



# ECO GUIDE TO Importing an Existing Inventory

If you have an existing complete inventory, you have the option to analyze that inventory by importing the data into Eco following the procedure outlined below. This guide applies to existing data from complete inventories that at a minimum contain species and diameter at breast height (dbh). It is currently not possible to import sample plot data into i-Tree Eco.

## Formatting Your Data

First, you will need to format your data. i-Tree Eco's inventory import tool works best with a properly formatted dataset. This means that existing data should be saved as a specific file type and include the required data fields. Each data field also has its own formatting requirements that must be adhered to.



### Caution

Depending on the available memory on your computer, you may need to divide large datasets into smaller batches in order for the import process to function. For example, some users have been unable to import datasets larger than 50,000 trees. If the software becomes slow, unresponsive, or fails when importing data, divide your dataset into smaller batches and import those separately into your Eco project.



### Tip

In addition to this guide, information and troubleshooting tips can be found in these videos and forum post:

#### Videos:

[Importing Inventory Data into i-Tree Eco v6](#)

[i-Tree Eco v6 – External Inventory Data Import Troubleshooting Steps](#)

#### Forum post:

[How Can I Troubleshoot Records Not Importing in Eco](#)

## What file type is best?

Save your inventory data as one of the following file types:

- Excel spreadsheet (.xls or .xlsx)

## What data are required?

i-Tree Eco v6.0 requires users to collect only two tree data fields:

- **Species:** The species and genus names of each tree assessed.
- **Diameter at breast height (dbh):** The tree stem diameter at breast height (4.5 feet above the ground) for each tree.



### Caution

i-Tree Eco requires users to input a minimum of two tree data fields, species and dbh, for complete inventory projects. While this approach allows users with limited data to run the model, it also has substantial limitations. The accuracy of ecosystem service estimates can be improved significantly by providing additional optional tree measurements.

Please read more about these data limitations in the [Eco Guide to Data Limitations](#).

For users collecting dead trees, an additional data field is required for your existing inventory. Users must collect:

- **Crown health:** Tree crown health estimated as condition or dieback (i.e., dead branches) of the crown.

The crown health field is used to indicate which sampled trees are dead and which are not. Dead trees should be given either a 100% dieback or 0% condition designation depending on which field you decide to provide.

Be aware that some supplemental analyses, such as energy benefits and pest detection, require certain data to be collected beyond species and DBH. Please refer to the [Eco guide, Data Collection Options for Supplemental Analyses](#), for more information.

## How do I format each data field?

In addition to the two required data fields (species and dbh), users are allowed to import any or all of the data shown in Table 1. Each data field has its own formatting requirements.



### Caution

Required fields, species and dbh, must be entered according to the formatting requirements in Table 1 or mapped to Eco's values. Invalid or unmatched values will result in records being skipped.

Here are several guidelines to keep in mind:

- **Spreadsheet Cell Format** - Each column in the spreadsheet that you are importing from should be formatted prior to importing according to the type of data it contains; mixing data types within a column may cause inconsistent results. For example, Microsoft Excel often displays data as numbers but formats them as another category such as text. This will become apparent during the import process and should be fixed in Excel beforehand.
- **Field names** – Users are not required to edit the field names of their existing data to match those used by i-Tree Eco; instead, during the import process, users will be asked to indicate the corresponding Eco field name.
- **Data limits** – Eco requires that all values to fall within accepted limits. For fields where this applies, the limits are included in Table 1. Tree records that do not meet these limitations will not be imported so it is best to correct issues before importing.
- **Field type** – Some Eco fields can be displayed in multiple ways. For example, species data can be entered as common name, scientific name, or species code. During the import process users must indicate which field type corresponds to their existing data.

**Data mapping** – During the import process user can select “I need to map my source column values” for certain fields. If you select this option, you will have the opportunity to match each unique value in the selected column of your data to a value that i-Tree Eco recognizes. For example, if you have recorded your species data as locally relevant species codes, these codes do not have to be the same ones that are built into i-Tree Eco. However, they must be mapped to values Eco recognizes. The option to map values is available for all fields in Table 1. If there are fields you want to map, the data formatting in Table 1 need not be followed.



**Tip**

**Save Time, Format Data Before Importing!**

The data mapping process can be tedious and time consuming when there are many values to be mapped. We highly recommend that you format the data you are going to import according to the guidelines in Table 1. In doing this you will eliminate, or severely limit, the amount of data that will need to be matched to values that Eco recognizes, which will likely save you time as mapping data during the import process can be more time consuming compared to formatting data in Excel.

Data Fields		Cell Format	Data Specifications and Limits
<b>Required fields</b>			
Species		Text	Enter as specified in the <a href="#">Eco Field Manual</a>
DBH		Number	Lower limit is 0.5 inch, there is not an upper limit to what Eco will accept.
<b>Optional fields</b>			
Tree ID		Number	> 0 without duplication. To import a unique identifier for each tree, please use the User Tree ID field.
Tree address			
Strata			Enter as defined in Project Configuration
Crew		Text	none
Survey Date		Short or Long Date	Long date will be converted to short date.
Status			Planted, Ingrowth, or Unknown
Land use		Text	Enter as specified in Project Configuration
Photo ID		General	none
Latitude			Decimal degrees if mapping is desired
Longitude			Decimal degrees if mapping is desired
DBH measurement height		Number	0.1 to 6 feet
DBH measured		Text	Enter as Yes (Y) or No (N)
Street tree/non-street tree		Text	Enter as Yes (Y) for street tree or No (N) for non-street tree
Public/private		Text	Enter as Yes (Y) for public tree or No (N) for private tree
Total tree height		Number	0 to 450 feet
Crown size	Height to live top	Number	0 to 450 feet
	Height to crown base	Number	0 to height to live top
	Crown width	Number	0 to 300 feet
	Percent crown missing	Number	0%, 100%, and the mid points of 5% increments (i.e. 0, 3, 8,13...98,100)
Crown health			Enter as defined in Project Configuration
Crown light exposure		Number	-1, 0, 1, 2, 3, 4, or 5
Energy	Direction	Number	1 to 360 degrees
	Distance	Number	0.1 to 60 feet
Maintenance recommended			Enter as defined in Project Configuration
Maintenance task			Enter as defined in Project Configuration
Sidewalk conflict			Enter as defined in Project Configuration
Utility conflict			Enter as defined in Project Configuration
Pests (IPED)			Enter as defined in <a href="#">IPED Field Manual</a>
User Tree ID		General	none

