

APPENDIX 2

SUMMARY OF VOC EMISSIONS IN CALIFORNIA OZONE NAAS

Appendix 2 - Nonattainment-Area Tables

Sacramento Metro NAA

Table A2-1-1. Total unadjusted emissions in the Sacramento Metro NAA.

Year	Unadjusted Emissions (tpd)	Change (tpd)	Percent Change
2023	1.444	-0.055	-4%
2022	1.499	0.180	14%
2021	1.319	-0.057	-4%
2020	1.376	-0.091	-6%
2019	1.467	-0.130	-8%
2018	1.597	0.123	8%
2017	1.474	0.028	2%
2016	1.446	0.105	8%
2015	1.341	-0.621	-32%
2014	1.962	0.658	50%
2013	1.304	-0.180	-12%
2012	1.483	0.377	34%
2011	1.106	0.042	4%
2010	1.064	-0.075	-7%
2009	1.139	0.058	5%
2008	1.081	-0.153	-12%
2007	1.234	-0.273	-18%
2006	1.507	0.201	15%
2005	1.306	-0.004	>-1%
2004	1.310	-0.241	-16%
1990	2.861		

Table A2-1-2. Total adjusted emissions in the Sacramento Metro NAA.

Year	Emissions (tpd)	Change (tpd)	Percent Change
2023	1.371	0.274	25%
2022	1.097	0.034	3%
2021	1.062	-0.107	-9%
2020	1.169	-0.017	-1%
2019	1.186	-0.061	-5%
2018	1.247	-0.053	-4%
2017	1.300	-0.016	-1%
2016	1.316	0.124	10%
2015	1.192	-0.140	-11%
2014	1.332	0.157	13%
2013	1.175	-0.129	-10%
2012	1.303	0.299	30%
2011	1.004	0.024	2%
2010	0.980	0.071	8%
2009	0.910	0.007	<1%
2008	0.903	-0.138	-13%
2007	1.041	-0.314	-23%
2006	1.354	0.115	9%
2005	1.239	0.004	<1%
2004	1.235		
1990	2.784		

Table A2-1-3. Fumigant and nonfumigant emissions in the Sacramento Metro NAA.

Year	Category	Emissions (tpd)	Percent of Total Emissions	Change (tpd)	Percent Change
2023	Fumigant	0.037	3%	-0.156	-81%
2023	Nonfumigant	1.334	97%	0.430	48%
2022	Fumigant	0.192	18%	0.077	67%
2022	Nonfumigant	0.904	82%	-0.043	-5%
2021	Fumigant	0.115	11%	-0.012	-9%
2021	Nonfumigant	0.947	89%	-0.095	-9%
2020	Fumigant	0.127	11%	-0.025	-17%
2020	Nonfumigant	1.042	89%	0.009	<1%
2019	Fumigant	0.152	13%	-0.041	-21%
2019	Nonfumigant	1.034	87%	-0.020	-2%
2018	Fumigant	0.193	15%	0.048	33%
2018	Nonfumigant	1.054	85%	-0.101	-9%
2017	Fumigant	0.145	11%	0.039	37%
2017	Nonfumigant	1.155	89%	-0.055	-5%
2016	Fumigant	0.106	8%	0.009	9%
2016	Nonfumigant	1.209	92%	0.115	11%
2015	Fumigant	0.098	8%	-0.148	-60%
2015	Nonfumigant	1.094	92%	0.008	<1%
2014	Fumigant	0.246	18%	0.177	259%
2014	Nonfumigant	1.086	82%	-0.020	-2%
2013	Fumigant	0.068	6%	-0.014	-17%
2013	Nonfumigant	1.106	94%	-0.114	-9%
2012	Fumigant	0.083	6%	0.022	36%
2012	Nonfumigant	1.221	94%	0.277	29%
2011	Fumigant	0.061	6%	-0.036	-37%

Year	Category	Emissions (tpd)	Percent of Total Emissions	Change (tpd)	Percent Change
2011	Nonfumigant	0.944	94%	0.061	7%
2010	Fumigant	0.097	10%	-0.037	-27%
2010	Nonfumigant	0.883	90%	0.107	14%
2009	Fumigant	0.134	15%	0.070	108%
2009	Nonfumigant	0.775	85%	-0.063	-7%
2008	Fumigant	0.064	7%	-0.125	-66%
2008	Nonfumigant	0.838	93%	-0.013	-2%
2007	Fumigant	0.189	18%	0.027	17%
2007	Nonfumigant	0.851	82%	-0.341	-29%
2006	Fumigant	0.162	12%	0.077	91%
2006	Nonfumigant	1.192	88%	0.038	3%
2005	Fumigant	0.085	7%	-0.026	-24%
2005	Nonfumigant	1.154	93%	0.030	3%
2004	Fumigant	0.111	9%		
2004	Nonfumigant	1.124	91%		
1990	Fumigant	0.384	14%		
1990	Nonfumigant	2.400	86%		

Table A2-1-4. Fumigant formulation emissions in the Sacramento Metro NAA.

Formulation	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
PRESSURIZED GAS	0.026	2%	71%	-0.018	-40%
LIQUID CONCENTRATE	0.009	<1%	24%	-0.133	-94%
SOLUTION/LIQUID (READY-TO-USE)	0.002	<1%	6%	-0.005	-71%
PELLET/TABLET/CAKE/BRIQUET	<0.001	<1%	<1%	>-0.001	-99%
EMULSIFIABLE CONCENTRATE	0.000	0%	0%	0.000	
GRANULAR/FLAKE	0.000	0%	0%	>-0.001	<-99%
PRESSURIZED LIQUID/SPRAYS/FOGGERS	0.000	0%	0%	0.000	

Table A2-1-5. Top 10 nonfumigant formulation emissions in the Sacramento Metro NAA.

Formulation	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
EMULSIFIABLE CONCENTRATE	0.598	44%	45%	0.202	51%
LIQUID CONCENTRATE	0.198	14%	15%	0.047	31%
FLOWABLE CONCENTRATE	0.172	13%	13%	0.077	81%
GRANULAR/FLAKE	0.172	13%	13%	0.049	39%
SUSPENSION	0.075	5%	6%	0.028	59%
PELLET/TABLET/CAKE/BRIQUET	0.043	3%	3%	0.017	62%
SOLUTION/LIQUID (READY-TO-USE)	0.035	3%	3%	0.012	55%
PRESSURIZED LIQUID/SPRAYS/FOGGERS	0.016	1%	1%	<0.001	5%
OIL	0.009	<1%	<1%	0.002	31%
OTHER (LIQUID)	0.005	<1%	<1%	>-0.001	-9%

Table A2-1-6. Fumigant primary AI emissions in the Sacramento Metro NAA.

