

March 7, 2019

## **SPECIFICATION SHEET: NONPT 2016beta Platform**

Description: Nonpoint (nonpt) emissions, for simulating 2016 air quality

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### **1. EXECUTIVE SUMMARY**

This document details the approach and data sources to be used for developing 2016 emissions for the nonpoint (nonpt) sector, which consists of all sources from 2014NElv2 nonpoint that are not included in the afdust, ag, cmv\_c1c2, cmv\_c3, np\_oilgas, rail, and rwc sectors. Emissions for 2016 beta platform include projections based on census population for certain sources and updates by the State of New Jersey. Because this sector covers a wide variety of sources, spatial surrogates, temporal profiles, and speciation profiles are also varied. Projection methods for nonpt are in process and this document will be updated when emission projections are finalized. Base year inventories were processed into a format that can be input to air quality models with the Sparse Matrix Operating Kernel Emissions (SMOKE) modeling system v4.6. National and state-level emission summaries for key pollutants are provided.

## **2. INTRODUCTION**

The starting point for the 2016 beta platform nonpt inventory is the 2014NEIv2, including all nonpoint sources that are not included in the afdust, ag, cmv\_c1c2, cmv\_c3, np\_oilgas, rail, and rwc sectors. The types of sources in the nonpt sector include, but are not limited to:

- stationary source fuel combustion, including industrial, commercial, and residential and orchard heaters;
- commercial sources such as commercial cooking;
- industrial processes such as chemical manufacturing, metal production, mineral processes, petroleum refining, wood products, fabricated metals, and refrigeration;
- solvent utilization for surface coatings such as architectural coatings, auto refinishing, traffic marking, textile production, furniture finishing, and coating of paper, plastic, metal, appliances, and motor vehicles;
- solvent utilization for degreasing of furniture, metals, auto repair, electronics, and manufacturing;
- solvent utilization for dry cleaning, graphic arts, plastics, industrial processes, personal care products, household products, adhesives and sealants;
- solvent utilization for asphalt application and roofing, and pesticide application;
- storage and transport of petroleum for uses such as portable gas cans, bulk terminals, gasoline service stations, aviation, and marine vessels;
- storage and transport of chemicals;
- waste disposal, treatment, and recovery via incineration, open burning, landfills, and composting;
- miscellaneous area sources such as cremation, hospitals, lamp breakage, and automotive repair shops.

A list of all SCCs in the nonpt sector is provided in Appendix A.

## **3. INVENTORY DEVELOPMENT METHODS**

The emissions in the nonpt sector are from the nonpoint data category of 2014NEIv2 but are not included in other sectors from that category such as ag, afdust, cmv\_c1c2, cmv\_c3, rail and rwc. The nonpt emissions in 2016 beta platform are equivalent to those in the 2014NEIv2 except for the following changes.

## New Jersey updates

In New Jersey, emissions for SCCs for Industrial (2102004000) and Commercial/Institutional (2103004000) Distillate Oil, Total: Boilers and IC Engines were removed at that state’s request. These emissions were derived from EPA estimates, and double counted emissions that were provided by New Jersey and assigned to other SCCs.

## Projection to 2016

Historical census population, sometimes by county and sometimes by state, was used to project select nonpt sources from 2014NEIv2 to 2016 for beta platform. The population data was downloaded from the US Census Bureau. Specifically, the “Population, Population Change, and Estimated Components of Population Change: April 1, 2010 to July 1, 2017” file (<https://www2.census.gov/programs-surveys/popest/datasets/2010-2017/counties/totals/co-est2017-alldata.csv>). A ratio of 2016 population to 2014 population was used to create a growth factor that was applied to the 2014NEIv2 emissions with SCCs matching the population-based SCCs listed in Table 1. Positive growth factors (from increasing population) were not capped, but negative growth factors (from decreasing population) were flatlined for no growth.

**Table 1. 2016 beta platform SCCs for Census-based growth**

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
2302002100	Industrial Processes	Food and Kindred Products: SIC 20	Commercial Charbroiling	Conveyorized Charbroiling
2302002200	Industrial Processes	Food and Kindred Products: SIC 20	Commercial Charbroiling	Under-fired Charbroiling
2302003000	Industrial Processes	Food and Kindred Products: SIC 20	Commercial Deep Fat Frying	Total
2302003100	Industrial Processes	Food and Kindred Products: SIC 20	Commercial Deep Fat Frying	Flat Griddle Frying
2302003200	Industrial Processes	Food and Kindred Products: SIC 20	Commercial Deep Fat Frying	Clamshell Griddle Frying
2401001000	Solvent Utilization	Surface Coating	Architectural Coatings	Total: All Solvent Types
2401002000	Solvent Utilization	Surface Coating	Architectural Coatings - Solvent-based	Total: All Solvent Types
2401003000	Solvent Utilization	Surface Coating	Architectural Coatings - Water-based	Total: All Solvent Types
2401100000	Solvent Utilization	Surface Coating	Industrial Maintenance Coatings	Total: All Solvent Types
2401200000	Solvent Utilization	Surface Coating	Other Special Purpose Coatings	Total: All Solvent Types
2425000000	Solvent Utilization	Graphic Arts	All Processes	Total: All Solvent Types

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
2425010000	Solvent Utilization	Graphic Arts	Lithography	Total: All Solvent Types
2425020000	Solvent Utilization	Graphic Arts	Letterpress	Total: All Solvent Types
2425030000	Solvent Utilization	Graphic Arts	Rotogravure	Total: All Solvent Types
2425040000	Solvent Utilization	Graphic Arts	Flexography	Total: All Solvent Types
2440020000	Solvent Utilization	Miscellaneous Industrial	Adhesive (Industrial) Application	Total: All Solvent Types
2460000000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All Processes	Total: All Solvent Types
2460100000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All Personal Care Products	Total: All Solvent Types
2460200000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All Household Products	Total: All Solvent Types
2460400000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All Automotive Aftermarket Products	Total: All Solvent Types
2460500000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All Coatings and Related Products	Total: All Solvent Types
2460600000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All Adhesives and Sealants	Total: All Solvent Types
2460800000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All FIFRA Related Products	Total: All Solvent Types
2460900000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	Miscellaneous Products (Not Otherwise Covered)	Total: All Solvent Types
2461800000	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Pesticide Application: All Processes	Total: All Solvent Types

