Appendix B

Draft Emissions Inventory

This page intentionally blank.

Appendix B: Draft Emissions Inventory

[Note: The evaluation being conducted to develop this plan is an ongoing work in progress, and will continue to be revised and updated throughout the public process.]

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. This plan utilizes annual average and winter average daily inventories, with emissions presented as tons per day (tpd). The annual average daily inventory represents emissions across the entire year, while the winter average daily inventory represents emissions from the months of November to April, which is when PM2.5 concentrations are at their highest in the San Joaquin Valley.

The inventories in this Appendix are used to study and propose control measures, to track emissions for Rate of Progress (ROP), to track Emissions Reduction Credits (ERCs), to establish motor vehicle conformity budgets for transportation planning, and to assist in demonstrating attainment. These inventories are still considered preliminary and have the potential to be updated as this plan continues to be developed.

This Appendix includes draft emissions inventories for the San Joaquin Valley Air Basin for the years 2007, 2012, 2014, 2015, 2016, 2017, 2018, and 2019. The base year (the year from which the inventory is projected forward and backward) for these inventories is 2007. The year 2012 has been included as a reference point for the current year. Years 2014 and 2019 have been included as 2014 is the attainment deadline for the 1997 federal PM2.5 standard, and 2019 is the longest attainment timeframe allowed under the 2006 federal PM2.5 standard. Naturally, the years in between 2014 and 2019 have been included to show the progression of the inventory. Please note that the inventories included in this appendix are still draft and undergoing additional analysis and revision.

Specifically, the following categories are currently being reviewed and updated within the emissions inventory for this plan:

- Farming operations – Harvest operations dust
- Farming operations – Tilling dust
- Unpaved road travel dust – Farm roads
- Managed burning and disposal – Agricultural Burning
- Glass and related products – Flat glass manufacturing
- Residential fuel combustion – Wood combustion

These categories are highlighted within the following emissions inventory tables for reference. Other categories are also being reviewed that are directly affected by estimates of future population projections. Section B.4 of this appendix provides more details on population projections for the San Joaquin Valley.
The tables in this appendix include:

- Table B-1 Directly emitted PM2.5, Annual and Winter Daily Averages
- Table B-2 NOx, Annual and Winter Daily Averages
- Table B-3 SOx, Annual and Winter Daily Averages
- Table B-4 VOC, Annual and Winter Daily Averages
- Table B-5 Ammonia, Annual and Winter Daily Averages

Tables B-1 through B-5 are followed by an overview of emissions inventory calculations and revisions, as well as a discussion on population projections that influence the emissions inventory.

B.1 DRAFT EMISSIONS INVENTORY TABLES

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

Directly Emitted PM2.5 (tpd)																
SUMMARY CATEGORY NAME	ANNUAL								WINTER							
	2007	2012	2014	2015	2016	2017	2018	2019	2007	2012	2014	2015	2016	2017	2018	2019
STATIONARY SOURCES																
FUEL COMBUSTION																
ELECTRIC UTILITIES	1.4	1.8	1.7	1.7	1.7	1.7	1.7	1.8	1.4	1.7	1.6	1.6	1.6	1.7	1.7	1.7
COGENERATION	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0
OIL AND GAS PRODUCTION (COMBUSTION)	1.9	1.3	1.2	1.2	1.1	1.1	1.1	1.1	1.9	1.2	1.2	1.2	1.1	1.1	1.1	1.0
PETROLEUM REFINING (COMBUSTION)	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4
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	0.2	0.2
FOOD AND AGRICULTURAL PROCESSING	1.0	0.7	0.7	0.6	0.5	0.5	0.5	0.5	1.0	0.6	0.6	0.6	0.5	0.5	0.4	0.4
SERVICE AND COMMERCIAL	0.4	0.3	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 (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	0.0	0.0
*** TOTAL FUEL COMBUSTION**	**5.9**	**5.5**	**5.5**	**5.4**	**5.2**	**5.2**	**5.3**	**5.4**	**5.9**	**5.3**	**5.3**	**5.3**	**5.1**	**5.2**	**5.2**	**5.1**
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	0.0	0.0
LANDFILLS	0.1	0.0	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	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	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	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	0.0	0.0

Directly Emitted PM2.5 (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
*** TOTAL WASTE DISPOSAL**	**0.1**	**0.0**	**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**	**0.0**
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	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	0.0	0.0
COATINGS AND RELATED PROCESS SOLVENTS	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	0.1	0.1
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	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	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	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**	**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	0.0	0.0
PETROLEUM REFINING	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	0.1	0.1
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	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	0.0	0.0
*** TOTAL PETROLEUM PRODUCTION AND MARKETING**	**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**	**0.1**	**0.1**
INDUSTRIAL PROCESSES																
CHEMICAL	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
FOOD AND	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2

Directly Emitted PM2.5 (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
AGRICULTURE																
MINERAL PROCESSES	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.5	1.4	1.5	1.6	1.6	1.7	1.7	1.7
METAL 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	0.1	0.1
WOOD AND PAPER	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
GLASS AND RELATED PRODUCTS	0.6	0.9	0.9	1.0	1.0	1.0	1.0	1.0	0.6	0.9	0.9	1.0	1.0	1.0	1.0	1.0
OTHER (INDUSTRIAL PROCESSES)	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
*** TOTAL INDUSTRIAL PROCESSES**	**3.6**	**4.1**	**4.1**	**4.3**	**4.3**	**4.5**	**4.6**	**4.7**	**3.8**	**4.2**	**4.3**	**4.5**	**4.5**	**4.7**	**4.7**	**4.8**
**** TOTAL STATIONARY SOURCES**	**9.8**	**9.8**	**9.8**	**9.9**	**9.7**	**9.9**	**10.1**	**10.3**	**10.0**	**9.7**	**9.8**	**10.0**	**9.8**	**10.1**	**10.1**	**10.1**
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	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	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	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	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**	**0.0**	**0.0**
MISCELLANEOUS PROCESSES																
RESIDENTIAL FUEL COMBUSTION	6.1	4.4	4.2	4.2	4.2	4.3	4.3	4.3	11.7	8.4	8.0	8.0	8.1	8.1	8.1	8.1
FARMING OPERATIONS	13.6	14.2	14.3	14.4	14.4	14.5	14.6	14.6	10.4	11.2	11.3	11.3	11.4	11.4	11.5	11.5
CONSTRUCTION AND DEMOLITION	1.2	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.1	1.0	1.0	1.0	1.0	1.1	1.1	1.1
PAVED ROAD DUST	5.6	6.4	6.7	6.8	7.0	7.1	7.3	7.4	4.8	6.0	6.3	6.4	6.5	6.7	6.8	6.9