Primary AI	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
METHYL BROMIDE	0.020	1%	54%	<0.001	4%
1,3-DICHLOROPROPENE	0.006	<1%	16%	-0.123	-96%
CHLOROPICRIN	0.006	<1%	15%	-0.018	-77%
POTASSIUM N-METHYLDITHIOCARBAMATE	0.003	<1%	8%	0.003	
METAM-SODIUM	0.002	<1%	6%	-0.005	-71%
INERTS	<0.001	<1%	2%	-0.012	-94%
DAZOMET	<0.001	<1%	<1%	>-0.001	-99%

Table A2-1-7. Top 10 nonfumigant primary AI emissions in the Sacramento Metro NAA.

Primary AI	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
PROPANIL	0.125	9%	9%	0.075	149%
PERMETHRIN	0.124	9%	9%	0.065	109%
BIFENTHRIN	0.084	6%	6%	0.028	49%
GLYPHOSATE, ISOPROPYLAMINE SALT	0.058	4%	4%	0.002	3%
THIOBENCARB	0.058	4%	4%	0.030	111%
GLUFOSINATE-AMMONIUM	0.057	4%	4%	0.014	33%
OXYFLUORFEN	0.052	4%	4%	-0.018	-26%
CLETHODIM	0.045	3%	3%	0.010	27%
CARBARYL	0.039	3%	3%	0.018	88%
TRIFLURALIN	0.039	3%	3%	0.010	37%

Table A2-1-8. Top 10 fumigant commodity emissions in the Sacramento Metro NAA.

Commodity	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
SOILAPPLICATION, PREPLANT- OUTDOOR (SEEDBEDS, ETC.)	0.019	1%	53%	<0.001	2%
WALNUT (ENGLISH WALNUT, PERSIAN WALNUT)	0.005	<1%	14%	-0.043	-89%
ALMOND	0.004	<1%	11%	0.002	95%
RIGHTS OF WAY	0.002	<1%	6%	-0.005	-71%
STRAWBERRY (ALL OR UNSPEC)	0.002	<1%	5%	>-0.001	-10%
GRAPES, WINE	0.001	<1%	4%	-0.047	-97%
UNCULTIVATED AGRICULTURAL AREAS (ALL OR UNSPEC)	0.001	<1%	3%	>-0.001	-6%
RICE (ALL OR UNSPEC)	<0.001	<1%	2%	<0.001	
COMMODITY FUMIGATION	<0.001	<1%	1%	<0.001	
FUMIGATION, OTHER	<0.001	<1%	<1%	>-0.001	-71%

Table A2-1-9. Top 10 nonfumigant commodity emissions in the Sacramento Metro NAA.

Commodity	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
RICE (ALL OR UNSPEC)	0.340	25%	25%	0.179	112%
STRUCTURAL PEST CONTROL	0.182	13%	14%	0.073	67%
TOMATOES, FOR PROCESSING/CANNING	0.152	11%	11%	0.053	54%
ALMOND	0.150	11%	11%	0.003	2%
GRAPES, WINE	0.118	9%	9%	0.045	61%
WALNUT (ENGLISH WALNUT, PERSIAN WALNUT)	0.065	5%	5%	-0.009	-12%
LANDSCAPE MAINTENANCE	0.047	3%	4%	-0.006	-12%
RIGHTS OF WAY	0.035	3%	3%	0.006	20%
PISTACHIO (PISTACHE NUT)	0.035	3%	3%	0.019	127%
ALFALFA (FORAGE-FODDER) (ALFALFA HAY)	0.031	2%	2%	0.019	163%

Table A2-1-10. Unadjusted emissions in the Sacramento Metro NAA during 2023, using the CEIDARS classifications.

Application Type	AI	Emissions (tpd)
Structural	Non-Methyl Bromide	0.182
Structural	Methyl Bromide	0.000
Agricultural	Non-Methyl Bromide	1.218
Agricultural	Methyl Bromide	0.045

San Joaquin Valley NAA

Table A2-2-1. Total unadjusted emissions in the San Joaquin Valley NAA.

Year	Unadjusted Emissions (tpd)	Change (tpd)	Percent Change
2023	21.708	2.609	14%
2022	19.098	-1.869	-9%
2021	20.968	-2.783	-12%
2020	23.751	-2.795	-11%
2019	26.545	0.234	<1%
2018	26.311	-1.137	-4%
2017	27.448	1.311	5%
2016	26.137	-0.391	-1%
2015	26.528	0.073	<1%
2014	26.455	-3.715	-12%
2013	30.170	2.545	9%
2012	27.625	1.134	4%
2011	26.491	2.019	8%
2010	24.472	3.466	17%
2009	21.005	-2.843	-12%
2008	23.849	-0.871	-4%
2007	24.720	-4.812	-16%
2006	29.532	0.302	1%
2005	29.230	4.057	16%
2004	25.173	0.785	3%
1990	22.472		

Table A2-2-2. Total adjusted emissions in the San Joaquin Valley NAA.

Year	Emissions (tpd)	Change (tpd)	Percent Change
2023	14.788	2.260	18%
2022	12.528	-0.378	-3%
2021	12.906	-1.893	-13%
2020	14.799	-1.267	-8%
2019	16.066	-0.097	>-1%
2018	16.163	-0.841	-5%
2017	17.004	1.621	11%
2016	15.383	0.014	<1%
2015	15.368	-1.447	-9%
2014	16.815	-2.705	-14%
2013	19.520	2.599	15%
2012	16.921	0.545	3%
2011	16.376	1.148	8%
2010	15.228	2.263	17%
2009	12.965	-1.560	-11%
2008	14.525	-2.569	-15%
2007	17.093	-4.212	-20%
2006	21.305	0.565	3%
2005	20.740	3.418	20%
2004	17.322		
1990	20.517		

Table A2-2-3. Fumigant and nonfumigant emissions in the San Joaquin Valley NAA.

