	18.2	0.0089	1,046,993	2.3	1.0
	LDGT2	2	19.1	0.0089	2,727,290	6.0	2.7
	with VMT	3	24.4	0.0089	1,694,159	3.7	1.7
	mix of	4	24.7	0.0089	872,616	1.9	0.9
	11.2%	5	28.2	0.0088	1,678,942	3.6	1.6
		1	18.2	0.0566	1,046,993	4.7	2.1
	HDGV	2	19.1	0.0566	2,727,290	12.1	5.5
	with VMT	3	24.4	0.0567	1,694,159	7.5	3.4
	mix of	4	24.7	0.0567	872,616	3.9	1.8
	3.6%	5	28.2	0.0567	1,678,942	7.5	3.4
		1	18.2	0.1567	1,046,993	0.8	0.4
	LDDV	2	19.1	0.1567	2,727,290	2.1	0.9
	with VMT	3	24.4	0.1567	1,694,159	1.3	0.6
	mix of	4	24.7	0.1567	872,616	0.7	0.3
	0.2%	5	28.2	0.1567	1,678,942	1.3	0.6
	1	18.2	0.1159	1,046,993	5.8	2.6	
LDDT	2	19.1	0.1159	2,727,290	15.1	6.8	
with VMT	3	24.4	0.1159	1,694,159	9.3	4.2	
mix of	4	24.7	0.1159	872,616	4.8	2.2	
2.2%	5	28.2	0.1159	1,678,942	9.3	4.2	
	1	18.2	0.3325	1,046,993	69.8	31.6	
HDDV	2	19.1	0.3325	2,727,290	181.7	82.4	
with VMT	3	24.4	0.3325	1,694,159	112.9	51.2	
mix of	4	24.7	0.3325	872,616	58.1	26.4	
9.1%	5	28.2	0.3325	1,678,942	111.9	50.7	
	1	18.2	0.0145	1,046,993	0.2	0.1	
MC	2	19.1	0.0145	2,727,290	0.4	0.2	
with VMT	3	24.4	0.0144	1,694,159	0.3	0.1	
mix of	4	24.7	0.0144	872,616	0.1	0.1	
0.5%	5	28.2	0.0144	1,678,942	0.3	0.1	

Table 5.5–4. Daily PM_{2.5} emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (excludes fugitive dust) (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
LOCAL		1	12.9	0.0050	195,247	1.0	0.4
	LDGV	2	12.9	0.0050	1,991,136	9.9	4.5
	with VMT	3	12.9	0.0050	2,564,545	12.7	5.8
	mix of	4	12.9	0.0050	1,689,510	8.4	3.8
	45.1%	5	12.9	0.0050	1,077,562	5.4	2.4
		1	12.9	0.0058	195,247	0.7	0.3
	LDGT1	2	12.9	0.0058	1,991,136	7.2	3.3
	with VMT	3	12.9	0.0058	2,564,545	9.3	4.2
	mix of	4	12.9	0.0058	1,689,510	6.1	2.8
	28.2%	5	12.9	0.0058	1,077,562	3.9	1.8
		1	12.9	0.0089	195,247	0.4	0.2
	LDGT2	2	12.9	0.0089	1,991,136	4.4	2.0
	with VMT	3	12.9	0.0089	2,564,545	5.6	2.5
	mix of	4	12.9	0.0089	1,689,510	3.7	1.7
	11.2%	5	12.9	0.0089	1,077,562	2.4	1.1
		1	12.9	0.0566	195,247	0.9	0.4
	HDTV	2	12.9	0.0566	1,991,136	8.8	4.0
	with VMT	3	12.9	0.0566	2,564,545	11.4	5.2
	mix of	4	12.9	0.0566	1,689,510	7.5	3.4
	3.6%	5	12.9	0.0566	1,077,562	4.8	2.2
	1	12.9	0.1567	195,247	0.1	0.1	
LDDV	2	12.9	0.1567	1,991,136	1.5	0.7	
with VMT	3	12.9	0.1567	2,564,545	1.9	0.9	
mix of	4	12.9	0.1567	1,689,510	1.3	0.6	
0.2%	5	12.9	0.1567	1,077,562	0.8	0.4	
	1	12.9	0.1159	195,247	1.1	0.5	
LDDT	2	12.9	0.1159	1,991,136	11.0	5.0	
with VMT	3	12.9	0.1159	2,564,545	14.2	6.4	
mix of	4	12.9	0.1159	1,689,510	9.3	4.2	
2.2%	5	12.9	0.1159	1,077,562	5.9	2.7	
	1	12.9	0.3325	195,247	13.0	5.9	
HDDV	2	12.9	0.3325	1,991,136	132.7	60.2	
with VMT	3	12.9	0.3325	2,564,545	170.9	77.5	
mix of	4	12.9	0.3325	1,689,510	112.6	51.1	
9.1%	5	12.9	0.3325	1,077,562	71.8	32.6	
	1	12.9	0.0145	195,247	0.0	0.0	
MC	2	12.9	0.0145	1,991,136	0.3	0.1	
with VMT	3	12.9	0.0145	2,564,545	0.4	0.2	
mix of	4	12.9	0.0145	1,689,510	0.3	0.1	
0.5%	5	12.9	0.0145	1,077,562	0.2	0.1	

Table 5.5–5. Daily NO_x emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type.

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)	
INTERSTATE, FREEWAY, and EXPRESSWAY		1	59.7	0.964	1,129,051	1,082.0	490.8	
		2	60.3	0.966	9,046,583	8,686.1	3,940.0	
		with VMT	3	63.2	0.968	6,240,489	6,001.1	2,722.1
		mix of	4	64.8	0.968	4,525,653	4,352.1	1,974.1
		45.1%	5	64.2	0.968	3,416,224	3,285.2	1,490.2
	LDGT1	1	59.7	1.188	1,129,051	834.6	378.6	
		2	60.3	1.191	9,046,583	6,700.8	3,039.5	
		with VMT	3	63.2	1.193	6,240,489	4,630.1	2,100.2
		mix of	4	64.8	1.193	4,525,653	3,357.8	1,523.1
		28.2%	5	64.2	1.193	3,416,224	2,534.7	1,149.7
	LDGT2	1	59.7	1.486	1,129,051	412.6	187.2	
		2	60.3	1.488	9,046,583	3,312.5	1,502.5	
		with VMT	3	63.2	1.490	6,240,489	2,287.9	1,037.8
		mix of	4	64.8	1.490	4,525,653	1,659.2	752.6
		11.2%	5	64.2	1.490	3,416,224	1,252.5	568.1
	HDGV	1	59.7	5.537	1,129,051	490.6	222.5	
		2	60.3	5.560	9,046,583	3,947.2	1,790.5	
		with VMT	3	63.2	5.575	6,240,489	2,730.3	1,238.4
		mix of	4	64.8	5.575	4,525,653	1,980.0	898.1
		3.6%	5	64.2	5.575	3,416,224	1,494.6	678.0
LDDV	1	59.7	1.787	1,129,051	9.8	4.4		
	2	60.3	1.832	9,046,583	80.4	36.5		
	with VMT	3	63.2	1.862	6,240,489	56.4	25.6	
	mix of	4	64.8	1.862	4,525,653	40.9	18.5	
	0.2%	5	64.2	1.862	3,416,224	30.8	14.0	
LDDT	1	59.7	1.180	1,129,051	63.4	28.8		
	2	60.3	1.210	9,046,583	521.2	236.4		
	with VMT	3	63.2	1.230	6,240,489	365.5	165.8	
	mix of	4	64.8	1.230	4,525,653	265.0	120.2	
	2.2%	5	64.2	1.230	3,416,224	200.1	90.8	
HDDV	1	59.7	23.357	1,129,051	5,284.2	2,396.9		
	2	60.3	23.825	9,046,583	43,187.5	19,589.8		
	with VMT	3	63.2	24.130	6,240,489	30,173.0	13,686.5	
	mix of	4	64.8	24.130	4,525,653	21,881.7	9,925.5	
	9.1%	5	64.2	24.130	3,416,224	16,517.6	7,492.4	
MC	1	59.7	1.680	1,129,051	21.3	9.7		
	2	60.3	1.699	9,046,583	172.8	78.4		
	with VMT	3	63.2	1.710	6,240,489	120.0	54.4	
	mix of	4	64.8	1.710	4,525,653	87.0	39.5	
	0.5%	5	64.2	1.710	3,416,224	65.7	29.8	

Table 5.5-5. Daily NO_x emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
		1	30.3	0.900	1,087,462	972.9	441.3
PRINCIPAL	LDGV	2	34.4	0.883	8,834,531	7,755.4	3,517.9
ARTERIALS	with VMT	3	36.1	0.883	9,795,953	8,600.4	3,901.1
&	mix of	4	39.0	0.884	6,923,412	6,080.5	2,758.1
MINOR	45.1%	5	42.6	0.893	3,494,642	3,101.1	1,406.7
ARTERIALS		1	30.3	1.088	1,087,462	736.1	333.9
	LDGT1	2	34.4	1.076	8,834,531	5,914.5	2,682.8
	with VMT	3	36.1	1.078	9,795,953	6,568.5	2,979.5
	mix of	4	39.0	1.080	6,923,412	4,650.5	2,109.5
	28.2%	5	42.6	1.092	3,494,642	2,374.8	1,077.2
		1	30.3	1.380	1,087,462	369.2	167.5
	LDGT2	2	34.4	1.366	8,834,531	2,969.5	1,346.9
	with VMT	3	36.1	1.368	9,795,953	3,296.2	1,495.2
	mix of	4	39.0	1.369	6,923,412	2,331.2	1,057.4
	11.2%	5	42.6	1.382	3,494,642	1,187.7	538.7
		1	30.3	4.426	1,087,462	377.7	171.3
	HDGV	2	34.4	4.573	8,834,531	3,170.5	1,438.1
	with VMT	3	36.1	4.635	9,795,953	3,563.3	1,616.3
	mix of	4	39.0	4.738	6,923,412	2,574.5	1,167.8
	3.6%	5	42.6	4.868	3,494,642	1,335.1	605.6
		1	30.3	1.005	1,087,462	5.3	2.4
	LDDV	2	34.4	0.997	8,834,531	42.7	19.4
	with VMT	3	36.1	1.002	9,795,953	47.6	21.6
	mix of	4	39.0	1.017	6,923,412	34.1	15.5
	0.2%	5	42.6	1.056	3,494,642	17.9	8.1
		1	30.3	0.658	1,087,462	34.1	15.5
	LDDT	2	34.4	0.653	8,834,531	274.7	124.6
	with VMT	3	36.1	0.657	9,795,953	306.3	138.9
	mix of	4	39.0	0.666	6,923,412	219.5	99.6
	2.2%	5	42.6	0.692	3,494,642	115.1	52.2
		1	30.3	13.045	1,087,462	2,842.5	1,289.4
	HDDV	2	34.4	12.970	8,834,531	22,959.1	10,414.2
	with VMT	3	36.1	13.024	9,795,953	25,565.2	11,596.4
	mix of	4	39.0	12.429	6,923,412	17,242.6	7,821.3
	9.1%	5	42.6	12.827	3,494,642	8,981.9	4,074.2
		1	30.3	1.172	1,087,462	14.3	6.5
	MC	2	34.4	1.209	8,834,531	120.1	54.5
	with VMT	3	36.1	1.220	9,795,953	134.3	60.9
	mix of	4	39.0	1.238	6,923,412	96.4	43.7
	0.5%	5	42.6	1.257	3,494,642	49.4	22.4

Table 5.5–5. Daily NO_x emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
COLLECTOR		1	18.2	1.037	1,046,993	1,079.1	489.5
	LDGV	2	19.1	1.021	2,727,290	2,768.3	1,255.7
	with VMT	3	24.4	0.950	1,694,159	1,599.7	725.6
	mix of	4	24.7	0.947	872,616	821.3	372.5
	45.1%	5	28.2	0.914	1,678,942	1,525.8	692.1
		1	18.2	1.223	1,046,993	796.8	361.4
	LDGT1	2	19.1	1.207	2,727,290	2,047.9	928.9
	with VMT	3	24.4	1.136	1,694,159	1,197.1	543.0
	mix of	4	24.7	1.133	872,616	614.9	278.9
	28.2%	5	28.2	1.101	1,678,942	1,149.6	521.5
		1	18.2	1.548	1,046,993	398.7	180.9
	LDGT2	2	19.1	1.528	2,727,290	1,025.4	465.1
	with VMT	3	24.4	1.440	1,694,159	600.0	272.2
	mix of	4	24.7	1.436	872,616	308.2	139.8
	11.2%	5	28.2	1.396	1,678,942	576.6	261.6
		1	18.2	4.004	1,046,993	328.9	149.2
	HDGV	2	19.1	4.031	2,727,290	862.8	391.3
	with VMT	3	24.4	4.217	1,694,159	560.7	254.3
	mix of	4	24.7	4.226	872,616	289.4	131.3
	3.6%	5	28.2	4.356	1,678,942	574.0	260.4
		1	18.2	1.172	1,046,993	6.0	2.7
	LDDV	2	19.1	1.151	2,727,290	15.2	6.9
	with VMT	3	24.4	1.057	1,694,159	8.7	3.9
	mix of	4	24.7	1.053	872,616	4.5	2.0
	0.2%	5	28.2	1.019	1,678,942	8.3	3.8
	1	18.2	0.770	1,046,993	38.4	17.4	
LDDT	2	19.1	0.756	2,727,290	98.2	44.5	
with VMT	3	24.4	0.693	1,694,159	55.9	25.4	
mix of	4	24.7	0.691	872,616	28.7	13.0	
2.2%	5	28.2	0.668	1,678,942	53.4	24.2	
	1	18.2	14.028	1,046,993	2,942.9	1,334.9	
HDDV	2	19.1	13.815	2,727,290	7,549.4	3,424.4	
with VMT	3	24.4	12.843	1,694,159	4,359.7	1,977.6	
mix of	4	24.7	12.800	872,616	2,238.1	1,015.2	
9.1%	5	28.2	12.450	1,678,942	4,188.5	1,899.9	
	1	18.2	1.030	1,046,993	12.1	5.5	
MC	2	19.1	1.039	2,727,290	31.9	14.5	
with VMT	3	24.4	1.101	1,694,159	21.0	9.5	
mix of	4	24.7	1.107	872,616	10.9	4.9	
0.5%	5	28.2	1.148	1,678,942	21.7	9.8	

Table 5.5–5. Daily NO_x emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
LOCAL		1	12.9	1.173	195,247	227.7	103.3
	LDGV	2	12.9	1.173	1,991,136	2,321.7	1,053.1
	with VMT	3	12.9	1.173	2,564,545	2,990.3	1,356.4
	mix of	4	12.9	1.173	1,689,510	1,970.0	893.6
	45.1%	5	12.9	1.173	1,077,562	1,256.4	569.9
		1	12.9	1.362	195,247	165.5	75.1
	LDGT1	2	12.9	1.362	1,991,136	1,687.4	765.4
	with VMT	3	12.9	1.362	2,564,545	2,173.3	985.8
	mix of	4	12.9	1.362	1,689,510	1,431.8	649.5
	28.2%	5	12.9	1.362	1,077,562	913.2	414.2
		1	12.9	1.721	195,247	82.6	37.5
	LDGT2	2	12.9	1.721	1,991,136	842.8	382.3
	with VMT	3	12.9	1.721	2,564,545	1,085.5	492.4
	mix of	4	12.9	1.721	1,689,510	715.1	324.4
	11.2%	5	12.9	1.721	1,077,562	456.1	206.9
		1	12.9	3.820	195,247	58.5	26.5
	HDGV	2	12.9	3.820	1,991,136	596.8	270.7
	with VMT	3	12.9	3.820	2,564,545	768.7	348.7
	mix of	4	12.9	3.820	1,689,510	506.4	229.7
	3.6%	5	12.9	3.820	1,077,562	323.0	146.5
	1	12.9	1.330	195,247	1.3	0.6	
LDDV	2	12.9	1.330	1,991,136	12.8	5.8	
with VMT	3	12.9	1.330	2,564,545	16.5	7.5	
mix of	4	12.9	1.330	1,689,510	10.9	4.9	
0.2%	5	12.9	1.330	1,077,562	6.9	3.2	
	1	12.9	0.875	195,247	8.1	3.7	
LDDT	2	12.9	0.875	1,991,136	83.0	37.6	
with VMT	3	12.9	0.875	2,564,545	106.8	48.5	
mix of	4	12.9	0.875	1,689,510	70.4	31.9	
2.2%	5	12.9	0.875	1,077,562	44.9	20.4	
	1	12.9	15.660	195,247	612.7	277.9	
HDDV	2	12.9	15.660	1,991,136	6,248.1	2,834.1	
with VMT	3	12.9	15.660	2,564,545	8,047.4	3,650.3	
mix of	4	12.9	15.660	1,689,510	5,301.6	2,404.8	
9.1%	5	12.9	15.660	1,077,562	3,381.3	1,533.8	
	1	12.9	0.990	195,247	2.2	1.0	
MC	2	12.9	0.990	1,991,136	22.2	10.1	
with VMT	3	12.9	0.990	2,564,545	28.5	12.9	
mix of	4	12.9	0.990	1,689,510	18.8	8.5	
0.5%	5	12.9	0.990	1,077,562	12.0	5.4	

Table 5.5–6. Sulfur dioxide (gaseous) emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type.