Directly Emitted PM2.5 (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
UNPAVED ROAD DUST	4.6	4.2	4.2	4.2	4.2	4.2	4.3	4.3	4.1	3.9	3.9	4.0	4.0	4.0	4.0	4.0
FUGITIVE WINDBLOWN DUST	7.8	7.6	7.6	7.6	7.6	7.5	7.5	7.5	5.0	4.9	4.8	4.8	4.8	4.8	4.8	4.8
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	0.2	0.2
MANAGED BURNING AND DISPOSAL	15.2	14.4	14.4	14.4	14.4	14.4	14.4	14.4	10.1	7.7	7.7	7.7	7.7	7.6	7.6	7.6
COOKING	2.1	1.7	1.7	1.7	1.7	1.8	1.8	1.8	2.1	1.7	1.7	1.7	1.7	1.8	1.8	1.8
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	0.0	0.0
*** TOTAL MISCELLANEOUS PROCESSES**	**56.4**	**54.2**	**54.4**	**54.6**	**54.8**	**55.2**	**55.6**	**55.7**	**49.5**	**45.0**	**44.9**	**45.1**	**45.4**	**45.7**	**45.9**	**46.0**
**** TOTAL AREA-WIDE SOURCES**	**56.4**	**54.2**	**54.4**	**54.6**	**54.8**	**55.2**	**55.6**	**55.7**	**49.5**	**45.0**	**44.9**	**45.1**	**45.4**	**45.7**	**45.9**	**46.0**
MOBILE SOURCES																
ON-ROAD MOTOR VEHICLES																
LIGHT DUTY PASSENGER (LDA)	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1
LIGHT DUTY TRUCKS - 1 (LDT1)	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	0.2	0.2
LIGHT DUTY TRUCKS - 2 (LDT2)	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	0.4	0.4
MEDIUM DUTY TRUCKS (MDV)	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5
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	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	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	0.0	0.0

Directly Emitted PM2.5 (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	0.0	0.0
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	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	0.2	0.2
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	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	0.1	0.1
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.8	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.8	0.5	0.4	0.4	0.4	0.3	0.3	0.3
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	5.8	3.9	2.0	1.7	1.5	1.4	1.4	1.5	5.8	3.9	2.0	1.7	1.5	1.4	1.5	1.5
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	0.0	0.0
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	0.1	0.1
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	0.0	0.0
SCHOOL BUSES (SB)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
OTHER BUSES (OB)	0.1	0.0	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	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	0.0	0.0
*** TOTAL ON-ROAD MOTOR VEHICLES**	**9.3**	**7.0**	**4.9**	**4.6**	**4.4**	**4.3**	**4.4**	**4.5**	**9.3**	**7.0**	**4.9**	**4.6**	**4.4**	**4.3**	**4.5**	**4.5**
OTHER MOBILE SOURCES																
AIRCRAFT	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3
TRAINS	0.6	0.5	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	0.5
SHIPS AND COMMERCIAL BOATS	0.0	0.0	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	0.0
RECREATIONAL BOATS	0.5	0.7	0.8	0.8	0.9	0.9	0.9	1.0	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4
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	0.0	0.0

Directly Emitted PM2.5 (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
OFF-ROAD EQUIPMENT	2.3	1.6	1.4	1.3	1.3	1.2	1.1	1.0	2.3	1.5	1.4	1.3	1.2	1.2	1.1	1.0
FARM EQUIPMENT	2.6	2.0	1.6	1.5	1.4	1.2	1.1	1.0	2.1	1.6	1.3	1.2	1.1	1.0	0.9	0.8
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	0.0	0.0
*** TOTAL OTHER MOBILE SOURCES**	**7.2**	**6.0**	**5.5**	**5.4**	**5.4**	**5.1**	**4.9**	**4.8**	**6.5**	**5.1**	**4.7**	**4.6**	**4.4**	**4.3**	**4.2**	**4.0**
**** TOTAL MOBILE SOURCES**	**16.5**	**13.0**	**10.4**	**10.0**	**9.8**	**9.4**	**9.3**	**9.3**	**15.8**	**12.1**	**9.6**	**9.2**	**8.8**	**8.6**	**8.7**	**8.5**
GRAND TOTAL FOR SAN JOAQUIN VALLEY	**82.7**	**77.0**	**74.6**	**74.5**	**74.3**	**74.5**	**75.0**	**75.3**	**75.3**	**66.8**	**64.3**	**64.3**	**64.0**	**64.4**	**64.7**	**64.6**

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

NOx (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STATIONARY SOURCES																
FUEL COMBUSTION																
ELECTRIC UTILITIES	7.1	5.6	5.5	5.3	5.5	5.6	5.6	5.7	7.1	5.6	5.4	5.3	5.4	5.5	5.6	5.6
COGENERATION	3.0	1.7	1.8	1.9	1.9	2.0	2.1	2.1	3.0	1.7	1.8	1.9	1.9	2.0	2.1	2.1
OIL AND GAS PRODUCTION (COMBUSTION)	3.5	1.5	1.2	0.9	0.9	0.9	0.9	0.8	3.5	1.5	1.2	0.9	0.9	0.9	0.8	0.8
PETROLEUM REFINING (COMBUSTION)	0.7	0.7	0.6	0.4	0.4	0.4	0.4	0.4	0.7	0.7	0.6	0.4	0.4	0.4	0.4	0.4
MANUFACTURING AND INDUSTRIAL	5.1	4.5	4.5	4.5	4.5	4.5	4.4	4.4	5.1	4.5	4.5	4.5	4.5	4.5	4.5	4.4
FOOD AND AGRICULTURAL PROCESSING	18.9	10.7	10.2	7.0	5.0	4.6	4.4	4.2	18.8	10.7	10.1	6.9	5.0	4.6	4.4	4.2
SERVICE AND COMMERCIAL	3.6	2.4	2.4	2.4	2.4	2.4	2.4	2.5	4.0	2.7	2.7	2.6	2.6	2.7	2.7	2.7
OTHER (FUEL COMBUSTION)	0.9	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.8
*** TOTAL FUEL COMBUSTION**	**42.8**	**28.1**	**27.2**	**23.2**	**21.4**	**21.2**	**21.0**	**20.9**	**43.0**	**28.3**	**27.2**	**23.3**	**21.5**	**21.4**	**21.3**	**21.0**
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	0.0	0.0
LANDFILLS	0.1	0.0	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
INCINERATORS	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	0.1	0.1
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	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	0.0	0.0
*** TOTAL WASTE DISPOSAL**	**0.2**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**

