

Chapter 3

Emissions Inventory

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3 EMISSIONS INVENTORY

3.1 INTRODUCTION

This chapter presents the District's emissions inventory (EI) and shows summaries that are used in this plan. An emissions inventory estimates the amount of criteria pollutants (such as carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter) and toxic air contaminant (TAC) pollution that is emitted into the atmosphere by various sources over a specific period of time. The emissions inventory for this plan includes PM10 and precursor emissions for the SJVAB. This chapter also discusses the Emission Budgets for Conformity purposes and how Emission Reduction Credit (ERC) is accounted for in the plan.

3.2 EMISSIONS INVENTORY

An emissions inventory is an account of pollutant emissions that estimates the amount of air pollutants emitted from many sources. An emissions inventory is not a direct measure of air quality since it does not account for what happens to pollutants once they are emitted: how long pollutants stay in the air, how they react in the atmosphere to form other substances, or how far they travel. However, an emissions inventory is a starting point used in air quality modeling and attainment demonstrations.

It is impractical to directly measure and compile emissions from a multitude of sources on a continuous basis, but surveys and sampling are used to increase understanding. Actual emission measurements can be taken on a sample of devices to determine an average emission rate. Source tests at stationary emission sources provide a snapshot of emission rates that can then be applied over time. Field measurements of fugitive dust emissions taken at area sources, such as construction sites, can be used to determine an average emission rate under a variety of conditions.

These studies are used to develop emission factors, representative values that relate the quantity of emitted pollutants to an associated activity. Emissions factors are used to determine the total emissions. These factors are multiplied by activity and control factors to estimate emissions from sources.

An emissions inventory is organized by source categories: mobile, stationary, areawide, and natural sources. Mobile sources include on-road sources and off-road mobile sources. The on-road emissions inventory, which includes automobiles, motorcycles, and trucks, is an estimation of population, activity, and emissions of the on-road motor vehicles used in California. Calculations are based on the contribution of gas, diesel, and electrically powered passenger cars, light, medium and heavy-duty trucks, motorcycles, school and transit buses and motor homes. The off-road emissions

inventory is an estimate of the population, activity, and emissions of various off-road equipment, including recreational vehicles, farm and construction equipment, lawn and garden equipment, forklifts, locomotives, commercial marine and marine pleasure craft. These estimates consider the relative contribution of gasoline, diesel, compressed natural gas, and liquefied petroleum gas powered vehicles to the overall emissions inventory of the state.

Stationary sources are large, fixed sources of air pollution, such as power plants, refineries, and manufacturing facilities. Stationary sources also include aggregated point sources. These are many small point sources, or facilities, that are not inventoried individually but are estimated as a group and reported as a single source category. Examples include gas stations and dry cleaners. Each of the local air districts estimates the emissions for the stationary sources within its jurisdiction.

Area-wide sources include source categories associated with human activity and emissions take place over a wide geographic area. Consumer products, fireplaces, farming operations (e.g. tilling) and unpaved road dust are examples of areawide sources.

Mobile sources include on-road motor vehicles and other mobile sources. On-road motor vehicles include cars, trucks, buses and motorcycles. Other mobile sources include categories such as off-road equipment (e.g., lawn and garden equipment), farm equipment, trains and recreational boats.

Natural, or non-anthropogenic, sources include source categories with naturally occurring emissions such as wildfires, petroleum seeps, and biogenic emissions from plants. ARB estimates emissions of biogenic volatile organic compounds (BVOCs) from vegetation for natural areas, crops, and urban vegetation. BVOC emissions are functions of the species leaf mass, emission factors, temperature, and light conditions.

For this Plan's emissions inventory, 1999 is the base year, the year from which the inventory is projected forward and backward. However, 2002 is the baseline, the year from which Rate of Progress calculations, control measure development, and other calculations are based. Appendix A contains further details of the emissions inventory, including an explanation of how it is calculated and why it is required.

Following the conclusion of this chapter, a series of summary tables show the annual emissions of pollutants followed by the annual average emissions for 2002, 2005, 2008, and 2010. The detailed emission inventories for 2002, 2005, 2008, and 2010 are found in a reference document to this Plan.

3.3 MOTOR VEHICLE EMISSION BUDGETS FOR CONFORMITY

In accordance with the 1990 Clean Air Act Amendments, conformity requirements are intended to ensure that transportation activities do not result in air quality degradation. Section 176 of the CAA Amendments requires that transportation plans, programs, and projects conform to applicable air quality plans before approved by a Metropolitan Planning Organization (MPO).

Section 176(c) provides the framework for ensuring that Federal actions conform to air quality plans under section 110. Conformity to an implementation plan means that proposed activities must not (1) cause or contribute to any new violation of any standard in any area, (2) increase the frequency or severity of any existing violation of any standard in any area, or (3) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area. For nonattainment areas' demonstration of RFP and attainment, EPA requires that the SIP revision contain statements of the motor vehicle emissions on which the demonstrations are based. These statements become the "emission budgets" for highway and transit vehicles. The transportation plans and programs produced by the transportation planning process are required to result in emissions that are less than or equal to the budget.

EPA transportation conformity regulations issued in November 1993 establish criteria involving the comparison of projected transportation plan emissions with the motor vehicle emissions assumed in the applicable air quality plans. The regulations define the term "motor vehicle emissions budget" as meaning "the portion of the total allowable emissions defined in a revision of the applicable implementation plan (or in an implementation plan revision endorsed by the Governor or his or her designee) for a certain date for the purpose of meeting reasonable further progress milestones or attainment or maintenance demonstrations, for any criteria pollutant or its precursors, allocated by the applicable implementation plan to highway and transit vehicles."¹

Regional emissions have been estimated for 2002, 2005, 2008, and 2010. The reasonable further progress demonstration contained in Chapter 7 is based on the average annual daily emissions for milestone years 2005 and 2008. In addition, the modeling demonstrates attainment of both the annual average standard and the 24-hour standard in 2010. In accordance with the conformity rule, described in more detail below, new motor vehicle emissions budgets are being established for 2008, and 2010 based on the average annual daily emissions that are applicable for both the annual and 24-hour PM10 standards.

For conformity purposes, the motor vehicle emissions budget for PM10 includes regional reentrained dust from travel on paved roads, vehicular exhaust, travel on unpaved roads, and road construction. Section 93.122(d)(2) of 40 CFR Part 51, subpart

¹ Federal transportation conformity regulations are found in 40 CFR Part 51, subpart T – Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 U.S.C. of the Federal Transit Laws. Part 93, subpart A of this chapter was revised by the EPA in the August 15, 1997 Federal Register.

T requires that PM10 from construction-related fugitive dust be included in the regional PM10 emissions analysis if it is identified as a contributor to the nonattainment problem in a PM10 implementation plan.

Section 93.102(b)(2)(iii) of 40 CFR Part 51, subpart T identifies VOC and NOx as the two PM10 precursor pollutants that must also have a motor vehicle emissions budget if deemed significant. The air quality modeling indicates that VOC is not a significant precursor to secondary PM10 formation in the SJVAB. Accordingly, a motor vehicle emissions budget for NOx is being established and includes vehicular exhaust only. Table 3-1 provides a sample budget calculation. The calculation methodology for the other years and counties is identical. Budgets for all District counties for the years 2008 and 2010 are provided in Table 3-2. It is important to note that the conformity rule does not require sulfur oxides or ammonia to be addressed.

According to EPA, the emissions budget applies as a ceiling on emissions in the year for which it is defined and for all subsequent years until either another year for which a different budget is defined or until a SIP revision modifies the budget. The emissions budgets provided in Table 3-2 are replacements to those found in the federally approved Amended *2003 PM10 Plan* and are applicable for both the annual and 24-hour PM10 standards. Appendix B contains a more detailed calculation.

Table 3-1 Example County Emission Budget Calculation for 2010 ^b
(tons per average annual day)

	PM10	NOx
Emissions Baseline		
Baseline EMFAC2002	1.5	30.1
I/M Improvements/Expansion	0.0	0.6
Reentrained road dust (paved)	13.7	--
Reentrained road dust (unpaved)	0.9	--
Road Construction Dust	4.6	--
Adjusted Baseline	20.7	29.5
Control Measures		
State Commitments ^a	0.0	2.2
Local Commitments ^a	4.6	0.4
Conformity Emission Budgets	16.2	27.0

^a The State and Local commitments are for emissions reductions basin-wide.

To support the development of transportation conformity budgets, ARB and District staff estimated the county-level emission benefits of the commitments.

^b All data is rounded to the nearest tenth.

