

APPENDIX B

STATE-WIDE NATIONAL EMISSIONS INVENTORY (NEI),

SO₂ & NO_x BY SECTOR,

2014-2020

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Summary

Catego	POLLUTANT	2011	2012	2014	2013	2015	2016	2017	2018	2019	2020
AREA	Nitrogen Oxides	31,007	29,414	27,774	26,181	24,572	22,914	21,305	21,613	21,929	22,237
AREA	Sulfur Dioxide	28,375	25,440	22,416	19,481	18,143	16,763	15,425	15,214	14,998	14,787
EGU	Nitrogen Oxides	119,627	116,534	113,348	110,255	94,878	79,034	63,657	57,481	51,119	44,943
EGU	Sulfur Dioxide	352,336	332,856	312,786	293,306	217,684	139,770	64,148	55,903	47,407	39,162
NONROAD	Nitrogen Oxides	70,541	68,840	67,086	65,385	61,477	57,452	53,544	49,690	45,719	41,865
NONROAD	Sulfur Dioxide	474	391	306	223	211	199	187	155	121	89
ONROAD	Nitrogen Oxides	171,439	164,975	158,314	151,850	134,202	116,018	98,370	86,499	74,269	62,398
ONROAD	Sulfur Dioxide	797	746	694	643	599	555	511	421	328	238
POINT	Nitrogen Oxides	50,870	48,251	45,554	42,935	43,144	43,358	43,567	43,547	43,527	43,507
POINT	Sulfur Dioxide	43,099	39,432	35,654	31,987	28,364	24,630	21,007	27,384	33,954	40,331

