

## Appendix D-2 Tioga County Non-road Annual Emissions by SCC

SCC	Classification	Equipment Type	Engine Type	Pollutant Code	2002 Emissions	2004 Emissions	2009 Emissions	2018 Emissions
2260001010	Recreational Equipment	Motorcycles: Off-Road	2 Stroke	NOx	0.143686	0.167168	0.273473	0.442908
2260001020	Recreational Equipment	Snowmobiles	2 Stroke	NOx	1.120444	1.223316	2.213697	6.142718
2260001030	Recreational Equipment	ATVs	2 Stroke	NOx	0.145284	0.199923	0.379508	0.642982
2260001060	Recreational Equipment	Specialty Vehicles/Carts	2 Stroke	NOx	0.214936	0.201407	0.164115	0.069113
2260002006	Construction and Mining Equipment	Tampers/Rammers	2 Stroke	NOx	0.014048	0.013510	0.007327	0.007349
2260002009	Construction and Mining Equipment	Plate Compactors	2 Stroke	NOx	0.000206	0.000348	0.000479	0.000491
2260002021	Construction and Mining Equipment	Paving Equipment	2 Stroke	NOx	0.000249	0.000425	0.000574	0.000588
2260002027	Construction and Mining Equipment	Signal Boards/Light Plants	2 Stroke	NOx	0.000002	0.000003	0.000004	0.000004
2260002039	Construction and Mining Equipment	Concrete/Industrial Saws	2 Stroke	NOx	0.033656	0.030476	0.018854	0.019317
2260002054	Construction and Mining Equipment	Crushing/Proc. Equipment	2 Stroke	NOx	0.000055	0.000091	0.000113	0.000116
2260003030	Industrial Equipment	Sweepers/Scrubbers	2 Stroke	NOx	0.000205	0.000296	0.000249	0.000088
2260003040	Industrial Equipment	Other General Industrial Eqp	2 Stroke	NOx	0.000016	0.000024	0.000020	0.000007
2260004015	Lawn and Garden Equipment (Res)	Rotary Tillers < 6 HP	2 Stroke	NOx	0.000766	0.001003	0.001904	0.002402
2260004016	Lawn and Garden Equipment (Com)	Rotary Tillers < 6 HP	2 Stroke	NOx	0.001920	0.002719	0.005170	0.006193
2260004020	Lawn and Garden Equipment (Res)	Chain Saws < 6 HP	2 Stroke	NOx	0.009990	0.014346	0.027528	0.032913
2260004030	Lawn and Garden Equipment (Com)	Chain Saws < 6 HP	2 Stroke	NOx	0.087516	0.085956	0.058831	0.068545
2260004025	Lawn and Garden Equipment (Res)	Trimmers/Edgers/Brush Cutter	2 Stroke	NOx	0.015331	0.021080	0.038645	0.046142
2260004026	Lawn and Garden Equipment (Com)	Trimmers/Edgers/Brush Cutter	2 Stroke	NOx	0.026157	0.037285	0.051755	0.060172
2260004030	Lawn and Garden Equipment (Res)	Leafblowers/Vacuums	2 Stroke	NOx	0.009124	0.012996	0.024692	0.029496
2260004031	Lawn and Garden Equipment (Com)	Leafblowers/Vacuums	2 Stroke	NOx	0.041649	0.049027	0.048264	0.055784
2260004035	Lawn and Garden Equipment (Res)	Snowblowers	2 Stroke	NOx	0.002919	0.003043	0.003348	0.003901
2260004036	Lawn and Garden Equipment (Com)	Snowblowers	2 Stroke	NOx	0.006165	0.006425	0.007070	0.008238
2260004071	Lawn and Garden Equipment (Com)	Commercial Turf Equipment	2 Stroke	NOx	0.000008	0.000014	0.000022	0.000026
2260005035	Agricultural Equipment	Sprayers	2 Stroke	NOx	0.000876	0.001331	0.002151	0.002441
2260006005	Commercial Equipment	Generator Sets	2 Stroke	NOx	0.000733	0.001292	0.002072	0.002569
2260006010	Commercial Equipment	Pumps	2 Stroke	NOx	0.005829	0.009880	0.014105	0.017461
2260006015	Commercial Equipment	Air Compressors	2 Stroke	NOx	0.000002	0.000004	0.000005	0.000007
2260006035	Commercial Equipment	Hydro Power Units	2 Stroke	NOx	0.000035	0.000061	0.000085	0.000106
2260007005	Logging Equipment	Chain Saws > 6 HP	2 Stroke	NOx	0.051681	0.050022	0.032666	0.041370
2265001010	Recreational Equipment	Motorcycles: Off-Road	4 Stroke	NOx	0.237491	0.278779	0.354529	0.392118
2265001030	Recreational Equipment	ATVs	4 Stroke	NOx	2.143998	2.623465	3.224912	3.112705
2265001050	Recreational Equipment	Golf Carts	4 Stroke	NOx	0.962976	0.864626	0.823740	0.878214
2265001060	Recreational Equipment	Specialty Vehicles/Carts	4 Stroke	NOx	0.220508	0.228902	0.229813	0.220799
2265002003	Construction and Mining Equipment	Pavers	4 Stroke	NOx	0.030063	0.027071	0.019589	0.014894
2265002006	Construction and Mining Equipment	Tampers/Rammers	4 Stroke	NOx	0.000167	0.000152	0.000121	0.000122
2265002009	Construction and Mining Equipment	Plate Compactors	4 Stroke	NOx	0.035711	0.034474	0.024162	0.022472
2265002015	Construction and Mining Equipment	Rollers	4 Stroke	NOx	0.051509	0.045697	0.031435	0.026044
2265002021	Construction and Mining Equipment	Paving Equipment	4 Stroke	NOx	0.074996	0.070647	0.054475	0.051825
2265002024	Construction and Mining Equipment	Surfacing Equipment	4 Stroke	NOx	0.031168	0.028017	0.022320	0.022051
2265002027	Construction and Mining Equipment	Signal Boards/Light Plants	4 Stroke	NOx	0.001463	0.001350	0.001011	0.001036
2265002030	Construction and Mining Equipment	Trenchers	4 Stroke	NOx	0.090741	0.083088	0.058403	0.043138
2265002033	Construction and Mining Equipment	Bore/Drill Rigs	4 Stroke	NOx	0.028512	0.028337	0.021171	0.015755
2265002039	Construction and Mining Equipment	Concrete/Industrial Saws	4 Stroke	NOx	0.154328	0.135999	0.104889	0.101212
2265002042	Construction and Mining Equipment	Cement & Mortar Mixers	4 Stroke	NOx	0.058259	0.060522	0.051111	0.044611
2265002045	Construction and Mining Equipment	Cranes	4 Stroke	NOx	0.014938	0.014350	0.010661	0.004411
2265002054	Construction and Mining Equipment	Crushing/Proc. Equipment	4 Stroke	NOx	0.010087	0.009138	0.007332	0.006391
2265002057	Construction and Mining Equipment	Rough Terrain Forklifts	4 Stroke	NOx	0.025745	0.024400	0.015553	0.004091
2265002060	Construction and Mining Equipment	Rubber Tire Loaders	4 Stroke	NOx	0.063703	0.059137	0.030840	0.006597
2265002066	Construction and Mining Equipment	Tractors/Loaders/Backhoes	4 Stroke	NOx	0.048396	0.042479	0.035244	0.033985
2265002072	Construction and Mining Equipment	Skid Steer Loaders	4 Stroke	NOx	0.067924	0.064128	0.045903	0.024584
2265002078	Construction and Mining Equipment	Dumpers/Tenders	4 Stroke	NOx	0.009542	0.009824	0.008582	0.007678
2265002081	Construction and Mining Equipment	Other Construction Equipment	4 Stroke	NOx	0.022230	0.021554	0.016373	0.007180
2265003010	Industrial Equipment	Aerial Lifts	4 Stroke	NOx	0.362087	0.316475	0.193575	0.058291
2265003020	Industrial Equipment	Forklifts	4 Stroke	NOx	1.528577	1.298252	0.565348	0.042715
2265003030	Industrial Equipment	Sweepers/Scrubbers	4 Stroke	NOx	0.272198	0.220315	0.077363	0.013041
2265003040	Industrial Equipment	Other General Industrial Eqp	4 Stroke	NOx	0.240416	0.201916	0.092583	0.026767
2265003050	Industrial Equipment	Other Material Handling Eqp	4 Stroke	NOx	0.024004	0.020731	0.012498	0.002984
2265003060	Industrial Equipment	AC/Refrigeration	4 Stroke	NOx	0.003491	0.002663	0.001591	0.000563
2265003070	Industrial Equipment	Terminal Tractors	4 Stroke	NOx	0.157867	0.125101	0.025278	0.003183
2265004010	Lawn and Garden Equipment (Res)	Lawn mowers	4 Stroke	NOx	0.794755	0.862531	0.779907	0.579339
2265004011	Lawn and Garden Equipment (Com)	Lawn mowers	4 Stroke	NOx	0.348484	0.366406	0.239455	0.242806
2265004015	Lawn and Garden Equipment (Res)	Rotary Tillers < 6 HP	4 Stroke	NOx	0.067445	0.073083	0.065767	0.048547
2265004016	Lawn and Garden Equipment (Com)	Rotary Tillers < 6 HP	4 Stroke	NOx	0.175661	0.187896	0.158625	0.124991
2265004025	Lawn and Garden Equipment (Res)	Trimmers/Edgers/Brush Cutter	4 Stroke	NOx	0.004567	0.004866	0.004072	0.003204
2265004026	Lawn and Garden Equipment (Com)	Trimmers/Edgers/Brush Cutter	4 Stroke	NOx	0.009035	0.008766	0.006997	0.007484
2265004030	Lawn and Garden Equipment (Res)	Leafblowers/Vacuums	4 Stroke	NOx	0.008764	0.009335	0.007789	0.006112
2265004031	Lawn and Garden Equipment (Com)	Leafblowers/Vacuums	4 Stroke	NOx	0.596399	0.552856	0.450991	0.375525
2265004035	Lawn and Garden Equipment (Res)	Snowblowers	4 Stroke	NOx	0.094338	0.099198	0.109168	0.127192
2265004036	Lawn and Garden Equipment (Com)	Snowblowers	4 Stroke	NOx	0.199198	0.209460	0.230512	0.268571
2265004040	Lawn and Garden Equipment (Res)	Rear Engine Riding Mowers	4 Stroke	NOx	0.207308	0.203591	0.180601	0.202111
2265004041	Lawn and Garden Equipment (Com)	Rear Engine Riding Mowers	4 Stroke	NOx	0.048339	0.043469	0.040770	0.047449
2265004046	Lawn and Garden Equipment (Com)	Front Mowers	4 Stroke	NOx	0.051002	0.053840	0.051664	0.054325
2265004051	Lawn and Garden Equipment (Com)	Shredders < 6 HP	4 Stroke	NOx	0.019980	0.021539	0.018799	0.014401
2265004055	Lawn and Garden Equipment (Res)	Lawn & Garden Tractors	4 Stroke	NOx	2.848223	2.790194	2.431500	2.710848
2265004056	Lawn and Garden Equipment (Com)	Lawn & Garden Tractors	4 Stroke	NOx	0.675195	0.599747	0.554534	0.645315
2265004066	Lawn and Garden Equipment (Com)	Chippers/Stump Grinders	4 Stroke	NOx	0.215776	0.201301	0.126442	0.082187
2265004071	Lawn and Garden Equipment (Com)	Commercial Turf Equipment	4 Stroke	NOx	2.364655	2.170782	1.654260	1.821524
2265004075	Lawn and Garden Equipment (Res)	Other Lawn & Garden Eqp.	4 Stroke	NOx	0.078101	0.084719	0.083131	0.074072