Table 3-2 Motor Vehicle Emissions Budgets
(tons per average annual day)

County	2008		2010	
	PM10	NOx	PM10	NOx
Fresno	13.4	33.3	13.6	27.0
Kern ^a	10.6	32.9	10.0	27.1
Kings	2.7	6.7	3.4	5.8
Madera	3.4	9.1	3.5	7.8
Merced	5.3	13.2	5.3	10.5
San Joaquin	8.8	21.4	9.8	17.1
Stanislaus	5.5	16.6	5.5	13.1
Tulare	5.5	18.2	6.1	15.5

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

Section 93.124(e) of the federal conformity rule indicates that nonattainment areas with more than one MPO may establish motor vehicle emission budgets for each MPO in the implementation plan. As a result, County-level emission budgets are provided in this plan. The budgets are derived starting with projections from ARB's EMFAC2002 on-road mobile source emission factor model. These are adjusted to account for any baseline emission reductions not included in the model and any emissions that the model does not project (e.g., road dust). Finally, the County-level emission reductions from local and State control measures², as committed to in this plan are subtracted from the adjusted baseline to arrive at the conformity budgets.

Section 93.124 of the federal conformity rule, in particular 93.124(c), allows for the SIP to establish trading mechanisms between budgets for pollutants or precursors, or among budgets allocated to mobile and other sources. The Amended 2003 PM10 Plan included a trading mechanism, which was approved by EPA effective June 25, 2004. This SIP allows trading from the motor vehicle emissions budget for the PM10 precursor NOx to the motor vehicle emissions budget for primary PM10 using a 1.5 to 1 ratio. The trading mechanism will allow the agencies responsible for demonstrating transportation conformity in the San Joaquin Valley to supplement the 2010 budget for PM10 with a portion of the 2010 budget for NOx, and use these adjusted motor vehicle emissions budgets for PM10 and NOx to demonstrate transportation conformity with the PM10 SIP for analysis years after 2010. The trading mechanism remains unchanged in this plan.

The trading mechanism will be used only for conformity analyses for years after 2010. To ensure that the trading mechanism does not impact the ability to meet the NOx budget, the NOx emission reductions available to supplement the PM10 budget shall only be those remaining after the NOx budget has been met. Finally, reductions from the State's motor vehicle control program shall be calculated using ARB approved factors and methodologies.

² The State and local commitments are for emissions reductions basin-wide. To support the development of transportation conformity budgets, ARB and District staff estimated the County-level emission benefits of the commitments.

Each agency responsible for demonstrating transportation conformity shall clearly document the calculations used in the trading, along with any additional reductions of NO_x or PM₁₀ emissions in the conformity analysis. The federally approved Amended 2003 PM₁₀ Plan included commitments from the San Joaquin Valley COG Directors have committed to conduct feasibility analyses as part of each new Regional Transportation Plan, excluding revisions (i.e., amendments). The analysis will identify and evaluate potential control measures that could be included in the Regional Transportation Plans. Any additional PM₁₀ or NO_x reductions achieved in the RTPs shall be credited in the transportation conformity demonstration. Reductions achieved after 2010 shall be credited prior to implementing the trading mechanism. Those commitments remain unchanged for this plan.

3.4 PRE-BASELINE EMISSION REDUCTION CREDITS

The District requires all new and modified stationary sources that increase emissions in amounts in excess of emission offset thresholds to obtain emission reduction credits to offset the growth in emissions. District Rule 2201 (New and Modified Stationary Source Review Rule) contains the offset requirements. Offsets represent either on-site reductions or the use of banked ERCs. Calendar year 2002 constitutes the baseline year for this PM₁₀ Plan. The District expects that some pre-baseline credits will be used to allow growth from permitted stationary sources.

The General Preamble to the Federal Clean Air Act (57 FR 13498) states that the pre-baseline ERCs must be reflected as growth and included in the attainment demonstration *“to the extent that the State expects that such credits will be used as offsets or netting prior to attainment of the ambient standards.”* The August 26, 1994 memorandum from John Seitz, EPA’s Director of Office of Air Quality Planning and Standards, to David Howekamp of EPA Region IX provides two ways for inclusion of these ERCs as growth by stating that *“A state may choose to show that the magnitude of the pre-1990 ERCs (in absolute tonnage) was included in the growth factor, or the state may choose to show that it was not included in the growth factor, but in addition to anticipated general growth.”*

By including the pre-baseline (pre-2002, in this case) ERCs in the growth factor, the District has selected the first methodology provided in Seitz’s memorandum. However, in either case, the purpose is to show that the following will result in a projected inventory adequate to attain the NAAQS and achieve any applicable rate of progress:

$$\text{baseline inventory} + \text{growth} + \text{ERCs(pre-baseline)} - \text{offsets} - \text{reductions}$$

where:

- growth = non-permitted growth + permitted growth
- offsets = ERCs(post-baseline) + ERCs(pre-baseline)
- reductions = reductions required by the measures in the Plan

Growth Estimates: The emissions trends and growth estimates in this plan were generated using the reports from the California Emission Forecasting System (CEFS). The SIP/Central California Ozone Study (CCOS) emissions inventory and associated emissions projections were developed jointly by the California Air Pollution Control and Air Quality Management Districts and the ARB. CEFS's computer tools were used to develop projections and the emission estimates based on the most currently available growth and control data available at the time of the forecast runs. CEFS was developed in the 1990s to assist in developing air quality plans, determining how and where air pollution can be reduced, tracking progress towards meeting plans goals and mandates, and constructing emission trends.

A key component of CEFS is the growth data. As a part of CCOS, the growth factors were enhanced in 2001. The February 26, 2001 report titled "Development of Emissions Growth Surrogates and Activity Projections Used in Forecasting Point and Area Source Emissions" describes efforts undertaken to identify the most appropriate growth surrogates for stationary sources. The growth estimates generated by CEFS include growth in emissions requiring offsets under the New Source Review Rule as well those that can be accommodated without triggering offsets. Tables 3-3 through 3-6 show total growth rates of 9.7 tons/day of NO_x, 7.2 tons/day of VOCs, 2.3 ton/day of PM₁₀, and 2.6 tons/day of SO_x. These tables also show the expected reductions for each pollutant from the measures contained or relied on in this Plan. The projected inventory for 2010 incorporates the projected growth as well as the expected controls from the measures contained in this Plan. Notwithstanding slight rounding errors, the projected 2010 inventory equals the baseline inventory plus the projected growth minus the expected reductions from the controls contained in the Plan.

Pre-Baseline Offset Usage Estimate: Under the District's New Source Review Rule 2201, new sources with emissions exceeding the following levels must offset their emissions:

NO _x	20,000 lbs/year
VOC	20,000 lbs/year
PM ₁₀	29,200 lbs/year
SO _x	54,750 lbs/year

Additionally, for existing facilities with emissions meeting or exceeding the above levels, any increase in emissions must be offset.

The amount of offsets required was estimated by establishing the percentage of permitting actions for each source category that would be subject to offset requirements under Rule 2201. For each source category, this percentage was established based on past permitting history, the fraction of sources in the category with emissions at or above the offset trigger levels, and the historical permitting activity for the source category. The following factors were used in estimating the potential need for offsets:

- All increases from modifications to existing sources with potential emissions at or above the above offset thresholds would require offsets (District Rule 2201).
- New sources with emissions exceeding the above offset thresholds would require offsets (District Rule 2201).
- The percentage of sources that meet any of the above criteria was estimated by examining past permitting history and by projecting future permitting based on the estimated growth. For instance, the majority of permitting actions with increases in emissions from oil production facilities come from sources with potential emissions in excess of the above offset thresholds. Therefore, for that source category, it was assumed that 80-100% of increases in overall emissions would require offsets.

The quantity of required offsets was then established by multiplying the expected growth in emissions for each source category by this percentage and the expected offset ratio. District Rule 2201 establishes offset ratios ranging from 1.0:1 to 1.5:1 based on the distance from the source of ERCs to the source with increase in emissions. An offset ratio of 1.5:1 applies to all transactions where the distance is greater than 15 miles. For calendar year 2005, the average offset ratio for all permitting actions was slightly higher than 1.3:1. Specifically, for each pollutant, the average offset ratios for 2005 were: 1.2:1 for NO_x, VOC, and SO_x; and 2.0:1 for PM₁₀. Therefore, these average offset ratios were used for this 2005 update's calculations. Tables 3-3 through 3-6 contain the expected growth, percentage of activities subject to offset requirements, and the expected quantity of offsets for each pollutant.

Although some offsets are expected to come from post-baseline reductions, this plan conservatively assumes that all offsets will be pre-baseline. The expected pre-baseline offset usage after 2002 through 2010, as shown in Tables 3-3 through 3-6, has been estimated in the original plan, and in this plan, as follows:

	Expected ERC Use (tpd)		Growth (tpd)
	<u>2003 Plan</u>	<u>2006 Plan</u>	<u>2006 Plan</u>
NO _x	7.01	6.96	9.7
VOC	6.41	5.06	7.2
PM ₁₀	1.90	2.14	2.3
SO _x	1.93	1.84	2.6

As shown above, the quantity of pre-baseline offsets that are expected to be used between 2002 and 2010, regardless of which estimate is used, are less than the plan's estimated growth in emissions for each pollutant. Therefore, if growth in new and modified sources occurs at the rate estimated in this plan, the use of offsets as required in Rule 2201 will ensure that permitted increases in emissions will not interfere with progress toward attainment of federal PM₁₀ standards or the achievement of the 5 percent per year reduction in PM₁₀ or PM₁₀ precursor emissions. As discussed in Chapter 7, the District also satisfies the requirement for Reasonable Further Progress (RFP) with the above-mentioned projected inventories and without taking credit for the ERCs required of and provided by new and modified stationary sources permitted during this period.