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
		1	59.7	0.0119	1,129,051	13.4	6.1
INTERSTATE, FREEWAY, and EXPRESSWAY	LDGV with VMT mix of 45.1%	2	60.3	0.0119	9,046,583	107.0	48.5
		3	63.2	0.0119	6,240,489	73.8	33.5
		4	64.8	0.0119	4,525,653	53.5	24.3
		5	64.2	0.0119	3,416,224	40.4	18.3
		1	59.7	0.0151	1,129,051	10.6	4.8
	LDGT1 with VMT mix of 28.2%	2	60.3	0.0151	9,046,583	85.0	38.5
3		63.2	0.0151	6,240,489	58.6	26.6	
4		64.8	0.0151	4,525,653	42.5	19.3	
5		64.2	0.0151	3,416,224	32.1	14.6	
1		59.7	0.0198	1,129,051	5.5	2.5	
	LDGT2 with VMT mix of 11.2%	2	60.3	0.0198	9,046,583	44.1	20.0
3		63.2	0.0198	6,240,489	30.4	13.8	
4		64.8	0.0198	4,525,653	22.0	10.0	
5		64.2	0.0198	3,416,224	16.6	7.5	
1		59.7	0.0298	1,129,051	2.6	1.2	
	HDGV with VMT mix of 3.6%	2	60.3	0.0298	9,046,583	21.2	9.6
3		63.2	0.0298	6,240,489	14.6	6.6	
4		64.8	0.0298	4,525,653	10.6	4.8	
5		64.2	0.0298	3,416,224	8.0	3.6	
1		59.7	0.0637	1,129,051	0.3	0.2	
	LDDV with VMT mix of 0.2%	2	60.3	0.0637	9,046,583	2.8	1.3
3		63.2	0.0637	6,240,489	1.9	0.9	
4		64.8	0.0637	4,525,653	1.4	0.6	
5		64.2	0.0637	3,416,224	1.1	0.5	
1		59.7	0.0910	1,129,051	4.9	2.2	
	LDDT with VMT mix of 2.2%	2	60.3	0.0910	9,046,583	39.2	17.8
3		63.2	0.0910	6,240,489	27.0	12.3	
4		64.8	0.0910	4,525,653	19.6	8.9	
5		64.2	0.0910	3,416,224	14.8	6.7	
1		59.7	0.2770	1,129,051	62.7	28.4	
	HDDV with VMT mix of 9.1%	2	60.3	0.2770	9,046,583	502.1	227.8
3		63.2	0.2770	6,240,489	346.4	157.1	
4		64.8	0.2770	4,525,653	251.2	113.9	
5		64.2	0.2770	3,416,224	189.6	86.0	
1		59.7	0.0057	1,129,051	0.1	0.0	
	MC with VMT mix of 0.5%	2	60.3	0.0057	9,046,583	0.6	0.3
3		63.2	0.0057	6,240,489	0.4	0.2	
4		64.8	0.0057	4,525,653	0.3	0.1	
5		64.2	0.0057	3,416,224	0.2	0.1	

Table 5.5–6. Sulfur dioxide (gaseous) emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
		1	30.3	0.0119	1,087,462	12.9	5.8
PRINCIPAL	LDGV	2	34.4	0.0119	8,834,531	104.5	47.4
ARTERIAL	with VMT	3	36.1	0.0119	9,795,953	115.9	52.6
&	mix of	4	39.0	0.0119	6,923,412	81.9	37.1
MINOR	45.1%	5	42.6	0.0119	3,494,642	41.3	18.7
ARTERIAL		1	30.3	0.0151	1,087,462	10.2	4.6
	LDGT1	2	34.4	0.0151	8,834,531	83.0	37.6
	with VMT	3	36.1	0.0151	9,795,953	92.0	41.7
	mix of	4	39.0	0.0151	6,923,412	65.0	29.5
	28.2%	5	42.6	0.0151	3,494,642	32.8	14.9
		1	30.3	0.0198	1,087,462	5.3	2.4
	LDGT2	2	34.4	0.0198	8,834,531	43.0	19.5
	with VMT	3	36.1	0.0198	9,795,953	47.7	21.6
	mix of	4	39.0	0.0198	6,923,412	33.7	15.3
	11.2%	5	42.6	0.0198	3,494,642	17.0	7.7
		1	30.3	0.0298	1,087,462	2.5	1.2
	HDTV	2	34.4	0.0298	8,834,531	20.7	9.4
	with VMT	3	36.1	0.0298	9,795,953	22.9	10.4
	mix of	4	39.0	0.0298	6,923,412	16.2	7.3
	3.6%	5	42.6	0.0298	3,494,642	8.2	3.7
		1	30.3	0.0637	1,087,462	0.3	0.2
	LDDV	2	34.4	0.0637	8,834,531	2.7	1.2
	with VMT	3	36.1	0.0637	9,795,953	3.0	1.4
	mix of	4	39.0	0.0637	6,923,412	2.1	1.0
	0.2%	5	42.6	0.0637	3,494,642	1.1	0.5
		1	30.3	0.0910	1,087,462	4.7	2.1
	LDDT	2	34.4	0.0910	8,834,531	38.3	17.4
	with VMT	3	36.1	0.0910	9,795,953	42.4	19.3
	mix of	4	39.0	0.0910	6,923,412	30.0	13.6
	2.2%	5	42.6	0.0910	3,494,642	15.1	6.9
		1	30.3	0.2770	1,087,462	60.4	27.4
	HDDV	2	34.4	0.2770	8,834,531	490.4	222.4
	with VMT	3	36.1	0.2770	9,795,953	543.7	246.6
	mix of	4	39.0	0.2770	6,923,412	384.3	174.3
	9.1%	5	42.6	0.2770	3,494,642	194.0	88.0
		1	30.3	0.0057	1,087,462	0.1	0.0
	MC	2	34.4	0.0057	8,834,531	0.6	0.3
	with VMT	3	36.1	0.0057	9,795,953	0.6	0.3
	mix of	4	39.0	0.0057	6,923,412	0.4	0.2
	0.5%	5	42.6	0.0057	3,494,642	0.2	0.1

Table 5.5–6. Sulfur dioxide (gaseous) emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
COLLECTOR		1	18.2	0.0118	1,046,993	12.3	5.6
	LDGV	2	19.1	0.0118	2,727,290	32.0	14.5
	with VMT	3	24.4	0.0118	1,694,159	19.9	9.0
	mix of	4	24.7	0.0118	872,616	10.2	4.6
	45.1%	5	28.2	0.0118	1,678,942	19.7	8.9
		1	18.2	0.0151	1,046,993	9.8	4.5
	LDGT1	2	19.1	0.0151	2,727,290	25.6	11.6
	with VMT	3	24.4	0.0151	1,694,159	15.9	7.2
	mix of	4	24.7	0.0151	872,616	8.2	3.7
	28.2%	5	28.2	0.0151	1,678,942	15.8	7.2
		1	18.2	0.0198	1,046,993	5.1	2.3
	LDGT2	2	19.1	0.0198	2,727,290	13.3	6.0
	with VMT	3	24.4	0.0198	1,694,159	8.3	3.7
	mix of	4	24.7	0.0198	872,616	4.3	1.9
	11.2%	5	28.2	0.0198	1,678,942	8.2	3.7
		1	18.2	0.0299	1,046,993	2.5	1.1
	HDGV	2	19.1	0.0299	2,727,290	6.4	2.9
	with VMT	3	24.4	0.0299	1,694,159	4.0	1.8
	mix of	4	24.7	0.0299	872,616	2.0	0.9
	3.6%	5	28.2	0.0299	1,678,942	3.9	1.8
		1	18.2	0.0637	1,046,993	0.3	0.1
	LDDV	2	19.1	0.0637	2,727,290	0.8	0.4
	with VMT	3	24.4	0.0637	1,694,159	0.5	0.2
	mix of	4	24.7	0.0637	872,616	0.3	0.1
	0.2%	5	28.2	0.0637	1,678,942	0.5	0.2
	1	18.2	0.0910	1,046,993	4.5	2.1	
LDDT	2	19.1	0.0910	2,727,290	11.8	5.4	
with VMT	3	24.4	0.0910	1,694,159	7.3	3.3	
mix of	4	24.7	0.0910	872,616	3.8	1.7	
2.2%	5	28.2	0.0910	1,678,942	7.3	3.3	
	1	18.2	0.2770	1,046,993	58.1	26.4	
HDDV	2	19.1	0.2770	2,727,290	151.4	68.7	
with VMT	3	24.4	0.2770	1,694,159	94.0	42.7	
mix of	4	24.7	0.2770	872,616	48.4	22.0	
9.1%	5	28.2	0.2770	1,678,942	93.2	42.3	
	1	18.2	0.0057	1,046,993	0.1	0.0	
MC	2	19.1	0.0057	2,727,290	0.2	0.1	
with VMT	3	24.4	0.0057	1,694,159	0.1	0.0	
mix of	4	24.7	0.0057	872,616	0.1	0.0	
0.5%	5	28.2	0.0057	1,678,942	0.1	0.0	

Table 5.5–6. Sulfur dioxide (gaseous) emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
LOCAL		1	12.9	0.0118	195,247	2.3	1.0
	LDGV	2	12.9	0.0118	1,991,136	23.4	10.6
	with VMT	3	12.9	0.0118	2,564,545	30.1	13.6
	mix of	4	12.9	0.0118	1,689,510	19.8	9.0
	45.1%	5	12.9	0.0118	1,077,562	12.6	5.7
		1	12.9	0.0151	195,247	1.8	0.8
	LDGT1	2	12.9	0.0151	1,991,136	18.7	8.5
	with VMT	3	12.9	0.0151	2,564,545	24.1	10.9
	mix of	4	12.9	0.0151	1,689,510	15.9	7.2
	28.2%	5	12.9	0.0151	1,077,562	10.1	4.6
		1	12.9	0.0198	195,247	1.0	0.4
	LDGT2	2	12.9	0.0198	1,991,136	9.7	4.4
	with VMT	3	12.9	0.0198	2,564,545	12.5	5.7
	mix of	4	12.9	0.0198	1,689,510	8.2	3.7
	11.2%	5	12.9	0.0198	1,077,562	5.2	2.4
		1	12.9	0.0299	195,247	0.5	0.2
	HDGV	2	12.9	0.0299	1,991,136	4.7	2.1
	with VMT	3	12.9	0.0299	2,564,545	6.0	2.7
	mix of	4	12.9	0.0299	1,689,510	4.0	1.8
	3.6%	5	12.9	0.0299	1,077,562	2.5	1.1
		1	12.9	0.0637	195,247	0.1	0.0
	LDDV	2	12.9	0.0637	1,991,136	0.6	0.3
	with VMT	3	12.9	0.0637	2,564,545	0.8	0.4
	mix of	4	12.9	0.0637	1,689,510	0.5	0.2
	0.2%	5	12.9	0.0637	1,077,562	0.3	0.2
	1	12.9	0.0910	195,247	0.8	0.4	
LDDT	2	12.9	0.0910	1,991,136	8.6	3.9	
with VMT	3	12.9	0.0910	2,564,545	11.1	5.0	
mix of	4	12.9	0.0910	1,689,510	7.3	3.3	
2.2%	5	12.9	0.0910	1,077,562	4.7	2.1	
	1	12.9	0.2770	195,247	10.8	4.9	
HDDV	2	12.9	0.2770	1,991,136	110.5	50.1	
with VMT	3	12.9	0.2770	2,564,545	142.3	64.6	
mix of	4	12.9	0.2770	1,689,510	93.8	42.5	
9.1%	5	12.9	0.2770	1,077,562	59.8	27.1	
	1	12.9	0.0057	195,247	0.0	0.0	
MC	2	12.9	0.0057	1,991,136	0.1	0.1	
with VMT	3	12.9	0.0057	2,564,545	0.2	0.1	
mix of	4	12.9	0.0057	1,689,510	0.1	0.0	
0.5%	5	12.9	0.0057	1,077,562	0.1	0.0	

Table 5.5-7. Daily ammonia emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type.

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
INTERSTATE, FREEWAY, and EXPRESSWAY	LDGV with VMT mix of 45.1%	1	59.7	0.1002	1,129,051	112.4	51.0
		2	60.3	0.1002	9,046,583	901.0	408.7
		3	63.2	0.1002	6,240,489	621.5	281.9
		4	64.8	0.1002	4,525,653	450.7	204.4
		5	64.2	0.1002	3,416,224	340.2	154.3
	LDGT1 with VMT mix of 28.2%	1	59.7	0.0983	1,129,051	69.0	31.3
		2	60.3	0.0983	9,046,583	553.2	250.9
		3	63.2	0.0983	6,240,489	381.6	173.1
		4	64.8	0.0983	4,525,653	276.7	125.5
		5	64.2	0.0983	3,416,224	208.9	94.8
	LDGT2 with VMT mix of 11.2%	1	59.7	0.0973	1,129,051	27.0	12.3
		2	60.3	0.0973	9,046,583	216.5	98.2
		3	63.2	0.0973	6,240,489	149.4	67.8
		4	64.8	0.0973	4,525,653	108.3	49.1
		5	64.2	0.0973	3,416,224	81.8	37.1
	HDGV with VMT mix of 3.6%	1	59.7	0.0451	1,129,051	4.0	1.8
		2	60.3	0.0451	9,046,583	32.0	14.5
		3	63.2	0.0451	6,240,489	22.1	10.0
		4	64.8	0.0451	4,525,653	16.0	7.3
		5	64.2	0.0451	3,416,224	12.1	5.5
LDDV with VMT mix of 0.2%	1	59.7	0.0068	1,129,051	0.0	0.0	
	2	60.3	0.0068	9,046,583	0.3	0.1	
	3	63.2	0.0068	6,240,489	0.2	0.1	
	4	64.8	0.0068	4,525,653	0.1	0.1	
	5	64.2	0.0068	3,416,224	0.1	0.1	
LDDT with VMT mix of 2.2%	1	59.7	0.0068	1,129,051	0.4	0.2	
	2	60.3	0.0068	9,046,583	2.9	1.3	
	3	63.2	0.0068	6,240,489	2.0	0.9	
	4	64.8	0.0068	4,525,653	1.5	0.7	
	5	64.2	0.0068	3,416,224	1.1	0.5	
HDDV with VMT mix of 9.1%	1	59.7	0.0270	1,129,051	6.1	2.8	
	2	60.3	0.0270	9,046,583	48.9	22.2	
	3	63.2	0.0270	6,240,489	33.8	15.3	
	4	64.8	0.0270	4,525,653	24.5	11.1	
	5	64.2	0.0270	3,416,224	18.5	8.4	
MC with VMT mix of 0.5%	1	59.7	0.0113	1,129,051	0.1	0.1	
	2	60.3	0.0113	9,046,583	1.1	0.5	
	3	63.2	0.0113	6,240,489	0.8	0.4	
	4	64.8	0.0113	4,525,653	0.6	0.3	
	5	64.2	0.0113	3,416,224	0.4	0.2	

