**Boston Region MPO Vehicle-Miles Traveled and Emissions Data Browser**

**Introduction**

You may use this application to browse Central Transportation Planning Staff’s (CTPS) database of modeled vehicle-miles traveled (VMT), vehicle-hours traveled (VHT), and emissions data for the 101 cities and towns in the Boston Region Metropolitan Planning Organization (MPO). The data are for the 2012 base year, 2020 future year and 2040 future year. CTPS modeled these data for the publication, *Charting Progress to 2040*, which is the current Long-Range Transportation Plan (LRTP) for the Boston region. The future-year scenarios include proposed key regional transportation projects identified in the plan (see <http://www.ctps.org/data/pdf/plans/lrtp/charting/2040_LRTP_Chapter5_final.pdf>, pages 5-11 to 5-13). These data are presented by vehicle type (single-occupancy vehicles, high-occupancy vehicles, and trucks) and by time period (6:00 AM to 9:00 AM, 9:00 AM to 3:00 PM, 3:00 PM to 6:00 PM, and 6:00 PM to 6:00 AM). The definitions of single- and high-occupancy vehicles are self-evident. The truck category includes commercial trucks of many types, such as trailer trucks, hazardous materials trucks, and box trucks; but it does not include passenger pickups and sports utility vehicles (SUV), which would fall under the single- and high-occupancy vehicle categories.

The emissions data for 2009 that previously was posted on this website was for the base year of the prior LRTP, *Paths to a Sustainable Region*. The MPO adopts new LRTPs every four years; and in some cases, emissions data for the latest LRTP is drastically different from the data in the previously published plan. These differences are based on a couple of factors. The base year data are different simply because they pertain to travel from different base years—2012 versus 2009. More significantly though, the software used to estimate mobile emissions has changed. The previous plan employed a software program known as MOBILE, while the latest plan uses a program called MOVES. These programs have resulted in significantly different—and improved—emissions estimates.

You may download the data in a comma-separated values (CSV) format, which popular spreadsheet programs, such as Microsoft Excel and Apache Open Office Calc, can read.

**Using the Application**

This application allows you to query and display data in five ways:

1. You may get VMT, VHT, and emissions data for a particular town or city by selecting a municipality in the “Select a Municipality” combo box. The selected municipality is outlined in red on the map, and the data for it is displayed in the tabbed panel on the right side of the application window.
2. You also may obtain VMT, VHT, and emissions data for a particular town or city by clicking on a municipality within the map. The selected municipality is outlined in red on the map, and the data for it is displayed in the tabbed panel on the right side of the application window.
3. You may display the map’s theme by selecting a theme (such as vehicle-miles traveled) from the “Select Map Theme” combo box.
4. You also may display the map’s theme by changing the tabbed panel on the right side of the application window. Switching tabs displays the panel’s selected theme (such as vehicle-miles traveled).
5. You may change the year of modeled data displayed by selecting a year from the “Display Year” combo box. The available years are the 2012 base year, 2020 future year, and 2040 future year, with the 2012 base year as the default.

**Data Sources**

The data displayed by this application come from:

1. Central Transportation Planning Staff of the Boston Region Metropolitan Planning Organization
2. Massachusetts Office of Geographic Information (MassGIS)

**Description of Database Fields**

When the data is downloaded as a CSV file, it contains 80 columns (fields). The meaning of the data in these fields is displayed below:

