

Appendix B

Emissions Inventory

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Appendix B: Emissions Inventory

B.1 INTRODUCTION

Emissions inventories provide the best available estimates of the amount of pollutants and precursors being emitted into the atmosphere. Emissions inventories undergo continuous updating and changing to improve accuracy, respond to new scientific and engineering developments, and to address changes to laws and regulations. A snapshot of the inventory is used to develop air quality plans. At the time the snapshot is taken, it reflects the best inventory available. The “snapshot” used as the starting point for this plan is ARB’s PM 2.5 SIP Planning Projections, based on CEFS v1.06. This plan utilizes annual average and winter average daily inventories, with emissions presented as tons per day (tpd).

The inventories in this chapter are “planning inventories” used to study and propose control measures (Appendix I and Chapter 6), to track emissions for Rate of Progress (Chapter 8), to track ERCs (Appendix D), to establish motor vehicle conformity budgets for transportation planning (Appendix C), and to assist in demonstrating attainment (Chapter 10). In contrast, the “modeling inventory” provides day-specific information used as inputs for the regional model (Chapter 3 and the Modeling Protocol). While the planning and modeling inventories are based on the same basic information, they may have different cutoff dates for the inclusion of control measures (i.e., control measures adopted past the cutoff date are not reflected in the inventories and must be subtracted from the results of inventory runs and model runs).

This Appendix includes emissions inventories for the San Joaquin Valley Air Basin for the years 2005, 2009, 2010, 2011, 2012, 2013, and 2014. The baseyear (the year from which the inventory is projected forward and backward) for these inventories is 2002. The year 2005 has been included for control measure development and as the reference year for gridded modeling (see Chapter 3). The years 2009, 2010, 2011, 2012, 2013, and 2014 are possible PM_{2.5} compliance years for attainment. The years 2009 and 2012 are also RFP years (see Chapter 8). Results from EMFAC2007 have been incorporated into the mobile source portion of the inventories.

The tables in this appendix include:

- Table B-1 Directly emitted PM_{2.5}, Annual and Winter Daily Averages
- Table B-2 NO_x, Annual and Winter Daily Averages
- Table B-3 SO₂, Annual and Winter Daily Averages
- Table B-4 VOC, Annual and Winter Daily Averages
- Table B-5 Ammonia, Annual and Winter Daily Averages

The December 2007 Draft *2008 PM_{2.5} Plan* contained tables of ARB and District adjustments for methodology revisions and control measures adopted between May 2005 and December 2006. This information has now been incorporated into the

baseline inventory, so adjustment tables have been removed. Tables B-1 through B-5 are followed by an overview of emissions inventory calculations and revisions.

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B.2 EMISSIONS INVENTORY TABLES

Table B-1 Directly Emitted PM2.5, Annual and Winter Daily Averages
(in tons per day)

