SmartWay Transport Partnership
U.S. Environmental Protection Agency

Barge Carrier Partner 2.0.13 Tool: Guide to Importing Vessel Data Using the Data Import/Export Function 2013 Data Year - United States Version

EPA United States Environmental Protection Agency

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

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Office of Transportation and Air Quality
EPA-420-B-14-013
March 2014

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Overview

The SmartWay Barge Tool has a Data Import/Export function. This function reduces the need to enter information regarding vessel characteristics and operations one at a time on the Tug/Tow Characteristics and Vessel Operations screens in the Tool, and instead allows partners to import and/or export a fleet's vessel-specific information in a single batch operation if they choose. The function is accessible after you have created your fleets and are in the process of entering data for a specific fleet.

THE DATA IMPORT/EXPORT FUNCTION IS RIGHT FOR YOU IF:
you have a relatively large number of vessels in your fleet and you prefer to prepare the necessary data outside the Tool. You may then import the prepared file directly into the Tool, instead of entering vessel information using the Tool screens for that fleet.

How the Data Import/Export Function Works

This function allows you to import data prepared outside the Tool directly into your Barge Tool. After you have created your fleets and selected a fleet for data entry, the function can be accessed to prepare and then import some or all of the vessel characteristics and operations data required for that fleet.

To input vessel characteristics and operations data into the Barge Tool, you will create a Comma-Separated Values (CSV) file that meets certain basic SmartWay specifications for the fleet and then enter your fleet's vessel information in tabular format. This CSV file will be uploaded into the Tool and will save you the time of entering data on the Tug/Tow Characteristics and Vessel Operations screen one at a time in the Tool itself. SmartWay suggests that you use Microsoft Excel to develop and modify your CSV files. Excel has standard support for CSV files, in that it can easily read and write this type of file.

> ***NOTE: You MUST always save your file as a CSV file before importing it into the Tool. If you accidently save your file as an Excel workbook, you can easily change the format back to a CSV file by using the "Save As" function in Excel.***

You can use the Import/Export function to prepare data outside the Tool for one fleet at a time. You can use the function for any of your fleets - . if you use the function to prepare data for one fleet, you do not have to use it for another fleet.

Preparing Your Data to Import into Your Barge Tool

There are five steps to preparing your CSV file for import into the Tool after you have created your fleets.

Step 1: **Open the Import/Export function** by navigating to the Tug/Tow Characteristics fleet data entry screen and selecting the Import/Export button on the right hand side of the screen.

Step 2: **Create your CSV file** using the Export Vessels function.

Step 3: **Populate the CSV file** with the appropriate vessel characteristics and operations data.

Step 4: **Import and validate your CSV file** using the Vessel Data Import function.

Step 5: **Enter additional data into the Tool** for your fleet (e.g., on the Barge Operations screen).

Please note that due to the variability in partner data systems, EPA does not have the resources to assist you in creating and importing this file. You should rely on your own in-house IT/MIS computer staff.

Step 1: Open the Import/Export Function

Before you can import or export data, you must take these initial steps for completing your Barge Tool:

1. Enter your company name and contact information (Steps 1 and 2 on the Home screen).

2. Define and create your fleets (Step 3 on the Home screen).

3. Double click on a fleet name in Step 4 on the Home screen to navigate to the fleet's data entry screens.

4. On the Tug/Tow Characteristics tab, select the Import/Export button on the right hand side.

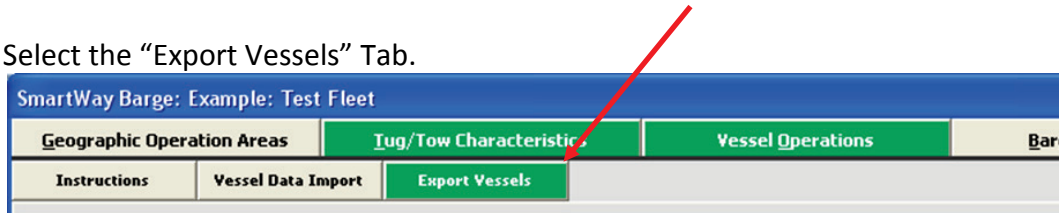
Once you have performed these four steps, you will be ready to use the Data Import/Export function for your fleet.

