



# 2021 SmartWay Multimodal Carrier Partner Tool: User Guide

**U.S. Version 2.0.20 (Data Year 2020)**



# **2021 SmartWay Multimodal Carrier Partner Tool: User Guide**

**U.S. Version 2.0.20  
(Data Year 2020)**

Transportation and Climate Division  
Office of Transportation and Air Quality  
U.S. Environmental Protection Agency

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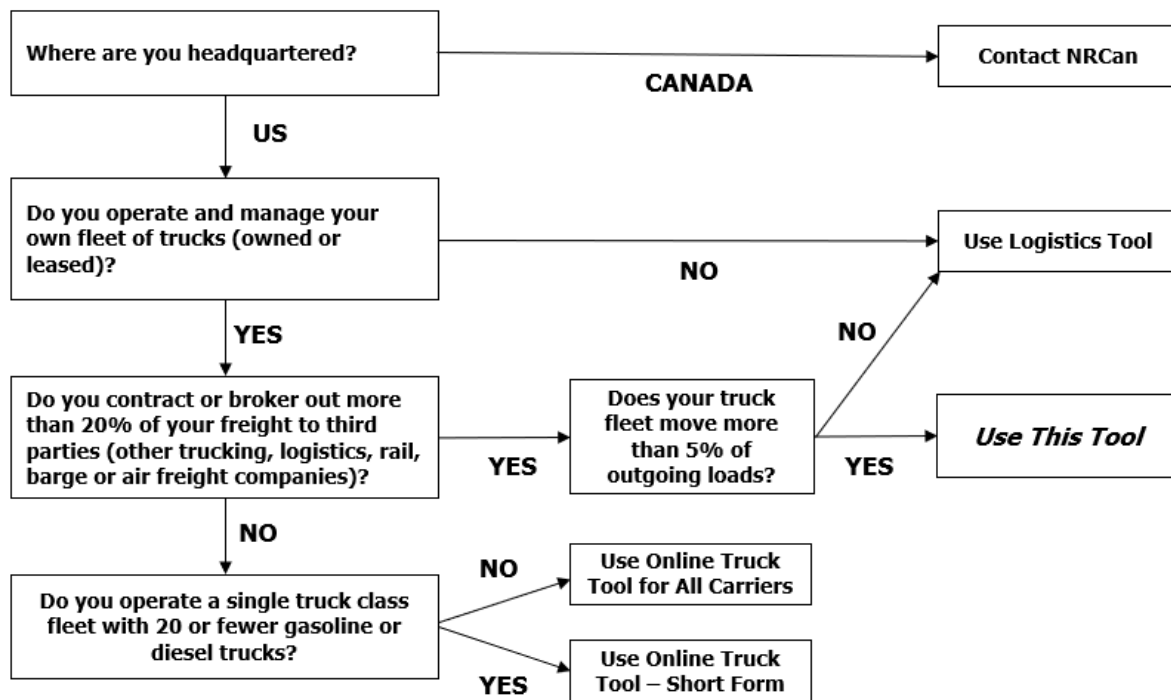
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# Pre-Checklist — Before Getting Started

**WARNING:**

*\*\*\*Before beginning, use this chart to make sure you are choosing the right tool for your operations!\*\*\**

## IS THIS THE RIGHT TOOL FOR ME?










If none of the above statements is applicable, contact EPA SmartWay at 734-214-4647 for assistance.

## WHAT IS THE SMARTWAY TRANSPORT PARTNERSHIP?

Launched in 2003, the SmartWay Transport Partnership is a public/private collaboration between the EPA and the freight industry to improve fuel efficiency, increase environmental performance, and encourage supply chain sustainability.

Seven types of freight transport companies can join SmartWay.

-  Freight shippers
-  Logistics companies (including 3PLs/4PLs<sup>1</sup>)
-  Truck carriers
-  Rail carriers
-  Barge carriers
-  Multimodal carriers
-  Air carriers

Companies join the SmartWay Transport Partnership by submitting a Partner Tool to SmartWay. The SmartWay Tools (1) assess freight operations; (2) calculate fuel consumption and carbon footprints; and (3) track fuel-efficiency and emission reductions. SmartWay Tools must be submitted each year for the company to remain a Partner in good standing. Tools submitted and approved on time qualify partners to use the SmartWay Logo.

SmartWay ranks Partners' efficiency and environmental performance and recognizes superior performance through the SmartWay Excellence Awards.

## WHY DO MULTIMODAL CARRIERS JOIN THE SMARTWAY TRANSPORT PARTNERSHIP?

The SmartWay Transport Partnership provides multimodal carriers with ways to reduce the environmental impact of their freight operations and address costs. Designed with and for the freight sector, the SmartWay Transport Partnership delivers solutions to marketplace needs and challenges. With access to the latest in EPA-tested technologies and peer-provided success stories, carriers that join the SmartWay Transport Partnership can gain a better understanding of their environmental footprint and assert their corporate leadership.

Additionally, SmartWay Partners are associated with an internationally recognized and respected brand that symbolizes cleaner, more efficient transportation choices.

## HOW DO MULTIMODAL CARRIERS JOIN THE SMARTWAY TRANSPORT PARTNERSHIP?

Multimodal Carriers join SmartWay by submitting a SmartWay Multimodal Carrier Tool (hereafter known as the "Multimodal Carrier Tool.")





Multimodal Carriers that submit tools that are approved by EPA are known as "SmartWay Multimodal Carrier Partners."

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<sup>1</sup> 3PLs/4PLs Third party logistics/fourth-party logistics companies

When a multimodal carrier submits a Multimodal Carrier Tool to EPA, they agree to the requirements stipulated in the SmartWay Carrier Partnership Agreement--notably, that they will measure and report the emissions performance of their company annually and provide supporting documentation to EPA upon request.

All SmartWay Multimodal Carrier Partners agree to complete and submit the SmartWay Multimodal Carrier Tool to:

-  define company composition
-  characterize company activity
-  individually benchmark fleets
-  track annual changes in performance

Upon approval of a Multimodal Carrier Tool submission, multimodal carriers will be identified as SmartWay Multimodal Carriers Partners on EPA's website on the SmartWay Partner List and in a database used to identify companies that meet SmartWay's annual requirements. The carrier will also receive information on how to access its current SmartWay Registration Document.



## HOW DO I JOIN IF MY PARENT COMPANY HAS MULTIPLE FLEETS?






Companies that join the SmartWay Partnership should include all of their fleets and trucks in their submission. If a company wishes to list multiple fleets in the Multimodal Carrier Tool, they should list these fleets as their customers can hire them. Internal fleets invisible to a customer should not be listed separately. Companies will be listed at the Company level in the SmartWay Partner list on the SmartWay website, and each individually defined fleet will appear as a separate entity in the SmartWay Carrier Data file that customers use to identify which fleets they do business with in the Shipper and/or Logistics Tools.

***SmartWay highly recommends developing your list of fleets before beginning your data entry process. Any fleet that a shipper or logistics company could hire directly should be listed as a separate fleet in your Multimodal Carrier Tool submission. The best strategy is to have a clear idea of how to define your companies before filling out the Tool.***

## WHAT DATA DO I NEED TO GATHER TO COMPLETE THE MULTIMODAL CARRIER TOOL?

To participate in SmartWay, multimodal carriers need to gather the following essential information to complete the Multimodal Carrier Tool:

-  The official company name EXACTLY as you would like it presented on the EPA website and other EPA communications
-  Company contact information


-  Contact details for your Working Contact
-  Contact details for an Executive, Sustainability, and/or Other Contact(s) (Executive cannot be the same as the Working Contact)
-  Fleet details:
  - Types of equipment
  - Vehicle/vessel/aircraft use by type
  - Fuel types and amount used
  - Engine information, total ton-miles and total miles) plus:
  - Operation categories
  - Body Types
  - Business Unit Focus (e.g., logistics provider, freight forwarder, freight broker, or truck carrier) for the Logistics Tool only
  - Composite fleet names and associated component fleets
  - Component fleet allocation percentages
  - SCAC, Motor Carrier Numbers (MCNs), DOT numbers, and/or National Safety Codes (NSCs, for Canadian-registered trucks) for composite fleets
  - Split between US/Canada operations for composite fleets
-  Data sources
-  SmartWay ID number (if this is not your first tool submission)

This data should be provided for all of your company's fleets. This data reflects the amount of freight carried by each carrier, the distance that freight is carried, and the fuel consumed to carry the freight.