## Using the Complete Inventory Import Function

Having properly formatted your existing inventory, you will now import that data into a new or existing Eco project. To begin, click on your computer's **Start button > (All) Programs > i-Tree > i-Tree Eco v6**.

To create a new project:

- 1 Click **File > New Project**.
- 2 In the **New Project** window, select "Complete Inventory" from the project type drop-down list in the upper right corner.
- 3 Click **OK**.
- 4 In the **Save Project File As** window, browse to the folder where you would like to save your project.
- 5 Enter a file name in the space provided.
- 6 Click **Save**.

After you create a new project, you will see that i-Tree Eco automatically opens the **Project Definition** function of the **Project Configuration** tab. Configuring your project is one of the first things that you do when you create an Eco project. This allows you to provide i-Tree Eco with important information, such as where your study area is located, and what data you will be collecting. For a complete inventory project where you are importing existing data, all of the information that you provide here should apply to that existing dataset.

To configure your project:

- 1 Click on the **Project Configuration** tab.
- 2 Click on the **Project Definition** function.
- 3 Work through the **Project Settings**, **Location**, and **Data Collection Options** tabs from left to right.
- 4 Close the **Project Definition** function when you are finished by clicking on the **OK** button in the upper right corner to save your settings.
- 5 Work from left to right through the **Project Configuration** tabs to configure fields and features relevant to your project.



### Tip

While working in Eco, use the on-screen help text in the panel on the left side of the window. This help text will provide directions for using each button and function.



### Tip

There are several data fields in the Project Definition > Data Collection Options action panel that can be defined by the user. For example, management fields, such as sidewalk and utility conflicts, can be customized so users can specify values that are relevant to their project. The values chosen for these fields within the project need reconcile with the values in the data you will be importing.

To import your existing inventory:

- 1 Click on the **Data** tab.
- 2 Click on the **Trees** function. (**Note:** The **Import** button will become available in the ribbon.)
- 3 Click on the **Import** tool to import your existing tree inventory.
- 4 In the **Data Import Wizard**, click **Browse**.
  - a Navigate to the file containing your inventory data.
  - b Select the file and click **Open**.
- 5 Check the box to signify that the first row of your dataset contains the column headers if that is true. Otherwise, leave the box unchecked.
- 6 Confirm that the correct data appears in the preview table and click **Next**.
- 7 Match your existing data fields to Eco's data fields.
  - a Select an inventory column from the table. The column header will appear in the "Your Source Column" space below the table on the left side.
  - b Choose the "Eco Field" from the drop-down list that matches your selected column.
  - c Check the box indicating whether you will need to map your field values to the Eco field values. (**Note:** You will be prompted to complete the value mapping later. See step 9 below.)

- d As previously described, Eco data fields can often be displayed in several ways. For example, species data can be entered as common name, scientific name, or species code. For data fields where this applies, a “Field Type” drop-down list will appear below “Eco Field.” Select the field type that matches your existing data.
- e Repeat steps 7a through 7d until each column that you would like to import has been matched to the appropriate Eco field.



**Tip**

Try moving across the columns that contain your data from left to right, clicking on each one that contains data you want to import. Columns that contain data you do not want to import can be skipped.

- 8 Click the **Next** button at the bottom of the window.
- 9 For data fields where you indicated the need to map field values (in step 7c above), match your field values to Eco’s.
  - a In the upper table, select a row.
  - b In the lower table, the values in the “Your Value” column that are colored green have been automatically matched to the values in the “Eco Value” column. The values Eco does not recognize, and you need to map, are colored black in the Your Value column and the adjacent “Eco Value” is empty. Select a row that you need to map and click in the “Eco Value” cell. Next, you will either type in a value Eco will recognize, or if a drop down list appears, choose the “Eco Value” from the drop-down list that is the best match for “Your Value”. It is possible to change the values that Eco automatically maps by clicking on the “Eco Value” you want to change and selecting from the drop down menu that appears.



**Tip**

Depending on how much data is in the “Eco Value” drop down menu it may take up to a minute for the menu to become visible. This is particularly true when mapping species. We suggest you format your data according to the parameter in Table 1 prior to importing.



- c Move through the lower table until all of your values have been matched to an Eco Value. Values that you have matched will appear orange in the Your Value and Eco Value columns.
- d Repeat steps 9a through 9c until all necessary data fields have been mapped.

10 Click **Next**.

11 Review the results of your processed data at the top of the **Data Import Wizard**. This information will tell you how many records from your inventory data will be imported.

12 When you are satisfied with the data that will be imported, click **Finish**. (**Note:** Use the **Back** button to return to previous steps for any adjustments.)

After you have completed importing your existing inventory data, you will be able to make use of i-Tree Eco as described in the **User's Manual**. Use the **Data** tab to view or edit your data, edit benefit prices, or add annual costs. Use the **Reports** tab to submit your data for processing, retrieve your results, and view the results of your i-Tree Eco run. In the **Forecast** tab you can model future scenarios for your urban forest. The **Support** tab contains links to i-Tree support materials.

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