

# EarthFX Data Transfer File



## Background

The EarthFX Data Transfer template (DTF) is a template used to transfer temporal data (such as water levels, water quality, pumping data) from laboratories, data loggers etc. into databases such as the EarthFX Standard Database (Data Model).

The transfer file can be in different formats such as spreadsheet, comma delimited (csv), XML etc. EarthFX software can automatically recognize many of these formats and no additional user 'mapping' is required. For our SiteFX product, when the format deviates from the template, tools are included to allow the user to map source and destination fields as required. Users are not limited to the default data model fields when using the EarthFX Data Model – others can be added as required.

In some cases there are options for field names and types – the description should provide guidance where required. For further information or questions, please contact Kelsy Brennan at: [kelsy@earthfx.com](mailto:kelsy@earthfx.com).

## Required Fields

Field Name	Field Type	Description
<b>Sample_Name</b> (or Station Name)	Text	The name or code used to reference the location the measurement / sample was collected from.
<b>Reading_Date</b>	Date/Time	Date reading was collected or measured. This is the date of sampling for water quality results, not the analysis date.
	Text (YYYY/MM/DD HH:MM:SS)	In some cases text is preferred. In spreadsheets especially there is often confusion as the operating system may reformat dates depending on regional settings, usually unbeknownst to users
		Time component is optional. If omitted, the time is usually auto assigned a value of 12:00 AM.
<b>Reading_Parameter</b>	Text	Name of the parameter being measured. Examples include 'water level', 'pumping rate', 'chloride' etc.
<b>Reading_Value</b>	Single	The initial, raw value of the measurement.
	Text	In some cases text is preferred. This is the case when significant digits are of particular importance. For example, in chemistry, if a value is reported as '11.0' the '0' is intentional and a reflection of the lab instruments precision.
		Often with chemistry, when the value is 'non-detect' the MDL (method detection limit) can be provided. This is accompanied by the Reading_Qualifier such as 'ND' or '<'.
<b>Reading_Units</b>	Text	The units of measurement of Reading_Value and Reading_MDL when working with chemistry if available.

## Optional Fields

Field Name	Field Type	Description
<b>Reading_CAS</b>	Text	The CAS Registry Number for the Reading_Parameter.
<b>Reading_MDL</b>	Single	For chemistry - the method detection limit (MDL) of the laboratory for Reading_Parameter. Provided in the same units as the Reading_Value.
	Text	Same explanation as for Reading_Value field.
<b>Reading_Modifier</b>	String	A text string qualifier for the reading. Examples include 'ND' and '<' and other qualifiers used to describe the reading. Note that this text string cannot be placed in the Reading_Value field
		In some cases the Reading_Modifier and Reading_Value are provided in the same field. EarthFX software can typically separate out the numeric and text portion when required.
<b>Reading_Type</b>	Integer	Used to identify the type of data being provided. Use the following codes: 1 - Water quality 2 - Water level 3 - Pumping rates 4 - Meteorological data (Please contact EarthFX for other types)
<b>Reading_Matrix</b>	Integer	Used to identify the matrix of the sample. Use the following codes: 1 – Water 2 – Soil Please contact EarthFX for other matrix types (vegetable for example)
		The station_name or sample_name is typically linked back to a master list of locations which already has a matrix property.
<b>Reading_Method</b>	String	Identifies the method of measurement.
<b>Parameter_Comment</b> (or Lab_Parameter_Comment)	String	A comment regarding a specific parameter.
<b>Sample_Comment</b> (or Lab_Sample_Comment)	String	A comment from the lab regarding the entire sample.
<b>Lab_Analysis_Date</b>	Date/Time	For chemistry - date the analysis of the sample was performed.
	Text (YYYY/MM/DD HH:MM:SS)	Sample explanation as for Reading_Date field.
		Time component is optional. If omitted, the time is usually auto assigned a value of 12:00 AM.
<b>Lab_QAFlag</b>	String	For chemistry - available for lab to flag a reading as an internal QA reading
<b>Data_Source_ID</b> (or Lab_Sample_ID)	String	For chemistry - available for data source to provide its own ID for sample.
<b>Lab_Dilution</b>	Integer	For chemistry - dilution factor.

<b>Lab_Expected</b>	Single	For chemistry - Expected Result for QA Parameters.
	Text	Same explanation as for Reading_Value field.
<b>Data_Source</b> (or Lab_Name)	Text	Identifies the source of the data in the event further details or confirmation are required. Examples include name of laboratory, file name, field book name etc.