

Continuous Water Quality Data Submission Field Definitions

Oregon Department of Environmental Quality
 Volunteer Water Quality Monitoring Program
 October 18, 2016

Deployment Information- Used to associate logger ID's with physical locations of the deployment. Each logger/site combination must have a unique logger ID. Therefore, if logger 1234 is deployed at site1 and site2 during the reporting period then a suffix should be added to the logger id for each unique logger/site, such as 1234a at site1 and 1234b at site2.

Site location information must include sufficient metadata to translate decimal degrees to the state NAD83 datum standard.

Table 1: SiteMasterInfo worksheet field descriptions

Header	Required	Description
Sampling Organization	Yes	Name of the organization conducting the sampling
QAPP/SAP Title	Yes	Quality assurance project plan, sample analysis plan or other project documentation that can be used to reference a description of the monitoring project.
QAPP/SAP Date	Yes	Date that the project document above was completed or approved.
Sample Information		
Logger_ID	Yes	Data logger serial number or other unique ID. This list of logger ID's is used as the valid values for the rest of the data submission and must be unique—the same logger ID cannot appear twice in this list. Assign a suffix (ex. "a", "b", etc.) to the end of the logger ID to make it unique if needed.
LASAR_ID	Cond.	If the LASAR ID is already established for a site then it should be provided
Site_ID	Cond.	Each unique lat/long must have unique ID. If LASAR ID's do not exist then the groups unique identifier may be used.
Station_Description	Yes	Waterbody name and brief narrative describing location. Individual's names will not be used.
Decimal_Latitude	Cond.	Required when a LASAR_ID does not already exist. Should be provided in decimal degrees (12.12345)
Decimal_Longitude	Cond.	Required when a LASAR_ID does not already exist. Should be provided in decimal degrees (-123.12345)
LAT_LONG_SOURCE	Cond.	Required when a lat/long is provided. Should provide enough info to determine which datum was used. DEQ uses the NAD83 datum.
Deploy_Depth(meters)	No	Depth where the sample collection or measure was made. Can be approximated. Reported in meters
Download_Date	No	Date that the logger was downloaded or stopped. Used to QC logger's date and time.
DownloadTime	No	Time that the logger was downloaded or stopped. Used to QC logger's date and time.
Logger_Date	No	Date reported by the logger when it was stopped or downloaded. Used as a QC of the logger's clock.
Logger_Time	No	Time reported by the logger when it was stopped or downloaded. Used as a QC of the logger's clock.
Time_Diff	No	Time difference between actual download or stop time and logged time in minutes.

COMMENTS	No	Comments relevant to the deployment of the logger. These comments will stay associated with the sample information.
----------	----	---

Field visit information is used determine the period of deployment and data quality. Each row of data represents a site visit. **Each deployment needs to have at a minimum a site visit for deployment and retrieval for each parameter even if no audits are reported.** If a parameter does not have start and end date on this worksheet it will be assumed to have not happened, even if parameter data is reported as logged data.

Table 2: FieldAuditResults field definitions

Column Header	Required	Description
LOGGER_ID	Yes	Valid values from the logger ID's from SiteMasterInfo sheet
LASAR_ID	Yes	Must be a unique site location for the lat long, can be the site ID if LASAR ID not present
PARAMETER	Yes	Valid parameters are Temp, DO, DOs, Turb, pH, Cond, or Q
UNITS	Yes	Appropriate unit for the parameter as recorded by the logger. THIS ESTABLISHES PARAMETER UNITS for the logged data
AUDIT_EQUIPMENT_ID	No	Serial number or other identifier for audit equipment
AuditType	Cond	"In situ" or "secondary container" Default is <i>in situ</i> but if the audit value does not represent the waterbody where the logger is deployed, then secondary container should be used
DATE	Yes	Date of audit
TIME	Yes	Time of audit
AUDIT_RESULT	No	This may be blank if the line is being used as a placeholder for deployment or retrieval date and time when no audits were taken. If insufficient audits are present data quality will be downgraded.
LOGGER_RESULT	No	It is strongly recommended that this be provided since the automated process for assigning logger result based on date and time may not make the best choice.
DIFF	Calc	Calculated absolute difference between audit and logged result. Note this may not be the correct calculation to determine data quality for the parameter (conductivity and turbidity)
DQL	No	This determination is based on the data quality matrix precision criteria and needs to be done by data provider.
COMMENTS	No	Important information relevant to the audit value and the subsequent matching of the value to the logged result. "Deployment" or "Retrieval" are useful comments when appropriate.