NOx (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	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	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	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	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	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	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**	**0.0**	**0.0**
PETROLEUM PRODUCTION AND MARKETING																
OIL AND GAS PRODUCTION	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
PETROLEUM REFINING	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	0.1	0.1
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	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	0.0	0.0
*** TOTAL PETROLEUM PRODUCTION AND MARKETING**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.2**	**0.2**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.2**	**0.2**
INDUSTRIAL PROCESSES																
CHEMICAL	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
FOOD AND AGRICULTURE	0.0	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	0.1
MINERAL PROCESSES	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2
METAL PROCESSES	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

NOx (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	0.0	0.0
GLASS AND RELATED PRODUCTS	7.8	5.3	3.7	3.8	3.8	3.9	3.9	4.0	7.8	5.3	3.7	3.8	3.8	3.9	3.9	4.0
OTHER (INDUSTRIAL PROCESSES)	0.0	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	0.1
*** TOTAL INDUSTRIAL PROCESSES**	**8.5**	**6.2**	**4.6**	**4.8**	**4.8**	**5.0**	**5.0**	**5.1**	**8.5**	**6.1**	**4.5**	**4.7**	**4.8**	**4.9**	**4.9**	**5.0**
**** TOTAL STATIONARY SOURCES**	**51.8**	**34.7**	**32.3**	**28.5**	**26.7**	**26.7**	**26.4**	**26.4**	**52.0**	**34.8**	**32.2**	**28.5**	**26.8**	**26.8**	**26.6**	**26.4**
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	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	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	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	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**	**0.0**	**0.0**
MISCELLANEOUS PROCESSES																
RESIDENTIAL FUEL COMBUSTION	7.1	6.6	6.6	6.7	6.7	6.7	6.7	6.8	11.1	10.4	10.4	10.5	10.5	10.6	10.6	10.7
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	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	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	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	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	0.0	0.0

NOx (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	0.0	0.0
MANAGED BURNING AND DISPOSAL	7.6	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3
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	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	0.0	0.0
*** TOTAL MISCELLANEOUS PROCESSES**	**14.7**	**13.6**	**13.6**	**13.7**	**13.7**	**13.7**	**13.7**	**13.8**	**18.2**	**15.7**	**15.7**	**15.8**	**15.8**	**15.9**	**15.9**	**16.0**
**** TOTAL AREA-WIDE SOURCES**	**14.7**	**13.6**	**13.6**	**13.7**	**13.7**	**13.7**	**13.7**	**13.8**	**18.2**	**15.7**	**15.7**	**15.8**	**15.8**	**15.9**	**15.9**	**16.0**
MOBILE SOURCES																
ON-ROAD MOTOR VEHICLES																
LIGHT DUTY PASSENGER (LDA)	17.2	10.7	8.4	7.5	6.8	6.1	5.6	5.2	18.8	11.7	9.2	8.2	7.4	6.7	6.1	5.7
LIGHT DUTY TRUCKS - 1 (LDT1)	5.7	3.9	3.2	2.9	2.7	2.4	2.2	2.1	6.3	4.2	3.5	3.2	2.9	2.7	2.5	2.3
LIGHT DUTY TRUCKS - 2 (LDT2)	11.9	7.9	6.2	5.5	4.9	4.3	3.9	3.5	13.1	8.6	6.8	6.0	5.3	4.7	4.3	3.9
MEDIUM DUTY TRUCKS (MDV)	15.3	12.6	11.1	10.3	9.7	9.0	8.4	7.9	16.8	13.8	12.1	11.3	10.6	9.9	9.2	8.6
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	4.9	4.6	4.3	4.2	4.1	4.0	3.9	3.8	5.2	4.9	4.6	4.5	4.4	4.2	4.1	4.0
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	1.1	0.9	0.7	0.7	0.6	0.6	0.5	0.5	1.2	0.9	0.8	0.7	0.7	0.6	0.5	0.5
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	15.0	12.3	11.1	10.5	9.9	9.3	8.8	8.3	15.2	12.6	11.2	10.6	10.1	9.5	9.0	8.4

