San Joaquin Valley
Unified Air Pollution Control District

Emission Inventory Methodology
670-Agricultural Burning

I. Purpose

This document describes the Area Source Methodology used to estimate criteria emissions from Agricultural Burning in the San Joaquin Valley Air Basin.

II. Applicability

The emission calculations from this area source methodology applies to agricultural burning of waste and debris associated with the following CES, REIC, and EIC codes:

A. CES Numbers and Descriptions

CES	REIC	Description
47241	670-660-0262-0000	Agricultural Burning - Pruning
47258	670-662-0262-0000	Agricultural Burning -Field Crops
47266	670-668-0000-0000	Weed Abatement

REIC 670-660-0262-0000

CES	EIC	Description	
47241	670-660-0262-0001	Agricultural Burning - Prunings - Agricultural Waste	Tree Prunings
	670-660-0262-0002		Grape Vines/Stumps
	670-660-0262-0003		Orchard Removal
	670-660-0262-0004		Raisin Trays
	670-660-0262-0005		Attrition
	670-660-0262-0006		Untreated Grape Stakes
	670-660-0262-0007		Vineyard Removal

REIC 670-662-0262-0000

CES	EIC	Description	
47258	670-662-0262-0001	Agricultural Burning - Field Crops - Agricultural Waste	Stubble
	670-662-0262-0002		Rice Stubble
	670-662-0262-0003		Paper Hot Caps

REIC 670-668-0000-0000

CES	EIC	Description	
47266	670-668-0000-0001	Weed Abatement - Solid Fuel (Unspecified)	Weed Abatement
	670-668-0000-0002		Ponding/Levee Banks/Ditchbank/Canal
	670-668-0000-0003		Noxious Weeds
	670-668-0000-0004		Tumbleweed

III. Methodology Description

This methodology includes categories of emissions from burning of:

A. Pruning: of almond, apple, apricot, avocado, bush berry, cherry, Christmas trees, citrus, date, eucalyptus, fig, grape, kiwi, nectarine, nursery plants, olive, pasture or corral trees, peach, pear, pecan, persimmon, pistachio, plum, pluot, pomegranate, prune, quince, rose, and walnut. This category also includes vineyard materials, orchard removals, and other agricultural materials such as attrition.

B. Field Crops: including alfalfa, asparagus, barley stubble, beans, corn, cotton, flower straw, hay, lemon grass, oat stubble, paper hot caps, pea vines, peanuts, rice stubble, safflower, sugar cane, vegetable crops, and wheat stubble.

C. Weeds: including tulles, tumbleweed, grass, thistle, star thistle, dodder weed, lemon grass, noxious weeds, and weeds growing along ditch bank and canals, berms, and fence rows.

IV. Activity Data

Activity data for agricultural burning was obtained from the San Joaquin Valley Unified Air Pollution Control District's Smoke Management System. Activity data for this category is defined by:

A. ACRES - Acres is defined as the area from which the agricultural waste was produced, in acres. For example, if pruning came from 40 acres of orchard, 40 acres should be entered into the database. The Smoke Management System directs the burn permit holder to enter ACRES into the Smoke Management System database in this manner.

B. FUEL LOADING - Fuel loading is a factor that defines the tonnage of burn material that is generated from an acre of a particular crop or tons reported in the Smoke Management System.

C. TONS - Tons of burn material is calculated by multiplying ACRES by FUEL LOADING. If the burn permit holder reports TONS only, TONS are used to calculate emissions.

V. Temporal Variation

Monthly temporal variation for agricultural burning was developed from the San Joaquin Valley Unified Air Pollution Control District's Smoke Management System. Temporal variation data is provided in Appendix A and is based on burn dates entered in the database.

VI. Spatial Variation

Burn locations are defined by street address in the San Joaquin Valley Unified Air Pollution Control District (District) Smoke Management System. The street address is converted to Latitude and Longitude or UTM based on software needs.

VII. Emission Factors

The emission factors can be found in Appendix B. The Air Resources Board compiled a list of emission factors per crop type based on AP-42 values and from a study conducted by B.M. Jenkins (Gaffney 2000). Fuel loading values from AP-42 are also associated with each emission factor. Some of the factors and values were adjusted as needed by the District to better reflect the conditions in the San Joaquin Valley.

VIII. Sample Calculations

The equations shown below were used to calculate emissions from agriculture and weed abatement burn. The Smoke Management System allows information regarding the burn to be reported in acreage or individual fuel loading capacity if known. On an individual crop type basis, Equation A is used when the actual fuel loading is not known. Otherwise, Equation B is used. Then, the emissions from each burn are computed, summed and totaled by county and year.

<u>Equation A:</u>

$$\text{Emission}_{(\text{tons})} = \text{Acreage} \times \text{Fuel Loading}_{(\text{tons/ acre})} \times \text{Emission Factor}_{(\text{lbs/ton})} / 2000_{(\text{lbs/ton})}$$

OR

<u>Equation B:</u>

$$\text{Emission}_{(\text{tons})} = \text{Fuel Loading}_{(\text{tons})} \times \text{Emission Factor}_{(\text{lbs/ton})} / 2000_{(\text{lbs/ton})}$$

Where:

Acreage	=	Acreage if reported by applicant
Emission Factor	=	Emission Factor per type of crops, see Appendix B for values
Fuel Loading	=	Quantity/residue burned in tons per acre, as reported or see Appendix B for default values

Example for nut crops:

Burn #1 reported for the year:

$$\text{PM10 Emission}_{(\text{tons})} = 20\ \text{Acreage} \times \text{Fuel Loading}\ 1.0_{(\text{tons/acre})} \times \text{Emission Factor}\ 7.0_{(\text{lbs/ton})} / 2000_{(\text{lbs/ton})}$$

$$\text{PM10 Emission}_{(\text{tons})} = 0.07$$

Burn #2 reported for the year:

$$\text{PM10 Emission}_{(\text{tons})} = \text{Fuel Loading}\ 2.8_{(\text{tons})} \times \text{Emission Factor}\ 7.0_{(\text{lbs/ton})} / 2000_{(\text{lbs/ton})}$$

$$\text{PM10 Emission}_{(\text{tons})} = 0.0098$$

Total PM10 emissions for the year:

$$\text{Total PM10 Emission}_{(\text{tons/year})} = 0.07 + 0.0098 = 0.08$$

IX. Assumptions

A. Estimation of amount of burned material. The agricultural operator is responsible for estimating the amount of material burned. Typically, the quantity of material is expressed in acres or tons and one of these values is entered into the database. Emissions are calculated from either acreage or tons of material.