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
2461800001	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Pesticide Application: All Processes	Surface Application
2461800002	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Pesticide Application: All Processes	Soil Incorporation
2461870999	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Pesticide Application: Non-Agricultural	Not Elsewhere Classified
2465800000	Solvent Utilization	Miscellaneous Non-industrial: Consumer	Pesticide Application	Total: All Solvent Types
2501011011	Storage and Transport	Petroleum and Petroleum Product Storage	Residential Portable Gas Cans	Permeation
2501011012	Storage and Transport	Petroleum and Petroleum Product Storage	Residential Portable Gas Cans	Evaporation (includes Diurnal losses)
2501011013	Storage and Transport	Petroleum and Petroleum Product Storage	Residential Portable Gas Cans	Spillage During Transport
2501011014	Storage and Transport	Petroleum and Petroleum Product Storage	Residential Portable Gas Cans	Refilling at the Pump - Vapor Displacement
2501011015	Storage and Transport	Petroleum and Petroleum Product Storage	Residential Portable Gas Cans	Refilling at the Pump - Spillage
2501012011	Storage and Transport	Petroleum and Petroleum Product Storage	Commercial Portable Gas Cans	Permeation
2501012012	Storage and Transport	Petroleum and Petroleum Product Storage	Commercial Portable Gas Cans	Evaporation (includes Diurnal losses)
2501012013	Storage and Transport	Petroleum and Petroleum Product Storage	Commercial Portable Gas Cans	Spillage During Transport
2501012014	Storage and Transport	Petroleum and Petroleum Product Storage	Commercial Portable Gas Cans	Refilling at the Pump - Vapor Displacement
2501012015	Storage and Transport	Petroleum and Petroleum Product Storage	Commercial Portable Gas Cans	Refilling at the Pump - Spillage
2630020000	Waste Disposal	Treatment and Recovery	Wastewater Treatment, Public Owned	Total Processed

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
2640000000	Waste Disposal	Treatment and Recovery	TSDFs, All TSDF Types	Total: All Processes
2810025000	Miscellaneous Area Sources	Other Combustion	Residential Grilling	Total
2810060100	Miscellaneous Area Sources	Other Combustion	Cremation	Humans

## 4. ANCILLARY DATA

### Spatial Allocation

Spatial allocation of nonpt emissions to the contiguous US (CONUS) 36km and 12km domains used for air quality modeling is accomplished using spatial surrogates. Spatial surrogates map county polygons to the uniformly spaced grid cells of a modeling domain. Reports summarizing total emissions by spatial surrogate at the state and county level were developed. A national summary by spatial surrogate is provided in Table 2.

**Table 2. 2016 beta platform nonpt emissions by spatial surrogate (36US3 domain)**

Surrogate	Description	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
<b>100</b>	Population	0	32,842	0	0	0	0	1,244,799
<b>150</b>	Residential Heating - Natural Gas	98,114	47,820	227,295	4,093	3,837	1,494	13,757
<b>170</b>	Residential Heating - Distillate Oil	9,811	1,865	35,187	4,583	3,988	56,230	1,245
<b>180</b>	Residential Heating - Coal	3,044	20	101	79	53	1,086	111
<b>190</b>	Residential Heating - LP Gas	9,595	121	34,439	207	183	762	1,332
<b>239</b>	Total Road Avg. Annual Daily Traffic (AADT)	786	0	25	575	551	0	274,991
<b>240</b>	Total Road Miles	0	0	0	0	0	0	34,042
<b>242</b>	All Restricted AADT	0	0	0	0	0	0	5,451

Surrogate	Description	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
244	All Unrestricted AADT	0	0	0	0	0	0	95,312
271	National Transportation Atlas Database (NTAD) Class 1 2 3 Railroad Density	0	0	0	0	0	0	2,252
300	National Land Cover Database (NLCD) Low Intensity Development	554,414	5,198	27,749	116,474	104,168	3,725	75,096
306	NLCD Med + High	295,787	28,101	200,139	305,815	240,282	64,743	955,021
307	NLCD All Development	1,563,172	25	46,372	157,454	126,828	14,199	602,300
308	NLCD Low + Med + High	138,152	1,134	185,338	19,661	16,837	18,989	65,604
310	NLCD Total Agriculture	0	0	0	216	37	0	204,819
319	NLCD Crop Land	6,361	0	0	96	95	71	293
320	NLCD Forest Land	7,399	4,143	378	1,472	1,289	9	474
505	Industrial Land	0	0	0	0	0	0	174
535	Residential + Commercial + Industrial + Institutional + Government	110	5	2	130	130	0	39
560	Hospital (COM6)	0	0	0	0	0	0	0
650	Refineries and Tank Farms	51	0	22	2	0	0	99,043
711	Airport Areas	0	0	0	0	0	0	287
801	Port Areas	0	0	0	0	0	0	8,059

### Temporal Allocation

All nonpt inventories are annual and are temporalized to hourly within SMOKE using month-of-year, day-of-week, and hour-of-day temporal profiles. Reports summarizing total emissions

according to the monthly, day-of-week, and hour-of-day temporal profile assignments were developed at the state and county level. A national summary by temporal profile is provided in Table 3.

**Table 3. 2016 beta platform nonpt emissions by temporal profile**

Monthly profile	Weekly profile	Diurnal profile	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
4	7	36	0	0	0	0	0	0	37,550
14	7	24	7,383	0	378	1,469	1,286	9	471
22	18	26	140	0	319	0	0	25	33
33	9	14	0	0	0	0	0	0	15,714
33	17	13	0	0	0	0	0	0	26,734
140	7	26	0	0	0	0	0	0	38,926
169	7	26	0	0	0	0	0	0	4,606
173	7	26	0	0	0	0	0	0	6,184
199	7	26	0	25	0	0	0	0	336,811
200	7	26	0	0	0	0	0	0	2,619
253	7	26	0	0	0	271	261	0	223,425
257	7	26	0	5	0	0	0	0	377,900
258	7	26	0	0	0	13	12	0	371,664
260	7	26	0	0	2	4	3	0	145,876
262	7	24	8,347	5,022	2,046	1,740	1,660	191	1,754
262	7	25	82	0	59	5	3	0	100,562
262	7	26	1,339,047	27,857	59,639	311,808	265,712	18,266	1,921,872
262	7	250	65	0	2	1,793	561	38	186
262	8	26	253,905	5,987	193,183	191,978	142,655	61,238	12,391
266	7	26	0	0	0	2	2	0	8,285
287	7	26	0	0	0	0	0	0	49,633
469	8	26	138,862	1,138	187,515	19,661	16,783	19,087	10,756
485	7	26	120,615	49,986	296,938	8,900	8,009	59,080	16,448
1215	7	26	0	0	0	0	0	0	13
1560	7	26	0	31,967	0	0	0	0	0
1600	7	26	197,492	0	5,923	20,216	15,584	1,939	14,190
1601	7	26	64,181	0	1,915	6,528	5,033	630	4,536
1612	7	26	114,263	0	3,392	11,544	8,900	1,122	7,934
1613	7	26	209,274	0	6,212	21,141	21,089	687	14,527
1645	7	26	51,251	0	1,529	5,213	4,019	503	3,622
BBQ	61500	BBQ <sup>1</sup>	238,021	0	5,105	16,653	13,324	0	4,484

<sup>1</sup> There are separate diurnal outdoor barbecue profiles for weekdays (BBQ5) and weekends (BBQ2).

### Chemical Speciation

The nonpt sector includes emissions for particulate matter < 2.5 μm (PM<sub>2.5</sub>), oxides of nitrogen (NO<sub>x</sub>), and VOC, among other criteria pollutants. These three inventory pollutants must be converted to air quality modeling species through an emissions processing step referred to as



“chemical speciation”. The U.S. EPA SPECIATE<sup>1</sup> database was used to develop factors to map the inventory species to the chemical species required for air quality modeling. The nonpt sector uses partial HAP integration for VOCs. A GSPRO\_COMBO is used to speciate VOC emissions from portable fuel containers (PFCs), Stage 1 refueling, and other gasoline storage SCCs. Reports summarizing total PM<sub>2.5</sub> and VOC emissions according to speciation profile were developed at the state and county level.