Step 2: Create Your CSV File

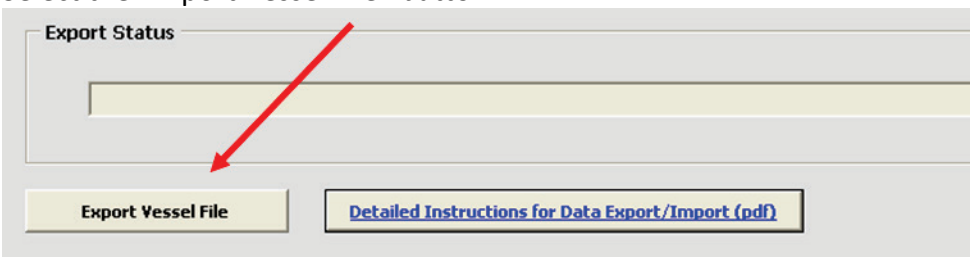
To create your CSV file, you can use the Export Vessels function to generate a file with any vessel characteristics and operations data you have already entered in the Tug/Tow Characteristics and Vessel Operations screens in the Tool. You can then open this CSV file in Excel and populate the remaining data for your vessels, or change data already entered. You can use this same method even if you have not entered any data in the Tool screens. Using the Export Vessels function to create the CSV file is the best way to ensure that the CSV file you start with is in the correct format, with all of the fields properly labeled and in the appropriate order. This helps ensure the file is compatible with the Barge Tool when you begin importing.

Follow these steps when creating your CSV file using the Export Vessels function.

1. Select the "Export Vessels" Tab.

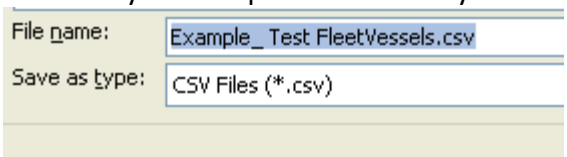


2. Select the "Export Vessel File" button.



3. A "Save As" screen will pop up.

4. Save document as "XXX.csv" file, where "XXX" is a name of your choosing, in any folder on your computer for which you have read/write access.



5. After the file has been saved the screen will indicate that the export has been completed.

6. Proceed to the next step (Step 3, "Populate the CSV file").

Step 3: Populate the CSV File

1. Navigate to the folder where you saved the CSV file in the previous step and open the file in Microsoft Excel (recommended) or other software that supports CSV files.

2. At the top of the file are important warnings and descriptions of the data that need to be entered in each column. These warnings and descriptions can be deleted from your CSV; ***<u>however, do not change the header row that begins with the label "Vessel ID"</u>.***

   NOTE: A list of the CSV fields can also be found at the end of this document, including a list of valid values.

   EPA recommends that you save a backup copy of the CSV file at this point and periodically thereafter with a different file name in case you make a mistake.

3. Populate the CSV file with vessel characteristics and operations data manually or from your own freight management software or related data systems. The data entered in the CSV file must remain in the format specified.

   You may need to work with your company's IT department to determine the best way to merge your in-house data with the CSV file's fields; EPA cannot provide support on data merging procedures.

4. Save and close your completed CSV file on your computer—again, make sure you save the file as a CSV file (with the .csv extension), or it will not load into the Tool.

You are now ready to upload and import your final CSV file into the SmartWay Barge Tool.

Step 4: Import and Validate Your CSV File

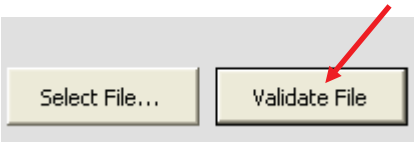
First make sure your Barge Tool is open. In Step 4 on the Home screen of the Barge Tool, double click on the fleet name into which you will be importing your CSV file.