B. Variable factor reported for calculation: The acreage is used in the calculation as shown in the equation in Section VIII above in the Smoke Management System when it's reported through the District's web page and the automated Phone system. Either the acreage or tons of burned material is used for calculation when reported through an operator.

C. Data entry: The database is screened for data entry errors.

X. Frequency of Update

The emissions for this methodology are being collected by the District's Smoke Management System. It is recommended that this inventory be updated annually.

Agricultural Burning - Pruning			
EIC	**Description**	**Frequency (In years)**	**Source of Emissions**
670-660-0262-0001	Tree Prunings	1	Data Gathering
670-660-0262-0002	Grape Vines/Stumps	1	Data Gathering
670-660-0262-0003	Orchard Removal	1	Data Gathering
670-660-0262-0004	Raisin Trays	1	Data Gathering
670-660-0262-0005	Attrition	1	Data Gathering
670-660-0262-0006	Untreated Grape Stakes	1	Data Gathering
670-660-0262-0007	Vineyard Removal	1	Data Gathering

Agricultural Burning - Field Crops			
EIC	**Description**	**Frequency (In years)**	**Source of Emissions**
670-662-0262-0001	Stubble	1	Data Gathering
670-662-0262-0002	Rice Stubble	1	Data Gathering
670-662-0262-0003	Paper Hot Caps	1	Data Gathering

Agricultural Burning - Weed Abatement			
EIC	**Description**	**Frequency (In years)**	**Source of Emissions**
670-668-0000-0001	Weed Abatement	1	Data Gathering
670-668-0000-0002	Ponding/Levee Banks/Ditchbank/Canal	1	Data Gathering
670-668-0000-0003	Noxious Weeds	1	Data Gathering
670-668-0000-0004	Tumbleweed	1	Data Gathering

XI. Growth Factor

The growth factors associated with this emissions category are presented in Appendix G.

XII. Control Level

The open burning of vegetation from agricultural operations is subject to District Rule 4103 (Open Burning).

XIII. Chemical Speciation

Profile Description	ARB Profile #		Fractions			
	Organic Gas	PM	ROG	VOC	PM_{10}	$PM_{2.5}$
Agricultural Burning - Pruning	307	450	0.5698	0.5698	0.9814	0.9252
Agricultural Burning -Field Crops	307	430	0.5698	0.5698	0.9835	0.9379
Weed Abatement	307	440	0.5698	0.5698	0.9835	0.9379

XIV. Assessment Of Methodology

Emissions calculations are based on amount of material burned. This method is deemed to be an accurate method for calculating emissions, provided that the characterization of amount of burn material is accurate.

XV. Emissions Comparison

District staff refined the existing three EIC codes used for the emission category Waste Burning and Disposal of Agricultural Burning of Pruning EIC 670-660-0262-0000, Field Crops EIC 670-662-0262-0000, and of Weed Abatement EIC 670-668-0000-0000 by separating the emission categories into several small groups and assigning new sub EIC codes for them within these three main codes. Please refer to Appendix E.

Due to this enhancement, the data in District's current emissions inventory database is not comparable to the 2004 data in CEIDARs which uses the three main EICs noted above. However, the 2005 emissions inventory for each new EIC code is available and can be found in Appendix D.

XVI. References

a. Patrick Gaffney, Emission Inventory Branch, California Air Resources Board, Draft Memorandum to Bill Sandman, Colusa County Air Pollution Control District. May 23, 2000.

XVII. Appendix

Appendix A: Temporal Variation
Appendix B: Emission Factors
Appendix C: 2005 Emissions
Appendix D: Smoke Management System EIC Mapping Report
Appendix E: Growth Factors for EIC 670-660-0262-0000

Appendix F: Growth Factors for EIC 670-662-0262-0000
Appendix G: Growth Factors for EIC 670-668-0000-0000

APPENDIX A
TEMPORAL VARIATION
Agricultural Burning

WASTE BURNING AND DISPOSAL
AGRICULTURAL BURNING - PRUNINGS

670-660-0262-0001	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Tree Prunings	13.0%	12.7%	12.2%	13.0%	7.8%	5.4%	1.0%	4.1%	3.0%	5.4%	12.0%	10.4%
670-660-0262-0002	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Grapes Vines/Stumps	7.8%	21.2%	25.5%	17.2%	6.2%	4.5%	0.6%	2.9%	2.5%	2.2%	5.4%	4.1%
670-660-0262-0003	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Orchard Removal	8.6%	11.9%	11.7%	10.9%	8.6%	5.9%	0.4%	4.7%	11.1%	10.6%	7.6%	7.9%
670-660-0262-0004	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Raisin Trays	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	1.3%	31.0%	58.1%	8.9%	0.6%
670-660-0262-0005	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Attrition	0.0%	0.0%	0.0%	0.0%	0.0%	11.5%	1.5%	10.0%	18.2%	16.3%	22.1%	20.3%
670-660-0262-0006	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Untreated Grape Stakes	30.4%	20.3%	25.6%	8.2%	4.8%	4.3%	0.5%	2.4%	0.5%	0.5%	1.0%	1.4%
670-660-0262-0007	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Vineyard Removal	7.0%	11.6%	21.0%	19.4%	10.2%	7.3%	0.4%	1.7%	0.5%	3.8%	4.7%	12.4%