Table 5.5–7. Daily ammonia emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
		1	30.3	0.1002	1,087,462	108.3	49.1
PRINCIPAL	LDGV	2	34.4	0.1002	8,834,531	879.9	399.1
ARTERIAL	with VMT	3	36.1	0.1002	9,795,953	975.6	442.5
&	mix of	4	39.0	0.1002	6,923,412	689.5	312.8
MINOR	45.1%	5	42.6	0.1002	3,494,642	348.0	157.9
ARTERIAL		1	30.3	0.0983	1,087,462	66.5	30.2
	LDGT1	2	34.4	0.0983	8,834,531	540.2	245.0
	with VMT	3	36.1	0.0983	9,795,953	599.0	271.7
	mix of	4	39.0	0.0983	6,923,412	423.4	192.0
	28.2%	5	42.6	0.0983	3,494,642	213.7	96.9
		1	30.3	0.0973	1,087,462	26.0	11.8
	LDGT2	2	34.4	0.0973	8,834,531	211.5	95.9
	with VMT	3	36.1	0.0973	9,795,953	234.5	106.4
	mix of	4	39.0	0.0973	6,923,412	165.7	75.2
	11.2%	5	42.6	0.0973	3,494,642	83.6	37.9
		1	30.3	0.0451	1,087,462	3.8	1.7
	HDGV	2	34.4	0.0451	8,834,531	31.3	14.2
	with VMT	3	36.1	0.0451	9,795,953	34.7	15.7
	mix of	4	39.0	0.0451	6,923,412	24.5	11.1
	3.6%	5	42.6	0.0451	3,494,642	12.4	5.6
		1	30.3	0.0068	1,087,462	0.0	0.0
	LDDV	2	34.4	0.0068	8,834,531	0.3	0.1
	with VMT	3	36.1	0.0068	9,795,953	0.3	0.1
	mix of	4	39.0	0.0068	6,923,412	0.2	0.1
	0.2%	5	42.6	0.0068	3,494,642	0.1	0.1
		1	30.3	0.0068	1,087,462	0.4	0.2
	LDDT	2	34.4	0.0068	8,834,531	2.9	1.3
	with VMT	3	36.1	0.0068	9,795,953	3.2	1.4
	mix of	4	39.0	0.0068	6,923,412	2.2	1.0
	2.2%	5	42.6	0.0068	3,494,642	1.1	0.5
		1	30.3	0.0270	1,087,462	5.9	2.7
	HDDV	2	34.4	0.0270	8,834,531	47.8	21.7
	with VMT	3	36.1	0.0270	9,795,953	53.0	24.0
	mix of	4	39.0	0.0270	6,923,412	37.5	17.0
	9.1%	5	42.6	0.0270	3,494,642	18.9	8.6
		1	30.3	0.0113	1,087,462	0.1	0.1
	MC	2	34.4	0.0113	8,834,531	1.1	0.5
	with VMT	3	36.1	0.0113	9,795,953	1.2	0.6
	mix of	4	39.0	0.0113	6,923,412	0.9	0.4
	0.5%	5	42.6	0.0113	3,494,642	0.4	0.2

Table 5.5–7. Daily ammonia emissions in the PM₁₀ nonattainment area by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
COLLECTOR		1	18.2	0.1002	1,046,993	104.3	47.3
	LDGV	2	19.1	0.1002	2,727,290	271.6	123.2
	with VMT	3	24.4	0.1002	1,694,159	168.7	76.5
	mix of	4	24.7	0.1002	872,616	86.9	39.4
	45.1%	5	28.2	0.1002	1,678,942	167.2	75.8
		1	18.2	0.0983	1,046,993	64.0	29.0
	LDGT1	2	19.1	0.0983	2,727,290	166.8	75.6
	with VMT	3	24.4	0.0983	1,694,159	103.6	47.0
	mix of	4	24.7	0.0983	872,616	53.4	24.2
	28.2%	5	28.2	0.0983	1,678,942	102.7	46.6
		1	18.2	0.0973	1,046,993	25.1	11.4
	LDGT2	2	19.1	0.0973	2,727,290	65.3	29.6
	with VMT	3	24.4	0.0973	1,694,159	40.6	18.4
	mix of	4	24.7	0.0973	872,616	20.9	9.5
	11.2%	5	28.2	0.0973	1,678,942	40.2	18.2
		1	18.2	0.0451	1,046,993	3.7	1.7
	HDGV	2	19.1	0.0451	2,727,290	9.7	4.4
	with VMT	3	24.4	0.0451	1,694,159	6.0	2.7
	mix of	4	24.7	0.0451	872,616	3.1	1.4
	3.6%	5	28.2	0.0451	1,678,942	5.9	2.7
		1	18.2	0.0068	1,046,993	0.0	0.0
	LDDV	2	19.1	0.0068	2,727,290	0.1	0.0
	with VMT	3	24.4	0.0068	1,694,159	0.1	0.0
	mix of	4	24.7	0.0068	872,616	0.0	0.0
	0.2%	5	28.2	0.0068	1,678,942	0.1	0.0
	1	18.2	0.0068	1,046,993	0.3	0.2	
LDDT	2	19.1	0.0068	2,727,290	0.9	0.4	
with VMT	3	24.4	0.0068	1,694,159	0.5	0.2	
mix of	4	24.7	0.0068	872,616	0.3	0.1	
2.2%	5	28.2	0.0068	1,678,942	0.5	0.2	
	1	18.2	0.0270	1,046,993	5.7	2.6	
HDDV	2	19.1	0.0270	2,727,290	14.8	6.7	
with VMT	3	24.4	0.0270	1,694,159	9.2	4.2	
mix of	4	24.7	0.0270	872,616	4.7	2.1	
9.1%	5	28.2	0.0270	1,678,942	9.1	4.1	
	1	18.2	0.0113	1,046,993	0.1	0.1	
MC	2	19.1	0.0113	2,727,290	0.3	0.2	
with VMT	3	24.4	0.0113	1,694,159	0.2	0.1	
mix of	4	24.7	0.0113	872,616	0.1	0.1	
0.5%	5	28.2	0.0113	1,678,942	0.2	0.1	

Table 5.5-7. Daily ammonia emissions in the PM₁₀ nonattainment by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
LOCAL		1	12.9	0.1002	195,247	19.4	8.8
	LDGV	2	12.9	0.1002	1,991,136	198.3	90.0
	with VMT	3	12.9	0.1002	2,564,545	255.4	115.9
	mix of	4	12.9	0.1002	1,689,510	168.3	76.3
	45.1%	5	12.9	0.1002	1,077,562	107.3	48.7
		1	12.9	0.0983	195,247	11.9	5.4
	LDGT1	2	12.9	0.0983	1,991,136	121.8	55.2
	with VMT	3	12.9	0.0983	2,564,545	156.8	71.1
	mix of	4	12.9	0.0983	1,689,510	103.3	46.9
	28.2%	5	12.9	0.0983	1,077,562	65.9	29.9
		1	12.9	0.0973	195,247	4.7	2.1
	LDGT2	2	12.9	0.0973	1,991,136	47.7	21.6
	with VMT	3	12.9	0.0973	2,564,545	61.4	27.8
	mix of	4	12.9	0.0973	1,689,510	40.4	18.3
	11.2%	5	12.9	0.0973	1,077,562	25.8	11.7
		1	12.9	0.0451	195,247	0.7	0.3
	HDGV	2	12.9	0.0451	1,991,136	7.0	3.2
	with VMT	3	12.9	0.0451	2,564,545	9.1	4.1
	mix of	4	12.9	0.0451	1,689,510	6.0	2.7
	3.6%	5	12.9	0.0451	1,077,562	3.8	1.7
		1	12.9	0.0068	195,247	0.0	0.0
	LDDV	2	12.9	0.0068	1,991,136	0.1	0.0
	with VMT	3	12.9	0.0068	2,564,545	0.1	0.0
	mix of	4	12.9	0.0068	1,689,510	0.1	0.0
	0.2%	5	12.9	0.0068	1,077,562	0.0	0.0
	1	12.9	0.0068	195,247	0.1	0.0	
LDDT	2	12.9	0.0068	1,991,136	0.6	0.3	
with VMT	3	12.9	0.0068	2,564,545	0.8	0.4	
mix of	4	12.9	0.0068	1,689,510	0.5	0.2	
2.2%	5	12.9	0.0068	1,077,562	0.3	0.2	
	1	12.9	0.0270	195,247	1.1	0.5	
HDDV	2	12.9	0.0270	1,991,136	10.8	4.9	
with VMT	3	12.9	0.0270	2,564,545	13.9	6.3	
mix of	4	12.9	0.0270	1,689,510	9.1	4.1	
9.1%	5	12.9	0.0270	1,077,562	5.8	2.6	
	1	12.9	0.0113	195,247	0.0	0.0	
MC	2	12.9	0.0113	1,991,136	0.3	0.1	
with VMT	3	12.9	0.0113	2,564,545	0.3	0.1	
mix of	4	12.9	0.0113	1,689,510	0.2	0.1	
0.5%	5	12.9	0.0113	1,077,562	0.1	0.1	

Table 5.5–8. Daily PM₁₀ Emissions in Maricopa County by facility type, vehicle class and area type (excludes fugitive dust).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
INTERSTATE, FREEWAY, and EXPRESSWAY		1	59.7	0.0050	1,129,051	5.6	2.5
	LDGV	2	60.3	0.0050	9,046,583	45.0	20.4
	with VMT	3	63.2	0.0050	6,240,489	31.0	14.1
	mix of	4	64.8	0.0050	4,525,653	22.5	10.2
	45.1%	5	64.2	0.0050	5,662,224	28.1	12.8
		1	59.7	0.0061	1,129,051	4.3	1.9
	LDGT1	2	60.3	0.0061	9,046,583	34.3	15.6
	with VMT	3	63.2	0.0061	6,240,489	23.7	10.7
	mix of	4	64.8	0.0061	4,525,653	17.2	7.8
	28.2%	5	64.2	0.0061	5,662,224	21.5	9.7
		1	59.7	0.0107	1,129,051	3.0	1.3
	LDGT2	2	60.3	0.0107	9,046,583	23.8	10.8
	with VMT	3	63.2	0.0107	6,240,489	16.4	7.5
	mix of	4	64.8	0.0107	4,525,653	11.9	5.4
	11.2%	5	64.2	0.0107	5,662,224	14.9	6.8
		1	59.7	0.0673	1,129,051	6.0	2.7
	HDGV	2	60.3	0.0673	9,046,583	47.8	21.7
	with VMT	3	63.2	0.0673	6,240,489	33.0	14.9
	mix of	4	64.8	0.0673	4,525,653	23.9	10.8
	3.6%	5	64.2	0.0673	5,662,224	29.9	13.6
		1	59.7	0.1700	1,129,051	0.9	0.4
	LDDV	2	60.3	0.1700	9,046,583	7.5	3.4
	with VMT	3	63.2	0.1700	6,240,489	5.1	2.3
	mix of	4	64.8	0.1700	4,525,653	3.7	1.7
	0.2%	5	64.2	0.1700	5,662,224	4.7	2.1
		1	59.7	0.1256	1,129,051	6.8	3.1
	LDDT	2	60.3	0.1256	9,046,583	54.1	24.5
	with VMT	3	63.2	0.1256	6,240,489	37.3	16.9
	mix of	4	64.8	0.1256	4,525,653	27.1	12.3
	2.2%	5	64.2	0.1256	5,662,224	33.9	15.4
		1	59.7	0.3597	1,129,051	81.4	36.9
	HDDV	2	60.3	0.3597	9,046,583	652.0	295.8
	with VMT	3	63.2	0.3597	6,240,489	449.8	204.0
	mix of	4	64.8	0.3597	4,525,653	326.2	148.0
	9.1%	5	64.2	0.3597	5,662,224	408.1	185.1
		1	59.7	0.0206	1,129,051	0.3	0.1
	MC	2	60.3	0.0206	9,046,583	2.1	1.0
	with VMT	3	63.2	0.0206	6,240,489	1.4	0.7
	mix of	4	64.8	0.0206	4,525,653	1.0	0.5
	0.5%	5	64.2	0.0206	5,662,224	1.3	0.6

Table 5.5–8. Daily PM₁₀ Emissions in Maricopa County by facility type, vehicle class and area type (excludes fugitive dust) (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
		1	30.3	0.0051	1,087,462	5.5	2.5
PRINCIPAL	LDGV	2	34.4	0.0050	8,834,531	43.9	19.9
ARTERIAL	with VMT	3	36.1	0.0050	9,795,953	48.7	22.1
&	mix of	4	39.0	0.0050	6,923,412	34.4	15.6
MINOR	45.1%	5	42.6	0.0050	3,738,642	18.6	8.4
ARTERIAL		1	30.3	0.0062	1,087,462	4.2	1.9
	LDGT1	2	34.4	0.0061	8,834,531	33.5	15.2
	with VMT	3	36.1	0.0061	9,795,953	37.2	16.9
	mix of	4	39.0	0.0061	6,923,412	26.3	11.9
	28.2%	5	42.6	0.0061	3,738,642	14.2	6.4
		1	30.3	0.0108	1,087,462	2.9	1.3
	LDGT2	2	34.4	0.0107	8,834,531	23.3	10.5
	with VMT	3	36.1	0.0107	9,795,953	25.8	11.7
	mix of	4	39.0	0.0107	6,923,412	18.2	8.3
	11.2%	5	42.6	0.0107	3,738,642	9.8	4.5
		1	30.3	0.0673	1,087,462	5.7	2.6
	HDTV	2	34.4	0.0673	8,834,531	46.7	21.2
	with VMT	3	36.1	0.0673	9,795,953	51.7	23.5
	mix of	4	39.0	0.0673	6,923,412	36.6	16.6
	3.6%	5	42.6	0.0673	3,738,642	19.7	9.0
		1	30.3	0.1700	1,087,462	0.9	0.4
	LDDV	2	34.4	0.1700	8,834,531	7.3	3.3
	with VMT	3	36.1	0.1700	9,795,953	8.1	3.7
	mix of	4	39.0	0.1700	6,923,412	5.7	2.6
	0.2%	5	42.6	0.1700	3,738,642	3.1	1.4
		1	30.3	0.1256	1,087,462	6.5	2.9
	LDDT	2	34.4	0.1256	8,834,531	52.8	24.0
	with VMT	3	36.1	0.1256	9,795,953	58.6	26.6
	mix of	4	39.0	0.1256	6,923,412	41.4	18.8
	2.2%	5	42.6	0.1256	3,738,642	22.4	10.1
		1	30.3	0.3597	1,087,462	78.4	35.6
	HDDV	2	34.4	0.3597	8,834,531	636.8	288.8
	with VMT	3	36.1	0.3597	9,795,953	706.0	320.3
	mix of	4	39.0	0.3597	6,923,412	499.0	226.4
	9.1%	5	42.6	0.3597	3,738,642	269.5	122.2
		1	30.3	0.0207	1,087,462	0.3	0.1
	MC	2	34.4	0.0206	8,834,531	2.0	0.9
	with VMT	3	36.1	0.0206	9,795,953	2.3	1.0
	mix of	4	39.0	0.0206	6,923,412	1.6	0.7
	0.5%	5	42.6	0.0206	3,738,642	0.9	0.4

Table 5.5–8. Daily PM₁₀ Emissions in Maricopa County by facility type, vehicle class and area type (excludes fugitive dust) (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
COLLECTOR		1	18.2	0.0054	1,046,993	5.6	2.5
	LDGV	2	19.1	0.0054	2,727,290	14.6	6.6
	with VMT	3	24.4	0.0053	1,694,159	8.9	4.0
	mix of	4	24.7	0.0053	872,616	4.6	2.1
	45.1%	5	28.2	0.0052	2,390,942	12.4	5.6
		1	18.2	0.0063	1,046,993	4.1	1.9
	LDGT1	2	19.1	0.0063	2,727,290	10.7	4.8
	with VMT	3	24.4	0.0063	1,694,159	6.6	3.0
	mix of	4	24.7	0.0063	872,616	3.4	1.6
	28.2%	5	28.2	0.0062	2,390,942	9.2	4.2
		1	18.2	0.0109	1,046,993	2.8	1.3
	LDGT2	2	19.1	0.0109	2,727,290	7.3	3.3
	with VMT	3	24.4	0.0108	1,694,159	4.5	2.0
	mix of	4	24.7	0.0108	872,616	2.3	1.1
	11.2%	5	28.2	0.0108	2,390,942	6.4	2.9
		1	18.2	0.0671	1,046,993	5.5	2.5
	HDGV	2	19.1	0.0671	2,727,290	14.4	6.5
	with VMT	3	24.4	0.0672	1,694,159	8.9	4.1
	mix of	4	24.7	0.0672	872,616	4.6	2.1
	3.6%	5	28.2	0.0672	2,390,942	12.6	5.7
		1	18.2	0.1700	1,046,993	0.9	0.4
	LDDV	2	19.1	0.1700	2,727,290	2.2	1.0
	with VMT	3	24.4	0.1700	1,694,159	1.4	0.6
	mix of	4	24.7	0.1700	872,616	0.7	0.3
	0.2%	5	28.2	0.1700	2,390,942	2.0	0.9
	1	18.2	0.1256	1,046,993	6.3	2.8	
LDDT	2	19.1	0.1256	2,727,290	16.3	7.4	
with VMT	3	24.4	0.1256	1,694,159	10.1	4.6	
mix of	4	24.7	0.1256	872,616	5.2	2.4	
2.2%	5	28.2	0.1256	2,390,942	14.3	6.5	
	1	18.2	0.3597	1,046,993	75.5	34.2	
HDDV	2	19.1	0.3597	2,727,290	196.6	89.2	
with VMT	3	24.4	0.3597	1,694,159	122.1	55.4	
mix of	4	24.7	0.3597	872,616	62.9	28.5	
9.1%	5	28.2	0.3597	2,390,942	172.3	78.2	
	1	18.2	0.0208	1,046,993	0.2	0.1	
MC	2	19.1	0.0208	2,727,290	0.6	0.3	
with VMT	3	24.4	0.0207	1,694,159	0.4	0.2	
mix of	4	24.7	0.0207	872,616	0.2	0.1	
0.5%	5	28.2	0.0207	2,390,942	0.6	0.3	

