

Uploading Data Tables

A data package typically contains one or more data tables. These data tables need to be described in the EML metadata. Entering the needed metadata by hand can be laborious and error prone. ezEML assists in this process by letting you upload your data tables in CSV (comma-separated value) format. ezEML then infers many of the needed metadata attributes for you.

To begin uploading data tables, click **Data Tables** in the **Contents** list to go the Data Tables page. It will look something like this:

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Active user: EDI Active EML Document: sample.1.1

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Check Metadata
Download EML


Data Tables ?

Data Table Name

Load Data Table from CSV File Add Data Table from Scratch ?

Save and Continue

We want to load the data table from a CSV file, not add it from scratch, so we click the button for that. This takes us to a page where we can select the CSV file to upload:

 ezEML

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Submit to EDI

Load Data Table from CSV File

Select the CSV file to upload:

Choose File

No file chosen

Field Delimiter

comma ▾

Quote Character

double quote - " ▾

Upload

Cancel

We refer to the file as a CSV (*comma*-separated value) file, but separators other than commas are supported, including tabs, vertical bars, colons, and semicolons.

In addition, the quote character can be specified, either a double quote (") or single quote ('). The quote character can be used to enclose values in the table that contain the separator within them, which otherwise would be interpreted as multiple values. E.g., if comma is the separator, a value like "Madison, Wisconsin" would appear to be two values if not enclosed in quotes.

In the example shown, we've selected a file called **decomp.csv**. We click **Upload** to cause the file to be uploaded and analyzed by ezEML.

ezEML will display a page that contains the metadata pertaining to the data table as a whole. In part, it looks like:

Data Table ?

Enter information about the data table object:

Name *

decomp ?

Description (Recommended)

?

Filename *

decomp.csv ?

Attribute Orientation

column ?

Field Delimiter

comma ?

Number of Header Lines (Optional)

1 ?

Record Delimiter (Optional)

\r ?

Quote Character

double quote - " ?

Case Sensitive

no ?

Size (Optional)

8590 ?

MD5 Checksum (Optional)

13fae6ca12d0460e9bcbd7321cbe81cf ?

Number of Records (Optional)

294 ?

Online Distribution URL (Optional)

?

You see that ezEML has filled in a number of the values for you. It has done its best to infer the values based on the CSV file. You will probably want to change some values and add others. In the screenshot above, for example, you might change **Name** and **Description** to something like:

Data Table ?

Please enter information about the data table object:

Name

Decomposition data ?

Description (Recommended)

Decomposition rates measured at a fortnightly frequency in 3 streams ?

At the bottom of the form is information about the data table's **Columns**. In this example, we have:

Columns:

TYPE, YEAR_PLACED_IN_FIELD, ARM, NTRT, YEAR, PERCENT_LOSS

Edit Column Properties

Save and Continue

Cancel

ezEML does its best to infer the needed metadata for the columns, but you will need to do some tweaking. Clicking **Edit Column Properties** brings up a page like:

Columns of *decomp*

Col #	Column Name	Type ?		
1	TYPE	Categorical	Edit Column's Properties	Change Type
2	YEAR_PLACED_IN_FIELD	DateTime	Edit Column's Properties	Change Type
3	ARM	Categorical	Edit Column's Properties	Change Type
4	NTRT	Categorical	Edit Column's Properties	Change Type
5	YEAR	DateTime	Edit Column's Properties	Change Type
6	PERCENT_LOSS	Numerical	Edit Column's Properties	Change Type

Back to Data Table

Data table columns can have one of four **Variable Types**: Categorical, Numerical, Text, or DateTime. ezEML infers the variable type based on the values in the uploaded data table, but there may be cases where you want to override the variable type inferred by ezEML for a given column. To do so, click the **Change Type** button for the column in question and select the desired variable type.

Let's suppose, though, that you are happy with the variable types as shown. You will still need to edit the columns' properties to fill in metadata that ezEML is unable to infer from the CSV file. In the screenshot above, suppose you click **Edit Column's Properties** for the TYPE column. You will see a screen like:

Categorical Column

Name *

TYPE  

Definition *



Label (Optional)

TYPE 

Define coded values and their definitions:

Codes: Sphagnum, Vascular

[Edit Codes and Definitions](#)

Allow only the code values found in the table



Optionally, enter up to 3 missing value codes with accompanying explanations:

Missing Value Code

Explanation

(Only part of the form is shown above.)

ezEML has used the column name (TYPE, in this case) for the **Name** and **Label** fields. Change them, as desired. The columns's **Definition** is not something ezEML can infer from the data table, but it is required. We can fill in something like:

Definition

Vegetation type: Sphagnum fuscum or vascular plant tissue

The TYPE variable is a categorical variable with two category codes: Sphagnum and Vascular. ezEML is able to pick up the codes from the table, but it cannot supply the code definitions. Click **Edit Codes and Definitions** to go to a page where the codes are listed:

Code Definitions for TYPE

Code	Definition (*)			
Sphagnum		▼	Edit	Remove
Vascular		▲	Edit	Remove

[Add Code Definition](#) [Back to Column](#)

We see that the definitions are missing for the codes, so we click **Edit** for each, bringing up forms like:

Code Definition for TYPE

Enter a code and its definition:

Code

Definition

Optionally, enter an order value, e.g. '1', '2', '3', etc. (meaningful only for ordinal attributes):

Order (Optional)

[Save and Continue](#) [Cancel](#)

Enter the definition for the code and click OK. Do that for each code. When you are done editing the column's properties, click Save and Continue to return to the column list.

Proceeding in this way, one column at a time, you can supply the column metadata required by EML.

In our example, there was a numerical column called PERCENT_LOSS. Numerical columns require their units to be specified. Click **Edit Column's Properties** for the PERCENT_LOSS column to bring up a form like:

Numerical Column

Name *

PERCENT_LOSS



Definition *



Label (Optional)

PERCENT_LOSS



Enter a standard unit value or a custom unit value:

Standard Unit <input type="text"/>	Custom Unit <input type="text"/> Description (Recommended) <input type="text"/>
--	--

Number Type

real



(Only part of the form is shown above.)

EML defines a list of standard units, mainly from the SI standard. If the appropriate unit for the variable in question is a standard unit, select it from the list. In this example, PERCENT_LOSS is a dimensionless percentage, so we select dimensionless from the list – and we’ve also filled in the column’s **Definition**:

Definition

Amount of mass lost expressed as a percent of original mass

Enter a standard unit value or a custom unit value:

Standard Unit <input type="text"/>	Custom Unit <input type="text"/>
--	--

In some cases, the variable’s unit is not among the standard units. In such a case, fill in a **Custom Unit** and **Description**, as in this example taken from a different data table:

Definition

Mass of 1-cm lengths of Sphagnum stems beneath the capitula per m2

Enter a standard unit value or a custom unit value:

Standard Unit <div></div>	Custom Unit gramsPerSquaredMeterPerCentimeter Description (Recommended) gramsPerSquaredMeterPerCentimeter
-------------------------------------	--

How do you know when you've made all of the needed modifications to an uploaded data table's metadata to satisfy EML's requirements and recommendations? ezEML's **Check Metadata** feature can check the metadata for you. See **Checking Your Metadata** in this User Guide.