SUMMARY CATEGORY NAME	Directly Emitted PM2.5 (tpd)													
	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
STATIONARY SOURCES														
FUEL COMBUSTION														
ELECTRIC UTILITIES	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6
COGENERATION	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.2	1.2	1.2	1.2	1.2
OIL AND GAS PRODUCTION (COMBUSTION)	1.1	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.1
PETROLEUM REFINING (COMBUSTION)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MANUFACTURING AND INDUSTRIAL	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6
FOOD AND AGRICULTURAL PROCESSING	1.3	1.2	1.2	1.1	1.1	1.1	1.0	0.9	0.8	0.8	0.8	0.7	0.7	0.7
SERVICE AND COMMERCIAL	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OTHER (FUEL COMBUSTION)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
* TOTAL FUEL COMBUSTION	5.1	5.0	5.0	5.0	5.0	5.0	5.0	4.6	4.6	4.6	4.6	4.6	4.6	4.6
WASTE DISPOSAL														
SEWAGE TREATMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LANDFILLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCINERATORS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SOIL REMEDIATION	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OTHER (WASTE DISPOSAL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL WASTE DISPOSAL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CLEANING AND SURFACE COATINGS														
LAUNDERING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEGREASING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Directly Emitted PM2.5 (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINTING	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1
ADHESIVES AND SEALANTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (CLEANING AND SURFACE COATINGS)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL CLEANING AND SURFACE COATINGS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PETROLEUM PRODUCTION AND MARKETING														
OIL AND GAS PRODUCTION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PETROLEUM REFINING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PETROLEUM MARKETING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL PETROLEUM PRODUCTION AND MARKETING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDUSTRIAL PROCESSES														
CHEMICAL	2.3	2.5	2.6	2.7	2.7	2.8	2.9	2.3	2.5	2.6	2.7	2.7	2.8	2.9
FOOD AND AGRICULTURE	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.2	2.3	2.3	2.3	2.3
MINERAL PROCESSES	1.8	1.9	1.9	2.0	2.0	2.0	2.0	1.7	1.8	1.9	1.9	1.9	1.9	1.9
METAL PROCESSES	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2
WOOD AND PAPER	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.5
GLASS AND RELATED PRODUCTS	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.0	1.1	1.1	1.1	1.2	1.2	1.2
OTHER (INDUSTRIAL PROCESSES)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
* TOTAL INDUSTRIAL PROCESSES	8.1	8.6	8.7	8.8	8.9	9.1	9.2	8.0	8.4	8.6	8.7	8.8	9.0	9.1
** TOTAL STATIONARY SOURCES	13.3	13.8	13.9	14.0	14.2	14.3	14.4	12.8	13.3	13.4	13.5	13.7	13.8	14.0
AREA-WIDE SOURCES														
SOLVENT EVAPORATION														
CONSUMER PRODUCTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARCHITECTURAL COATINGS AND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Directly Emitted PM2.5 (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
RELATED PROCESS SOLVENTS														
PESTICIDES/FERTILIZERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ASPHALT PAVING / ROOFING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL SOLVENT EVAPORATION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MISCELLANEOUS PROCESSES														
RESIDENTIAL FUEL COMBUSTION	10.7	8.9	8.7	8.3	7.9	7.5	7.2	20.7	17.3	16.9	16.1	15.4	14.8	14.1
FARMING OPERATIONS	8.3	8.3	8.3	8.3	8.3	8.3	8.3	5.9	5.9	5.9	5.9	5.8	5.8	5.8
CONSTRUCTION AND DEMOLITION	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.0	1.1	1.1	1.0	1.0	1.0	1.0
PAVED ROAD DUST	5.3	5.4	5.5	5.5	5.5	5.5	5.6	4.9	5.1	5.1	5.1	5.1	5.2	5.2
UNPAVED ROAD DUST	3.8	3.8	3.8	3.8	3.8	3.8	3.8	2.8	2.7	2.7	2.7	2.7	2.7	2.7
FUGITIVE WINDBLOWN DUST	7.2	7.0	7.0	7.0	7.0	6.9	6.9	4.5	4.4	4.4	4.4	4.4	4.4	4.4
FIRES	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
MANAGED BURNING AND DISPOSAL	12.2	9.2	9.1	9.1	9.1	9.1	9.0	11.9	11.7	11.6	11.6	11.5	11.5	11.4
COOKING	2.7	2.8	2.9	2.9	3.0	3.0	3.1	2.7	2.8	2.9	2.9	3.0	3.0	3.1
OTHER (MISCELLANEOUS PROCESSES)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL MISCELLANEOUS PROCESSES	51.5	46.8	46.6	46.1	45.8	45.5	45.2	54.6	51.2	50.7	49.9	49.2	48.5	47.9
** TOTAL AREA-WIDE SOURCES	51.5	46.8	46.6	46.1	45.8	45.5	45.2	54.6	51.2	50.7	49.9	49.2	48.5	47.9
MOBILE SOURCES														
ON-ROAD MOTOR VEHICLES														
LIGHT DUTY PASSENGER (LDA)	0.8	0.7	0.9	0.9	0.8	0.9	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0
LIGHT DUTY TRUCKS - 1 (LDT1)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
LIGHT DUTY TRUCKS - 2 (LDT2)	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.6	0.7	0.7	0.8	0.8	0.8	0.8
MEDIUM DUTY TRUCKS (MDV)LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.3	0.4	0.4	0.4	0.4	0.5	0.5
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Directly Emitted PM2.5 (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	9.1	8.3	7.6	7.0	6.7	6.0	5.7	9.1	8.4	7.6	7.1	6.8	6.0	5.7
MOTORCYCLES (MCY)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HEAVY DUTY GAS URBAN BUSES (UB)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCHOOL BUSES (SB)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OTHER BUSES (OB)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOTOR HOMES (MH)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL ON-ROAD MOTOR VEHICLES	12.1	11.3	10.8	10.3	9.9	9.3	8.9	12.2	11.4	10.8	10.3	10.0	9.3	9.0
OTHER MOBILE SOURCES														
AIRCRAFT	1.3	1.4	1.4	1.5	1.5	1.5	1.6	1.3	1.4	1.4	1.5	1.5	1.5	1.6
TRAINS	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5
SHIPS AND COMMERCIAL BOATS	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
RECREATIONAL BOATS	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.2	0.2	0.2	0.2	0.3	0.3	0.3
OFF-ROAD RECREATIONAL VEHICLES	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OFF-ROAD EQUIPMENT	3.5	2.9	2.7	2.5	2.3	2.1	2.0	3.5	2.8	2.7	2.5	2.3	2.1	2.0
FARM EQUIPMENT	3.0	2.4	2.3	2.2	2.0	1.8	1.6	2.3	1.9	1.8	1.7	1.6	1.4	1.3
FUEL STORAGE AND HANDLING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Directly Emitted PM2.5 (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
* TOTAL OTHER MOBILE SOURCES	9.0	7.9	7.7	7.5	7.2	6.8	6.6	8.1	7.0	6.8	6.6	6.3	6.0	5.7
** TOTAL MOBILE SOURCES	21.1	19.2	18.5	17.8	17.0	16.1	15.4	20.2	18.4	17.6	16.9	16.3	15.3	14.7
GRAND TOTAL FOR SAN JOAQUIN VALLEY	86.0	79.8	79.0	77.9	77.0	75.9	75.0	87.6	82.9	81.7	80.3	79.1	77.7	76.6

Table B-2 NOx, Annual and Winter Daily Averages
(in tons per day)

NOx (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
STATIONARY SOURCES														
FUEL COMBUSTION														
ELECTRIC UTILITIES	3.3	3.0	3.1	3.1	3.1	3.2	3.2	3.2	3.0	3.1	3.1	3.1	3.1	3.1
COGENERATION	10.0	7.3	7.3	7.3	7.4	7.4	7.5	10.0	7.3	7.3	7.3	7.4	7.4	7.5
OIL AND GAS PRODUCTION (COMBUSTION)	11.2	10.1	10.0	9.9	9.9	9.8	9.8	11.2	10.1	10.0	9.9	9.9	9.8	9.8
PETROLEUM REFINING (COMBUSTION)	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
MANUFACTURING AND INDUSTRIAL	5.5	5.5	5.6	5.7	5.8	5.9	6.1	5.3	5.3	5.4	5.5	5.6	5.7	5.8
FOOD AND AGRICULTURAL PROCESSING	24.2	13.3	11.4	10.1	8.8	7.5	6.2	16.0	8.7	7.5	6.6	5.8	4.9	4.1
SERVICE AND COMMERCIAL	2.7	2.7	2.7	2.7	2.8	2.8	2.8	3.3	3.3	3.3	3.4	3.4	3.4	3.4
OTHER (FUEL COMBUSTION)	1.4	1.2	1.2	1.2	1.1	1.1	1.1	1.3	1.1	1.1	1.0	1.0	1.0	1.0
* TOTAL FUEL COMBUSTION	58.6	43.3	41.5	40.2	39.0	37.8	36.6	50.5	38.9	37.8	37.0	36.2	35.5	34.7
WASTE DISPOSAL														