Table 5.5–8. Daily PM₁₀ Emissions in Maricopa County by facility type, vehicle class and area type (excludes fugitive dust) (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
LOCAL		1	12.9	0.0054	195,247	1.0	0.5
	LDGV	2	12.9	0.0054	1,991,136	10.7	4.8
	with VMT	3	12.9	0.0054	2,564,545	13.8	6.2
	mix of	4	12.9	0.0054	1,689,510	9.1	4.1
	45.1%	5	12.9	0.0054	1,422,562	7.6	3.5
		1	12.9	0.0063	195,247	0.8	0.3
	LDGT1	2	12.9	0.0063	1,991,136	7.8	3.5
	with VMT	3	12.9	0.0063	2,564,545	10.1	4.6
	mix of	4	12.9	0.0063	1,689,510	6.6	3.0
	28.2%	5	12.9	0.0063	1,422,562	5.6	2.5
		1	12.9	0.0109	195,247	0.5	0.2
	LDGT2	2	12.9	0.0109	1,991,136	5.3	2.4
	with VMT	3	12.9	0.0109	2,564,545	6.9	3.1
	mix of	4	12.9	0.0109	1,689,510	4.5	2.1
	11.2%	5	12.9	0.0109	1,422,562	3.8	1.7
		1	12.9	0.0671	195,247	1.0	0.5
	HDTV	2	12.9	0.0671	1,991,136	10.5	4.8
	with VMT	3	12.9	0.0671	2,564,545	13.5	6.1
	mix of	4	12.9	0.0671	1,689,510	8.9	4.0
	3.6%	5	12.9	0.0671	1,422,562	7.5	3.4
		1	12.9	0.1700	195,247	0.2	0.1
	LDDV	2	12.9	0.1700	1,991,136	1.6	0.7
	with VMT	3	12.9	0.1700	2,564,545	2.1	1.0
	mix of	4	12.9	0.1700	1,689,510	1.4	0.6
	0.2%	5	12.9	0.1700	1,422,562	1.2	0.5
	1	12.9	0.1256	195,247	1.2	0.5	
LDDT	2	12.9	0.1256	1,991,136	11.9	5.4	
with VMT	3	12.9	0.1256	2,564,545	15.3	7.0	
mix of	4	12.9	0.1256	1,689,510	10.1	4.6	
2.2%	5	12.9	0.1256	1,422,562	8.5	3.9	
	1	12.9	0.3597	195,247	14.1	6.4	
HDDV	2	12.9	0.3597	1,991,136	143.5	65.1	
with VMT	3	12.9	0.3597	2,564,545	184.8	83.8	
mix of	4	12.9	0.3597	1,689,510	121.8	55.2	
9.1%	5	12.9	0.3597	1,422,562	102.5	46.5	
	1	12.9	0.0208	195,247	0.0	0.0	
MC	2	12.9	0.0208	1,991,136	0.5	0.2	
with VMT	3	12.9	0.0208	2,564,545	0.6	0.3	
mix of	4	12.9	0.0208	1,689,510	0.4	0.2	
0.5%	5	12.9	0.0208	1,422,562	0.3	0.2	

Table 5.5–9. Daily PM_{2.5} emissions in Maricopa County by facility type, vehicle class and area type (excludes fugitive dust).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
INTERSTATE, FREEWAY, and EXPRESSWAY		1	59.7	0.0046	1,129,051	5.2	2.3
	LDGV	2	60.3	0.0046	9,046,583	41.4	18.8
	with VMT	3	63.2	0.0046	6,240,489	28.5	12.9
	mix of	4	64.8	0.0046	4,525,653	20.7	9.4
	45.1%	5	64.2	0.0046	5,662,224	25.9	11.7
		1	59.7	0.0056	1,129,051	3.9	1.8
	LDGT1	2	60.3	0.0056	9,046,583	31.5	14.3
	with VMT	3	63.2	0.0056	6,240,489	21.7	9.9
	mix of	4	64.8	0.0056	4,525,653	15.8	7.2
	28.2%	5	64.2	0.0056	5,662,224	19.7	8.9
		1	59.7	0.0087	1,129,051	2.4	1.1
	LDGT2	2	60.3	0.0087	9,046,583	19.4	8.8
	with VMT	3	63.2	0.0087	6,240,489	13.4	6.1
	mix of	4	64.8	0.0087	4,525,653	9.7	4.4
	11.2%	5	64.2	0.0087	5,662,224	12.1	5.5
		1	59.7	0.0569	1,129,051	5.0	2.3
	HDGV	2	60.3	0.0569	9,046,583	40.4	18.3
	with VMT	3	63.2	0.0569	6,240,489	27.9	12.6
	mix of	4	64.8	0.0569	4,525,653	20.2	9.2
	3.6%	5	64.2	0.0569	5,662,224	25.3	11.5
	1	59.7	0.1567	1,129,051	0.9	0.4	
LDDV	2	60.3	0.1567	9,046,583	6.9	3.1	
with VMT	3	63.2	0.1567	6,240,489	4.7	2.2	
mix of	4	64.8	0.1567	4,525,653	3.4	1.6	
0.2%	5	64.2	0.1567	5,662,224	4.3	2.0	
	1	59.7	0.1159	1,129,051	6.2	2.8	
LDDT	2	60.3	0.1159	9,046,583	49.9	22.6	
with VMT	3	63.2	0.1159	6,240,489	34.4	15.6	
mix of	4	64.8	0.1159	4,525,653	25.0	11.3	
2.2%	5	64.2	0.1159	5,662,224	31.2	14.2	
	1	59.7	0.3325	1,129,051	75.2	34.1	
HDDV	2	60.3	0.3325	9,046,583	602.7	273.4	
with VMT	3	63.2	0.3325	6,240,489	415.8	188.6	
mix of	4	64.8	0.3325	4,525,653	301.5	136.8	
9.1%	5	64.2	0.3325	5,662,224	377.2	171.1	
	1	59.7	0.0143	1,129,051	0.2	0.1	
MC	2	60.3	0.0143	9,046,583	1.5	0.7	
with VMT	3	63.2	0.0143	6,240,489	1.0	0.5	
mix of	4	64.8	0.0143	4,525,653	0.7	0.3	
0.5%	5	64.2	0.0143	5,662,224	0.9	0.4	

Table 5.5–9. Daily PM_{2.5} emissions in Maricopa County by facility type, vehicle class and area type (excludes fugitive dust).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
		1	30.3	0.0047	1,087,462	5.1	2.3
PRINCIPAL	LDGV	2	34.4	0.0046	8,834,531	40.4	18.3
ARTERIAL	with VMT	3	36.1	0.0046	9,795,953	44.8	20.3
&	mix of	4	39.0	0.0046	6,923,412	31.7	14.4
MINOR	45.1%	5	42.6	0.0046	3,738,642	17.1	7.8
ARTERIAL		1	30.3	0.0056	1,087,462	3.8	1.7
	LDGT1	2	34.4	0.0056	8,834,531	30.8	14.0
	with VMT	3	36.1	0.0056	9,795,953	34.1	15.5
	mix of	4	39.0	0.0056	6,923,412	24.1	10.9
	28.2%	5	42.6	0.0056	3,738,642	13.0	5.9
		1	30.3	0.0088	1,087,462	2.4	1.1
	LDGT2	2	34.4	0.0087	8,834,531	18.9	8.6
	with VMT	3	36.1	0.0087	9,795,953	21.0	9.5
	mix of	4	39.0	0.0087	6,923,412	14.8	6.7
	11.2%	5	42.6	0.0087	3,738,642	8.0	3.6
		1	30.3	0.0568	1,087,462	4.8	2.2
	HDGV	2	34.4	0.0568	8,834,531	39.4	17.9
	with VMT	3	36.1	0.0569	9,795,953	43.7	19.8
	mix of	4	39.0	0.0569	6,923,412	30.9	14.0
	3.6%	5	42.6	0.0569	3,738,642	16.7	7.6
		1	30.3	0.1567	1,087,462	0.8	0.4
	LDDV	2	34.4	0.1567	8,834,531	6.7	3.0
	with VMT	3	36.1	0.1567	9,795,953	7.4	3.4
	mix of	4	39.0	0.1567	6,923,412	5.3	2.4
	0.2%	5	42.6	0.1567	3,738,642	2.8	1.3
		1	30.3	0.1159	1,087,462	6.0	2.7
	LDDT	2	34.4	0.1159	8,834,531	48.8	22.1
	with VMT	3	36.1	0.1159	9,795,953	54.1	24.5
	mix of	4	39.0	0.1159	6,923,412	38.2	17.3
	2.2%	5	42.6	0.1159	3,738,642	20.6	9.4
		1	30.3	0.3325	1,087,462	72.5	32.9
	HDDV	2	34.4	0.3325	8,834,531	588.6	267.0
	with VMT	3	36.1	0.3325	9,795,953	652.7	296.0
	mix of	4	39.0	0.3325	6,923,412	461.3	209.2
	9.1%	5	42.6	0.3325	3,738,642	249.1	113.0
		1	30.3	0.0144	1,087,462	0.2	0.1
	MC	2	34.4	0.0143	8,834,531	1.4	0.6
	with VMT	3	36.1	0.0143	9,795,953	1.6	0.7
	mix of	4	39.0	0.0143	6,923,412	1.1	0.5
	0.5%	5	42.6	0.0143	3,738,642	0.6	0.3

Table 5.5–9. Daily PM_{2.5} emissions in Maricopa County by facility type, vehicle class and area type (excludes fugitive dust).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
COLLECTOR		1	18.2	0.0050	1,046,993	5.2	2.4
	LDGV	2	19.1	0.0050	2,727,290	13.6	6.1
	with VMT	3	24.4	0.0049	1,694,159	8.3	3.7
	mix of	4	24.7	0.0048	872,616	4.2	1.9
	45.1%	5	28.2	0.0048	2,390,942	11.4	5.2
		1	18.2	0.0058	1,046,993	3.8	1.7
	LDGT1	2	19.1	0.0058	2,727,290	9.8	4.5
	with VMT	3	24.4	0.0057	1,694,159	6.0	2.7
	mix of	4	24.7	0.0057	872,616	3.1	1.4
	28.2%	5	28.2	0.0057	2,390,942	8.5	3.8
		1	18.2	0.0089	1,046,993	2.3	1.0
	LDGT2	2	19.1	0.0089	2,727,290	6.0	2.7
	with VMT	3	24.4	0.0089	1,694,159	3.7	1.7
	mix of	4	24.7	0.0089	872,616	1.9	0.9
	11.2%	5	28.2	0.0088	2,390,942	5.2	2.3
		1	18.2	0.0566	1,046,993	4.7	2.1
	HDGV	2	19.1	0.0566	2,727,290	12.1	5.5
	with VMT	3	24.4	0.0567	1,694,159	7.5	3.4
	mix of	4	24.7	0.0567	872,616	3.9	1.8
	3.6%	5	28.2	0.0567	2,390,942	10.6	4.8
		1	18.2	0.1567	1,046,993	0.8	0.4
	LDDV	2	19.1	0.1567	2,727,290	2.1	0.9
	with VMT	3	24.4	0.1567	1,694,159	1.3	0.6
	mix of	4	24.7	0.1567	872,616	0.7	0.3
	0.2%	5	28.2	0.1567	2,390,942	1.8	0.8
	1	18.2	0.1159	1,046,993	5.8	2.6	
LDDT	2	19.1	0.1159	2,727,290	15.1	6.8	
with VMT	3	24.4	0.1159	1,694,159	9.3	4.2	
mix of	4	24.7	0.1159	872,616	4.8	2.2	
2.2%	5	28.2	0.1159	2,390,942	13.2	6.0	
	1	18.2	0.3325	1,046,993	69.8	31.6	
HDDV	2	19.1	0.3325	2,727,290	181.7	82.4	
with VMT	3	24.4	0.3325	1,694,159	112.9	51.2	
mix of	4	24.7	0.3325	872,616	58.1	26.4	
9.1%	5	28.2	0.3325	2,390,942	159.3	72.3	
	1	18.2	0.0145	1,046,993	0.2	0.1	
MC	2	19.1	0.0145	2,727,290	0.4	0.2	
with VMT	3	24.4	0.0144	1,694,159	0.3	0.1	
mix of	4	24.7	0.0144	872,616	0.1	0.1	
0.5%	5	28.2	0.0144	2,390,942	0.4	0.2	

Table 5.5–9. Daily PM_{2.5} emissions in Maricopa County by facility type, vehicle class and area type (excludes fugitive dust).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
LOCAL		1	12.9	0.0050	195,247	1.0	0.4
	LDGV	2	12.9	0.0050	1,991,136	9.9	4.5
	with VMT	3	12.9	0.0050	2,564,545	12.7	5.8
	mix of	4	12.9	0.0050	1,689,510	8.4	3.8
	45.1%	5	12.9	0.0050	1,422,562	7.1	3.2
		1	12.9	0.0058	195,247	0.7	0.3
	LDGT1	2	12.9	0.0058	1,991,136	7.2	3.3
	with VMT	3	12.9	0.0058	2,564,545	9.3	4.2
	mix of	4	12.9	0.0058	1,689,510	6.1	2.8
	28.2%	5	12.9	0.0058	1,422,562	5.1	2.3
		1	12.9	0.0089	195,247	0.4	0.2
	LDGT2	2	12.9	0.0089	1,991,136	4.4	2.0
	with VMT	3	12.9	0.0089	2,564,545	5.6	2.5
	mix of	4	12.9	0.0089	1,689,510	3.7	1.7
	11.2%	5	12.9	0.0089	1,422,562	3.1	1.4
		1	12.9	0.0566	195,247	0.9	0.4
	HDGV	2	12.9	0.0566	1,991,136	8.8	4.0
	with VMT	3	12.9	0.0566	2,564,545	11.4	5.2
	mix of	4	12.9	0.0566	1,689,510	7.5	3.4
	3.6%	5	12.9	0.0566	1,422,562	6.3	2.9
	1	12.9	0.1567	195,247	0.1	0.1	
LDDV	2	12.9	0.1567	1,991,136	1.5	0.7	
with VMT	3	12.9	0.1567	2,564,545	1.9	0.9	
mix of	4	12.9	0.1567	1,689,510	1.3	0.6	
0.2%	5	12.9	0.1567	1,422,562	1.1	0.5	
	1	12.9	0.1159	195,247	1.1	0.5	
LDDT	2	12.9	0.1159	1,991,136	11.0	5.0	
with VMT	3	12.9	0.1159	2,564,545	14.2	6.4	
mix of	4	12.9	0.1159	1,689,510	9.3	4.2	
2.2%	5	12.9	0.1159	1,422,562	7.9	3.6	
	1	12.9	0.3325	195,247	13.0	5.9	
HDDV	2	12.9	0.3325	1,991,136	132.7	60.2	
with VMT	3	12.9	0.3325	2,564,545	170.9	77.5	
mix of	4	12.9	0.3325	1,689,510	112.6	51.1	
9.1%	5	12.9	0.3325	1,422,562	94.8	43.0	
	1	12.9	0.0145	195,247	0.0	0.0	
MC	2	12.9	0.0145	1,991,136	0.3	0.1	
with VMT	3	12.9	0.0145	2,564,545	0.4	0.2	
mix of	4	12.9	0.0145	1,689,510	0.3	0.1	
0.5%	5	12.9	0.0145	1,422,562	0.2	0.1	

Table 5.5–10. Daily NO_x emissions in Maricopa County by facility type, vehicle class and area type (annual average day).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
INTERSTATE, FREEWAY, and EXPRESSWAY		1	59.7	0.964	1,129,051	1,082.0	490.8
	LDGV	2	60.3	0.966	9,046,583	8,686.1	3,940.0
	with VMT	3	63.2	0.968	6,240,489	6,001.1	2,722.1
	mix of	4	64.8	0.968	4,525,653	4,352.1	1,974.1
	45.1%	5	64.2	0.968	5,662,224	5,445.0	2,469.9
		1	59.7	1.188	1,129,051	834.6	378.6
	LDGT1	2	60.3	1.191	9,046,583	6,700.8	3,039.5
	with VMT	3	63.2	1.193	6,240,489	4,630.1	2,100.2
	mix of	4	64.8	1.193	4,525,653	3,357.8	1,523.1
	28.2%	5	64.2	1.193	5,662,224	4,201.1	1,905.6
		1	59.7	1.486	1,129,051	412.6	187.2
	LDGT2	2	60.3	1.488	9,046,583	3,312.5	1,502.5
	with VMT	3	63.2	1.490	6,240,489	2,287.9	1,037.8
	mix of	4	64.8	1.490	4,525,653	1,659.2	752.6
	11.2%	5	64.2	1.490	5,662,224	2,075.9	941.6
		1	59.7	5.537	1,129,051	490.6	222.5
	HDGV	2	60.3	5.560	9,046,583	3,947.2	1,790.5
	with VMT	3	63.2	5.575	6,240,489	2,730.3	1,238.4
	mix of	4	64.8	5.575	4,525,653	1,980.0	898.1
	3.6%	5	64.2	5.575	5,662,224	2,477.3	1,123.7
	1	59.7	1.787	1,129,051	9.8	4.4	
LDDV	2	60.3	1.832	9,046,583	80.4	36.5	
with VMT	3	63.2	1.862	6,240,489	56.4	25.6	
mix of	4	64.8	1.862	4,525,653	40.9	18.5	
0.2%	5	64.2	1.862	5,662,224	51.1	23.2	
	1	59.7	1.180	1,129,051	63.4	28.8	
LDDT	2	60.3	1.210	9,046,583	521.2	236.4	
with VMT	3	63.2	1.230	6,240,489	365.5	165.8	
mix of	4	64.8	1.230	4,525,653	265.0	120.2	
2.2%	5	64.2	1.230	5,662,224	331.6	150.4	
	1	59.7	23.357	1,129,051	5,284.2	2,396.9	
HDDV	2	60.3	23.825	9,046,583	43,187.5	19,589.8	
with VMT	3	63.2	24.130	6,240,489	30,173.0	13,686.5	
mix of	4	64.8	24.130	4,525,653	21,881.7	9,925.5	
9.1%	5	64.2	24.130	5,662,224	27,377.0	12,418.2	
	1	59.7	1.680	1,129,051	21.3	9.7	
MC	2	60.3	1.699	9,046,583	172.8	78.4	
with VMT	3	63.2	1.710	6,240,489	120.0	54.4	
mix of	4	64.8	1.710	4,525,653	87.0	39.5	
0.5%	5	64.2	1.710	5,662,224	108.9	49.4	

