

Appendix B: Atlanta MSA Comprehensive GHG Inventory Technical Support Document

Comprehensive Greenhouse Gas Inventory

Data Sources

ARC's comprehensive GHG inventory for the 29-county Atlanta Metropolitan Statistical Area (MSA) draws on two primary sources: (1) [Drawdown Georgia's GHG Emissions Tracker](#) (*Comaster40c.xlsx*, November 2023), and (2) U.S. Environmental Protection Agency's (EPA) [Inventory of U.S. Greenhouse Gas Emissions and Sinks by State: 1990-2022](#) (*AllStateGHGData90-22_v082924.xlsx*, with supporting documentation from *AllStateGHGDataPY2024_README_08292024.docx*).

The Drawdown Georgia GHG Emissions Tracker, developed by Georgia Tech's Climate and Energy Policy Laboratory, provides monthly and annual emissions estimates for all 159 Georgia counties and over 200 cities. It leverages statewide emissions data and distributes it to the county or city level using local indicators such as population, housing, employment, land cover, vehicle miles traveled, and agricultural statistics. Statewide emissions data are sourced from monthly data published by the U.S. Energy Information Administration (EIA) and the U.S. Department of Transportation (DOT), and annual data from EPA's State Inventory Tool (SIT) and Facility Level Information on Greenhouse gases Tool (FLIGHT). This dataset provides modeled estimates rather than direct measurements, and reports emissions only in metric tons of carbon dioxide equivalent (MT CO₂e) and does not disaggregate MT CO₂e into contributions from individual major greenhouse gases.

The EPA dataset provides an annual, state-level breakdown of GHG emissions and sinks across all U.S. states. Emissions estimates in this dataset are consistent with the [national Inventory](#) and adhere to internationally accepted protocols, including the Intergovernmental Panel on Climate Change (IPCC) Guidelines and United Nations Framework Convention on Climate Change (UNFCCC) transparency reporting system. Emissions are reported in million metric tons of CO₂ equivalent (MMT CO₂e) for all major greenhouse gases - carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). Estimates are derived from activity data such as fuel consumption, industrial production, and land sector changes, gathered through extensive collaboration with federal agencies, academic institutions, and industry partners. EPA applies modeling approaches to allocate emissions by both economic sector and gas.

Methodology

To meet EPA's reporting requirements for the Atlanta MSA Comprehensive GHG Inventory, the Drawdown Georgia dataset was paired with EPA's state-level inventory to calculate shares for CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, and NF₃. Specifically, EPA data were used to calculate the relative share of each gas by sector at the state

level, and these proportions were then applied to the Drawdown Georgia CO₂e values for the Atlanta MSA. This approach preserved the spatial accuracy of the Drawdown Georgia dataset while leveraging the detailed gas-level resolution of the EPA inventory. Metric tons of CO₂e were converted to metric tons of each GHG using 100-year global warming potentials (GWPs) as specified in the Code of Federal Regulations Equation A-1 in [40 CFR Part 98](#).

For this analysis, annual values from the EPA dataset were summed for the years 2005, 2010, 2015, 2020, and 2022. These years were chosen to provide both a consistent base year (2005), interim checks (2010 and 2015), a COVID-19 disruption year (2020), and the most recent available year (2022).

Emissions were disaggregated by gas type using the *ghg_category* column. Gases included in this analysis were CO₂, CH₄, N₂O, HFC, PFC-760, PFC-6630, PFC-7500, PFC-7820, PFC-7910, PFC-8900, PFC-9540, PFC-11100, SF₆, and NF₃. In four cases – covering the Commercial, Industry, Residential, and Transportation sectors - values were reported only in CO₂e. Since these totals could not be separated into individual gases, they were conservatively attributed to CO₂. Only the Industry sector showed non-zero values for fluorinated gases (HFCs, PFCs, SF₆, NF₃).