NOx (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	3.6	2.9	2.6	2.5	2.3	2.2	2.1	1.9	3.7	3.0	2.7	2.5	2.4	2.2	2.1	2.0
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	19.4	13.3	12.2	10.9	10.0	9.1	8.3	7.5	19.7	13.5	12.4	11.1	10.2	9.2	8.4	7.6
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	184.9	108.4	94.2	83.7	74.9	68.9	63.7	59.9	187.4	110.2	95.7	84.9	75.9	69.8	64.4	60.5
MOTORCYCLES (MCY)	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2
HEAVY DUTY DIESEL URBAN BUSES (UB)	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	2.1	2.2	2.0	2.0	2.0	2.0	2.0	1.9
HEAVY DUTY GAS URBAN BUSES (UB)	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	0.3	0.3
SCHOOL BUSES (SB)	1.5	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.5	1.1	1.1	1.1	1.1	1.1	1.0	1.0
OTHER BUSES (OB)	2.2	1.6	1.5	1.3	1.1	1.0	0.9	0.9	2.3	1.6	1.5	1.3	1.2	1.1	1.0	0.9
MOTOR HOMES (MH)	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.5
*** TOTAL ON-ROAD MOTOR VEHICLES**	**287.7**	**185.1**	**161.4**	**145.8**	**132.8**	**122.7**	**113.8**	**107.0**	**296.5**	**191.3**	**166.7**	**150.5**	**137.1**	**126.6**	**117.5**	**110.1**
OTHER MOBILE SOURCES																
AIRCRAFT	2.7	3.4	3.5	3.6	3.6	3.7	3.7	3.8	2.7	3.4	3.5	3.6	3.6	3.7	3.7	3.8
TRAINS	21.4	20.5	20.7	20.8	20.9	21.0	21.2	21.3	21.4	20.5	20.7	20.8	20.9	21.0	21.2	21.3
SHIPS AND COMMERCIAL BOATS	1.1	0.9	0.9	0.8	0.8	0.8	0.8	0.8	1.1	0.9	0.9	0.8	0.8	0.8	0.8	0.8
RECREATIONAL BOATS	3.5	3.5	3.5	3.5	3.5	3.6	3.6	3.6	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
OFF-ROAD RECREATIONAL VEHICLES	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
OFF-ROAD EQUIPMENT	45.5	32.7	31.1	30.6	29.6	28.8	27.1	26.1	45.5	32.6	31.0	30.5	29.5	28.8	27.1	26.0
FARM EQUIPMENT	48.1	36.7	31.6	29.2	27.0	25.0	22.9	21.0	37.7	28.7	24.7	22.9	21.1	19.5	18.0	16.4
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	0.0	0.0
*** TOTAL OTHER MOBILE**	**122.5**	**97.8**	**91.4**	**88.7**	**85.6**	**83.1**	**79.5**	**76.8**	**109.9**	**87.6**	**82.3**	**80.1**	**77.4**	**75.3**	**72.3**	**69.8**

NOx (tpd)																
SUMMARY CATEGORY NAME	ANNUAL								WINTER							
	2007	2012	2014	2015	2016	2017	2018	2019	2007	2012	2014	2015	2016	2017	2018	2019
SOURCES																
** TOTAL MOBILE SOURCES	410.2	282.9	252.8	234.5	218.4	205.8	193.3	183.8	406.4	278.9	249.0	230.6	214.5	201.9	189.8	179.9
GRAND TOTAL FOR SAN JOAQUIN VALLEY	476.7	331.2	298.7	276.7	258.8	246.2	233.4	224.0	476.6	329.4	296.9	274.9	257.1	244.6	232.3	222.3

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

SOx (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STATIONARY SOURCES																
FUEL COMBUSTION																
ELECTRIC UTILITIES	1.4	1.7	1.6	1.6	1.6	1.6	1.7	1.7	1.4	1.7	1.5	1.5	1.6	1.6	1.6	1.6
COGENERATION	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3
OIL AND GAS PRODUCTION (COMBUSTION)	2.0	0.7	0.3	0.3	0.3	0.3	0.3	0.3	2.0	0.7	0.3	0.3	0.3	0.3	0.3	0.3
PETROLEUM REFINING (COMBUSTION)	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
MANUFACTURING AND INDUSTRIAL	1.1	0.9	0.8	0.8	0.9	0.9	0.9	0.9	1.1	0.9	0.9	0.9	0.9	0.9	0.9	0.9
FOOD AND AGRICULTURAL PROCESSING	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SERVICE AND COMMERCIAL	0.4	0.2	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	0.2
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	0.0	0.0
*** TOTAL FUEL COMBUSTION**	**5.6**	**3.9**	**3.2**	**3.2**	**3.3**	**3.3**	**3.5**	**3.5**	**5.6**	**3.9**	**3.2**	**3.2**	**3.3**	**3.3**	**3.4**	**3.4**
WASTE DISPOSAL																
SEWAGE TREATMENT	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
LANDFILLS	0.1	0.0	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	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	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	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	0.0	0.0
*** TOTAL WASTE DISPOSAL**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.1**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.1**	**0.1**

SOx (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	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	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	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	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	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	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**	**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	0.0	0.0
PETROLEUM REFINING	0.1	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	0.1	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	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	0.0	0.0
*** TOTAL PETROLEUM PRODUCTION AND MARKETING**	**0.1**	**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**	**0.1**	**0.2**
INDUSTRIAL PROCESSES																
CHEMICAL	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2
FOOD AND AGRICULTURE	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MINERAL PROCESSES	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4
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	0.0	0.0

SOx (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	0.0	0.0
GLASS AND RELATED PRODUCTS	3.0	1.7	1.6	1.6	1.7	1.7	1.7	1.7	3.0	1.7	1.6	1.6	1.7	1.7	1.7	1.7
OTHER (INDUSTRIAL PROCESSES)	0.1	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	0.0
*** TOTAL INDUSTRIAL PROCESSES**	**4.7**	**3.3**	**3.2**	**3.2**	**3.5**	**3.5**	**3.5**	**3.6**	**4.5**	**3.2**	**3.1**	**3.1**	**3.3**	**3.3**	**3.4**	**3.4**
**** TOTAL STATIONARY SOURCES**	**10.5**	**7.3**	**6.5**	**6.5**	**6.9**	**7.0**	**7.2**	**7.4**	**10.3**	**7.2**	**6.4**	**6.4**	**6.7**	**6.8**	**7.0**	**7.1**
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	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	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	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	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**	**0.0**	**0.0**
MISCELLANEOUS PROCESSES																
RESIDENTIAL FUEL COMBUSTION	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
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	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	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	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	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	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	0.0	0.0

SOx (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
MANAGED BURNING AND DISPOSAL	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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	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	0.0	0.0
*** TOTAL MISCELLANEOUS PROCESSES**	**1.4**	**1.4**	**1.4**	**1.4**	**1.4**	**1.4**	**1.4**	**1.4**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**
**** TOTAL AREA-WIDE SOURCES**	**1.4**	**1.4**	**1.4**	**1.4**	**1.4**	**1.4**	**1.4**	**1.4**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**
MOBILE SOURCES																
ON-ROAD MOTOR VEHICLES																
LIGHT DUTY PASSENGER (LDA)	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LIGHT DUTY TRUCKS - 1 (LDT1)	0.0	0.0	0.0	0.0	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 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	0.1	0.1
MEDIUM DUTY TRUCKS (MDV)	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	0.1	0.1
LIGHT HEAVY DUTY GAS 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	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	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	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	0.0	0.0
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	0.0	0.0