WASTE BURNING AND DISPOSAL
AGRICULTURAL BURNING - FIELD CROPS

670-662-0262-0001	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Stubble	10.0%	13.3%	6.7%	43.3%	26.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
670-662-0262-0002	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rice Stubble	0.0%	0.0%	3.1%	58.1%	18.8%	3.8%	0.0%	0.6%	0.6%	9.4%	5.6%	0.0%
670-662-0262-0003	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Paper Hot Caps	0.0%	0.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

WASTE BURNING AND DISPOSAL
WEED ABATEMENT

670-668-0200-0001	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Weed Abatement	11.7%	18.2%	23.4%	14.6%	21.2%	6.6%	0.0%	0.0%	0.0%	2.2%	1.5%	0.7%
670-668-0200-0002	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ponding/Levee Banks/Ditchbank/Canal	4.6%	8.5%	10.7%	11.9%	7.2%	6.7%	1.2%	5.0%	6.7%	14.3%	17.6%	5.5%
670-668-0200-0003	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Noxious Weeds	3.2%	3.0%	7.3%	7.6%	8.2%	10.8%	5.2%	10.2%	11.9%	14.7%	12.3%	5.6%
670-668-0200-0004	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Tumble Weed	15.6%	11.2%	14.6%	7.9%	3.6%	1.9%	0.3%	2.3%	6.2%	10.2%	13.8%	12.4%

APPENDIX B
EMISSION FACTORS
Agricultural Burning

Crop	PM10	PM25	NOx	SO_2	VOC	CO	Fuel Loading	Source of Data
Prunings (EIC 670-660-0262-0000)								
Almond	7	6.7	5.9	0.1	5.2	52.2	1	Jenkins (EF)
Apple	3.9	3.7	5.2	0.1	2.3	42	2.3	AP-42, Jenkins NOx & SO2
Apricot	5.9	5.6	5.2	0.1	4.6	49	1.8	AP-42, Jenkins NOx & SO2
Avocado	20.6	19.4	5.2	0.1	18.5	116	1.5	AP-42, Jenkins NOx & SO2
Bamboo	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Bushberry	7.8	7.3	5.2	0.1	6.3	66	1.7	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter)
Cherry	7.9	7.4	5.2	0.1	6	44	1	AP-42, Jenkins NOx & SO2
Christmas trees	8.67	7.76	4.27	0.14	4.35	64.69	1	Ponderosa Pine, Jenkins; use ARB's (Patrick Gaffney) fuel loading of 1 ton per acre
Citrus	5.9	5.6	5.2	0.1	6.8	81	1	AP-42, Jenkins NOx & SO2
Date palm	9.8	9.3	5.2	0.1	3.8	56	1	AP-42, Jenkins NOx & SO2
Dried flowers	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Eucalyptus	7.8	7.3	5.2	0.1	6.3	66	1.7	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter)
Fig	6.9	6.5	5.2	0.1	6	57	2.2	AP-42, Jenkins NOx & SO2
Flower straw	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Grape	4.9	4.6	5.2	0.1	3.8	51	2.5	AP-42, Jenkins NOx & SO2

APPENDIX B (cont.)

Crop	PM10	PM25	NOx	SO_2	VOC	CO	Fuel Loading	Source of Data
Grape stumps/stakes	7.8	7.3	5.2	0.1	6.3	66	10	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter); Fuel Loading increased to 30 tons per acre based on consiltations with compliance
Kiwi	7.8	7.3	5.2	0.1	6.3	66	1.7	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter)
Nectarine	3.9	3.7	5.2	0.1	2.3	33	2	AP-42, Jenkins NOx & SO2
Olive	11.8	11.1	5.2	0.1	10.3	114	1.2	AP-42, Jenkins NOx & SO2
Orchard removal	7.8	7.3	5.2	0.1	6.3	66	30	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter); Fuel Loading increased to 30 tons per acre based on consiltations with compliance
Other prunings	7.8	7.3	5.2	0.1	6.3	66	1.7	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter)
Pasture trees	7.8	7.3	5.2	0.1	6.3	66	1.7	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter)
Peach	5.9	5.6	5.2	0.1	3	42	2.5	AP-42, Jenkins NOx & SO2
Pear	8.8	8.3	5.2	0.1	5.1	57	2.6	AP-42, Jenkins NOx & SO2
Pecan	7.8	7.3	5.2	0.1	6.3	66	1.7	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter)
Persimmon	7.8	7.3	5.2	0.1	6.3	66	1.7	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter)

APPENDIX B (cont.)

Crop	PM10	PM25	NOx	SO_2	VOC	CO	Fuel Loading	Source of Data
Pistachio	7.8	7.3	5.2	0.1	6.3	66	1.7	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter)
Plum	7.8	7.3	5.2	0.1	6.3	66	1.7	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter)
Pluot(plum-apricot)	7.8	7.3	5.2	0.1	6.3	66	1.7	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter)
Pomegranate	7.8	7.3	5.2	0.1	6.3	66	1.7	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter)
Prune	2.9	2.8	5.2	0.1	4.6	47	1.2	AP-42, Jenkins NOx & SO2
Quince	7.8	7.3	5.2	0.1	6.3	66	1.7	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter)
Raisin trays	0.78	0.74	4.27	0.14	4.35	64.69	0.03	PM & loading from UCD/Asbaugh, NOx, etc from Jenkins pine
Rose pruning	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Vineyard removal	7.8	7.3	5.2	0.1	6.3	66	15	Average of Almond, Apple, Apricot, Avocado, Bean/Pea, Date Palm, Fig, Grape, Nectarine, Olive, Peach, Pear, Prune, and Walnut (as of 9/12/00, Patrick Gaffney's letter); Fuel Loading increased to 15 tons per acre based on consiltations with compliance
Walnut	4.2	4	4.5	0.2	4.8	67	1.2	Jenkins (EF)

APPENDIX B (cont.)