## WHAT SOFTWARE & HARDWARE IS REQUIRED FOR COMPLETING THE MULTIMODAL CARRIER TOOL?





The Multimodal Carrier Tool was designed in Microsoft Excel using forms and Visual Basic for Applications (VBA) macros and code. Completing the Multimodal Carrier Tool requires the following software and system requirements:

### Supported Operating Systems


-  Microsoft Windows 7 or later
  - Includes Windows 7, Windows 8 and 8.1, and Windows 10

- The Tool should also be compatible with Windows XP if all other requirements are met as well. However, Windows XP has reached end of support at Microsoft and this may affect tool performance.

### System Requirements

-  IBM Pentium processor or newer
-  2 GB Ram
-  100 MB disk space
-  Monitor display setting of 1,024 x 768 or larger

### Software Requirements

-  Microsoft Excel 2013 or later
  - Includes Excel 2013, Excel 2016 and Excel in Office 365
  - Must be the one-time purchase version of Microsoft Excel installed on a PC or the Office 365 subscription **desktop version** of the application; **cannot run with Microsoft Excel online or through OneDrive online**
  - The Tool should also be compatible with Excel 2007 and Excel 2010 if all other requirements are met as well. However, Excel 2007 has reached end of support and Microsoft no longer provides technical support, bug fixes, or security fixes. This may affect tool performance.
  - Excel 2010 will also reach end of support by Microsoft on October 13, 2020.
  - Please download the tool and save it to your desktop, or a location on your hard drive if your desktop is in the cloud. The tool will not run if saved to the cloud or certain other locations.

Please check with the user guides for your computer, online support, or your company's IT department to make sure your system is set up to use the Multimodal Carrier Tool.

### HOW DO I SET THE SECURITY LEVEL WHEN OPENING SMARTWAY TOOLS?

Since the Tool employs macros, Excel macros must be enabled to use the Tool. If necessary, follow the directions on the first screen of the Tool to enable macros, follow directions provided on the Microsoft Support website: <https://support.office.com/en-us/article/Enable-or-disable-macros-in-Office-files-12B036FD-D140-4E74-B45E-16FED1A7E5C6>, or follow the directions below:

#### Macros must be enabled on your computer to use the Multimodal Carrier Tool.

-  The default macro security setting in Excel is "Disable all macros with notification."



- When you open the tool, you may get a security alert that macros are present, and you need to choose to enable the macros for this file to work. The steps below describe how to enable macros for different versions of Excel, first if the message bar or security dialog appear, and alternatively in the Trust Center if the message/dialog do not appear.

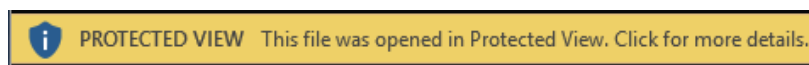
### Enable macros when the Message Bar appears (Excel 2016, 2013, and 2010)

- When you open the tool, the yellow message bar appears with a shield icon and the **Enable Content** button.



- On the Message Bar, click **Enable Content**.

**Note:** if the file opens in Protected View, click **Enable Editing** on the message bar. If there is no **Enable Editing** option, click **for more details** and then click **Edit Anyway**. The Protected View message will look similar to the image below:



Once editing is enabled, follow Steps 1 and 2 above to enable content on the macro message bar.

### Enable macros when the Security Options dialog appears (Excel 2007)


- When the Security Options dialog appears, click **Enable this content**.

2. Excel 2007 Security Options dialog window:



If the Message Bar or Security Options dialog does not appear, change macro settings in the Trust Center

#### Change macro settings in the Trust Center (Excel 2016, 2013, 2010, 2007)

1. Click the **File** tab (Excel 2016, 2013, 2010) or the **Microsoft Office Button** (Excel 2007) 
2. Click **Options** (Excel 2016, 2013, 2010) or **Excel Options** (Excel 2007)
3. Click Trust Center, and then click Trust Center Settings.
4. In the Trust Center, click Macro Settings.
5. Click the option "Disable all macros with notification."
6. Click **OK**.
7. Close out of the Excel file and then re-open it.
8. Follow the previous instructions to Enable macros when the Message Bar or Security Options dialog appears

The following image is the **Macro Settings** area of the Trust Center.



Once macros are enabled (and you are not in Protected View), you should be able to proceed with running the Tool.

If, at this point, the Tool does not open, review the "**Software and Hardware Requirements**." If you after reviewing this section, you cannot determine how to correct the problem, contact your SmartWay Partner Account Manager.

## WHAT IS INCLUDED IN THE SMARTWAY CARRIER PARTNERSHIP AGREEMENT?

To join the SmartWay Transport Partnership as a truck carrier, you must agree to the language on the "Partnership Agreement for Carriers." When you begin working within the Tool, you will be asked to check a box stating that you agree to the terms of the Partnership Agreement. **This agreement must be renewed annually.**

Please review this language with the appropriate personnel within your organization before completing or submitting a Tool to EPA.

### Partnership Agreement for Carriers

#### With this agreement, your company joins EPA's SmartWay Transport Partnership and commits to:

1. Measure and report to EPA on an annual basis the environmental performance of your fleet(s) using EPA's SmartWay Multimodal Tool. (Existing fleets must report the 12 months of data for the prior year ending December 31. Newly formed companies require a minimum of 3 months of operational data.)
2. Have performance results and tool submittal status posted on the EPA SmartWay website/database.
3. Agree to submit supporting documentation to EPA for any data used to complete this Tool and agree to EPA audit of this data upon request by EPA.

#### In return, EPA commits to:

1. Promote company participation in the Partnership by posting Partner names on the EPA SmartWay Website and in related educational, promotional, and media materials. EPA will obtain express written consent from the Partner before using the Partner's name other than in the context of increasing public awareness of its participation as described here.
2. Provide companies with industry-wide performance benchmark data as this data becomes available to EPA.
3. Assist Partners in achieving emission and fuel usage reduction goals (subject to Federal Government Appropriations).
4. Treat individual corporate data as sensitive business information.

#### General Terms

1. If the Partner or EPA defaults upon this agreement at any point, the agreement shall be considered null and void.
2. Either party can terminate the agreement at any time without prior notification or penalties or any further obligation.
3. EPA agrees not to comment publicly regarding the withdrawal of specific partners.
4. EPA reserves the right to suspend or revoke Partner status for any Partner that fails to accomplish the specific actions to which it committed in the SmartWay Transport Partnership Agreement and subsequent annual Agreements.
5. The Partner agrees that it will not claim or imply that its participation in the SmartWay Transport Partnership constitutes EPA approval or endorsement of anything other than the Partner's commitment to the program. The Partner will not make statements or imply that EPA endorses the purchase or sale of the Partner's products and services or the views of the organization.
6. Submittal of this SmartWay Multimodal Tool annually constitutes agreement to all terms in this Partnership Agreement. No separate agreement need be submitted.

## Step 1 Data Collection Requirements

This section will identify data needed to complete the sections of the Multimodal Carrier Tool.

### INTRODUCTORY SCREENS

Upon opening the 2020 Tool, you will see a **Welcome** screen. On this screen current partners may input their SmartWay ID number, and new partners will indicate how they heard about the SmartWay program. The Welcome screen is followed by five screens which orient you to the Tool. The Assistance for New Users screen appears first, and allows users to view an orientation video. Additional screens may be accessed from this screen, including Tool selection guidance, data collection needs, Tool help and navigation, and the SmartWay Partner Tool Schedule for 2021. These are general information screens and may be skipped if you are already familiar with the Tool. However, upon proceeding you **MUST** select the box at the bottom of the Partnership Agreement screen, indicating that you agree to the terms of the Partnership Agreement.