Year	Category	Emissions (tpd)	Percent of Total Emissions	Change (tpd)	Percent Change
2023	Fumigant	2.583	17%	0.253	11%
2023	Nonfumigant	12.205	83%	2.007	20%
2022	Fumigant	2.330	19%	-0.782	-25%
2022	Nonfumigant	10.198	81%	0.404	4%
2021	Fumigant	3.112	24%	-0.787	-20%
2021	Nonfumigant	9.794	76%	-1.105	-10%
2020	Fumigant	3.899	26%	-0.525	-12%
2020	Nonfumigant	10.899	74%	-0.742	-6%
2019	Fumigant	4.424	28%	0.473	12%
2019	Nonfumigant	11.642	72%	-0.570	-5%
2018	Fumigant	3.951	24%	-0.268	-6%
2018	Nonfumigant	12.212	76%	-0.572	-4%
2017	Fumigant	4.219	25%	-0.018	>-1%
2017	Nonfumigant	12.785	75%	1.639	15%
2016	Fumigant	4.237	28%	-0.540	-11%
2016	Nonfumigant	11.146	72%	0.555	5%
2015	Fumigant	4.777	31%	0.752	19%
2015	Nonfumigant	10.591	69%	-2.198	-17%
2014	Fumigant	4.026	24%	-0.327	-8%
2014	Nonfumigant	12.789	76%	-2.378	-16%
2013	Fumigant	4.353	22%	0.088	2%
2013	Nonfumigant	15.167	78%	2.512	20%
2012	Fumigant	4.265	25%	0.264	7%
2012	Nonfumigant	12.656	75%	0.281	2%
2011	Fumigant	4.001	24%	0.302	8%

Year	Category	Emissions (tpd)	Percent of Total Emissions	Change (tpd)	Percent Change
2011	Nonfumigant	12.375	76%	0.847	7%
2010	Fumigant	3.700	24%	0.621	20%
2010	Nonfumigant	11.528	76%	1.641	17%
2009	Fumigant	3.078	24%	-0.292	-9%
2009	Nonfumigant	9.887	76%	-1.267	-11%
2008	Fumigant	3.370	23%	-2.753	-45%
2008	Nonfumigant	11.154	77%	0.184	2%
2007	Fumigant	6.123	36%	-0.685	-10%
2007	Nonfumigant	10.970	64%	-3.528	-24%
2006	Fumigant	6.808	32%	-0.102	-1%
2006	Nonfumigant	14.498	68%	0.667	5%
2005	Fumigant	6.910	33%	0.547	9%
2005	Nonfumigant	13.831	67%	2.871	26%
2004	Fumigant	6.362	37%		
2004	Nonfumigant	10.960	63%		
1990	Fumigant	5.536	27%		
1990	Nonfumigant	14.981	73%		

Table A2-2-4. Fumigant formulation emissions in the San Joaquin Valley NAA.

Formulation	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
LIQUID CONCENTRATE	1.591	11%	62%	0.016	1%
PRESSURIZED GAS	0.869	6%	34%	0.204	31%
EMULSIFIABLE CONCENTRATE	0.075	<1%	3%	-0.011	-13%
PRESSURIZED LIQUID/SPRAYS/FOGGERS	0.046	<1%	2%	0.045	11,242% ¹
SOLUTION/LIQUID (READY-TO-USE)	0.002	<1%	<1%	-0.002	-39%

¹ The high percentage change results from increased usage of 1,3-D/chloropicrin combination products in Stanislaus County.

Table A2-2-5. Top 10 nonfumigant formulation emissions in the San Joaquin Valley NAA.

Formulation	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
EMULSIFIABLE CONCENTRATE	5.836	39%	48%	1.376	31%
LIQUID CONCENTRATE	3.004	20%	25%	0.569	23%
GRANULAR/FLAKE	0.672	5%	6%	0.019	3%
SUSPENSION	0.630	4%	5%	0.069	12%
FLOWABLE CONCENTRATE	0.575	4%	5%	0.011	2%
OIL	0.552	4%	5%	-0.073	-12%
OTHER (LIQUID)	0.390	3%	3%	-0.037	-9%
PRESSURIZED LIQUID/SPRAYS/FOGGERS	0.154	1%	1%	0.011	8%
PELLET/TABLET/CAKE/BRIQUET	0.128	<1%	1%	0.030	31%
DUST/POWDER	0.118	<1%	<1%	0.017	17%

Table A2-2-6. Fumigant primary AI emissions in the San Joaquin Valley NAA.

Primary AI	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
1,3-DICHLOROPROPENE	1.096	7%	42%	0.054	5%
METHYL BROMIDE	0.486	3%	19%	0.012	2%
CHLOROPICRIN	0.373	3%	14%	0.192	106%
POTASSIUM N-METHYLDITHIOCARBAMATE	0.317	2%	12%	-0.010	-3%
METAM-SODIUM	0.183	1%	7%	-0.005	-3%
INERTS	0.128	<1%	5%	0.010	8%

Table A2-2-7. Top 10 nonfumigant primary AI emissions in the San Joaquin Valley NAA.

Primary AI	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
GLUFOSINATE-AMMONIUM	1.211	8%	10%	0.517	74%
GLYPHOSATE, ISOPROPYLAMINE SALT	0.935	6%	8%	0.070	8%
BIFENTHRIN	0.746	5%	6%	0.084	13%
ETOXAZOLE	0.588	4%	5%	0.584	13,722% ²
GLYPHOSATE, POTASSIUM SALT	0.575	4%	5%	0.360	167%
MINERAL OIL	0.548	4%	4%	-0.086	-14%
OXYFLUORFEN	0.498	3%	4%	0.028	6%
ABAMECTIN	0.435	3%	4%	-0.055	-11%
CLETHODIM	0.429	3%	4%	0.045	12%
HEXYTHIAZOX	0.339	2%	3%	-0.158	-32%

² This large percent change is a result of overall increased usage across a majority of the counties in the San Joaquin Valley NAA. The largest increase in usage (167%) occurred in Tulare County.

Table A2-2-8. Top 10 fumigant commodity emissions in the San Joaquin Valley NAA.

Commodity	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
ALMOND	0.627	4%	24%	0.089	16%
CARROTS, GENERAL	0.342	2%	13%	-0.118	-26%
N-OUTDR GRWN TRNSPLNT/PRPGTV MTRL	0.201	1%	8%	0.082	69%
N-OUTDR CONTAINER/FLD GRWN PLANTS	0.184	1%	7%	0.011	6%
SOIL APPLICATION, PREPLANT-OUTDOOR (SEEDBEDS,ETC.)	0.177	1%	7%	-0.100	-36%
SWEET POTATO	0.156	1%	6%	0.133	583%
GRAPES, WINE	0.136	<1%	5%	0.039	41%
GRAPES	0.093	<1%	4%	0.062	200%
WALNUT (ENGLISH WALNUT, PERSIAN WALNUT)	0.074	<1%	3%	-0.005	-6%
FUMIGATION, OTHER	0.057	<1%	2%	0.031	118%

Table A2-2-9. Top 10 nonfumigant commodity emissions in the San Joaquin Valley NAA.