1. Open the Import/Export Function by navigating to the Tug/Tow Characteristics data entry screen and selecting the Import/Export button. You will now select the "Vessel Data Import" tab.

2. Click the “Select File…” button on the Vessel Data Import screen.

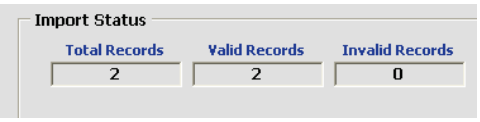
3. Select the XXX.CSV file you created in the preceding steps, and click the “Open” button.

4. After specifying the file path, you need to validate the data in your CSV file by using the “Validate File” button.



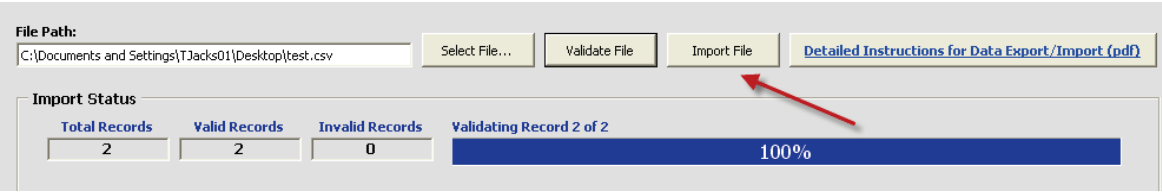
This performs an initial validation of the data in your CSV file to ensure it is in the proper format.

5. After the validation is complete, the Tool will display a list of errors and warnings for your review, along with a count of total records and valid records summarizing the validation results.



NOTE: If your file contains errors or warnings, a message box will appear at the bottom of the screen identifying what they are. You may still import the file even if warnings or errors are detected, although any data field failing validation may be ignored or may have been set to zero. In that case, corrections can be made to the CSV file or within the Tool after importing your data.

6. The “Import File” button will now be enabled if there is at least one valid vessel row in the file, allowing you to import your CSV file.



7. To import the file, select the “Import File” button.

8. After importing your file, text will appear saying “Import successfully completed.”

Once you have imported your CSV file into the Tool, you may augment, correct, or modify any of the vessel data using the Tool screens.

Step 5: Enter Additional Data into the Tool

In addition to vessel-specific information, the Tool will require you to enter additional information through the user interface. This includes barge operations and activity data accessible from the Barge Operations tab.

After importing your vessel characteristics and operations data, please review every data entry screen to verify completeness and accuracy. The Tool will prompt you when data is missing or in error. Alternatively, you may select the Validate Screen button at the bottom of each screen, which will allow you to see any errors.

You are now ready to review your Tool, view data reports, and submit your final Tool to EPA for approval.

Appendix

SPECIAL CASES/CONSIDERATIONS

YOU WISH TO ADD ADDITIONAL VESSEL DATA AT A LATER DATE.

The Data Import/Export function was designed so that you can also add vessel data at a later date. To add vessel data, you can enter information directly in the Tool screens, or you can use the Export Vessels option to export all the current vessel data in the Tool to a CSV file. You can then insert your additional vessel data or change existing data in this exported CSV file using Excel and then re-import the modified CSV file.

YOU HAVE MANUALLY ENTERED VESSEL DATA INTO THE TOOL AND THEN DECIDE TO IMPORT DATA PREPARED OUTSIDE OF THE TOOL.

When you perform a Data Import, all previously entered or imported data in the Tool is overwritten. If you need to merge vessel data from the Tool with other outside vessel data, you can either manually enter the additional information into the Tool, or use the Export Vessels function to export all the current data in the Tool to a CSV file. Then you can edit and update the vessel information in the exported CSV file, and re-import the updated CSV back into the Tool.

CSV File Field Descriptions:

- ***Vessel ID*** - An internal identifier is used to identify your vessels. After specifying the number of vessels (tugs) in a fleet in the Fleet Characterization section (or adjusting the number on the Tug/Tow Characteristics screen), a row for data entry is created for each of the vessels you specify. The Vessel ID corresponds to the row number for that vessel. When you create your CSV file using the Export Vessels function, *you should not change these values*.