SOx (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	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	0.0	0.0
HEAVY HEAVY DUTY DIESEL 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	0.2	0.2
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	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	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	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	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	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	0.0	0.0
*** TOTAL ON-ROAD MOTOR VEHICLES**	**0.5**	**0.6**	**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**	**0.6**
OTHER MOBILE SOURCES																
AIRCRAFT	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	0.4	0.4
TRAINS	0.1	0.0	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	0.0
SHIPS AND COMMERCIAL BOATS	0.5	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.0	0.1	0.1	0.1	0.1	0.1	0.1
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	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	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	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	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	0.0	0.0
*** TOTAL OTHER MOBILE**	**1.0**	**0.4**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**1.0**	**0.4**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**

SOx (tpd)																
SUMMARY CATEGORY NAME	ANNUAL								WINTER							
	2007	2012	2014	2015	2016	2017	2018	2019	2007	2012	2014	2015	2016	2017	2018	2019
SOURCES																
** TOTAL MOBILE SOURCES	1.5	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.5	1.0	1.1	1.1	1.1	1.1	1.1	1.1
GRAND TOTAL FOR SAN JOAQUIN VALLEY	13.4	9.7	9.0	9.0	9.4	9.5	9.7	9.9	12.5	8.9	8.2	8.2	8.5	8.6	8.8	8.9

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

SUMMARY CATEGORY NAME	VOC (tpd)															
	ANNUAL								WINTER							
	2007	2012	2014	2015	2016	2017	2018	2019	2007	2012	2014	2015	2016	2017	2018	2019
STATIONARY SOURCES																
FUEL COMBUSTION																
ELECTRIC UTILITIES	0.2	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.2	0.7	0.6	0.6	0.6	0.6	0.6	0.6
COGENERATION	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5
OIL AND GAS PRODUCTION (COMBUSTION)	1.5	1.0	1.0	1.0	1.0	0.9	0.9	0.9	1.5	1.0	1.0	1.0	0.9	0.9	0.9	0.9
PETROLEUM REFINING (COMBUSTION)	0.1	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.1	0.6	0.6	0.6	0.6	0.6	0.6	0.6
MANUFACTURING AND INDUSTRIAL	0.3	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	0.2
FOOD AND AGRICULTURAL PROCESSING	1.7	1.0	0.9	0.8	0.6	0.6	0.6	0.5	1.6	0.9	0.9	0.7	0.6	0.5	0.5	0.5
SERVICE AND COMMERCIAL	0.5	0.5	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	0.5
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	0.1	0.1
*** TOTAL FUEL COMBUSTION**	**4.6**	**4.6**	**4.5**	**4.3**	**4.1**	**4.1**	**4.1**	**4.1**	**4.5**	**4.5**	**4.4**	**4.2**	**4.1**	**4.0**	**4.0**	**4.0**
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	0.0	0.0
LANDFILLS	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.5
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	0.0	0.0
SOIL REMEDIATION	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OTHER (WASTE DISPOSAL)	23.0	19.7	20.8	21.4	22.0	21.7	22.3	22.8	22.9	19.7	20.8	21.4	22.0	21.7	22.3	22.8
*** TOTAL WASTE DISPOSAL**	**24.5**	**21.5**	**22.6**	**23.3**	**23.8**	**23.6**	**24.2**	**24.7**	**24.5**	**21.5**	**22.6**	**23.2**	**23.8**	**23.6**	**24.2**	**24.7**

VOC (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	0.1	0.1
DEGREASING	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6
COATINGS AND RELATED PROCESS SOLVENTS	7.3	8.2	8.7	8.9	9.0	9.2	9.4	9.6	7.3	8.2	8.6	8.8	9.0	9.2	9.4	9.5
PRINTING	4.4	4.9	5.1	5.1	5.2	5.3	5.4	5.5	4.4	4.9	5.1	5.1	5.2	5.3	5.4	5.5
ADHESIVES AND SEALANTS	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6
OTHER (CLEANING AND SURFACE COATINGS)	3.6	4.2	4.4	4.5	4.6	4.7	4.8	4.9	3.6	4.2	4.4	4.5	4.6	4.7	4.8	4.9
*** TOTAL CLEANING AND SURFACE COATINGS**	**17.6**	**19.6**	**20.5**	**20.8**	**21.2**	**21.5**	**21.9**	**22.3**	**17.6**	**19.5**	**20.4**	**20.8**	**21.1**	**21.5**	**21.9**	**22.2**
PETROLEUM PRODUCTION AND MARKETING																
OIL AND GAS PRODUCTION	30.7	26.4	25.6	25.0	24.4	23.7	22.9	21.9	30.7	26.4	25.6	25.0	24.4	23.7	22.9	21.9
PETROLEUM REFINING	1.1	1.9	2.0	2.1	2.1	2.1	2.2	2.2	1.1	1.9	2.0	2.0	2.1	2.1	2.2	2.2
PETROLEUM MARKETING	6.5	8.0	8.3	8.4	8.6	8.7	8.8	9.0	6.5	8.0	8.3	8.4	8.6	8.7	8.8	9.0
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	0.0	0.0
*** TOTAL PETROLEUM PRODUCTION AND MARKETING**	**38.4**	**36.4**	**35.9**	**35.6**	**35.2**	**34.6**	**34.0**	**33.1**	**38.4**	**36.3**	**35.9**	**35.5**	**35.1**	**34.6**	**33.9**	**33.1**
INDUSTRIAL PROCESSES																
CHEMICAL	3.5	2.7	2.8	2.8	2.9	2.9	2.9	3.0	3.4	2.7	2.8	2.8	2.8	2.9	2.9	3.0
FOOD AND AGRICULTURE	11.0	11.4	11.8	12.0	12.2	12.5	12.7	12.9	9.5	9.8	10.1	10.3	10.5	10.7	10.9	11.1
MINERAL PROCESSES	0.3	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.3	0.7	0.8	0.8	0.8	0.8	0.8	0.9
METAL PROCESSES	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