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2265004076	Lawn and Garden Equipment (Com)	Other Lawn & Garden Eqp.	4 Stroke	NOx	0.052475	0.056861	0.055710	0.049492
2265005010	Agricultural Equipment	2-Wheel Tractors	4 Stroke	NOx	0.015505	0.013601	0.012652	0.014326
2265005015	Agricultural Equipment	Agricultural Tractors	4 Stroke	NOx	0.172628	0.163362	0.095124	0.032393
2265005020	Agricultural Equipment	Combines	4 Stroke	NOx	0.001298	0.001306	0.001137	0.000773
2265005025	Agricultural Equipment	Balers	4 Stroke	NOx	0.122709	0.123408	0.107470	0.073163
2265005030	Agricultural Equipment	Agricultural Mowers	4 Stroke	NOx	0.012671	0.012473	0.011008	0.011799
2265005035	Agricultural Equipment	Sprayers	4 Stroke	NOx	0.199628	0.205146	0.183225	0.147855
2265005040	Agricultural Equipment	Tillers > 6 HP	4 Stroke	NOx	0.191361	0.204584	0.227674	0.267786
2265005045	Agricultural Equipment	Swathers	4 Stroke	NOx	0.194361	0.195467	0.170223	0.115883
2265005055	Agricultural Equipment	Other Agricultural Equipment	4 Stroke	NOx	0.232348	0.233709	0.204381	0.146614
2265005060	Agricultural Equipment	Irrigation Sets	4 Stroke	NOx	0.338148	0.315892	0.143083	0.040956
2265006005	Commercial Equipment	Generator Sets	4 Stroke	NOx	1.111154	1.137388	1.062743	1.229549
2265006010	Commercial Equipment	Pumps	4 Stroke	NOx	0.336277	0.331950	0.264702	0.267406
2265006015	Commercial Equipment	Air Compressors	4 Stroke	NOx	0.231729	0.226257	0.171289	0.134236
2265006025	Commercial Equipment	Welders	4 Stroke	NOx	0.418407	0.398067	0.353198	0.343280
2265006030	Commercial Equipment	Pressure Washers	4 Stroke	NOx	0.490182	0.487133	0.410274	0.480728
2265006035	Commercial Equipment	Hydro Power Units	4 Stroke	NOx	0.024432	0.023016	0.020996	0.025162
2265007010	Logging Equipment	Shredders > 6 HP	4 Stroke	NOx	0.173410	0.191585	0.205231	0.230372
2265007015	Logging Equipment	Forest Eqp - Feller/Bunch/Skidder	4 Stroke	NOx	0.001949	0.001996	0.001540	0.001951
2265008005	Airport Equipment	Airport Ground Support Equipment	4 Stroke	NOx	0.000000	0.000000	0.000000	0.000000
2265010010	Industrial Equipment	Other Oil Field Equipment	4 Stroke	NOx	0.000000	0.000000	0.000000	0.000000
2267001060	Recreational Equipment	Specialty Vehicle Carts	LPG	NOx	0.074699	0.073426	0.062189	0.040378
2267002003	Construction and Mining Equipment	Pavers	LPG	NOx	0.016488	0.015718	0.009155	0.002533
2267002015	Construction and Mining Equipment	Rollers	LPG	NOx	0.027777	0.025478	0.010883	0.002966
2267002021	Construction and Mining Equipment	Paving Equipment	LPG	NOx	0.004348	0.004287	0.003319	0.001366
2267002024	Construction and Mining Equipment	Surfacing Equipment	LPG	NOx	0.002838	0.002686	0.001455	0.000415
2267002030	Construction and Mining Equipment	Trenchers	LPG	NOx	0.050468	0.048311	0.029251	0.007869
2267002033	Construction and Mining Equipment	Bore/Drill Rigs	LPG	NOx	0.016609	0.016644	0.014472	0.009606
2267002039	Construction and Mining Equipment	Concrete/Industrial Saws	LPG	NOx	0.048106	0.042414	0.012873	0.004918
2267002045	Construction and Mining Equipment	Cranes	LPG	NOx	0.017768	0.017517	0.013525	0.005426
2267002054	Construction and Mining Equipment	Crushing/Proc. Equipment	LPG	NOx	0.002958	0.002909	0.002207	0.000800
2267002057	Construction and Mining Equipment	Rough Terrain Forklifts	LPG	NOx	0.032087	0.031062	0.020702	0.005553
2267002060	Construction and Mining Equipment	Rubber Tire Loaders	LPG	NOx	0.079837	0.075692	0.041337	0.009129
2267002066	Construction and Mining Equipment	Tractors/Loaders/Backhoes	LPG	NOx	0.008482	0.007891	0.003631	0.000887
2267002072	Construction and Mining Equipment	Skid Steer Loaders	LPG	NOx	0.065967	0.064490	0.046744	0.018946
2267002081	Construction and Mining Equipment	Other Construction Equipment	LPG	NOx	0.026525	0.026252	0.020886	0.009652
2267003010	Industrial Equipment	Aerial Lifts	LPG	NOx	0.502051	0.502081	0.396734	0.193035
2267003020	Industrial Equipment	Forklifts	LPG	NOx	47.320495	45.569493	25.652855	5.983654
2267003030	Industrial Equipment	Sweepers/Scrubbers	LPG	NOx	0.361095	0.333297	0.133902	0.042672
2267003040	Industrial Equipment	Other General Industrial Equipm	LPG	NOx	0.110434	0.104250	0.050371	0.013128
2267003050	Industrial Equipment	Other Material Handling Equipment	LPG	NOx	0.027116	0.027064	0.021018	0.007867
2267003070	Industrial Equipment	Terminal Tractors	LPG	NOx	0.220510	0.198442	0.055633	0.024754
2267004066	Lawn and Garden Equipment (Com)	Chippers/Stump Grinders	LPG	NOx	0.179233	0.168048	0.083379	0.019686
2267005055	Agricultural Equipment	Other Agricultural Equipment	LPG	NOx	0.003420	0.003323	0.002773	0.001748
2267005060	Agricultural Equipment	Irrigation Sets	LPG	NOx	0.002879	0.002600	0.001114	0.000226
2267006005	Commercial Equipment	Generator Sets	LPG	NOx	0.557236	0.586043	0.537629	0.387941
2267006010	Commercial Equipment	Pumps	LPG	NOx	0.129769	0.133305	0.103690	0.051927
2267006015	Commercial Equipment	Air Compressors	LPG	NOx	0.156447	0.158155	0.108189	0.033239
2267006025	Commercial Equipment	Welders	LPG	NOx	0.195052	0.199791	0.143486	0.042782
2267006030	Commercial Equipment	Pressure Washers	LPG	NOx	0.002563	0.002682	0.002287	0.001143
2267006035	Commercial Equipment	Hydro Power Units	LPG	NOx	0.002429	0.002405	0.001359	0.000482
2267008005	Airport Equipment	Airport Ground Support Equipment	LPG	NOx	0.000000	0.000000	0.000000	0.000000
2268002081	Construction and Mining Equipment	Other Construction Equipment	CNG	NOx	0.001046	0.001036	0.000825	0.000384
2268003020	Industrial Equipment	Forklifts	CNG	NOx	3.445304	3.287632	1.837726	0.429192
2268003030	Industrial Equipment	Sweepers/Scrubbers	CNG	NOx	0.004117	0.003924	0.002168	0.000504
2268003040	Industrial Equipment	Other General Industrial Equipment	CNG	NOx	0.002692	0.002551	0.001324	0.000318
2268003060	Industrial Equipment	AC/Refrigeration	CNG	NOx	0.005264	0.004914	0.002203	0.000691
2268003070	Industrial Equipment	Terminal Tractors	CNG	NOx	0.015523	0.013861	0.003862	0.001722
2268005055	Agricultural Equipment	Other Agricultural Equipment	CNG	NOx	0.004137	0.003381	0.001890	0.000530
2268005060	Agricultural Equipment	Irrigation Sets	CNG	NOx	0.322927	0.186009	0.020924	0.000000
2268006005	Commercial Equipment	Generator Sets	CNG	NOx	0.182644	0.186093	0.166119	0.117994
2268006010	Commercial Equipment	Pumps	CNG	NOx	0.009158	0.009181	0.007357	0.003971
2268006015	Commercial Equipment	Air Compressors	CNG	NOx	0.013100	0.012836	0.008631	0.002409
2268006020	Commercial Equipment	Gas Compressors	CNG	NOx	0.483779	0.169793	0.049769	0.062194
2268006035	Commercial Equipment	Hydro Power Units	CNG	NOx	0.000000	0.000000	0.000000	0.000000
2268010010	Industrial Equipment	Other Oil Field Equipment	CNG	NOx	0.000000	0.000000	0.000000	0.000000
2270001060	Recreational Equipment	Specialty Vehicle Carts	Diesel	NOx	0.772453	0.782130	0.774660	0.632448
2270002003	Construction and Mining Equipment	Pavers	Diesel	NOx	1.330751	1.269823	1.083945	0.496387
2270002006	Construction and Mining Equipment	Tampers/Rammers	Diesel	NOx	0.002925	0.002852	0.002453	0.002098
2270002009	Construction and Mining Equipment	Plate Compactors	Diesel	NOx	0.045622	0.044358	0.038415	0.034380
2270002015	Construction and Mining Equipment	Rollers	Diesel	NOx	3.301817	3.188300	2.799352	1.412557
2270002018	Construction and Mining Equipment	Scrapers	Diesel	NOx	3.822753	3.673873	3.055714	1.338302
2270002021	Construction and Mining Equipment	Paving Equipment	Diesel	NOx	0.210441	0.203412	0.176360	0.100217
2270002024	Construction and Mining Equipment	Surfacing Equipment	Diesel	NOx	0.141798	0.139348	0.127520	0.087068
2270002027	Construction and Mining Equipment	Signal Boards/Light Plants	Diesel	NOx	0.398733	0.389330	0.354010	0.331600
2270002030	Construction and Mining Equipment	Trenchers	Diesel	NOx	1.535960	1.518335	1.412553	0.985281
2270002033	Construction and Mining Equipment	Bore/Drill Rigs	Diesel	NOx	1.823530	1.807402	1.696963	1.174383
2270002036	Construction and Mining Equipment	Excavators	Diesel	NOx	13.197818	12.432206	10.204321	3.498062