Table 5.5–10. Daily NO_x emissions in Maricopa County by facility type, vehicle class and area type (annual average day) (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
		1	30.3	0.900	1,087,462	972.9	441.3
PRINCIPAL	LDGV	2	34.4	0.883	8,834,531	7,755.4	3,517.9
ARTERIALS	with VMT	3	36.1	0.883	9,795,953	8,600.4	3,901.1
&	mix of	4	39.0	0.884	6,923,412	6,080.5	2,758.1
MINOR	45.1%	5	42.6	0.893	3,738,642	3,317.7	1,504.9
ARTERIALS		1	30.3	1.088	1,087,462	736.1	333.9
	LDGT1	2	34.4	1.076	8,834,531	5,914.5	2,682.8
	with VMT	3	36.1	1.078	9,795,953	6,568.5	2,979.5
	mix of	4	39.0	1.080	6,923,412	4,650.5	2,109.5
	28.2%	5	42.6	1.092	3,738,642	2,540.6	1,152.4
		1	30.3	1.380	1,087,462	369.2	167.5
	LDGT2	2	34.4	1.366	8,834,531	2,969.5	1,346.9
	with VMT	3	36.1	1.368	9,795,953	3,296.2	1,495.2
	mix of	4	39.0	1.369	6,923,412	2,331.2	1,057.4
	11.2%	5	42.6	1.382	3,738,642	1,270.6	576.3
		1	30.3	4.426	1,087,462	377.7	171.3
	HDGV	2	34.4	4.573	8,834,531	3,170.5	1,438.1
	with VMT	3	36.1	4.635	9,795,953	3,563.3	1,616.3
	mix of	4	39.0	4.738	6,923,412	2,574.5	1,167.8
	3.6%	5	42.6	4.868	3,738,642	1,428.3	647.9
		1	30.3	1.005	1,087,462	5.3	2.4
	LDDV	2	34.4	0.997	8,834,531	42.7	19.4
	with VMT	3	36.1	1.002	9,795,953	47.6	21.6
	mix of	4	39.0	1.017	6,923,412	34.1	15.5
	0.2%	5	42.6	1.056	3,738,642	19.1	8.7
		1	30.3	0.658	1,087,462	34.1	15.5
	LDDT	2	34.4	0.653	8,834,531	274.7	124.6
	with VMT	3	36.1	0.657	9,795,953	306.3	138.9
	mix of	4	39.0	0.666	6,923,412	219.5	99.6
	2.2%	5	42.6	0.692	3,738,642	123.2	55.9
		1	30.3	13.045	1,087,462	2,842.5	1,289.4
	HDDV	2	34.4	12.970	8,834,531	22,959.1	10,414.2
	with VMT	3	36.1	13.024	9,795,953	25,565.2	11,596.4
	mix of	4	39.0	12.429	6,923,412	17,242.6	7,821.3
	9.1%	5	42.6	12.827	3,738,642	9,609.0	4,358.7
		1	30.3	1.172	1,087,462	14.3	6.5
	MC	2	34.4	1.209	8,834,531	120.1	54.5
	with VMT	3	36.1	1.220	9,795,953	134.3	60.9
	mix of	4	39.0	1.238	6,923,412	96.4	43.7
	0.5%	5	42.6	1.257	3,738,642	52.8	24.0

Table 5.5–10. Daily NO_x emissions in Maricopa County by facility type, vehicle class and area type (annual average day) (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
COLLECTOR		1	18.2	1.037	1,046,993	1,079.1	489.5
	LDGV	2	19.1	1.021	2,727,290	2,768.3	1,255.7
	with VMT	3	24.4	0.950	1,694,159	1,599.7	725.6
	mix of	4	24.7	0.947	872,616	821.3	372.5
	45.1%	5	28.2	0.914	2,390,942	2,172.8	985.6
		1	18.2	1.223	1,046,993	796.8	361.4
	LDGT1	2	19.1	1.207	2,727,290	2,047.9	928.9
	with VMT	3	24.4	1.136	1,694,159	1,197.1	543.0
	mix of	4	24.7	1.133	872,616	614.9	278.9
	28.2%	5	28.2	1.101	2,390,942	1,637.1	742.6
		1	18.2	1.548	1,046,993	398.7	180.9
	LDGT2	2	19.1	1.528	2,727,290	1,025.4	465.1
	with VMT	3	24.4	1.440	1,694,159	600.0	272.2
	mix of	4	24.7	1.436	872,616	308.2	139.8
	11.2%	5	28.2	1.396	2,390,942	821.2	372.5
		1	18.2	4.004	1,046,993	328.9	149.2
	HDGV	2	19.1	4.031	2,727,290	862.8	391.3
	with VMT	3	24.4	4.217	1,694,159	560.7	254.3
	mix of	4	24.7	4.226	872,616	289.4	131.3
	3.6%	5	28.2	4.356	2,390,942	817.4	370.8
		1	18.2	1.172	1,046,993	6.0	2.7
	LDDV	2	19.1	1.151	2,727,290	15.2	6.9
	with VMT	3	24.4	1.057	1,694,159	8.7	3.9
	mix of	4	24.7	1.053	872,616	4.5	2.0
	0.2%	5	28.2	1.019	2,390,942	11.8	5.4
	1	18.2	0.770	1,046,993	38.4	17.4	
LDDT	2	19.1	0.756	2,727,290	98.2	44.5	
with VMT	3	24.4	0.693	1,694,159	55.9	25.4	
mix of	4	24.7	0.691	872,616	28.7	13.0	
2.2%	5	28.2	0.668	2,390,942	76.0	34.5	
	1	18.2	14.028	1,046,993	2,942.9	1,334.9	
HDDV	2	19.1	13.815	2,727,290	7,549.4	3,424.4	
with VMT	3	24.4	12.843	1,694,159	4,359.7	1,977.6	
mix of	4	24.7	12.800	872,616	2,238.1	1,015.2	
9.1%	5	28.2	12.450	2,390,942	5,964.8	2,705.6	
	1	18.2	1.030	1,046,993	12.1	5.5	
MC	2	19.1	1.039	2,727,290	31.9	14.5	
with VMT	3	24.4	1.101	1,694,159	21.0	9.5	
mix of	4	24.7	1.107	872,616	10.9	4.9	
0.5%	5	28.2	1.148	2,390,942	30.9	14.0	

Table 5.5–10. Daily NO_x emissions in Maricopa County by facility type, vehicle class and area type (annual average day) (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
LOCAL		1	12.9	1.173	195,247	227.7	103.3
	LDGV	2	12.9	1.173	1,991,136	2,321.7	1,053.1
	with VMT	3	12.9	1.173	2,564,545	2,990.3	1,356.4
	mix of	4	12.9	1.173	1,689,510	1,970.0	893.6
	45.1%	5	12.9	1.173	1,422,562	1,658.7	752.4
		1	12.9	1.362	195,247	165.5	75.1
	LDGT1	2	12.9	1.362	1,991,136	1,687.4	765.4
	with VMT	3	12.9	1.362	2,564,545	2,173.3	985.8
	mix of	4	12.9	1.362	1,689,510	1,431.8	649.5
	28.2%	5	12.9	1.362	1,422,562	1,205.5	546.8
		1	12.9	1.721	195,247	82.6	37.5
	LDGT2	2	12.9	1.721	1,991,136	842.8	382.3
	with VMT	3	12.9	1.721	2,564,545	1,085.5	492.4
	mix of	4	12.9	1.721	1,689,510	715.1	324.4
	11.2%	5	12.9	1.721	1,422,562	602.1	273.1
		1	12.9	3.820	195,247	58.5	26.5
	HDGV	2	12.9	3.820	1,991,136	596.8	270.7
	with VMT	3	12.9	3.820	2,564,545	768.7	348.7
	mix of	4	12.9	3.820	1,689,510	506.4	229.7
	3.6%	5	12.9	3.820	1,422,562	426.4	193.4
	1	12.9	1.330	195,247	1.3	0.6	
LDDV	2	12.9	1.330	1,991,136	12.8	5.8	
with VMT	3	12.9	1.330	2,564,545	16.5	7.5	
mix of	4	12.9	1.330	1,689,510	10.9	4.9	
0.2%	5	12.9	1.330	1,422,562	9.2	4.2	
	1	12.9	0.875	195,247	8.1	3.7	
LDDT	2	12.9	0.875	1,991,136	83.0	37.6	
with VMT	3	12.9	0.875	2,564,545	106.8	48.5	
mix of	4	12.9	0.875	1,689,510	70.4	31.9	
2.2%	5	12.9	0.875	1,422,562	59.3	26.9	
	1	12.9	15.660	195,247	612.7	277.9	
HDDV	2	12.9	15.660	1,991,136	6,248.1	2,834.1	
with VMT	3	12.9	15.660	2,564,545	8,047.4	3,650.3	
mix of	4	12.9	15.660	1,689,510	5,301.6	2,404.8	
9.1%	5	12.9	15.660	1,422,562	4,463.9	2,024.8	
	1	12.9	0.990	195,247	2.2	1.0	
MC	2	12.9	0.990	1,991,136	22.2	10.1	
with VMT	3	12.9	0.990	2,564,545	28.5	12.9	
mix of	4	12.9	0.990	1,689,510	18.8	8.5	
0.5%	5	12.9	0.990	1,422,562	15.8	7.2	

Table 5.5–11. Daily sulfur dioxide (gaseous) emissions in Maricopa County by facility type, vehicle class and area type.

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
INTERSTATE, FREEWAY, and EXPRESSWAY	LDGV with VMT mix of 45.1%	1	59.7	0.0119	1,129,051	13.4	6.1
		2	60.3	0.0119	9,046,583	107.0	48.5
		3	63.2	0.0119	6,240,489	73.8	33.5
		4	64.8	0.0119	4,525,653	53.5	24.3
		5	64.2	0.0119	5,662,224	67.0	30.4
	LDGT1 with VMT mix of 28.2%	1	59.7	0.0151	1,129,051	10.6	4.8
		2	60.3	0.0151	9,046,583	85.0	38.5
		3	63.2	0.0151	6,240,489	58.6	26.6
		4	64.8	0.0151	4,525,653	42.5	19.3
		5	64.2	0.0151	5,662,224	53.2	24.1
	LDGT2 with VMT mix of 11.2%	1	59.7	0.0198	1,129,051	5.5	2.5
		2	60.3	0.0198	9,046,583	44.1	20.0
		3	63.2	0.0198	6,240,489	30.4	13.8
		4	64.8	0.0198	4,525,653	22.0	10.0
		5	64.2	0.0198	5,662,224	27.6	12.5
	HDGV with VMT mix of 3.6%	1	59.7	0.0298	1,129,051	2.6	1.2
		2	60.3	0.0298	9,046,583	21.2	9.6
		3	63.2	0.0298	6,240,489	14.6	6.6
		4	64.8	0.0298	4,525,653	10.6	4.8
		5	64.2	0.0298	5,662,224	13.2	6.0
LDDV with VMT mix of 0.2%	1	59.7	0.0637	1,129,051	0.3	0.2	
	2	60.3	0.0637	9,046,583	2.8	1.3	
	3	63.2	0.0637	6,240,489	1.9	0.9	
	4	64.8	0.0637	4,525,653	1.4	0.6	
	5	64.2	0.0637	5,662,224	1.7	0.8	
LDDT with VMT mix of 2.2%	1	59.7	0.0910	1,129,051	4.9	2.2	
	2	60.3	0.0910	9,046,583	39.2	17.8	
	3	63.2	0.0910	6,240,489	27.0	12.3	
	4	64.8	0.0910	4,525,653	19.6	8.9	
	5	64.2	0.0910	5,662,224	24.5	11.1	
HDDV with VMT mix of 9.1%	1	59.7	0.2770	1,129,051	62.7	28.4	
	2	60.3	0.2770	9,046,583	502.1	227.8	
	3	63.2	0.2770	6,240,489	346.4	157.1	
	4	64.8	0.2770	4,525,653	251.2	113.9	
	5	64.2	0.2770	5,662,224	314.3	142.6	
MC with VMT mix of 0.5%	1	59.7	0.0057	1,129,051	0.1	0.0	
	2	60.3	0.0057	9,046,583	0.6	0.3	
	3	63.2	0.0057	6,240,489	0.4	0.2	
	4	64.8	0.0057	4,525,653	0.3	0.1	
	5	64.2	0.0057	5,662,224	0.4	0.2	

Table 5.5–11. Daily sulfur dioxide (gaseous) emissions in Maricopa County by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
		1	30.3	0.0119	1,087,462	12.9	5.8
PRINCIPAL	LDGV	2	34.4	0.0119	8,834,531	104.5	47.4
ARTERIAL	with VMT	3	36.1	0.0119	9,795,953	115.9	52.6
&	mix of	4	39.0	0.0119	6,923,412	81.9	37.1
MINOR	45.1%	5	42.6	0.0119	3,738,642	44.2	20.1
ARTERIAL		1	30.3	0.0151	1,087,462	10.2	4.6
	LDGT1	2	34.4	0.0151	8,834,531	83.0	37.6
	with VMT	3	36.1	0.0151	9,795,953	92.0	41.7
	mix of	4	39.0	0.0151	6,923,412	65.0	29.5
	28.2%	5	42.6	0.0151	3,738,642	35.1	15.9
		1	30.3	0.0198	1,087,462	5.3	2.4
	LDGT2	2	34.4	0.0198	8,834,531	43.0	19.5
	with VMT	3	36.1	0.0198	9,795,953	47.7	21.6
	mix of	4	39.0	0.0198	6,923,412	33.7	15.3
	11.2%	5	42.6	0.0198	3,738,642	18.2	8.3
		1	30.3	0.0298	1,087,462	2.5	1.2
	HDGV	2	34.4	0.0298	8,834,531	20.7	9.4
	with VMT	3	36.1	0.0298	9,795,953	22.9	10.4
	mix of	4	39.0	0.0298	6,923,412	16.2	7.3
	3.6%	5	42.6	0.0298	3,738,642	8.7	4.0
		1	30.3	0.0637	1,087,462	0.3	0.2
	LDDV	2	34.4	0.0637	8,834,531	2.7	1.2
	with VMT	3	36.1	0.0637	9,795,953	3.0	1.4
	mix of	4	39.0	0.0637	6,923,412	2.1	1.0
	0.2%	5	42.6	0.0637	3,738,642	1.2	0.5
		1	30.3	0.0910	1,087,462	4.7	2.1
	LDDT	2	34.4	0.0910	8,834,531	38.3	17.4
	with VMT	3	36.1	0.0910	9,795,953	42.4	19.3
	mix of	4	39.0	0.0910	6,923,412	30.0	13.6
	2.2%	5	42.6	0.0910	3,738,642	16.2	7.3
		1	30.3	0.2770	1,087,462	60.4	27.4
	HDDV	2	34.4	0.2770	8,834,531	490.4	222.4
	with VMT	3	36.1	0.2770	9,795,953	543.7	246.6
	mix of	4	39.0	0.2770	6,923,412	384.3	174.3
	9.1%	5	42.6	0.2770	3,738,642	207.5	94.1
		1	30.3	0.0057	1,087,462	0.1	0.0
	MC	2	34.4	0.0057	8,834,531	0.6	0.3
	with VMT	3	36.1	0.0057	9,795,953	0.6	0.3
	mix of	4	39.0	0.0057	6,923,412	0.4	0.2
	0.5%	5	42.6	0.0057	3,738,642	0.2	0.1

