Field Name	Field Title	Data Type	Definition
Alphalevel	Alpha Level	Number	The predetermined statistical acceptance level, or the probability of rejecting the null hypothesis when the null hypothesis is true. This value is chosen by the laboratory when running the statistical method. Alphalevels will range from 0 to 1, most common values are 0.01 and 0.05.
Analyte	Analyte	Plain Text	Name of the analyte or parameter for which the analysis is conducted and result is reported. A list of possible options is available at this link: AnalyteLookUpList
CalculatedValue	Calculation Value	Number	The calculated statistical value from the associated Probability type. Note: when the Probability field has the value of "Probability", negative control samples (CNEG) have a CalculatedValue of 0.5.
ChannelWidth	Channel Width	Plain Text	The width of the channel where the sample was collected. Default value equals "none" if unknown or not recorded. This field is optional so it could be blank.
CollectionComments	Collection Comments	Plain Text	Comments referring to the lab collection of the sample.
CollectionDepth	Collection Depth	Number	Records the depth or penetration, from the surface in the water or sediment column, at which the sample was collected. Default value equals "-88" if unknown or not recorded.
CollectionDevice Description	Collection Device	Plain Text	Name of the device used to collect the sample (e.g. "MPSL-Eboat_(BigE)", "WPCL-DFG Gill Net 1(50m,1.5")", "Individual Collection by bucket sampler", etc.). Default value equals "Not Recorded" if unknown. A list of possible options is available at this link: CollectionDeviceLookUpList
CollectionMethod Name	Collection Method Name	Plain Text	Refers to the general method used to collect the sample, organism, or field observation. Depending on the data types, different types of collection methods will be stated. Some examples are: "Algae_SWAMP," "BMI_CSBP_Transect", "Sed_Core", "Water_Grab", "Autosampler24h", "Habitat_Generic", etc. The default value of "Not Recorded" is utilized if method is unknown. LabQA samples utilize "Not Applicable." A list of possible options is available at this link: CollectionMethodLookUpList

CollectionReplicate	Collection Replicate	Plain Text	Used to distinguish between replicates created at a single collection in the field. Replicate samples that are collected at the same station and date should either have a value of "2" or "3." Samples collected on different dates, even if they are from the same station, should both have a value of "1." Default value is also "1."
CollectionTime	Collection Time	Date/Time	Refers to the time when the first sample of a sampling event at a specific station was collected in the field. Format equals hh:mm in 24 hour time (e.g. 13:30 for 1:30 pm). Default value equals "00:00" if the time sampling started is unknown.
ComplianceCode	Compliance Code	Plain Text	Unique code referencing the compliance with the associated Quality Assurance Project Plan (QAPP). "Com" is used when all standards are met for the associated QAPP. Default value equals "NR" if unknown. A list of possible options and definitions is available at this link: ComplianceLookUpList
DataQuality	Data Quality	Number	Describes the overall quality of the record by taking the QACode, ResultQACode, ComplicanceCode, BatchVerificationCode, and special circumstances into account to assign it to one of the following categories: • "Metadata, QC record"- Not a measurement of environmental conditions • "Passed QC"- Data passed all QC checks • "Some review needed"- Data did not pass minor QC checks, some effort needed to review and defend data if used • "Spatial Accuracy Unknown"- Data missing spatial datum information, data should not be used for fine scale spatial analysis • "Extensive review needed"- Data did not pass QC some critical checks, high level of effort needed to defend data if used • "Unknown Data Quality"- Data was not reviewed by the project. Data will need review before use • "Reject Data"- Data was rejected by the project or data did not pass all critical QC checks. Data deemed unusable The assignments and categories are provisional. A working explanation of the data quality ranking can be found at the following link. This link is open to public comments as well: DataQualityEstimator-DecisionTree.
DataQualityIndicator	Data Quality Indicator	Plain Text	Explains the reason for the DataQuality value by indicating which quality assurance check the data did not pass (e.g. BatchVerificationCode, ResultQACode, etc.). If this field contains "Special Rule," this indicates that the data falls into a special circumstance that decreases data quality. This field is left blank for values "Metadata, QC record" and "Passed QC."