SUMMARY CATEGORY NAME	NOx (tpd)													
	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
SEWAGE TREATMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LANDFILLS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INCINERATORS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SOIL REMEDIATION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (WASTE DISPOSAL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL WASTE DISPOSAL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1
CLEANING AND SURFACE COATINGS														
LAUNDERING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEGREASING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINTING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ADHESIVES AND SEALANTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (CLEANING AND SURFACE COATINGS)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL CLEANING AND SURFACE COATINGS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PETROLEUM PRODUCTION AND MARKETING														
OIL AND GAS PRODUCTION	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PETROLEUM REFINING	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
PETROLEUM MARKETING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL PETROLEUM PRODUCTION AND MARKETING	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
INDUSTRIAL PROCESSES														
CHEMICAL	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4
FOOD AND AGRICULTURE	9.1	9.0	9.0	8.9	8.9	8.9	8.8	9.1	9.0	8.9	8.9	8.9	8.8	8.8
MINERAL PROCESSES	2.3	2.5	2.5	2.6	2.6	2.7	2.8	2.3	2.5	2.5	2.6	2.6	2.7	2.7

NOx (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
METAL PROCESSES	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
WOOD AND PAPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GLASS AND RELATED PRODUCTS	9.4	8.2	8.4	8.6	8.7	8.9	9.1	9.4	8.2	8.4	8.6	8.7	8.9	9.1
OTHER (INDUSTRIAL PROCESSES)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<i>Extra-inventory Reductions (District Rules)</i>	-0.3	-1.2	-1.3	-1.5	-1.6	-1.7	-1.8	0.0	-1.1	-1.2	-1.3	-1.3	-1.4	0.0
* TOTAL INDUSTRIAL PROCESSES	21.1	19.0	19.1	19.2	19.3	19.4	19.5	21.2	19.0	19.2	19.3	19.5	19.6	21.2
** TOTAL STATIONARY SOURCES	80.1	62.7	61.1	59.9	58.7	57.7	56.5	71.9	58.5	57.5	56.8	56.2	55.6	55.0
AREA-WIDE SOURCES														
SOLVENT EVAPORATION														
CONSUMER PRODUCTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PESTICIDES/FERTILIZERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ASPHALT PAVING / ROOFING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL SOLVENT EVAPORATION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MISCELLANEOUS PROCESSES														
RESIDENTIAL FUEL COMBUSTION	6.3	6.0	6.0	5.9	5.9	5.8	5.8	9.6	9.0	9.0	8.8	8.8	8.7	8.6
FARMING OPERATIONS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTRUCTION AND DEMOLITION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAVED ROAD DUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UNPAVED ROAD DUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FUGITIVE WINDBLOWN DUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIRES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MANAGED BURNING AND DISPOSAL	7.1	5.0	5.0	5.0	4.9	4.9	4.9	8.5	7.2	7.2	7.2	7.1	7.1	7.1
COOKING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (MISCELLANEOUS PROCESSES)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL MISCELLANEOUS PROCESSES	13.5	11.0	11.0	10.9	10.8	10.8	10.7	18.2	16.3	16.2	16.0	15.9	15.8	15.7

NOx (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
** TOTAL AREA-WIDE SOURCES	13.5	11.0	11.0	10.9	10.8	10.8	10.7	18.2	16.3	16.2	16.0	15.9	15.8	15.7
MOBILE SOURCES														
ON-ROAD MOTOR VEHICLES														
LIGHT DUTY PASSENGER (LDA)	22.2	14.5	14.5	13.2	10.9	10.8	8.9	24.0	17.5	15.7	14.2	13.3	11.6	10.8
LIGHT DUTY TRUCKS - 1 (LDT1)	10.0	7.4	6.7	6.1	5.8	5.1	4.9	10.7	7.9	7.2	6.6	6.2	5.5	5.2
LIGHT DUTY TRUCKS - 2 (LDT2)	19.8	15.0	13.8	12.8	12.2	11.0	10.4	21.4	16.3	14.9	13.9	13.2	11.9	11.3
MEDIUM DUTY TRUCKS (MDV)LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	13.4	10.3	9.5	8.9	8.6	7.8	7.5	14.5	11.1	10.2	9.6	9.3	8.4	8.1
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	4.7	4.1	4.0	3.9	4.0	3.9	3.9	5.0	4.4	4.2	4.1	4.3	4.1	4.1
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	1.0	1.0	1.0	1.0	1.0	0.9	0.9	1.1	1.0	1.0	1.0	1.0	1.0	1.0
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	2.2	1.8	1.7	1.6	1.6	1.4	1.4	2.3	1.9	1.8	1.7	1.7	1.5	1.5
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	2.5	2.0	1.9	1.9	1.8	1.7	1.7	2.7	2.2	2.1	2.0	2.0	1.9	1.8
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	5.4	3.8	3.4	3.2	3.1	2.8	2.8	5.6	3.9	3.5	3.3	3.2	2.9	2.9
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	3.3	2.9	2.7	2.5	2.4	2.2	2.1	3.4	3.0	2.7	2.6	2.5	2.3	2.2
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	21.3	18.1	16.8	15.6	14.9	13.2	12.5	22.0	18.7	17.4	16.1	15.4	13.7	12.9
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	213.4	210.3	191.9	177.9	170.1	150.3	142.1	220.2	217.0	198.0	183.5	175.4	154.9	146.3
MOTORCYCLES (MCY)	1.4	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.7	1.6	1.7
HEAVY DUTY DIESEL URBAN BUSES (UB)	2.2	2.3	2.3	2.4	2.5	2.4	2.4	2.3	2.4	2.4	2.4	2.5	2.5	2.5
HEAVY DUTY GAS URBAN BUSES (UB)	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4
SCHOOL BUSES (SB)	2.4	2.3	2.3	2.1	2.2	2.0	1.9	2.5	2.3	2.3	2.2	2.3	2.0	2.0
OTHER BUSES (OB)	1.1	1.0	1.0	0.9	0.9	0.8	0.8	1.1	1.1	1.0	1.0	1.0	0.9	0.9
MOTOR HOMES (MH)	1.1	1.0	1.0	0.9	0.9	0.8	0.8	1.2	1.1	1.0	1.0	1.0	0.9	0.9