Crop	PM10	PM25	NOx	SO_2	VOC	CO	Fuel Loading	Source of Data
Field Crops (EIC 670-662-0262-0000)								
Alfalfa	28.5	27.2	4.5	0.6	21.7	119	0.8	AP-42, Jenkins NOx & SO2
Asparagus	40	39.34	4.49	0.61	66	150	1.5	AP-42, Jenkins NOx & SO2
Barley	14.3	13.8	5.1	0.1	15	183.7	1.7	Jenkins (EF)
Bean/pea	13.7	13	5.2	0.1	14.2	148	2.5	AP-42, Jenkins NOx & SO2
Corn	11.4	10.9	3.3	0.4	6.6	70.9	4.2	Jenkins (EF)
Cotton	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Dried flowers	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Flax	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Flower straw	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Nursury prunings	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Oats	20.7	19.7	4.5	0.6	10.3	136	1.6	AP-42, Jenkins NOx & SO2
Other field crops	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Pea vines	13.7	13	5.2	0.1	14.2	148	2.5	AP-42, Jenkins NOx & SO2
Peanuts	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Rice	6.3	5.9	5.2	1.1	4.7	57.4	3	Jenkins (EF)
Rye	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Safflower	17.7	16.9	4.5	0.6	14.8	144	1.3	AP-42, Jenkins NOx & SO2
Sorghum	17.7	16.9	4.5	0.6	5.1	77	2.9	AP-42, Jenkins NOx & SO2
Sudan	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)

APPENDIX B (cont.)

Crop	PM10	PM25	NOx	SO_2	VOC	CO	Fuel Loading	Source of Data
Sugar cane	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Vegetable crops	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Wheat	10.6	10.1	4.3	0.9	7.6	123.6	1.9	Jenkins (EF)
Wild hay	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Weed Abatement (EIC 670-668-0200-0000)								
Berms	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Brush	18	16.25	4	0.35	12.55	133.85	13.1	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter) and Jenkins fir & pine; Hardy, 1996, NOx & SO2 avg.
Ditchbank & canal	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Dodder weed	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Fence rows	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Grass	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Lemon grass	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Noxious weeds	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Ponding/levee banks	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)

APPENDIX B (cont.)

Crop	PM10	PM25	NOx	SO_2	VOC	CO	Fuel Loading	Source of Data
Star thistle	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Thistle	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Tules	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)
Tumbleweed	15.9	15.18	4.49	0.61	10.73	113.95	2.175	Average of Alfalfa, Barley, Corn, Oats, Rice, Dafflower, Sorghum, and Wheat (as of 9/12/00, Patrick Gaffney's letter)

APPENDIX C
2005 EMISSIONS
Ag Burning Summary

EIC # 67066002620000 WASTE BURNING AND DISPOSAL
AGRICULTURAL BURNING -
AGRICULTURAL WASTE

EIC Subcategory *670-660-0262-0001* TREE PRUNINGS

County	Process Rate (Tons)	NOX	SOX	CO	PM10	VOC
FRESNO	26465.1	75.50	1.47	708.52	89.21	67.68
KERN	12234.625	35.35	0.72	339.89	44.18	33.35
KINGS	4486.9	11.24	0.34	135.08	12.55	10.97
MADERA	15441.3	43.65	0.83	427.58	54.22	42.40
MERCED	27635.025	78.89	1.63	746.61	92.77	71.61
SAN JOAQUIN	28329.65	74.06	2.09	817.74	82.20	70.69
STANISLAUS	27950.775	77.50	1.85	774.19	88.23	70.50
TULARE	13992.625	35.12	1.06	463.48	42.54	38.74
Summary for 'Sub EIC' = 670-660-0262-0001 (8 detail records)						
Sum		*431.30*	*9.99*	*4413.10*	*505.90*	*405.95*

EIC Subcategory *670-660-0262-0002* GRAPE VINES/STUMPS

County	Process Rate (Tons)	NOX	SOX	CO	PM10	VOC
FRESNO	16028.5	41.67	0.81	408.74	39.28	30.47
KERN	2473	6.43	0.13	63.06	6.06	4.70
KINGS	106	0.28	0.01	2.70	0.26	0.20
MADERA	6154	16.00	0.31	156.93	15.08	11.70
MERCED	275.5	0.72	0.01	7.03	0.68	0.52
SAN JOAQUIN	1589	4.13	0.08	40.52	3.90	3.02
STANISLAUS	247	0.64	0.01	6.30	0.61	0.47
TULARE	902.5	2.35	0.05	23.02	2.21	1.72
Summary for 'Sub EIC' = 670-660-0262-0002 (8 detail records)						
Sum		*72.22*	*1.41*	*708.31*	*68.07*	*52.81*

EIC Subcategory *670-660-0262-0003* ORCHARD REMOVAL

County	Process Rate (Tons)	NOX	SOX	CO	PM10	VOC
FRESNO	102211	265.75	5.11	3372.96	396.58	321.97
KERN	24139	62.76	1.21	796.59	94.14	76.04
KINGS	22660	58.92	1.13	747.78	88.37	71.38
MADERA	8029	20.88	0.40	264.96	31.31	25.29
MERCED	33341	86.69	1.67	1100.25	130.03	105.02

EIC Subcategory *670-660-0262-0003* ORCHARD REMOVAL

County	Process Rate (Tons)	NOX	SOX	CO	PM10	VOC
SAN JOAQUIN	22935	59.63	1.15	756.86	89.45	72.25
STANISLAUS	26495	68.89	1.33	874.34	102.41	83.46
TULARE	113288	294.55	5.67	3738.50	441.09	356.86
Summary for 'Sub EIC' = 670-660-0262-0003 (8 detail records)						
Sum		*918.05*	*17.66*	*11652.23*	*1373.38*	*1112.26*