Safeguards to assure plan integrity despite the use of pre-baseline credits: In order to assure that the use of pre-baseline ERCs does not interfere with attainment effort and the applicable rate of progress, this plan incorporates the following safeguards:

- The District will place a cap on the amount of pre-baseline credits that can be used. Although the District has relied on a number of conservative assumptions in estimating the usage quantity of pre-baseline credits, some degree of uncertainty exists. For instance, unexpected growth or irregular permitting activity may occur for one or more source categories. The cap on the use of pre-baseline ERCs will be enforced by tracking the use of such credits and disallowing the use of such credits in permitting actions when the above-specified levels are reached. The pre-baseline ERC usage cap on each pollutant will be the larger of the two estimates shown above (represented by bold type), as we have demonstrated, the use of those quantities of pre-baseline credits will not interfere with our attainment efforts.
- Although some ERCs will come from post-baseline reductions, this Plan conservatively assumes that all offsets will come from pre-baseline reductions. As discussed earlier, federal law only requires the pre-baseline ERCs be included in the growth and the attainment demonstration. This plan assumes that all ERCs used to offset emission increases will be pre-baseline ERCs and, therefore, includes them all within the projected inventory as growth. Using this higher projected inventory leads to conservative conclusions relating to the attainment and Reasonable Further Progress demonstrations.
- Although permissible, this plan does not take credit for reductions and mitigations required under the District's New Source Review Rule. In particular, this Plan does not reduce the future years emissions by taking credit for the amount of ERCs provided through permitting actions. This conservative approach further assures that the attainment demonstration is not affected by the use of pre-baseline ERCs.

Table 3-3 Estimated NOx Growth, Control, and Estimated Offset Use

SUMMARY CATEGORY NAME	2002 Emissions Tons/day	Growth Factor (%)	Estimated Growth (tons/day)	Control Factor (%)	Reductions (tons/day)	2010 Emissions Tons/day	Percent Requiring Offsets	Estimated Offsets (tons/day)
FUEL COMBUSTION								
ELECTRIC UTILITIES	2.82	11.26%	0.318	-5.07%	-0.143	2.93	100	0.38
COGENERATION	10.44	18.19%	1.899	-46.57%	-4.861	6.31	90	2.05
OIL AND GAS PRODUCTION (COMBUSTION)	25.02	1.06%	0.265	-33.26%	-8.322	16.83	80	0.25
PETROLEUM REFINING (COMBUSTION)	1.46	0.08%	0.001	-18.70%	-0.273	1.19	100	0.00
MANUFACTURING AND INDUSTRIAL	30.07	12.36%	3.718	-3.51%	-1.055	32.96	30	1.34
FOOD AND AGRICULTURAL PROCESSING	19.85	-2.85%	-0.565	-16.72%	-3.317	16.03	30	0.00
SERVICE AND COMMERCIAL	29.18	7.83%	2.284	-2.07%	-0.604	30.79	30	0.82
OTHER (FUEL COMBUSTION)	1.71	-0.01%	0.000	-35.17%	-0.603	1.11	25	0.00
TOTAL NOx: FUEL COMBUSTION	120.56		7.92		-19.18	108.14		4.85
WASTE DISPOSAL								
SEWAGE TREATMENT	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
LANDFILLS	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
INCINERATORS	0.05	9.63%	0.005	0.20%	0.000	0.06	30	0.00
SOIL REMEDIATION	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
OTHER (WASTE DISPOSAL)	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
TOTAL NOx: WASTE DISPOSAL	0.05		0.01		0.00	0.06		0.00
CLEANING AND SURFACE COATINGS								
LAUNDERING	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
DEGREASING	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00

SUMMARY CATEGORY NAME	2002 Emissions Tons/day	Growth Factor (%)	Estimated Growth (tons/day)	Control Factor (%)	Reductions (tons/day)	2010 Emissions Tons/day	Percent Requiring Offsets	Estimated Offsets (tons/day)
PRINTING	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
ADHESIVES AND SEALANTS	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	70.37%	0.002	0.00%	0.000	0.00		0.00
TOTAL NOx: CLEANING AND SURFACE COATINGS	0.00		0.00		0.00	0.00		0.00
PETROLEUM PRODUCTION AND MARKETING								
OIL AND GAS PRODUCTION	0.18	40.36%	0.073	-0.19%	0.000	0.23	80	0.07
PETROLEUM REFINING	0.09	0.00%	0.000	0.00%	0.000	0.09	80	0.00
PETROLEUM MARKETING	0.02	39.67%	0.008	0.00%	0.000	0.03	0	0.00
TOTAL NOx: PETROLEUM PRODUCTION AND MARKETING	0.29		0.08		0.00	0.35		0.07
INDUSTRIAL PROCESSES								
CHEMICAL	0.13	15.40%	0.020	-0.08%	0.000	0.15	25	0.01
FOOD AND AGRICULTURE	9.17	-2.36%	-0.217	0.05%	0.005	8.95	10	0.00
MINERAL PROCESSES	1.46	12.97%	0.189	0.00%	0.000	1.65	25	0.06
METAL PROCESSES	0.02	6.02%	0.001	0.00%	0.000	0.02	10	0.00
WOOD AND PAPER	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
GLASS AND RELATED PRODUCTS	12.28	13.41%	1.647	-25.64%	-3.149	10.31	100	1.98
ELECTRONICS	0.00	68.75%	0.000	0.00%	0.000	0.00		0.00
OTHER (INDUSTRIAL PROCESSES)	0.02	27.69%	0.005	0.00%	0.000	0.02	25	0.00
TOTAL NOx: INDUSTRIAL PROCESSES	23.08		1.65		-3.14	21.12		2.04
TOTAL NOx: STATIONARY SOURCES	143.99		9.65		-22.32	129.66		6.96

Table 3-4 Estimated VOC Growth, Control, and Estimated Offset Use

SUMMARY CATEGORY NAME	2002 Emissions (tons/day)	Growth Factor (%)	Estimated Growth (tons/day)	Control Factor (%)	Reductions (tons/day)	2010 Emissions (tons/day)	Percent Requiring Offsets	Estimated Offsets (tons/day)
FUEL COMBUSTION								
ELECTRIC UTILITIES	0.39	22.63%	0.089	0.09%	0.000	0.48	100	0.11
COGENERATION	0.82	15.79%	0.129	0.01%	0.000	0.95	90	0.14
OIL AND GAS PRODUCTION (COMBUSTION)	2.90	9.05%	0.262	-0.02%	-0.001	3.16	80	0.25
PETROLEUM REFINING (COMBUSTION)	0.07	0.00%	0.000	0.00%	0.000	0.07	100	0.00
MANUFACTURING AND INDUSTRIAL	0.26	18.29%	0.047	-0.13%	0.000	0.31	25	0.01
FOOD AND AGRICULTURAL PROCESSING	2.45	-3.04%	-0.075	-0.01%	0.000	2.38	10	0.00
SERVICE AND COMMERCIAL	2.54	7.13%	0.181	-0.02%	-0.001	2.72	25	0.05
OTHER (FUEL COMBUSTION)	0.16	-0.07%	0.000	-42.32%	-0.066	0.09	10	0.00
TOTAL VOC: FUEL COMBUSTION	9.59		0.63		-0.07	10.16		0.57
WASTE DISPOSAL								
SEWAGE TREATMENT	0.02	16.41%	0.003	0.00%	0.000	0.02	25	0.00
LANDFILLS	2.92	16.27%	0.475	0.01%	0.000	3.39	50	0.28
INCINERATORS	0.00	25.00%	0.000	0.00%	0.000	0.00		0.00
SOIL REMEDIATION	0.01	11.94%	0.001	-1.52%	0.000	0.01	10	0.00
OTHER (WASTE DISPOSAL)	0.50	19.96%	0.099	0.00%	0.000	0.60	25	0.03
TOTAL VOC: WASTE DISPOSAL	3.44		0.58		0.00	4.02		0.32
CLEANING AND SURFACE COATINGS								
LAUNDERING	0.06	18.01%	0.010	0.00%	0.000	0.07	0	0.00
DEGREASING	8.74	-5.25%	-0.459	-83.15%	-7.271	1.49	10	0.00
COATINGS AND RELATED PROCESS SOLVENTS	10.75	26.47%	2.846	-4.13%	-0.444	13.16	50	1.71
PRINTING	1.50	13.14%	0.197	0.00%	0.000	1.69	25	0.06
ADHESIVES AND SEALANTS	0.71	-15.12%	-0.108	0.03%	0.000	0.61	25	0.00