## **5. EMISSIONS PROJECTION METHODS**

Future year projections for the 2016 beta platform have not yet been finalized at the time this was written.

## **6. EMISSIONS PROCESSING REQUIREMENTS**

Nonpt sector emissions were processed for air quality modeling using the Sparse Matrix Operator Kernel Emissions (SMOKE<sup>2</sup>) modeling system. All nonpt sector inventories are annual, but the sector is typically run through SMOKE as a monthly sector; i.e. Smkinven is run 12 times, each with a different SMKINVEN\_MONTH setting. This is because in prior emissions platforms, the nonpt sector has occasionally included at least one monthly inventory. SMOKE applies the same monthly temporalization to annual sources as it would when running Smkinven on an annual basis, so this does not impact the emissions. The downside to this approach is a small amount of additional processing time.

Nonpt sector emissions are processed for seven representative days per month (one for each day of the week), plus holidays. This is a 2-D sector in which all emissions are output to a single layer gridded emissions file.

## **7. EMISSIONS SUMMARIES**

National and state totals by pollutant for the beta platform cases are provided here in Table 4 – Table 6, and some example plots (Figure 1 – Figure 3). Additional nonpt plots and maps are available online through the LADCO website<sup>3</sup> and the Intermountain West Data Warehouse<sup>4</sup>.

Descriptions of the emissions platform cases shown in the tables and plots below are as follows:

2011en, 2023en, 2028el = Final 2011, 2023, and 2028 cases from the 2011v6.3 platform

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<sup>1</sup> <https://www.epa.gov/air-emissions-modeling/speciate-version-45-through-40>

<sup>2</sup> <http://www.smoke-model.org/index.cfm>

<sup>3</sup> <https://www.ladco.org/technical/modeling-results/2016-inventory-collaborative/>

<sup>4</sup> <http://views.cira.colostate.edu/iwdw/eibrowser2016>

2014fd = 2014NElv2 and 2014 NATA

2016fe = 2016 alpha platform (grown from 2014NElv2)

2016ff = 2016 beta platform

**Table 4. Comparison of national total annual CAPS nonpt emissions (tons/yr)**

Pollutant	2011en	2014fd	2016fe	2016ff	2023en	2028el
CO	1,659,563	2,738,901	2,738,901	2,742,927	1,695,179	1,695,815
NH3	95,189	122,006	122,006	121,986	95,637	95,542
NOX	727,808	765,230	765,230	764,158	738,591	739,639
PM10	495,754	617,154	617,154	618,938	512,700	513,118
PM2.5	407,682	503,253	503,253	504,895	430,481	430,836
SO2	281,630	163,983	163,983	162,816	97,842	97,741
VOC	3,731,618	3,725,042	3,725,042	3,759,706	3,507,786	3,507,763

**Table 5. Comparison of state total annual NOx nonpt emissions (tons/yr)**

State	2011en	2014fd	2016fe	2016ff	2023en	2028el
Alabama	11,630	20,003	20,003	20,004	11,895	11,895
Alaska	5,853	5,641	5,641	5,642	4,613	4,613
Arizona	6,878	8,398	8,398	8,401	8,381	8,381
Arkansas	3,025	9,830	9,830	9,831	3,025	3,025
California	57,105	47,933	47,933	47,943	60,743	60,743
Colorado	7,286	7,210	7,210	7,213	8,425	8,425
Connecticut	11,786	12,273	12,273	12,273	9,229	8,992
Delaware	2,059	2,891	2,891	2,892	2,037	2,064
D.C.	1,357	1,682	1,682	1,682	1,384	1,404
Florida	18,835	17,247	17,247	17,261	20,986	20,986
Georgia	17,193	19,404	19,404	19,409	17,271	17,271
Hawaii	1,129	395	395	395	600	600
Idaho	5,722	4,657	4,657	4,658	5,992	5,992
Illinois	42,634	48,552	48,552	48,552	44,658	44,658
Indiana	16,498	12,832	12,832	12,833	16,684	16,684
Iowa	11,441	9,481	9,481	9,482	12,816	12,816
Kansas	9,100	7,232	7,232	7,232	9,554	9,554
Kentucky	6,615	6,212	6,212	6,213	6,830	6,830
Louisiana	33,058	7,325	7,325	7,326	35,405	35,405
Maine	4,371	6,484	6,484	6,485	2,725	2,581
Maryland	12,848	11,448	11,448	11,449	13,946	14,274
Massachusetts	21,014	27,958	27,958	27,960	17,941	17,716
Michigan	29,958	38,590	38,590	38,591	31,214	31,214
Minnesota	22,831	22,313	22,313	22,314	22,251	22,251
Mississippi	4,248	3,625	3,625	3,626	4,217	4,217
Missouri	13,127	14,530	14,530	14,531	13,380	13,380

State	2011en	2014fd	2016fe	2016ff	2023en	2028el
Montana	3,451	5,050	5,050	5,051	3,415	3,415
Nebraska	4,234	2,755	2,755	2,756	4,159	4,159
Nevada	4,275	3,251	3,251	3,253	3,813	3,813
New Hampshire	4,373	10,782	10,782	10,782	3,733	3,645
New Jersey	23,144	25,978	25,978	24,808	21,850	23,746
New Mexico	4,961	7,678	7,678	7,678	5,081	5,081
New York	62,946	58,447	58,447	58,448	57,399	57,610
North Carolina	13,268	15,795	15,795	15,799	13,594	13,594
North Dakota	4,148	1,275	1,275	1,275	4,259	4,259
Ohio	37,241	35,082	35,082	35,083	39,919	39,919
Oklahoma	17,784	8,363	8,363	8,364	19,817	19,817
Oregon	11,811	8,623	8,623	8,626	12,557	12,557
Pennsylvania	33,198	61,553	61,553	61,554	30,971	30,495
Rhode Island	5,565	3,468	3,468	3,468	4,033	3,726
South Carolina	9,979	9,338	9,338	9,340	11,713	11,713
South Dakota	1,974	1,213	1,213	1,213	1,606	1,606
Tennessee	16,230	18,084	18,084	18,086	17,218	17,218
Texas	32,622	46,146	46,146	46,162	39,790	39,790
Utah	7,002	4,854	4,854	4,856	6,870	6,870
Vermont	3,531	3,176	3,176	3,176	2,776	2,703
Virginia	15,102	18,382	18,382	18,384	14,880	14,996
Washington	5,665	11,868	11,868	11,873	5,711	5,711
West Virginia	4,841	7,798	7,798	7,798	4,798	4,798
Wisconsin	20,944	20,062	20,062	20,063	20,521	20,521
Wyoming	1,546	1,022	1,022	1,022	1,543	1,543
Puerto Rico	37	864	864	864	36	36
Virgin Islands	1	59	59	59	1	1
Tribal Data	334	120	120	120	326	326