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2270002039	Construction and Mining Equipment	Concrete/Industrial Saws	Diesel	NOx	0.103274	0.101893	0.096991	0.071020
2270002042	Construction and Mining Equipment	Cement & Mortar Mixers	Diesel	NOx	0.068512	0.068321	0.064547	0.049644
2270002045	Construction and Mining Equipment	Cranes	Diesel	NOx	3.594159	3.452085	2.895241	1.342208
2270002048	Construction and Mining Equipment	Graders	Diesel	NOx	3.353388	3.137329	2.568659	0.871505
2270002051	Construction and Mining Equipment	Off-highway Trucks	Diesel	NOx	12.448018	12.044717	10.079877	4.985027
2270002054	Construction and Mining Equipment	Crushing/Proc. Equipment	Diesel	NOx	0.631036	0.612409	0.530605	0.296088
2270002057	Construction and Mining Equipment	Rough Terrain Forklifts	Diesel	NOx	4.218603	4.165344	3.765557	1.957197
2270002060	Construction and Mining Equipment	Rubber Tire Loaders	Diesel	NOx	16.160935	15.607556	13.460313	6.800942
2270002066	Construction and Mining Equipment	Tractors/Loaders/Backhoes	Diesel	NOx	9.818508	9.716298	9.097091	6.019358
2270002069	Construction and Mining Equipment	Crawler Tractor/Dozers	Diesel	NOx	14.200399	13.583927	11.456284	5.032435
2270002072	Construction and Mining Equipment	Skid Steer Loaders	Diesel	NOx	6.295335	6.350739	6.214976	5.073743
2270002075	Construction and Mining Equipment	Off-Highway Tractors	Diesel	NOx	1.713976	1.677255	1.476141	0.868920
2270002078	Construction and Mining Equipment	Dumpers/Tenders	Diesel	NOx	0.020262	0.020421	0.020668	0.016537
2270002081	Construction and Mining Equipment	Other Construction Equipment	Diesel	NOx	1.664408	1.620242	1.422877	0.833067
2270003010	Industrial Equipment	Aerial Lifts	Diesel	NOx	0.522007	0.523419	0.505152	0.423604
2270003020	Industrial Equipment	Forklifts	Diesel	NOx	5.508782	5.458604	4.674896	1.747954
2270003030	Industrial Equipment	Sweepers/Scrubbers	Diesel	NOx	2.920551	2.793838	2.425888	1.018089
2270003040	Industrial Equipment	Other General Industrial Eqp	Diesel	NOx	3.326246	3.219712	2.754451	1.368958
2270003050	Industrial Equipment	Other Material Handling Eqp	Diesel	NOx	0.153846	0.151772	0.139502	0.098439
2270003060	Industrial Equipment	AC\Refrigeration	Diesel	NOx	5.936984	5.887071	5.610658	4.614914
2270003070	Industrial Equipment	Terminal Tractors	Diesel	NOx	3.768933	3.617439	2.924981	0.812144
2270004031	Lawn and Garden Equipment (Com)	Leafblowers/Vacuums	Diesel	NOx	0.000133	0.000140	0.000152	0.000160
2270004036	Lawn and Garden Equipment (Com)	Snowblowers	Diesel	NOx	0.073511	0.076696	0.078142	0.059638
2270004046	Lawn and Garden Equipment (Com)	Front Mowers	Diesel	NOx	0.816419	0.844117	0.876649	0.892163
2270004056	Lawn and Garden Equipment (Com)	Lawn & Garden Tractors	Diesel	NOx	0.180172	0.181087	0.175357	0.192985
2270004066	Lawn and Garden Equipment (Com)	Chippers/Stump Grinders	Diesel	NOx	1.219894	1.279757	1.332350	1.044596
2270004071	Lawn and Garden Equipment (Com)	Commercial Turf Equipment	Diesel	NOx	0.123027	0.123452	0.123960	0.084107
2270004076	Lawn and Garden Equipment (Com)	Other Lawn & Garden Eqp.	Diesel	NOx	0.003202	0.003357	0.003556	0.003456
2270005010	Agricultural Equipment	2-Wheel Tractors	Diesel	NOx	0.003100	0.002881	0.002237	0.002281
2270005015	Agricultural Equipment	Agricultural Tractors	Diesel	NOx	134.153452	130.044869	116.695411	74.172041
2270005020	Agricultural Equipment	Combines	Diesel	NOx	13.601825	13.362516	12.194197	8.297741
2270005025	Agricultural Equipment	Balers	Diesel	NOx	0.058302	0.059052	0.058431	0.047910
2270005030	Agricultural Equipment	Agricultural Mowers	Diesel	NOx	0.012431	0.012290	0.011449	0.007974
2270005035	Agricultural Equipment	Sprayers	Diesel	NOx	0.963970	0.968396	0.932908	0.675129
2270005040	Agricultural Equipment	Tillers > 6 HP	Diesel	NOx	0.001585	0.001591	0.001515	0.001085
2270005045	Agricultural Equipment	Swathers	Diesel	NOx	0.952393	0.944077	0.887293	0.648495
2270005055	Agricultural Equipment	Other Agricultural Equipment	Diesel	NOx	2.802391	2.739345	2.460703	1.606653
2270005060	Agricultural Equipment	Irrigation Sets	Diesel	NOx	1.757651	1.738835	1.570908	0.876667
2270006005	Commercial Equipment	Generator Sets	Diesel	NOx	2.426130	2.491264	2.526415	2.115712
2270006010	Commercial Equipment	Pumps	Diesel	NOx	0.577580	0.593018	0.598576	0.493094
2270006015	Commercial Equipment	Air Compressors	Diesel	NOx	1.457878	1.480812	1.419077	0.901805
2270006020	Commercial Equipment	Gas Compressors	Diesel	NOx	0.000000	0.000000	0.000000	0.000000
2270006025	Commercial Equipment	Welders	Diesel	NOx	0.705889	0.728619	0.753694	0.676864
2270006030	Commercial Equipment	Pressure Washers	Diesel	NOx	0.081047	0.083088	0.083975	0.070815
2270006035	Commercial Equipment	Hydro Power Units	Diesel	NOx	0.063060	0.063772	0.061356	0.041843
2270007010	Logging Equipment	Shredders > 6 HP	Diesel	NOx	0.000000	0.000000	0.000000	0.000000
2270007015	Logging Equipment	Forest Eqp - Feller/Bunch/Skidder	Diesel	NOx	10.264194	9.074056	6.074042	1.272242
2270008005	Airport Equipment	Airport Ground Support Equipment	Diesel	NOx	0.000000	0.000000	0.000000	0.000000
2270009010	Construction and Mining Equipment	Other Underground Mining Equipment	Diesel	NOx	0.000000	0.000000	0.000000	0.000000
2270010010	Industrial Equipment	Other Oil Field Equipment	Diesel	NOx	0.000000	0.000000	0.000000	0.000000
2275000000	Aircraft	All Aircraft Types and Operations	Other	NOx	0.209129	0.209129	0.229221	0.270353
2280000000	Marine Vessels	Commercial	All Fuels	NOx	0.000000	0.000000	0.000000	0.000000
2280001000	Marine Vessels	Commercial	Coal	NOx	0.000000	0.000000	0.000000	0.000000
2280002000	Marine Vessels	Commercial	Diesel	NOx	0.000000	0.000000	0.000000	0.000000
2280003000	Marine Vessels	Commercial	Residual Fuel	NOx	0.000000	0.000000	0.000000	0.000000
2280004000	Marine Vessels	Commercial	Gasoline	NOx	0.000000	0.000000	0.000000	0.000000
2282005010	Pleasure Craft	Outboard	2 Stroke	NOx	1.737213	2.095960	3.075174	4.382285
2282005015	Pleasure Craft	Personal Water Craft	2 Stroke	NOx	0.486355	0.642744	1.004315	1.296869
2282010005	Pleasure Craft	Inboard/Sterndrive	4 Stroke	NOx	4.610861	4.902889	5.602332	6.814596
2282020005	Pleasure Craft	Inboard/Sterndrive	Diesel	NOx	5.112251	5.399790	5.759197	6.076472
2282020010	Pleasure Craft	Outboards	Diesel	NOx	0.019250	0.019680	0.020497	0.021708
2285002005	Railroad Equipment	Line Haul Locomotives	Diesel	NOx	2.269819	2.053959	1.715983	1.487412
2285002010	Railroad Equipment	Yard Locomotives	Diesel	NOx	0.000000	0.000000	0.000000	0.000000
2285002015	Railroad Equipment	Railway Maintenance	Diesel	NOx	0.000000	0.000000	0.000000	0.000000
2285004015	Railroad Equipment	Railway Maintenance	4 Stroke	NOx	0.000000	0.000000	0.000000	0.000000
2285006015	Railroad Equipment	Railway Maintenance	LPG	NOx	0.000000	0.000000	0.000000	0.000000
<b>County Total Annual NOx Emissions</b>					<b>386.526731</b>	<b>375.751798</b>	<b>320.336408</b>	<b>200.516995</b>
2260001010	Recreational Equipment	Motorcycles: Off-Road	2 Stroke	VOC	60.079144	69.736725	79.907416	64.815962
2260001020	Recreational Equipment	Snowmobiles	2 Stroke	VOC	171.583297	186.951941	194.096067	137.698263
2260001030	Recreational Equipment	ATVs	2 Stroke	VOC	59.980337	82.790813	99.290668	40.012356
2260001060	Recreational Equipment	Specialty Vehicles/Carts	2 Stroke	VOC	1.215145	1.126232	0.960304	0.982085
2260002006	Construction and Mining Equipment	Tampers/Rammers	2 Stroke	VOC	1.174801	1.124578	0.506514	0.502489
2260002009	Construction and Mining Equipment	Plate Compactors	2 Stroke	VOC	0.071166	0.043062	0.017785	0.018222