### AUTO-POPULATION

As you progress through the Tool, you will see an **Auto-Population** screen. This screen allows partners and applicants to input their SmartWay ID (if not already entered on the Welcome screen), and automatically load the information for the initial steps of the Tool (Partner Name, Contact Information, and for established Partners, Truck and Logistics Fleet Information), based on the prior year's submittal or, for applicants, information entered through the online SmartWay Carrier Application.<sup>2</sup> The Auto-Population option can save time and ensure naming consistency for your contacts and fleet(s) from year to year. A popup screen will appear displaying all the contact and fleet data uploaded for your review before proceeding. Corrections and revisions may be made on the **HOME** screen if needed. If you do not have a SmartWay ID, or prefer to enter this data manually, you may skip this step.

### DATA REQUIREMENTS FOR ESTABLISHING YOUR DATA COLLECTION YEAR

Before beginning your data collection, identify the last calendar year for which you have full annual (12 months) data. This means that you have data from January of the calendar year through December of the same year. If you have not been in operation for a full year, you must collect ***a minimum of three months' data*** for input into the SmartWay Tool. In your next update year, you will be expected to submit a full year's data.

### DATA REQUIREMENTS FOR SECTION 1: SPECIFY OFFICIAL PARTNER NAME

Your Partner Name is the official name that your customers would recognize for your company—in other words, the name someone hiring you would look for.

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<sup>2</sup> You may access the SmartWay carrier application at <https://app4.erg.com/smartwayonramp/onramp/index.cfm?CFID=708106&CFTOKEN=14c13f056f84b32c-C1172202-F7AC-091B-019982BF6AE1A5ED>.

You must specify your company's official Partner Name under Section 1 of the **Home** screen, exactly as you want it to appear on the SmartWay website.

For example, you may enter:

 ABC Company


 ABC Company, Inc.


Your company will be listed **exactly** as you've entered in Section 1. Therefore, it is important to pay special attention to proper capitalization, abbreviations, annotations, and punctuation.

*If you selected the auto-populate option please review the Partner Name as it appears on the screen, revising it as necessary.*


## DATA REQUIREMENTS FOR SECTION 2: ENTER CONTACT INFORMATION


The SmartWay Tool asks for:

 **General company information** such as location, web address, phone number, etc.

 **A Working Contact**<sup>3</sup> for any questions about your company's participation and Tool submissions

 **An Executive Contact**<sup>4</sup> for participation in awards and recognition events

 **A Sustainability Contact (optional)**<sup>5</sup> for information on company sustainability programs and outreach

 **Additional contacts (optional):** Additional contacts may include anyone who is not the Working, Executive, or Sustainability contact but may be involved with SmartWay (e.g., press/media contact, fleet manager, etc.).

**Note** you MUST have at least two contacts listed in the **Contact Information** section of the Tool, and the Working and Executive Contacts must be different, in order to proceed. SmartWay recommends developing an internal succession plan to make sure that your Multimodal Carrier Tool submission schedule is maintained, in the event that a Working Contact is reassigned, or leaves the company for any reason.

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<sup>3</sup> The Working Contact is the individual designated by the Executive Contact to directly interface with SmartWay regarding specific tasks involved in the timely submission of the Tool. The Working Contact is responsible for coordinating the assembly of information to complete/update company data; completing and updating the Tool itself; maintaining direct communication with SmartWay; and keeping interested parties within the company apprised of relevant developments with SmartWay.) NOTE: To ensure that emails from SmartWay/EPA are not blocked, new Working contacts may need to add SmartWay/EPA to their preferred list of trusted sources.)

<sup>4</sup> The Executive Contact is the company executive who is responsible for agreeing to the requirements in the SmartWay Partnership Agreement, overseeing the Working Contact (as appropriate), and ensuring the timely submission of the Tool to SmartWay. The Executive Contact also represents the company at awards/recognition events. This person should be a Vice President or higher-level representative for the company.

<sup>5</sup> The Sustainability Contact may be the same as the Working or Executive Contact, but not the same as any Other Contacts.

If you selected the auto-populate option you still **MUST** review the **Contact Information** summary screen that pops up upon completion of this step and revise any entries on the **Home** screen as needed.

## DATA REQUIREMENTS FOR SECTION 3: DEFINE YOUR COMPONENT FLEETS

### Understanding Component and Composite Fleets

Multimodal companies are somewhat more complicated to characterize than truck, rail, air, or barge-only companies. Often, multimodal services are comprised of a wide range of truck, rail, barge, and/or dray services that may be provided by the company or purchased from third party providers by the company. To properly characterize the emission rates for multimodal companies, one must account for this wide variety of operations and service levels.





*Multimodal rail freight is defined as any freight transported by a multimodal carrier, which may include intermodal containers as well as cargo configurations such as boxcars, tanker cars, etc.*

To accomplish this SmartWay has developed the concept of "component" and "composite" fleets.

**Composite fleets** are entities that your customers can hire to move their freight. For example, you may have a Truckload Division and an Intermodal Division, whereas **Component fleets** are organized around your internal management of the company.

In the Multimodal Carrier Tool you will be asked to input data for all your component fleets which will include those you own and manage as well as any hired services you purchase. Once these component fleets have been characterized you will be asked to build your composite fleets (the ones the public sees and can hire) from your component fleets. This process will attribute the appropriate weighted emission factors to your composite fleets and demonstrate to your customers the benefits of using your multimodal freight services.

**Example:** Company "J" has a Truckload Division, an Intermodal Division, and a Dray Division that the public can hire. Internally the company has its own truckload fleet, it hires a 3PL, it hires rail services, it has its own dray fleet, and it hires dray companies.

-  The Truckload Division's services are provided by its own truckload fleet and its hired 3PL fleet.
-  The Dray Division's services are provided by its own dray fleet and hired dray services
-  The Intermodal Division's services are provided for by its own truckload fleet, its own dray fleet, its hired rail services, and its hired dray services.
-  Therefore, the partner defines the following component fleets:
  - For its truckload fleet (using the Truck Mode selection)
  - For its dray fleet (using the Truck Mode selection)
  - For its 3PL fleet and hired dray operations (using the Logistics Mode selection)


- For its rail operations (using the Rail Mode selection)

The partner will then assign the appropriate operations of these component fleets to define the composite fleets that the public can hire:

#### Composite Fleet One: Truckload Division

-  60% of its truckload fleet, 70% of its 3PL fleet

#### Composite Fleet Two: Intermodal Division

-  40% of its truckload fleet, 30% of its 3PL fleet, 100% of its hired rail, 80% of its hired dray fleet, and 40% of its own dray fleet

#### Composite Fleet Three: Dray Division

-  20% of its hired dray fleet, 60% of its own dray fleet




*Drayage operations should be included in the SmartWay Multimodal Carrier Tool if your company controls drayage movements (e.g., receives payments directly to move the freight using your own drayage trucks, or purchases drayage services directly from a third party).*

#### Data Requirements for Component Truck and Logistics Fleets

There are four screens in the **Truck Fleet Characterization** section of the Tool. The first two screens are also common to the Logistics Mode:

1. Identify Fleets
2. Fleet Details
3. Operation
4. Body Types

To characterize truck and logistics component fleets you will need to specify:





-  **Fleet (Partner) Name:** Each of your component fleet names will begin with the name of your company.
-  **Fleet Identifier:** Each fleet identifier will automatically be combined with the Fleet Name (Partner Name) field.
-  **95% Control:** Determine if your company controls over 95% of the operation of each fleet, weighted by miles. "Control" means that you operate/route the fleet, regardless of ownership status. Control




includes dedicated fleets that you operate for other parties. If you contract out more than 5% of the fleet's operation, the Logistics mode should be selected instead of Truck for that fleet.

The key question regarding definition of "control" is: Am I able to influence the fuel efficiency of the trucks, and can I collect data on the trucks? SmartWay understands that control within the trucking business exists along a continuum. On one hand, some fleets purchase their own trucks, spec, maintain, and route the trucks, and have full operational control over the trucks, for example controlling the speed the trucks are allowed to drive, when and where they can idle, etc. These fleets have a high degree of control. On the other end of the continuum, some companies hire other parties to move the freight, and other than assigning a load with a pickup/destination point, have no interaction with the freight delivery, or ability to influence the fuel efficiency of the truck or the collection of data on the truck.






If you can actively affect the fuel efficiency of the truck and collect the data necessary on that truck to include in this Tool, you have control. SmartWay understands that there are many organizational/operational permutations in the trucking industry and there may be "gray" areas that need further clarification. If you still have questions, you may contact your assigned SmartWay Partner Account Manager or the SmartWay help line at 734-214-4767.