**Table 6. Comparison of state total annual VOC nonpt emissions (tons/yr)**

State	2011en	2014fd	2016fe	2016ff	2023en	2028el
Alabama	66,226	69,875	69,875	70,147	60,092	60,092
Alaska	9,278	7,944	7,944	7,986	7,872	7,872
Arizona	64,286	68,370	68,370	69,694	59,461	59,461
Arkansas	58,559	53,026	53,026	53,344	51,760	51,760
California	244,800	224,154	224,154	225,686	238,165	238,165
Colorado	41,085	35,883	35,883	36,987	39,010	39,010
Connecticut	31,218	41,841	41,841	41,861	30,692	30,447
Delaware	7,164	6,054	6,054	6,125	6,864	6,957
D.C.	3,927	4,685	4,685	4,837	4,315	4,439
Florida	251,511	219,307	219,307	224,596	218,130	218,130
Georgia	137,331	136,011	136,011	137,573	126,927	126,927
Hawaii	17,892	14,570	14,570	14,641	16,015	16,015

State	2011en	2014fd	2016fe	2016ff	2023en	2028el
Idaho	37,268	42,629	42,629	42,991	34,705	34,705
Illinois	133,768	134,425	134,425	134,538	128,376	128,376
Indiana	92,125	94,795	94,795	95,310	84,127	84,127
Iowa	72,032	48,853	48,853	49,145	66,656	66,656
Kansas	66,245	48,078	48,078	48,323	61,407	61,407
Kentucky	64,217	59,746	59,746	60,238	57,842	57,842
Louisiana	121,111	73,941	73,941	74,278	109,500	109,500
Maine	13,216	14,862	14,862	14,904	12,242	11,971
Maryland	45,120	49,454	49,454	49,778	45,744	46,533
Massachusetts	59,544	75,762	75,762	76,266	55,739	55,720
Michigan	114,326	127,745	127,745	128,177	99,811	99,811
Minnesota	86,057	66,590	66,590	67,120	80,068	80,068
Mississippi	65,610	44,951	44,951	45,097	57,489	57,489
Missouri	88,022	85,136	85,136	85,566	79,662	79,662
Montana	17,282	26,621	26,621	26,770	15,803	15,803
Nebraska	41,688	33,936	33,936	34,191	38,867	38,867
Nevada	23,607	30,441	30,441	31,202	22,582	22,582
New Hampshire	12,696	14,128	14,128	14,177	11,913	11,970
New Jersey	79,765	78,490	78,490	78,734	75,992	77,448
New Mexico	29,207	30,565	30,565	30,622	26,083	26,083
New York	168,064	208,400	208,400	209,334	156,574	155,686
North Carolina	111,260	125,863	125,863	127,757	114,809	113,637
North Dakota	19,494	22,843	22,843	22,983	18,622	18,622
Ohio	124,575	151,524	151,524	152,146	118,893	118,893
Oklahoma	49,776	55,214	55,214	55,662	44,517	44,517
Oregon	50,603	51,675	51,675	52,643	48,172	48,172
Pennsylvania	124,041	170,578	170,578	171,039	119,340	118,490
Rhode Island	8,047	11,009	11,009	11,041	7,543	7,451
South Carolina	70,658	67,073	67,073	68,173	61,583	61,583
South Dakota	26,945	28,579	28,579	28,693	25,651	25,651
Tennessee	93,236	101,507	101,507	102,608	83,213	83,213
Texas	313,142	309,651	309,651	315,069	325,298	325,298
Utah	30,720	30,668	30,668	31,353	28,967	28,967
Vermont	5,397	7,384	7,384	7,396	5,353	5,366
Virginia	107,795	93,072	93,072	93,764	107,608	108,833
Washington	86,004	101,843	101,843	103,558	82,274	82,274
West Virginia	23,603	22,928	22,928	22,990	21,032	20,788
Wisconsin	77,752	64,543	64,543	64,743	72,878	72,878
Wyoming	11,197	7,978	7,978	8,007	9,827	9,827
Puerto Rico	31,681	28,189	28,189	28,189	30,354	30,354
Virgin Islands	756	900	900	900	744	744
Tribal Data	689	753	753	753	624	624

