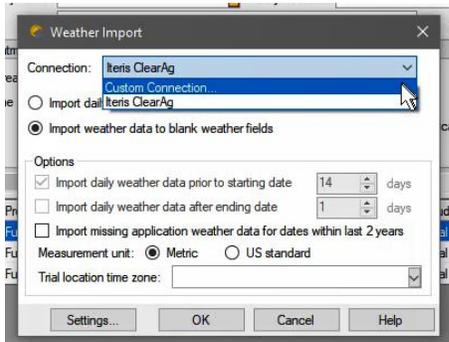**In this video…**

- Create a custom connection to weather data source .csv file
- Link data columns from .csv to ARM weather fields
- Import:
  - Daily weather -> Weather table
  - Hourly weather -> Application tab
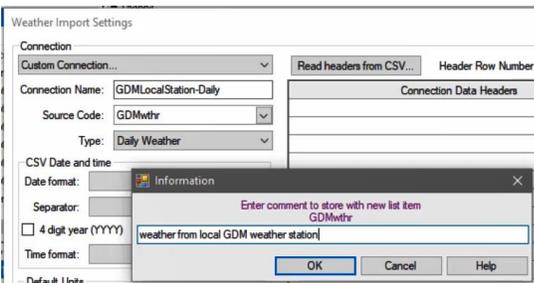 - Batch import into multiple trials

In this video, we demonstrate how to import weather data into an ARM trial using any weather data source.

We will create a custom connection to a weather data source file, link the data columns in the file to ARM weather fields, and use the connection to import daily weather to the Weather table, and then import 'hourly' weather to the Application table into several trials at once.
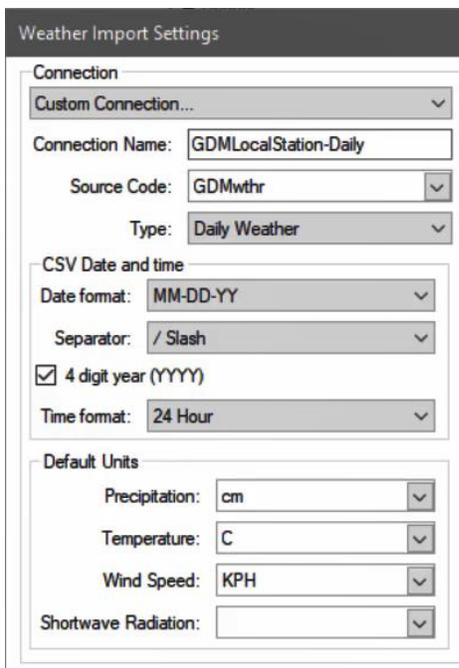
To begin, select the Import Weather Data button on the toolbar. If you have not created a custom connection before, the Iteris ClearAg connection is loaded to start. With a subscription to their service, you can import their weather and soil data by directly connecting to their API – see Import ClearAg Weather Data for more information.

Next, select 'Custom Connection…' from the dropdown to create a new connection.

Start by defining a name for this connection. Then define an 8-digit code that will be used to identify the source of the data imported through this connection.

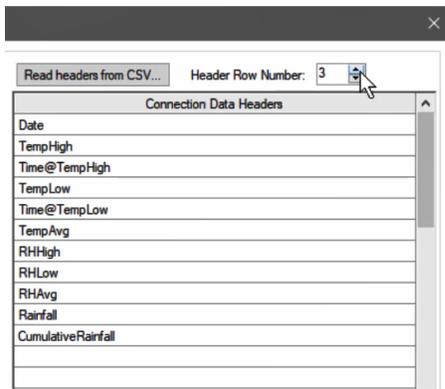Click the dropdown button to add a comment and save this code for later use.

Next, define the type of weather that will be imported with this connection.

Daily connections link to the Weather tab of the Site Description, while **Application** connections are for hourly data that import into the Application weather fields based on application start and stop times. For this example we will use Daily weather.