- ***Vessel Name*** - The vessel name you use to identify a vessel. The vessel name does not need to be unique (e.g. more than one vessel can have the same name), but it will be easier for you to distinguish the vessel if you give it a unique name. Vessel name can be anything you choose and can be up to 200 characters long. (Required)

- ***Vessel Type*** - The vessel type that best describes the tug. Specify vessel type based on the most common type of operation. Allowable values include "Linehaul" "Locking" "Canal" "Harbor" "Coastwise" or "Other". The value must match one of these options exactly or it will not be imported. (Required)

- ***Coast Guard #*** - The six or seven digit USCG identification number associated with the vessel. Coast Guard # can be anything you choose and can be up to 7 characters long. (Optional)

- ***Number of Engines*** - The number of propulsion engines associated with the vessel. Allowable values are 1 or 2. (Required)

- ***Model/Last Rebuilt Year*** – The engine model year, or if the engine has been rebuilt, the year of the latest rebuild. Allowable values are 1940 through 2014. Enter just the year, e.g. "1986". (Required)

- ***Power Units*** – The units you select for reporting the engine power value for this vessel. Allowable values are "HP" or "kW". The value must match exactly or it will not be imported. (Required)

- ***Fuel Type*** – The fuel type used by the vessel. Allowable values are "Marine Diesel (Low Sulfur)" "Marine Diesel (Ultra-Low Sulfur)" "Biodiesel" or "Liquefied Natural Gas". The value must match exactly or it will not be imported. (Required)

- ***Bioblend Value*** – If the fuel type for the vessel is "Biodiesel" then enter the biodiesel blend percentage as an integer (e.g. if the vessel uses B20, the entry would be "20"). This value is required if the fuel type is "Biodiesel" otherwise it should be left blank or it will be ignored on import.

- ***EPA Engine Category*** – The US EPA size designation associated with the vessel engine(s). The options are Category 1 (less than 7 liters per cylinder) or Category 2 (7 to 30 liters per cylinder). The allowable values in the CSV are "1" or "2". (Required)

- ***Total Rated Propulsion Power*** – The maximum rated power of the propulsion engine(s) for the vessel, in the units specified in in the Power Units column. Enter a numeric value (e.g. if there are two 2,000 HP engines, then enter "4000" for the vessel). (Required)

- ***Vessel Type Other Description*** – If the vessel type is "Other" then this is your description of the vessel type. The description can be anything you choose and can be up to 3,000 characters. This is required if the vessel type is "Other" otherwise it should be left blank or it will be ignored on import.

- ***Retrofit Information Provided*** – Indicates if the vessel has retrofit information provided or not. Only vessels that use diesel fuel can include retrofit information at this time. The value should be "TRUE" or "FALSE" depending on whether retrofit information is provided (if it is left blank it will import as "FALSE").

- ***Retrofit Reduction Strategy*** – If the vessel uses retrofit technologies and a value of "TRUE" is provided in the Retrofit Information Provided column, then this field contains the reduction strategy used by the vessel. Allowable values are "Fuel Injection Engine Improvements" "Diesel Oxidation Catalyst" "SCR" "Common Rail" "Lean NOx Catalysts", "Diesel Electric", "Humid Air Motor (HAM)", "Hybrid Engines" or "Other". Each strategy is associated with a default percent reduction (except for "Other"). The field value must match exactly or it and all other retrofit information will not be imported. Required if retrofit information is provided.

- ***Retrofit Reduction Value – PM*** – If retrofit information is provided and the retrofit reduction strategy is "Other" then this is the percent reduction in PM emissions associated with the "Other" strategy. The value should be entered as an integer between 0 and 100 (e.g. if the strategy provides a 20 percent reduction in PM emissions, enter "20"). It is required if the retrofit reduction strategy is "Other"., No retrofit information for this vessel will be imported if the value is missing or outside the valid range.