Figure 1. Annual County-total 2016 nonpt NOx emissions

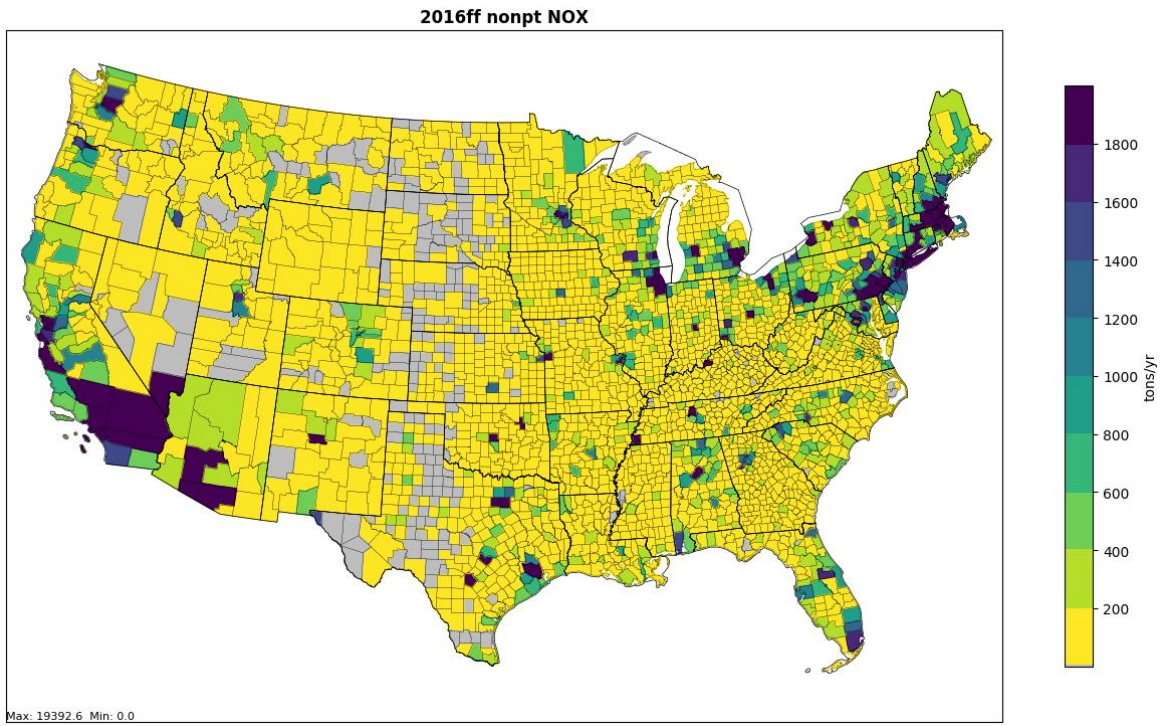


Figure 2. Annual County-total 2016 nonpt PM2.5 emissions

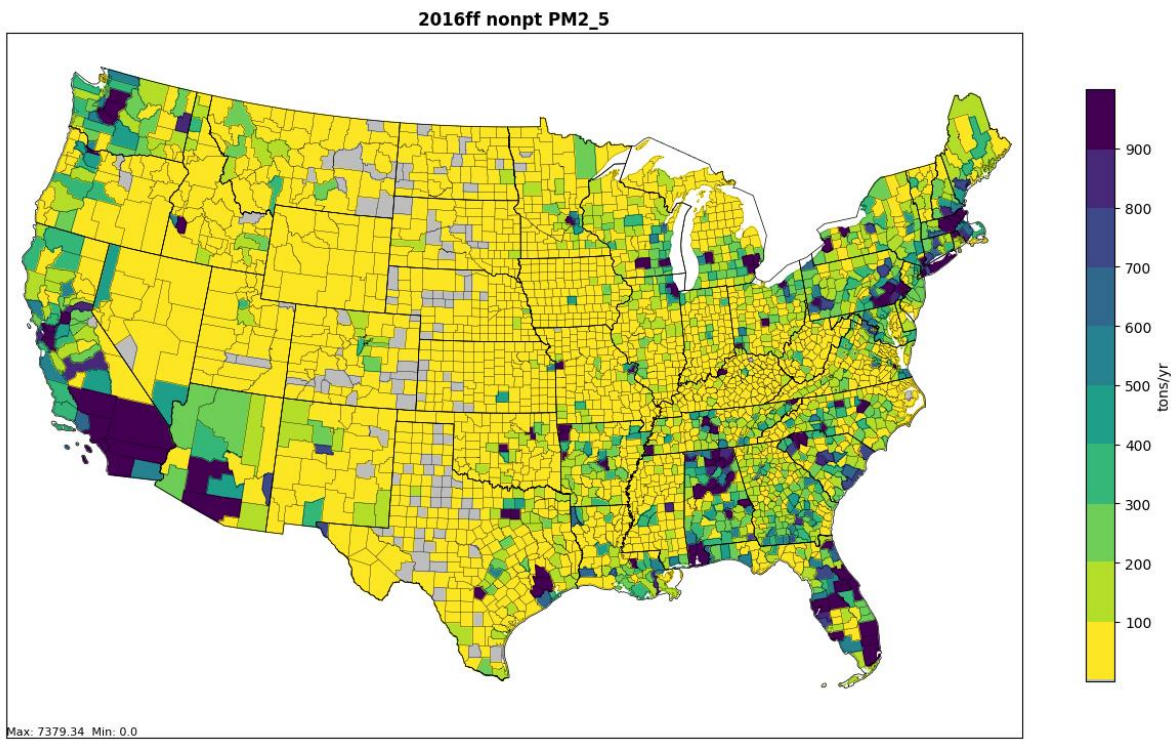
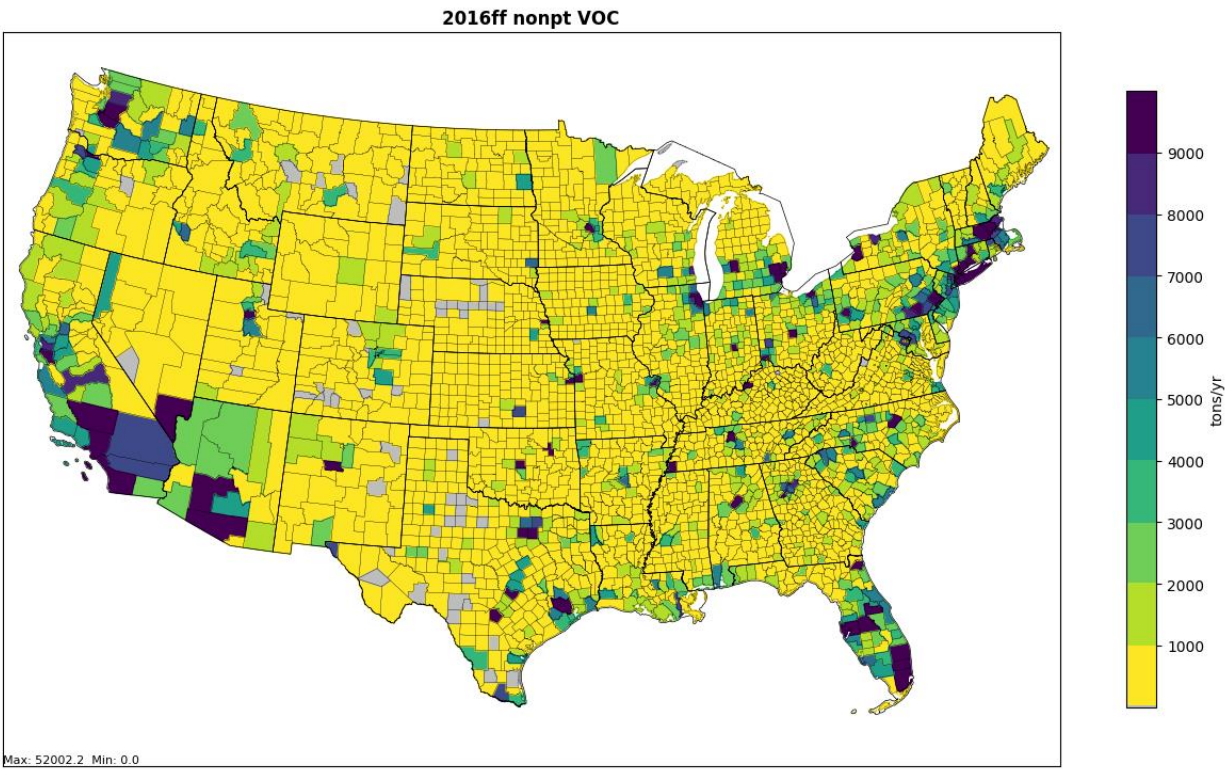


Figure 3. Annual County-total 2016 nonpt VOC emissions



## Appendix A: List of SCCs in nonpt sector

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
2102001000	Stationary Source Fuel Combustion	Industrial	Anthracite Coal	Total: All Boiler Types
2102002000	Stationary Source Fuel Combustion	Industrial	Bituminous/Subbituminous Coal	Total: All Boiler Types
2102004000	Stationary Source Fuel Combustion	Industrial	Distillate Oil	Total: Boilers and IC Engines
2102004001	Stationary Source Fuel Combustion	Industrial	Distillate Oil	All Boiler Types
2102004002	Stationary Source Fuel Combustion	Industrial	Distillate Oil	All IC Engine Types
2102005000	Stationary Source Fuel Combustion	Industrial	Residual Oil	Total: All Boiler Types
2102006000	Stationary Source Fuel Combustion	Industrial	Natural Gas	Total: Boilers and IC Engines
2102007000	Stationary Source Fuel Combustion	Industrial	Liquified Petroleum Gas (LPG)	Total: All Boiler Types
2102008000	Stationary Source Fuel Combustion	Industrial	Wood	Total: All Boiler Types
2102011000	Stationary Source Fuel Combustion	Industrial	Kerosene	Total: All Boiler Types
2102012000	Stationary Source Fuel Combustion	Industrial	Waste oil	Total
2103001000	Stationary Source Fuel Combustion	Commercial/Institutional	Anthracite Coal	Total: All Boiler Types
2103002000	Stationary Source Fuel Combustion	Commercial/Institutional	Bituminous/Subbituminous Coal	Total: All Boiler Types
2103004000	Stationary Source Fuel Combustion	Commercial/Institutional	Distillate Oil	Total: Boilers and IC Engines
2103004001	Stationary Source Fuel Combustion	Commercial/Institutional	Distillate Oil	Boilers
2103004002	Stationary Source Fuel Combustion	Commercial/Institutional	Distillate Oil	IC Engines
2103005000	Stationary Source Fuel Combustion	Commercial/Institutional	Residual Oil	Total: All Boiler Types
2103006000	Stationary Source Fuel Combustion	Commercial/Institutional	Natural Gas	Total: Boilers and IC Engines
2103007000	Stationary Source Fuel Combustion	Commercial/Institutional	Liquified Petroleum Gas (LPG)	Total: All Combustor Types
2103008000	Stationary Source Fuel Combustion	Commercial/Institutional	Wood	Total: All Boiler Types
2103011000	Stationary Source Fuel Combustion	Commercial/Institutional	Kerosene	Total: All Combustor Types



SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
2104001000	Stationary Source Fuel Combustion	Residential	Anthracite Coal	Total: All Combustor Types
2104002000	Stationary Source Fuel Combustion	Residential	Bituminous/Subbituminous Coal	Total: All Combustor Types
2104004000	Stationary Source Fuel Combustion	Residential	Distillate Oil	Total: All Combustor Types
2104006000	Stationary Source Fuel Combustion	Residential	Natural Gas	Total: All Combustor Types
2104007000	Stationary Source Fuel Combustion	Residential	Liquified Petroleum Gas (LPG)	Total: All Combustor Types
2104011000	Stationary Source Fuel Combustion	Residential	Kerosene	Total: All Heater Types
2275085000	Mobile Sources	Aircraft	Unpaved Airstrips	Total
2294000000	Mobile Sources	Paved Roads	All Paved Roads	Total: Fugitives
2301000000	Industrial Processes	Chemical Manufacturing: SIC 28	All Processes	Total
2301020000	Industrial Processes	Chemical Manufacturing: SIC 28	Process Emissions from Synthetic Fibers Manuf (NAPAP cat. 107)	Total
2301030000	Industrial Processes	Chemical Manufacturing: SIC 28	Process Emissions from Pharmaceutical Manuf (NAPAP cat. 106)	Total
2301040000	Industrial Processes	Chemical Manufacturing: SIC 28	Fugitive Emissions from Synthetic Organic Chem Manuf (NAPAP cat. 102)	Total
2302000000	Industrial Processes	Food and Kindred Products: SIC 20	All Processes	Total
2302002100	Industrial Processes	Food and Kindred Products: SIC 20	Commercial Cooking - Charbroiling	Conveyorized Charbroiling
2302002200	Industrial Processes	Food and Kindred Products: SIC 20	Commercial Cooking - Charbroiling	Under-fired Charbroiling
2302003000	Industrial Processes	Food and Kindred	Commercial Cooking - Frying	Deep Fat Frying



SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
		Products: SIC 20		
2302003100	Industrial Processes	Food and Kindred Products: SIC 20	Commercial Cooking - Frying	Flat Griddle Frying
2302003200	Industrial Processes	Food and Kindred Products: SIC 20	Commercial Cooking - Frying	Clamshell Griddle Frying
2302010000	Industrial Processes	Food and Kindred Products: SIC 20	Meat Products	Total
2302050000	Industrial Processes	Food and Kindred Products: SIC 20	Bakery Products	Total
2302070000	Industrial Processes	Food and Kindred Products: SIC 20	Fermentation/Beverages	Total
2302070001	Industrial Processes	Food and Kindred Products: SIC 20	Fermentation/Beverages	Breweries
2302070005	Industrial Processes	Food and Kindred Products: SIC 20	Fermentation/Beverages	Wineries
2302070010	Industrial Processes	Food and Kindred Products: SIC 20	Fermentation/Beverages	Distilleries
2302080000	Industrial Processes	Food and Kindred Products: SIC 20	Miscellaneous Food and Kindred Products	Total
2302080002	Industrial Processes	Food and Kindred Products: SIC 20	Miscellaneous Food and Kindred Products	Refrigeration
2304000000	Industrial Processes	Secondary Metal	All Processes	Total

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
		Production: SIC 33		
2305000000	Industrial Processes	Mineral Processes: SIC 32	All Processes	Total
2305070000	Industrial Processes	Mineral Processes: SIC 32	Concrete, Gypsum, Plaster Products	Total
2305080000	Industrial Processes	Mineral Processes: SIC 32	Cut Stone and Stone Products	Total
2306000000	Industrial Processes	Petroleum Refining: SIC 29	All Processes	Total
2306010000	Industrial Processes	Petroleum Refining: SIC 29	Asphalt Paving/Roofing Materials	Total
2307000000	Industrial Processes	Wood Products: SIC 24	All Processes	Total
2308000000	Industrial Processes	Rubber/Plastics : SIC 30	All Processes	Total
2309000000	Industrial Processes	Fabricated Metals: SIC 34	All Processes	Total
2309100200	Industrial Processes	Fabricated Metals: SIC 34	Coating, Engraving, and Allied Services	Abrasive Blasting
2311000000	Industrial Processes	Construction: SIC 15 - 17	All Processes	Total
2311010000	Industrial Processes	Construction: SIC 15 - 17	Residential	Total
2311020000	Industrial Processes	Construction: SIC 15 - 17	Industrial/Commercial/Institutional	Total
2311030000	Industrial Processes	Construction: SIC 15 - 17	Road Construction	Total
2312000000	Industrial Processes	Machinery: SIC 35	All Processes	Total
2325000000	Industrial Processes	Mining and Quarrying: SIC 14	All Processes	Total
2399000000	Industrial Processes	Industrial Processes: NEC	Industrial Processes: NEC	Total
2399010000	Industrial Processes	Industrial Refrigeration	Refrigerant Losses	All Processes
2401001000	Solvent Utilization	Surface Coating	Architectural Coatings	Total: All Solvent Types

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
2401001050	Solvent Utilization	Surface Coating	Architectural Coatings	All Other Architectural Categories
2401005000	Solvent Utilization	Surface Coating	Auto Refinishing: SIC 7532	Total: All Solvent Types
2401005700	Solvent Utilization	Surface Coating	Auto Refinishing: SIC 7532	Top Coats
2401005800	Solvent Utilization	Surface Coating	Auto Refinishing: SIC 7532	Clean-up Solvents
2401008000	Solvent Utilization	Surface Coating	Traffic Markings	Total: All Solvent Types
2401010000	Solvent Utilization	Surface Coating	Textile Products: SIC 22	Total: All Solvent Types
2401015000	Solvent Utilization	Surface Coating	Factory Finished Wood: SIC 2426 thru 242	Total: All Solvent Types
2401020000	Solvent Utilization	Surface Coating	Wood Furniture: SIC 25	Total: All Solvent Types
2401025000	Solvent Utilization	Surface Coating	Metal Furniture: SIC 25	Total: All Solvent Types
2401030000	Solvent Utilization	Surface Coating	Paper: SIC 26	Total: All Solvent Types
2401035000	Solvent Utilization	Surface Coating	Plastic Products: SIC 308	Total: All Solvent Types
2401040000	Solvent Utilization	Surface Coating	Metal Cans: SIC 341	Total: All Solvent Types
2401045000	Solvent Utilization	Surface Coating	Metal Coils: SIC 3498	Total: All Solvent Types
2401050000	Solvent Utilization	Surface Coating	Miscellaneous Finished Metals: SIC 34 - (341 + 3498)	Total: All Solvent Types
2401055000	Solvent Utilization	Surface Coating	Machinery and Equipment: SIC 35	Total: All Solvent Types
2401060000	Solvent Utilization	Surface Coating	Large Appliances: SIC 363	Total: All Solvent Types
2401065000	Solvent Utilization	Surface Coating	Electronic and Other Electrical: SIC 36 - 363	Total: All Solvent Types
2401070000	Solvent Utilization	Surface Coating	Motor Vehicles: SIC 371	Total: All Solvent Types
2401075000	Solvent Utilization	Surface Coating	Aircraft: SIC 372	Total: All Solvent Types
2401080000	Solvent Utilization	Surface Coating	Marine: SIC 373	Total: All Solvent Types