OTHER (CLEANING AND SURFACE COATINGS)	3.03	31.87%	0.967	0.03%	0.001	4.00	50	0.58
TOTAL VOC: CLEANING AND SURFACE COAT	24.79		3.45		-7.71	21.02		2.35
PETROLEUM PRODUCTION AND MARKETING								
OIL AND GAS PRODUCTION	31.51	0.86%	0.272	-12.54%	-3.950	27.20	80	0.26
PETROLEUM REFINING	1.40	0.31%	0.004	-16.91%	-0.236	1.17	90	0.00
PETROLEUM MARKETING	6.77	15.49%	1.049	-11.47%	-0.776	6.90	80	1.01
TOTAL VOC: PETROLEUM PRODUCTION AND MARKETING	39.68		1.32		-4.96	35.27		1.27
INDUSTRIAL PROCESSES								
CHEMICAL	1.98	23.37%	0.463	-0.01%	0.000	2.44	25	0.14
FOOD AND AGRICULTURE	10.37	6.23%	0.646	-2.91%	-0.302	10.70	50	0.39
MINERAL PROCESSES	0.28	15.56%	0.043	-0.04%	0.000	0.32	25	0.01
METAL PROCESSES	0.15	0.46%	0.001	0.07%	0.000	0.15	25	0.00
WOOD AND PAPER	0.00	0.00%	0.000	0.00%	0.000	0.00	25	0.00
GLASS AND RELATED PRODUCTS	0.11	11.46%	0.013	0.00%	0.000	0.13	100	0.02
ELECTRONICS	0.02	71.88%	0.000	0.00%	0.000	0.04		0.00
OTHER (INDUSTRIAL PROCESSES)	0.13	8.71%	0.012	-0.08%	0.000	0.14	25	0.00
TOTAL VOC: INDUSTRIAL PROCESSES	13.05		1.18		-0.30	13.92		0.56
TOTAL VOC: STATIONARY SOURCES	90.55		7.17		-13.04	84.39		5.06

Table 3-5 Estimated PM10 Growth, Control, and Estimated Offset Use

SUMMARY CATEGORY NAME	2002 Emissions Tons/day	Growth Factor (%)	Estimated Growth (tons/day)	Control Factor (%)	Reductions (tons/day)	2010 Emissions Tons/day	Percent Requiring Offsets	Estimated Offsets (tons/day)
FUEL COMBUSTION								
ELECTRIC UTILITIES	0.34	11.99%	0.041	-0.03%	0.000	0.38	100	0.08
COGENERATION	0.85	16.91%	0.143	-0.01%	0.000	0.99	80	0.23
OIL AND GAS PRODUCTION (COMBUSTION)	1.90	7.50%	0.143	-0.03%	-0.001	2.04	80	0.23
PETROLEUM REFINING (COMBUSTION)	0.18	0.00%	0.000	0.00%	0.000	0.18	80	0.00
MANUFACTURING AND INDUSTRIAL	0.75	15.11%	0.114	0.01%	0.000	0.86	25	0.06
FOOD AND AGRICULTURAL PROCESSING	1.40	-2.67%	-0.037	-12.79%	-0.179	1.19	20	0.00
SERVICE AND COMMERCIAL	1.18	7.13%	0.084	0.00%	0.000	1.27	25	0.04
OTHER (FUEL COMBUSTION)	0.05	-0.20%	0.000	-44.01%	-0.024	0.03		0.00
TOTAL PM10: FUEL COMBUSTION	6.64		0.49		-0.20	6.93		0.64
WASTE DISPOSAL								
SEWAGE TREATMENT	0.00	0.00%	0.000	0.00%	0.000	0.00	25	0.00
LANDFILLS	0.01	12.73%	0.001	-1.92%	0.000	0.01	50	0.00
INCINERATORS	0.00	13.33%	0.000	0.00%	0.000	0.00	25	0.00
SOIL REMEDIATION	0.00	0.00%	0.000	0.00%	0.000	0.00	25	0.00
OTHER (WASTE DISPOSAL)	0.00	0.00%	0.000	0.00%	0.000	0.00	25	0.00
TOTAL PM10: WASTE DISPOSAL	0.01		0.00		0.00	0.01		0.00
CLEANING AND SURFACE COATINGS								
LAUNDERING	0.00	0.00%	0.000	0.00%	0.000	0.00		
DEGREASING	0.00	0.00%	0.000	0.00%	0.000	0.00		
COATINGS AND RELATED PROCESS SOLVENTS	0.03	12.22%	0.003	-0.78%	0.000	0.03	25	0.00
PRINTING	0.06	13.60%	0.008	0.19%	0.000	0.06	10	0.00

ADHESIVES AND SEALANTS	0.00	0.00%	0.000	0.00%	0.000	0.00	10	0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00%	0.000	0.00%	0.000	0.00	50	0.00
TOTAL PM10: CLEANING AND SURFACE COAT	0.08		0.01		0.00	0.09		0.00
PETROLEUM PRODUCTION AND MARKETING								
OIL AND GAS PRODUCTION	0.04	12.54%	0.004	-0.31%	0.000	0.04	80	0.01
PETROLEUM REFINING	0.06	0.00%	0.000	0.00%	0.000	0.06	80	0.00
PETROLEUM MARKETING	0.00	0.00%	0.000	0.00%	0.000	0.00	80	0.00
TOTAL PM10: PETROLEUM PRODUCTION AND MARKETING	0.09		0.00		0.00	0.10		0.01
INDUSTRIAL PROCESSES								
CHEMICAL	1.95	32.20%	0.628	-0.02%	0.000	2.58	25	0.31
FOOD AND AGRICULTURE	10.00	4.78%	0.478	-6.65%	-0.665	9.71	50	0.48
MINERAL PROCESSES	5.57	9.91%	0.552	-0.02%	-0.001	6.12	50	0.55
METAL PROCESSES	0.18	1.25%	0.002	0.00%	0.000	0.18		0.00
WOOD AND PAPER	0.36	14.50%	0.053	0.06%	0.000	0.42		0.00
GLASS AND RELATED PRODUCTS	0.56	12.22%	0.068	0.04%	0.000	0.63	100	0.14
ELECTRONICS	0.00	0.00%	0.000			0.00		0.00
OTHER (INDUSTRIAL PROCESSES)	0.08	22.68%	0.018	-0.14%	0.000	0.10	25	0.01
TOTAL PM10: INDUSTRIAL PROCESSES	18.70		1.80		-0.67	19.73		1.49
TOTAL PM10: STATIONARY SOURCES	25.53		2.30		-0.87	26.86		2.14

Table 3-6 Estimated SOx Growth, Control, and Estimated Offset Use

SUMMARY CATEGORY NAME	2002 Emissions Tons/day	Growth Factor (%)	Estimated Growth (tons/day)	Control Factor (%)	Reductions (tons/day)	2010 Emissions Tons/day	Percent Requiring Offsets	Estimated Offsets (tons/day)
FUEL COMBUSTION								
ELECTRIC UTILITIES	0.98	2.64%	0.026	0.00%	0.000	1.00	100	0.03
COGENERATION	0.70	9.57%	0.067	0.03%	0.000	0.76	80	0.06
OIL AND GAS PRODUCTION (COMBUSTION)	7.90	9.09%	0.718	-0.02%	-0.001	8.62	80	0.69
PETROLEUM REFINING (COMBUSTION)	1.11	0.21%	0.002	0.00%	0.000	1.11	100	0.00
MANUFACTURING AND INDUSTRIAL	6.15	15.41%	0.948	0.03%	0.002	7.10	25	0.28
FOOD AND AGRICULTURAL PROCESSING	2.25	-1.76%	-0.040	0.01%	0.000	2.21	10	0.00
SERVICE AND COMMERCIAL	1.25	6.71%	0.084	-0.01%	0.000	1.34	25	0.03
OTHER (FUEL COMBUSTION)	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
TOTAL SOx: FUEL COMBUSTION	20.33		1.81		0.00	22.14		1.09
WASTE DISPOSAL								
SEWAGE TREATMENT	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
LANDFILLS	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
INCINERATORS	0.01	10.00%	0.001	0.00%	0.000	0.01	25	0.00
SOIL REMEDIATION	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
OTHER (WASTE DISPOSAL)	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
TOTAL SOx: WASTE DISPOSAL	0.01		0.00		0.00	0.01		0.00
CLEANING AND SURFACE COATINGS								
LAUNDERING	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
DEGREASING	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00