VOC (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	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	0.0	0.0
OTHER (INDUSTRIAL PROCESSES)	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5
*** TOTAL INDUSTRIAL PROCESSES**	**15.3**	**15.6**	**16.2**	**16.5**	**16.8**	**17.1**	**17.3**	**17.7**	**13.7**	**13.9**	**14.4**	**14.7**	**14.9**	**15.2**	**15.4**	**15.7**
**** TOTAL STATIONARY SOURCES**	**100.4**	**97.6**	**99.7**	**100.4**	**101.1**	**100.9**	**101.5**	**101.9**	**98.7**	**95.7**	**97.7**	**98.4**	**99.0**	**98.9**	**99.4**	**99.8**
AREA-WIDE SOURCES																
SOLVENT EVAPORATION																
CONSUMER PRODUCTS	22.7	21.6	21.6	22.1	22.7	23.2	23.8	24.3	22.7	21.6	21.6	22.1	22.7	23.2	23.8	24.3
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	11.5	9.0	9.1	9.2	9.3	9.3	9.4	9.5	9.8	7.7	7.8	7.9	8.0	8.0	8.1	8.2
PESTICIDES/FERTILIZERS	17.7	16.8	16.7	16.7	16.6	16.5	16.5	16.4	18.1	16.5	16.4	16.3	16.3	16.2	16.2	16.1
ASPHALT PAVING / ROOFING	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9
*** TOTAL SOLVENT EVAPORATION**	**52.8**	**48.3**	**48.3**	**48.8**	**49.4**	**50.0**	**50.6**	**51.1**	**51.5**	**46.8**	**46.8**	**47.2**	**47.8**	**48.4**	**48.9**	**49.5**
MISCELLANEOUS PROCESSES																
RESIDENTIAL FUEL COMBUSTION	7.0	4.9	4.7	4.7	4.7	4.7	4.7	4.7	13.5	9.4	8.9	9.0	9.0	9.0	9.0	9.0
FARMING OPERATIONS	139.6	147.0	150.5	152.2	153.9	155.6	157.4	159.1	139.6	147.0	150.4	152.1	153.8	155.6	157.3	159.0
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	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	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	0.0	0.0
FUGITIVE WINDBLOWN	0.0	0.0	0.0	0.0	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**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
DUST																
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	0.1	0.1
MANAGED BURNING AND DISPOSAL	12.6	12.1	12.1	12.1	12.1	12.1	12.1	12.1	8.5	6.8	6.8	6.8	6.8	6.8	6.7	6.7
COOKING	0.5	0.4	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
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	0.0	0.0
*** TOTAL MISCELLANEOUS PROCESSES**	**159.9**	**164.6**	**167.8**	**169.5**	**171.3**	**173.0**	**174.7**	**176.5**	**162.2**	**163.7**	**166.7**	**168.4**	**170.1**	**171.9**	**173.6**	**175.3**
**** TOTAL AREA-WIDE SOURCES**	**212.7**	**212.9**	**216.1**	**218.4**	**220.7**	**223.0**	**225.3**	**227.6**	**213.8**	**210.4**	**213.4**	**215.6**	**217.9**	**220.2**	**222.5**	**224.8**
MOBILE SOURCES																
ON-ROAD MOTOR VEHICLES																
LIGHT DUTY PASSENGER (LDA)	19.5	12.8	9.8	8.6	7.6	6.7	5.9	5.4	20.2	13.1	9.9	8.7	7.7	6.7	5.9	5.4
LIGHT DUTY TRUCKS - 1 (LDT1)	6.6	4.7	3.9	3.6	3.3	3.1	2.8	2.7	7.0	4.9	4.1	3.8	3.5	3.2	2.9	2.7
LIGHT DUTY TRUCKS - 2 (LDT2)	8.4	6.5	5.3	4.8	4.4	4.0	3.6	3.3	8.9	6.8	5.6	5.1	4.6	4.1	3.7	3.4
MEDIUM DUTY TRUCKS (MDV)	7.9	7.9	7.6	7.4	7.2	7.0	6.8	6.6	8.5	8.4	8.0	7.8	7.6	7.3	7.1	6.9
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	3.6	3.1	2.9	2.8	2.7	2.6	2.5	2.4	3.8	3.3	3.1	3.0	2.9	2.8	2.7	2.6
LIGHT HEAVY DUTY GAS TRUCKS - 2 (LHDV2)	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2
MEDIUM HEAVY DUTY GAS TRUCKS (MHDV)	1.2	0.8	0.6	0.5	0.5	0.4	0.3	0.3	1.4	1.0	0.7	0.6	0.5	0.5	0.4	0.3
HEAVY HEAVY DUTY GAS TRUCKS (HHDV)	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1

VOC (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
LIGHT HEAVY DUTY DIESEL TRUCKS - 1 (LHDV1)	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	0.6	0.5	0.5
LIGHT HEAVY DUTY DIESEL TRUCKS - 2 (LHDV2)	0.2	0.1	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	0.1
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	1.1	0.8	0.6	0.5	0.5	0.4	0.4	0.4	1.1	0.8	0.6	0.5	0.5	0.4	0.4	0.4
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	9.7	6.4	4.4	4.2	4.1	4.1	4.2	4.3	9.8	6.4	4.5	4.2	4.1	4.2	4.3	4.4
MOTORCYCLES (MCY)	4.0	3.6	3.4	3.4	3.4	3.4	3.4	3.5	4.2	3.7	3.5	3.5	3.4	3.4	3.4	3.5
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	0.1	0.1
HEAVY DUTY GAS 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	0.1	0.1
SCHOOL BUSES (SB)	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
OTHER BUSES (OB)	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1
MOTOR HOMES (MH)	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0
*** TOTAL ON-ROAD MOTOR VEHICLES**	**64.4**	**48.5**	**40.2**	**37.4**	**35.1**	**33.0**	**31.4**	**30.1**	**67.3**	**50.4**	**41.7**	**38.8**	**36.3**	**34.1**	**32.3**	**30.9**
OTHER MOBILE SOURCES																
AIRCRAFT	5.0	4.7	4.9	5.0	5.0	5.1	5.2	5.2	5.0	4.7	4.9	4.9	5.0	5.1	5.2	5.2
TRAINS	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	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	0.1	0.1
RECREATIONAL BOATS	12.8	11.5	11.3	11.2	11.1	11.1	11.0	11.0	7.6	7.4	7.4	7.5	7.5	7.6	7.6	7.7
OFF-ROAD RECREATIONAL VEHICLES	4.7	3.9	3.7	3.7	3.7	3.7	3.7	3.7	3.7	2.9	2.8	2.8	2.8	2.7	2.7	2.7
OFF-ROAD EQUIPMENT	14.9	11.2	10.2	9.9	9.6	9.4	9.1	8.9	14.5	10.8	9.9	9.6	9.3	9.1	8.8	8.6