To extract sectoral emissions, the *econ_sector* and *sector* columns on the “Data by Economic Sectors” sheet of the **AllStateGHGData90-22_v082924.xlsx** workbook were filtered as follows:

- **Commercial Sector:** *econ_sector* = “Commercial” and *sector* ≠ “Energy”
- **Residential Sector:** *econ_sector* = “Residential” and *sector* ≠ “Energy”
- **Industry Sector:** *econ_sector* = “Industry” and *sector* ≠ “Energy”
- **Consumed Electricity:** *econ_sector* = “Commercial,” “Residential,” “Industry” and *sector* = “Energy”
- **Transportation:** *econ_sector* = “Transportation”
- **Agriculture:** *econ_sector* = “Agriculture”
- **Trees and Greenspace:** *econ_sector* = “LULUCF Sector Net Total”
- **Waste and Materials Management:** *econ_sector* = “Commercial,” “Industry” and *sector* = “Waste”

For the Transportation sector, additional disaggregation was performed using the EPA dataset’s *sub_category_1* column as shown in Figure 8, Section 2.3 of the Metro Atlanta Climate Action Plan (MACAP). This allowed emissions to be separated into four source categories: Alternative Fuel Highway, Diesel Highway, Gasoline Highway, and Non-Highway. These source shares were calculated for both 2005 and 2022 to highlight shifts in transportation fuel used and emission patterns. Drawdown Georgia does not provide fuel-type detail for transportation emissions, so this analysis relies solely on EPA inventory data.

For the Commercial and Industry sectors, waste-related emissions were intentionally included to align with Drawdown Georgia’s convention of embedding waste into these categories. This alignment was critical since EPA data were used only to calculate the relative shares of each GHG, which were then applied to the Drawdown Georgia CO₂e values for disaggregation into individual gases.

To disaggregate Drawdown Georgia’s CO₂e values into individual gases, the following process was followed:

1. Calculate the proportion of each GHG (CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, NF₃) relative to the sector total for Georgia using EPA's dataset.
2. Apply these proportions to the Atlanta MSA's sectoral CO₂e totals from Drawdown Georgia.
3. Report both gas-specific metric tons and sectoral CO₂e totals.

This approach ensured that the inventory leveraged the localized accuracy of Drawdown Georgia while maintaining consistency with the national/state GHG Inventory framework.

Reporting Sectors

The comprehensive GHG inventory is structured into eight reporting sectors, with sector-specific data sources summarized below:

1. **Commercial:** Direct emissions from commercial buildings and activities are captured in this sector. Drawdown Georgia incorporates data from the EIA Open Data API, Quarterly Workforce Indicators (QWI), Commercial Buildings Energy Consumption Survey (CBECS), and statewide energy use data.
2. **Residential:** Direct emissions from residential activities and energy use are captured in this sector. Drawdown Georgia uses the Census American Community Survey (ACS), EIA Residential Energy Consumption Survey (RECS), NOAA Climate Normals, and EIA Open Data API to estimate emissions.
3. **Industry:** Direct emissions from industrial facilities and processes are captured in this sector. Drawdown Georgia integrates EIA Open Data API, QWI industrial employment data, the Manufacturing Energy Consumption Survey (MECS), and statewide emissions estimates.
4. **Consumed Electricity:** This sector represents indirect emissions associated with electricity consumption in residential, commercial, and industrial sectors. Data are sourced from Drawdown Georgia's platform, which relies on the EIA Open Data API and state-specific datasets.
5. **Transportation:** Direct emissions from on-road vehicles, including passenger cars, trucks, and buses are included in this sector. Drawdown Georgia uses the EIA Open Data API, US DOT monthly Traffic Volume Trends (TVT), and the Georgia DOT's Highway Performance Monitoring System (HPMS) to estimate emissions.
6. **Agriculture:** Direct emissions from agricultural soil management, enteric fermentation, and manure management are included in this sector. Drawdown Georgia uses United States Department of Agriculture (USDOA) Census data, Growing Degree Days (GDDs), USDOA animal units, and USDOA manure generation values per animal unit to estimate emissions.
7. **Trees and Greenspace:** Emissions sinks from forest uptake and wood sequestration are quantified in this sector. Drawdown Georgia uses National Land Cover Dataset (NLCD), Oak Ridge National Laboratory (ORNL) Forest Flux Data, EPA State Inventory Tool (SIT) for Forestry Flux, and GDDs to estimate emissions and flux.
8. **Waste and Materials Management:** Emissions from solid waste management. While not reported as a standalone category in the Drawdown Georgia dataset, these emissions are embedded in the Commercial and Industry sectors. For reference, estimates were derived from the EPA dataset.