PrePost deployment accuracy checks are in lab QC checks used to determine instrument accuracy. Generally conducted before and after deployment of a logger these have different requirements for each parameter defined in the parameter's method.

Table 3: PrePostResults field definitions

Column Header	Required	Description
LOGGER_ID	Yes	Valid values from the logger ID's from SiteMasterInfo sheet
PARAMETER	Yes	Valid parameters are Temp, DO, DOs, Turb, pH, Cond, or Q
UNITS	Yes	Appropriate unit for the parameter
DATE_TIME	Yes	Date and time combined in a single field (MM/DD/YYYY hh:mm) when the accuracy check result was conducted.
EXPECTED_RESULT	Yes	This is the reference equipment value; the certified value from a standard; or, for DO checks at saturation, the expected saturation concentration at the given conditions
LOGGER_RESULT	Yes	The result reported by the logger instrument in the reference material.
REFERENCE_ID	No	Serial number or other identifier for audit equipment when the "standard" is a certified piece of equipment, as with temperature. For DO this could be an equipment ID number, "air" or "water" depending on how the check is done. For pH, conductivity and turbidity these reference solution lot ID's can be listed.
DIFF	Calc	Calculated absolute difference between expected and logged result. Note this may not be the correct calculation to determine data quality for the parameter (conductivity and turbidity may use relative percent difference)
DQL	No	This determination is based on the data quality matrix accuracy criteria and needs to be done by data provider.
COMMENTS	No	Important information relevant to the accuracy check value or logger result value.

Continuous data reporting sheet is used to report the data recorded by a data logger. The sheet must be duplicated for each unique logger/station combination from the SiteMasterInfo sheet and the **sheet must be named with the unique logger ID from the SiteMasterInfo** worksheet.

Header	Required	Description
STATION_DESC	No	Waterbody name and brief narrative describing location from SiteMasterInfo worksheet
LASAR OR SITE ID	Yes	Must be a unique site location for the lat long, can be the site ID if LASAR ID not present
LOGGER_ID	Yes	Valid values from the logger ID's from SiteMasterInfo sheet
Logged Data		
DATE	Yes	Date of recording
TIME	Yes	Time of recording
TEMP_r	Yes	If temperature is logged then the results must be reported in this column in the units defined in the FieldAuditResults worksheet
TEMP_DQL	No	It is recommended that data providers review and assign a data quality level based on their knowledge of the deployment and the reported QC data
DO_r	Yes	If DO is logged then the results must be reported in this column in the units defined in the FieldAuditResults worksheet
DOs_r	No	It is recommended that DO saturation be reported with the concentration if possible.
DO_DQL	No	It is recommended that data providers review and assign a data quality level based on their knowledge of the deployment and the reported QC data. Both DO concentration and saturation receive the same data quality level.
PH_r	Yes	If pH is logged then the results must be reported in this column in the units defined in the FieldAuditResults worksheet
PH_DQL	No	see TEMP_DQL
TURB_r	Yes	If turbidity is logged then the results must be reported in this column in the units defined in the FieldAuditResults worksheet
TURB_DQL	No	see TEMP_DQL
COND_r	Yes	If conductivity is logged then the results must be reported in this column in the units defined in the FieldAuditResults worksheet
COND_DQL	No	see TEMP_DQL
Q_r	Yes	If stream discharge is logged then the results must be reported in this column in the units defined in the FieldAuditResults worksheet
Q_DQL	No	see TEMP_DQL