EIC Subcategory *670-660-0262-0004* RAISIN TRAYS

County	Process Rate (Tons)	NOX	SOX	CO	PM10	VOC
FRESNO	853.38	1.82	0.01	27.64	0.31	1.90
KERN	65.13	0.14	0.00	2.11	0.03	0.14
KINGS	7.83	0.02	0.00	0.25	0.00	0.02
MADERA	186.9	0.40	0.00	6.05	0.07	0.41
MERCED	1.08	0.00	0.00	0.04	0.00	0.00
SAN JOAQUIN	0.06	0.00	0.00	0.00	0.00	0.00
TULARE	63.55	0.14	0.00	2.06	0.02	0.14
Summary for 'Sub EIC' = 670-660-0262-0004 (7 detail records)						
Sum		*2.52*	*0.01*	*38.15*	*0.43*	*2.62*

EIC Subcategory *670-660-0262-0005* ATTRITION

County	Process Rate (Tons)	NOX	SOX	CO	PM10	VOC
FRESNO	914	2.38	0.05	23.91	2.60	2.08
KERN	212	0.55	0.01	6.53	0.77	0.67
KINGS	61	0.16	0.00	1.54	0.20	0.13
MADERA	307	0.80	0.02	9.92	1.06	0.93
MERCED	670	1.74	0.04	15.81	1.39	1.47
SAN JOAQUIN	922	2.39	0.06	21.53	3.57	2.65
STANISLAUS	280	0.73	0.02	6.59	0.85	0.59
TULARE	974	2.53	0.06	34.33	3.22	2.99
Summary for 'Sub EIC' = 670-660-0262-0005 (8 detail records)						
Sum		*11.27*	*0.26*	*120.16*	*13.65*	*11.52*

EIC Subcategory *670-660-0262-0006* UNTREATED GRAPE STAKES

County	Process Rate (Tons)	NOX	SOX	CO	PM10	VOC
FRESNO	14982	38.95	0.75	494.41	58.43	47.19
KINGS	20	0.05	0.00	0.66	0.08	0.06
MADERA	2311	6.01	0.12	76.26	9.01	7.28
TULARE	33	0.09	0.00	1.09	0.13	0.10

EIC Subcategory	*670-660-0262-0006*	UNTREATED GRAPE STAKES				
County	***Process Rate (Tons)***	***NOX***	***SOX***	***CO***	***PM10***	***VOC***
Summary for 'Sub EIC' = 670-660-0262-0006 (4 detail records)						
Sum		*45.10*	*0.87*	*572.42*	*67.65*	*54.64*
EIC Subcategory	*670-660-0262-0007*	VINEYARD REMOVAL				
County	***Process Rate (Tons)***	***NOX***	***SOX***	***CO***	***PM10***	***VOC***
FRESNO	62658	162.91	3.14	2067.71	244.00	197.38
KERN	29094	75.64	1.46	960.10	113.47	91.65
KINGS	60	0.16	0.00	1.98	0.23	0.19
MADERA	23415	60.88	1.17	772.70	91.32	73.76
MERCED	120	0.31	0.01	3.96	0.47	0.38
SAN JOAQUIN	12412	32.27	0.62	409.60	48.41	39.10
STANISLAUS	4968	12.92	0.25	163.94	19.38	14.69
TULARE	25914	67.38	1.30	855.16	101.06	81.63
Summary for 'Sub EIC' = 670-660-0262-0007 (8 detail records)						
Sum		*412.47*	*7.95*	*5235.15*	*618.33*	*498.78*
Summary for 'EIC' = 67066002620000 (51 detail records)						
Sum		*1892.93*	*38.15*	*22739.53*	*2647.42*	*2138.58*

EIC # 67066202620000 WASTE BURNING AND DISPOSAL
AGRICULTURAL BURNING - FIELD
AGRICULTURAL WASTE

EIC Subcategory *670-662-0262-0001* STUBBLE

County	***Process Rate (Tons)***	***NOX***	***SOX***	***CO***	***PM10***	***VOC***
FRESNO	10.6	0.03	0.00	0.76	0.13	0.15
KINGS	7.6	0.02	0.00	0.47	0.04	0.03
MERCED	54.8	0.12	0.02	3.67	0.54	0.28
SAN JOAQUIN	680.3	1.31	0.13	35.20	4.24	3.00
STANISLAUS	2.175	0.00	0.00	0.12	0.02	0.01
TULARE	1	0.00	0.00	0.06	0.01	0.01
Summary for 'Sub EIC' = 670-662-0262-0001 (6 detail records)						
Sum		*1.48*	*0.15*	*40.29*	*4.98*	*3.48*

EIC Subcategory *670-662-0262-0002* RICE STUBBLE

County	***Process Rate (Tons)***	***NOX***	***SOX***	***CO***	***PM10***	***VOC***
FRESNO	3750	9.75	2.06	107.63	11.81	8.81
MERCED	763	1.98	0.42	21.90	2.40	1.79
SAN JOAQUIN	7134	18.55	3.93	204.75	20.96	16.77
STANISLAUS	3768	9.80	2.07	108.14	11.87	8.86
Summary for 'Sub EIC' = 670-662-0262-0002 (4 detail records)						
Sum		*40.08*	*8.48*	*442.41*	*47.05*	*36.23*

EIC Subcategory *670-662-0262-0003* PAPER HOT CAPS

County	***Process Rate (Tons)***	***NOX***	***SOX***	***CO***	***PM10***	***VOC***
FRESNO	2	0.00	0.00	0.06	0.00	0.00
Summary for 'Sub EIC' = 670-662-0262-0003 (1 detail record)						
Sum		*0.00*	*0.00*	*0.06*	*0.00*	*0.00*
Summary for 'EIC' = 67066202620000 (11 detail records)						
Sum		*41.56*	*8.63*	*482.77*	*52.02*	*39.71*