-  **Standard Carrier Alpha Codes (SCACs):** The Standard Carrier Alpha Code is a unique 2-4 alphabetic character code used by the transportation industry to identify transportation companies. SCACs are assigned by the National Motor Freight Traffic Association, Inc., (NMFTA). If you cannot remember your SCAC(s), please contact NMFTA before proceeding. You can find NMFTA contact information at <http://www.nmfta.org/Pages/ContactUs.aspx>.
-  **Motor Carrier Number (MCN):** The Motor Carrier Number is a 5-, 6-, or 7-digit number provided by the Federal Motor Carrier Safety Administration.
-  **Department of Transportation (DOT) Numbers:** The carrier identification number issued to all carriers in the U.S. by the Federal Motor Carrier Safety Administration and can be up to 7 digits in length.
-  **National Safety Code (NSC) Numbers** are carrier identification numbers issued to fleets with Canadian registration.

*Entering SCACs, MCNs, DOT, and NSC numbers are optional; however, if you have this information you are encouraged to supply it to make sure SmartWay Shippers and Logistics companies can identify you.*










-  **Fleet Type:** Fleet Type is defined as the service type for your fleet. There are three options accepted by the Tool — "For-Hire," "Private," and "Dedicated." If your company has only one fleet, your "Fleet Type" selection will reflect your company's operations as a whole. If there are multiple fleets, each will have its fleet type defined separately.

You will also need to indicate the percentage of operation on a mileage basis. Operational categories include:

-  **Truckload (TL)** - Truckload shipping is the movement of large amounts of homogeneous cargo, generally the amount necessary to fill an entire semi-trailer or intermodal container. A truckload carrier is a trucking company that generally contracts an entire trailer-load to a single customer.
-  **Less-than-truckload (LTL)** - Less-than-truckload carriers collect freight from various shippers and consolidate that freight onto enclosed trailers for linehaul to the delivering terminal or to a hub terminal where the freight will be further sorted and consolidated for additional linehauls.
-  **Drayage** - Predominantly associated with port, or rail-head connections where freight is picked up and moved to another transfer facility or transport mode terminal. Often these moves are short in nature but can be longer depending on specific situations.
-  **Package delivery (PD)** - Covers operations characterized by residential or business package delivery/pickup consisting primarily of single or small groups of packages. It does not include larger scale pickup delivery operations that are more properly characterized as LTL operations. Common examples of this type of operation are the brown UPS and white FedEx delivery vehicles.
-  **Expedited** - Time-sensitive freight shipments, with trucks typically on stand-by.

Estimate the percent of each operational category based on approximate mileage. This percentage calculation does not need to be exact but should be reasonably reflective of your fleet.

Next you will need to provide the percentage by body type for each component fleet. Body Type categories include:

-  Dry van/box van
-  Refrigerated (Reefer)
-  Flatbed
-  Tanker
-  Intermodal chassis containers (pooled and owned)
-  Heavy/Bulk hauler
-  Auto carriers
-  Moving
-  Utility<sup>6</sup>

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<sup>6</sup> The utility category encompasses class 2b to 8b vehicles that do not carry typical commercial freight. Examples include garbage, recycle, service, work, dump, landscape, cement, bucket, boom, ambulance, armored, fire, farm, wrecker and other similar trucks.






Because these trucks do not carry traditional freight payload, the user should self-define their payloads so as to make the emissions per payload efficiency useful to the user. SmartWay will not use the emissions per payload results for the utility category. Users may experience yellow or red warning labels on the Activity screen due to the unique nature of utility "payload." In the case of red alerts, simply input text defining your special conditions in the required text boxes that appear.

-  Special hauler (e.g., Hopper, Livestock, and other specialized carriers)

The percentages specified can be approximate, based on vehicle populations.





### Data Requirements for Business Unit Characterization Screen (Logistics Only)

For each Logistics business unit, you will need to specify the percent of total activity associated with the different Business Unit Focus categories, listed below.

-  **Logistics Provider:** Logistics providers are non-asset based third parties that provide multiple, bundled logistics services. They may be involved in material management, transportation management, inbound and outbound freight, inventory management, 4PL activities, warehousing, cross dock, kitting, packaging, and sub assembly processes.
-  **Freight Forwarder:** Freight forwarders are documentation specialists and consolidators of freight such as LTL (less than truckload) and LCL (less than container load). Freight forwarders normally provide pickup and delivery for domestic and international shipments and provide the property transportation for a compensation or fee basis.
-  **Freight Broker:** A freight broker buys and sells transportation services and normally works on behalf of a carrier or shipper.
-  **Truck Carrier:** Truck carriers operate their own managed fleet (owned or leased). These fleets can be for-hire or private/dedicated. Refer to "Choosing the Right Tool for your Business Units" in Part I of this guide to determine if you should complete the SmartWay Truck Tool for the Truck Carrier portion of your operations.
-  **Rail Freight Broker:** Freight broker specializing in rail mode services.




### Data Requirements for Other Components (Air, Barge, and Rail Modes)

The Air, Barge, and Rail component tools require similar information to identify and characterize individual fleets. The Air component requests information on:


-  Fleet Type (dedicated freight, mixed operations, or passenger)
-  Service area (international, national, or regional)
-  Revenue category (large <\$1B/yr; medium \$100M - \$1B/yr; small \$20M - \$100M/yr; and micro < \$20M/yr)
-  Number of aircraft

The Barge component requests:

-  Fleet Type (open water or river barge)

-  Number of barges
-  Number of tugs
-  Annual tons of cargo shipped by commodity type

The Rail component requests:

-  Class of the fleet (1, 2, or 3)

## DATA REQUIREMENTS FOR SECTION 4: DOWNLOAD LATEST SMARTWAY CARRIER DATA FILE

To ensure that the Multimodal Tool gives you the most current list of SmartWay carriers to select from, you must select the **“Download Latest SmartWay Carrier Data File”** button on the **Home** screen. A new box will appear next to the button indicating the **“Date of Current Carrier File.”** You are now ready to select carriers and enter activity data for each fleet.

You will not be able to input the required logistics fleet data in Step 5 without this file. You must have an active Internet connection to perform this step.

## DATA REQUIREMENTS FOR SECTION 5: DATA ENTRY FOR COMPONENT FLEETS

***PLEASE REFER TO THE TRUCK, LOGISTICS, BARGE, RAIL, AND AIR TOOL USER GUIDES FOR DETAILED INSTRUCTIONS REGARDING DATA REQUIREMENTS FOR YOUR COMPONENT FLEETS.***

## DATA REQUIREMENTS FOR SECTION 6: DEFINE YOUR COMPOSITE FLEETS

After identifying and characterizing your component fleets, you will provide information for EACH composite fleet. Required information includes the name of each composite fleet. You must also allocate component fleet activity based on the percentage of total miles and total ton-miles attributable to each composite fleet. Total Miles refers to truckload miles for the Truck mode, railcar-miles for the Rail mode, barge-miles for the Barge mode, and aircraft miles for the Air mode.

**Please refer to [Appendix A](#) for a description of the procedure used to calculate the gram per mile and gram per ton-mile performance metrics for composite fleets.**

You will also need to specify the SCAC, MCN, DOT, and NSC values for each composite fleet, if available. These values are not mandatory but will assist Shippers and Logistics Companies in identifying your fleets. Finally, for each composite fleet, you must estimate the percentage of operations that occur in the United States and Canada.

**Please use the worksheets in [Appendix B](#) to help compile your information before entering your data into the Multimodal Tool.**

## Step 2 Data Entry

### DOWNLOADING THE SMARTWAY MULTIMODAL CARRIER TOOL

To download the SmartWay Multimodal Tool, visit: <https://www.epa.gov/smartway/smartway-multimodal-carrier-tools-and-resources>. Save the Tool in a folder on your hard drive; this folder should house copies of your data and future updates.

### HOW TO SET SECURITY LEVELS FOR THE SMARTWAY TOOLS

In some cases, Microsoft Excel will ask you to adjust your security settings before opening the Tool. Instructions should appear on your screen *if* you need to change your security settings before running the Tool. The instructions differ depending upon what version of Excel you use (Excel 2007, 2010, 2013, or 2016).