NOx (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
<i>Extra-inventory Reductions (District Rules): ISR on-road</i>	0.0	-2.2	-1.8	-1.3	-1.1	-0.8	-0.4	0.0	-2.2	-1.8	-1.3	-1.1	-0.8	-0.4
* TOTAL ON-ROAD MOTOR VEHICLES	327.9	297.4	274.4	255.4	243.8	218.3	206.7	342.1	311.5	285.7	265.9	255.1	227.1	216.0
OTHER MOBILE SOURCES														
AIRCRAFT	3.0	4.2	4.3	4.5	4.6	4.7	4.8	3.0	4.2	4.3	4.5	4.6	4.7	4.8
TRAINS	23.6	20.9	20.0	20.4	20.5	20.6	20.7	23.6	20.9	20.0	20.4	20.5	20.6	20.7
SHIPS AND COMMERCIAL BOATS	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0
RECREATIONAL BOATS	3.2	3.5	3.5	3.5	3.5	3.5	3.5	1.3	1.4	1.4	1.4	1.4	1.4	1.4
OFF-ROAD RECREATIONAL VEHICLES	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OFF-ROAD EQUIPMENT	70.4	58.8	55.7	52.7	49.8	47.0	44.3	70.8	59.1	56.0	53.0	50.1	47.2	44.5
FARM EQUIPMENT	52.5	43.4	41.7	39.4	36.6	33.9	31.5	41.1	33.9	32.6	30.8	28.6	26.5	24.6
FUEL STORAGE AND HANDLING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Extra-inventory Reductions (District Rules): ISR Off-road reductions</i>	0.0	-2.3	-3.4	-4.6	-5.2	-4.5	-3.8	0.0	-2.3	-3.4	-4.6	-5.2	-4.5	-3.8
* TOTAL OTHER MOBILE SOURCES	153.9	129.7	123.0	117.1	111.1	106.3	102.2	141.0	118.4	112.1	106.7	101.2	97.1	93.4
** TOTAL MOBILE SOURCES	481.8	427.1	397.4	372.5	354.8	324.6	308.9	483.0	429.9	397.8	372.5	356.3	324.1	309.5
GRAND TOTAL FOR SAN JOAQUIN VALLEY	575.4	500.9	469.5	443.3	424.4	393.1	376.2	573.1	504.7	471.5	445.4	428.4	395.6	380.1

Table B-3 SO₂, Annual and Winter Daily Averages
(in tons per day)