## Appendix D-2 Tioga County Non-road Annual Emissions by SCC

SCC	Classification	Equipment Type	Engine Type	Pollutant Code	2002 Emissions	2004 Emissions	2009 Emissions	2018 Emissions
2260002021	Construction and Mining Equipment	Paving Equipment	2 Stroke	VOC	0.084798	0.049885	0.021173	0.021694
2260002027	Construction and Mining Equipment	Signal Boards/Light Plants	2 Stroke	VOC	0.000608	0.000332	0.000182	0.000187
2260002039	Construction and Mining Equipment	Concrete/Industrial Saws	2 Stroke	VOC	3.137295	2.581785	1.251733	1.282532
2260002054	Construction and Mining Equipment	Crushing/Proc. Equipment	2 Stroke	VOC	0.015742	0.008404	0.004282	0.004387
2260003030	Industrial Equipment	Sweepers/Scrubbers	2 Stroke	VOC	0.054424	0.025302	0.009619	0.003410
2260003040	Industrial Equipment	Other General Industrial Eqp	2 Stroke	VOC	0.004319	0.002001	0.000756	0.000268
2260004015	Lawn and Garden Equipment (Res)	Rotary Tillers < 6 HP	2 Stroke	VOC	0.299840	0.259681	0.116333	0.096309
2260004016	Lawn and Garden Equipment (Com)	Rotary Tillers < 6 HP	2 Stroke	VOC	0.712867	0.587646	0.198042	0.194555
2260004020	Lawn and Garden Equipment (Res)	Chain Saws < 6 HP	2 Stroke	VOC	3.869121	3.204304	1.162792	1.179633
2260004021	Lawn and Garden Equipment (Com)	Chain Saws < 6 HP	2 Stroke	VOC	8.584886	7.371660	3.709188	4.321608
2260004025	Lawn and Garden Equipment (Res)	Trimmers/Edgers/Brush Cutter	2 Stroke	VOC	5.708116	4.768288	1.845174	1.896281
2260004026	Lawn and Garden Equipment (Com)	Trimmers/Edgers/Brush Cutter	2 Stroke	VOC	6.763272	4.928030	1.887682	2.186492
2260004030	Lawn and Garden Equipment (Res)	Leafblowers/Vacuums	2 Stroke	VOC	3.762080	3.165999	1.343432	1.410284
2260004031	Lawn and Garden Equipment (Com)	Leafblowers/Vacuums	2 Stroke	VOC	6.487554	5.240194	2.203443	2.520963
2260004035	Lawn and Garden Equipment (Res)	Snowblowers	2 Stroke	VOC	2.814772	2.921629	3.215766	3.747430
2260004036	Lawn and Garden Equipment (Com)	Snowblowers	2 Stroke	VOC	5.234131	5.453794	6.002985	6.995637
2260004071	Lawn and Garden Equipment (Com)	Commercial Turf Equipment	2 Stroke	VOC	0.002916	0.002036	0.000732	0.000854
2260005035	Agricultural Equipment	Sprayers	2 Stroke	VOC	0.306887	0.222884	0.077049	0.086036
2260006005	Commercial Equipment	Generator Sets	2 Stroke	VOC	0.253693	0.167162	0.072974	0.090515
2260006010	Commercial Equipment	Pumps	2 Stroke	VOC	1.738854	1.006830	0.530863	0.640255
2260006015	Commercial Equipment	Air Compressors	2 Stroke	VOC	0.000616	0.000339	0.000203	0.000251
2260006035	Commercial Equipment	Hydro Power Units	2 Stroke	VOC	0.009614	0.005326	0.003142	0.003896
2260007005	Logging Equipment	Chain Saws > 6 HP	2 Stroke	VOC	4.478242	4.238459	2.264553	2.867976
2265001010	Recreational Equipment	Motorcycles: Off-Road	4 Stroke	VOC	2.248246	2.515445	3.032630	3.090626
2265001030	Recreational Equipment	ATVs	4 Stroke	VOC	23.456510	27.437289	33.939833	33.884790
2265001050	Recreational Equipment	Golf Carts	4 Stroke	VOC	3.339865	2.977194	2.837221	3.024846
2265001060	Recreational Equipment	Specialty Vehicles/Carts	4 Stroke	VOC	1.331344	1.274591	1.138431	0.930400
2265002003	Construction and Mining Equipment	Pavers	4 Stroke	VOC	0.064854	0.057065	0.042815	0.039731
2265002006	Construction and Mining Equipment	Tampers/Rammers	4 Stroke	VOC	0.000549	0.000478	0.000377	0.000379
2265002009	Construction and Mining Equipment	Plate Compactors	4 Stroke	VOC	0.254469	0.248898	0.152476	0.126240
2265002015	Construction and Mining Equipment	Rollers	4 Stroke	VOC	0.104990	0.090712	0.073256	0.070220
2265002021	Construction and Mining Equipment	Paving Equipment	4 Stroke	VOC	0.355009	0.327217	0.218928	0.204836
2265002024	Construction and Mining Equipment	Surfacing Equipment	4 Stroke	VOC	0.131030	0.120949	0.079578	0.080858
2265002027	Construction and Mining Equipment	Signal Boards/Light Plants	4 Stroke	VOC	0.009163	0.008801	0.005031	0.005154
2265002030	Construction and Mining Equipment	Trenchers	4 Stroke	VOC	0.259232	0.240173	0.149827	0.140214
2265002033	Construction and Mining Equipment	Bore/Drill Rigs	4 Stroke	VOC	0.151850	0.150805	0.095705	0.073803
2265002039	Construction and Mining Equipment	Concrete/Industrial Saws	4 Stroke	VOC	0.378522	0.326722	0.281763	0.283938
2265002042	Construction and Mining Equipment	Cement & Mortar Mixers	4 Stroke	VOC	0.380115	0.347576	0.272927	0.210590
2265002045	Construction and Mining Equipment	Cranes	4 Stroke	VOC	0.013098	0.012311	0.009376	0.004452
2265002054	Construction and Mining Equipment	Crushing/Proc. Equipment	4 Stroke	VOC	0.034259	0.031303	0.021084	0.020717
2265002057	Construction and Mining Equipment	Rough Terrain Forklifts	4 Stroke	VOC	0.019491	0.018336	0.011717	0.002608
2265002060	Construction and Mining Equipment	Rubber Tire Loaders	4 Stroke	VOC	0.047081	0.043440	0.022205	0.003013
2265002066	Construction and Mining Equipment	Tractors/Loaders/Backhoes	4 Stroke	VOC	0.127215	0.108695	0.093601	0.094244
2265002072	Construction and Mining Equipment	Skid Steer Loaders	4 Stroke	VOC	0.088262	0.079727	0.059366	0.042538
2265002078	Construction and Mining Equipment	Dumpers/Tenders	4 Stroke	VOC	0.053219	0.048340	0.038462	0.032205
2265002081	Construction and Mining Equipment	Other Construction Equipment	4 Stroke	VOC	0.016873	0.016256	0.012441	0.005229
2265003010	Industrial Equipment	Aerial Lifts	4 Stroke	VOC	0.400269	0.335173	0.200467	0.063036
2265003020	Industrial Equipment	Forklifts	4 Stroke	VOC	1.130616	0.955441	0.412930	0.022202
2265003030	Industrial Equipment	Sweepers/Scrubbers	4 Stroke	VOC	0.350817	0.282488	0.111342	0.028167
2265003040	Industrial Equipment	Other General Industrial Eqp	4 Stroke	VOC	1.251626	1.085312	0.383022	0.131004
2265003050	Industrial Equipment	Other Material Handling Eqp	4 Stroke	VOC	0.028517	0.023471	0.013921	0.003791
2265003060	Industrial Equipment	AC\Refrigeration	4 Stroke	VOC	0.011391	0.008665	0.005196	0.001851
2265003070	Industrial Equipment	Terminal Tractors	4 Stroke	VOC	0.116509	0.091685	0.015694	0.001350
2265004010	Lawn and Garden Equipment (Res)	Lawn mowers	4 Stroke	VOC	11.120276	10.979643	10.238017	7.601710
2265004011	Lawn and Garden Equipment (Com)	Lawn mowers	4 Stroke	VOC	3.653977	3.814294	2.179660	2.035189
2265004015	Lawn and Garden Equipment (Res)	Rotary Tillers < 6 HP	4 Stroke	VOC	0.927420	0.922685	0.851934	0.602798
2265004016	Lawn and Garden Equipment (Com)	Rotary Tillers < 6 HP	4 Stroke	VOC	1.749653	1.737617	1.471494	0.924292
2265004025	Lawn and Garden Equipment (Res)	Trimmers/Edgers/Brush Cutter	4 Stroke	VOC	0.058148	0.059155	0.052458	0.039556
2265004026	Lawn and Garden Equipment (Com)	Trimmers/Edgers/Brush Cutter	4 Stroke	VOC	0.060395	0.060697	0.039287	0.036298
2265004030	Lawn and Garden Equipment (Res)	Leafblowers/Vacuums	4 Stroke	VOC	0.118297	0.120438	0.107026	0.081988
2265004031	Lawn and Garden Equipment (Com)	Leafblowers/Vacuums	4 Stroke	VOC	1.215619	1.080915	0.902139	0.916415
2265004035	Lawn and Garden Equipment (Res)	Snowblowers	4 Stroke	VOC	1.038507	1.059329	1.165922	1.358606
2265004036	Lawn and Garden Equipment (Com)	Snowblowers	4 Stroke	VOC	0.792318	0.823552	0.906587	1.056654
2265004040	Lawn and Garden Equipment (Res)	Rear Engine Riding Mowers	4 Stroke	VOC	1.066461	1.030584	0.983168	1.115850
2265004041	Lawn and Garden Equipment (Com)	Rear Engine Riding Mowers	4 Stroke	VOC	0.140600	0.124276	0.114193	0.132900
2265004046	Lawn and Garden Equipment (Com)	Front Mowers	4 Stroke	VOC	0.225192	0.212432	0.186950	0.190574
2265004051	Lawn and Garden Equipment (Com)	Shredders < 6 HP	4 Stroke	VOC	0.212692	0.206849	0.180538	0.112964
2265004055	Lawn and Garden Equipment (Res)	Lawn & Garden Tractors	4 Stroke	VOC	12.750228	12.122049	11.063763	12.467543
2265004056	Lawn and Garden Equipment (Com)	Lawn & Garden Tractors	4 Stroke	VOC	1.903602	1.644473	1.471723	1.712429
2265004066	Lawn and Garden Equipment (Com)	Chippers/Stump Grinders	4 Stroke	VOC	0.288432	0.259868	0.196313	0.177603
2265004071	Lawn and Garden Equipment (Com)	Commercial Turf Equipment	4 Stroke	VOC	7.044673	6.668296	5.423338	5.691107
2265004075	Lawn and Garden Equipment (Res)	Other Lawn & Garden Eqp.	4 Stroke	VOC	0.708587	0.682167	0.614743	0.472046
2265004076	Lawn and Garden Equipment (Com)	Other Lawn & Garden Eqp.	4 Stroke	VOC	0.469300	0.451627	0.406951	0.312376
2265005010	Agricultural Equipment	2-Wheel Tractors	4 Stroke	VOC	0.046503	0.039929	0.036559	0.041400
2265005015	Agricultural Equipment	Agricultural Tractors	4 Stroke	VOC	0.151940	0.140256	0.087319	0.040696
2265005020	Agricultural Equipment	Combines	4 Stroke	VOC	0.001099	0.001104	0.000977	0.000663
2265005025	Agricultural Equipment	Balers	4 Stroke	VOC	0.113970	0.114724	0.102100	0.069499
2265005030	Agricultural Equipment	Agricultural Mowers	4 Stroke	VOC	0.047852	0.042875	0.035191	0.036842