Table 5.5–11. Daily sulfur dioxide (gaseous) emissions in Maricopa County by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
COLLECTOR		1	18.2	0.0118	1,046,993	12.3	5.6
	LDGV	2	19.1	0.0118	2,727,290	32.0	14.5
	with VMT	3	24.4	0.0118	1,694,159	19.9	9.0
	mix of	4	24.7	0.0118	872,616	10.2	4.6
	45.1%	5	28.2	0.0118	2,390,942	28.0	12.7
		1	18.2	0.0151	1,046,993	9.8	4.5
	LDGT1	2	19.1	0.0151	2,727,290	25.6	11.6
	with VMT	3	24.4	0.0151	1,694,159	15.9	7.2
	mix of	4	24.7	0.0151	872,616	8.2	3.7
	28.2%	5	28.2	0.0151	2,390,942	22.5	10.2
		1	18.2	0.0198	1,046,993	5.1	2.3
	LDGT2	2	19.1	0.0198	2,727,290	13.3	6.0
	with VMT	3	24.4	0.0198	1,694,159	8.3	3.7
	mix of	4	24.7	0.0198	872,616	4.3	1.9
	11.2%	5	28.2	0.0198	2,390,942	11.6	5.3
		1	18.2	0.0299	1,046,993	2.5	1.1
	HDGV	2	19.1	0.0299	2,727,290	6.4	2.9
	with VMT	3	24.4	0.0299	1,694,159	4.0	1.8
	mix of	4	24.7	0.0299	872,616	2.0	0.9
	3.6%	5	28.2	0.0299	2,390,942	5.6	2.5
		1	18.2	0.0637	1,046,993	0.3	0.1
	LDDV	2	19.1	0.0637	2,727,290	0.8	0.4
	with VMT	3	24.4	0.0637	1,694,159	0.5	0.2
	mix of	4	24.7	0.0637	872,616	0.3	0.1
	0.2%	5	28.2	0.0637	2,390,942	0.7	0.3
	1	18.2	0.0910	1,046,993	4.5	2.1	
LDDT	2	19.1	0.0910	2,727,290	11.8	5.4	
with VMT	3	24.4	0.0910	1,694,159	7.3	3.3	
mix of	4	24.7	0.0910	872,616	3.8	1.7	
2.2%	5	28.2	0.0910	2,390,942	10.4	4.7	
	1	18.2	0.2770	1,046,993	58.1	26.4	
HDDV	2	19.1	0.2770	2,727,290	151.4	68.7	
with VMT	3	24.4	0.2770	1,694,159	94.0	42.7	
mix of	4	24.7	0.2770	872,616	48.4	22.0	
9.1%	5	28.2	0.2770	2,390,942	132.7	60.2	
	1	18.2	0.0057	1,046,993	0.1	0.0	
MC	2	19.1	0.0057	2,727,290	0.2	0.1	
with VMT	3	24.4	0.0057	1,694,159	0.1	0.0	
mix of	4	24.7	0.0057	872,616	0.1	0.0	
0.5%	5	28.2	0.0057	2,390,942	0.2	0.1	

Table 5.5–11. Daily sulfur dioxide (gaseous) emissions in Maricopa County by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
LOCAL		1	12.9	0.0118	195,247	2.3	1.0
	LDGV	2	12.9	0.0118	1,991,136	23.4	10.6
	with VMT	3	12.9	0.0118	2,564,545	30.1	13.6
	mix of	4	12.9	0.0118	1,689,510	19.8	9.0
	45.1%	5	12.9	0.0118	1,422,562	16.7	7.6
		1	12.9	0.0151	195,247	1.8	0.8
	LDGT1	2	12.9	0.0151	1,991,136	18.7	8.5
	with VMT	3	12.9	0.0151	2,564,545	24.1	10.9
	mix of	4	12.9	0.0151	1,689,510	15.9	7.2
	28.2%	5	12.9	0.0151	1,422,562	13.4	6.1
		1	12.9	0.0198	195,247	1.0	0.4
	LDGT2	2	12.9	0.0198	1,991,136	9.7	4.4
	with VMT	3	12.9	0.0198	2,564,545	12.5	5.7
	mix of	4	12.9	0.0198	1,689,510	8.2	3.7
	11.2%	5	12.9	0.0198	1,422,562	6.9	3.1
		1	12.9	0.0299	195,247	0.5	0.2
	HDGV	2	12.9	0.0299	1,991,136	4.7	2.1
	with VMT	3	12.9	0.0299	2,564,545	6.0	2.7
	mix of	4	12.9	0.0299	1,689,510	4.0	1.8
	3.6%	5	12.9	0.0299	1,422,562	3.3	1.5
		1	12.9	0.0637	195,247	0.1	0.0
	LDDV	2	12.9	0.0637	1,991,136	0.6	0.3
	with VMT	3	12.9	0.0637	2,564,545	0.8	0.4
	mix of	4	12.9	0.0637	1,689,510	0.5	0.2
	0.2%	5	12.9	0.0637	1,422,562	0.4	0.2
	1	12.9	0.0910	195,247	0.8	0.4	
LDDT	2	12.9	0.0910	1,991,136	8.6	3.9	
with VMT	3	12.9	0.0910	2,564,545	11.1	5.0	
mix of	4	12.9	0.0910	1,689,510	7.3	3.3	
2.2%	5	12.9	0.0910	1,422,562	6.2	2.8	
	1	12.9	0.2770	195,247	10.8	4.9	
HDDV	2	12.9	0.2770	1,991,136	110.5	50.1	
with VMT	3	12.9	0.2770	2,564,545	142.3	64.6	
mix of	4	12.9	0.2770	1,689,510	93.8	42.5	
9.1%	5	12.9	0.2770	1,422,562	79.0	35.8	
	1	12.9	0.0057	195,247	0.0	0.0	
MC	2	12.9	0.0057	1,991,136	0.1	0.1	
with VMT	3	12.9	0.0057	2,564,545	0.2	0.1	
mix of	4	12.9	0.0057	1,689,510	0.1	0.0	
0.5%	5	12.9	0.0057	1,422,562	0.1	0.0	

Table 5.5–12. Daily ammonia emissions in Maricopa County by facility type, vehicle class and area type.

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
INTERSTATE, FREEWAY, and EXPRESSWAY	LDGV with VMT mix of 45.1%	1	59.7	0.1002	1,129,051	112.4	51.0
		2	60.3	0.1002	9,046,583	901.0	408.7
		3	63.2	0.1002	6,240,489	621.5	281.9
		4	64.8	0.1002	4,525,653	450.7	204.4
		5	64.2	0.1002	5,662,224	563.9	255.8
	LDGT1 with VMT mix of 28.2%	1	59.7	0.0983	1,129,051	69.0	31.3
		2	60.3	0.0983	9,046,583	553.2	250.9
		3	63.2	0.0983	6,240,489	381.6	173.1
		4	64.8	0.0983	4,525,653	276.7	125.5
		5	64.2	0.0983	5,662,224	346.2	157.1
	LDGT2 with VMT mix of 11.2%	1	59.7	0.0973	1,129,051	27.0	12.3
		2	60.3	0.0973	9,046,583	216.5	98.2
		3	63.2	0.0973	6,240,489	149.4	67.8
		4	64.8	0.0973	4,525,653	108.3	49.1
		5	64.2	0.0973	5,662,224	135.5	61.5
	HDGV with VMT mix of 3.6%	1	59.7	0.0451	1,129,051	4.0	1.8
		2	60.3	0.0451	9,046,583	32.0	14.5
		3	63.2	0.0451	6,240,489	22.1	10.0
		4	64.8	0.0451	4,525,653	16.0	7.3
		5	64.2	0.0451	5,662,224	20.0	9.1
	LDDV with VMT mix of 0.2%	1	59.7	0.0068	1,129,051	0.0	0.0
		2	60.3	0.0068	9,046,583	0.3	0.1
		3	63.2	0.0068	6,240,489	0.2	0.1
		4	64.8	0.0068	4,525,653	0.1	0.1
		5	64.2	0.0068	5,662,224	0.2	0.1
LDDT with VMT mix of 2.2%	1	59.7	0.0068	1,129,051	0.4	0.2	
	2	60.3	0.0068	9,046,583	2.9	1.3	
	3	63.2	0.0068	6,240,489	2.0	0.9	
	4	64.8	0.0068	4,525,653	1.5	0.7	
	5	64.2	0.0068	5,662,224	1.8	0.8	
HDDV with VMT mix of 9.1%	1	59.7	0.0270	1,129,051	6.1	2.8	
	2	60.3	0.0270	9,046,583	48.9	22.2	
	3	63.2	0.0270	6,240,489	33.8	15.3	
	4	64.8	0.0270	4,525,653	24.5	11.1	
	5	64.2	0.0270	5,662,224	30.6	13.9	
MC with VMT mix of 0.5%	1	59.7	0.0113	1,129,051	0.1	0.1	
	2	60.3	0.0113	9,046,583	1.1	0.5	
	3	63.2	0.0113	6,240,489	0.8	0.4	
	4	64.8	0.0113	4,525,653	0.6	0.3	
	5	64.2	0.0113	5,662,224	0.7	0.3	

Table 5.5–12. Daily ammonia emissions in Maricopa County by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
PRINCIPAL ARTERIAL & MINOR ARTERIAL		1	30.3	0.1002	1,087,462	108.3	49.1
	LDGV	2	34.4	0.1002	8,834,531	879.9	399.1
	with VMT	3	36.1	0.1002	9,795,953	975.6	442.5
	mix of	4	39.0	0.1002	6,923,412	689.5	312.8
	45.1%	5	42.6	0.1002	3,738,642	372.3	168.9
		1	30.3	0.0983	1,087,462	66.5	30.2
	LDGT1	2	34.4	0.0983	8,834,531	540.2	245.0
	with VMT	3	36.1	0.0983	9,795,953	599.0	271.7
	mix of	4	39.0	0.0983	6,923,412	423.4	192.0
	28.2%	5	42.6	0.0983	3,738,642	228.6	103.7
		1	30.3	0.0973	1,087,462	26.0	11.8
	LDGT2	2	34.4	0.0973	8,834,531	211.5	95.9
	with VMT	3	36.1	0.0973	9,795,953	234.5	106.4
	mix of	4	39.0	0.0973	6,923,412	165.7	75.2
	11.2%	5	42.6	0.0973	3,738,642	89.5	40.6
		1	30.3	0.0451	1,087,462	3.8	1.7
	HDGV	2	34.4	0.0451	8,834,531	31.3	14.2
	with VMT	3	36.1	0.0451	9,795,953	34.7	15.7
	mix of	4	39.0	0.0451	6,923,412	24.5	11.1
	3.6%	5	42.6	0.0451	3,738,642	13.2	6.0
		1	30.3	0.0068	1,087,462	0.0	0.0
	LDDV	2	34.4	0.0068	8,834,531	0.3	0.1
	with VMT	3	36.1	0.0068	9,795,953	0.3	0.1
	mix of	4	39.0	0.0068	6,923,412	0.2	0.1
	0.2%	5	42.6	0.0068	3,738,642	0.1	0.1
		1	30.3	0.0068	1,087,462	0.4	0.2
	LDDT	2	34.4	0.0068	8,834,531	2.9	1.3
	with VMT	3	36.1	0.0068	9,795,953	3.2	1.4
	mix of	4	39.0	0.0068	6,923,412	2.2	1.0
	2.2%	5	42.6	0.0068	3,738,642	1.2	0.5
		1	30.3	0.0270	1,087,462	5.9	2.7
	HDDV	2	34.4	0.0270	8,834,531	47.8	21.7
	with VMT	3	36.1	0.0270	9,795,953	53.0	24.0
	mix of	4	39.0	0.0270	6,923,412	37.5	17.0
	9.1%	5	42.6	0.0270	3,738,642	20.2	9.2
		1	30.3	0.0113	1,087,462	0.1	0.1
	MC	2	34.4	0.0113	8,834,531	1.1	0.5
	with VMT	3	36.1	0.0113	9,795,953	1.2	0.6
	mix of	4	39.0	0.0113	6,923,412	0.9	0.4
	0.5%	5	42.6	0.0113	3,738,642	0.5	0.2

Table 5.5–12. Daily ammonia emissions in Maricopa County by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
COLLECTOR		1	18.2	0.1002	1,046,993	104.3	47.3
	LDGV	2	19.1	0.1002	2,727,290	271.6	123.2
	with VMT	3	24.4	0.1002	1,694,159	168.7	76.5
	mix of	4	24.7	0.1002	872,616	86.9	39.4
	45.1%	5	28.2	0.1002	2,390,942	238.1	108.0
		1	18.2	0.0983	1,046,993	64.0	29.0
	LDGT1	2	19.1	0.0983	2,727,290	166.8	75.6
	with VMT	3	24.4	0.0983	1,694,159	103.6	47.0
	mix of	4	24.7	0.0983	872,616	53.4	24.2
	28.2%	5	28.2	0.0983	2,390,942	146.2	66.3
		1	18.2	0.0973	1,046,993	25.1	11.4
	LDGT2	2	19.1	0.0973	2,727,290	65.3	29.6
	with VMT	3	24.4	0.0973	1,694,159	40.6	18.4
	mix of	4	24.7	0.0973	872,616	20.9	9.5
	11.2%	5	28.2	0.0973	2,390,942	57.2	26.0
		1	18.2	0.0451	1,046,993	3.7	1.7
	HDGV	2	19.1	0.0451	2,727,290	9.7	4.4
	with VMT	3	24.4	0.0451	1,694,159	6.0	2.7
	mix of	4	24.7	0.0451	872,616	3.1	1.4
	3.6%	5	28.2	0.0451	2,390,942	8.5	3.8
		1	18.2	0.0068	1,046,993	0.0	0.0
	LDDV	2	19.1	0.0068	2,727,290	0.1	0.0
	with VMT	3	24.4	0.0068	1,694,159	0.1	0.0
	mix of	4	24.7	0.0068	872,616	0.0	0.0
	0.2%	5	28.2	0.0068	2,390,942	0.1	0.0
	1	18.2	0.0068	1,046,993	0.3	0.2	
LDDT	2	19.1	0.0068	2,727,290	0.9	0.4	
with VMT	3	24.4	0.0068	1,694,159	0.5	0.2	
mix of	4	24.7	0.0068	872,616	0.3	0.1	
2.2%	5	28.2	0.0068	2,390,942	0.8	0.4	
	1	18.2	0.0270	1,046,993	5.7	2.6	
HDDV	2	19.1	0.0270	2,727,290	14.8	6.7	
with VMT	3	24.4	0.0270	1,694,159	9.2	4.2	
mix of	4	24.7	0.0270	872,616	4.7	2.1	
9.1%	5	28.2	0.0270	2,390,942	12.9	5.9	
	1	18.2	0.0113	1,046,993	0.1	0.1	
MC	2	19.1	0.0113	2,727,290	0.3	0.2	
with VMT	3	24.4	0.0113	1,694,159	0.2	0.1	
mix of	4	24.7	0.0113	872,616	0.1	0.1	
0.5%	5	28.2	0.0113	2,390,942	0.3	0.1	

Table 5.5–12. Daily ammonia emissions in Maricopa County by facility type, vehicle class and area type (continued).