SUMMARY CATEGORY NAME	SO ₂ (tpd)													
	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
STATIONARY SOURCES														
FUEL COMBUSTION														
ELECTRIC UTILITIES	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.9	0.9
COGENERATION	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7
OIL AND GAS PRODUCTION (COMBUSTION)	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3
PETROLEUM REFINING (COMBUSTION)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MANUFACTURING AND INDUSTRIAL	6.0	6.3	6.4	6.6	6.7	6.8	7.0	6.0	6.3	6.4	6.6	6.7	6.8	7.0
FOOD AND AGRICULTURAL PROCESSING	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.3	1.3	1.3	1.3	1.3	1.2	1.2
SERVICE AND COMMERCIAL	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
OTHER (FUEL COMBUSTION)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL FUEL COMBUSTION	12.7	13.0	13.1	13.3	13.4	13.5	13.7	12.0	12.3	12.5	12.6	12.8	12.9	13.0
WASTE DISPOSAL														
SEWAGE TREATMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LANDFILLS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
INCINERATORS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SOIL REMEDIATION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (WASTE DISPOSAL)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL WASTE DISPOSAL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CLEANING AND SURFACE COATINGS														
LAUNDERING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEGREASING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINTING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SO ₂ (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
ADHESIVES AND SEALANTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (CLEANING AND SURFACE COATINGS)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL CLEANING AND SURFACE COATINGS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PETROLEUM PRODUCTION AND MARKETING														
OIL AND GAS PRODUCTION	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
PETROLEUM REFINING	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
PETROLEUM MARKETING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL PETROLEUM PRODUCTION AND MARKETING	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6
INDUSTRIAL PROCESSES														
CHEMICAL	0.9	1.0	1.0	1.0	1.1	1.1	1.1	0.9	1.0	1.0	1.0	1.0	1.0	1.1
FOOD AND AGRICULTURE	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
MINERAL PROCESSES	1.5	1.6	1.7	1.7	1.7	1.8	1.8	1.5	1.6	1.6	1.7	1.7	1.7	1.8
METAL PROCESSES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WOOD AND PAPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GLASS AND RELATED PRODUCTS	3.8	3.5	3.6	3.7	3.8	3.9	3.9	3.8	3.8	3.9	4.0	4.0	4.1	4.2
OTHER (INDUSTRIAL PROCESSES)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL INDUSTRIAL PROCESSES	7.1	7.0	7.2	7.3	7.4	7.6	7.7	6.9	7.1	7.2	7.4	7.5	7.6	7.8
** TOTAL STATIONARY SOURCES	20.4	20.6	20.9	21.2	21.5	22.9	23.2	19.6	20.0	20.3	20.6	20.9	21.2	21.4
AREA-WIDE SOURCES														
SOLVENT EVAPORATION														
CONSUMER PRODUCTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PESTICIDES/FERTILIZERS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ASPHALT PAVING / ROOFING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SO ₂ (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
* TOTAL SOLVENT EVAPORATION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MISCELLANEOUS PROCESSES														
RESIDENTIAL FUEL COMBUSTION	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5
FARMING OPERATIONS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CONSTRUCTION AND DEMOLITION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAVED ROAD DUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UNPAVED ROAD DUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FUGITIVE WINDBLOWN DUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIRES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MANAGED BURNING AND DISPOSAL	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2
COOKING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (MISCELLANEOUS PROCESSES)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL MISCELLANEOUS PROCESSES	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8
** TOTAL AREA-WIDE SOURCES	0.9	0.9	0.9	0.9	0.9	1.1	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8
MOBILE SOURCES														
ON-ROAD MOTOR VEHICLES														
LIGHT DUTY PASSENGER (LDA)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LIGHT DUTY TRUCKS - 1 (LDT1)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LIGHT DUTY TRUCKS - 2 (LDT2)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MEDIUM DUTY TRUCKS (MDV)LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HEAVY HEAVY DUTY GAS TRUCKS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SO ₂ (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
(HHDV)														
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	1.8	0.2	0.2	0.2	0.3	0.2	0.3	1.7	0.2	0.2	0.2	0.3	0.2	0.3
MOTORCYCLES (MCY)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HEAVY DUTY GAS URBAN BUSES (UB)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCHOOL BUSES (SB)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER BUSES (OB)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOTOR HOMES (MH)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL ON-ROAD MOTOR VEHICLES	2.6	0.7	0.7	0.7	0.7	0.8	0.7	2.5	0.7	0.7	0.7	0.7	0.7	0.7
OTHER MOBILE SOURCES														
AIRCRAFT	0.44	0.47	0.48	0.49	0.50	0.51	0.51	0.4	0.5	0.5	0.5	0.5	0.5	0.5
TRAINS	0.71	0.07	0.07	0.02	0.02	0.02	0.02	0.7	0.1	0.1	0.0	0.0	0.0	0.0
SHIPS AND COMMERCIAL BOATS	0.31	0.13	0.08	0.08	0.09	0.09	0.10	0.3	0.1	0.1	0.1	0.1	0.1	0.1
RECREATIONAL BOATS	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF-ROAD RECREATIONAL VEHICLES	0.06	0.07	0.07	0.07	0.08	0.08	0.08	0.0	0.1	0.1	0.1	0.1	0.1	0.1
OFF-ROAD EQUIPMENT	0.49	0.05	0.05	0.05	0.05	0.05	0.05	0.5	0.0	0.0	0.0	0.1	0.1	0.1
FARM EQUIPMENT	0.42	0.04	0.04	0.04	0.04	0.04	0.04	0.3	0.0	0.0	0.0	0.0	0.0	0.0
FUEL STORAGE AND HANDLING	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL OTHER MOBILE SOURCES	2.42	0.83	0.79	0.76	0.78	0.79	0.81	2.3	0.8	0.8	0.7	0.8	0.8	0.8
** TOTAL MOBILE SOURCES	5.0	1.5	1.5	1.5	1.5	1.6	1.5	4.9	1.5	1.5	1.4	1.5	1.5	1.5

SO ₂ (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
GRAND TOTAL FOR SAN JOAQUIN VALLEY	26.4	23.0	23.3	23.6	23.8	25.5	25.6	25.2	22.3	22.6	22.8	23.1	23.4	23.7

Table B-4 Volatile Organic Compounds (VOC), Annual and Winter Daily Averages
(in tons per day)

VOC (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
STATIONARY SOURCES														
FUEL COMBUSTION														
ELECTRIC UTILITIES	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5
COGENERATION	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OIL AND GAS PRODUCTION (COMBUSTION)	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2
PETROLEUM REFINING (COMBUSTION)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MANUFACTURING AND INDUSTRIAL	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
FOOD AND AGRICULTURAL PROCESSING	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3
SERVICE AND COMMERCIAL	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
OTHER (FUEL COMBUSTION)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
* TOTAL FUEL COMBUSTION	6.7	6.7	6.7	6.7	6.7	6.6	6.6	6.1	6.1	6.1	6.1	6.0	6.0	6.0
WASTE DISPOSAL														
SEWAGE TREATMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

VOC (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
LANDFILLS	1.6	1.7	1.7	1.8	1.8	1.8	1.9	1.6	1.7	1.7	1.8	1.8	1.8	1.8
INCINERATORS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SOIL REMEDIATION	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OTHER (WASTE DISPOSAL)	45.4	46.0	46.5	47.1	47.5	49.8	52.1	27.5	27.8	28.2	28.5	28.7	30.1	31.5
* TOTAL WASTE DISPOSAL	47.1	47.8	48.4	48.9	49.3	51.7	54.1	29.1	29.6	30.0	30.3	30.6	32.0	33.5
CLEANING AND SURFACE COATINGS														
LAUNDERING	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
DEGREASING	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
COATINGS AND RELATED PROCESS SOLVENTS	7.6	7.5	7.7	7.9	8.1	8.3	8.6	7.6	7.5	7.7	7.9	8.1	8.3	8.5
PRINTING	1.7	1.8	1.8	1.8	1.9	1.9	2.0	1.6	1.8	1.8	1.8	1.9	1.9	1.9
ADHESIVES AND SEALANTS	3.2	3.4	3.5	3.5	3.6	3.7	3.7	3.2	3.4	3.5	3.5	3.6	3.7	3.7
OTHER (CLEANING AND SURFACE COATINGS)	3.4	3.9	4.0	4.1	4.2	4.3	4.4	3.4	3.9	4.0	4.1	4.2	4.3	4.4
* TOTAL CLEANING AND SURFACE COATINGS	17.4	18.1	18.5	18.9	19.4	19.8	20.3	17.3	18.0	18.5	18.9	19.3	19.7	20.2
PETROLEUM PRODUCTION AND MARKETING														
OIL AND GAS PRODUCTION	27.9	27.2	26.8	26.5	26.2	25.8	25.5	27.9	27.2	26.8	26.5	26.1	25.8	25.5
PETROLEUM REFINING	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
PETROLEUM MARKETING	6.8	7.1	7.2	7.3	7.4	7.5	7.6	6.7	7.0	7.2	7.3	7.4	7.5	7.6
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL PETROLEUM PRODUCTION AND MARKETING	35.3	34.9	34.6	34.4	34.2	34.0	33.8	35.3	34.9	34.6	34.4	34.2	34.0	33.8
INDUSTRIAL PROCESSES														
CHEMICAL	2.4	2.6	2.6	2.6	2.7	2.7	2.8	2.3	2.5	2.6	2.6	2.7	2.7	2.8
FOOD AND AGRICULTURE	11.4	10.9	11.0	11.1	11.2	11.3	11.4	10.0	10.0	10.1	10.2	10.3	10.4	10.5
MINERAL PROCESSES	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4
METAL PROCESSES	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3