VOC (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
FARM EQUIPMENT	9.8	7.2	5.9	5.4	5.0	4.5	4.1	3.8	8.0	5.9	4.9	4.5	4.1	3.8	3.4	3.1
FUEL STORAGE AND HANDLING	3.2	1.8	1.7	1.6	1.5	1.5	1.4	1.4	3.1	1.7	1.5	1.4	1.4	1.3	1.3	1.3
*** TOTAL OTHER MOBILE SOURCES**	**52.0**	**41.9**	**39.3**	**38.4**	**37.5**	**36.9**	**36.2**	**35.7**	**43.5**	**35.1**	**33.1**	**32.4**	**31.7**	**31.2**	**30.7**	**30.3**
**** TOTAL MOBILE SOURCES**	**116.4**	**90.3**	**79.5**	**75.8**	**72.7**	**69.9**	**67.6**	**65.8**	**110.9**	**85.6**	**74.8**	**71.2**	**68.0**	**65.3**	**63.0**	**61.2**
GRAND TOTAL FOR SAN JOAQUIN VALLEY	**429.5**	**400.9**	**395.4**	**394.6**	**394.4**	**393.8**	**394.4**	**395.3**	**423.4**	**391.7**	**386.0**	**385.2**	**385.0**	**384.4**	**384.9**	**385.8**

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

Ammonia (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STATIONARY SOURCES																
FUEL COMBUSTION																
ELECTRIC UTILITIES	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COGENERATION	0.1	0.0	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	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	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	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	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	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	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	0.0	0.0
*** TOTAL FUEL COMBUSTION**	**0.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
WASTE DISPOSAL																
SEWAGE TREATMENT	0.0	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	0.1
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	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	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	0.0	0.0
OTHER (WASTE DISPOSAL)	17.8	19.6	20.7	21.3	21.8	22.4	22.9	23.5	17.8	19.6	20.7	21.3	21.8	22.4	22.9	23.5
*** TOTAL WASTE DISPOSAL**	**17.8**	**19.7**	**20.8**	**21.3**	**21.9**	**22.5**	**23.0**	**23.6**	**17.8**	**19.6**	**20.8**	**21.3**	**21.9**	**22.4**	**23.0**	**23.6**

Ammonia (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	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	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	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	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	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	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**	**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	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	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	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	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**	**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	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	0.0	0.0
MINERAL PROCESSES	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	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	0.0	0.0

Ammonia (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	0.0	0.0
GLASS AND RELATED PRODUCTS	0.5	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.3	0.3	0.3	0.4	0.4	0.4	0.4
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	0.0	0.0
*** TOTAL INDUSTRIAL PROCESSES**	**1.0**	**0.3**	**0.3**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**	**1.0**	**0.3**	**0.3**	**0.4**	**0.4**	**0.4**	**0.4**	**0.4**
**** TOTAL STATIONARY SOURCES**	**19.7**	**20.0**	**21.1**	**21.7**	**22.3**	**22.8**	**23.4**	**24.0**	**19.7**	**20.0**	**21.1**	**21.7**	**22.3**	**22.8**	**23.4**	**24.0**
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	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	0.0	0.0
PESTICIDES/FERTILIZERS	88.0	86.4	85.8	85.5	85.2	84.9	84.6	84.3	68.5	67.3	66.8	66.6	66.3	66.1	65.9	65.6
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	0.0	0.0
*** TOTAL SOLVENT EVAPORATION**	**88.0**	**86.4**	**85.8**	**85.5**	**85.2**	**84.9**	**84.6**	**84.3**	**68.5**	**67.3**	**66.8**	**66.6**	**66.3**	**66.1**	**65.9**	**65.6**
MISCELLANEOUS PROCESSES																
RESIDENTIAL FUEL COMBUSTION	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7
FARMING OPERATIONS	294.4	323.8	337.5	344.4	351.3	358.2	365.1	372.0	294.3	323.7	337.4	344.3	351.2	358.0	364.9	371.8
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	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	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	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	0.0	0.0

Ammonia (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	0.0	0.0
MANAGED BURNING AND DISPOSAL	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1
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	0.0	0.0
OTHER (MISCELLANEOUS PROCESSES)	6.3	7.0	7.4	7.6	7.8	8.0	8.2	8.4	6.3	7.0	7.4	7.6	7.8	8.0	8.2	8.4
*** TOTAL MISCELLANEOUS PROCESSES**	**303.0**	**332.9**	**347.1**	**354.2**	**361.2**	**368.3**	**375.4**	**382.5**	**302.8**	**332.3**	**346.5**	**353.6**	**360.7**	**367.8**	**374.8**	**381.9**
**** TOTAL AREA-WIDE SOURCES**	**391.0**	**419.3**	**432.8**	**439.6**	**446.4**	**453.2**	**460.0**	**466.8**	**371.3**	**399.6**	**413.3**	**420.2**	**427.0**	**433.8**	**440.7**	**447.6**
MOBILE SOURCES																
ON-ROAD MOTOR VEHICLES																
LIGHT DUTY PASSENGER (LDA)	1.8	1.5	1.4	1.3	1.3	1.3	1.3	1.2	1.8	1.5	1.4	1.3	1.3	1.3	1.3	1.2
LIGHT DUTY TRUCKS - 1 (LDT1)	0.3	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	0.2
LIGHT DUTY TRUCKS - 2 (LDT2)	1.0	0.8	0.8	0.7	0.7	0.7	0.7	0.7	1.0	0.8	0.8	0.7	0.7	0.7	0.7	0.7
MEDIUM DUTY TRUCKS (MDV)	1.6	1.4	1.3	1.3	1.3	1.3	1.3	1.2	1.6	1.4	1.3	1.3	1.3	1.3	1.3	1.2
LIGHT HEAVY DUTY GAS TRUCKS - 1 (LHDV1)	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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	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	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	0.0	0.0