Interpolation of Intervening Years between NEI Years

TIER	Category	POLLUTANT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Biogenics - Vegetation and Soil	Biogenics	Nitrogen Oxides	22,566	21,494	20,389	19,317	21,222	23,186	25,091	25,254	25,423	25,586
Bulk Gasoline Terminals	POINT	Nitrogen Oxides	3	5	8	10	9	7	6	7	9	10
Bulk Gasoline Terminals	POINT	Sulfur Dioxide	-	0	1	1	1	0	-	-	-	-
Commercial Cooking	AREA	Nitrogen Oxides	-	-	-	-	-	-	-	-	-	-
Commercial Cooking	AREA	Sulfur Dioxide	-	-	-	-	-	-	-	-	-	-
Fires - Agricultural Field Burning	AREA	Nitrogen Oxides	8	10	11	13	9	4	-	6	11	17
Fires - Agricultural Field Burning	AREA	Sulfur Dioxide	3	3	2	2	1	1	-	1	1	2
Fires - Prescribed Fires	AREA	Nitrogen Oxides	397	562	733	898	863	828	793	643	488	338
Fires - Prescribed Fires	AREA	Sulfur Dioxide	211	298	389	476	453	428	405	323	238	156
Fires - Wildfires	AREA	Nitrogen Oxides	26	25	23	22	29	36	43	34	24	15
Fires - Wildfires	AREA	Sulfur Dioxide	12	11	11	10	14	17	21	16	11	6
Fuel Comb - Comm/Institutional - Biomass	AREA	Nitrogen Oxides	228	211	194	177	181	185	189	197	204	212
Fuel Comb - Comm/Institutional - Biomass	AREA	Sulfur Dioxide	19	16	14	11	12	13	14	16	18	20
Fuel Comb - Comm/Institutional - Coal	AREA	Nitrogen Oxides	2,225	1,679	1,117	571	457	339	225	222	218	215
Fuel Comb - Comm/Institutional - Coal	AREA	Sulfur Dioxide	9,128	7,309	5,436	3,617	2,747	1,850	980	1,038	1,098	1,156
Fuel Comb - Comm/Institutional - Natural Gas	AREA	Nitrogen Oxides	4,057	3,738	3,410	3,091	3,244	3,402	3,555	3,708	3,866	4,019
Fuel Comb - Comm/Institutional - Natural Gas	AREA	Sulfur Dioxide	18	16	13	11	12	13	14	15	17	18
Fuel Comb - Comm/Institutional - Oil	AREA	Nitrogen Oxides	1,571	1,079	573	81	90	98	107	92	76	61
Fuel Comb - Comm/Institutional - Oil	AREA	Sulfur Dioxide	31	26	20	15	12	8	5	5	5	5
Fuel Comb - Comm/Institutional - Other	AREA	Nitrogen Oxides	175	247	322	394	343	290	239	246	252	259
Fuel Comb - Comm/Institutional - Other	AREA	Sulfur Dioxide	4	4	4	4	3	1	-	-	-	-
Fuel Comb - Electric Generation - Coal	EGU	Nitrogen Oxides	116,612	113,186	109,655	106,229	90,746	74,795	59,312	53,475	47,460	41,623
Fuel Comb - Electric Generation - Coal	EGU	Sulfur Dioxide	351,817	332,329	312,251	292,763	217,157	139,261	63,655	55,525	47,148	39,018
Fuel Comb - Electric Generation - Natural Gas	EGU	Nitrogen Oxides	2,561	2,893	3,236	3,568	3,747	3,930	4,109	3,678	3,235	2,804
Fuel Comb - Electric Generation - Natural Gas	EGU	Sulfur Dioxide	460	467	474	481	465	448	432	331	226	125
Fuel Comb - Electric Generation - Oil	EGU	Nitrogen Oxides	130	123	117	110	113	115	118	94	70	46
Fuel Comb - Electric Generation - Oil	EGU	Sulfur Dioxide	31	32	34	35	41	48	54	41	28	15
Fuel Comb - Electric Generation - Other	EGU	Nitrogen Oxides	324	332	340	348	272	194	118	234	354	470
Fuel Comb - Electric Generation - Other	EGU	Sulfur Dioxide	28	28	27	27	20	14	7	6	5	4
Fuel Comb - Industrial Boilers, ICES - Biomass	POINT	Nitrogen Oxides	234	239	244	249	298	349	398	469	542	613
Fuel Comb - Industrial Boilers, ICES - Biomass	POINT	Sulfur Dioxide	35	28	22	15	22	28	35	43	51	59
Fuel Comb - Industrial Boilers, ICES - Coal	POINT	Nitrogen Oxides	5,334	4,534	3,711	2,911	2,273	1,617	979	1,691	2,426	3,138