Commodity	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
ALMOND	4.063	27%	33%	0.526	15%
PISTACHIO (PISTACHE NUT)	1.851	13%	15%	0.380	26%
COTTON, GENERAL	0.941	6%	8%	0.043	5%
CORN (FORAGE-FODDER)	0.719	5%	6%	0.244	51%
ORANGE (ALL OR UNSPEC)	0.581	4%	5%	0.124	27%
TOMATOES, FOR PROCESSING/CANNING	0.517	3%	4%	0.200	63%
GRAPES, WINE	0.368	2%	3%	0.126	52%
GRAPES	0.365	2%	3%	0.011	3%
WALNUT (ENGLISH WALNUT, PERSIAN WALNUT)	0.351	2%	3%	0.013	4%
TANGERINE (MANDARIN, SATSUMA, MURCOTT, ETC.)	0.346	2%	3%	0.107	45%

Table A2-2-10. Unadjusted emissions in the San Joaquin Valley NAA during 2023, using the CEIDARS classifications.

Application Type	AI	Emissions (tpd)
Structural	Non-Methyl Bromide	0.228
Structural	Methyl Bromide	0.000
Agricultural	Non-Methyl Bromide	20.469
Agricultural	Methyl Bromide	1.010

Southeast Desert NAA

Table A2-3-1. Total unadjusted emissions in the Southeast Desert NAA.

Year	Unadjusted Emissions (tpd)	Change (tpd)	Percent Change
2023	1.197	0.511	75%
2022	0.686	0.051	8%
2021	0.635	-0.397	-38%
2020	1.032	0.404	64%
2019	0.628	0.230	58%
2018	0.398	-0.084	-18%
2017	0.483	0.030	7%
2016	0.453	-0.150	-25%
2015	0.603	0.091	18%
2014	0.512	-0.280	-35%
2013	0.792	-0.464	-37%
2012	1.256	0.636	103%
2011	0.619	-0.381	-38%
2010	1.001	0.385	62%
2009	0.616	-0.248	-29%
2008	0.864	-0.410	-32%
2007	1.274	0.303	31%
2006	0.971	-0.159	-14%
2005	1.130	-0.379	-25%
2004	1.509	-0.046	-3%
1990	1.246		

Table A2-3-2. Total adjusted emissions in the Southeast Desert NAA.

Year	Emissions (tpd)	Change (tpd)	Percent Change
2023	0.493	0.185	60%
2022	0.308	-0.084	-21%
2021	0.392	-0.015	-4%
2020	0.408	0.128	46%
2019	0.279	0.016	6%
2018	0.263	-0.094	-26%
2017	0.357	0.100	39%
2016	0.256	-0.101	-28%
2015	0.357	0.068	24%
2014	0.289	-0.081	-22%
2013	0.370	-0.103	-22%
2012	0.473	0.258	120%
2011	0.215	-0.245	-53%
2010	0.460	0.176	62%
2009	0.284	-0.002	>-1%
2008	0.286	-0.477	-63%
2007	0.762	0.129	20%
2006	0.634	-0.106	-14%
2005	0.740	-0.255	-26%
2004	0.995		
1990	1.153		

Table A2-3-3. Fumigant and nonfumigant emissions in the Southeast Desert NAA.

Year	Category	Emissions (tpd)	Percent of Total Emissions	Change (tpd)	Percent Change
2023	Fumigant	0.271	55%	0.183	209%
2023	Nonfumigant	0.222	45%	0.002	<1%
2022	Fumigant	0.088	28%	-0.080	-48%
2022	Nonfumigant	0.221	72%	-0.004	-2%
2021	Fumigant	0.168	43%	-0.009	-5%
2021	Nonfumigant	0.225	57%	-0.006	-3%
2020	Fumigant	0.177	43%	0.124	234%
2020	Nonfumigant	0.231	57%	0.004	2%
2019	Fumigant	0.053	19%	0.012	29%
2019	Nonfumigant	0.226	81%	0.004	2%
2018	Fumigant	0.041	16%	-0.064	-61%
2018	Nonfumigant	0.222	84%	-0.029	-12%
2017	Fumigant	0.106	30%	0.033	45%
2017	Nonfumigant	0.251	70%	0.068	37%
2016	Fumigant	0.073	28%	-0.023	-24%
2016	Nonfumigant	0.183	72%	-0.078	-30%
2015	Fumigant	0.095	27%	0.011	13%
2015	Nonfumigant	0.262	73%	0.057	28%
2014	Fumigant	0.085	29%	-0.085	-50%
2014	Nonfumigant	0.204	71%	0.003	2%
2013	Fumigant	0.169	46%	-0.089	-34%
2013	Nonfumigant	0.201	54%	-0.014	-6%
2012	Fumigant	0.258	55%	0.180	231%
2012	Nonfumigant	0.215	45%	0.078	57%
2011	Fumigant	0.078	36%	-0.195	-71%

Year	Category	Emissions (tpd)	Percent of Total Emissions	Change (tpd)	Percent Change
2011	Nonfumigant	0.137	64%	-0.049	-26%
2010	Fumigant	0.273	59%	0.136	99%
2010	Nonfumigant	0.186	41%	0.040	27%
2009	Fumigant	0.137	48%	0.019	16%
2009	Nonfumigant	0.146	52%	-0.020	-12%
2008	Fumigant	0.119	42%	-0.456	-79%
2008	Nonfumigant	0.167	58%	-0.020	-11%
2007	Fumigant	0.575	75%	0.163	39%
2007	Nonfumigant	0.187	25%	-0.034	-15%
2006	Fumigant	0.413	65%	-0.061	-13%
2006	Nonfumigant	0.221	35%	-0.045	-17%
2005	Fumigant	0.474	64%	-0.288	-38%
2005	Nonfumigant	0.266	36%	0.033	14%
2004	Fumigant	0.762	77%		
2004	Nonfumigant	0.233	23%		
1990	Fumigant	0.840	73%		
1990	Nonfumigant	0.313	27%		

Table A2-3-4. Fumigant formulation emissions in the Southeast Desert NAA.