- ***Retrofit Reduction Explanation - PM*** – If retrofit information is provided and the retrofit reduction strategy is "Other" then this is the justification for the percent reduction in PM emissions. The explanation can be anything you choose and up to 1,000 characters. It is required if the retrofit reduction strategy is "Other", and no retrofit information for this vessel will be imported if the explanation is missing.

- ***Retrofit Reduction Value – NOx*** – If retrofit information is provided and the retrofit reduction strategy is "Other" then this is the percent reduction in NOx emissions associated with the "Other" strategy. The value should be entered as an integer between 0 and 100 (e.g. if the strategy provides a 20 percent reduction in NOx emissions, enter "20"). It is required if the retrofit reduction strategy is "Other". No retrofit information for this vessel will be imported if the value is missing or outside the valid range.

- ***Retrofit Reduction Explanation - NOx*** – If retrofit information is provided and the retrofit reduction strategy is "Other" then this is the justification for the percent reduction in NOx emissions. The explanation can be anything you choose and up to 1,000 characters. It is required if the retrofit reduction strategy is "Other", and no retrofit information for this vessel will be imported if the explanation is missing.

- ***Retrofit Reduction - Additional Comments*** - If retrofit information is provided then you can enter any additional comments about the retrofit in this column. The comments can be anything you choose and up to 3,000 characters. (Optional)

- ***Annual Fuel Usage*** – The total annual fuel use for the vessel in either gallons or tons (see "Fuel Units" field description below). Enter a numeric value. (Required)

- ***Fuel Units*** – The units selected for reporting the total annual fuel use for this vessel. If the fuel type for the vessel is diesel (low sulfur, ultra-low sulfur, or biodiesel), then the allowable values are "Gallons" or "Tons". If the fuel type for this vessel is LNG, then only "Tons" is allowed. The value must match exactly or it will not be imported. (Required)

- ***Towing Capacity*** – The maximum total towing capacity for the vessel specified in short tons. Enter a numeric value. (Required)

- ***Propulsion Engines: Hours Underway*** – The total annual hours of operation for underway operation for the vessel propulsion engine(s). The value should be entered as an integer between 0 and 8,760. The sum of the underway and the maneuvering hours must also be between 0 and 8,760. (Required)

- ***Propulsion Engines: Hours Maneuvering*** – The total annual hours of operation for maneuvering operation for the vessel propulsion engine(s). The value should be entered as an integer between 0 and 8,760. The sum of the underway and the maneuvering hours must also be between 0 and 8,760. (Required)

You can specify information for up to eight auxiliary engines for each vessel. The information for each of the eight engines is the same, as listed here:

- ***Auxiliary Engine #: Information Provided*** - Indicates if the vessel has auxiliary engine information or not for the specified auxiliary engine number (1 through 8). The value should be "TRUE" or "FALSE" depending on whether there is information provided (it will import as "FALSE" if it is left blank).

- ***Auxiliary Engine #: Manufacture/Model Year*** – If auxiliary engine information is provided for the specified auxiliary engine number (1 through 8), then this is the engine model year or year of manufacture of the auxiliary engine. Allowable values are 1940 through 2014. Enter just the year, e.g. "1986". The year is required if information is provided, and no auxiliary engine information will be imported if the value is invalid.

- ***Auxiliary Engine #: Hours of Operation*** – If auxiliary engine information is provided for the specified auxiliary engine number (1 through 8), then this is the annual hours of use for the auxiliary engine. The value should be entered as an integer between 0 and 8,760. The hours value is required if information is provided, and no auxiliary engine information will be imported if the value is invalid.

- ***Auxiliary Engine #: Rated Power*** – If auxiliary engine information is provided for the specified auxiliary engine number (1 through 8), then this is the maximum rated power of the auxiliary engine, in the units specified in the Power Units column. Enter a numeric value. The rated power value is required if information is provided, and no auxiliary engine information will be imported if the value is invalid.