EIC #67066802000000 WASTE BURNING AND DISPOSAL
WEED ABATEMENT
SOLID FUEL (UNSPECIFIED)

EIC Subcategory *670-668-0200-0001* WEED ABATEMENT

County	Process Rate (Tons)	NOX	SOX	CO	PM10	VOC
FRESNO	487.2	1.09	0.15	27.76	3.87	2.61
KERN	7	0.01	0.00	0.46	0.06	0.04
KINGS	1	0.00	0.00	0.06	0.01	0.01
MADERA	622.05	1.40	0.19	35.44	4.95	3.34
MERCED	145.325	0.30	0.03	9.40	1.27	0.88
SAN JOAQUIN	7.525	0.02	0.00	0.43	0.06	0.04
STANISLAUS	37.8	0.08	0.01	2.17	0.30	0.20
TULARE	33.925	0.08	0.01	1.76	0.24	0.17
Summary for 'Sub EIC' = 670-668-0200-0001 (8 detail records)						
Sum		*2.98*	*0.39*	*77.48*	*10.77*	*7.29*

EIC Subcategory *670-668-0200-0002* PONDING/LEVEE

County	Process Rate (Tons)	NOX	SOX	CO	PM10	VOC
FRESNO	1544.9	3.47	0.47	88.02	12.28	8.29
KERN	1136.3	2.55	0.35	64.74	9.04	6.10
KINGS	637.925	1.43	0.20	36.34	5.07	3.42
MADERA	576.8	1.30	0.18	32.86	4.59	3.10
MERCED	3881.35	8.71	1.19	221.14	30.86	20.83
SAN JOAQUIN	1391.025	3.12	0.43	79.25	11.06	7.47
STANISLAUS	1518.8	3.41	0.47	86.53	12.08	8.15
TULARE	240.075	0.54	0.07	13.68	1.91	1.29
Summary for 'Sub EIC' = 670-668-0200-0002 (8 detail records)						
Sum		*24.54*	*3.35*	*622.56*	*86.89*	*58.64*

EIC Subcategory *670-668-0200-0003* NOXIOUS WEEDS

County	Process Rate (Tons)	NOX	SOX	CO	PM10	VOC
FRESNO	903.925	2.03	0.28	51.50	7.19	4.85
KERN	196.7	0.44	0.06	11.21	1.56	1.06
KINGS	55.2	0.12	0.02	3.14	0.44	0.30
MADERA	7.175	0.02	0.00	0.41	0.06	0.04
MERCED	1388.425	3.12	0.43	79.10	11.04	7.45
SAN JOAQUIN	481	1.08	0.15	27.40	3.83	2.58
STANISLAUS	496.2	1.11	0.15	28.27	3.95	2.66

EIC Subcategory	*670-668-0200-0003*	NOXIOUS WEEDS				
County	***Process Rate (Tons)***	***NOX***	***SOX***	***CO***	***PM10***	***VOC***
TULARE	221.5	0.50	0.07	12.62	1.76	1.19
Summary for 'Sub EIC' = 670-668-0200-0003 (8 detail records)						
Sum		*8.42*	*1.15*	*213.66*	*29.82*	*20.12*
EIC Subcategory	*670-668-0200-0004*	TUMBLEWEED				
County	***Process Rate (Tons)***	***NOX***	***SOX***	***CO***	***PM10***	***VOC***
FRESNO	2220.425	4.99	0.68	126.51	17.62	11.92
KERN	5646.325	12.68	1.73	321.69	44.90	30.30
KINGS	742.45	1.67	0.23	42.30	5.91	3.98
MADERA	262.825	0.59	0.08	14.97	2.09	1.41
MERCED	1409.825	3.17	0.43	80.32	11.21	7.57
SAN JOAQUIN	604.675	1.36	0.19	34.45	4.81	3.25
STANISLAUS	161.95	0.36	0.05	9.23	1.29	0.87
TULARE	228.975	0.51	0.07	13.05	1.82	1.23
Summary for 'Sub EIC' = 670-668-0200-0004 (8 detail records)						
Sum		*25.32*	*3.46*	*642.52*	*89.65*	*60.52*
Summary for 'EIC' = 67066802000000 (32 detail records)						
Sum		*61.27*	*8.35*	*1556.21*	*217.13*	*146.57*

APPENDIX D

SMS EIC
Mapping Report

New EIC Code 670-660-0262-0001
WASTE BURNING AND DISPOSAL - AGRICULTURAL BURNING - PRUNINGS - AGRICULTURAL WASTE - TREE PRUNINGS

Current Category	Crop Code	Crop Name
670-660-0262-0000	101	ALMOND PRUNING
670-660-0262-0000	102	APPLE PRUNING
670-660-0262-0000	103	APRICOT PRUNING
670-660-0262-0000	104	AVOCADO PRUNING
670-660-0262-0000	105	BUSHBERRY
670-660-0262-0000	106	CHERRY PRUNING
670-660-0262-0000	107	CITRUS PRUNING
670-660-0262-0000	108	DATE PRUNING
670-660-0262-0000	109	FIG PRUNING
670-660-0262-0000	111	KIWI PRUNING
670-660-0262-0000	112	NECTARINE PRUNING
670-660-0262-0000	113	OLIVE PRUNING
670-660-0262-0000	115	PEACH PRUNING
670-660-0262-0000	116	PEAR PRUNING
670-660-0262-0000	117	PECAN PRUNING
670-660-0262-0000	118	PERSIMMON PRUNING
670-660-0262-0000	119	PISTACHIO PRUNING
670-660-0262-0000	120	PLUM PRUNING
670-660-0262-0000	121	POMEGRANATE PRUNING
670-660-0262-0000	122	PRUNE PRUNING
670-660-0262-0000	123	QUINCE
670-660-0262-0000	125	WALNUT PRUNING
670-660-0262-0000	126	OTHER PRUNINGS
670-660-0262-0000	127	PALM TREES
670-660-0262-0000	128	CHESTNUT PRUNING
670-660-0262-0000	129	PLUOT PRUNING
670-660-0262-0000	131	JUJUBE
670-660-0262-0000	602	CHRISTMAS TREES
670-664-0200-0000	607	PASTURE
670-660-0262-0000	608	EUCALYPTUS
670-660-0262-0000	611	ROSE PRUNING
670-662-0262-0000	612	NURSURY PRUNINGS
670-660-0262-0000	710	PASTURE/CORRAL TREES
670-660-0262-0000	720	BAMBOO