Ammonia (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	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	0.0	0.0
MEDIUM HEAVY DUTY DIESEL TRUCKS (MHDV)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
HEAVY HEAVY DUTY DIESEL TRUCKS (HHDV)	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	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	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	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	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	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	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	0.0	0.0
*** TOTAL ON-ROAD MOTOR VEHICLES**	**5.3**	**4.7**	**4.4**	**4.3**	**4.3**	**4.2**	**4.2**	**4.2**	**5.3**	**4.7**	**4.4**	**4.3**	**4.3**	**4.2**	**4.2**	**4.2**
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	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	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	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	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	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	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	0.0	0.0

Ammonia (tpd)																
SUMMARY CATEGORY NAME	**ANNUAL**								**WINTER**							
	2007	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2007**	**2012**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
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	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**	**0.0**	**0.0**
**** TOTAL MOBILE SOURCES**	**5.4**	**4.7**	**4.5**	**4.4**	**4.3**	**4.3**	**4.2**	**4.2**	**5.4**	**4.7**	**4.5**	**4.4**	**4.3**	**4.3**	**4.2**	**4.2**
GRAND TOTAL FOR SAN JOAQUIN VALLEY	**416.1**	**444.0**	**458.4**	**465.7**	**473.0**	**480.3**	**487.6**	**495.0**	**396.3**	**424.3**	**438.9**	**446.2**	**453.6**	**460.9**	**468.3**	**475.7**

B.2 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 form 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. The Air Resources Board (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. NOx) also have biogenic sources.

B.2.1 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.

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.2.2 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. The District updates emissions growth estimates on a periodic basis and revises emissions estimates based on the effects of District prohibitory rules on an emissions source category.

B.3 FUTURE POPULATION ESTIMATES

Future population estimates play a key role in emissions inventory projections. Population increases and decreases are directly linked to emissions categories such as residential fuel combustion, commercial cooking, consumer products, mobile sources, and more. There are often competing population projection models that can be used for inclusion in the emissions inventory. The following is a discussion of two such models.

The Valley's population increases make it one of the fastest growing regions in the state. Population growth estimates for the Valley and for California as a whole have been under review in 2012. The Population Research Unit of the Department of Finance (DOF) released interim revised population growth projections in May 2012[1]. For the 2012 data, DOF used currently available 2010 census data and demographic trends showing slower growth than projected in DOF's 2007 series projections. The DOF developed these interim projections per its duties under California Government Code Sections 13073 and 13073.5 to provide sound and current population data for use

[1] DOF Interim Population Projects for California and its Counties, 2010-2050. http://www.dof.ca.gov/research/demographic/reports/projections/interim/view.php

in developing state, regional, and local agency policies. The DOF's final projections will be completed by January 2013.

The Valley's Metropolitan Planning Organizations (MPOs) released their revised population growth projections on March 27, 2012[2]. The MPOs use their forecasts to analyze potential development densities, run MPO traffic models, formulate Sustainable Community Strategies for SB375, and more.

Population data is factored into air quality planning in a few ways. For example, a county's population is one factor in determining the minimum number of air monitoring stations required for that county, and data from these air monitoring stations are used to determine attainment status and show the extent of a region's attainment challenges. Population also affects the emissions inventory, with emissions growth projections from categories like consumer products, architectural coatings, commercial cooking, and light duty vehicles linked to anticipated growth in population. Increasing population generally increases air pollutant emissions from these categories, offsetting some of the emissions reductions progress made by control measures and improved pollution control technologies.

The population data displayed in Table B-6 and Figure B-1 show that although newer estimates show less population growth in the Valley than was previously estimated, the population of the Valley is still growing over the 2010-2020 time period covered by this plan. Population growth is a component of the Valley's air quality challenges.

Table B-6 Comparison between DOF and MPO Population Projections

County	Old DOF (2007 Series)			New DOF			MPO		
	2010	2020	% change	2010	2020	% change	2010	2020	% change
Fresno	983,478	1,201,792	22%	932,926	1,083,889	16%	930,000	1,082,000	16%
Kern*	871,728	1,086,113	25%	841,609	1,041,469	24%	840,000	1,004,000	20%
Kings	164,535	205,707	25%	152,996	179,722	17%	153,000	181,000	18%
Madera	162,114	212,874	31%	151,136	183,176	21%	150,900	154,500	2%
Merced	273,935	348,690	27%	256,345	301,449	18%	256,000	303,000	18%
San Joaquin	741,417	965,094	30%	686,651	795,631	16%	685,000	807,000	18%
Stanislaus	559,708	699,144	25%	515,229	582,746	13%	514,000	594,000	16%
Tulare	466,893	599,117	28%	443,567	536,429	21%	442,000	501,000	13%
Total	4,223,808	5,318,531	26%	3,980,459	4,704,511	18%	3,970,900	4,626,500	17%
California Total	39.1 million	44.1 million	12.8%	37.3 million	40.8 million	9%	*NA*	*NA*	*NA*
% Calif. pop. in Valley	10.8%	12.1%		10.7%	11.5%		*NA*	*NA*	*NA*

[2] San Joaquin Valley Demographic Forecasts, 2010-2015 (March 27, 2012) http://www.valleyblueprint.org/files/San%20Joaquin%20Valley%20Demographic%20Forecasts%20-%20Final%2027%20Mar%202012_0.pdf

Figure B-1 Temporal Comparison of Population Projections