Formulation	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
LIQUID CONCENTRATE	0.133	27%	49%	0.127	2,030%
PRESSURIZED LIQUID/SPRAYS/FOGGERS	0.065	13%	24%	0.065	
PRESSURIZED GAS	0.037	7%	14%	0.037	
EMULSIFIABLE CONCENTRATE	0.034	7%	13%	-0.044	-57%
SOLUTION/LIQUID (READY-TO-USE)	0.001	<1%	<1%	-0.001	-51%
DUST/POWDER	<0.001	<1%	<1%	<0.001	1,416%
PELLET/TABLET/CAKE/BRIQUET	<0.001	<1%	<1%	<0.001	9,074%
GRANULAR/FLAKE	<0.001	<1%	<1%	>-0.001	-99%

Table A2-3-5. Top 10 nonfumigant formulation emissions in the Southeast Desert NAA.

Formulation	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
EMULSIFIABLE CONCENTRATE	0.097	20%	44%	-0.007	-7%
LIQUID CONCENTRATE	0.038	8%	17%	0.005	14%
PRESSURIZED LIQUID/SPRAYS/FOGGERS	0.027	5%	12%	0.013	89%
FLOWABLE CONCENTRATE	0.015	3%	7%	-0.009	-39%
GRANULAR/FLAKE	0.013	3%	6%	0.001	10%
SUSPENSION	0.011	2%	5%	0.002	16%
DUST/POWDER	0.010	2%	4%	0.006	151%
PELLET/TABLET/CAKE/BRIQUET	0.004	<1%	2%	>-0.001	-12%
OIL	0.003	<1%	1%	<0.001	19%
SOLUTION/LIQUID (READY-TO-USE)	0.002	<1%	1%	-0.002	-51%

Table A2-3-6. Fumigant primary AI emissions in the Southeast Desert NAA.

Primary AI	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
1,3-DICHLOROPROPENE	0.158	32%	59%	0.153	2,787%
METAM-SODIUM	0.040	8%	15%	-0.033	-45%
METHYL BROMIDE	0.035	7%	13%	0.035	
CHLOROPICRIN	0.019	4%	7%	0.017	819%
INERTS	0.017	4%	6%	0.014	437%
DAZOMET	0.001	<1%	<1%	<0.001	57%

Table A2-3-7. Top 10 nonfumigant primary AI emissions in the Southeast Desert NAA.

Primary AI	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
BENSULIDE	0.022	4%	10%	0.004	24%
CAPRYLIC ACID	0.019	4%	9%	-0.006	-24%
GLYPHOSATE, ISOPROPYLAMINE SALT	0.014	3%	6%	0.006	65%
N-OCTYL BICYCLOHEPTENE DICARBOXIMIDE	0.014	3%	6%	0.003	29%
MEFENOXAM	0.012	2%	5%	0.005	75%
KAOLIN	0.010	2%	4%	0.002	20%
PIPERONYL BUTOXIDE	0.009	2%	4%	0.006	182%
BIFENTHRIN	0.009	2%	4%	0.002	38%
SULFUR	0.008	2%	4%	-0.011	-57%
GLYPHOSATE, POTASSIUM SALT	0.006	1%	2%	0.004	185%

Table A2-3-8. Top 10 fumigant commodity emissions in the Southeast Desert NAA.

Commodity	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
PEACH	0.146	30%	54%	0.146	
GRAPES	0.047	9%	17%	0.041	692%
ORNAMENTAL TURF (ALL OR UNSPEC)	0.037	7%	14%	0.037	
PEPPERS (FRUITING VEGETABLE), (BELL, CHILI, ETC.)	0.023	5%	9%	-0.032	-58%
LIME (MEXICAN LIME, ETC.)	0.008	2%	3%	0.008	
RIGHTS OF WAY	0.007	1%	3%	0.002	46%
SQUASH (ALL OR UNSPEC)	0.003	<1%	<1%	0.003	
STRAWBERRY (ALL OR UNSPEC)	<0.001	<1%	<1%	-0.011	-97%
STRUCTURAL PEST CONTROL	<0.001	<1%	<1%	>-0.001	-59%
LANDSCAPE MAINTENANCE	<0.001	<1%	<1%	>-0.001	<-99%

Table A2-3-9. Top 10 nonfumigant commodity emissions in the Southeast Desert NAA.

Commodity	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
STRUCTURAL PEST CONTROL	0.052	11%	24%	0.014	37%
CARROTS, GENERAL	0.023	5%	10%	-0.008	-26%
LANDSCAPE MAINTENANCE	0.022	4%	10%	>-0.001	-1%
LEMON	0.018	4%	8%	0.003	21%
DATE	0.016	3%	7%	-0.007	-30%
UNCULTIVATED AGRICULTURAL AREAS (ALL OR UNSPEC)	0.012	3%	6%	0.003	39%
RIGHTS OF WAY	0.010	2%	4%	-0.003	-23%
PEPPERS (FRUITING VEGETABLE), (BELL, CHILI, ETC.)	0.009	2%	4%	<0.001	8%
LETTUCE, LEAF (ALL OR UNSPEC)	0.008	2%	4%	>-0.001	-5%
MANGO	0.007	1%	3%	0.003	58%

Table A2-3-10. Unadjusted emissions in the Southeast Desert NAA during 2023, using the CEIDARS classifications.

Application Type	AI	Emissions (tpd)
Structural	Non-Methyl Bromide	0.053
Structural	Methyl Bromide	0.000
Agricultural	Non-Methyl Bromide	1.070
Agricultural	Methyl Bromide	0.075

Ventura NAA

Table A2-4-1. Total unadjusted emissions in the Ventura NAA.

Year	Unadjusted Emissions (tpd)	Change (tpd)	Percent Change
2023	7.799	-0.049	>-1%
2022	7.849	1.080	16%
2021	6.768	0.298	5%
2020	6.471	0.728	13%
2019	5.743	-0.614	-10%
2018	6.357	-0.125	-2%
2017	6.482	-0.265	-4%
2016	6.746	-1.045	-13%
2015	7.792	-0.345	-4%
2014	8.137	-0.106	-1%
2013	8.243	-1.581	-16%
2012	9.824	0.272	3%
2011	9.551	0.231	2%
2010	9.320	2.522	37%
2009	6.798	-0.526	-7%
2008	7.325	-1.761	-19%
2007	9.086	-0.535	-6%
2006	9.621	0.282	3%
2005	9.339	-0.199	-2%
2004	9.538	1.814	23%
1990	4.555		

Table A2-4-2. Total adjusted emissions in the Ventura NAA.