If you need additional assistance with your security settings, review the "How do I set the Security Level When Opening SmartWay Tools?" section above, or contact your Partner Account Manager.

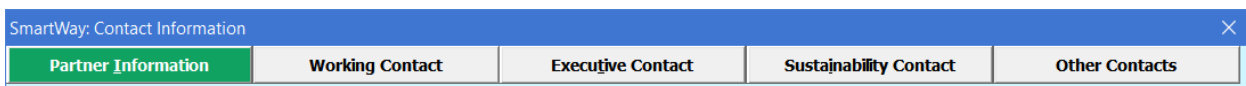
### ENTERING PARTNER NAME

Under Step 1 on the **Home** screen:

1. Type your Partner Name EXACTLY as you would like it to appear on the SmartWay website and in other EPA communications in the field as indicated.
2. Proceed to Section 2 to enter Contact Information.

### ENTERING CONTACT INFORMATION

Under the Partner Information tab:



*Note: Use the Tabs at the top of the window to navigate between the 5 information screens*

*Each field marked with an asterisk must be filled out. You will not be able to submit the Tool to SmartWay without this information.*

1. Enter the Company address, phone numbers, and website (optional).
2. **Enter the Working Contact name and title.**

The **Working Contact** is the individual designated by the Executive Contact to directly interface with SmartWay regarding specific tasks involved in the timely submission of the Tool. The Working Contact is responsible for coordinating the assembly of information to complete/update fleet data; completing and updating the Tool itself; maintaining direct communication with SmartWay; and keeping interested parties within the company apprised of relevant developments with SmartWay. To ensure that e-mails from SmartWay/EPA are not blocked, new contacts may need to add SmartWay/EPA to their preferred list of trusted sources.

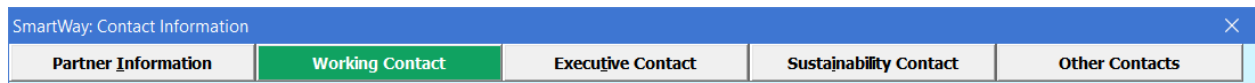
3. **Enter the Executive Contact name and title.**

The **Executive Contact** is the company executive who is responsible for agreeing to the requirements in the SmartWay Partnership Annual Agreement, overseeing the Working Contact (as appropriate), and ensuring the timely submission of the Tool to SmartWay. The Executive Contact also represents the company at awards/recognition events. This person should be a Vice President or higher level representative for the company.

4. **Enter the Sustainability Contact name and title (optional).**

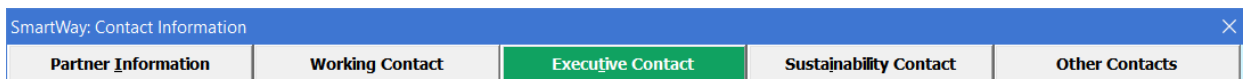
The **Sustainability Contact** is the individual assigned responsibility for monitoring the company's environmental performance. The Sustainability Contact may be the same as the Working or Executive Contact (and specified by checking the "Same as" boxes in the Sustainability Contact section) but cannot be the same as any Other Contact.

**Under the Working Contact tab:**



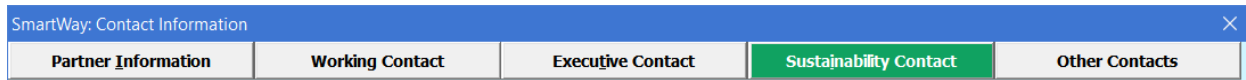
1. Enter the Working Contact information. If the Working Contact shares the same address as the company, you may select the **Use Partner Address** button to auto-populate the address section of this record. Enter the email address twice to confirm its accuracy.

**Under the Executive Contact tab:**



1. Enter the Executive Contact information, including the contact email address. The same buttons and fields are available as described for the **Working Contact** tab.

### Under the Sustainability Contact tab:



1. If applicable, enter the Sustainability Contact information including the contact email address. The same buttons and fields are available as described for the **Working Contact** tab.

### Under the Other Contacts tab:



1. Enter Other Contacts (if applicable) by selecting the **Add New Contact** button.
2. Enter the first Other Contact then select the **OK** button when done.

**Note:** You must supply at least two unique contacts on the contact screen to ensure EPA has access to at least two people for Tool submission follow-up.

**Note:** In some cases, companies with multiple fleets will gather information from different sources within the company. You may find it useful to have this additional contact information stored within the Tool.

You can add more contacts to the **Other Contacts** box by repeating this process. If you wish to edit an existing contact's information, highlight the name you wish to edit and then select the **Edit Selected Contact** button. You can remove an existing contact by highlighting the contact and then selecting **Delete Selected Contact**.

To make sure you have filled out all required contact information, select **VALIDATE SCREEN** at the bottom of the screen on the **Partner Information** tab. If any information is missing or invalid, a dialogue box will appear informing you what additional information is required.

Next select the **HOME** button to return to the **Home** screen and go to Step 3.


## ENTERING COMPONENT FLEET CHARACTERISTICS

### Identify Fleets Screen

1. On the **Home** screen select the pull-down menu for **Define Your Component Fleets** to display the available component fleet modes. Options include truck, logistics, rail, barge, and air modes. A commercial marine module will be added to the Tool in the future. Note that some terminology on the Define Component Fleets screens are slightly inconsistent between the Truck Mode and the Logistics Mode, however the two modes work and act the same. For example, "fleets" within the Truck Mode are referred to as "Business Units" within the Logistics Mode.
2. Enter data for your first component fleet including:

- a. **Fleet (Partner) Name:** Each of your component fleet names will begin with the name of your company. This fleet name will be whatever you enter in the Fleet Name (Partner Name) field on the Identify Fleets screen. By default, this field is automatically populated with the first 50 characters of the Partner Name that was entered on the **Home** screen. Whatever you enter for Fleet Name for the first fleet will automatically be used for any additional fleets you add. Similarly, any edits you make to the Fleet Name for the first fleet will automatically be reflected on each subsequent fleet. Note that this field is called Company Name for Logistics component fleets.
- b. **Fleet Identifier:** Please make sure to specify each fleet identifier name exactly as you want it displayed on the SmartWay website, including proper capitalization, any abbreviations, and punctuation. Remember that it will automatically be combined with the Fleet Name (Partner Name) field.

NOTE: If you have only one fleet, you may leave the Fleet Identifier field blank, in which case your fleet name will simply be your Partner Name. This field is called the Business Unit Identifier for Logistics component fleets.

3. To enter another component fleet, select the **Add Another Fleet** button. To delete a component fleet, select the box next to the row you wish to delete, and then select the **Delete Checked Rows** button. Once you have confirmed or modified the Partner Name and specified the Fleet Identifiers, the full Fleet Names will be displayed on the screen to the right of the screen.
4. Note the **ADD COMMENTS** button located at the bottom of the screen. This allows you to enter notes about the collection process, your assumptions and methods, data, or other information. These details could prove useful for your reviewer when you or someone else fills out the Tool next year. If comments have been added for a particular screen, the **ADD COMMENTS** button will now read **VIEW/EDIT COMMENTS** to indicate to your reviewer that there are comments to be read.
5. A **HELP** button is also available should you need assistance. You will also notice small gray icons with question marks  displayed throughout the Tool. When clicked, these icons provide additional information about specific items located on the screen.
6. Proceed by selecting the **Fleet Details** tab at the top of the screen, or select the **NEXT** button at the bottom of the screen.

## Fleet Details Screen

For each fleet specify the following:

1. **95% Control (mandatory):** Select this box if your company controls over 95% of the operation of each fleet, weighted by miles. If you contract out more than 5% of the fleet's operation, the Logistics mode should be selected instead for that fleet. This box is not included in the **Fleet Details** screen for the Logistics Mode selection.



2. **Standard Carrier Alpha Codes (SCACs - optional):** If your fleet has a SCAC, please input that information. If you have a single fleet that has multiple SCACs, enter all of the codes into the SCAC field, and separate them with commas. It is not required to enter SCAC information for each component fleet.
3. **Motor Carrier Number (MCN - optional):** If your fleet has a Motor Carrier Number, please input that information. It is not required to enter MCN information for each component fleet.
4. **Department of Transportation (DOT) Numbers (optional):** If your fleet has a DOT Number, please input that information. It is not required to enter DOT information for each component fleet.
5. **National Safety Code (NSC) Numbers (optional):** If your fleet has a NSC Number, please input that information. It is not required to enter NSC information for each component fleet.