Limitations and Considerations

While the methods used in this inventory integrate multiple high-quality data sources, several limitations should be considered when interpreting results.

Since the Drawdown Georgia dataset reports only in CO₂e and the EPA dataset reports individual gases at the state level, combining the two required applying proportional shares. This hybrid approach preserves spatial granularity while ensuring gas-level detail, but it is subject to compounding uncertainties from both datasets.

The Drawdown Georgia GHG Emissions Tracker provides modeled estimates of county-level emissions based on state-level data and proxy indicators such as population, employment, and land use. These values do not represent direct measurements and may be subject to uncertainties related to allocation methods and assumptions used in downscaling.

EPA's state-level inventory was applied to allocate greenhouse gas shares by gas type within the Atlanta MSA. While this ensures consistency with national reporting protocols, the downscaling process assumes that Georgia-wide gas ratios are representative of the Atlanta MSA. This introduces approximation, especially in sectors where regional economic or industrial activity may diverge from statewide averages.

In some instances, specifically for the Commercial, Industry, Residential, and Transportation sectors, EPA reported values only in CO₂e. Since these totals could not be separated into individual gases, they were conservatively attributed to CO₂. This approach may understate the presence of other gases in these sectors. Fluorinated gases (HFCs, PFCs, SF₆, NF₃) were reported only for the Industry sector, further limiting granularity in other sectors.

To maintain alignment with the Drawdown Georgia framework, waste-related emissions were embedded within the Commercial and Industry sectors rather than treated as a standalone category.

Transportation fuel use patterns were drawn exclusively from EPA's dataset using the sub_category_1 field, as Drawdown Georgia does not provide this level of fuel-specific detail. As a result, the transportation subcategory analysis (e.g., Gasoline Highway, Diesel Highway, Non-Highway) depends solely on EPA data and may reflect limitations in how subcategories are defined at the state and national levels.

Co-Pollutant Inventory Data

Data Source

Co-pollutant emissions data were compiled from the U.S. EPA's National Emissions Inventory (NEI). The NEI provides a comprehensive estimate of primary emissions of criteria air pollutants at the county, state, and national levels. For this analysis, data were downloaded for 2005, the designated base year for this plan, and filtered to include only the 29 counties of the Atlanta MSA.

For the purposes of this inventory, the following pollutants were included:

- Carbon Monoxide (CO)

- Nitrogen Oxides (NO_x)
- Sulfur Dioxide (SO₂)
- Volatile Organic Compounds (VOCs)
- Particulate Matter 2.5 (PM_{2.5}-PRI)
- Particulate Matter 10 (PM₁₀-PRI)

The values inventoried reflect primary emissions only, reported across four source categories: point, nonpoint, on-road, and non-road.

Methodology

NEI 2005 summary data were downloaded from [EPA's public data portal](#). Data were filtered by state for Georgia and then by county, selecting the 29 counties within the Atlanta MSA. NEI reports emissions in short tons. To align with GHG inventory, emissions were converted to metric tons and then reported in thousand metric tons. Values from all four NEI source categories (point, nonpoint, on-road, and non-road) were summed for each pollutant to provide a total emissions estimate for the MSA.

Limitations and Considerations

It is important to note that NEI reports only primary emissions. In contrast, modeling systems such as the Energy Policy Simulator (EPS) account for both primary emissions and secondary formation of pollutants in the atmosphere (e.g., secondary PM_{2.5} from precursor gases, or secondary organic aerosols from VOCs). For this reason, some inventoried NEI values appear lower than the forecasted reductions from EPS presented in Section 7.1 of the main report.

Additional Resources

For more information about the data used and calculations made by the Drawdown Georgia GHG Emissions Tracker, see the [GHG Emissions Tracker Documentation Slides](#) and [the GHG Emissions Tracker Documentation Manual](#).

For more information about EPA's NEI data, see the [General Emissions Inventory Information](#) page.