| **Data Name** | | **Description** |
| --- | --- | --- |
|  | TOWN\_ID | Town identification number |
|  | TOWN | Name of town or city |
| ***Modeled Vehicle-Miles Traveled:*** | | |
|  | VMT\_SOV\_AM | Modeled VMT by SOV between 6:00 AM and 9:00 AM |
|  | VMT\_SOV\_MD | Modeled VMT by SOV between 9:00 AM and 3:00 PM |
|  | VMT\_SOV\_PM | Modeled VMT by SOV between 3:00 PM and 6:00 PM |
|  | VMT\_SOV\_NT | Modeled VMT by SOV between 6:00 PM and 6:00 AM |
|  | VMT\_HOV\_AM | Modeled VMT by HOV between 6:00 AM and 9:00 AM |
|  | VMT\_HOV\_MD | Modeled VMT by HOV between 9:00 AM and 3:00 PM |
|  | VMT\_HOV\_PM | Modeled VMT by HOV between 3:00 PM and 6:00 PM |
|  | VMT\_HOV\_NT | Modeled VMT by HOV between 6:00 PM and 6:00 AM |
|  | VMT\_TRK\_AM | Modeled VMT by trucks between 6:00 AM and 9:00 AM |
|  | VMT\_TRK\_MD | Modeled VMT by trucks between 9:00 AM and 3:00 PM |
|  | VMT\_TRK\_PM | Modeled VMT by trucks between 3:00 PM and 6:00 PM |
|  | VMT\_TRK\_NT | Modeled VMT by trucks between 6:00 PM and 6:00 AM |
|  | VMT\_TOTAL | Total modeled VMT per Day |
| ***Modeled Vehicle-Hours Traveled:*** | | |
|  | VHT\_SOV\_AM | Modeled VHT by SOV between 6:00 AM and 9:00 AM |
|  | VHT\_SOV\_MD | Modeled VHT by SOV between 9:00 AM and 3:00 PM |
|  | VHT\_SOV\_PM | Modeled VHT by SOV between 3:00 PM and 6:00 PM |
|  | VHT\_SOV\_NT | Modeled VHT by SOV between 6:00 PM and 6:00 AM |
|  | VHT\_HOV\_AM | Modeled VHT by HOV between 6:00 AM and 9:00 AM |
|  | VHT\_HOV\_MD | Modeled VHT by HOV between 9:00 AM and 3:00 PM |
|  | VHT\_HOV\_PM | Modeled VHT by HOV between 3:00 PM and 6:00 PM |
|  | VHT\_HOV\_NT | Modeled VHT by HOV between 6:00 PM and 6:00 AM |
|  | VHT\_TRK\_AM | Modeled VHT by trucks between 6:00 AM and 9:00 AM |
|  | VHT\_TRK\_MD | Modeled VHT by trucks between 9:00 AM and 3:00 PM |
|  | VHT\_TRK\_PM | Modeled VHT by trucks between 3:00 PM and 6:00 PM |
|  | VHT\_TRK\_NT | Modeled VHT by trucks between 6:00 PM and 6:00 AM |
|  | VHT\_TOTAL | Total modeled VHT per Day |
| ***Modeled Grams of Volatile Organic Compounds Emitted:*** | | |
|  | VOC\_SOV\_AM | Modeled grams of VOC emitted by SOV between 6:00 AM and 9:00 AM |
|  | VOC\_SOV\_MD | Modeled grams of VOC emitted by SOV between 9:00 AM and 3:00 PM |
|  | VOC\_SOV\_PM | Modeled grams of VOC emitted by SOV between 3:00 PM and 6:00 PM |
|  | VOC\_SOV\_NT | Modeled grams of VOC emitted by SOV between 6:00 PM and 6:00 AM |
|  | VOC\_HOV\_AM | Modeled grams of VOC emitted by HOV between 6:00 AM and 9:00 AM |
|  | VOC\_HOV\_MD | Modeled grams of VOC emitted by HOV between 9:00 AM and 3:00 PM |
|  | VOC\_HOV\_PM | Modeled grams of VOC emitted by HOV between 3:00 PM and 6:00 PM |
|  | VOC\_HOV\_NT | Modeled grams of VOC emitted by HOV between 6:00 PM and 6:00 AM |
|  | VOC\_TRK\_AM | Modeled grams of VOC emitted by trucks between 6:00 AM and 9:00 AM |
|  | VOC\_TRK\_MD | Modeled grams of VOC emitted by trucks between 9:00 AM and 3:00 PM |
|  | VOC\_TRK\_PM | Modeled grams of VOC emitted by trucks between 3:00 PM and 6:00 PM |
|  | VOC\_TRK\_NT | Modeled grams of VOC emitted by trucks between 6:00 PM and 6:00 AM |
|  | VOC\_TOTAL | Total Modeled Grams of VOC Emitted per Day |
| ***Modeled Grams of Nitrogen Oxides Emitted:*** | | |
|  | NOX\_SOV\_AM | Modeled grams of NOx emitted by SOV between 6:00 AM and 9:00 AM |
|  | NOX\_SOV\_MD | Modeled grams of NOx emitted by SOV between 9:00 AM and 3:00 PM |