*Note: Entering SCACs, MCNs, DOT, and NSC numbers are optional; however, if you have this information you are encouraged to supply it to make sure SmartWay Shippers and Logistics companies can identify you.*

6. **Fleet Type (mandatory):** Specify the fleet type - "For-Hire," "Private," or "Dedicated."

### Operation Screen

1. For each component fleet, fill out the **Operation Category (%)** information by indicating the percentage of operation on a mileage basis. Enter the percent of each operational category based on approximate mileage. This percentage calculation does not need to be exact but should be reasonably reflective of your fleet.

### Body Types Screen

1. Fill out the **Body Type** fields, indicating the percentage by body type for each component fleet. The percentages specified can be approximate, based on vehicle populations. The percentages for each fleet must sum to 100%.
2. Once you are sure your information is input correctly, select the **CREATE FLEET(S)** button near bottom of the page.
3. If, at a point later in the data entry process, you realize that you need to add a new fleet or delete an existing fleet, you can return to the **Identify Fleets** screen. To add a new fleet, follow all of the instructions on the screen regarding defining your fleets, including selecting the **CREATE FLEET(S)** button. When you select this button, the system will create blank data entry forms only for the new fleet(s) you have added; the existing fleets will not be affected.
4. If you need to delete an existing fleet, simply select the box next to the fleet and then select the **Delete Checked Rows** button. Note that, if you have already generated data entry forms for the fleet you are deleting, the system will prompt you to confirm the deletion.

*If you choose to delete a component fleet, and if you have allocated any of this fleet's*

*activity to a composite multimodal fleet (defined under Step 6 on the HOME screen) then you must re-allocate your composite fleet activity to reflect this change. Similarly, adding a new component fleet may require modifying your composite fleet activity allocations under Step 6.*





5. As on the other screens there is a **HOME** button as well as an **ADD COMMENTS** button. Selecting **HOME** will take you back to the **Home** screen. At this point you may define another component fleet following the same process or proceed to Step 4 on the **Home** screen.

### Business Unit Characterization Screen (Logistics Only)





1. For each Logistics business unit specify the percent of total activity associated with the different Business Unit Focus categories.

### Other Component Screens (Air, Barge, and Rail Modes)

The Air, Barge, and Rail component tools require similar information to identify and characterize individual fleets. Provide the following information for Air component fleets using the drop-down menus:

-  Fleet Type
-  Service area
-  Revenue category
-  Number of aircraft (enter value)

Provide the following information for Barge component fleets:

-  Fleet Type
-  Number of barges
-  Number of tugs
-  Annual tons of cargo shipped by commodity type

Provide the following information for Air component fleets:

-  Class of the fleet

### DOWNLOADING THE LATEST SMARTWAY CARRIER DATA FILE




1. If you have any Logistics component fleets/business units, you will need to download the SmartWay Carrier Data File. On the **Home** screen, select the **Download Latest SmartWay Carrier Data File** button under Step 4 and allow the Tool to download the latest carrier data (SmartWayCarrierData2020.xlsx).

2. Proceed to Step 5 to enter data for your fleets.



## ENTERING COMPONENT FLEET ACTIVITY INFORMATION

On the **Home** screen, you will now see all the fleets you created listed in the window below item # 5: **Select Component Fleet for Data Entry**.

There will be a status message after each fleet, indicating whether or not the data entry for that fleet is complete. The following information may appear beside a fleet name:

-  **Not checked** - Data has not been entered yet.
-  **Incomplete** - Some data is still missing and/or inconsistent.
-  **Complete** - All data requirements have been met and validation has occurred.

In addition to the status indicators above, you may also see one of two qualifiers: "Errors" or "Warnings."

-  **Errors** will prevent you from defining your composite fleet under Step 6, and must be addressed before you can submit your Tool to EPA.
-  **Warnings** will still allow you to proceed and submit your data to EPA. However, it is strongly recommended that you carefully review each warning message before sending your data to EPA so that you can anticipate questions that may come from a Partner Account Manager as a result of your data being outside the expected ranges. The method addressing errors and warnings is described for subsequent input screens in the following sections.

To add data to a particular fleet file, highlight the fleet name and then double-click. You will then proceed to the Tool **Data Entry Screens**.

***PLEASE REFER TO THE TRUCK, LOGISTICS, BARGE, RAIL, AND AIR TOOL USER GUIDES FOR DETAILED INSTRUCTIONS REGARDING DATA ENTRY REQUIREMENTS FOR YOUR COMPONENT FLEETS.***

## ENTERING COMPOSITE FLEET DATA

Once you have entered data for all of your component fleets, and resolved any error notifications, you may proceed to Step 6, **Define Your Composite Fleets**. This step allows you to group your component fleets into larger, *composite fleets* operating across one or more modes. Composite fleets are entities that your customers can hire to move their freight. For example you may have a Truckload Division and an Intermodal Division for hire.

The "**Define Your Composite Fleet**" section of the Tool has three subsections:

1. Identify Composite Fleets

2. Allocate Component Fleets
3. Composite Fleet Details

### Identify Composite Fleets

1. Enter the name of your composite fleets. Names include your Partner Name combined with your Composite Fleet Identifier. Remember to enter your composite fleet names exactly as you want them to be seen on the SmartWay website.

*Note: Your company's name and your composite fleet(s) will be listed on the SmartWay website to indicate your participation in the SmartWay Transport Partnership. Your shipper and logistics customers can also use the SmartWay Online Database to search for your company by the name you submit in the Tool, your SCAC, Motor Carrier Number, DOT Number, and/or NSC. Therefore, it is critical that you identify your company and composite fleet(s) in the Tool as you would have them appear on the SmartWay website and within other SmartWay Tools.*

2. Add more fleets by selecting the **Add Another Composite Fleet** button. To proceed to the next screen, select the **Allocate Component Fleets** tab or select **NEXT**.

### Allocate Component Fleets

1. Proceed to the **Allocate Component Fleets** screen to see a list all of the component fleets defined under Step 3 (**Define Your Component Fleets**). Allocate component fleet activity based on the percentage of total miles and total ton-miles attributable to each composite fleet. The total miles and ton-miles listed for each component fleet is automatically calculated from Step 5 where you entered the activity data for your component fleets.

The percentage allocations must sum to 100 for each component fleet. In addition, if you enter a non-zero percentage for a particular total miles assignment, and zero percent for the corresponding ton-mile assignment (or vice versa), the Tool will display an error and you will not be allowed to proceed until reconciling the discrepancy.

2. Select the **Show Allocations** button located below the component fleet list to view a summary of your composite fleet percentage allocations across all of your different component fleets, in order to confirm the accuracy of your assignments.
3. Select the **VALIDATE SCREEN** button to validate the information entered on this screen. The ratio of total allocated ton-miles to total miles is checked for each composite fleet. If any of these ratios differ substantially from industry average payload standards, you will receive a warning message. These warning messages are intended to flag possible data entry errors; however, these warning messages will not prevent you from submitting your completed Multimodal Carrier Tool to EPA.<sup>7</sup>

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<sup>7</sup> Validation warnings are issued for low payloads if the average payload for a composite fleet is < 14.5 tons (based on the

4. Select the **Return to Entry Form** button to leave the spreadsheet and return to the allocation screen.

### Composite Fleet Details

1. Proceed by entering the SCAC, MCN, DOT, and NSC values for each composite fleet, if available. Separate multiple values by a comma if necessary. These values are not mandatory but will assist Shippers and Logistics Companies in identifying your fleets.
2. For each composite fleet, enter the percentage of operations that occur in the United States and Canada.
3. Once you have allocated all your component fleets across the composite fleets, select the **HOME** button to return to the **Home** screen.