			The assignments and categories are provisional. A working explanation of the data quality ranking can be found at the following link. A full explanation of the data quality ranking can be found at the following link. This link is open to public comments as well: DataQualityEstimator-DecisionTree.
Datum	Datum	Plain Text	Represents the associated model of the Earth from which reference points are used to calculate position measurements. GPS devices commonly use datums such as "NAD83" and "WGS84." Default value equals "NR" if unknown. A list of possible options is available at the following site (Note: search the first column in the table for "DatumList"): VariableCodesLookUpList
Dilution	Dilution	Number	Dilution is recorded as a proportion of the original sample. If no dilution is performed, the default value of "100" is used. A sample with 80% sample and 20% blank water has a dilution value of "80". Values of "-88" indicate no data.
DistanceFromBank	Distance From Bank	Number	The measured distance from the stream bank where the sample was taken. Default value is "None" if not applicable, or "-88" if not recorded.
DownStreamLength	Down Stream Length	Number	The measured distance downstream where the recorded sample was taken. Default value is "None" if not applicable.
DW_AnalyteName	DW Analyte Name	Plain Text	A more detailed name for the analyte. This field is included to assist with data reporting.
EvalThreshold	Evaluation Threshold	Number	The evaluation threshold is the programmatic level that is used to identify that an environmental sample is biologically significantly different from its associated control sample and is recorded as a percentage. The PercentEffect field is compared to the EvalThreshold, and if PercentEffect exceeds the EvalThreshold, then the sample is determined to be significantly different by the program. In cases where programs use program specific MSDs (Minimum Significant Difference) the EvalThreshold will equal the MSD and will be compared to the PercentEffect. If the evaluation threshhold is utilizing the TST method, this field corresponds to the critical difference in the EPA TST methods.

EventCode	Event Code	Plain Text	Represents the primary reason for the sampling event at a particular station and date (e.g. for water quality, a time series, or bioassessment sampling). A list of possible options is available at: EventLookUpList
GroupSamples	Group Samples	Number	An Identifier used to group samples by the project staff. Not a required field.
Hydromod	Hydrological Modification	Plain Text	Indicates if there is any type of alterations in the natural watershed hydrology associated with changes in land cover and use, or notes any observed hydrological modification on the waterbody that was sampled (e.g. "Pipes", "bridges", "ConcreteChannel", etc.). Default value is "NR" if unknown. A list of possible options is available at the following site (Note: search the first column in the table for "HydromodList"): VariableCodesLookUpList
HydroModLoc	Hydrological Modification Location	Plain Text	Codes that refer to the location of the hydrological modification (HydroMod field). A list of possible options is available at the following site (Note: search the first column in the table for "HydromodLocList"): VariableCodesLookUpList
LabAgency	Lab Agency	Plain Text	The organization, agency, or laboratory that performed the analysis on the sample. Default value equals "Not Recorded" if unknown. A list of possible agencies is available at this link: AgencyLookUpList
LabReplicate	Lab Replicate	Plain Text	Identifies the individual laboratory splits of the toxicity sample. Values will equal numbers 1 and greater.
LabSampleID	Lab Sample ID	Plain Text	An ID assigned by the lab; intended to provide lab-specific identification for an analyzed sample. The format and content is determined by the lab. May have "- Dup," "-MS," or "-MSD" to the end of the ID to help confirm the SampleType and the LabSampleID of the native sample. If the lab does not assign the samples an ID, this column is left blank.

LabSubmissionCode	Lab Submission Code	Plain Text	A unique batch qualifier code assigned to the lab batch as a whole by the analyzing laboratory which references the quality of the data in the entire batch. This code should be reviewed by the Project Manager, or other appropriate person, to ensure that the code has been applied based on project-specific data quality objectives and criteria. Default value equals "NR" if unknown. A list of possible options is available at this link: LabSubmissionLookUpList
Latitude	Target Latitude	Number	The latitude in decimal degrees of the sample site (should be positive).
LocationCode	Location Code	Plain Text	Describes the physical location in the waterbody and the field survey method used where the sample was collected (e.g. "Transect at 177m from start", "First instance where sample was collected in OpenWater", "second instance where a net (e.g. gill, fyke, dip) was used at the thalweg of the waterbody", "Bank, Left", etc.). Default value equals "Not Recorded" if unknown. A list of possible options is available at this link: LocationLookUpList
LocationDetailWQ Comments	Location Detail WQ Comments	Plain Text	Comments regarding observations about the location from which samples were taken, how the samples were taken, or comments about the samples themselves.
Longitude	Target Longitude	Number	The longitude in decimal degrees of the sample site (should be negative).
MatrixName	Matrix Name	Plain Text	Refers to the sample matrix; the substance in which the analyte is evaluated in or the components of a sample other than the analyte of interest (e.g. "samplewater", "tissue"). Default value equals "Not Recorded" if unknown. A list of possible options is available at this link: MatrixLookUpList
Mean	Mean	Number	The average result calculated from all replicates of a single sample.
MethodName	Method Name	Plain Text	Refers to the method used by the laboratory to analyze the sample. Default value equals "Not Recorded" if unknown. A list of possible options is available at this link: MethodLookUpList