Fuel Comb - Industrial Boilers, ICES - Coal	POINT	Sulfur Dioxide	16,492	13,506	10,429	7,443	5,517	3,532	1,606	8,288	15,172	21,854
Fuel Comb - Industrial Boilers, ICES - Natural Gas	POINT	Nitrogen Oxides	16,283	15,538	14,769	14,024	15,428	16,876	18,280	17,777	17,260	16,757
Fuel Comb - Industrial Boilers, ICES - Natural Gas	POINT	Sulfur Dioxide	157	360	568	771	593	411	233	220	207	194
Fuel Comb - Industrial Boilers, ICES - Oil	POINT	Nitrogen Oxides	926	991	1,059	1,124	1,571	2,032	2,479	2,145	1,800	1,466
Fuel Comb - Industrial Boilers, ICES - Oil	POINT	Sulfur Dioxide	278	339	401	462	423	382	343	276	207	140
Fuel Comb - Industrial Boilers, ICES - Other	POINT	Nitrogen Oxides	3,030	2,916	2,799	2,685	2,544	2,398	2,257	2,382	2,511	2,636
Fuel Comb - Industrial Boilers, ICES - Other	POINT	Sulfur Dioxide	9,233	8,909	8,575	8,251	8,207	8,163	8,119	7,938	7,753	7,572
Fuel Comb - Residential - Natural Gas	AREA	Nitrogen Oxides	6,571	6,833	7,102	7,364	6,856	6,332	5,824	5,978	6,138	6,292
Fuel Comb - Residential - Natural Gas	AREA	Sulfur Dioxide	32	34	37	39	35	32	28	29	31	32
Fuel Comb - Residential - Oil	AREA	Nitrogen Oxides	168	142	115	89	82	76	69	71	73	75
Fuel Comb - Residential - Oil	AREA	Sulfur Dioxide	387	332	274	219	151	82	14	9	5	-
Fuel Comb - Residential - Other	AREA	Nitrogen Oxides	1,657	1,436	1,207	986	929	870	813	853	894	934
Fuel Comb - Residential - Other	AREA	Sulfur Dioxide	1,391	932	459	-	-	-	-	-	-	-
Fuel Comb - Residential - Wood	AREA	Nitrogen Oxides	775	864	955	1,044	996	946	898	1,004	1,114	1,220
Fuel Comb - Residential - Wood	AREA	Sulfur Dioxide	420	401	380	361	307	252	198	238	280	320
Industrial Processes - Cement Manuf	POINT	Nitrogen Oxides	5,392	5,018	4,634	4,260	4,376	4,495	4,610	4,628	4,646	4,664
Industrial Processes - Cement Manuf	POINT	Sulfur Dioxide	3,289	2,672	2,035	1,418	1,349	1,277	1,208	1,254	1,301	1,347
Industrial Processes - Chemical Manuf	POINT	Nitrogen Oxides	1,132	963	788	619	596	571	548	532	515	499
Industrial Processes - Chemical Manuf	POINT	Sulfur Dioxide	917	924	930	937	966	997	1,026	977	927	878
Industrial Processes - Ferrous Metals	POINT	Nitrogen Oxides	4,108	4,088	4,068	4,048	3,986	3,922	3,860	3,973	4,089	4,202
Industrial Processes - Ferrous Metals	POINT	Sulfur Dioxide	4,180	4,425	4,676	4,921	4,851	4,780	4,710	4,455	4,191	3,936
Industrial Processes - Mining	POINT	Nitrogen Oxides	-	4	7	11	8	6	3	4	6	7
Industrial Processes - Mining	POINT	Sulfur Dioxide	-	3	7	10	7	3	-	0	1	1
Industrial Processes - NEC	AREA	Nitrogen Oxides	13,137	12,531	11,908	11,302	10,383	9,437	8,518	8,527	8,535	8,544
Industrial Processes - NEC	AREA	Sulfur Dioxide	16,719	16,058	15,376	14,715	14,395	14,066	13,746	13,524	13,294	13,072
Industrial Processes - Non-ferrous Metals	POINT	Nitrogen Oxides	3,648	3,771	3,898	4,021	3,910	3,796	3,685	3,615	3,543	3,473
Industrial Processes - Non-ferrous Metals	POINT	Sulfur Dioxide	6,759	6,603	6,441	6,285	5,231	4,145	3,091	3,195	3,302	3,406
Industrial Processes - Oil & Gas Production	POINT	Nitrogen Oxides	6,191	5,770	5,337	4,916	4,682	4,441	4,207	3,683	3,142	2,618
Industrial Processes - Oil & Gas Production	POINT	Sulfur Dioxide	84	167	253	336	263	187	114	149	184	219
Industrial Processes - Petroleum Refineries	POINT	Nitrogen Oxides	2,311	2,034	1,750	1,473	1,295	1,111	933	923	913	903