Atlanta MSA Comprehensive GHG Inventory

Emissions Source/Sink	2005 (MT)	2005 (MT CO ₂ e)	2010 (MT)	2010 (MT CO ₂ e)	2015 (MT)	2015 (MT CO ₂ e)	2020 (MT)	2020 (MT CO ₂ e)	2022 (MT)	2022 (MT CO ₂ e)
Commercial										
CO ₂	0.1929	0.1929	0.3724	0.3724	0.4397	0.4397	0.3814	0.3814	0.4714	0.4714
CH ₄	0.0565	1.5816	0.0597	1.6726	0.0512	1.4331	0.0494	1.3830	0.0519	1.4528
N ₂ O	0.0006	0.1590	0.0006	0.1557	0.0006	0.1506	0.0005	0.1447	0.0006	0.1703
HFC, PFC, SF ₆ , and NF ₃	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Residential										
CO ₂	4.6198	4.6198	5.2719	5.2719	4.4840	4.4840	4.7361	4.7361	5.3006	5.3006
CH ₄	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N ₂ O	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
HFC, PFC, SF ₆ , and NF ₃	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Industry										
CO ₂	1.1235	1.1235	0.7561	0.7561	1.0381	1.0381	2.1647	2.1647	1.5333	1.5333
CH ₄	0.0212	0.5937	0.0265	0.7425	0.0267	0.7463	0.0162	0.4550	0.0323	0.9057
N ₂ O	0.0026	0.6883	0.0034	0.9031	0.0030	0.7937	0.0005	0.1331	0.0008	0.2198
HFC	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PFC ₇₆₀	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PFC ₆₆₃₀	0.0000	0.0000	0.0000	0.0007	0.0000	0.0005	0.0000	0.0000	0.0000	0.0002
PFC ₇₅₀₀	0.0000	0.0009	0.0000	0.0025	0.0000	0.0021	0.0000	0.0006	0.0000	0.0028
PFC ₇₈₂₀	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PFC ₇₉₁₀	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PFC ₈₉₀₀	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PFC ₉₅₄₀	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
PFC ₁₁₁₀₀	0.0000	0.0000	0.0000	0.0002	0.0000	0.0001	0.0000	0.0000	0.0000	0.0001

Emissions Source/Sink	2005 (MT)	2005 (MT CO ₂ e)	2010 (MT)	2010 (MT CO ₂ e)	2015 (MT)	2015 (MT CO ₂ e)	2020 (MT)	2020 (MT CO ₂ e)	2022 (MT)	2022 (MT CO ₂ e)
<i>SF₆</i>	0.0000	0.0040	0.0000	0.0051	0.0000	0.0042	0.0000	0.0004	0.0000	0.0021
<i>NF₃</i>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumed Electricity¹										
<i>CO₂</i>	48.5353	48.5353	47.7303	47.7303	35.9793	35.9793	25.8290	25.8290	25.9943	25.9943
<i>CH₄</i>	0.1007	2.8189	0.0992	2.7770	0.0821	2.2986	0.0664	1.8583	0.0610	0.0610
<i>N₂O</i>	0.0013	0.3340	0.0013	0.3468	0.0012	0.3230	0.0009	0.2350	0.0008	0.0008
<i>HFC, PFC, SF₆, and NF₃</i>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Transportation										
<i>CO₂</i>	27.6090	27.6090	26.3873	26.3873	28.6131	28.6131	28.6659	28.6659	32.9898	32.9898
<i>CH₄</i>	0.0015	0.0415	0.0015	0.0427	0.0011	0.0298	0.0008	0.0222	0.0009	0.0264
<i>N₂O</i>	0.0017	0.4520	0.0014	0.3780	0.0010	0.2683	0.0008	0.2119	0.0008	0.2217
<i>HFC, PFC, SF₆, and NF₃</i>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Agriculture										
<i>CO₂</i>	0.1334	0.1334	0.1146	0.1146	0.1095	0.1095	0.0699	0.0699	0.0758	0.0758
<i>CH₄</i>	0.0134	0.3756	0.0116	0.3249	0.0117	0.3276	0.0120	0.3367	0.0124	0.3469
<i>N₂O</i>	0.0013	0.3510	0.0012	0.3154	0.0012	0.3251	0.0012	0.3195	0.0012	0.3112
<i>HFC, PFC, SF₆, and NF₃</i>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Trees and Greenspace										
<i>CO₂</i>	-4.8683	-4.8683	-4.6744	-4.6744	-5.3238	-5.3238	-5.0960	-5.0960	-5.1997	-5.1997
<i>CH₄</i>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<i>N₂O</i>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0113	0.0000	0.0000	0.0000	0.0000
<i>HFC, PFC, SF₆, and NF₃</i>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste and Materials Management²										
<i>CO₂</i>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Emissions Source/Sink	2005 (MT)	2005 (MT CO ₂ e)	2010 (MT)	2010 (MT CO ₂ e)	2015 (MT)	2015 (MT CO ₂ e)	2020 (MT)	2020 (MT CO ₂ e)	2022 (MT)	2022 (MT CO ₂ e)
CH ₄	0.1024	2.8670	0.1439	4.0301	0.1375	3.8494	0.1585	4.4368	0.1432	4.0109
N ₂ O	0.0009	0.2499	0.0013	0.3334	0.0013	0.3570	0.0016	0.4150	0.0016	0.4131
HFC, PFC, SF ₆ , and NF ₃	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Gross Emissions		89.6142		88.3000		77.3667		66.9475		70.0869
Sinks		-4.8683		-4.6744		-5.3125		-5.0960		-5.1997
Net Emissions		84.7459		83.6256		72.0542		61.8515		64.8872
<p>1 Consumed Electricity represents indirect GHG emissions associated with electricity purchased and used within Commercial, Residential, and Industry sectors.</p> <p>2 Waste and Materials Management sector values are included for reference only. Values were calculated from waste facilities in the Commercial and Industry sectors and are excluded from Total Emissions.</p>										