Facility type	Vehicle class	Area type	Speed (mph)	Emission factor (g/mi)	DVMT (miles)	Emissions (lb/day)	Emissions (kg/day)
LOCAL		1	12.9	0.1002	195,247	19.4	8.8
	LDGV	2	12.9	0.1002	1,991,136	198.3	90.0
	with VMT	3	12.9	0.1002	2,564,545	255.4	115.9
	mix of	4	12.9	0.1002	1,689,510	168.3	76.3
	45.1%	5	12.9	0.1002	1,422,562	141.7	64.3
		1	12.9	0.0983	195,247	11.9	5.4
	LDGT1	2	12.9	0.0983	1,991,136	121.8	55.2
	with VMT	3	12.9	0.0983	2,564,545	156.8	71.1
	mix of	4	12.9	0.0983	1,689,510	103.3	46.9
	28.2%	5	12.9	0.0983	1,422,562	87.0	39.5
		1	12.9	0.0973	195,247	4.7	2.1
	LDGT2	2	12.9	0.0973	1,991,136	47.7	21.6
	with VMT	3	12.9	0.0973	2,564,545	61.4	27.8
	mix of	4	12.9	0.0973	1,689,510	40.4	18.3
	11.2%	5	12.9	0.0973	1,422,562	34.1	15.4
		1	12.9	0.0451	195,247	0.7	0.3
	HDGV	2	12.9	0.0451	1,991,136	7.0	3.2
	with VMT	3	12.9	0.0451	2,564,545	9.1	4.1
	mix of	4	12.9	0.0451	1,689,510	6.0	2.7
	3.6%	5	12.9	0.0451	1,422,562	5.0	2.3
		1	12.9	0.0068	195,247	0.0	0.0
	LDDV	2	12.9	0.0068	1,991,136	0.1	0.0
	with VMT	3	12.9	0.0068	2,564,545	0.1	0.0
	mix of	4	12.9	0.0068	1,689,510	0.1	0.0
	0.2%	5	12.9	0.0068	1,422,562	0.0	0.0
	1	12.9	0.0068	195,247	0.1	0.0	
LDDT	2	12.9	0.0068	1,991,136	0.6	0.3	
with VMT	3	12.9	0.0068	2,564,545	0.8	0.4	
mix of	4	12.9	0.0068	1,689,510	0.5	0.2	
2.2%	5	12.9	0.0068	1,422,562	0.5	0.2	
	1	12.9	0.0270	195,247	1.1	0.5	
HDDV	2	12.9	0.0270	1,991,136	10.8	4.9	
with VMT	3	12.9	0.0270	2,564,545	13.9	6.3	
mix of	4	12.9	0.0270	1,689,510	9.1	4.1	
9.1%	5	12.9	0.0270	1,422,562	7.7	3.5	
	1	12.9	0.0113	195,247	0.0	0.0	
MC	2	12.9	0.0113	1,991,136	0.3	0.1	
with VMT	3	12.9	0.0113	2,564,545	0.3	0.1	
mix of	4	12.9	0.0113	1,689,510	0.2	0.1	
0.5%	5	12.9	0.0113	1,422,562	0.2	0.1	

5.6 Summary of particulate emissions from onroad mobile sources

Tables 5.6–1 through 5.6–10 summarize the calculated particulate emissions for the pollutants PM₁₀, PM_{2.5}, NO_x, SO₂, and NH₃ by vehicle class, area, and facility type. Annual and average daily emissions from onroad mobile sources for all of Maricopa County for 2002 are shown below in Table 5.6–1, while Table 5.6–2 presents these data for the PM₁₀ nonattainment area. Tables 5.6–3 through 5.6–12 provide more detailed breakouts of emissions by facility type, area type, and vehicle type for each pollutant.

Table 5.6–1. Annual and average daily emissions from all onroad mobile sources for Maricopa County.

	Annual emissions (tons/yr)					Average daily emissions (lbs/day)				
	PM ₁₀	PM _{2.5}	NO _x	SO _x	NH ₃	PM ₁₀	PM _{2.5}	NO _x	SO _x	NH ₃
Exhaust	1,285	1,176	79,572	1,183	2,544	7,039	6,446	436,006	6,479	13,937
Paved road fugitive dust	20,046	2,374				109,838	13,007			
Unpaved road fugitive dust	9,562	1,432				52,392	7,846			
Tire wear	287	71				1,574	390			
Brake wear	370	157				2,028	860			
Total:	31,550	5,210	79,572	1,183	2,544	172,872	28,550	436,006	6,479	13,937

Table 5.6–2. Annual and average daily emissions from all onroad mobile sources for the PM₁₀ nonattainment area.

	Annual emissions (tons/yr)					Average daily emissions (lbs/day)				
	PM ₁₀	PM _{2.5}	NO _x	SO _x	NH ₃	PM ₁₀	PM _{2.5}	NO _x	SO _x	NH ₃
Exhaust	1,223	1,120	75,307	1,125	2,418	6,700	6,135	412,639	6,166	13,250
Paved road fugitive dust	19,241	2,276				105,431	12,474			
Unpaved road fugitive dust	9,142	1,369				50,093	7,502			
Tire wear	273	68				1,497	370			
Brake wear	352	149				1,929	818			
Total:	30,231	4,982	75,307	1,125	2,418	165,649	27,300	412,639	6,166	13,250

Table 5.6–3. Daily PM₁₀ emissions (kg/day) in the PM₁₀ NAA by facility type, area type and vehicle class (annual average, excluding fugitive dust particulate matter).

Facility type	Area Type	Vehicle Class								TOTAL
		LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
INTERSTATE, FREEWAY, and EXPRESSWAY	1	20.4	15.6	10.8	21.7	3.4	24.5	295.8	1.0	393.1
	2	14.1	10.7	7.5	14.9	2.3	16.9	204.0	0.7	271.2
	3	10.2	7.8	5.4	10.8	1.7	12.3	148.0	0.5	196.6
	4	7.7	5.9	4.1	8.2	1.3	9.3	111.7	0.4	148.4
	5	1.9	1.3	2.7	0.4	3.1	36.9	0.1	0.0	46.5
	Total	54.3	41.3	30.4	56.1	11.7	99.9	759.6	2.4	1,055.8
PRINCIPAL ARTERIAL and MINOR ARTERIAL	1	19.9	15.2	10.5	21.2	3.3	24.0	288.8	0.9	383.9
	2	22.1	16.9	11.7	23.5	3.7	26.6	320.3	1.0	425.6
	3	15.6	11.9	8.3	16.6	2.6	18.8	226.4	0.7	300.8
	4	7.9	6.0	4.2	8.4	1.3	9.5	114.3	0.4	151.8
	5	1.9	1.3	2.6	0.4	2.9	35.6	0.1	0.0	44.8
	Total	67.4	51.3	37.3	70.0	13.8	114.4	949.8	3.1	1,307.0
COLLECTOR	1	6.6	4.8	3.3	6.5	1.0	7.4	89.2	0.3	119.2
	2	4.0	3.0	2.0	4.1	0.6	4.6	55.4	0.2	74.0
	3	2.1	1.6	1.1	2.1	0.3	2.4	28.5	0.1	38.1
	4	3.9	2.9	2.0	4.0	0.6	4.6	54.9	0.2	73.2
	5	1.9	1.3	2.5	0.4	2.8	34.2	0.1	0.0	43.2
	Total	18.6	13.6	10.9	17.1	5.4	53.1	228.1	0.7	347.6
LOCAL	1	4.8	3.5	2.4	4.8	0.7	5.4	65.1	0.2	87.0
	2	6.2	4.6	3.1	6.1	1.0	7.0	83.8	0.3	112.1
	3	4.1	3.0	2.1	4.0	0.6	4.6	55.2	0.2	73.8
	4	2.6	1.9	1.3	2.6	0.4	2.9	35.2	0.1	47.1
	5	0.3	0.2	0.5	0.1	0.5	6.4	0.0	0.0	8.1
	Total	18.2	13.3	9.4	17.6	3.3	26.2	239.4	0.8	328.1
GRAND TOTALS:		158.4	119.5	88.0	160.7	34.3	293.7	2,176.9	7.0	3,038.5

Table 5.6–4. Daily PM_{2.5} emissions (kg/day) in the PM₁₀ NAA by facility type, area type and vehicle class (annual average, excluding fugitive dust particulate matter).

Facility type	Area	Vehicle Class								TOTAL
	Type	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
INTERSTATE, FREEWAY, and EXPRESSWAY	1	18.8	14.3	8.8	18.3	3.1	22.6	273.4	0.7	360.0
	2	12.9	9.9	6.1	12.6	2.2	15.6	188.6	0.5	248.3
	3	9.4	7.2	4.4	9.2	1.6	11.3	136.8	0.3	180.1
	4	7.1	5.4	3.3	6.9	1.2	8.6	103.2	0.2	135.9
	5	1.8	1.1	2.3	0.4	2.8	34.1	0.1	0.0	42.6
	Total	50.0	37.8	24.8	47.4	10.8	92.3	702.1	1.7	966.9
PRINCIPAL ARTERIAL and MINOR ARTERIAL	1	18.3	14.0	8.6	17.9	3.0	22.1	267.0	0.6	351.5
	2	20.3	15.5	9.5	19.8	3.4	24.5	296.0	0.7	389.8
	3	14.4	10.9	6.7	14.0	2.4	17.3	209.2	0.5	275.5
	4	7.2	5.5	3.4	7.1	1.2	8.7	105.6	0.3	139.1
	5	1.7	1.1	2.2	0.4	2.7	32.9	0.1	0.0	41.0
	Total	62.0	47.0	30.4	59.2	12.7	105.6	878.0	2.1	1,196.9
COLLECTOR	1	6.1	4.5	2.7	5.5	0.9	6.8	82.4	0.2	109.2
	2	3.7	2.7	1.7	3.4	0.6	4.2	51.2	0.1	67.7
	3	1.9	1.4	0.9	1.8	0.3	2.2	26.4	0.1	34.8
	4	3.6	2.7	1.6	3.4	0.6	4.2	50.7	0.1	67.0
	5	1.7	1.0	2.1	0.4	2.6	31.6	0.1	0.0	39.6
	Total	17.1	12.3	9.0	14.4	5.0	49.1	210.8	0.5	318.3
LOCAL	1	4.5	3.3	2.0	4.0	0.7	5.0	60.2	0.1	79.7
	2	5.8	4.2	2.5	5.2	0.9	6.4	77.5	0.2	102.7
	3	3.8	2.8	1.7	3.4	0.6	4.2	51.1	0.1	67.7
	4	2.4	1.8	1.1	2.2	0.4	2.7	32.6	0.1	43.1
	5	0.3	0.2	0.4	0.1	0.5	5.9	0.0	0.0	7.4
	Total	16.8	12.2	7.7	14.8	3.0	24.2	221.3	0.5	300.6
GRAND TOTALS:		145.9	109.3	71.9	135.9	31.6	271.2	2,012.2	4.9	2,782.8

Table 5.6–5. Daily NO_x emissions (kg/day) in the PM₁₀ NAA by facility type, area type and vehicle class (annual average).

Facility type	Area Type	Vehicle Class								
		LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTAL
INTERSTATE, FREEWAY, and EXPRESSWAY	1	490.8	378.6	187.2	222.5	4.4	28.8	2,396.9	9.7	3,718.9
	2	3,940.0	3,039.5	1,502.5	1,790.5	36.5	236.4	19,589.8	78.4	30,213.6
	3	2,722.1	2,100.2	1,037.8	1,238.4	25.6	165.8	13,686.5	54.4	21,030.8
	4	1,974.1	1,523.1	752.6	898.1	18.5	120.2	9,925.5	39.5	15,251.7
	5	1,490.2	1,149.7	568.1	678.0	14.0	90.8	7,492.4	29.8	11,512.9
	Total	10,617.2	8,191.1	4,048.2	4,827.5	99.0	642.0	53,091.1	211.7	81,727.8
PRINCIPAL ARTERIAL and MINOR ARTERIAL	1	441.3	333.9	167.5	171.3	2.4	15.5	1,289.4	6.5	2,427.7
	2	3,517.9	2,682.8	1,346.9	1,438.1	19.4	124.6	10,414.2	54.5	19,598.4
	3	3,901.1	2,979.5	1,495.2	1,616.3	21.6	138.9	11,596.4	60.9	21,809.9
	4	2,758.1	2,109.5	1,057.4	1,167.8	15.5	99.6	7,821.3	43.7	15,072.9
	5	1,406.7	1,077.2	538.7	605.6	8.1	52.2	4,074.2	22.4	7,785.1
	Total	12,025.1	9,182.9	4,605.7	4,999.1	67.0	430.8	35,195.4	188.0	66,694.0
COLLECTOR	1	489.5	361.4	180.9	149.2	2.7	17.4	1,334.9	5.5	2,541.5
	2	1,255.7	928.9	465.1	391.3	6.9	44.5	3,424.4	14.5	6,531.4
	3	725.6	543.0	272.2	254.3	3.9	25.4	1,977.6	9.5	3,811.5
	4	372.5	278.9	139.8	131.3	2.0	13.0	1,015.2	4.9	1,957.7
	5	692.1	521.5	261.6	260.4	3.8	24.2	1,899.9	9.8	3,673.2
	Total	3,535.4	2,633.7	1,319.5	1,186.5	19.3	124.5	9,652.0	44.2	18,515.2
LOCAL	1	103.3	75.1	37.5	26.5	0.6	3.7	277.9	1.0	525.5
	2	1,053.1	765.4	382.3	270.7	5.8	37.6	2,834.1	10.1	5,359.1
	3	1,356.4	985.8	492.4	348.7	7.5	48.5	3,650.3	12.9	6,902.5
	4	893.6	649.5	324.4	229.7	4.9	31.9	2,404.8	8.5	4,547.3
	5	569.9	414.2	206.9	146.5	3.2	20.4	1,533.8	5.4	2,900.3
	Total	3,976.3	2,889.9	1,443.4	1,022.2	22.0	142.1	10,700.9	38.0	20,234.7
GRAND TOTALS:		30,154.0	22,897.6	11,416.9	12,035.3	207.3	1,339.4	108,639.3	481.9	187,171.7

Table 5.6–6. Daily SO₂ emissions (kg/day) in the PM₁₀ NAA by facility type, area type and vehicle class (annual average).

Facility type	Area Type	Vehicle Class								TOTAL
		LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
INTERSTATE, FREEWAY, and EXPRESSWAY	1	48.5	38.5	20.0	9.6	1.3	17.8	227.8	0.3	363.7
	2	33.5	26.6	13.8	6.6	0.9	12.3	157.1	0.2	250.9
	3	24.3	19.3	10.0	4.8	0.6	8.9	113.9	0.1	182.0
	4	18.3	14.6	7.5	3.6	0.5	6.7	86.0	0.1	137.4
	5	4.8	2.5	1.2	0.2	2.2	28.4	0.0	0.0	39.3
	Total	129.4	101.5	52.5	24.8	5.5	74.1	584.9	0.7	973.3
PRINCIPAL ARTERIAL and MINOR ARTERIAL	1	47.4	37.6	19.5	9.4	1.2	17.4	222.4	0.3	355.2
	2	52.6	41.7	21.6	10.4	1.4	19.3	246.6	0.3	393.9
	3	37.1	29.5	15.3	7.3	1.0	13.6	174.3	0.2	278.4
	4	18.7	14.9	7.7	3.7	0.5	6.9	88.0	0.1	140.5
	5	4.6	2.4	1.2	0.2	2.1	27.4	0.0	0.0	37.9
	Total	160.5	126.2	65.3	31.0	6.2	84.5	731.4	0.8	1,205.9
COLLECTOR	1	14.5	11.6	6.0	2.9	0.4	5.4	68.7	0.1	109.5
	2	9.0	7.2	3.7	1.8	0.2	3.3	42.7	0.0	68.0
	3	4.6	3.7	1.9	0.9	0.1	1.7	22.0	0.0	35.0
	4	8.9	7.2	3.7	1.8	0.2	3.3	42.3	0.0	67.4
	5	4.5	2.3	1.1	0.1	2.1	26.4	0.0	0.0	36.5
	Total	41.6	32.0	16.5	7.6	3.0	40.1	175.6	0.2	316.6
LOCAL	1	10.6	8.5	4.4	2.1	0.3	3.9	50.1	0.1	80.0
	2	13.6	10.9	5.7	2.7	0.4	5.0	64.6	0.1	103.0
	3	9.0	7.2	3.7	1.8	0.2	3.3	42.5	0.0	67.9
	4	5.7	4.6	2.4	1.1	0.2	2.1	27.1	0.0	43.3
	5	0.8	0.4	0.2	0.0	0.4	4.9	0.0	0.0	6.8
	Total	39.8	31.6	16.4	7.8	1.4	19.3	184.4	0.2	300.9
GRAND TOTALS:		371.3	291.3	150.8	71.2	16.1	217.9	1,676.2	1.9	2,796.7

Table 5.6–7. Daily ammonia emissions (kg/day) in the PM₁₀ NAA by facility type, area type and vehicle class (annual average).

Facility type	Area Type	Vehicle Class								TOTAL
		LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
INTERSTATE, FREEWAY, and EXPRESSWAY	1	408.7	250.9	98.2	14.5	0.1	1.3	22.2	0.5	796.5
	2	281.9	173.1	67.8	10.0	0.1	0.9	15.3	0.4	549.5
	3	204.4	125.5	49.1	7.3	0.1	0.7	11.1	0.3	398.5
	4	154.3	94.8	37.1	5.5	0.1	0.5	8.4	0.2	300.8
	5	31.3	12.3	1.8	0.0	0.2	2.8	0.1	0.0	48.4
	Total	1,080.7	656.6	254.0	37.3	0.5	6.2	57.1	1.3	2,093.7
PRINCIPAL ARTERIAL and MINOR ARTERIAL	1	399.1	245.0	95.9	14.2	0.1	1.3	21.7	0.5	777.9
	2	442.5	271.7	106.4	15.7	0.1	1.4	24.0	0.6	862.5
	3	312.8	192.0	75.2	11.1	0.1	1.0	17.0	0.4	609.6
	4	157.9	96.9	37.9	5.6	0.1	0.5	8.6	0.2	307.7
	5	30.2	11.8	1.7	0.0	0.2	2.7	0.1	0.0	46.6
	Total	1,342.5	817.5	317.1	46.7	0.6	6.9	71.3	1.7	2,604.3
COLLECTOR	1	123.2	75.6	29.6	4.4	0.0	0.4	6.7	0.2	240.1
	2	76.5	47.0	18.4	2.7	0.0	0.2	4.2	0.1	149.2
	3	39.4	24.2	9.5	1.4	0.0	0.1	2.1	0.1	76.8
	4	75.8	46.6	18.2	2.7	0.0	0.2	4.1	0.1	147.8
	5	29.0	11.4	1.7	0.0	0.2	2.6	0.1	0.0	44.9
	Total	344.1	204.8	77.4	11.2	0.3	3.6	17.2	0.4	658.9
LOCAL	1	90.0	55.2	21.6	3.2	0.0	0.3	4.9	0.1	175.3
	2	115.9	71.1	27.8	4.1	0.0	0.4	6.3	0.1	225.8
	3	76.3	46.9	18.3	2.7	0.0	0.2	4.1	0.1	148.8
	4	48.7	29.9	11.7	1.7	0.0	0.2	2.6	0.1	94.9
	5	5.4	2.1	0.3	0.0	0.0	0.5	0.0	0.0	8.4
	Total	336.2	205.2	79.8	11.8	0.1	1.6	18.0	0.4	653.1
GRAND TOTALS:		3,103.4	1,884.1	728.4	106.9	1.5	18.3	163.6	3.8	6,010.0

Table 5.6–8. Daily PM₁₀ emissions (kg/day) in Maricopa County by facility type, area type and vehicle class (annual average, excluding fugitive dust particulate matter.)