## Appendix D-2 Tioga County Non-road Annual Emissions by SCC

SCC	Classification	Equipment Type	Engine Type	Pollutant Code	2002 Emissions	2004 Emissions	2009 Emissions	2018 Emissions
2265005035	Agricultural Equipment	Sprayers	4 Stroke	VOC	0.695582	0.673802	0.563720	0.447740
2265005040	Agricultural Equipment	Tillers > 6 HP	4 Stroke	VOC	1.349017	1.332583	1.276041	1.125607
2265005045	Agricultural Equipment	Swathers	4 Stroke	VOC	0.166025	0.166754	0.147677	0.100322
2265005055	Agricultural Equipment	Other Agricultural Equipment	4 Stroke	VOC	0.263785	0.256205	0.219562	0.173861
2265005060	Agricultural Equipment	Irrigation Sets	4 Stroke	VOC	0.277580	0.260343	0.114321	0.035363
2265006005	Commercial Equipment	Generator Sets	4 Stroke	VOC	5.180980	5.043124	4.332313	4.809316
2265006010	Commercial Equipment	Pumps	4 Stroke	VOC	1.559889	1.592274	0.961549	1.127250
2265006015	Commercial Equipment	Air Compressors	4 Stroke	VOC	0.630438	0.631897	0.427794	0.482432
2265006025	Commercial Equipment	Welders	4 Stroke	VOC	0.980829	0.911509	0.854409	0.983787
2265006030	Commercial Equipment	Pressure Washers	4 Stroke	VOC	2.732192	2.755827	2.003338	2.167491
2265006035	Commercial Equipment	Hydro Power Units	4 Stroke	VOC	0.096385	0.093135	0.074268	0.091519
2265007010	Logging Equipment	Shredders > 6 HP	4 Stroke	VOC	0.836483	0.796075	0.076000	0.740641
2265007015	Logging Equipment	Forest Eq - Feller/Bunch/Skidder	4 Stroke	VOC	0.014988	0.015765	0.080402	0.010641
2265008005	Airport Equipment	Airport Ground Support Equipment	4 Stroke	VOC	0.000000	0.000000	0.000000	0.000000
2265010010	Industrial Equipment	Other Oil Field Equipment	4 Stroke	VOC	0.000000	0.000000	0.000000	0.000000
2267001060	Recreational Equipment	Specialty Vehicle Carts	LPG	VOC	0.020238	0.019936	0.017088	0.011153
2267002003	Construction and Mining Equipment	Pavers	LPG	VOC	0.004494	0.004318	0.002566	0.000527
2267002015	Construction and Mining Equipment	Rollers	LPG	VOC	0.007625	0.007072	0.003053	0.000476
2267002021	Construction and Mining Equipment	Paving Equipment	LPG	VOC	0.001176	0.001165	0.000920	0.000357
2267002024	Construction and Mining Equipment	Surfacing Equipment	LPG	VOC	0.000775	0.000740	0.000409	0.000084
2267002030	Construction and Mining Equipment	Trenchers	LPG	VOC	0.013754	0.013264	0.008204	0.001652
2267002033	Construction and Mining Equipment	Bore/Drill Rigs	LPG	VOC	0.004463	0.004488	0.003958	0.002633
2267002039	Construction and Mining Equipment	Concrete/Industrial Saws	LPG	VOC	0.013330	0.011926	0.003528	0.000750
2267002045	Construction and Mining Equipment	Cranes	LPG	VOC	0.004807	0.004762	0.003751	0.001422
2267002054	Construction and Mining Equipment	Crushing/Proc. Equipment	LPG	VOC	0.000801	0.000791	0.000613	0.000206
2267002057	Construction and Mining Equipment	Rough Terrain Forklifts	LPG	VOC	0.008722	0.008498	0.005797	0.001226
2267002060	Construction and Mining Equipment	Rubber Tire Loaders	LPG	VOC	0.021820	0.020864	0.011701	0.001569
2267002066	Construction and Mining Equipment	Tractors/Loaders/Backhoes	LPG	VOC	0.002327	0.002186	0.001028	0.000139
2267002072	Construction and Mining Equipment	Skid Steer Loaders	LPG	VOC	0.017880	0.017577	0.012992	0.004855
2267002081	Construction and Mining Equipment	Other Construction Equipment	LPG	VOC	0.007165	0.007123	0.005774	0.002584
2267003010	Industrial Equipment	Aerial Lifts	LPG	VOC	0.135236	0.136033	0.109618	0.050896
2267003020	Industrial Equipment	Forklifts	LPG	VOC	12.902488	12.538115	7.246271	1.028308
2267003030	Industrial Equipment	Sweepers/Scrubbers	LPG	VOC	0.099376	0.092864	0.037456	0.006859
2267003040	Industrial Equipment	Other General Industrial Equipm	LPG	VOC	0.030196	0.028804	0.014181	0.002125
2267003050	Industrial Equipment	Other Material Handling Equipment	LPG	VOC	0.007312	0.007341	0.005827	0.002008
2267003070	Industrial Equipment	Terminal Tractors	LPG	VOC	0.060832	0.055549	0.015368	0.003732
2267004066	Lawn and Garden Equipment (Com)	Chippers/Stump Grinders	LPG	VOC	0.049022	0.046396	0.023553	0.003242
2267005055	Agricultural Equipment	Other Agricultural Equipment	LPG	VOC	0.000929	0.000905	0.000765	0.000486
2267005060	Agricultural Equipment	Irrigation Sets	LPG	VOC	0.000791	0.000721	0.000317	0.000035
2267006005	Commercial Equipment	Generator Sets	LPG	VOC	0.113154	0.119242	0.101616	0.079887
2267006010	Commercial Equipment	Pumps	LPG	VOC	0.026686	0.027479	0.021512	0.010134
2267006015	Commercial Equipment	Air Compressors	LPG	VOC	0.032447	0.032896	0.022570	0.005639
2267006025	Commercial Equipment	Welders	LPG	VOC	0.052522	0.054237	0.040000	0.008789
2267006030	Commercial Equipment	Pressure Washers	LPG	VOC	0.000683	0.000719	0.000627	0.000296
2267006035	Commercial Equipment	Hydro Power Units	LPG	VOC	0.000506	0.000502	0.000278	0.000080
2267008005	Airport Equipment	Airport Ground Support Equipment	LPG	VOC	0.000000	0.000000	0.000000	0.000000
2268002081	Construction and Mining Equipment	Other Construction Equipment	CNG	VOC	0.000017	0.000017	0.000013	0.000006
2268003020	Industrial Equipment	Forklifts	CNG	VOC	0.055436	0.053358	0.030645	0.004417
2268003030	Industrial Equipment	Sweepers/Scrubbers	CNG	VOC	0.000066	0.000064	0.000036	0.000005
2268003040	Industrial Equipment	Other General Industrial Equipment	CNG	VOC	0.000043	0.000041	0.000022	0.000003
2268003060	Industrial Equipment	AC\Refrigeration	CNG	VOC	0.000085	0.000080	0.000036	0.000007
2268003070	Industrial Equipment	Terminal Tractors	CNG	VOC	0.000252	0.000229	0.000063	0.000016
2268005055	Agricultural Equipment	Other Agricultural Equipment	CNG	VOC	0.000071	0.000058	0.000033	0.000009
2268005060	Agricultural Equipment	Irrigation Sets	CNG	VOC	0.005440	0.003185	0.000364	0.000000
2268006005	Commercial Equipment	Generator Sets	CNG	VOC	0.002207	0.002253	0.002032	0.001452
2268006010	Commercial Equipment	Pumps	CNG	VOC	0.000112	0.000112	0.000091	0.000048
2268006015	Commercial Equipment	Air Compressors	CNG	VOC	0.000161	0.000158	0.000107	0.000025
2268006020	Commercial Equipment	Gas Compressors	CNG	VOC	0.008411	0.003239	0.000501	0.000626
2268006035	Commercial Equipment	Hydro Power Units	CNG	VOC	0.000000	0.000000	0.000000	0.000000
2268010010	Industrial Equipment	Other Oil Field Equipment	CNG	VOC	0.000000	0.000000	0.000000	0.000000
2270001060	Recreational Equipment	Specialty Vehicle Carts	Diesel	VOC	0.246972	0.239834	0.210692	0.136972
2270002003	Construction and Mining Equipment	Pavers	Diesel	VOC	0.128334	0.115571	0.089597	0.051796
2270002006	Construction and Mining Equipment	Tampers/Rammers	Diesel	VOC	0.000476	0.000462	0.000381	0.000293
2270002009	Construction and Mining Equipment	Plate Compactors	Diesel	VOC	0.007973	0.007588	0.005959	0.004458
2270002015	Construction and Mining Equipment	Rollers	Diesel	VOC	0.363784	0.324190	0.242765	0.139757
2270002018	Construction and Mining Equipment	Scrapers	Diesel	VOC	0.266926	0.238173	0.176920	0.135210
2270002021	Construction and Mining Equipment	Paving Equipment	Diesel	VOC	0.023453	0.021569	0.016255	0.009988
2270002024	Construction and Mining Equipment	Surfacing Equipment	Diesel	VOC	0.016181	0.014689	0.011040	0.007015
2270002027	Construction and Mining Equipment	Signal Boards/Light Plants	Diesel	VOC	0.078650	0.070936	0.047756	0.032270
2270002030	Construction and Mining Equipment	Trenchers	Diesel	VOC	0.216603	0.194889	0.140993	0.077110
2270002033	Construction and Mining Equipment	Bore/Drill Rigs	Diesel	VOC	0.169835	0.163440	0.140658	0.096288
2270002036	Construction and Mining Equipment	Excavators	Diesel	VOC	1.053246	0.946196	0.770478	0.481732
2270002039	Construction and Mining Equipment	Concrete/Industrial Saws	Diesel	VOC	0.017449	0.015260	0.010372	0.005673
2270002042	Construction and Mining Equipment	Cement & Mortar Mixers	Diesel	VOC	0.008167	0.008029	0.007287	0.005370
2270002045	Construction and Mining Equipment	Cranes	Diesel	VOC	0.274373	0.252099	0.197556	0.128379
2270002048	Construction and Mining Equipment	Graders	Diesel	VOC	0.262246	0.235465	0.193896	0.122309
2270002051	Construction and Mining Equipment	Off-highway Trucks	Diesel	VOC	0.907732	0.784201	0.561410	0.491649
2270002054	Construction and Mining Equipment	Crushing/Proc. Equipment	Diesel	VOC	0.055933	0.051179	0.039061	0.023712