VOC (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
WOOD AND PAPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GLASS AND RELATED PRODUCTS	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OTHER (INDUSTRIAL PROCESSES)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<i>External Inventory Corrections (Rule 4401)</i>	0.0	-0.4	-0.7	-1.1	-1.1	-1.1	-1.0	0.0	-0.4	-0.7	-1.1	-1.1	-1.1	-1.0
* TOTAL INDUSTRIAL PROCESSES	15.0	14.5	14.3	14.1	14.3	14.5	14.7	13.5	13.5	13.3	13.1	13.2	13.4	13.6
** TOTAL STATIONARY SOURCES	121.5	121.9	122.5	123.1	123.9	126.6	129.5	101.4	102.0	102.4	102.7	103.4	105.2	107.1
AREA-WIDE SOURCES														
SOLVENT EVAPORATION														
CONSUMER PRODUCTS	23.5	23.3	23.6	24.1	24.6	25.0	25.5	23.5	23.3	23.6	24.1	24.6	25.0	25.5
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	9.4	9.7	9.8	9.9	10.0	10.1	10.2	7.7	8.0	8.1	8.1	8.2	8.3	8.4
PESTICIDES/FERTILIZERS	23.5	22.6	22.4	22.3	22.2	22.1	22.0	25.1	24.2	24.0	23.9	23.8	23.7	23.6
ASPHALT PAVING / ROOFING	2.3	2.4	2.4	2.4	2.4	2.4	2.4	1.7	1.7	1.8	1.8	1.8	1.8	1.8
* TOTAL SOLVENT EVAPORATION	58.7	58.0	58.2	58.7	59.2	59.7	60.1	58.1	57.3	57.4	57.9	58.3	58.8	59.2
MISCELLANEOUS PROCESSES														
RESIDENTIAL FUEL COMBUSTION	5.9	5.0	4.9	4.7	4.5	4.4	4.2	11.4	9.6	9.4	9.0	8.7	8.3	8.0
FARMING OPERATIONS	65.4	51.3	51.9	52.9	53.8	54.8	55.7	65.4	51.3	51.9	52.8	53.8	54.7	55.7
CONSTRUCTION AND DEMOLITION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAVED ROAD DUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UNPAVED ROAD DUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FUGITIVE WINDBLOWN DUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIRES	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MANAGED BURNING AND DISPOSAL	10.1	7.6	7.5	7.5	7.5	7.5	7.4	10.0	8.5	8.4	8.4	8.3	8.3	8.3
COOKING	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OTHER (MISCELLANEOUS PROCESSES)	0.0	0.0	0.0	-1.1	0.0	0.0	0.0	0.0	0.0	0.0	-1.1	0.0	0.0	0.0
* TOTAL MISCELLANEOUS PROCESSES	82.0	64.4	64.9	64.5	66.4	67.1	67.9	87.3	69.9	70.2	69.7	71.3	71.9	72.5
** TOTAL AREA-WIDE SOURCES	140.7	122.4	123.1	123.2	125.5	126.8	128.0	145.4	127.1	127.6	127.5	129.6	130.7	131.7

VOC (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
MOBILE SOURCES														
ON-ROAD MOTOR VEHICLES														
LIGHT DUTY PASSENGER (LDA)	27.2	19.0	17.7	16.1	14.6	13.3	12.1	28.6	20.5	18.4	16.7	15.6	13.7	12.8
LIGHT DUTY TRUCKS - 1 (LDT1)	10.5	7.7	7.0	6.5	6.2	5.6	5.3	11.2	8.2	7.5	7.0	6.6	6.0	5.7
LIGHT DUTY TRUCKS - 2 (LDT2)	14.0	11.6	11.1	10.6	10.3	9.5	9.3	14.9	12.5	11.9	11.3	11.0	10.2	9.9
MEDIUM DUTY TRUCKS (MDV) LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	7.9	6.6	6.3	6.1	6.0	5.7	5.6	8.4	7.0	6.7	6.5	6.4	6.1	6.0
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	5.4	3.4	3.2	3.0	2.9	2.7	2.7	5.8	3.7	3.4	3.2	3.2	2.9	2.9
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	1.3	1.0	0.9	0.8	0.8	0.7	0.7	1.4	1.0	1.0	0.9	0.9	0.8	0.8
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	3.3	2.4	2.2	1.9	1.8	1.5	1.4	3.7	2.7	2.4	2.1	2.0	1.7	1.5
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	1.4	0.9	0.9	0.8	0.8	0.7	0.6	1.5	1.0	0.9	0.9	0.8	0.7	0.7
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	16.1	16.8	15.7	14.9	14.5	13.2	12.7	16.2	17.0	15.8	15.0	14.6	13.3	12.8
MOTORCYCLES (MCY)	5.8	5.4	5.1	4.9	5.2	4.8	5.1	6.0	5.6	5.2	5.0	5.3	4.9	5.2
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
HEAVY DUTY GAS URBAN BUSES (UB)	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2
SCHOOL BUSES (SB)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
OTHER BUSES (OB)	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2
MOTOR HOMES (MH)	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2
* TOTAL ON-ROAD MOTOR	94.8	76.5	71.5	67.3	64.8	59.4	57.2	99.7	80.9	74.8	70.3	68.1	61.9	59.9