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
2401085000	Solvent Utilization	Surface Coating	Railroad: SIC 374	Total: All Solvent Types
2401090000	Solvent Utilization	Surface Coating	Miscellaneous Manufacturing	Total: All Solvent Types
2401100000	Solvent Utilization	Surface Coating	Industrial Maintenance Coatings	Total: All Solvent Types
2401200000	Solvent Utilization	Surface Coating	Other Special Purpose Coatings	Total: All Solvent Types
2415000000	Solvent Utilization	Degreasing	All Processes/All Industries	Total: All Solvent Types
2420000000	Solvent Utilization	Dry Cleaning	All Processes	Total: All Solvent Types
2425000000	Solvent Utilization	Graphic Arts	All Processes	Total: All Solvent Types
2440000000	Solvent Utilization	Miscellaneous Industrial	All Processes	Total: All Solvent Types
2440020000	Solvent Utilization	Miscellaneous Industrial	Adhesive (Industrial) Application	Total: All Solvent Types
2460000000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All Processes	Total: All Solvent Types
2460100000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All Personal Care Products	Total: All Solvent Types
2460200000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All Household Products	Total: All Solvent Types
2460400000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All Automotive Aftermarket Products	Total: All Solvent Types
2460500000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All Coatings and Related Products	Total: All Solvent Types
2460600000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All Adhesives and Sealants	Total: All Solvent Types

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
2460800000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	All FIFRA Related Products	Total: All Solvent Types
2460900000	Solvent Utilization	Miscellaneous Non-industrial: Consumer and Commercial	Miscellaneous Products (Not Otherwise Covered)	Total: All Solvent Types
2461000000	Solvent Utilization	Miscellaneous Non-industrial: Commercial	All Processes	Total: All Solvent Types
2461020000	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Asphalt Application: All Processes	Total: All Solvent Types
2461021000	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Cutback Asphalt	Total: All Solvent Types
2461022000	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Emulsified Asphalt	Total: All Solvent Types
2461023000	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Asphalt Roofing	Total: All Solvent Types
2461024000	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Asphalt Pipe Coating	Total: All Solvent Types
2461160000	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Tank/Drum Cleaning: All Processes	Total: All Solvent Types
2461800001	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Pesticide Application: All Processes	Surface Application
2461800002	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Pesticide Application: All Processes	Soil Incorporation
2461850000	Solvent Utilization	Miscellaneous Non-industrial: Commercial	Pesticide Application: Agricultural	All Processes
2501000150	Storage and Transport	Petroleum and Petroleum Product Storage	All Storage Types: Breathing Loss	Jet Naphtha
2501011011	Storage and Transport	Petroleum and Petroleum	Residential Portable Gas Cans	Permeation

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
		Product Storage		
2501011012	Storage and Transport	Petroleum and Petroleum Product Storage	Residential Portable Gas Cans	Evaporation (includes Diurnal losses)
2501011013	Storage and Transport	Petroleum and Petroleum Product Storage	Residential Portable Gas Cans	Spillage During Transport
2501011014	Storage and Transport	Petroleum and Petroleum Product Storage	Residential Portable Gas Cans	Refilling at the Pump - Vapor Displacement
2501011015	Storage and Transport	Petroleum and Petroleum Product Storage	Residential Portable Gas Cans	Refilling at the Pump - Spillage
2501012011	Storage and Transport	Petroleum and Petroleum Product Storage	Commercial Portable Gas Cans	Permeation
2501012012	Storage and Transport	Petroleum and Petroleum Product Storage	Commercial Portable Gas Cans	Evaporation (includes Diurnal losses)
2501012013	Storage and Transport	Petroleum and Petroleum Product Storage	Commercial Portable Gas Cans	Spillage During Transport
2501012014	Storage and Transport	Petroleum and Petroleum Product Storage	Commercial Portable Gas Cans	Refilling at the Pump - Vapor Displacement
2501012015	Storage and Transport	Petroleum and Petroleum Product Storage	Commercial Portable Gas Cans	Refilling at the Pump - Spillage
2501050120	Storage and Transport	Petroleum and Petroleum Product Storage	Bulk Terminals: All Evaporative Losses	Gasoline
2501055120	Storage and Transport	Petroleum and Petroleum	Bulk Plants: All Evaporative Losses	Gasoline

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
		Product Storage		
2501060050	Storage and Transport	Petroleum and Petroleum Product Storage	Gasoline Service Stations	Stage 1: Total
2501060051	Storage and Transport	Petroleum and Petroleum Product Storage	Gasoline Service Stations	Stage 1: Submerged Filling
2501060052	Storage and Transport	Petroleum and Petroleum Product Storage	Gasoline Service Stations	Stage 1: Splash Filling
2501060053	Storage and Transport	Petroleum and Petroleum Product Storage	Gasoline Service Stations	Stage 1: Balanced Submerged Filling
2501060201	Storage and Transport	Petroleum and Petroleum Product Storage	Gasoline Service Stations	Underground Tank: Breathing and Emptying
2501070053	Storage and Transport	Petroleum and Petroleum Product Storage	Diesel Service Stations	Stage 1: Balanced Submerged Filling
2501070201	Storage and Transport	Petroleum and Petroleum Product Storage	Diesel Service Stations	Underground Tank: Breathing and Emptying
2501080050	Storage and Transport	Petroleum and Petroleum Product Storage	Airports : Aviation Gasoline	Stage 1: Total
2501080100	Storage and Transport	Petroleum and Petroleum Product Storage	Airports : Aviation Gasoline	Stage 2: Total
2501080201	Storage and Transport	Petroleum and Petroleum Product Storage	Airports : Aviation Gasoline	Underground Tank: Breathing and Emptying
2501995120	Storage and Transport	Petroleum and Petroleum	All Storage Types: Working Loss	Gasoline