Appendix D-2  
Tioga County Non-road Annual Emissions by SCC

SCC	Classification	Equipment Type	Engine Type	Pollutant Code	2002 Emissions	2004 Emissions	2009 Emissions	2018 Emissions
2270002057	Construction and Mining Equipment	Rough Terrain Forklifts	Diesel	VOC	0.523092	0.483503	0.364172	0.197410
2270002060	Construction and Mining Equipment	Rubber Tire Loaders	Diesel	VOC	1.309214	1.218306	0.962246	0.630130
2270002066	Construction and Mining Equipment	Tractors/Loaders/Backhoes	Diesel	VOC	2.260091	2.200905	1.924728	1.099432
2270002069	Construction and Mining Equipment	Crawler Tractor/Dozers	Diesel	VOC	1.137601	1.021451	0.785101	0.527168
2270002072	Construction and Mining Equipment	Skid Steer Loaders	Diesel	VOC	2.182059	2.097062	1.754270	1.015927
2270002075	Construction and Mining Equipment	Off-Highway Tractors	Diesel	VOC	0.153912	0.136730	0.097197	0.067655
2270002078	Construction and Mining Equipment	Dumpers/Tenders	Diesel	VOC	0.006632	0.006515	0.005814	0.003613
2270002081	Construction and Mining Equipment	Other Construction Equipment	Diesel	VOC	0.143620	0.132484	0.104168	0.066831
2270003010	Industrial Equipment	Aerial Lifts	Diesel	VOC	0.153929	0.152251	0.138560	0.092084
2270003020	Industrial Equipment	Forklifts	Diesel	VOC	0.543354	0.516934	0.395807	0.210487
2270003030	Industrial Equipment	Sweepers/Scrubbers	Diesel	VOC	0.281027	0.249626	0.196166	0.112390
2270003040	Industrial Equipment	Other General Industrial Eqp	Diesel	VOC	0.304208	0.286523	0.225008	0.137372
2270003050	Industrial Equipment	Other Material Handling Eqp	Diesel	VOC	0.028633	0.028121	0.025309	0.016711
2270003060	Industrial Equipment	AC Refrigeration	Diesel	VOC	0.804582	0.683816	0.500597	0.269109
2270003070	Industrial Equipment	Terminal Tractors	Diesel	VOC	0.297689	0.283738	0.239139	0.143193
2270004031	Lawn and Garden Equipment (Com)	Leafblowers/Vacuums	Diesel	VOC	0.000027	0.000027	0.000026	0.000022
2270004036	Lawn and Garden Equipment (Com)	Snowblowers	Diesel	VOC	0.007059	0.006968	0.006390	0.004851
2270004046	Lawn and Garden Equipment (Com)	Front Mowers	Diesel	VOC	0.160917	0.152896	0.119351	0.081140
2270004056	Lawn and Garden Equipment (Com)	Lawn & Garden Tractors	Diesel	VOC	0.035637	0.033299	0.024715	0.020514
2270004066	Lawn and Garden Equipment (Com)	Chippers/Stump Grinders	Diesel	VOC	0.137939	0.138022	0.129104	0.096955
2270004071	Lawn and Garden Equipment (Com)	Commercial Turf Equipment	Diesel	VOC	0.016632	0.013831	0.010398	0.007043
2270004076	Lawn and Garden Equipment (Com)	Other Lawn & Garden Eqp.	Diesel	VOC	0.000512	0.000512	0.000472	0.000362
2270005010	Agricultural Equipment	2-Wheel Tractors	Diesel	VOC	0.000556	0.000515	0.000363	0.000313
2270005015	Agricultural Equipment	Agricultural Tractors	Diesel	VOC	16.660553	14.984251	11.434214	6.729957
2270005020	Agricultural Equipment	Combines	Diesel	VOC	1.213355	1.185774	1.061114	0.756083
2270005025	Agricultural Equipment	Balers	Diesel	VOC	0.012282	0.011613	0.009490	0.005864
2270005030	Agricultural Equipment	Agricultural Mowers	Diesel	VOC	0.001977	0.001891	0.001583	0.000985
2270005035	Agricultural Equipment	Sprayers	Diesel	VOC	0.176994	0.164655	0.128666	0.075850
2270005040	Agricultural Equipment	Tillers > 6 HP	Diesel	VOC	0.000183	0.000172	0.000143	0.000094
2270005045	Agricultural Equipment	Swathers	Diesel	VOC	0.109240	0.108563	0.101208	0.073155
2270005055	Agricultural Equipment	Other Agricultural Equipment	Diesel	VOC	0.371401	0.341040	0.258994	0.155440
2270005060	Agricultural Equipment	Irrigation Sets	Diesel	VOC	0.228610	0.207587	0.154877	0.085086
2270006005	Commercial Equipment	Generator Sets	Diesel	VOC	0.368214	0.359991	0.318144	0.152268
2270006010	Commercial Equipment	Pumps	Diesel	VOC	0.080968	0.079655	0.071343	0.050797
2270006015	Commercial Equipment	Air Compressors	Diesel	VOC	0.182516	0.172866	0.137369	0.078716
2270006020	Commercial Equipment	Gas Compressors	Diesel	VOC	0.000000	0.000000	0.000000	0.000000
2270006025	Commercial Equipment	Welders	Diesel	VOC	0.277853	0.270935	0.233273	0.129335
2270006030	Commercial Equipment	Pressure Washers	Diesel	VOC	0.011574	0.011403	0.010411	0.007791
2270006035	Commercial Equipment	Hydro Power Units	Diesel	VOC	0.008502	0.007902	0.006090	0.003625
2270007010	Logging Equipment	Shredders > 6 HP	Diesel	VOC	0.000000	0.000000	0.000000	0.000000
2270007015	Logging Equipment	Forest Eqp - Feller/Bunch/Skidder	Diesel	VOC	0.746381	0.649668	0.462411	0.221693
2270008005	Airport Equipment	Airport Ground Support Equipment	Diesel	VOC	0.000000	0.000000	0.000000	0.000000
2270009010	Construction and Mining Equipment	Other Underground Mining Equipment	Diesel	VOC	0.000000	0.000000	0.000000	0.000000
2270010010	Industrial Equipment	Other Oil Field Equipment	Diesel	VOC	0.000000	0.000000	0.000000	0.000000
2275000000	Aircraft	All Aircraft Types and Operations	Other	VOC	0.462124	0.462124	0.506523	0.597412
2280000000	Marine Vessels	Commercial	All Fuels	VOC	0.000000	0.000000	0.000000	0.000000
2280001000	Marine Vessels	Commercial	Coal	VOC	0.000000	0.000000	0.000000	0.000000
2280002000	Marine Vessels	Commercial	Diesel	VOC	0.000000	0.000000	0.000000	0.000000
2280003000	Marine Vessels	Commercial	Residual Fuel	VOC	0.000000	0.000000	0.000000	0.000000
2280004000	Marine Vessels	Commercial	Gasoline	VOC	0.000000	0.000000	0.000000	0.000000
2282005010	Pleasure Craft	Outboard	2 Stroke	VOC	109.832698	101.879269	80.791611	56.422639
2282005015	Pleasure Craft	Personal Water Craft	2 Stroke	VOC	38.317490	34.151864	22.612690	15.331220
2282010005	Pleasure Craft	Inboard/Sterndrive	4 Stroke	VOC	7.406945	7.291072	7.151391	6.919367
2282020005	Pleasure Craft	Inboard/Sterndrive	Diesel	VOC	0.191261	0.201246	0.208853	0.206553
2282020010	Pleasure Craft	Outboards	Diesel	VOC	0.004805	0.004578	0.003812	0.002255
2285002005	Railroad Equipment	Line Haul Locomotives	Diesel	VOC	0.098105	0.101274	0.096310	0.096928
2285002010	Railroad Equipment	Yard Locomotives	Diesel	VOC	0.000000	0.000000	0.000000	0.000000
2285002015	Railroad Equipment	Railway Maintenance	Diesel	VOC	0.000000	0.000000	0.000000	0.000000
2285004015	Railroad Equipment	Railway Maintenance	4 Stroke	VOC	0.000000	0.000000	0.000000	0.000000
2285006015	Railroad Equipment	Railway Maintenance	LPG	VOC	0.000000	0.000000	0.000000	0.000000
<b>County Total Annual VOC Emissions</b>					<b>650.338592</b>	<b>675.685520</b>	<b>639.338798</b>	<b>461.883403</b>
2260001010	Recreational Equipment	Motorcycles: Off-Road	2 Stroke	CO	56.832001	65.990707	83.272522	88.828613
2260001020	Recreational Equipment	Snowmobiles	2 Stroke	CO	426.391214	464.917604	492.620178	405.165617
2260001030	Recreational Equipment	ATVs	2 Stroke	CO	56.034321	77.377007	117.947330	135.284360
2260001060	Recreational Equipment	Specialty Vehicles/Carts	2 Stroke	CO	36.178029	37.169032	40.368883	43.293708
2260002006	Construction and Mining Equipment	Tampers/Rammers	2 Stroke	CO	3.193826	3.160989	2.643313	2.693798
2260002009	Construction and Mining Equipment	Plate Compactors	2 Stroke	CO	0.153949	0.124387	0.098582	0.101008
2260002021	Construction and Mining Equipment	Paving Equipment	2 Stroke	CO	0.184764	0.148114	0.118918	0.121844
2260002027	Construction and Mining Equipment	Signal Boards/Light Plants	2 Stroke	CO	0.001351	0.001063	0.000914	0.000936
2260002039	Construction and Mining Equipment	Concrete/Industrial Saws	2 Stroke	CO	8.439720	7.955246	6.847608	7.016091
2260002054	Construction and Mining Equipment	Crushing/Proc. Equipment	2 Stroke	CO	0.036018	0.028359	0.024265	0.024862
2260003030	Industrial Equipment	Sweepers/Scrubbers	2 Stroke	CO	0.125985	0.088051	0.053605	0.019002
2260003040	Industrial Equipment	Other General Industrial Eqp	2 Stroke	CO	0.010038	0.007015	0.004271	0.001514
2260004015	Lawn and Garden Equipment (Res)	Rotary Tillers < 6 HP	2 Stroke	CO	0.630197	0.573705	0.428712	0.456324