Facility type	Area Type	Vehicle Class								MC	TOTAL
		LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV			
INTERSTATE, FREEWAY, and EXPRESSWAY	1	20.4	15.6	10.8	21.7	3.4	24.5	295.8	1.0	393.1	
	2	14.1	10.7	7.5	14.9	2.3	16.9	204.0	0.7	271.2	
	3	10.2	7.8	5.4	10.8	1.7	12.3	148.0	0.5	196.6	
	4	12.8	9.7	6.8	13.6	2.1	15.4	185.1	0.6	246.0	
	5	1.9	1.3	2.7	0.4	3.1	36.9	0.1	0.0	46.5	
	Total	59.4	45.2	33.1	61.5	12.6	106.0	833.0	2.7	1,153.4	
PRINCIPAL ARTERIAL and MINOR ARTERIAL	1	19.9	15.2	10.5	21.2	3.3	24.0	288.8	0.9	383.9	
	2	22.1	16.9	11.7	23.5	3.7	26.6	320.3	1.0	425.6	
	3	15.6	11.9	8.3	16.6	2.6	18.8	226.4	0.7	300.8	
	4	8.4	6.4	4.5	9.0	1.4	10.1	122.2	0.4	162.4	
	5	1.9	1.3	2.6	0.4	2.9	35.6	0.1	0.0	44.8	
	Total	67.9	51.7	37.6	70.6	13.9	115.0	957.8	3.1	1,317.6	
COLLECTOR	1	6.6	4.8	3.3	6.5	1.0	7.4	89.2	0.3	119.2	
	2	4.0	3.0	2.0	4.1	0.6	4.6	55.4	0.2	74.0	
	3	2.1	1.6	1.1	2.1	0.3	2.4	28.5	0.1	38.1	
	4	5.6	4.2	2.9	5.7	0.9	6.5	78.2	0.3	104.2	
	5	1.9	1.3	2.5	0.4	2.8	34.2	0.1	0.0	43.2	
	Total	20.2	14.9	11.8	18.8	5.7	55.1	251.4	0.8	378.6	
LOCAL	1	4.8	3.5	2.4	4.8	0.7	5.4	65.1	0.2	87.0	
	2	6.2	4.6	3.1	6.1	1.0	7.0	83.8	0.3	112.1	
	3	4.1	3.0	2.1	4.0	0.6	4.6	55.2	0.2	73.8	
	4	3.5	2.5	1.7	3.4	0.5	3.9	46.5	0.2	62.2	
	5	0.3	0.2	0.5	0.1	0.5	6.4	0.0	0.0	8.1	
	Total	19.0	13.9	9.8	18.4	3.4	27.2	250.7	0.8	343.2	
GRAND TOTALS:		166.6	125.7	92.3	169.2	35.6	303.3	2,292.8	7.4	3,192.8	

Table 5.6–9. Daily PM_{2.5} emissions (kg/day) in Maricopa County by facility type, area type and vehicle class (annual average, excluding fugitive dust particulate matter).

Facility type	Area Type	Vehicle Class								TOTAL
		LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
INTERSTATE, FREEWAY, and EXPRESSWAY	1	18.8	14.3	8.8	18.3	3.1	22.6	273.4	0.7	360.0
	2	12.9	9.9	6.1	12.6	2.2	15.6	188.6	0.5	248.3
	3	9.4	7.2	4.4	9.2	1.6	11.3	136.8	0.3	180.1
	4	11.7	8.9	5.5	11.5	2.0	14.2	171.1	0.4	225.3
	5	1.8	1.1	2.3	0.4	2.8	34.1	0.1	0.0	42.6
	Total	54.6	41.4	27.0	52.0	11.6	97.9	770.0	1.9	1,056.3
PRINCIPAL ARTERIAL and MINOR ARTERIAL	1	18.3	14.0	8.6	17.9	3.0	22.1	267.0	0.6	351.5
	2	20.3	15.5	9.5	19.8	3.4	24.5	296.0	0.7	389.8
	3	14.4	10.9	6.7	14.0	2.4	17.3	209.2	0.5	275.5
	4	7.8	5.9	3.6	7.6	1.3	9.4	113.0	0.3	148.8
	5	1.7	1.1	2.2	0.4	2.7	32.9	0.1	0.0	41.0
	Total	62.5	47.4	30.6	59.7	12.8	106.2	885.3	2.1	1,206.6
COLLECTOR	1	6.1	4.5	2.7	5.5	0.9	6.8	82.4	0.2	109.2
	2	3.7	2.7	1.7	3.4	0.6	4.2	51.2	0.1	67.7
	3	1.9	1.4	0.9	1.8	0.3	2.2	26.4	0.1	34.8
	4	5.2	3.8	2.3	4.8	0.8	6.0	72.3	0.2	95.4
	5	1.7	1.0	2.1	0.4	2.6	31.6	0.1	0.0	39.6
	Total	18.7	13.5	9.7	15.9	5.3	50.9	232.3	0.6	346.8
LOCAL	1	4.5	3.3	2.0	4.0	0.7	5.0	60.2	0.1	79.7
	2	5.8	4.2	2.5	5.2	0.9	6.4	77.5	0.2	102.7
	3	3.8	2.8	1.7	3.4	0.6	4.2	51.1	0.1	67.7
	4	3.2	2.3	1.4	2.9	0.5	3.6	43.0	0.1	57.0
	5	0.3	0.2	0.4	0.1	0.5	5.9	0.0	0.0	7.4
	Total	17.6	12.7	8.0	15.5	3.1	25.1	231.7	0.6	314.4
GRAND TOTALS:		153.4	114.9	75.4	143.0	32.8	280.1	2,119.4	5.1	2,924.1

Table 5.6–10. Daily NO_x emissions(kg/day) in Maricopa County by facility type, area type and vehicle class (annual average).

Facility type	Area Type	Vehicle Class								TOTAL
		LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
INTERSTATE, FREEWAY, and EXPRESSWAY	1	490.8	378.6	187.2	222.5	4.4	28.8	2,396.9	9.7	3,718.9
	2	3,940.0	3,039.5	1,502.5	1,790.5	36.5	236.4	19,589.8	78.4	30,213.6
	3	2,722.1	2,100.2	1,037.8	1,238.4	25.6	165.8	13,686.5	54.4	21,030.8
	4	1,974.1	1,523.1	752.6	898.1	18.5	120.2	9,925.5	39.5	15,251.7
	5	2,469.9	1,905.6	941.6	1,123.7	23.2	150.4	12,418.2	49.4	19,082.0
	Total	11,596.9	8,947.0	4,421.7	5,273.3	108.2	701.6	58,016.9	231.3	89,297.0
PRINCIPAL ARTERIAL and MINOR ARTERIAL	1	441.3	333.9	167.5	171.3	2.4	15.5	1,289.4	6.5	2,427.7
	2	3,517.9	2,682.8	1,346.9	1,438.1	19.4	124.6	10,414.2	54.5	19,598.4
	3	3,901.1	2,979.5	1,495.2	1,616.3	21.6	138.9	11,596.4	60.9	21,809.9
	4	2,758.1	2,109.5	1,057.4	1,167.8	15.5	99.6	7,821.3	43.7	15,072.9
	5	1,504.9	1,152.4	576.3	647.9	8.7	55.9	4,358.7	24.0	8,328.7
	Total	12,123.3	9,258.1	4,643.3	5,041.4	67.6	434.5	35,479.9	189.6	67,237.6
COLLECTOR	1	489.5	361.4	180.9	149.2	2.7	17.4	1,334.9	5.5	2,541.5
	2	1,255.7	928.9	465.1	391.3	6.9	44.5	3,424.4	14.5	6,531.4
	3	725.6	543.0	272.2	254.3	3.9	25.4	1,977.6	9.5	3,811.5
	4	372.5	278.9	139.8	131.3	2.0	13.0	1,015.2	4.9	1,957.7
	5	985.6	742.6	372.5	370.8	5.4	34.5	2,705.6	14.0	5,230.9
	Total	3,828.9	2,854.9	1,430.5	1,296.9	20.9	134.8	10,457.7	48.4	20,072.9
LOCAL	1	103.3	75.1	37.5	26.5	0.6	3.7	277.9	1.0	525.5
	2	1,053.1	765.4	382.3	270.7	5.8	37.6	2,834.1	10.1	5,359.1
	3	1,356.4	985.8	492.4	348.7	7.5	48.5	3,650.3	12.9	6,902.5
	4	893.6	649.5	324.4	229.7	4.9	31.9	2,404.8	8.5	4,547.3
	5	752.4	546.8	273.1	193.4	4.2	26.9	2,024.8	7.2	3,828.8
	Total	4,158.7	3,022.6	1,509.6	1,069.1	23.0	148.6	11,192.0	39.7	21,163.2
GRAND TOTALS:		31,707.9	24,082.5	12,005.2	12,680.7	219.7	1,419.5	115,146.4	509.0	197,770.7

Table 5.6–11. Daily SO₂ emissions (kg/day) in Maricopa County by facility type, area type and vehicle class (annual average).

Facility type	Area Type	Vehicle Class								TOTAL
		LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
INTERSTATE, FREEWAY, and EXPRESSWAY	1	48.5	38.5	20.0	9.6	1.3	17.8	227.8	0.3	363.7
	2	33.5	26.6	13.8	6.6	0.9	12.3	157.1	0.2	250.9
	3	24.3	19.3	10.0	4.8	0.6	8.9	113.9	0.1	182.0
	4	30.4	24.1	12.5	6.0	0.8	11.1	142.6	0.2	227.7
	5	4.8	2.5	1.2	0.2	2.2	28.4	0.0	0.0	39.3
	Total	141.5	111.0	57.5	27.2	5.8	78.5	641.4	0.7	1,063.6
PRINCIPAL ARTERIAL and MINOR ARTERIAL	1	47.4	37.6	19.5	9.4	1.2	17.4	222.4	0.3	355.2
	2	52.6	41.7	21.6	10.4	1.4	19.3	246.6	0.3	393.9
	3	37.1	29.5	15.3	7.3	1.0	13.6	174.3	0.2	278.4
	4	20.1	15.9	8.3	4.0	0.5	7.3	94.1	0.1	150.3
	5	4.6	2.4	1.2	0.2	2.1	27.4	0.0	0.0	37.9
	Total	161.8	127.2	65.9	31.2	6.2	85.0	737.5	0.9	1,215.7
COLLECTOR	1	14.5	11.6	6.0	2.9	0.4	5.4	68.7	0.1	109.5
	2	9.0	7.2	3.7	1.8	0.2	3.3	42.7	0.0	68.0
	3	4.6	3.7	1.9	0.9	0.1	1.7	22.0	0.0	35.0
	4	12.7	10.2	5.3	2.5	0.3	4.7	60.2	0.1	96.0
	5	4.5	2.3	1.1	0.1	2.1	26.4	0.0	0.0	36.5
	Total	45.3	35.1	18.1	8.3	3.1	41.5	193.5	0.2	345.2
LOCAL	1	10.6	8.5	4.4	2.1	0.3	3.9	50.1	0.1	80.0
	2	13.6	10.9	5.7	2.7	0.4	5.0	64.6	0.1	103.0
	3	9.0	7.2	3.7	1.8	0.2	3.3	42.5	0.0	67.9
	4	7.6	6.1	3.1	1.5	0.2	2.8	35.8	0.0	57.1
	5	0.8	0.4	0.2	0.0	0.4	4.9	0.0	0.0	6.8
	Total	41.6	33.1	17.1	8.2	1.5	20.0	193.1	0.2	314.8
GRAND TOTALS:		390.3	306.4	158.6	74.9	16.6	224.9	1,765.5	2.0	2,939.2

Table 5.6–12. Daily ammonia emissions (kg/day) in Maricopa County by facility type, area type and vehicle class (annual average).

Facility type	Area Type	Vehicle Class								TOTAL
		LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	
INTERSTATE, FREEWAY, and EXPRESSWAY	1	408.7	250.9	98.2	14.5	0.1	1.3	22.2	0.5	796.5
	2	281.9	173.1	67.8	10.0	0.1	0.9	15.3	0.4	549.5
	3	204.4	125.5	49.1	7.3	0.1	0.7	11.1	0.3	398.5
	4	255.8	157.1	61.5	9.1	0.1	0.8	13.9	0.3	498.6
	5	31.3	12.3	1.8	0.0	0.2	2.8	0.1	0.0	48.4
	Total	1,182.2	718.9	278.4	40.9	0.5	6.5	62.6	1.5	2,291.5
PRINCIPAL ARTERIAL and MINOR ARTERIAL	1	399.1	245.0	95.9	14.2	0.1	1.3	21.7	0.5	777.9
	2	442.5	271.7	106.4	15.7	0.1	1.4	24.0	0.6	862.5
	3	312.8	192.0	75.2	11.1	0.1	1.0	17.0	0.4	609.6
	4	168.9	103.7	40.6	6.0	0.1	0.5	9.2	0.2	329.2
	5	30.2	11.8	1.7	0.0	0.2	2.7	0.1	0.0	46.6
	Total	1,353.5	824.3	319.8	47.0	0.6	7.0	71.9	1.7	2,625.8
COLLECTOR	1	123.2	75.6	29.6	4.4	0.0	0.4	6.7	0.2	240.1
	2	76.5	47.0	18.4	2.7	0.0	0.2	4.2	0.1	149.2
	3	39.4	24.2	9.5	1.4	0.0	0.1	2.1	0.1	76.8
	4	108.0	66.3	26.0	3.8	0.0	0.4	5.9	0.1	210.5
	5	29.0	11.4	1.7	0.0	0.2	2.6	0.1	0.0	44.9
	Total	376.2	224.5	85.1	12.4	0.3	3.7	18.9	0.4	721.6
LOCAL	1	90.0	55.2	21.6	3.2	0.0	0.3	4.9	0.1	175.3
	2	115.9	71.1	27.8	4.1	0.0	0.4	6.3	0.1	225.8
	3	76.3	46.9	18.3	2.7	0.0	0.2	4.1	0.1	148.8
	4	64.3	39.5	15.4	2.3	0.0	0.2	3.5	0.1	125.3
	5	5.4	2.1	0.3	0.0	0.0	0.5	0.0	0.0	8.4
	Total	351.8	214.8	83.6	12.3	0.1	1.6	18.8	0.4	683.5
GRAND TOTALS:		3,263.7	1,982.5	766.9	112.6	1.6	18.8	172.3	4.0	6,322.4

5.7 Quality assurance process

5.7.1 VMT estimates

Normal quality assurance procedures, including extensive automated consistency checks, were used by ADOT in developing the 2002 HPMS data. These data were submitted to the Federal Highway Administration in October 2003.

5.7.2 Emission factor estimates

The quality assurance (QA) process performed on the MOBILE6.2 analyses included accuracy, completeness, and reasonableness checks. For accuracy and completeness, a system was used that included a two-layer, independent reviewer set-up. All hard copy and computer-based data entries as well as all calculations procedures were checked independently for accuracy and completeness by two different reviewers. Any errors found were corrected and the changes were then rechecked by the reviewers.

The entire onroad mobile source portion of the 2002 periodic particulate matter inventory was reviewed by MAG staff that did not directly participate in its development. All comments were addressed.

5.7.3 Quality review of 2002 draft particulate matter emissions inventory

The draft onroad mobile source portion of the 2002 periodic particulate matter emissions inventory was reviewed using published EPA quality review guidelines for base year emission inventories (EPA Document 450/4-91-022, September 1991). The procedural review (Levels I, II, and III) included checks for completeness, consistency, and the correct use of appropriate procedures.

As an additional QA check, the average miles per gallon estimate was derived using average annual daily VMT estimates and gasoline sales from ADOT. The results of that QA check may be found in Appendix 5.5.

5.8 References

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