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
		Product Storage		
2501995180	Storage and Transport	Petroleum and Petroleum Product Storage	All Storage Types: Working Loss	Kerosene
2505000120	Storage and Transport	Petroleum and Petroleum Product Transport	All Transport Types	Gasoline
2505010000	Storage and Transport	Petroleum and Petroleum Product Transport	Rail Tank Car	Total: All Products
2505020000	Storage and Transport	Petroleum and Petroleum Product Transport	Marine Vessel	Total: All Products
2505020030	Storage and Transport	Petroleum and Petroleum Product Transport	Marine Vessel	Crude Oil
2505020060	Storage and Transport	Petroleum and Petroleum Product Transport	Marine Vessel	Residual Oil
2505020090	Storage and Transport	Petroleum and Petroleum Product Transport	Marine Vessel	Distillate Oil
2505020120	Storage and Transport	Petroleum and Petroleum Product Transport	Marine Vessel	Gasoline
2505020150	Storage and Transport	Petroleum and Petroleum Product Transport	Marine Vessel	Jet Naphtha
2505020180	Storage and Transport	Petroleum and Petroleum Product Transport	Marine Vessel	Kerosene
2505020900	Storage and Transport	Petroleum and Petroleum	Marine Vessel	Tank Cleaning



SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
		Product Transport		
2505030120	Storage and Transport	Petroleum and Petroleum Product Transport	Truck	Gasoline
2505040120	Storage and Transport	Petroleum and Petroleum Product Transport	Pipeline	Gasoline
2510000000	Storage and Transport	Organic Chemical Storage	All Storage Types: Breathing Loss	Total: All Products
2520010000	Storage and Transport	Inorganic Chemical Storage	Commercial/Industrial: Breathing Loss	Total: All Products
2601000000	Waste Disposal, Treatment, and Recovery	On-site Incineration	All Categories	Total
2601010000	Waste Disposal, Treatment, and Recovery	On-site Incineration	Industrial	Total
2601020000	Waste Disposal, Treatment, and Recovery	On-site Incineration	Commercial/Institutional	Total
2610000100	Waste Disposal, Treatment, and Recovery	Open Burning	All Categories	Yard Waste - Leaf Species Unspecified
2610000300	Waste Disposal, Treatment, and Recovery	Open Burning	All Categories	Yard Waste - Weed Species Unspecified (incl Grass)
2610000400	Waste Disposal, Treatment, and Recovery	Open Burning	All Categories	Yard Waste - Brush Species Unspecified
2610000500	Waste Disposal, Treatment, and Recovery	Open Burning	All Categories	Land Clearing Debris (use 28-10-005-000 for Logging Debris Burning)
2610030000	Waste Disposal, Treatment, and Recovery	Open Burning	Residential	Household Waste (use 26-10-000-xxx for Yard Wastes)
2620010000	Waste Disposal, Treatment, and Recovery	Landfills	Industrial	Total

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
2620030000	Waste Disposal, Treatment, and Recovery	Landfills	Municipal	Total
2620030001	Waste Disposal, Treatment, and Recovery	Landfills	Municipal	Dumping/Crushing/Spreading of New Materials (working face)
2630010000	Waste Disposal, Treatment, and Recovery	Wastewater Treatment	Industrial	Total Processed
2630020000	Waste Disposal, Treatment, and Recovery	Wastewater Treatment	Public Owned	Total Processed
2635000000	Waste Disposal, Treatment, and Recovery	Soil and Groundwater Remediation	All Categories	Total
2640000000	Waste Disposal, Treatment, and Recovery	TSDFs	All TSDF Types	Total: All Processes
2650000000	Waste Disposal, Treatment, and Recovery	Scrap and Waste Materials	Scrap and Waste Materials	Total: All Processes
2650000002	Waste Disposal, Treatment, and Recovery	Scrap and Waste Materials	Scrap and Waste Materials	Shredding
2660000000	Waste Disposal, Treatment, and Recovery	Leaking Underground Storage Tanks	Leaking Underground Storage Tanks	Total: All Storage Types
2680001000	Waste Disposal, Treatment, and Recovery	Composting	100% Biosolids (e.g., sewage sludge, manure, mixtures of these mats)	All Processes
2680002000	Waste Disposal, Treatment, and Recovery	Composting	Mixed Waste (e.g., a 50:50 mixture of biosolids and green wastes)	All Processes
2680003000	Waste Disposal, Treatment, and Recovery	Composting	100% Green Waste (e.g., residential or municipal yard wastes)	All Processes
2801000000	Miscellaneous Area Sources	Agriculture Production - Crops	Agriculture - Crops	Total

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
2801520000	Miscellaneous Area Sources	Agriculture Production - Crops	Orchard Heaters	Total, all fuels
2801600000	Miscellaneous Area Sources	Agriculture Production - Crops	Country Grain Elevators	Total
2806010000	Miscellaneous Area Sources	Domestic Animals Waste Emissions	Cats	Total
2806015000	Miscellaneous Area Sources	Domestic Animals Waste Emissions	Dogs	Total
2807020001	Miscellaneous Area Sources	Wild Animals Waste Emissions	Bears	Black Bears
2807020002	Miscellaneous Area Sources	Wild Animals Waste Emissions	Bears	Grizzly Bears
2807025000	Miscellaneous Area Sources	Wild Animals Waste Emissions	Elk	Total
2807030000	Miscellaneous Area Sources	Wild Animals Waste Emissions	Deer	Total
2807040000	Miscellaneous Area Sources	Wild Animals Waste Emissions	Birds	Total
2810003000	Miscellaneous Area Sources	Other Combustion	Cigarette Smoke	Total
2810005000	Miscellaneous Area Sources	Other Combustion	Managed Burning, Slash (Logging Debris)	Unspecified Burn Method (use 2610000500 for non-logging debris)
2810005001	Miscellaneous Area Sources	Other Combustion	Managed Burning, Slash (Logging Debris)	Pile Burning
2810010000	Miscellaneous Area Sources	Other Combustion	Human Perspiration and Respiration	Total
2810025000	Miscellaneous Area Sources	Other Combustion	Residential Grilling (see 23-02-002-xxx for Commercial)	Total
2810030000	Miscellaneous Area Sources	Other Combustion	Structure Fires	Unspecified

SCC	Tier 1 Description	Tier 2 Description	Tier 3 Description	Tier 4 Description
2810035000	Miscellaneous Area Sources	Other Combustion	Firefighting Training	Total
2810040000	Miscellaneous Area Sources	Other Combustion	Aircraft/Rocket Engine Firing and Testing	Total
2810050000	Miscellaneous Area Sources	Other Combustion	Motor Vehicle Fires	Unspecified
2810060100	Miscellaneous Area Sources	Other Combustion	Cremation	Humans
2810060200	Miscellaneous Area Sources	Other Combustion	Cremation	Animals
2830000000	Miscellaneous Area Sources	Catastrophic/Accidental Releases	All Catastrophic/Accidental Releases	Total
2840000000	Miscellaneous Area Sources	Automotive Repair Shops	Automotive Repair Shops	Total
2840010000	Miscellaneous Area Sources	Automotive Repair Shops	Auto Top and Body Repair	Total
2850000010	Miscellaneous Area Sources	Health Services	Hospitals	Sterilization Operations
2851001000	Miscellaneous Area Sources	Laboratories	Bench Scale Reagents	Total
2862000000	Miscellaneous Area Sources	Swimming Pools	Total (Commercial, Residential, Public)	Total