|  | NOX\_SOV\_PM | Modeled grams of NOx emitted by SOV between 3:00 PM and 6:00 PM |
|  | NOX\_SOV\_NT | Modeled grams of NOx emitted by SOV between 6:00 PM and 6:00 AM |
|  | NOX\_HOV\_AM | Modeled grams of NOx emitted by HOV between 6:00 AM and 9:00 AM |
|  | NOX\_HOV\_MD | Modeled grams of NOx emitted by HOV between 9:00 AM and 3:00 PM |
|  | NOX\_HOV\_PM | Modeled grams of NOx emitted by HOV between 3:00 PM and 6:00 PM |
|  | NOX\_HOV\_NT | Modeled grams of NOx emitted by HOV between 6:00 PM and 6:00 AM |
|  | NOX\_TRK\_AM | Modeled grams of NOx emitted by trucks between 6:00 AM and 9:00 AM |
|  | NOX\_TRK\_MD | Modeled grams of NOx emitted by trucks between 9:00 AM and 3:00 PM |
|  | NOX\_TRK\_PM | Modeled grams of NOx emitted by trucks between 3:00 PM and 6:00 PM |
|  | NOX\_TRK\_NT | Modeled grams of NOx emitted by trucks between 6:00 PM and 6:00 AM |
|  | NOX\_TOTAL | Total Modeled Grams of NOx Emitted per Day |
| ***Modeled Grams of Carbon Monoxide Emitted :*** | | |
|  | CO\_SOV\_AM | Modeled grams of CO emitted by SOV between 6:00 AM and 9:00 AM |
|  | CO\_SOV\_MD | Modeled grams of CO emitted by SOV between 9:00 AM and 3:00 PM |
|  | CO\_SOV\_PM | Modeled grams of CO emitted by SOV between 3:00 PM and 6:00 PM |
|  | CO\_SOV\_NT | Modeled grams of CO emitted by SOV between 6:00 PM and 6:00 AM |
|  | CO\_HOV\_AM | Modeled grams of CO emitted by HOV between 6:00 AM and 9:00 AM |
|  | CO\_HOV\_MD | Modeled grams of CO emitted by HOV between 9:00 AM and 3:00 PM |
|  | CO\_HOV\_PM | Modeled grams of CO emitted by HOV between 3:00 PM and 6:00 PM |
|  | CO\_HOV\_NT | Modeled grams of CO emitted by HOV between 6:00 PM and 6:00 AM |
|  | CO\_TRK\_AM | Modeled grams of CO emitted by trucks between 6:00 AM and 9:00 AM |
|  | CO\_TRK\_MD | Modeled grams of CO emitted by trucks between 9:00 AM and 3:00 PM |
|  | CO\_TRK\_PM | Modeled grams of CO emitted by trucks between 3:00 PM and 6:00 PM |
|  | CO\_TRK\_NT | Modeled grams of CO emitted by trucks between 6:00 PM and 6:00 AM |
|  | CO\_TOTAL | Total Modeled Grams of CO Emitted per Day |
| ***Modeled Grams of Carbon Dioxide*** ***Emitted:*** | | |
|  | CO2\_SOV\_AM | Modeled grams of CO2emitted by SOV between 6:00 AM and 9:00 AM |
|  | CO2\_SOV\_MD | Modeled grams of CO2emitted by SOV between 9:00 AM and 3:00 PM |
|  | CO2\_SOV\_PM | Modeled grams of CO2emitted by SOV between 3:00 PM and 6:00 PM |
|  | CO2\_SOV\_NT | Modeled grams of CO2emitted by SOV between 6:00 PM and 6:00 AM |
|  | CO2\_HOV\_AM | Modeled grams of CO2emitted by HOV between 6:00 AM and 9:00 AM |
|  | CO2\_HOV\_MD | Modeled grams of CO2emitted by HOV between 9:00 AM and 3:00 PM |
|  | CO2\_HOV\_PM | Modeled grams of CO2emitted by HOV between 3:00 PM and 6:00 PM |
|  | CO2\_HOV\_NT | Modeled grams of CO2emitted by HOV between 6:00 PM and 6:00 AM |
|  | CO2\_TRK\_AM | Modeled grams of CO2emitted by trucks between 6:00 AM and 9:00 AM |
|  | CO2\_TRK\_MD | Modeled grams of CO2 emitted by trucks between 9:00 AM and 3:00 PM |
|  | CO2\_TRK\_PM | Modeled grams of CO2 emitted by trucks between 3:00 PM and 6:00 PM |
|  | CO2\_TRK\_NT | Modeled grams of CO2 emitted by trucks between 6:00 PM and 6:00 AM |
|  | CO2\_TOTAL | Total Modeled Grams of CO2 Emitted per Day |

CO2 = Carbon dioxide. CO = Carbon monoxide. HOV = High-occupancy vehicles. NOX = Nitrous oxide. SOV = Single-occupancy vehicles. VMT = Vehicle-miles traveled. VHT = Vehicle-hours traveled. VOC = Volatile organic compounds.