PRINTING	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
ADHESIVES AND SEALANTS	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
OTHER (CLEANING AND SURFACE COATINGS)	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
TOTAL SOx: CLEANING AND SURFACE COAT	0.00		0.00		0.00	0.00		0.00
PETROLEUM PRODUCTION AND MARKETING								
OIL AND GAS PRODUCTION	0.11	28.36%	0.030	-0.10%	0.000	0.14	90	0.03
PETROLEUM REFINING	0.19	0.00%	0.000	0.00%	0.000	0.19	100	0.00
PETROLEUM MARKETING	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
TOTAL SOx: PETROLEUM PRODUCTION AND MARKETING	0.29		0.03		0.00	0.32		0.03
INDUSTRIAL PROCESSES								
CHEMICAL	0.35	12.43%	0.043	0.00%	0.000	0.39	25	0.01
FOOD AND AGRICULTURE	1.03	4.70%	0.048	-0.02%	0.000	1.08	50	0.03
MINERAL PROCESSES	1.22	14.01%	0.172	0.03%	0.000	1.40	25	0.05
METAL PROCESSES	0.07	3.77%	0.003	0.00%	0.000	0.07	25	0.00
WOOD AND PAPER	0.00	0.00%	0.000	0.00%	0.000	0.00		0.00
GLASS AND RELATED PRODUCTS	4.07	12.67%	0.516	0.03%	0.001	4.58	100	0.62
ELECTRONICS	0.00	0.00%		0.00%		0.00		0.00
OTHER (INDUSTRIAL PROCESSES)	0.00	50.00%	0.000	0.00%	0.000	0.00	25	0.00
TOTAL SOx: INDUSTRIAL PROCESSES	6.74		0.78		0.00	7.52		0.71
TOTAL SOx: STATIONARY SOURCES	27.37		2.62		0.00	29.99		1.84

Following this subsection, there are a series of summary tables (Tables 3-7 through 3-12) that show the annual emissions of a pollutant for the years 2002, 2005, 2008, and 2010. These inventories come from the ARB-maintained CCOS v2.14 inventories.

Table 3-7 Annual Average Total Organic Gases (TOG)				
STATIONARY SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
FUEL COMBUSTION				
ELECTRIC UTILITIES	3.9	4.3	4.6	4.9
COGENERATION	8.8	9.7	10.1	10.1
OIL AND GAS PRODUCTION (COMBUSTION)	37.7	41.6	41.7	41.4
PETROLEUM REFINING (COMBUSTION)	0.3	0.3	0.3	0.3
MANUFACTURING AND INDUSTRIAL	0.6	0.7	0.7	0.7
FOOD AND AGRICULTURAL PROCESSING	3.0	3.0	3.0	3.0
SERVICE AND COMMERCIAL	7.7	7.9	8.1	8.1
OTHER (FUEL COMBUSTION)	0.2	0.2	0.2	0.1
* TOTAL FUEL COMBUSTION	62.2	67.6	68.6	68.6
WASTE DISPOSAL				
SEWAGE TREATMENT	0.0	0.0	0.0	0.0
LANDFILLS	226.2	240.3	253.9	263.0
INCINERATORS	0.0	0.0	0.0	0.0
SOIL REMEDIATION	0.0	0.0	0.0	0.0
OTHER (WASTE DISPOSAL)	1.8	1.9	2.0	2.1
* TOTAL WASTE DISPOSAL	228.0	242.2	256.0	265.1
CLEANING AND SURFACE COATINGS				
LAUNDERING	0.7	0.8	0.8	0.9
DEGREASING	11.2	2.5	2.6	2.7
COATINGS AND RELATED PROCESS SOLVENTS	11.3	11.9	13.0	13.8
PRINTING	1.5	1.6	1.6	1.7
ADHESIVES AND SEALANTS	0.8	0.8	0.7	0.7
OTHER (CLEANING AND SURFACE COATINGS)	4.3	4.9	5.4	5.7
* TOTAL CLEANING AND SURFACE COATINGS	29.9	22.4	24.2	25.5
PETROLEUM PRODUCTION AND MARKETING				
OIL AND GAS PRODUCTION	53.4	49.9	49.8	48.7
PETROLEUM REFINING	1.8	1.6	1.6	1.6
PETROLEUM MARKETING	14.2	14.9	15.0	15.1
* TOTAL PETROLEUM PRODUCTION AND MARKETING	69.4	66.4	66.4	65.4
INDUSTRIAL PROCESSES				
CHEMICAL	2.7	3.0	3.2	3.4
FOOD AND AGRICULTURE	11.1	11.0	11.2	11.4
MINERAL PROCESSES	0.3	0.4	0.4	0.4
METAL PROCESSES	0.2	0.2	0.2	0.2
WOOD AND PAPER	0.0	0.0	0.0	0.0
GLASS AND RELATED PRODUCTS	0.1	0.2	0.2	0.2
ELECTRONICS	0.0	0.0	0.1	0.1

OTHER (INDUSTRIAL PROCESSES)	0.2	0.2	0.2	0.2
* TOTAL INDUSTRIAL PROCESSES	14.8	15.0	15.5	15.8
** TOTAL STATIONARY SOURCES	404.3	413.6	430.6	440.5
AREA-WIDE SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
SOLVENT EVAPORATION				
CONSUMER PRODUCTS	30.9	28.8	30.6	31.8
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	12.6	10.7	10.9	11.1
PESTICIDES/FERTILIZERS	26.4	25.4	24.5	23.8
ASPHALT PAVING / ROOFING	2.7	2.7	2.8	2.8
* TOTAL SOLVENT EVAPORATION	72.6	67.6	68.8	69.5
MISCELLANEOUS PROCESSES				
RESIDENTIAL FUEL COMBUSTION	14.6	13.5	12.1	11.2
FARMING OPERATIONS	775.7	817.6	859.5	887.5
CONSTRUCTION AND DEMOLITION	0.0	0.0	0.0	0.0
PAVED ROAD DUST	0.0	0.0	0.0	0.0
UNPAVED ROAD DUST	0.0	0.0	0.0	0.0
FUGITIVE WINDBLOWN DUST	0.0	0.0	0.0	0.0
FIRES	0.1	0.1	0.1	0.1
WASTE BURNING AND DISPOSAL	47.3	46.8	46.4	46.2
COOKING	0.6	0.6	0.7	0.7
OTHER (MISCELLANEOUS PROCESSES)	0.0	0.0	0.0	0.0
* TOTAL MISCELLANEOUS PROCESSES	838.3	878.7	918.8	945.7
** TOTAL AREA-WIDE SOURCES	910.9	946.3	987.5	1015.2
MOBILE SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
ON-ROAD MOTOR VEHICLES				
LIGHT DUTY PASSENGER (LDA)	43.5	33.2	25.1	20.7
LIGHT DUTY TRUCKS - 1 (LDT1)	23.1	19.3	15.8	13.5
LIGHT DUTY TRUCKS - 2 (LDT2)	15.6	13.4	11.4	10.3
MEDIUM DUTY TRUCKS (MDV)	6.7	5.8	5.0	4.6
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	3.6	2.3	1.8	1.6
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.6	0.6	0.6	0.6
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	5.0	4.1	3.3	2.8
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	2.8	2.3	1.9	1.7
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.2	0.2	0.2	0.2
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.2	0.2	0.2	0.2
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.7	0.7	0.7	0.6
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	4.8	4.6	4.1	3.8
MOTORCYCLES (MCY)	2.4	2.3	2.2	2.1
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.2	0.2	0.2	0.2
HEAVY DUTY GAS URBAN BUSES (UB)	1.2	1.2	1.2	1.2
SCHOOL BUSES (SB)	0.4	0.4	0.3	0.3
MOTOR HOMES (MH)	1.0	1.0	0.8	0.7
* TOTAL ON-ROAD MOTOR VEHICLES	111.9	91.8	74.7	65.0
OTHER MOBILE SOURCES				
AIRCRAFT	7.8	8.0	8.1	8.1

TRAINS	1.4	1.4	1.3	1.3
SHIPS AND COMMERCIAL BOATS	0.1	0.1	0.1	0.1
RECREATIONAL BOATS	11.4	10.0	8.7	7.2
OFF-ROAD RECREATIONAL VEHICLES	4.8	5.0	5.2	5.3
OFF-ROAD EQUIPMENT	19.2	15.7	13.4	12.2
FARM EQUIPMENT	9.8	8.8	7.6	6.9
FUEL STORAGE AND HANDLING	7.2	2.7	2.3	2.4
* TOTAL OTHER MOBILE SOURCES	61.7	51.7	46.7	43.5
** TOTAL MOBILE SOURCES	173.7	143.5	121.4	108.5
GRAND TOTAL FOR SAN JOAQUIN VALLEY UNIFIED APCD	1488.9	1503.4	1539.6	1564.1