### SUBMITTING YOUR TOOL TO EPA

1. Select the **Generate a (.xml) data file** button to open a new screen.
2. Select the checkbox to indicate you understand the terms of the SmartWay Partnership Agreement once again.
3. When ready, select **NEXT** to create a file with the following naming convention:  
Multimodal\_PartnerName\_Year\_Vo.xml<sup>8</sup>

For example,

Multimodal \_ABCompany\_2020\_Vo.xml

where

PartnerName is your company's name as entered for Step 1 on the **Home** screen, and Year indicates the year for which you are submitting your data.

4. Next specify the folder where you would like to save the .xml file, and a screen will appear.
5. Follow these instructions for submitting your .xml and .xls files to SmartWay. Note that the .xml file is approximately 10 times smaller than the .xls file.
6. Upon selecting **NEXT**, a screen will appear that allows you to close the Multimodal Carrier Tool or return to the **Home** screen.

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out of range warning for Class 8b TL/Dry Vans – see Truck Tool Technical Documentation for details). Warnings are issued at the high end if the average composite fleet payloads are > 60 tons. This value was chosen based on the distribution of payloads reported by Multimodal Partners in 2012, with approximately two thirds of Partners having payloads less than this cutoff.

<sup>8</sup> If you create the XML file multiple times the file name will increment each time (e.g., Multimodal\_ABCompany\_2020\_V1.XML for the second iteration, etc.



***NOTE: DO NOT ZIP the .xls and .xml files. Send them to EPA as normal files attached in an e-mail. EPA security will not allow zipped files through the EPA firewall.***

***NOTE: DO NOT CHANGE THE NAME OF THE XML OR XLS FILES.***

Please visit <https://www.epa.gov/smartway/smartway-multimodal-carrier-tools-and-resources> for additional resources for more in depth exploration of each section of the Multimodal Carrier Tool.

## Step 3 Additional SmartWay Resources

After completion of the above steps, review the available reports to ensure the accuracy of your data entry. EPA strongly encourages you to explore the optional sections of the Tool available at the bottom of the screen before completing your submission.

The **View Summary Data Reports** section gives you access to four composite fleet reports and several component fleet reports to help you understand your data and use it to make better performance decisions.

The **Year-to-Year Comparison Report** allows you to compare the fleet characteristics, activity values, and performance metrics from your current reporting year with your prior reporting year. This report is particularly helpful in identifying any changes that may have occurred since your last reporting period, determining trends in activity and performance, and performing general quality assurance of the inputs use for your current Tool. You can access this report by selecting **Review your Year-to-Year Performance** at the bottom of the **Home** screen.

The **Feedback** section in Step 7 allows you to provide EPA with general feedback regarding the SmartWay program. This information is optional and is not required in order to submit your Multimodal Carrier Tool data to EPA. Selecting the **Give Us Feedback** button on the **Home** screen will open this form.

Finally, you may select the **Visit the SmartWay Partner Portal** button which will open a web browser to the login page of the **EPA SmartWay Portal**. The portal provides access to a range of useful documents and functions including the partner registration document, the SmartWay Partner Logo, a sample press release, an online version of the feedback survey, and Awards information if applicable.

# Appendix A: Calculating Composite Fleet Performance Metrics and Black Carbon Emissions

The Multimodal Carrier Tool calculates gram per mile and gram per ton-mile performance metrics for composite fleets using the carrier-specific performance metrics associated with the component fleets. The percentage distributions provided for miles and for ton-miles are used as weighting factors in developing these composite values.

The following example illustrates how the composite metrics are calculated for CO<sub>2</sub> grams per mile.

1. Three Component Fleets are defined: Logistics 1, Truck 1, and Logistics 2
2. Three Composite Fleets are defined: Composite 1, Composite 2, Composite 3
3. Component fleet activity is allocated across the composite fleets as summarized below:

Total Miles Allocation Component Fleets	Total Miles	Composite 1	Composite 2	Composite 3	Total
<b>Logistics 1</b>	6,679,941	30%	50%	20%	100%
<b>Truck 1</b>	1,234,567	50%	50%	0%	100%
<b>Logistics 2</b>	1,000,000	35%	12%	53%	100%
<b>Total</b>	<b>8,914,508</b>				

1. The mileage associated with each component/composite fleet combination is calculated by multiplying the total miles in the table above by the associated fraction, with the results summarized as follows:

Miles	Logistics 1	Truck 1	Logistics 2	Total
<b>Composite 1</b>	2,003,982	617,284	350,000	<b>2,971,266</b>
<b>Composite 2</b>	3,339,971	617,284	120,000	<b>4,077,254</b>
<b>Composite 3</b>	1,335,988	0	530,000	<b>1,865,988</b>
<b>Total</b>	<b>6,679,941</b>	<b>1,234,567</b>	<b>1,000,000</b>	<b>8,914,508</b>

2. The corresponding composite-based mileage fractions are as follows:

Miles	Logistics 1	Truck 1	Logistics 2	Total
<b>Composite 1</b>	67%	21%	12%	100%
<b>Composite 2</b>	82%	15%	3%	100%



<b>Composite 3</b>	72%	0%	28%	100%
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3. The CO<sub>2</sub> grams per mile values calculated for each component fleet are as follows:
  - Logistics 1: 2,261 g/mi
  - Truck 1: 1,649 g/mi
  - Logistics 2: 1,163 g/mi
  
4. Using the composite-based mileage distributions and component fleet grams per mile values, the grams per mile value for Composite Fleet 1 is calculated as follows:

$$\text{Composite 1 g/mi} = (0.67 \times 2,261 + 0.21 \times 1,649 + 0.12 \times 1,163) = 2,001 \text{ g/mi}$$

Gram per mile values for Composite Fleets 2 and 3 are calculated in a similar fashion, as are the corresponding gram per ton-mile values. Values for NO<sub>x</sub> and PM are calculated in an identical fashion.

**Note:** Emission factors for all rail fleets within the Multimodal Carrier Tool are reported in grams per truck-equivalent mile to facilitate compositing with truck fleets. Therefore, the grams per railcar-mile values for Rail Carriers are converted to grams per truck-equivalent mile, using the fleet average rail car volume value of 6,091 cubic feet and the average truck trailer volume of 3,180 cubic feet, resulting in the following modal average gram per mile factors used for all rail fleets:

- CO<sub>2</sub> g/mi = 665
- NO<sub>x</sub> g/mi = 11.54
- PM<sub>10</sub> g/mi = 0.312
- PM<sub>2.5</sub> g/mi = 0.322

Please see the Rail Tool Technical Documentation for details.

The air, rail, barge, and truck tool components within the Multimodal Tool estimate black carbon (BC) emissions using either emission factors (e.g. grams of BC per mile for truck carriers) or by scaling from PM emission estimates (e.g. for air carriers). BC emissions are also estimated for logistics component fleets assuming BC emission rates scale directly with PM (e.g., tons BC = scaling factor x tons PM). Average scaling factors for logistics business units are estimated for each selected carrier's mode/SmartWay Category combination, based on the following:

- The BC/PM<sub>2.5</sub> ratios for air and rail carriers are constant for each mode and are the same as those used to estimate BC emissions in the SmartWay Air and Rail Tools, respectively. Estimates assume jet fuel use for air carriers, and ultra-low sulfur diesel for rail carriers.
- Factors for barge carriers are based on the average BC/PM<sub>10</sub> ratio across all propulsion engine

age groups and sizes in EPA's 2020 Port Emission Inventory Guidance.<sup>9</sup> Estimates assume ultra-low sulfur diesel fuel use.

- Factors for each Truck/SmartWay Category combination are based on average BC/PM<sub>2.5</sub> ratio for SmartWay truck carrier submissions for Data Year 2019.
- Factors for the Multimodal-Surface and Multimodal-Air categories are based on simple averages of the BC/PM<sub>2.5</sub> ratios for Truck (all Categories) and Rail, and Truck (all Categories) and Air, respectively.
- Factors for logistics business units are determined by calculating a weighted average of the BC/PM ratios for all other modes/categories. First, the ton-miles attributed to the air, rail, barge, truck, and multimodal carriers selected by SmartWay logistics business units for the 2019 data year were summed by mode.<sup>10</sup> Then the fraction of ton-miles for each mode were applied to the BC factors for each mode to estimate a weighted average BC/PM ratio for all logistics carriers. The resulting weighting factors are as follows:
  - Air – 0.04%
  - Barge – 0.06%
  - Rail – 4.07%
  - Multimodal – 6.83%
  - Truck (all Categories) – 88.99%

The following table presents the average scaling factors used to estimate logistics business unit BC emissions within the Multimodal Tool. The table also presents the minimum and maximum BC/PM ratios observed in the various data sources to provide a measure of the potential variability associated a logistic business unit's carrier selections. BC estimates are particularly uncertain for truck carriers selected by logistics business units, due to the large variation in BC/PM ratios across engine model years and truck classes.