## Appendix D-2 Tioga County Non-road Annual Emissions by SCC

SCC	Classification	Equipment Type	Engine Type	Pollutant Code	2002 Emissions	2004 Emissions	2009 Emissions	2018 Emissions
2260004016	Lawn and Garden Equipment (Com)	Rotary Tillers < 6 HP	2 Stroke	CO	1.557315	1.416598	1.054919	1.189409
2260004020	Lawn and Garden Equipment (Res)	Chain Saws < 6 HP	2 Stroke	CO	8.220318	7.515564	5.722379	6.483327
2260004021	Lawn and Garden Equipment (Com)	Chain Saws < 6 HP	2 Stroke	CO	22.906892	22.362593	20.646115	24.054967
2260004025	Lawn and Garden Equipment (Res)	Trimmers/Edgers/Brush Cutter	2 Stroke	CO	11.858794	10.639843	7.400162	8.312349
2260004026	Lawn and Garden Equipment (Com)	Trimmers/Edgers/Brush Cutter	2 Stroke	CO	15.478339	13.640414	11.292591	13.147032
2260004030	Lawn and Garden Equipment (Res)	Leafblowers/Vacuums	2 Stroke	CO	7.400866	6.738473	5.016074	5.674448
2260004031	Lawn and Garden Equipment (Com)	Leafblowers/Vacuums	2 Stroke	CO	15.609125	14.654717	12.680004	14.650212
2260004035	Lawn and Garden Equipment (Res)	Snowblowers	2 Stroke	CO	5.526969	5.760727	6.340823	7.389343
2260004036	Lawn and Garden Equipment (Com)	Snowblowers	2 Stroke	CO	11.669835	12.163396	13.388243	15.602129
2260004071	Lawn and Garden Equipment (Com)	Commercial Turf Equipment	2 Stroke	CO	0.006368	0.005555	0.004505	0.005250
2260005035	Agricultural Equipment	Sprayers	2 Stroke	CO	0.647020	0.546517	0.378975	0.427596
2260006005	Commercial Equipment	Generator Sets	2 Stroke	CO	0.551827	0.475819	0.419452	0.520203
2260006010	Commercial Equipment	Pumps	2 Stroke	CO	3.885755	3.084277	5.062533	3.372533
2260006015	Commercial Equipment	Air Compressors	2 Stroke	CO	0.001438	0.001196	0.001181	0.001464
2260006035	Commercial Equipment	Hydro Power Units	2 Stroke	CO	0.022351	0.018609	0.018298	0.022688
2260007005	Logging Equipment	Chain Saws > 6 HP	2 Stroke	CO	12.289730	12.701371	12.523133	15.860101
2265001010	Recreational Equipment	Motorcycles: Off-Road	4 Stroke	CO	24.518381	28.460068	34.114094	32.258335
2265001030	Recreational Equipment	ATVs	4 Stroke	CO	221.022950	267.012820	362.251070	423.424160
2265001050	Recreational Equipment	Golf Carts	4 Stroke	CO	171.360020	178.309520	187.753490	200.169650
2265001060	Recreational Equipment	Specialty Vehicles/Carts	4 Stroke	CO	30.894125	30.974716	31.512907	33.336791
2265002003	Construction and Mining Equipment	Pavers	4 Stroke	CO	2.772645	2.844590	2.853459	2.825882
2265002006	Construction and Mining Equipment	Tampers/Rammers	4 Stroke	CO	0.021928	0.022443	0.023808	0.024469
2265002009	Construction and Mining Equipment	Plate Compactors	4 Stroke	CO	5.120234	5.185702	5.296214	5.412029
2265002015	Construction and Mining Equipment	Rollers	4 Stroke	CO	5.196535	5.318566	5.290598	5.297228
2265002021	Construction and Mining Equipment	Paving Equipment	4 Stroke	CO	10.025115	10.194570	10.581185	10.860173
2265002024	Construction and Mining Equipment	Surfacing Equipment	4 Stroke	CO	4.544076	4.669035	4.780526	4.882818
2265002027	Construction and Mining Equipment	Signal Boards/Light Plants	4 Stroke	CO	0.231233	0.236472	0.240630	0.246558
2265002030	Construction and Mining Equipment	Trenchers	4 Stroke	CO	8.498121	8.678418	8.643267	8.541094
2265002033	Construction and Mining Equipment	Bore/Drill Rigs	4 Stroke	CO	2.503707	2.510282	2.488717	2.469051
2265002039	Construction and Mining Equipment	Concrete/Industrial Saws	4 Stroke	CO	20.986171	21.526248	21.737811	22.140255
2265002042	Construction and Mining Equipment	Cement & Mortar Mixers	4 Stroke	CO	8.777772	9.278835	9.002265	9.335912
2265002045	Construction and Mining Equipment	Cranes	4 Stroke	CO	0.351284	0.347114	0.298007	0.190649
2265002054	Construction and Mining Equipment	Crushing/Proc. Equipment	4 Stroke	CO	1.232329	1.267053	1.292904	1.304787
2265002057	Construction and Mining Equipment	Rough Terrain Forklifts	4 Stroke	CO	0.458544	0.438185	0.302341	0.089367
2265002060	Construction and Mining Equipment	Rubber Tire Loaders	4 Stroke	CO	1.099410	1.029478	0.577299	0.104204
2265002066	Construction and Mining Equipment	Tractors/Loaders/Backhoes	4 Stroke	CO	6.608750	6.816726	6.997364	7.126980
2265002072	Construction and Mining Equipment	Skid Steer Loaders	4 Stroke	CO	2.923662	2.943845	2.828413	2.501939
2265002078	Construction and Mining Equipment	Dumpers/Tenders	4 Stroke	CO	1.366773	1.358955	1.400207	1.455190
2265002081	Construction and Mining Equipment	Other Construction Equipment	4 Stroke	CO	0.385466	0.373828	0.297363	0.138298
2265003010	Industrial Equipment	Aerial Lifts	4 Stroke	CO	11.822347	10.615132	9.397715	2.488945
2265003020	Industrial Equipment	Forklifts	4 Stroke	CO	26.724809	22.820881	10.601625	0.731086
2265003030	Industrial Equipment	Sweepers/Scrubbers	4 Stroke	CO	11.488189	10.180841	6.034887	1.855125
2265003040	Industrial Equipment	Other General Industrial Eqp	4 Stroke	CO	29.307812	26.518378	18.416687	6.413606
2265003050	Industrial Equipment	Other Material Handling Eqp	4 Stroke	CO	0.903826	0.818739	0.572502	0.180285
2265003060	Industrial Equipment	AC Refrigeration	4 Stroke	CO	0.488456	0.452825	0.331580	0.118642
2265003070	Industrial Equipment	Terminal Tractors	4 Stroke	CO	2.775265	2.240369	0.493226	0.048591
2265004010	Lawn and Garden Equipment (Res)	Lawn mowers	4 Stroke	CO	120.228607	124.367754	135.396544	154.774915
2265004011	Lawn and Garden Equipment (Com)	Lawn mowers	4 Stroke	CO	53.704935	55.884514	60.080362	69.655726
2265004015	Lawn and Garden Equipment (Res)	Rotary Tillers < 6 HP	4 Stroke	CO	10.127276	10.463696	11.372760	12.976843
2265004016	Lawn and Garden Equipment (Com)	Rotary Tillers < 6 HP	4 Stroke	CO	26.164024	27.189758	29.622578	33.974403
2265004025	Lawn and Garden Equipment (Res)	Trimmers/Edgers/Brush Cutter	4 Stroke	CO	0.675194	0.700516	0.761789	0.872550
2265004026	Lawn and Garden Equipment (Com)	Trimmers/Edgers/Brush Cutter	4 Stroke	CO	1.333709	1.411533	1.555209	1.805618
2265004030	Lawn and Garden Equipment (Res)	Leafblowers/Vacuums	4 Stroke	CO	1.290611	1.339036	1.454940	1.665113
2265004031	Lawn and Garden Equipment (Com)	Leafblowers/Vacuums	4 Stroke	CO	53.379016	57.064766	62.605616	70.172654
2265004035	Lawn and Garden Equipment (Res)	Snowblowers	4 Stroke	CO	16.262659	16.925760	18.633192	21.718847
2265004036	Lawn and Garden Equipment (Com)	Snowblowers	4 Stroke	CO	34.335701	35.735711	39.340716	45.855569
2265004040	Lawn and Garden Equipment (Res)	Rear Engine Riding Mowers	4 Stroke	CO	28.274890	29.647400	33.870620	39.774265
2265004041	Lawn and Garden Equipment (Com)	Rear Engine Riding Mowers	4 Stroke	CO	6.911318	7.402869	8.360197	9.745139
2265004046	Lawn and Garden Equipment (Com)	Front Mowers	4 Stroke	CO	7.463604	7.707080	8.669718	10.303252
2265004051	Lawn and Garden Equipment (Com)	Shredders < 6 HP	4 Stroke	CO	2.998104	3.113402	3.395368	3.889615
2265004055	Lawn and Garden Equipment (Res)	Lawn & Garden Tractors	4 Stroke	CO	375.945521	394.526369	453.912036	533.810055
2265004056	Lawn and Garden Equipment (Com)	Lawn & Garden Tractors	4 Stroke	CO	92.958091	100.138055	113.656981	132.489792
2265004066	Lawn and Garden Equipment (Com)	Chippers/Stump Grinders	4 Stroke	CO	12.345267	12.919920	13.025722	13.889987
2265004071	Lawn and Garden Equipment (Com)	Commercial Turf Equipment	4 Stroke	CO	287.536500	302.622411	328.810730	381.356741
2265004075	Lawn and Garden Equipment (Res)	Other Lawn & Garden Eqp.	4 Stroke	CO	12.271439	12.678419	13.882985	16.275484
2265004076	Lawn and Garden Equipment (Com)	Other Lawn & Garden Eqp.	4 Stroke	CO	8.129199	8.398486	9.193806	10.772418
2265005010	Agricultural Equipment	2-Wheel Tractors	4 Stroke	CO	2.245508	2.398691	2.659228	3.011484
2265005015	Agricultural Equipment	Agricultural Tractors	4 Stroke	CO	4.541940	4.555642	3.703537	2.736426
2265005020	Agricultural Equipment	Combines	4 Stroke	CO	0.021843	0.021918	0.019702	0.013891
2265005025	Agricultural Equipment	Balers	4 Stroke	CO	2.064573	2.071708	1.862707	1.314521
2265005030	Agricultural Equipment	Agricultural Mowers	4 Stroke	CO	1.746286	1.813053	2.030701	2.325151
2265005035	Agricultural Equipment	Sprayers	4 Stroke	CO	14.946487	15.274051	16.204701	17.773372
2265005040	Agricultural Equipment	Tillers > 6 HP	4 Stroke	CO	37.166318	38.058268	40.577949	45.540993
2265005045	Agricultural Equipment	Swathers	4 Stroke	CO	3.270106	3.281407	2.950366	2.082087
2265005055	Agricultural Equipment	Other Agricultural Equipment	4 Stroke	CO	6.784720	6.901738	6.913206	6.536701
2265005060	Agricultural Equipment	Irrigation Sets	4 Stroke	CO	6.364476	6.077765	3.331702	1.330801
2265006005	Commercial Equipment	Generator Sets	4 Stroke	CO	155.435266	166.148501	197.430396	247.541402
2265006010	Commercial Equipment	Pumps	4 Stroke	CO	35.917043	38.765389	44.424911	54.402096

## Appendix D-2 Tioga County Non-road Annual Emissions by SCC

SCC	Classification	Equipment Type	Engine Type	Pollutant Code	2002 Emissions	2004 Emissions	2009 Emissions	2018 Emissions
2265006015	Commercial Equipment	Air Compressors	4 Stroke	CO	17.841871	19.225289	21.676590	25.904422
2265006025	Commercial Equipment	Welders	4 Stroke	CO	44.823628	48.801878	56.364703	68.132528
2265006030	Commercial Equipment	Pressure Washers	4 Stroke	CO	68.075096	73.487238	86.538543	107.354800
2265006035	Commercial Equipment	Hydro Power Units	4 Stroke	CO	3.444860	3.759465	4.403901	5.451792
2265007010	Logging Equipment	Shredders > 6 HP	4 Stroke	CO	26.493390	28.160896	33.462782	43.631930
2265007015	Logging Equipment	Forest Eq - Feller/Bunch/Skidder	4 Stroke	CO	0.315902	0.342791	0.399039	0.505423
2265008005	Airport Equipment	Airport Ground Support Equipment	4 Stroke	CO	0.000000	0.000000	0.000000	0.000000
2265010010	Industrial Equipment	Other Oil Field Equipment	4 Stroke	CO	0.000000	0.000000	0.000000	0.000000
2267001060	Recreational Equipment	Specialty Vehicle Carts	LPG	CO	0.298857	0.301828	0.277881	0.197508
2267002003	Construction and Mining Equipment	Pavers	LPG	CO	0.066503	0.068348	0.052539	0.014655
2267002015	Construction and Mining Equipment	Rollers	LPG	CO	0.113087	0.115568	0.073308	0.016547
2267002021	Construction and Mining Equipment	Paving Equipment	LPG	CO	0.017351	0.017924	0.016084	0.008151
2267002024	Construction and Mining Equipment	Surfacing Equipment	LPG	CO	0.011481	0.011787	0.008744	0.002419
2267002030	Construction and Mining Equipment	Trenchers	LPG	CO	0.203505	0.209284	0.164263	0.045770
2267002033	Construction and Mining Equipment	Bore/Drill Rigs	LPG	CO	0.065720	0.068068	0.065177	0.047709
2267002039	Construction and Mining Equipment	Concrete/Industrial Saws	LPG	CO	0.198304	0.201498	0.101433	0.025753
2267002045	Construction and Mining Equipment	Cranes	LPG	CO	0.070956	0.073298	0.065711	0.033033
2267002054	Construction and Mining Equipment	Crushing/Proc. Equipment	LPG	CO	0.011819	0.012205	0.010834	0.005069
2267002057	Construction and Mining Equipment	Rough Terrain Forklifts	LPG	CO	0.128945	0.132828	0.109960	0.032827
2267002060	Construction and Mining Equipment	Rubber Tire Loaders	LPG	CO	0.323156	0.331873	0.248868	0.053184
2267002066	Construction and Mining Equipment	Tractors/Loaders/Backhoes	LPG	CO	0.034497	0.035329	0.024055	0.004876
2267002072	Construction and Mining Equipment	Skid Steer Loaders	LPG	CO	0.264077	0.272437	0.235441	0.109732
2267002081	Construction and Mining Equipment	Other Construction Equipment	LPG	CO	0.105696	0.109249	0.099554	0.055576
2267003010	Industrial Equipment	Aerial Lifts	LPG	CO	1.993140	2.096210	1.930683	1.072316
2267003020	Industrial Equipment	Forklifts	LPG	CO	190.933422	199.567828	154.325312	34.821369
2267003030	Industrial Equipment	Sweepers/Scrubbers	LPG	CO	1.475085	1.531397	0.955019	0.234829
2267003040	Industrial Equipment	Other General Industrial Equipm	LPG	CO	0.447262	0.465977	0.327097	0.074111
2267003050	Industrial Equipment	Other Material Handling Equipment	LPG	CO	0.107799	0.113331	0.103557	0.049871
2267003070	Industrial Equipment	Terminal Tractors	LPG	CO	0.903665	0.934607	0.500505	0.128236
2267004066	Lawn and Garden Equipment (Com)	Chippers/Stump Grinders	LPG	CO	0.726183	0.745078	0.527654	0.112744
2267005055	Agricultural Equipment	Other Agricultural Equipment	LPG	CO	0.013734	0.013674	0.012308	0.008460
2267005060	Agricultural Equipment	Irrigation Sets	LPG	CO	0.011733	0.011554	0.007427	0.001238
2267006005	Commercial Equipment	Generator Sets	LPG	CO	1.485030	1.651135	1.762220	1.484120
2267006010	Commercial Equipment	Pumps	LPG	CO	0.351740	0.389724	0.382993	0.228580
2267006015	Commercial Equipment	Air Compressors	LPG	CO	0.428910	0.474116	0.439689	0.173627
2267006025	Commercial Equipment	Welders	LPG	CO	0.773997	0.855838	0.785755	0.252631
2267006030	Commercial Equipment	Pressure Washers	LPG	CO	0.010034	0.011136	0.011206	0.006786
2267006035	Commercial Equipment	Hydro Power Units	LPG	CO	0.006694	0.007380	0.006263	0.002494
2267008005	Airport Equipment	Airport Ground Support Equipment	LPG	CO	0.000000	0.000000	0.000000	0.000000
2268002081	Construction and Mining Equipment	Other Construction Equipment	CNG	CO	0.004169	0.004310	0.003927	0.002192
2268003020	Industrial Equipment	Forklifts	CNG	CO	13.924169	14.392378	10.984453	2.407362
2268003030	Industrial Equipment	Sweepers/Scrubbers	CNG	CO	0.016652	0.017209	0.013055	0.002815
2268003040	Industrial Equipment	Other General Industrial Equipment	CNG	CO	0.010884	0.011239	0.008279	0.001750
2268003060	Industrial Equipment	AC\Refrigeration	CNG	CO	0.021381	0.022028	0.014949	0.003675
2268003070	Industrial Equipment	Terminal Tractors	CNG	CO	0.063641	0.065158	0.034363	0.008518
2268005055	Agricultural Equipment	Other Agricultural Equipment	CNG	CO	0.018087	0.014862	0.008406	0.002373
2268005060	Agricultural Equipment	Irrigation Sets	CNG	CO	1.386511	0.816037	0.094170	0.000000
2268006005	Commercial Equipment	Generator Sets	CNG	CO	0.493115	0.524305	0.528862	0.428241
2268006010	Commercial Equipment	Pumps	CNG	CO	0.024981	0.026491	0.025278	0.016307
2268006015	Commercial Equipment	Air Compressors	CNG	CO	0.036170	0.038230	0.033658	0.012185
2268006020	Commercial Equipment	Gas Compressors	CNG	CO	2.164544	2.037029	0.259238	0.323955
2268006035	Commercial Equipment	Hydro Power Units	CNG	CO	0.000000	0.000000	0.000000	0.000000
2268010010	Industrial Equipment	Other Oil Field Equipment	CNG	CO	0.000000	0.000000	0.000000	0.000000
2270001060	Recreational Equipment	Specialty Vehicle Carts	Diesel	CO	0.919056	0.895928	0.804411	0.531734
2270002003	Construction and Mining Equipment	Pavers	Diesel	CO	0.675434	0.593029	0.499643	0.216493
2270002006	Construction and Mining Equipment	Tampers/Rammers	Diesel	CO	0.001703	0.001745	0.001820	0.002054
2270002009	Construction and Mining Equipment	Plate Compactors	Diesel	CO	0.027274	0.027334	0.026805	0.028662
2270002015	Construction and Mining Equipment	Rollers	Diesel	CO	1.943538	1.756656	1.479853	0.715559
2270002018	Construction and Mining Equipment	Scrapers	Diesel	CO	1.756202	1.601460	1.343950	0.626326
2270002021	Construction and Mining Equipment	Paving Equipment	Diesel	CO	0.126090	0.115688	0.092498	0.051376
2270002024	Construction and Mining Equipment	Surfacing Equipment	Diesel	CO	0.095131	0.088867	0.073432	0.041506
2270002027	Construction and Mining Equipment	Signal Boards/Light Plants	Diesel	CO	0.248296	0.233934	0.187729	0.154315
2270002030	Construction and Mining Equipment	Trenchers	Diesel	CO	1.166804	1.092493	0.919047	0.488184
2270002033	Construction and Mining Equipment	Bore/Drill Rigs	Diesel	CO	0.700905	0.671710	0.586423	0.358966
2270002036	Construction and Mining Equipment	Excavators	Diesel	CO	5.391582	4.568652	4.137458	1.283364
2270002039	Construction and Mining Equipment	Concrete/Industrial Saws	Diesel	CO	0.090230	0.083659	0.069422	0.037103
2270002042	Construction and Mining Equipment	Cement & Mortar Mixers	Diesel	CO	0.030954	0.030763	0.029870	0.024204
2270002045	Construction and Mining Equipment	Cranes	Diesel	CO	0.984309	0.904363	0.741456	0.358438
2270002048	Construction and Mining Equipment	Graders	Diesel	CO	1.270032	1.040441	0.920042	0.321935
2270002051	Construction and Mining Equipment	Off-highway Trucks	Diesel	CO	5.509067	4.614799	3.405391	0.719820
2270002054	Construction and Mining Equipment	Crushing/Proc. Equipment	Diesel	CO	0.230525	0.212213	0.178702	0.095213
2270002057	Construction and Mining Equipment	Rough Terrain Forklifts	Diesel	CO	2.902037	2.726992	2.372162	1.285148
2270002060	Construction and Mining Equipment	Rubber Tire Loaders	Diesel	CO	7.464912	6.842857	5.620267	2.637532
2270002066	Construction and Mining Equipment	Tractors/Loaders/Backhoes	Diesel	CO	9.118471	9.026406	8.659274	5.621005
2270002069	Construction and Mining Equipment	Crawler Tractor/Dozers	Diesel	CO	6.388234	5.672632	4.797598	1.988344
2270002072	Construction and Mining Equipment	Skid Steer Loaders	Diesel	CO	7.974200	7.924738	7.447515	5.088580
2270002075	Construction and Mining Equipment	Off-Highway Tractors	Diesel	CO	0.967927	0.867946	0.665515	0.295584
2270002078	Construction and Mining Equipment	Dumpers/Tenders	Diesel	CO	0.022796	0.023080	0.022699	0.016301