Table 3-8 Annual Average Volatile Organic Compounds (VOC)				
STATIONARY SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
FUEL COMBUSTION				
ELECTRIC UTILITIES	0.4	0.4	0.5	0.5
COGENERATION	0.8	0.9	0.9	0.9
OIL AND GAS PRODUCTION (COMBUSTION)	2.9	3.2	3.2	3.2
PETROLEUM REFINING (COMBUSTION)	0.1	0.1	0.1	0.1
MANUFACTURING AND INDUSTRIAL	0.3	0.3	0.3	0.3
FOOD AND AGRICULTURAL PROCESSING	2.5	2.4	2.4	2.4
SERVICE AND COMMERCIAL	2.5	2.6	2.7	2.7
OTHER (FUEL COMBUSTION)	0.2	0.1	0.1	0.1
* TOTAL FUEL COMBUSTION	9.6	10.0	10.1	10.2
WASTE DISPOSAL				
SEWAGE TREATMENT	0.0	0.0	0.0	0.0
LANDFILLS	2.9	3.1	3.3	3.4
INCINERATORS	0.0	0.0	0.0	0.0
SOIL REMEDIATION	0.0	0.0	0.0	0.0
OTHER (WASTE DISPOSAL)	0.5	0.5	0.6	0.6
* TOTAL WASTE DISPOSAL	3.4	3.7	3.9	4.0
CLEANING AND SURFACE COATINGS				
LAUNDERING	0.1	0.1	0.1	0.1
DEGREASING	8.7	1.5	1.5	1.5
COATINGS AND RELATED PROCESS SOLVENTS	10.7	11.3	12.4	13.2
PRINTING	1.5	1.5	1.6	1.7
ADHESIVES AND SEALANTS	0.7	0.7	0.6	0.6
OTHER (CLEANING AND SURFACE COATINGS)	3.0	3.4	3.8	4.0
* TOTAL CLEANING AND SURFACE COATINGS	24.8	18.5	19.9	21.0
PETROLEUM PRODUCTION AND MARKETING				
OIL AND GAS PRODUCTION	31.5	28.2	27.9	27.2
PETROLEUM REFINING	1.4	1.2	1.2	1.2
PETROLEUM MARKETING	6.8	6.7	6.8	6.9
* TOTAL PETROLEUM PRODUCTION AND MARKETING	39.7	36.0	35.8	35.3
INDUSTRIAL PROCESSES				
CHEMICAL	2.0	2.2	2.3	2.4

FOOD AND AGRICULTURE	10.4	10.3	10.5	10.7
MINERAL PROCESSES	0.3	0.3	0.3	0.3
METAL PROCESSES	0.2	0.2	0.2	0.2
WOOD AND PAPER	0.0	0.0	0.0	0.0
GLASS AND RELATED PRODUCTS	0.1	0.1	0.1	0.1
ELECTRONICS	0.0	0.0	0.0	0.0
OTHER (INDUSTRIAL PROCESSES)	0.1	0.1	0.1	0.1
* TOTAL INDUSTRIAL PROCESSES	13.0	13.2	13.6	13.9
** TOTAL STATIONARY SOURCES	90.6	81.4	83.4	84.4
AREA-WIDE SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
SOLVENT EVAPORATION				
CONSUMER PRODUCTS	25.7	24.2	25.7	26.7
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	12.3	10.4	10.7	10.9
PESTICIDES/FERTILIZERS	26.4	25.4	24.5	23.8
ASPHALT PAVING / ROOFING	2.3	2.3	2.4	2.4
* TOTAL SOLVENT EVAPORATION	66.7	62.4	63.3	63.8
MISCELLANEOUS PROCESSES				
RESIDENTIAL FUEL COMBUSTION	6.4	5.9	5.3	4.9
FARMING OPERATIONS	62.1	65.4	68.8	71.0
CONSTRUCTION AND DEMOLITION	0.0	0.0	0.0	0.0
PAVED ROAD DUST	0.0	0.0	0.0	0.0
UNPAVED ROAD DUST	0.0	0.0	0.0	0.0
FUGITIVE WINDBLOWN DUST	0.0	0.0	0.0	0.0
FIRES	0.1	0.1	0.1	0.1
WASTE BURNING AND DISPOSAL	26.4	26.1	25.9	25.7
COOKING	0.5	0.4	0.5	0.5
OTHER (MISCELLANEOUS PROCESSES)	0.0	0.0	0.0	0.0
* TOTAL MISCELLANEOUS PROCESSES	95.4	98.0	100.5	102.2
** TOTAL AREA-WIDE SOURCES	162.1	160.4	163.7	166.0
MOBILE SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
ON-ROAD MOTOR VEHICLES				
LIGHT DUTY PASSENGER (LDA)	40.1	30.7	23.1	19.0
LIGHT DUTY TRUCKS - 1 (LDT1)	21.3	17.8	14.5	12.5
LIGHT DUTY TRUCKS - 2 (LDT2)	14.3	12.3	10.5	9.4
MEDIUM DUTY TRUCKS (MDV)	6.1	5.3	4.6	4.1
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	3.3	2.1	1.6	1.5
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.6	0.6	0.6	0.5
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	4.6	3.8	3.0	2.6
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	2.5	2.1	1.7	1.5
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.1	0.2	0.2	0.2
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.2	0.2	0.2	0.1
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.6	0.6	0.6	0.5
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	4.0	3.8	3.5	3.2
MOTORCYCLES (MCY)	2.3	2.2	2.0	1.9
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.2	0.2	0.2	0.2
HEAVY DUTY GAS URBAN BUSES (UB)	1.0	1.0	1.0	0.9
SCHOOL BUSES (SB)	0.3	0.3	0.3	0.3
MOTOR HOMES (MH)	0.9	0.8	0.7	0.6
* TOTAL ON-ROAD MOTOR VEHICLES	102.4	83.9	68.1	59.0

OTHER MOBILE SOURCES				
AIRCRAFT	7.0	7.1	7.2	7.3
TRAINS	1.2	1.2	1.2	1.1
SHIPS AND COMMERCIAL BOATS	0.1	0.1	0.1	0.1
RECREATIONAL BOATS	10.5	9.2	8.1	6.6
OFF-ROAD RECREATIONAL VEHICLES	4.5	4.6	4.8	4.9
OFF-ROAD EQUIPMENT	17.1	14.0	12.0	10.9
FARM EQUIPMENT	8.4	7.5	6.5	5.9
FUEL STORAGE AND HANDLING	7.1	2.7	2.3	2.4
* TOTAL OTHER MOBILE SOURCES	55.9	46.4	42.1	39.2
** TOTAL MOBILE SOURCES	158.3	130.4	110.2	98.2
GRAND TOTAL FOR SAN JOAQUIN VALLEY UNIFIED APCD	410.9	372.1	357.3	348.6

Table 3-9 Annual Average Oxides of Nitrogen (NOx)				
STATIONARY SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
FUEL COMBUSTION				
ELECTRIC UTILITIES	2.8	2.8	2.8	2.9
COGENERATION	10.4	9.7	6.1	6.3
OIL AND GAS PRODUCTION (COMBUSTION)	25.0	19.6	17.2	16.8
PETROLEUM REFINING (COMBUSTION)	1.5	1.3	1.2	1.2
MANUFACTURING AND INDUSTRIAL	30.1	30.7	32.1	33.0
FOOD AND AGRICULTURAL PROCESSING	19.8	19.0	16.8	16.0
SERVICE AND COMMERCIAL	29.2	30.0	30.5	30.8
OTHER (FUEL COMBUSTION)	1.7	1.4	1.2	1.1
* TOTAL FUEL COMBUSTION	120.5	114.5	107.8	108.1
WASTE DISPOSAL				
SEWAGE TREATMENT	0.0	0.0	0.0	0.0
LANDFILLS	0.0	0.0	0.0	0.0
INCINERATORS	0.1	0.1	0.1	0.1
SOIL REMEDIATION	0.0	0.0	0.0	0.0
OTHER (WASTE DISPOSAL)	0.0	0.0	0.0	0.0
* TOTAL WASTE DISPOSAL	0.1	0.1	0.1	0.1
CLEANING AND SURFACE COATINGS				
LAUNDERING	0.0	0.0	0.0	0.0
DEGREASING	0.0	0.0	0.0	0.0
COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0
PRINTING	0.0	0.0	0.0	0.0
ADHESIVES AND SEALANTS	0.0	0.0	0.0	0.0
OTHER (CLEANING AND SURFACE COATINGS)	0.0	0.0	0.0	0.0
* TOTAL CLEANING AND SURFACE COATINGS	0.0	0.0	0.0	0.0
PETROLEUM PRODUCTION AND MARKETING				
OIL AND GAS PRODUCTION	0.2	0.2	0.2	0.2
PETROLEUM REFINING	0.1	0.1	0.1	0.1
PETROLEUM MARKETING	0.0	0.0	0.0	0.0
* TOTAL PETROLEUM PRODUCTION AND MARKETING	0.3	0.3	0.3	0.3