Atlanta MSA Co-Pollutant Inventory for 2005

County	CO (TMT)	NOX (TMT)	PM10-PRI (TMT)	PM2.5-PRI (TMT)	SO2 (TMT)	VOC (TMT)
Barrow						
<i>Non-Road</i>	2.172	0.442	0.028	0.026	0.039	0.172
<i>On-Road</i>	9.340	1.329	0.040	0.028	0.026	0.784
<i>Point</i>	1.046	0.310	0.173	0.148	0.036	0.422
<i>Non-Point</i>	3.286	0.228	4.164	0.801	0.290	1.523
Bartow						
<i>Non-Road</i>	5.454	1.241	0.071	0.067	0.098	0.670
<i>On-Road</i>	27.007	3.791	0.111	0.079	0.072	2.069
<i>Point</i>	2.331	24.044	11.095	8.339	170.156	0.430
<i>Non-Point</i>	8.474	0.689	9.262	1.822	0.952	4.174
Butts						
<i>Non-Road</i>	0.812	0.453	0.018	0.017	0.034	0.120
<i>On-Road</i>	5.205	0.726	0.022	0.015	0.014	0.396
<i>Point</i>	0.000	0.000	0.000	0.000	0.000	0.000
<i>Non-Point</i>	1.462	0.096	2.142	0.401	0.114	0.937
Carroll						
<i>Non-Road</i>	4.355	0.744	0.057	0.054	0.073	0.497
<i>On-Road</i>	17.578	2.476	0.075	0.053	0.048	1.378
<i>Point</i>	0.546	0.042	0.056	0.045	0.005	0.179
<i>Non-Point</i>	6.596	0.627	9.282	1.685	0.907	3.166
Cherokee						
<i>Non-Road</i>	12.995	1.072	0.120	0.115	0.128	1.294
<i>On-Road</i>	24.436	3.950	0.118	0.083	0.076	2.333
<i>Point</i>	0.266	0.067	0.004	0.003	0.000	0.092
<i>Non-Point</i>	8.010	0.570	11.536	1.992	0.427	3.209
Clayton						
<i>Non-Road</i>	9.011	1.385	0.106	0.101	0.145	0.670
<i>On-Road</i>	34.276	5.597	0.166	0.117	0.107	3.267
<i>Point</i>	5.113	3.633	0.234	0.218	0.329	1.110
<i>Non-Point</i>	1.171	0.566	3.754	0.490	0.664	4.347
Cobb						
<i>Non-Road</i>	56.920	3.856	0.353	0.335	0.355	4.346
<i>On-Road</i>	80.331	13.188	0.392	0.278	0.254	7.818
<i>Point</i>	0.842	4.509	1.712	1.471	26.141	0.303
<i>Non-Point</i>	3.686	2.003	10.953	1.549	2.422	12.177
Coweta						