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<sup>9</sup> See Table H-6. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P10102U0.pdf>. Accessed 4-14-2021.

<sup>10</sup> Logistics business units selected by other logistics business units were excluded to simplify the analysis. This exclusion adds an unspecified degree of uncertainty to the final BC/PM ratio estimate.



### BC/PM Ratios for Logistics Component Fleets

Mode/Category	Basis	Average	Min	Max	Range	Data Source/Basis
Rail	PM2.5	<b>0.677</b>	N/A	N/A	N/A	SmartWay Rail Tool
Air	PM2.5	<b>0.130</b>	N/A	N/A	N/A	SmartWay Air Tool
Barge	PM10	<b>0.746</b>	0.733	0.754	0.021	2020 EPA Port Emissions Inventory Guidance
Truck/Auto	PM2.5	<b>0.366</b>	0.088	0.760	0.671	2019 Data Year Truck Partner submissions
Truck/Dray	PM2.5	<b>0.442</b>	0.085	0.782	0.697	2019 Data Year Truck Partner submissions
Truck/Expedited	PM2.5	<b>0.295</b>	0.071	0.720	0.649	2019 Data Year Truck Partner submissions
Truck/Flatbed	PM2.5	<b>0.366</b>	0.083	0.815	0.732	2019 Data Year Truck Partner submissions
Truck/Heavy-Bulk	PM2.5	<b>0.335</b>	0.088	0.764	0.676	2019 Data Year Truck Partner submissions
Truck/LTL	PM2.5	<b>0.330</b>	0.063	0.746	0.684	2019 Data Year Truck Partner submissions
Truck/Mixed	PM2.5	<b>0.355</b>	0.077	0.785	0.708	2019 Data Year Truck Partner submissions
Truck/Moving	PM2.5	<b>0.361</b>	0.077	0.673	0.596	2019 Data Year Truck Partner submissions
Truck/Package	PM2.5	<b>0.162</b>	0.088	0.576	0.488	2019 Data Year Truck Partner submissions
Truck/Refrigerated	PM2.5	<b>0.330</b>	0.090	0.799	0.710	2019 Data Year Truck Partner submissions
Truck/Specialized	PM2.5	<b>0.353</b>	0.077	0.733	0.656	2019 Data Year Truck Partner submissions
Truck/Tanker	PM2.5	<b>0.330</b>	0.088	0.767	0.680	2019 Data Year Truck Partner submissions
Truck/TL-Dry Van	PM2.5	<b>0.295</b>	0.059	0.826	0.768	2019 Data Year Truck Partner submissions
Truck/General	PM2.5	<b>0.329</b>	0.059	0.826	0.768	Average across all SmartWay Truck Categories
MM/Surface	PM2.5	<b>0.503</b>	0.329	0.677	0.348	Simple average of truck (all categories) and rail BC ratios
MM/Air	PM2.5	<b>0.230</b>	0.130	0.329	0.199	Simple average of truck (all categories) and air BC ratios
Logistics	PM2.5	<b>0.355</b>	0.130	0.746	0.616	Weighted average of all category ratios

# Appendix B: Worksheets for Data Collection

## WORKSHEET #1: COMPANY AND CONTACT INFORMATION

#1. Enter your Contact Information:

### GENERAL COMPANY CONTACT INFORMATION

Company Name							
Headquarters Mailing Address							
City		State/Province		Zip		Country	
Main Phone Number		Toll-free Number		Cell number		Web Address	

### WORKING CONTACT INFORMATION

Working Contact Name							
Working Contact Mailing Address							
City		State/Province		Zip		Country	
Working Contact Phone Number				Email Address			

### EXECUTIVE CONTACT INFORMATION

Executive Contact Name							
Executive Contact Mailing Address							
City		State/Province		Zip		Country	
Executive Contact Phone Number				Email Address			

**SUSTAINABILITY CONTACT INFORMATION**

Sustainability Contact Name							
Sustainability Contact Mailing Address							
City		State/Province		Zip		Country	
Sustainability Contact Phone Number				Email Address			

**OTHER CONTACT INFORMATION**

Other Contact Name							
Other Contact Mailing Address							
City		State/Province		Zip		Country	
Other Contact Phone Number				Email Address			
Contact's role in program							

## WORKSHEET #2: COMPONENT FLEET CHARACTERIZATION

Complete this worksheet for each component truck and/or logistics fleet you will be submitting in the Multimodal Carrier Tool.<sup>11</sup>

### #2: Define your Fleets

Partner Name \_\_\_\_\_

Fleet Identifier \_\_\_\_\_

95% Control\* \_\_\_\_\_ SCAC: \_\_\_\_\_ MCN: \_\_\_\_\_ DOT#: \_\_\_\_\_

NSC: \_\_\_\_\_ FLEET TYPE: \_\_\_\_\_

Operation Percentages (must sum to 100):

Truckload \_\_\_\_\_ LTL \_\_\_\_\_ Drayage \_\_\_\_\_ Package Delivery \_\_\_\_\_ Expedited \_\_\_\_\_

Body Type Percentages (must sum to 100):

Dry Van \_\_\_\_\_ Reefer \_\_\_\_\_ Flatbed \_\_\_\_\_ Tanker \_\_\_\_\_ Chassis \_\_\_\_\_ Heavy Bulk \_\_\_\_\_

Auto Carrier \_\_\_\_\_ Moving \_\_\_\_\_ Utility \_\_\_\_\_ Special Hauler \_\_\_\_\_

If Special Hauler is selected, please describe type:

\_\_\_\_\_

Business Focus Percentages (Logistics Only):

Logistics Provider \_\_\_\_\_ Freight Forwarder \_\_\_\_\_ Freight Broker \_\_\_\_\_ Truck Carrier \_\_\_\_\_

Rail Freight Broker \_\_\_\_\_

\* Applicable for Truck fleets, not Logistics fleets

<sup>11</sup> Component Rail fleets only require Partner Name, Fleet Identifier and Rail Class (1, 2, or 3).

## WORKSHEET #3A: IDENTIFY COMPOSITE FLEETS AND COMPOSITE FLEET DETAILS

Complete the following for each composite fleet you will be submitting in the Multimodal Carrier Tool.

### #3A: Define Your Composite Fleets

Company Name \_\_\_\_\_

Component Fleet Identifier \_\_\_\_\_

SCAC: \_\_\_\_\_

Motor Carrier Number: \_\_\_\_\_

DOT Number: \_\_\_\_\_

NSC: \_\_\_\_\_

Percent U.S. Operations: \_\_\_\_\_

Percent Canadian Operation: \_\_\_\_\_

### WORKSHEET #3B: ALLOCATE COMPONENT FLEETS

Complete the following table for each component fleet you will be assigning to the composite fleets listed in Worksheet 3A.

#### #3B: Allocate Your Component Fleets

List each composite fleet identified in Worksheet 3A. Add lines to the table below or copy the table multiple times if necessary.

"% Miles" and "% Ton-Miles" columns must each sum to exactly 100% for each component fleet.

	Composite Fleet Name	% Miles	% Ton Miles
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			





For more information:

U. S. Environmental Protection Agency  
Office of Transportation and Air Quality  
1200 Pennsylvania Ave. NW  
Washington, DC 20460  
(734) 214-4333

[www.epa.gov/transportation-air-pollution-and-climate-change](http://www.epa.gov/transportation-air-pollution-and-climate-change)

U. S. Environmental Protection Agency  
National Vehicle and Fuel Emissions Laboratory  
2565 Plymouth Rd.  
Ann Arbor, MI 48105  
(734) 214-4200

[www.epa.gov/aboutepa/about-national-vehicle-and-fuel-emissions-laboratory-nvfel](http://www.epa.gov/aboutepa/about-national-vehicle-and-fuel-emissions-laboratory-nvfel)