Year	Emissions (tpd)	Change (tpd)	Percent Change
2023	1.286	-0.003	>-1%
2022	1.289	0.195	18%
2021	1.093	-0.087	-7%
2020	1.180	0.138	13%
2019	1.043	-0.078	-7%
2018	1.121	-0.116	-9%
2017	1.237	-0.127	-9%
2016	1.364	-0.303	-18%
2015	1.668	0.048	3%
2014	1.620	-0.088	-5%
2013	1.707	-1.355	-44%
2012	3.063	0.060	2%
2011	3.003	0.214	8%
2010	2.789	0.615	28%
2009	2.174	0.435	25%
2008	1.739	-1.624	-48%
2007	3.363	-0.320	-9%
2006	3.682	0.066	2%
2005	3.617	-0.308	-8%
2004	3.924		
1990	3.786		

Table A2-4-3. Fumigant and nonfumigant emissions in the Ventura NAA.

Year	Category	Emissions (tpd)	Percent of Total Emissions	Change (tpd)	Percent Change
2023	Fumigant	0.893	69%	-0.023	-3%
2023	Nonfumigant	0.393	31%	0.020	5%
2022	Fumigant	0.916	71%	0.133	17%
2022	Nonfumigant	0.373	29%	0.063	20%
2021	Fumigant	0.783	72%	-0.024	-3%
2021	Nonfumigant	0.310	28%	-0.063	-17%
2020	Fumigant	0.807	68%	0.117	17%
2020	Nonfumigant	0.373	32%	0.021	6%
2019	Fumigant	0.691	66%	-0.042	-6%
2019	Nonfumigant	0.352	34%	-0.037	-9%
2018	Fumigant	0.733	65%	0.008	1%
2018	Nonfumigant	0.388	35%	-0.124	-24%
2017	Fumigant	0.725	59%	-0.217	-23%
2017	Nonfumigant	0.512	41%	0.090	21%
2016	Fumigant	0.942	69%	-0.269	-22%
2016	Nonfumigant	0.423	31%	-0.034	-7%
2015	Fumigant	1.211	73%	0.023	2%
2015	Nonfumigant	0.457	27%	0.025	6%
2014	Fumigant	1.188	73%	-0.123	-9%
2014	Nonfumigant	0.432	27%	0.036	9%
2013	Fumigant	1.311	77%	-1.370	-51%
2013	Nonfumigant	0.397	23%	0.015	4%
2012	Fumigant	2.681	88%	0.104	4%
2012	Nonfumigant	0.382	12%	-0.043	-10%
2011	Fumigant	2.577	86%	0.265	11%

Year	Category	Emissions (tpd)	Percent of Total Emissions	Change (tpd)	Percent Change
2011	Nonfumigant	0.425	14%	-0.052	-11%
2010	Fumigant	2.312	83%	0.592	34%
2010	Nonfumigant	0.477	17%	0.023	5%
2009	Fumigant	1.720	79%	0.468	37%
2009	Nonfumigant	0.454	21%	-0.033	-7%
2008	Fumigant	1.252	72%	-1.682	-57%
2008	Nonfumigant	0.486	28%	0.059	14%
2007	Fumigant	2.935	87%	-0.240	-8%
2007	Nonfumigant	0.428	13%	-0.080	-16%
2006	Fumigant	3.175	86%	0.056	2%
2006	Nonfumigant	0.508	14%	0.010	2%
2005	Fumigant	3.119	86%	-0.183	-6%
2005	Nonfumigant	0.497	14%	-0.125	-20%
2004	Fumigant	3.302	84%		
2004	Nonfumigant	0.622	16%		
1990	Fumigant	3.140	83%		
1990	Nonfumigant	0.647	17%		

Table A2-4-4. Fumigant formulation emissions in the Ventura NAA.

Formulation	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
PRESSURIZED GAS	0.498	39%	56%	-0.017	-3%
EMULSIFIABLE CONCENTRATE	0.217	17%	24%	-0.003	-1%
LIQUID CONCENTRATE	0.110	9%	12%	-0.070	-39%
PRESSURIZED LIQUID/SPRAYS/FOGGERS	0.066	5%	7%	0.066	
SOLUTION/LIQUID (READY-TO-USE)	0.001	<1%	<1%	<0.001	9%

Table A2-4-5. Top 10 nonfumigant formulation emissions in the Ventura NAA.

Formulation	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
EMULSIFIABLE CONCENTRATE	0.138	11%	35%	-0.035	-20%
LIQUID CONCENTRATE	0.105	8%	27%	0.026	33%
OIL	0.050	4%	13%	-0.001	-2%
SUSPENSION	0.038	3%	10%	0.020	117%
GRANULAR/FLAKE	0.020	2%	5%	0.003	17%
FLOWABLE CONCENTRATE	0.016	1%	4%	>-0.001	-4%
PELLET/TABLET/CAKE/BRIQUET	0.011	<1%	3%	0.005	78%
PRESSURIZED LIQUID/SPRAYS/FOGGERS	0.004	<1%	<1%	<0.001	15%
SOLUTION/LIQUID (READY-TO-USE)	0.004	<1%	<1%	0.002	86%
DRY FLOWABLE	0.002	<1%	<1%	>-0.001	-3%

Table A2-4-6. Fumigant primary AI emissions in the Ventura NAA.

Primary AI	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
CHLOROPICRIN	0.352	27%	39%	<0.001	<1%
INERTS	0.260	20%	29%	-0.013	-5%
1,3-DICHLOROPROPENE	0.156	12%	17%	-0.008	-5%
POTASSIUM N-METHYLDITHIOCARBAMATE	0.099	8%	11%	-0.008	-7%
METAM-SODIUM	0.020	2%	2%	0.006	43%
METHYL BROMIDE	0.004	<1%	<1%	>-0.001	-9%

Table A2-4-7. Top 10 nonfumigant primary AI emissions in the Ventura NAA.

Primary AI	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
MINERAL OIL	0.036	3%	9%	-0.008	-19%
GLYPHOSATE, ISOPROPYLAMINE SALT	0.028	2%	7%	0.011	61%
BACILLUS AMYLOLIQUEFACENS STRAIN: F727	0.015	1%	4%	0.015	2,974%
CLARIFIED HYDROPHOBIC EXTRACT OF NEEM OIL	0.014	1%	4%	0.007	111%
NOVALURON	0.011	<1%	3%	-0.003	-23%
BENSULIDE	0.011	<1%	3%	0.004	54%
GLYPHOSATE, POTASSIUM SALT	0.010	<1%	3%	0.007	228%
OXAMYL	0.010	<1%	2%	0.004	71%
PROPICONAZOLE	0.010	<1%	2%	-0.004	-30%
PERMETHRIN	0.009	<1%	2%	<0.001	11%

Table A2-4-8. Top 10 fumigant commodity emissions in the Ventura NAA.