Industrial Processes - Petroleum Refineries	POINT	Sulfur Dioxide	1,010	903	794	687	523	353	189	198	208	217
Industrial Processes - Pulp & Paper	POINT	Nitrogen Oxides	-	-	-	-	-	-	-	-	-	-
Industrial Processes - Storage and Transfer	POINT	Nitrogen Oxides	5	3	2	-	1	1	2	2	3	3
Industrial Processes - Storage and Transfer	POINT	Sulfur Dioxide	426	287	143	4	5	5	6	6	6	6
Miscellaneous Non-Industrial NEC	AREA	Nitrogen Oxides	12	57	102	147	109	70	32	33	35	36
Miscellaneous Non-Industrial NEC	AREA	Sulfur Dioxide	-	0	1	1	1	0	-	-	-	-
Mobile - Aircraft	NONROAD	Nitrogen Oxides	1,192	1,228	1,264	1,300	1,164	1,023	887	783	675	571
Mobile - Aircraft	NONROAD	Sulfur Dioxide	130	132	135	137	133	130	126	106	86	66
Mobile - Commercial Marine Vessels	NONROAD	Nitrogen Oxides	149	1,972	3,850	5,673	4,041	2,361	729	643	554	468
Mobile - Commercial Marine Vessels	NONROAD	Sulfur Dioxide	20	15	11	6	8	9	11	10	9	8
Mobile - Locomotives	NONROAD	Nitrogen Oxides	21,442	20,660	19,855	19,073	18,256	17,413	16,596	15,185	13,732	12,321
Mobile - Locomotives	NONROAD	Sulfur Dioxide	211	144	74	7	7	7	7	6	5	4
Mobile - Non-Road Equipment - Diesel	NONROAD	Nitrogen Oxides	37,973	35,948	33,861	31,836	31,490	31,133	30,787	28,590	26,326	24,129
Mobile - Non-Road Equipment - Diesel	NONROAD	Sulfur Dioxide	91	79	68	56	47	37	28	21	14	7
Mobile - Non-Road Equipment - Gasoline	NONROAD	Nitrogen Oxides	5,625	5,464	5,297	5,136	4,433	3,708	3,005	2,995	2,986	2,976
Mobile - Non-Road Equipment - Gasoline	NONROAD	Sulfur Dioxide	12	13	13	14	13	11	10	7	5	2
Mobile - Non-Road Equipment - Other	NONROAD	Nitrogen Oxides	4,160	3,568	2,959	2,367	2,094	1,813	1,540	1,494	1,446	1,400
Mobile - Non-Road Equipment - Other	NONROAD	Sulfur Dioxide	10	8	5	3	4	4	5	4	3	2
Mobile - On-Road Diesel Heavy Duty Vehicles	ONROAD	Nitrogen Oxides	68,246	68,217	68,187	68,158	58,515	48,580	38,937	37,449	35,917	34,429
Mobile - On-Road Diesel Heavy Duty Vehicles	ONROAD	Sulfur Dioxide	71	83	95	107	107	107	107	84	60	37
Mobile - On-Road Diesel Light Duty Vehicles	ONROAD	Nitrogen Oxides	3,659	3,696	3,735	3,772	3,592	3,408	3,228	3,304	3,383	3,459
Mobile - On-Road Diesel Light Duty Vehicles	ONROAD	Sulfur Dioxide	1	1	1	1	1	1	1	1	0	-
Mobile - On-Road non-Diesel Heavy Duty Vehicles	ONROAD	Nitrogen Oxides	2,013	2,146	2,283	2,416	2,191	1,960	1,735	1,499	1,256	1,020
Mobile - On-Road non-Diesel Heavy Duty Vehicles	ONROAD	Sulfur Dioxide	4	4	4	4	3	2	1	1	2	2
Mobile - On-Road non-Diesel Light Duty Vehicles	ONROAD	Nitrogen Oxides	97,521	90,915	84,110	77,504	69,903	62,071	54,470	44,247	33,713	23,490
Mobile - On-Road non-Diesel Light Duty Vehicles	ONROAD	Sulfur Dioxide	721	658	594	531	488	445	402	335	266	199
Solvent - Degreasing	AREA	Nitrogen Oxides	-	-	-	-	-	-	-	-	-	-
Solvent - Degreasing	AREA	Sulfur Dioxide	-	-	-	-	-	-	-	-	-	-
Solvent - Graphic Arts	AREA	Nitrogen Oxides	-	1	1	2	1	1	-	-	-	-
Solvent - Graphic Arts	AREA	Sulfur Dioxide	-	-	-	-	-	-	-	-	-	-
Solvent - Industrial Surface Coating & Solvent Use	POINT	Nitrogen Oxides	23	23	23	23	24	25	26	22	19	15
Solvent - Industrial Surface Coating & Solvent Use	POINT	Sulfur Dioxide	-	-	-	-	2	5	7	7	7	7
Waste Disposal	POINT	Nitrogen Oxides	2,250	2,353	2,458	2,561	2,14					