SMS EIC
Mapping Report

New EIC Code 670-660-0262-0002
WASTE BURNING AND DISPOSAL - AGRICULTURAL BURNING - PRUNINGS - AGRICULTURAL WASTE - GRAPE VINES/STUMPS

Current Category	Crop Code	Crop Name
670-660-0262-0000	110	GRAPE VINES/STUMPS

New EIC Code 670-660-0262-0003
WASTE BURNING AND DISPOSAL - AGRICULTURAL BURNING - PRUNINGS - AGRICULTURAL WASTE - ORCHARD REMOVAL

Current Category	Crop Code	Crop Name
670-660-0262-0000	114	ORCHARD REMOVAL

New EIC Code 670-660-0262-0004
WASTE BURNING AND DISPOSAL - AGRICULTURAL BURNING - PRUNINGS - AGRICULTURAL WASTE - RAISIN TRAYS

Current Category	Crop Code	Crop Name
670-660-0262-0000	124	RAISIN TRAYS

New EIC Code 670-660-0262-0005
WASTE BURNING AND DISPOSAL - AGRICULTURAL BURNING - PRUNINGS - AGRICULTURAL WASTE - ATTRITION

Current Category	Crop Code	Crop Name
670-660-0262-0000	153	APRICOT ATTRITION
670-660-0262-0000	154	AVOCADO ATTRITION
670-660-0262-0000	155	BUSHBERRY ATTRITION
670-660-0262-0000	156	CHERRY ATTRITION
670-660-0262-0000	157	CITRUS ATTRITION
670-660-0262-0000	161	KIWI ATTRITION
670-660-0262-0000	162	NECTARINE ATTRITION
670-660-0262-0000	163	OLIVE ATTRITION
670-660-0262-0000	164	PEACH ATTRITION
670-660-0262-0000	166	PERSIMMON ATTRITION
670-660-0262-0000	170	PLUM ATTRITION
670-660-0262-0000	171	POMEGRANATE ATTRITION
670-660-0262-0000	172	PRUNE ATTRITION
670-660-0262-0000	179	PLUOT ATTRITION

SMS EIC
Mapping Report

New EIC Code 670-660-0262-0005
WASTE BURNING AND DISPOSAL - AGRICULTURAL BURNING - PRUNINGS - AGRICULTURAL WASTE - ATTRITION

Current Category	Crop Code	Crop Name
670-660-0262-0000	180	EUCALYPTUS ATTRITION
670-662-0262-0000	181	NURSERY ATTRITION
670-660-0262-0000	182	PISTACHIO ATTRITION

New EIC Code 670-660-0262-0006
WASTE BURNING AND DISPOSAL - AGRICULTURAL BURNING - PRUNINGS - AGRICULTURAL WASTE - UNTREATED GRAPE STAKES

Current Category	Crop Code	Crop Name
670-660-0262-0000	603	UNTREATED GRAPE STAKES

New EIC Code 670-660-0262-0007
WASTE BURNING AND DISPOSAL - AGRICULTURAL BURNING - PRUNINGS - AGRICULTURAL WASTE - VINEYARD REMOVAL

Current Category	Crop Code	Crop Name
670-660-0262-0000	614	VINEYARD REMOVAL

New EIC Code 670-662-0262-0001
WASTE BURNING AND DISPOSAL - AGRICULTURAL BURNING - FIELD CROPS - AGRICULTURAL WASTE - STUBBLE

Current Category	Crop Code	Crop Name
670-662-0262-0000	241	ALFALFA
670-662-0262-0000	242	BARLEY STUBBLE
670-662-0262-0000	243	BEAN
670-662-0262-0000	244	CORN
670-662-0262-0000	247	ASPARAGUS
670-662-0262-0000	248	OAT STUBBLE
670-662-0262-0000	254	WHEAT STUBBLE
670-662-0262-0000	259	HAY

SMS EIC
Mapping Report

New EIC Code 670-662-0262-0002
WASTE BURNING AND DISPOSAL - AGRICULTURAL BURNING - FIELD CROPS - AGRICULTURAL WASTE - RICE STUBBLE

Current Category	Crop Code	Crop Name
670-662-0262-0000	250	RICE STUBBLE

New EIC Code 670-662-0262-0003
WASTE BURNING AND DISPOSAL - AGRICULTURAL BURNING - FIELD CROPS - AGRICULTURAL WASTE - PAPER HOT CAPS

Current Category	Crop Code	Crop Name
670-662-0262-0000	261	PAPER HOT CAPS

New EIC Code 670-668-0200-0001
WASTE BURNING AND DISPOSAL - WEED ABATEMENT - SOLID FUEL (UNSPECIFIED) - WEED ABATEMENT

Current Category	Crop Code	Crop Name
670-668-0200-0000	361	BRUSH
670-666-0200-0000	471	SLASH
670-668-0200-0000	584	GRASS
670-668-0200-0000	585	FENCE ROWS
670-668-0200-0000	601	BERMS

New EIC Code 670-668-0200-0002
WASTE BURNING AND DISPOSAL - WEED ABATEMENT - SOLID FUEL (UNSPECIFIED) - PONDING/LEVEE BANKS/DITCHBANK/CANAL