County	CO (TMT)	NOX (TMT)	PM10-PRI (TMT)	PM2.5-PRI (TMT)	SO2 (TMT)	VOC (TMT)
<i>Non-Road</i>	7.001	1.026	0.068	0.065	0.089	0.557
<i>On-Road</i>	17.330	2.721	0.083	0.059	0.054	1.460
<i>Point</i>	0.763	11.115	3.175	2.676	60.345	0.281
<i>Non-Point</i>	6.517	0.511	8.308	1.515	0.591	2.430
Dawson						
<i>Non-Road</i>	2.264	0.147	0.017	0.016	0.016	0.203
<i>On-Road</i>	3.078	0.429	0.013	0.009	0.008	0.250
<i>Point</i>	0.000	0.000	0.000	0.000	0.000	0.000
<i>Non-Point</i>	3.052	0.107	2.237	0.541	0.067	0.957
DeKalb						
<i>Non-Road</i>	50.240	2.995	0.298	0.283	0.287	3.791
<i>On-Road</i>	93.085	15.177	0.454	0.322	0.294	8.559
<i>Point</i>	0.000	0.000	0.000	0.000	0.000	0.000
<i>Non-Point</i>	3.774	1.997	9.065	1.339	2.408	13.742
Douglas						
<i>Non-Road</i>	3.972	0.582	0.042	0.040	0.057	0.291
<i>On-Road</i>	18.124	2.931	0.087	0.062	0.056	1.703
<i>Point</i>	0.015	0.019	0.001	0.001	0.011	0.026
<i>Non-Point</i>	4.748	0.365	4.726	0.965	0.294	2.058
Fayette						
<i>Non-Road</i>	6.073	0.671	0.054	0.052	0.068	0.443
<i>On-Road</i>	12.779	2.127	0.063	0.044	0.041	1.358
<i>Point</i>	0.174	0.041	0.040	0.027	0.002	0.077
<i>Non-Point</i>	2.946	0.393	6.676	1.003	0.482	2.003
Forsyth						
<i>Non-Road</i>	14.042	0.935	0.099	0.094	0.100	1.249
<i>On-Road</i>	17.708	2.889	0.085	0.060	0.055	1.798
<i>Point</i>	0.039	0.032	0.003	0.001	0.001	0.162
<i>Non-Point</i>	4.593	0.463	8.830	1.403	0.519	2.197
Fulton						
<i>Non-Road</i>	53.699	6.243	0.507	0.485	0.639	4.354
<i>On-Road</i>	145.096	23.682	0.709	0.502	0.459	13.381
<i>Point</i>	0.958	2.424	0.655	0.555	2.221	1.345
<i>Non-Point</i>	5.501	3.096	13.994	2.120	3.511	22.118
Gwinnett						
<i>Non-Road</i>	75.962	4.574	0.474	0.452	0.473	5.286
<i>On-Road</i>	84.590	13.902	0.413	0.292	0.267	8.284
<i>Point</i>	0.382	0.031	0.006	0.004	0.000	0.086