INDUSTRIAL PROCESSES				
CHEMICAL	0.1	0.1	0.1	0.2
FOOD AND AGRICULTURE	9.2	9.1	9.0	9.0
MINERAL PROCESSES	1.5	1.5	1.6	1.6
METAL PROCESSES	0.0	0.0	0.0	0.0
WOOD AND PAPER	0.0	0.0	0.0	0.0
GLASS AND RELATED PRODUCTS	12.3	11.8	9.9	10.3
ELECTRONICS	0.0	0.0	0.0	0.0
OTHER (INDUSTRIAL PROCESSES)	0.0	0.0	0.0	0.0
* TOTAL INDUSTRIAL PROCESSES	23.1	22.6	20.7	21.1
** TOTAL STATIONARY SOURCES	144.0	137.5	128.9	129.6
AREA-WIDE SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
SOLVENT EVAPORATION				
CONSUMER PRODUCTS	0.0	0.0	0.0	0.0
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0
PESTICIDES/FERTILIZERS	0.0	0.0	0.0	0.0
ASPHALT PAVING / ROOFING	0.0	0.0	0.0	0.0
* TOTAL SOLVENT EVAPORATION	0.0	0.0	0.0	0.0
MISCELLANEOUS PROCESSES				
RESIDENTIAL FUEL COMBUSTION	6.6	6.3	6.1	6.0
FARMING OPERATIONS	0.0	0.0	0.0	0.0
CONSTRUCTION AND DEMOLITION	0.0	0.0	0.0	0.0
PAVED ROAD DUST	0.0	0.0	0.0	0.0
UNPAVED ROAD DUST	0.0	0.0	0.0	0.0
FUGITIVE WINDBLOWN DUST	0.0	0.0	0.0	0.0
FIRES	0.0	0.0	0.0	0.0
WASTE BURNING AND DISPOSAL	4.6	4.5	4.5	4.5
COOKING	0.0	0.0	0.0	0.0
OTHER (MISCELLANEOUS PROCESSES)	0.0	0.0	0.0	0.0
* TOTAL MISCELLANEOUS PROCESSES	11.2	10.9	10.6	10.5
** TOTAL AREA-WIDE SOURCES	11.2	10.9	10.6	10.5
MOBILE SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
ON-ROAD MOTOR VEHICLES				
LIGHT DUTY PASSENGER (LDA)	37.7	28.2	21.3	17.5
LIGHT DUTY TRUCKS - 1 (LDT1)	23.8	18.5	14.4	12.1
LIGHT DUTY TRUCKS - 2 (LDT2)	20.9	16.9	13.8	12.0
MEDIUM DUTY TRUCKS (MDV)	10.2	8.4	7.0	6.1
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	2.1	2.1	2.4	2.6
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.7	0.7	0.7	0.7
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	2.9	2.6	2.2	2.0
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	4.7	3.9	3.0	2.5
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	2.6	2.8	2.5	2.1
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	2.3	2.1	1.9	1.6
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	19.3	18.3	16.2	14.3
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	87.8	81.4	70.9	61.9
MOTORCYCLES (MCY)	0.5	0.5	0.6	0.6
HEAVY DUTY DIESEL URBAN BUSES (UB)	3.7	3.7	3.6	3.6
HEAVY DUTY GAS URBAN BUSES (UB)	1.0	1.0	1.1	1.1

SCHOOL BUSES (SB)	2.4	2.5	2.6	2.7
MOTOR HOMES (MH)	2.1	2.1	2.0	1.9
* TOTAL ON-ROAD MOTOR VEHICLES	224.7	195.7	166.1	145.3
OTHER MOBILE SOURCES				
AIRCRAFT	2.3	2.4	2.4	2.5
TRAINS	30.2	24.3	21.3	20.8
SHIPS AND COMMERCIAL BOATS	0.3	0.3	0.3	0.3
RECREATIONAL BOATS	2.5	3.1	3.3	3.3
OFF-ROAD RECREATIONAL VEHICLES	0.5	0.5	0.5	0.5
OFF-ROAD EQUIPMENT	49.3	45.1	39.4	34.7
FARM EQUIPMENT	61.7	55.6	48.4	44.6
FUEL STORAGE AND HANDLING	0.0	0.0	0.0	0.0
* TOTAL OTHER MOBILE SOURCES	146.8	131.3	115.6	106.6
** TOTAL MOBILE SOURCES	371.4	326.9	281.7	251.9
GRAND TOTAL FOR SAN JOAQUIN VALLEY UNIFIED APCD				
	526.7	475.4	421.2	392.0

Table 3-10 Annual Average Oxides of Sulfur (SOx)				
STATIONARY SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
FUEL COMBUSTION				
ELECTRIC UTILITIES	1.0	1.0	1.0	1.0
COGENERATION	0.7	0.7	0.8	0.8
OIL AND GAS PRODUCTION (COMBUSTION)	7.9	8.7	8.7	8.6
PETROLEUM REFINING (COMBUSTION)	1.1	1.1	1.1	1.1
MANUFACTURING AND INDUSTRIAL	6.1	6.7	6.9	7.1
FOOD AND AGRICULTURAL PROCESSING	2.2	2.2	2.2	2.2
SERVICE AND COMMERCIAL	1.3	1.3	1.3	1.3
OTHER (FUEL COMBUSTION)	0.0	0.0	0.0	0.0
* TOTAL FUEL COMBUSTION	20.3	21.7	22.0	22.1
WASTE DISPOSAL				
SEWAGE TREATMENT	0.0	0.0	0.0	0.0
LANDFILLS	0.0	0.0	0.0	0.0
INCINERATORS	0.0	0.0	0.0	0.0
SOIL REMEDIATION	0.0	0.0	0.0	0.0
OTHER (WASTE DISPOSAL)	0.0	0.0	0.0	0.0
* TOTAL WASTE DISPOSAL	0.0	0.0	0.0	0.0
CLEANING AND SURFACE COATINGS				
LAUNDERING	0.0	0.0	0.0	0.0
DEGREASING	0.0	0.0	0.0	0.0
COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0
PRINTING	0.0	0.0	0.0	0.0
ADHESIVES AND SEALANTS	0.0	0.0	0.0	0.0
OTHER (CLEANING AND SURFACE COATINGS)	0.0	0.0	0.0	0.0
* TOTAL CLEANING AND SURFACE COATINGS	0.0	0.0	0.0	0.0
PETROLEUM PRODUCTION AND MARKETING				
OIL AND GAS PRODUCTION	0.1	0.1	0.1	0.1
PETROLEUM REFINING	0.2	0.2	0.2	0.2

PETROLEUM MARKETING	0.0	0.0	0.0	0.0
* TOTAL PETROLEUM PRODUCTION AND MARKETING	0.3	0.3	0.3	0.3
INDUSTRIAL PROCESSES				
CHEMICAL	0.3	0.4	0.4	0.4
FOOD AND AGRICULTURE	1.0	1.0	1.1	1.1
MINERAL PROCESSES	1.2	1.3	1.3	1.4
METAL PROCESSES	0.1	0.1	0.1	0.1
WOOD AND PAPER	0.0	0.0	0.0	0.0
GLASS AND RELATED PRODUCTS	4.1	4.2	4.4	4.6
ELECTRONICS	0.0	0.0	0.0	0.0
OTHER (INDUSTRIAL PROCESSES)	0.0	0.0	0.0	0.0
* TOTAL INDUSTRIAL PROCESSES	6.7	6.9	7.2	7.5
** TOTAL STATIONARY SOURCES	27.4	28.9	29.5	30.0
AREA-WIDE SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
SOLVENT EVAPORATION				
CONSUMER PRODUCTS	0.0	0.0	0.0	0.0
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0
PESTICIDES/FERTILIZERS	0.0	0.0	0.0	0.0
ASPHALT PAVING / ROOFING	0.0	0.0	0.0	0.0
* TOTAL SOLVENT EVAPORATION	0.0	0.0	0.0	0.0
MISCELLANEOUS PROCESSES				
RESIDENTIAL FUEL COMBUSTION	0.3	0.3	0.3	0.3
FARMING OPERATIONS	0.0	0.0	0.0	0.0
CONSTRUCTION AND DEMOLITION	0.0	0.0	0.0	0.0
PAVED ROAD DUST	0.0	0.0	0.0	0.0
UNPAVED ROAD DUST	0.0	0.0	0.0	0.0
FUGITIVE WINDBLOWN DUST	0.0	0.0	0.0	0.0
FIRES	0.0	0.0	0.0	0.0
WASTE BURNING AND DISPOSAL	0.1	0.1	0.1	0.1
COOKING	0.0	0.0	0.0	0.0
OTHER (MISCELLANEOUS PROCESSES)	0.0	0.0	0.0	0.0
* TOTAL MISCELLANEOUS PROCESSES	0.4	0.4	0.4	0.4
** TOTAL AREA-WIDE SOURCES	0.4	0.4	0.4	0.4
MOBILE SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
ON-ROAD MOTOR VEHICLES				
LIGHT DUTY PASSENGER (LDA)	0.3	0.2	0.2	0.2
LIGHT DUTY TRUCKS - 1 (LDT1)	0.1	0.1	0.1	0.1
LIGHT DUTY TRUCKS - 2 (LDT2)	0.1	0.1	0.1	0.1
MEDIUM DUTY TRUCKS (MDV)	0.1	0.0	0.0	0.0
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.0	0.0	0.0	0.0
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.0	0.0	0.0	0.0
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.0	0.0	0.0	0.0
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.0	0.0	0.0	0.0
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.0	0.0	0.0	0.0
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.0	0.0	0.0	0.0
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.2	0.2	0.0	0.0
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	0.9	1.0	0.1	0.1
MOTORCYCLES (MCY)	0.0	0.0	0.0	0.0