Commodity	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
STRAWBERRY (ALL OR UNSPEC)	0.871	68%	98%	-0.011	-1%
PEPPERS (FRUITING VEGETABLE), (BELL, CHILI, ETC.)	0.015	1%	2%	-0.007	-34%
N-OUTDR GRWN CUT FLWRS OR GREENS	0.004	<1%	<1%	-0.001	-24%
FUMIGATION, OTHER	0.003	<1%	<1%	>-0.001	-9%
TOMATO	<0.001	<1%	<1%	>-0.001	-29%
RIGHTS OF WAY	<0.001	<1%	<1%	<0.001	
COMMODITY FUMIGATION	<0.001	<1%	<1%	<0.001	50%
STRUCTURAL PEST CONTROL	<0.001	<1%	<1%	<0.001	

Table A2-4-9. Top 10 nonfumigant commodity emissions in the Ventura NAA.

Commodity	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
LEMON	0.064	5%	16%	-0.002	-3%
STRAWBERRY (ALL OR UNSPEC)	0.055	4%	14%	-0.009	-14%
PEPPERS (FRUITING VEGETABLE), (BELL, CHILI, ETC.)	0.043	3%	11%	0.026	152%
AVOCADO (ALL OR UNSPEC)	0.029	2%	7%	0.006	27%
BLACKBERRY	0.022	2%	6%	-0.016	-41%
STRUCTURAL PEST CONTROL	0.022	2%	6%	0.011	91%
RASPBERRY (ALL OR UNSPEC)	0.019	1%	5%	-0.010	-36%
CELERY, GENERAL	0.019	1%	5%	>-0.001	-2%
LANDSCAPE MAINTENANCE	0.017	1%	4%	0.004	34%
CABBAGE	0.015	1%	4%	0.002	18%

Table A2-4-10. Unadjusted emissions in the Ventura NAA during 2023, using the CEIDARS classifications.

Application Type	AI	Emissions (tpd)
Structural	Non-Methyl Bromide	0.022
Structural	Methyl Bromide	0.000
Agricultural	Non-Methyl Bromide	7.771
Agricultural	Methyl Bromide	0.006

South Coast NAA

Table A2-5-1. Total unadjusted emissions in the South Coast NAA.

Year	Unadjusted Emissions (tpd)	Change (tpd)	Percent Change
2023	1.165	0.217	23%
2022	0.948	-0.014	-1%
2021	0.962	-0.071	-7%
2020	1.033	-0.010	>-1%
2019	1.043	-0.184	-15%
2018	1.227	-0.319	-21%
2017	1.546	0.272	21%
2016	1.274	-0.199	-14%
2015	1.473	0.206	16%
2014	1.267	-0.252	-17%
2013	1.519	-0.147	-9%
2012	1.666	0.291	21%
2011	1.375	-0.637	-32%
2010	2.012	0.390	24%
2009	1.621	-0.351	-18%
2008	1.972	0.014	<1%
2007	1.958	<0.001	<1%
2006	1.958	-0.718	-27%
2005	2.676	0.037	1%
2004	2.638	-0.392	-13%
1990	10.982		

Table A2-5-2. Total adjusted emissions in the South Coast NAA.

Year	Emissions (tpd)	Change (tpd)	Percent Change
2023	1.030	0.225	28%
2022	0.804	-0.029	-3%
2021	0.833	0.025	3%
2020	0.808	-0.070	-8%
2019	0.877	-0.194	-18%
2018	1.071	-0.036	-3%
2017	1.107	0.105	10%
2016	1.002	-0.333	-25%
2015	1.335	0.169	14%
2014	1.167	-0.146	-11%
2013	1.312	-0.062	-4%
2012	1.374	0.253	23%
2011	1.121	-0.618	-36%
2010	1.740	0.500	40%
2009	1.240	-0.044	-3%
2008	1.283	-0.203	-14%
2007	1.487	0.005	<1%
2006	1.482	-0.487	-25%
2005	1.969	0.047	2%
2004	1.922		
1990	10.840		

Table A2-5-3. Fumigant and nonfumigant emissions in the South Coast NAA.

Year	Category	Emissions (tpd)	Percent of Total Emissions	Change (tpd)	Percent Change
2023	Fumigant	0.111	11%	0.018	20%
2023	Nonfumigant	0.919	89%	0.207	29%
2022	Fumigant	0.093	12%	-0.026	-22%
2022	Nonfumigant	0.712	88%	-0.003	>-1%
2021	Fumigant	0.119	14%	0.004	3%
2021	Nonfumigant	0.714	86%	0.021	3%
2020	Fumigant	0.115	14%	<0.001	<1%
2020	Nonfumigant	0.693	86%	-0.070	-9%
2019	Fumigant	0.115	13%	-0.053	-32%
2019	Nonfumigant	0.763	87%	-0.140	-16%
2018	Fumigant	0.168	16%	-0.022	-12%
2018	Nonfumigant	0.903	84%	-0.013	-1%
2017	Fumigant	0.190	17%	-0.083	-30%
2017	Nonfumigant	0.917	83%	0.188	26%
2016	Fumigant	0.273	27%	0.017	7%
2016	Nonfumigant	0.729	73%	-0.350	-32%
2015	Fumigant	0.257	19%	0.049	23%
2015	Nonfumigant	1.079	81%	0.120	13%
2014	Fumigant	0.208	18%	-0.078	-27%
2014	Nonfumigant	0.959	82%	-0.068	-7%
2013	Fumigant	0.285	22%	-0.095	-25%
2013	Nonfumigant	1.027	78%	0.034	3%
2012	Fumigant	0.381	28%	0.185	95%
2012	Nonfumigant	0.993	72%	0.068	7%
2011	Fumigant	0.196	17%	-0.179	-48%

Year	Category	Emissions (tpd)	Percent of Total Emissions	Change (tpd)	Percent Change
2011	Nonfumigant	0.926	83%	-0.439	-32%
2010	Fumigant	0.375	22%	0.063	20%
2010	Nonfumigant	1.365	78%	0.437	47%
2009	Fumigant	0.312	25%	-0.065	-17%
2009	Nonfumigant	0.927	75%	0.021	2%
2008	Fumigant	0.377	29%	-0.034	-8%
2008	Nonfumigant	0.906	71%	-0.169	-16%
2007	Fumigant	0.411	28%	-0.011	-3%
2007	Nonfumigant	1.075	72%	0.016	1%
2006	Fumigant	0.422	28%	-0.172	-29%
2006	Nonfumigant	1.060	72%	-0.315	-23%
2005	Fumigant	0.594	30%	-0.107	-15%
2005	Nonfumigant	1.375	70%	0.155	13%
2004	Fumigant	0.702	37%		
2004	Nonfumigant	1.220	63%		
1990	Fumigant	9.372	86%		
1990	Nonfumigant	1.468	14%		

Table A2-5-4. Fumigant formulation emissions in the South Coast NAA.