VOC (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
VEHICLES														
OTHER MOBILE SOURCES														
AIRCRAFT	6.7	5.8	6.5	6.5	6.6	6.7	6.8	6.7	5.8	6.5	6.5	6.6	6.7	6.7
TRAINS	1.6	1.6	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.6	1.6	1.6	1.6
SHIPS AND COMMERCIAL BOATS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RECREATIONAL BOATS	13.2	12.1	11.9	11.6	11.5	11.4	11.3	7.7	7.5	7.4	7.4	7.4	7.4	7.4
OFF-ROAD RECREATIONAL VEHICLES	6.9	7.7	7.9	8.1	8.3	8.5	8.7	7.4	8.2	8.4	8.5	8.7	8.8	9.0
OFF-ROAD EQUIPMENT	19.8	16.1	15.3	14.6	13.9	13.2	12.6	19.8	16.2	15.4	14.6	13.9	13.3	12.7
FARM EQUIPMENT	10.8	8.7	8.3	7.8	7.1	6.4	5.9	9.0	7.2	6.9	6.5	5.9	5.4	4.9
FUEL STORAGE AND HANDLING	3.5	2.2	2.1	2.0	1.8	1.7	1.7	3.4	2.1	1.9	1.8	1.7	1.6	1.5
* TOTAL OTHER MOBILE SOURCES	62.7	54.3	53.5	52.2	50.8	49.6	48.5	55.7	48.6	48.1	47.0	45.8	44.8	43.9
** TOTAL MOBILE SOURCES	157.5	130.8	125.0	119.5	115.6	109.0	105.7	155.4	129.5	122.9	117.3	113.9	106.7	103.8
GRAND TOTAL FOR SAN JOAQUIN VALLEY	419.8	375.2	370.6	365.8	365.0	362.3	363.2	402.2	358.6	352.8	347.5	346.9	342.6	342.6

Table B-5 Ammonia, Annual and Winter Daily Averages
(in tons per day)

Ammonia (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
STATIONARY SOURCES														
FUEL COMBUSTION														
ELECTRIC UTILITIES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COGENERATION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIL AND GAS PRODUCTION (COMBUSTION)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PETROLEUM REFINING (COMBUSTION)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MANUFACTURING AND INDUSTRIAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FOOD AND AGRICULTURAL PROCESSING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SERVICE AND COMMERCIAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (FUEL COMBUSTION)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL FUEL COMBUSTION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WASTE DISPOSAL														
SEWAGE TREATMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LANDFILLS	2.8	3.0	3.0	3.1	3.1	3.2	3.2	2.8	3.0	3.0	3.1	3.1	3.2	3.2
INCINERATORS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SOIL REMEDIATION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (WASTE DISPOSAL)	17.0	18.0	18.3	18.6	19.0	19.4	19.8	17.0	18.0	18.3	18.6	19.0	19.4	19.8
* TOTAL WASTE DISPOSAL	19.8	21.0	21.3	21.7	22.2	22.6	23.0	19.8	21.0	21.3	21.7	22.2	22.6	23.0
CLEANING AND SURFACE COATINGS														
LAUNDERING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEGREASING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PRINTING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Ammonia (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
ADHESIVES AND SEALANTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (CLEANING AND SURFACE COATINGS)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL CLEANING AND SURFACE COATINGS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PETROLEUM PRODUCTION AND MARKETING														
OIL AND GAS PRODUCTION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PETROLEUM REFINING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PETROLEUM MARKETING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (PETROLEUM PRODUCTION AND MARKETING)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL PETROLEUM PRODUCTION AND MARKETING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDUSTRIAL PROCESSES														
CHEMICAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FOOD AND AGRICULTURE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MINERAL PROCESSES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
METAL PROCESSES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WOOD AND PAPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GLASS AND RELATED PRODUCTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (INDUSTRIAL PROCESSES)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL INDUSTRIAL PROCESSES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
** TOTAL STATIONARY SOURCES	19.8	21.0	21.3	21.7	22.2	22.6	23.0	19.8	21.0	21.3	21.7	22.2	22.6	23.0
AREA-WIDE SOURCES														
SOLVENT EVAPORATION														
CONSUMER PRODUCTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PESTICIDES/FERTILIZERS	15.0	14.8	14.7	14.7	14.6	14.5	14.5	15.0	14.8	14.7	14.6	14.6	14.5	14.5
ASPHALT PAVING / ROOFING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Ammonia (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
* TOTAL SOLVENT EVAPORATION	15.0	14.8	14.7	14.7	14.6	14.5	14.5	15.0	14.8	14.7	14.6	14.6	14.5	14.5
MISCELLANEOUS PROCESSES														
RESIDENTIAL FUEL COMBUSTION	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.1	1.2	1.2	1.2	1.2	1.2	1.2
FARMING OPERATIONS	332.1	358.0	364.5	373.1	381.7	390.3	398.9	332.0	357.9	364.3	372.9	381.5	390.1	398.7
CONSTRUCTION AND DEMOLITION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAVED ROAD DUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UNPAVED ROAD DUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FUGITIVE WINDBLOWN DUST	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FIRES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MANAGED BURNING AND DISPOSAL	2.6	2.6	2.6	2.6	2.6	2.6	2.5	3.2	3.1	3.1	3.1	3.1	3.1	3.0
COOKING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER (MISCELLANEOUS PROCESSES)	5.6	6.0	6.1	6.2	6.3	6.5	6.6	5.6	6.0	6.1	6.2	6.3	6.5	6.6
* TOTAL MISCELLANEOUS PROCESSES	340.9	367.2	373.7	382.4	391.2	399.9	408.7	341.9	368.1	374.6	383.4	392.1	400.8	409.6
** TOTAL AREA-WIDE SOURCES	355.9	381.9	388.4	397.1	405.8	414.5	423.1	356.9	382.9	389.3	398.0	406.7	415.4	424.0
MOBILE SOURCES														
ON-ROAD MOTOR VEHICLES														
LIGHT DUTY PASSENGER (LDA)	2.6	2.1	2.0	1.9	1.8	1.8	1.7	2.6	2.1	2.0	1.9	1.8	1.8	1.7
LIGHT DUTY TRUCKS - 1 (LDT1)	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.7	0.6	0.5	0.5	0.5	0.5	0.5
LIGHT DUTY TRUCKS - 2 (LDT2)	1.3	1.0	1.0	0.9	0.9	0.8	0.8	1.3	1.0	1.0	0.9	0.9	0.8	0.8
MEDIUM DUTY TRUCKS (MDV) LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	1.3	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.3	1.3	1.3	1.3	1.3
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HEAVY HEAVY DUTY GAS TRUCKS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Ammonia (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
(HHDV)														
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOTORCYCLES (MCY)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1
HEAVY DUTY DIESEL URBAN BUSES (UB)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HEAVY DUTY GAS URBAN BUSES (UB)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCHOOL BUSES (SB)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER BUSES (OB)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOTOR HOMES (MH)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL ON-ROAD MOTOR VEHICLES	6.2	5.3	5.2	5.1	5.0	4.9	4.8	6.2	5.3	5.2	5.1	5.0	4.9	4.8
OTHER MOBILE SOURCES														
AIRCRAFT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRAINS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SHIPS AND COMMERCIAL BOATS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RECREATIONAL BOATS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF-ROAD RECREATIONAL VEHICLES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OFF-ROAD EQUIPMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FARM EQUIPMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FUEL STORAGE AND HANDLING	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
* TOTAL OTHER MOBILE SOURCES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
** TOTAL MOBILE SOURCES	6.2	5.3	5.2	5.1	5.0	4.9	4.8	6.2	5.3	5.2	5.1	5.0	4.9	4.8