Current Category	Crop Code	Crop Name
670-668-0200-0000	581	DITCHBANK & CANAL
670-668-0200-0000	606	PONDING/LEVEE BANKS

SMS EIC
Mapping Report

New EIC Code 670-668-0200-0003

WASTE BURNING AND DISPOSAL - WEED ABATEMENT - SOLID FUEL (UNSPECIFIED) - NOXIOUS WEEDS

Current Category	Crop Code	Crop Name
670-668-0200-0000	582	NOXIOUS WEEDS
670-668-0200-0000	586	BERMUDA GRASS
670-668-0200-0000	587	STAR THISTLE
670-668-0200-0000	604	DODDER WEED

New EIC Code 670-668-0200-0004

WASTE BURNING AND DISPOSAL - WEED ABATEMENT - SOLID FUEL (UNSPECIFIED) - TUMBLEWEED

Current Category	Crop Code	Crop Name
670-668-0200-0000	583	TUMBLEWEED

Appendix E. California Air Resources Board growth parameters for EIC 670-660-0262-0000.

Year	Growth Activity Parameter by County							
	Fresno	Kern	Kings	Madera	Merced	San Joaquin	Stanislaus	Tulare
2000	1,400,535	674,994	607,274	374,762	589,072	630,990	386,534	880,604
2001	1,399,665	674,373	607,683	372,874	588,026	628,697	384,029	880,224
2002	1,398,795	673,753	608,092	370,986	586,980	626,404	381,523	879,843
2003	1,392,128	670,794	607,570	369,030	585,667	625,205	380,000	879,938
2004	1,385,493	667,848	607,049	367,084	584,357	624,009	378,482	880,032
2005	1,378,890	664,915	606,528	365,149	583,050	622,815	376,971	880,127
2006	1,372,318	661,995	606,008	363,224	581,746	621,623	375,466	880,221
2007	1,365,778	659,088	605,488	361,309	580,444	620,434	373,967	880,316
2008	1,359,268	656,194	604,969	359,404	579,146	619,247	372,473	880,411
2009	1,352,790	653,312	604,450	357,509	577,850	618,062	370,986	880,505
2010	1,346,343	650,443	603,932	355,624	576,558	616,879	369,505	880,600
2015	1,314,563	636,286	601,346	346,347	570,138	611,000	362,187	881,073
2020	1,283,534	622,437	598,771	337,313	563,790	605,176	355,013	881,547
2025	1,281,650	608,889	600,710	329,275	558,404	599,744	348,687	883,704
2030	1,279,768	595,636	602,654	321,428	553,069	594,362	342,473	885,866

Appendix F. California Air Resources Board growth parameters for EIC 670-662-0262-0000.

Year	Growth Activity Parameter by County							
	Fresno	Kern	Kings	Madera	Merced	San Joaquin	Stanislaus	Tulare
2000	1,400,535	674,994	607,274	374,762	589,072	630,990	386,534	880,604
2001	1,399,665	674,373	607,683	372,874	588,026	628,697	384,029	880,224
2002	1,398,795	673,753	608,092	370,986	586,980	626,404	381,523	879,843
2003	1,392,128	670,794	607,570	369,030	585,667	625,205	380,000	879,938
2004	1,385,493	667,848	607,049	367,084	584,357	624,009	378,482	880,032
2005	1,378,890	664,915	606,528	365,149	583,050	622,815	376,971	880,127
2006	1,372,318	661,995	606,008	363,224	581,746	621,623	375,466	880,221
2007	1,365,778	659,088	605,488	361,309	580,444	620,434	373,967	880,316
2008	1,359,268	656,194	604,969	359,404	579,146	619,247	372,473	880,411
2009	1,352,790	653,312	604,450	357,509	577,850	618,062	370,986	880,505
2010	1,346,343	650,443	603,932	355,624	576,558	616,879	369,505	880,600
2015	1,314,563	636,286	601,346	346,347	570,138	611,000	362,187	881,073
2020	1,283,534	622,437	598,771	337,313	563,790	605,176	355,013	881,547
2025	1,281,650	608,889	600,710	329,275	558,404	599,744	348,687	883,704
2030	1,279,768	595,636	602,654	321,428	553,069	594,362	342,473	885,866

Appendix G. California Air Resources Board growth parameters for EIC 670-668-0000-0000.

Year	Growth Activity Parameter by County							
	Fresno	Kern	Kings	Madera	Merced	San Joaquin	Stanislaus	Tulare
2000	0.78	0.74	0.76	0.68	0.76	0.76	0.71	0.76
2001	0.77	0.73	0.75	0.67	0.75	0.75	0.69	0.75
2002	0.76	0.73	0.74	0.65	0.75	0.74	0.68	0.74
2003	0.75	0.72	0.73	0.64	0.74	0.73	0.66	0.74
2004	0.74	0.71	0.72	0.63	0.73	0.72	0.65	0.73
2005	0.73	0.70	0.72	0.61	0.72	0.72	0.64	0.73
2006	0.73	0.69	0.71	0.60	0.72	0.71	0.63	0.72
2007	0.72	0.68	0.71	0.59	0.71	0.70	0.62	0.72
2008	0.71	0.68	0.70	0.58	0.71	0.69	0.61	0.71
2009	0.70	0.67	0.70	0.56	0.70	0.69	0.60	0.71
2010	0.69	0.66	0.69	0.55	0.70	0.68	0.59	0.70
2015	0.64	0.63	0.67	0.48	0.68	0.64	0.54	0.67
2020	0.57	0.57	0.62	0.40	0.63	0.59	0.47	0.61
2025	0.49	0.51	0.54	0.33	0.56	0.52	0.40	0.54
2030	0.41	0.44	0.46	0.25	0.49	0.45	0.33	0.48