HEAVY DUTY DIESEL URBAN BUSES (UB)	0.0	0.0	0.0	0.0
HEAVY DUTY GAS URBAN BUSES (UB)	0.0	0.0	0.0	0.0
SCHOOL BUSES (SB)	0.0	0.0	0.0	0.0
MOTOR HOMES (MH)	0.0	0.0	0.0	0.0
* TOTAL ON-ROAD MOTOR VEHICLES	1.8	1.7	0.6	0.6
OTHER MOBILE SOURCES				
AIRCRAFT	0.4	0.4	0.4	0.4
TRAINS	2.5	2.6	2.7	2.8
SHIPS AND COMMERCIAL BOATS	0.4	0.4	0.4	0.4
RECREATIONAL BOATS	0.1	0.0	0.1	0.0
OFF-ROAD RECREATIONAL VEHICLES	0.0	0.0	0.0	0.0
OFF-ROAD EQUIPMENT	0.1	0.1	0.1	0.1
FARM EQUIPMENT	0.4	0.4	0.1	0.1
FUEL STORAGE AND HANDLING	0.0	0.0	0.0	0.0
* TOTAL OTHER MOBILE SOURCES	3.8	3.9	3.7	3.8
** TOTAL MOBILE SOURCES	5.6	5.7	4.3	4.4
GRAND TOTAL FOR SAN JOAQUIN VALLEY UNIFIED APCD				
	33.4	35.0	34.2	34.8

Table 3-11 Annual Average Particulate Matter <10 microns (PM10)				
STATIONARY SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
FUEL COMBUSTION				
ELECTRIC UTILITIES	0.3	0.4	0.4	0.4
COGENERATION	0.8	0.9	1.0	1.0
OIL AND GAS PRODUCTION (COMBUSTION)	1.9	2.1	2.1	2.0
PETROLEUM REFINING (COMBUSTION)	0.2	0.2	0.2	0.2
MANUFACTURING AND INDUSTRIAL	0.8	0.8	0.8	0.9
FOOD AND AGRICULTURAL PROCESSING	1.4	1.4	1.3	1.2
SERVICE AND COMMERCIAL	1.2	1.2	1.3	1.3
OTHER (FUEL COMBUSTION)	0.1	0.0	0.0	0.0
* TOTAL FUEL COMBUSTION	6.6	6.9	7.0	6.9
WASTE DISPOSAL				
SEWAGE TREATMENT	0.0	0.0	0.0	0.0
LANDFILLS	0.0	0.0	0.0	0.0
INCINERATORS	0.0	0.0	0.0	0.0
SOIL REMEDIATION	0.0	0.0	0.0	0.0
OTHER (WASTE DISPOSAL)	0.0	0.0	0.0	0.0
* TOTAL WASTE DISPOSAL	0.0	0.0	0.0	0.0
CLEANING AND SURFACE COATINGS				
LAUNDERING	0.0	0.0	0.0	0.0
DEGREASING	0.0	0.0	0.0	0.0
COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0
PRINTING	0.1	0.1	0.1	0.1
ADHESIVES AND SEALANTS	0.0	0.0	0.0	0.0
OTHER (CLEANING AND SURFACE COATINGS)	0.0	0.0	0.0	0.0
* TOTAL CLEANING AND SURFACE COATINGS	0.1	0.1	0.1	0.1
PETROLEUM PRODUCTION AND MARKETING				

OIL AND GAS PRODUCTION	0.0	0.0	0.0	0.0
PETROLEUM REFINING	0.1	0.1	0.1	0.1
PETROLEUM MARKETING	0.0	0.0	0.0	0.0
* TOTAL PETROLEUM PRODUCTION AND MARKETING	0.1	0.1	0.1	0.1
INDUSTRIAL PROCESSES				
CHEMICAL	2.0	2.2	2.4	2.6
FOOD AND AGRICULTURE	10.0	10.1	10.0	9.7
MINERAL PROCESSES	5.6	5.7	6.0	6.1
METAL PROCESSES	0.2	0.2	0.2	0.2
WOOD AND PAPER	0.4	0.4	0.4	0.4
GLASS AND RELATED PRODUCTS	0.6	0.6	0.6	0.6
ELECTRONICS	0.0	0.0	0.0	0.0
OTHER (INDUSTRIAL PROCESSES)	0.1	0.1	0.1	0.1
* TOTAL INDUSTRIAL PROCESSES	18.7	19.3	19.6	19.7
** TOTAL STATIONARY SOURCES	25.5	26.4	26.8	26.9
AREA-WIDE SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
SOLVENT EVAPORATION				
CONSUMER PRODUCTS	0.0	0.0	0.0	0.0
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0
PESTICIDES/FERTILIZERS	0.0	0.0	0.0	0.0
ASPHALT PAVING / ROOFING	0.0	0.0	0.0	0.0
* TOTAL SOLVENT EVAPORATION	0.0	0.0	0.0	0.0
MISCELLANEOUS PROCESSES				
RESIDENTIAL FUEL COMBUSTION	12.0	11.3	10.3	9.7
FARMING OPERATIONS	79.8	67.7	62.6	55.5
CONSTRUCTION AND DEMOLITION	12.6	11.5	12.1	13.3
PAVED ROAD DUST	43.5	44.1	43.5	46.4
UNPAVED ROAD DUST	42.2	39.9	38.4	37.8
FUGITIVE WINDBLOWN DUST	50.9	46.5	43.9	41.3
FIRES	0.2	0.2	0.2	0.2
WASTE BURNING AND DISPOSAL	39.7	39.2	38.9	38.6
COOKING	2.0	2.1	2.2	2.2
OTHER (MISCELLANEOUS PROCESSES)	0.0	0.0	0.0	0.0
* TOTAL MISCELLANEOUS PROCESSES	283.0	262.5	252.1	245.0
** TOTAL AREA-WIDE SOURCES	283.0	262.5	252.1	245.0
MOBILE SOURCES (tons per day)				
SUMMARY CATEGORY NAME	2002	2005	2008	2010
ON-ROAD MOTOR VEHICLES				
LIGHT DUTY PASSENGER (LDA)	1.5	1.6	1.8	1.8
LIGHT DUTY TRUCKS - 1 (LDT1)	0.7	0.7	0.8	0.8
LIGHT DUTY TRUCKS - 2 (LDT2)	0.6	0.7	0.8	0.8
MEDIUM DUTY TRUCKS (MDV)	0.2	0.3	0.3	0.3
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.1	0.1	0.1	0.1
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.0	0.0	0.0	0.0
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.0	0.0	0.0	0.0
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.0	0.0	0.0	0.0
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.0	0.0	0.0	0.0
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.0	0.0	0.0	0.0
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.6	0.6	0.6	0.5

HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	2.1	1.9	1.6	1.5
MOTORCYCLES (MCY)	0.0	0.0	0.0	0.0
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.1	0.1	0.1	0.1
HEAVY DUTY GAS URBAN BUSES (UB)	0.0	0.0	0.0	0.0
SCHOOL BUSES (SB)	0.1	0.1	0.1	0.1
MOTOR HOMES (MH)	0.0	0.0	0.0	0.0
* TOTAL ON-ROAD MOTOR VEHICLES	6.1	6.2	6.2	6.2
OTHER MOBILE SOURCES				
AIRCRAFT	0.4	0.4	0.4	0.4
TRAINS	0.7	0.7	0.7	0.7
SHIPS AND COMMERCIAL BOATS	0.0	0.0	0.0	0.0
RECREATIONAL BOATS	0.6	0.8	0.9	0.9
OFF-ROAD RECREATIONAL VEHICLES	0.0	0.0	0.0	0.0
OFF-ROAD EQUIPMENT	3.3	3.1	2.8	2.5
FARM EQUIPMENT	4.1	3.7	3.3	3.1
FUEL STORAGE AND HANDLING	0.0	0.0	0.0	0.0
* TOTAL OTHER MOBILE SOURCES	9.3	8.9	8.2	7.7
** TOTAL MOBILE SOURCES	15.4	15.1	14.4	14.0
GRAND TOTAL FOR SAN JOAQUIN VALLEY UNIFIED APCD	323.8	304.0	293.2	285.9

Table 3-12 Summary of Annual Ammonia Emissions
(tpd, rounded to nearest tenth)

Source Category	2002	2005	2008	2010
Farming Operations	279.4	297.9	316.4	328.8
Waste Burning and Disposal	0.5	0.5	0.8	0.5
Other Miscellaneous Processes	5.0	5.0	5.0	5.0
Residential Fuel Combustion	0.6	0.6	0.6	0.6
Pesticides/Fertilizers	15.2	15.0	14.9	14.7
Landfills	7.6	8.0	8.5	8.8
Other Waste Disposal	14.8	15.8	16.6	17.2
Sewage Treatment	0.0	0.0	0.0	0.0
On-Road motor vehicles	10.2	11.2	12.3	13.0
TOTAL	333.3	354.1	375.1	388.6