Ammonia (tpd)														
SUMMARY CATEGORY NAME	ANNUAL							WINTER						
	2005	2009	2010	2011	2012	2013	2014	2005	2009	2010	2011	2012	2013	2014
GRAND TOTAL FOR SAN JOAQUIN VALLEY	382.0	408.3	414.9	423.9	433.0	442.0	451.0	382.9	409.2	415.8	424.8	433.9	442.8	451.8

DRAFT

B.3 EMISSIONS INVENTORY CALCULATIONS AND REVISIONS

Emissions are estimated in a variety of ways. Some point and mobile sources may have emissions source tests or continuous emissions monitoring, which can provide direct tabulation of emission rates. Data from source-specific emission tests or continuous emission monitors are usually preferred for estimating a source's emissions because those data provide the best representation of the source's emissions.

Typically, the mobile source inventory is based on population, activity rates, fuel specifications, and emissions of typical vehicles. For area sources, estimates are made based on 'surrogate' data that is assumed to be proportional to emissions, such as population, employment, economic data or some type of human activity. If no emissions data are available for a particular source, the District may send a survey to businesses that are identified as producing emissions from that source. The survey typically requests data that are used to estimate emissions. Each of the local air districts estimates the emissions for the stationary sources within its jurisdiction.

Emissions from natural sources are typically estimated by conducting a scientific study. 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. Other pollutants (e.g. NO_x) also have biogenic sources.

B.3.1 Emission Factors and Emission Equations

The general equation for emission estimation is:

$$E = A \times EF \times (1 - ER/100)$$

where:

E = emissions

A = activity rate

EF = emission factor

ER = overall emission reduction efficiency, percent

An emission factor relates the quantity of a pollutant emitted into the atmosphere to an activity associated with the pollutant's release. Such factors may be used in equations to estimate emissions from a process where source specific data is not available. Emission factors are typically expressed as the weight of pollutant divided by a unit weight, area, volume, distance, or duration of the activity emitting the pollutant. In most cases, these factors are simply averages of all available data of acceptable quality, and are generally assumed to be representative of long-term averages for all facilities in the source category. EPA publishes emission factors for many emissions categories in the document entitled AP-42.

Once an emission factor is determined, the next step is to determine the population (number of sources) and extent of each source. Population data is collected directly and indirectly. For example, vehicle registration data are gathered by the state. Stationary sources must obtain a permit from the District; therefore, populations of permitted equipment are directly obtained and are reasonably accurate. The number of fireplaces is not reported and must be estimated indirectly using housing statistics and surveys. Each source category has its own methodology.

The next step is to determine an activity rate. Activity data is reported in hours of operation, gallons of fuel used, miles traveled, and other units. Stationary sources of emissions permitted by the District are required to report actual emissions to ensure that they remain below their emission limits. This provides detailed activity data that is used in the emissions inventory. In other cases, facility operators can inform the District of their actual production figures or fuel burned. A survey is often carried out to determine usage rates.

B.3.2 Emissions Inventory Updates

The District, in cooperation with the ARB, is committed to continually updating the emissions inventory as research, emission factor updates, and other information become available. When emissions data change dramatically, the District is committed to revising the inventory and ensuring that any impact is reflected in the control strategy and the attainment demonstration.

The District re-evaluates the emissions inventory on a regular basis to ensure that the inventory is accurate and current. Major point sources are typically re-evaluated every year. Area sources are scheduled to be re-evaluated every one to five years. Seventy-five area source categories were updated during the period from 2003 to 2006.

The District updates emissions growth estimates on a periodic basis. Ten source categories are being examined in 2006 to reevaluate growth trends. The District also revises emissions estimates based on the effects of District prohibitory rules on an emissions source category. Approximately sixty-eight District prohibitory rules will be examined in 2006 to evaluate emissions controls and the effect of the rule requirements on the emissions inventory.