Formulation	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
PRESSURIZED GAS	0.063	6%	57%	>-0.001	-2%
LIQUID CONCENTRATE	0.025	2%	23%	0.011	74%
EMULSIFIABLE CONCENTRATE	0.014	1%	13%	0.013	2,041%
SOLUTION/LIQUID (READY-TO-USE)	0.006	<1%	5%	-0.006	-51%
DUST/POWDER	0.002	<1%	2%	0.002	1,416%
PELLET/TABLET/CAKE/BRIQUET	0.001	<1%	1%	0.001	3,451%
GRANULAR/FLAKE	<0.001	<1%	<1%	-0.002	-99%
PRESSURIZED LIQUID/SPRAYS/FOGGERS	<0.001	<1%	<1%	<0.001	

Table A2-5-5. Top 10 nonfumigant formulation emissions in the South Coast NAA.

Formulation	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
PRESSURIZED LIQUID/SPRAYS/FOGGERS	0.261	25%	28%	0.044	20%
EMULSIFIABLE CONCENTRATE	0.250	24%	27%	0.083	50%
LIQUID CONCENTRATE	0.194	19%	21%	0.094	94%
GRANULAR/FLAKE	0.078	8%	9%	0.019	31%
PELLET/TABLET/CAKE/BRIQUET	0.041	4%	4%	-0.005	-11%
SUSPENSION	0.031	3%	3%	0.004	15%
FLOWABLE CONCENTRATE	0.031	3%	3%	0.013	72%
SOLUTION/LIQUID (READY-TO-USE)	0.012	1%	1%	-0.007	-36%
OTHER (LIQUID)	0.009	<1%	1%	-0.039	-81%
OIL	0.006	<1%	<1%	0.002	42%

Table A2-5-6. Fumigant primary AI emissions in the South Coast NAA.

Primary AI	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
METHYL BROMIDE	0.049	5%	44%	>-0.001	>-1%
METAM-SODIUM	0.031	3%	28%	0.004	16%
1,3-DICHLOROPROPENE	0.019	2%	17%	0.013	208%
CHLOROPICRIN	0.006	<1%	6%	>-0.001	-5%
DAZOMET	0.003	<1%	3%	<0.001	37%
INERTS	0.003	<1%	3%	<0.001	35%

Table A2-5-7. Top 10 nonfumigant primary AI emissions in the South Coast NAA.

Primary AI	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
BIFENTHRIN	0.126	12%	14%	0.085	208%
PIPERONYL BUTOXIDE	0.098	10%	11%	0.050	104%
PHENYLETHYL PROPIONATE	0.090	9%	10%	0.089	7,647%
N-OCTYL BICYCLOHEPTENE DICARBOXIMIDE	0.072	7%	8%	-0.086	-54%
PYRIPROXYFEN	0.061	6%	7%	0.051	537%
FIPRONIL	0.027	3%	3%	0.014	107%
TRINEXAPAC-ETHYL	0.025	2%	3%	-0.010	-29%
IMIDACLOPRID	0.021	2%	2%	0.004	25%
DINOTEFURAN	0.021	2%	2%	0.005	33%
CAPRYLIC ACID	0.016	2%	2%	0.006	56%

Table A2-5-8. Top 10 fumigant commodity emissions in the South Coast NAA.

Commodity	Emissions (tpd)	Percent of Total Emissions	Percent of Fumigant Emissions	Change (tpd)	Percent Change
RIGHTS OF WAY	0.034	3%	31%	0.008	31%
FUMIGATION, OTHER	0.034	3%	31%	-0.009	-20%
COMMODITY FUMIGATION	0.015	1%	13%	0.008	137%
STRAWBERRY (ALL OR UNSPEC)	0.014	1%	13%	>-0.001	-5%
PEPPERS (FRUITING VEGETABLE), (BELL, CHILI, ETC.)	0.014	1%	13%	0.014	
STRUCTURAL PEST CONTROL	<0.001	<1%	<1%	<0.001	208%
N-OUTDR CONTAINER/FLD GRWN PLANTS	<0.001	<1%	<1%	<0.001	
LANDSCAPE MAINTENANCE	<0.001	<1%	<1%	-0.002	<-99%
DATE	0.000	0%	0%	0.000	
FLAVORING AND SPICE CROPS (ALL OR UNSPEC)	0.000	0%	0%	0.000	

Table A2-5-9. Top 10 nonfumigant commodity emissions in the South Coast NAA.

Commodity	Emissions (tpd)	Percent of Total Emissions	Percent of Nonfumigant Emissions	Change (tpd)	Percent Change
STRUCTURAL PEST CONTROL	0.629	61%	68%	0.180	40%
LANDSCAPE MAINTENANCE	0.172	17%	19%	0.010	6%
RIGHTS OF WAY	0.033	3%	4%	<0.001	2%
TURF, GOLF COURSE (FAIRWAYS, GREENS, ROUGH)	0.014	1%	2%	0.007	91%
N-OUTDR CONTAINER/FLD GRWN PLANTS	0.012	1%	1%	-0.002	-16%
CABBAGE	0.007	<1%	<1%	<0.001	4%
N-GRNHS GRWN CUT FLWRS OR GREENS	0.006	<1%	<1%	0.003	88%
CHINESE BROCCOLI (WHITE FLOWERING) (GAILON)	0.006	<1%	<1%	0.003	107%
GRAPEFRUIT	0.006	<1%	<1%	0.001	23%
ORANGE (ALL OR UNSPEC)	0.004	<1%	<1%	<0.001	12%

Table A2-5-10. Unadjusted emissions in the South Coast NAA during 2023, using the CEIDARS classifications.

Application Type	AI	Emissions (tpd)
Structural	Non-Methyl Bromide	0.630
Structural	Methyl Bromide	0.000
Agricultural	Non-Methyl Bromide	0.486
Agricultural	Methyl Bromide	0.049