County	CO (TMT)	NOX (TMT)	PM10-PRI (TMT)	PM2.5-PRI (TMT)	SO2 (TMT)	VOC (TMT)
<i>Non-Point</i>	4.891	2.065	15.171	2.115	2.797	14.701
Haralson						
<i>Non-Road</i>	0.858	0.274	0.011	0.010	0.019	0.081
<i>On-Road</i>	5.636	0.791	0.023	0.017	0.015	0.438
<i>Point</i>	0.000	0.000	0.000	0.000	0.000	0.000
<i>Non-Point</i>	2.476	0.176	2.906	0.586	0.216	1.879
Heard						
<i>Non-Road</i>	1.320	0.071	0.016	0.015	0.008	0.404
<i>On-Road</i>	1.876	0.267	0.008	0.006	0.005	0.159
<i>Point</i>	1.761	13.398	4.567	3.890	92.103	0.170
<i>Non-Point</i>	2.922	0.095	1.830	0.468	0.069	0.880
Henry						
<i>Non-Road</i>	6.857	1.451	0.111	0.106	0.152	0.683
<i>On-Road</i>	26.811	4.326	0.129	0.092	0.084	2.497
<i>Point</i>	0.673	1.848	0.087	0.076	0.001	0.399
<i>Non-Point</i>	8.522	0.512	10.236	1.865	0.350	3.108
Jasper						
<i>Non-Road</i>	0.592	0.093	0.007	0.007	0.009	0.088
<i>On-Road</i>	2.368	0.337	0.010	0.007	0.007	0.204
<i>Point</i>	1.348	0.117	0.492	0.431	0.006	0.297
<i>Non-Point</i>	4.561	0.157	2.058	0.639	0.129	1.312
Lamar						
<i>Non-Road</i>	0.506	0.087	0.007	0.007	0.010	0.056
<i>On-Road</i>	3.756	0.529	0.016	0.011	0.010	0.299
<i>Point</i>	0.000	0.000	0.000	0.000	0.000	0.000
<i>Non-Point</i>	2.416	0.131	1.794	0.429	0.158	0.983
Meriwether						
<i>Non-Road</i>	0.845	0.418	0.017	0.016	0.031	0.100
<i>On-Road</i>	4.606	0.651	0.020	0.014	0.013	0.374
<i>Point</i>	0.771	0.111	0.185	0.130	0.000	0.147
<i>Non-Point</i>	6.219	0.247	3.711	0.964	0.253	1.982
Morgan						
<i>Non-Road</i>	1.261	0.216	0.019	0.018	0.019	0.284
<i>On-Road</i>	7.352	1.020	0.030	0.021	0.019	0.541
<i>Point</i>	0.356	0.127	0.211	0.173	0.014	0.093
<i>Non-Point</i>	4.809	0.182	2.274	0.649	0.192	1.548
Newton						
<i>Non-Road</i>	3.604	0.597	0.048	0.046	0.064	0.305



County	CO (TMT)	NOX (TMT)	PM10-PRI (TMT)	PM2.5-PRI (TMT)	SO2 (TMT)	VOC (TMT)
<i>On-Road</i>	14.226	2.061	0.059	0.042	0.038	1.303
<i>Point</i>	0.116	0.002	0.005	0.004	0.000	0.254
<i>Non-Point</i>	5.410	0.396	6.629	1.216	0.503	2.415
Paulding						
<i>Non-Road</i>	3.959	0.834	0.055	0.052	0.079	0.327
<i>On-Road</i>	10.784	1.774	0.053	0.037	0.034	1.137
<i>Point</i>	0.000	0.000	0.000	0.000	0.000	0.000
<i>Non-Point</i>	5.821	0.299	8.213	1.424	0.125	1.719
Pickens						
<i>Non-Road</i>	1.646	0.165	0.020	0.019	0.019	0.246
<i>On-Road</i>	4.957	0.689	0.021	0.015	0.014	0.400
<i>Point</i>	0.016	0.000	0.090	0.047	0.000	0.001
<i>Non-Point</i>	3.040	0.153	2.977	0.643	0.148	1.061
Pike						
<i>Non-Road</i>	0.479	0.055	0.006	0.006	0.007	0.051
<i>On-Road</i>	2.576	0.364	0.011	0.008	0.007	0.216
<i>Point</i>	0.000	0.000	0.000	0.000	0.000	0.000
<i>Non-Point</i>	2.477	0.069	2.066	0.443	0.032	0.750
Rockdale						
<i>Non-Road</i>	4.608	0.490	0.037	0.035	0.045	0.331
<i>On-Road</i>	11.711	1.919	0.057	0.040	0.037	1.158
<i>Point</i>	0.017	0.051	0.000	0.000	0.000	0.154
<i>Non-Point</i>	0.644	0.375	5.976	0.700	0.659	2.083
Spalding						
<i>Non-Road</i>	2.843	0.270	0.023	0.022	0.023	0.331
<i>On-Road</i>	9.716	1.412	0.041	0.029	0.027	0.903
<i>Point</i>	0.096	0.002	0.004	0.003	0.000	0.063
<i>Non-Point</i>	3.639	0.381	5.353	0.928	0.549	2.613
Walton						
<i>Non-Road</i>	4.519	0.511	0.047	0.045	0.057	0.338
<i>On-Road</i>	11.178	1.617	0.048	0.034	0.031	1.002
<i>Point</i>	0.035	0.003	0.005	0.004	0.000	0.086
<i>Non-Point</i>	5.766	0.273	5.161	1.135	0.266	2.649
Gross Emissions	1,191.48	223.73	210.18	55.06	376.78	213.94