Next, set the format of dates and times found in the source file. This can be different from the format ARM uses to display dates and times within the program, so make sure to look at your source file to determine the format so that ARM reads the file correctly.
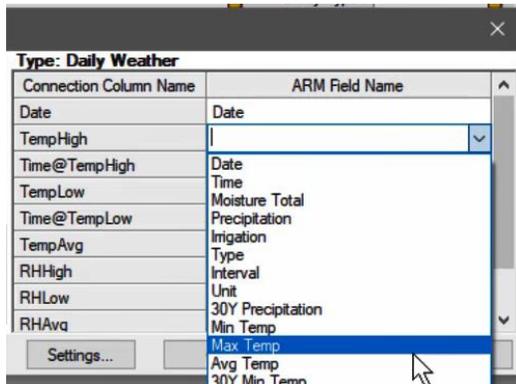
Then enter the units of measure for values stored in the source file. When a data value is imported, ARM will auto-fill the appropriate unit from the list of defaults defined here.
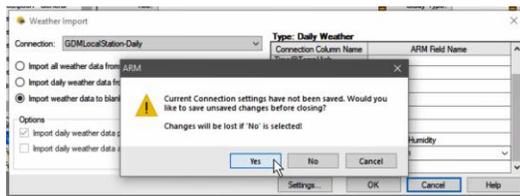
Finally, enter the data headers for the connection file. Select a source file for ARM to read the headers from, instead of hand-typing the information. (If the header row is not the very first line of the document, specify which row for ARM to read the headers from.)

Press OK to save this connection.

Now we can link the headers from the source file to ARM trial fields. Since we chose the Daily connection type, we can select fields from the Weather table to link.
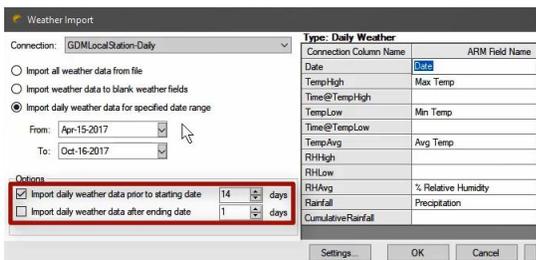
Select a field name to link the data from the source column name to that trial field when importing data. Note that not all of the fields in your source file need to be linked to a field; ARM will simply skip over any unused columns during an import.

Since we do not have a trial open to import weather yet, click Cancel and then click Yes to save our changes to this connection.
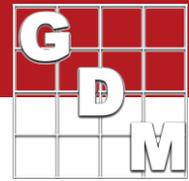

Now let's open a trial to use this new connection. When importing daily weather, ARM uses the Trial Initiation and Completion dates as the default date range to import, found on the General Trial tab of the Site Description.

The Weather Import process can also be triggered from the Tools menu. Again, ARM defaults to the dates specified within the trial, but we can also specify additional days prior to the starting date or after the ending date to include in the import. Alternatively, we can import all of the days of weather data contained in the source file.
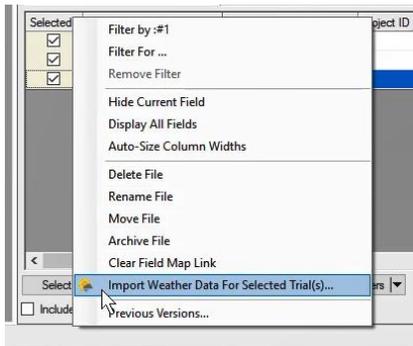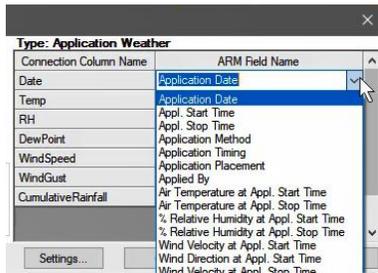
Press OK to proceed to select the weather data file to import. This should be saved in a comma-separated file (.csv file extension) – a common, simple output type for large sets of data (and an easy format to 'save as' from an Excel spreadsheet if needed).

Now on the Weather tab, we can see the daily weather records have been imported into the fields we defined within the connection, for the date range specified.
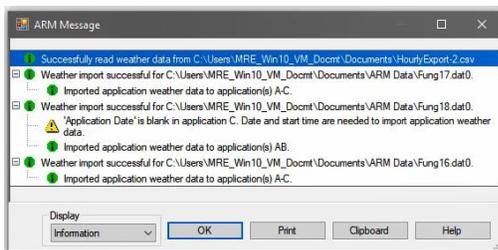

You can also import weather data into multiple trials at one time. This can be useful for a weather station located at a research location, to import that same data into all trials at that location. We will demonstrate this with the Application connection type, but it can be done with daily weather too.

From the Study List, select the trials to import data into. Then right-click and select 'Import Weather Data for Selected Trial(s)'.

We select from the list an Application connection that we had set up previously. Note that we link fields from the source csv to weather-related fields found on the Application tab of the Site Description for this connection type.

Now click OK to proceed to select the weather source file to import. This time we choose the 'hourly' weather data.

After the data has been imported into the files, ARM displays a summary of what occurred, and any errors it may have encountered.

Then if we open one of the trials, we can see that application weather details have been filled in from file, for applications that have a date and time specified.

Also note that Start and Stop fields like air temperature are both filled in, based on the Application Start and Stop times.