Appendix D-2  
Tioga County Non-road Annual Emissions by SCC

SCC	Classification	Equipment Type	Engine Type	Pollutant Code	2002 Emissions	2004 Emissions	2009 Emissions	2018 Emissions
2270002081	Construction and Mining Equipment	Other Construction Equipment	Diesel	CO	0.927366	0.856261	0.692850	0.366548
2270003010	Industrial Equipment	Aerial Lifts	Diesel	CO	0.529264	0.541163	0.545212	0.412423
2270003020	Industrial Equipment	Forklifts	Diesel	CO	3.214244	3.203338	3.417205	0.592574
2270003030	Industrial Equipment	Sweepers/Scrubbers	Diesel	CO	0.989049	0.875657	0.810399	0.347586
2270003040	Industrial Equipment	Other General Industrial Eqp	Diesel	CO	1.072731	1.008461	0.857539	0.482931
2270003050	Industrial Equipment	Other Material Handling Eqp	Diesel	CO	0.098295	0.097701	0.093874	0.064675
2270003060	Industrial Equipment	AC\Refrigeration	Diesel	CO	3.070017	2.851736	2.835512	1.470895
2270003070	Industrial Equipment	Terminal Tractors	Diesel	CO	1.359293	1.236211	1.282865	0.286804
2270004031	Lawn and Garden Equipment (Com)	Leafblowers/Vacuums	Diesel	CO	0.000081	0.000085	0.000093	0.000095
2270004036	Lawn and Garden Equipment (Com)	Snowblowers	Diesel	CO	0.028674	0.028230	0.026112	0.016635
2270004046	Lawn and Garden Equipment (Com)	Front Mowers	Diesel	CO	0.512971	0.508737	0.466266	0.377472
2270004056	Lawn and Garden Equipment (Com)	Lawn & Garden Tractors	Diesel	CO	0.112092	0.109965	0.097266	0.099673
2270004066	Lawn and Garden Equipment (Com)	Chippers/Stump Grinders	Diesel	CO	0.546798	0.550999	0.545799	0.393291
2270004071	Lawn and Garden Equipment (Com)	Commercial Turf Equipment	Diesel	CO	0.057674	0.051467	0.047868	0.026470
2270004076	Lawn and Garden Equipment (Com)	Other Lawn & Garden Eqp.	Diesel	CO	0.001830	0.001880	0.001946	0.001709
2270005010	Agricultural Equipment	2-Wheel Tractors	Diesel	CO	0.003033	0.003037	0.002810	0.002405
2270005015	Agricultural Equipment	Agricultural Tractors	Diesel	CO	81.302536	75.069534	61.651570	33.607429
2270005020	Agricultural Equipment	Combines	Diesel	CO	5.064007	4.987446	4.744293	3.111012
2270005025	Agricultural Equipment	Balers	Diesel	CO	0.042264	0.042148	0.041039	0.030065
2270005030	Agricultural Equipment	Agricultural Mowers	Diesel	CO	0.009711	0.009677	0.009514	0.006837
2270005035	Agricultural Equipment	Sprayers	Diesel	CO	0.570317	0.549312	0.490397	0.307163
2270005040	Agricultural Equipment	Tillers > 6 HP	Diesel	CO	0.001100	0.001046	0.000895	0.000542
2270005045	Agricultural Equipment	Swathers	Diesel	CO	0.487176	0.504030	0.542122	0.434009
2270005055	Agricultural Equipment	Other Agricultural Equipment	Diesel	CO	1.615011	1.521485	1.274782	0.720034
2270005060	Agricultural Equipment	Irrigation Sets	Diesel	CO	0.723605	0.690048	0.609039	0.356077
2270006005	Commercial Equipment	Generator Sets	Diesel	CO	1.299652	1.291281	1.234872	0.904993
2270006010	Commercial Equipment	Pumps	Diesel	CO	0.302236	0.301506	0.292783	0.224153
2270006015	Commercial Equipment	Air Compressors	Diesel	CO	0.689474	0.672666	0.636789	0.395966
2270006020	Commercial Equipment	Gas Compressors	Diesel	CO	0.000000	0.000000	0.000000	0.000000
2270006025	Commercial Equipment	Welders	Diesel	CO	1.023135	1.023723	0.958779	0.616991
2270006030	Commercial Equipment	Pressure Washers	Diesel	CO	0.039135	0.038730	0.036820	0.027944
2270006035	Commercial Equipment	Hydro Power Units	Diesel	CO	0.031153	0.030065	0.027879	0.018025
2270007010	Logging Equipment	Shredders > 6 HP	Diesel	CO	0.000000	0.000000	0.000000	0.000000
2270007015	Logging Equipment	Forest Eqp - Feller/Bunch/Skidder	Diesel	CO	3.531262	2.884995	2.374239	0.453033
2270008005	Airport Equipment	Airport Ground Support Equipment	Diesel	CO	0.000000	0.000000	0.000000	0.000000
2270009010	Construction and Mining Equipment	Other Underground Mining Equipment	Diesel	CO	0.000000	0.000000	0.000000	0.000000
2270010010	Industrial Equipment	Other Oil Field Equipment	Diesel	CO	0.000000	0.000000	0.000000	0.000000
2275000000	Aircraft	All Aircraft Types and Operations	Other	CO	23.395520	23.395520	25.643249	30.244465
2280000000	Marine Vessels	Commercial	All Fuels	CO	0.000000	0.000000	0.000000	0.000000
2280001000	Marine Vessels	Commercial	Coal	CO	0.000000	0.000000	0.000000	0.000000
2280002000	Marine Vessels	Commercial	Diesel	CO	0.000000	0.000000	0.000000	0.000000
2280003000	Marine Vessels	Commercial	Residual Fuel	CO	0.000000	0.000000	0.000000	0.000000
2280004000	Marine Vessels	Commercial	Gasoline	CO	0.000000	0.000000	0.000000	0.000000
2282005010	Pleasure Craft	Outboard	2 Stroke	CO	213.694149	205.246182	180.737167	156.689112
2282005015	Pleasure Craft	Personal Water Craft	2 Stroke	CO	77.332514	75.165060	70.488271	69.966084
2282010005	Pleasure Craft	Inboard/Sterndrive	4 Stroke	CO	105.997813	103.409651	95.347566	80.946431
2282020005	Pleasure Craft	Inboard/Sterndrive	Diesel	CO	0.808627	0.853065	0.963851	1.161327
2282020010	Pleasure Craft	Outboards	Diesel	CO	0.013880	0.013563	0.012261	0.009235
2285002005	Railroad Equipment	Line Haul Locomotives	Diesel	CO	0.249972	0.258035	0.279349	0.322248
2285002010	Railroad Equipment	Yard Locomotives	Diesel	CO	0.000000	0.000000	0.000000	0.000000
2285002015	Railroad Equipment	Railway Maintenance	Diesel	CO	0.000000	0.000000	0.000000	0.000000
2285004015	Railroad Equipment	Railway Maintenance	4 Stroke	CO	0.000000	0.000000	0.000000	0.000000
2285006015	Railroad Equipment	Railway Maintenance	LPG	CO	0.000000	0.000000	0.000000	0.000000

**County  
Total  
Annual CO  
Emissions**

**3710.589326 3891.846590 4141.813197 4238.058337**