MSD	Minimum Significant Difference	Number	The Minimum Significant Difference (MSD) is a measurement that can be produced for each statistical comparison performed between sample and control, or among multiple concentrations of a sample and control. It represents the smallest significant difference from the control and is unique for each statistical comparison. This number should be reported as a percentage (e.g. '20' = 20%). This field should be left blank for methods with no MSD value.
OccupationMethod	Occupation Method	Plain Text	The means by which a crew entered or occupied the sampling location and collected a sample (e.g. "Walk In", "RV Questuary", "From Bridge", etc.)
OrganismAgeAtTest Start	Organism Age At Test Start	Plain Text	The age or age range (e.g. 7 days or 7-10 days) of the test organisms at the beginning of the toxicity test.
OrganismName	Organism Name	Plain Text	Scientific name of the organism used in the toxicity test. A list of possible options is available at this link: OrganismLookUpList
ParentProject	Parent Project Name	Plain Text	A larger or on-going project in which the specific project that the samples were collected for is associated with. A list of possible options can be found at this link: ParentProjectLookUpList
PctControl	Percent Difference From Control	Number	The percent at which the results from the toxicity test differ from the control.
PercentEffect	Percent Effect	Number	Percent difference between the mean of the samples' endpoints and the mean of the control's associated endpoints. This is calculated by: ((Mean Control Response – Mean Sample Response) / Mean Control Response) * 100.
PositionWaterColumn	Position Water Column	Plain Text	Position in water column where the sample was taken (e.g. "Surface", "Midcolumn", "Nearbottom"). Use "Not Applicable" if unknown. A list of possible options is available at the following site (Note: search the first column in the table for "PositionWaterColumnList"): VariableCodesLookUpList
Probability	Probability	Number	Describes the type of statistical value recorded in the CalculatedValue (e.g. "Probability", "T value").
Program	Program Name	Plain Text	The name of the program that is associated with the sample. A list of possible options is available at this link: ProgramLookUpList
Project	Project Name	Plain Text	The project to which the sample result is associated. A list of possible options is available at this link: ProjectLookUpList

ProtocolCode	Protocol	Plain Text	Represents the sampling protocol used, which includes the set of methods, methodology and/or specifications, such as "MPSL-DFG_Field_v1.0." Default value is "Not Recorded." LabQA samples will have "Not Applicable." A list of possible options is available at this link: ProtocolLookUpList
QACode	Quality Assurance Code	Plain Text	Codes that indicate data quality by describing any special conditions, situations or outliers that occurred during or prior to the analysis to achieve the result. The default code, indicating no special conditions, is "None." A list of possible options is available at this link: QALookUpList
RefToxBatch	Reference Toxicity Batch ID	Plain Text	Lists the Reference Toxicity Batch ID (ToxBatch field) run with this batch of samples. Default value equals "Not Recorded" if unknown.
RepCount	Replicate Count	Number	Total number of sample replicates analyzed for the associated tox-point in the toxicity test (i.e. the number of lab replicates used to calculate the mean result).
ResultQualCode	Result Qualifier Code	Plain Text	A code that indicates specific details about the analytical result of the sample, such as if the analyte was detected but not quantifiable or if the result was a field estimation. Default value is "=", which means that the recorded result is the actual result. A list of possible options is available at this link: ResQualLookUpList
Result	Result	Number	Final numeric result of a given analyte, stored as text to retain trailing zeros. The result should be reported with the appropriate number of significant figures. Result may be left blank as long as an appropriate ResultQualCode is provided.
SampleAgency	Sampling Agency	Plain Text	Refers to the organization or agency that collected the sample. Default value equals "Not Recorded" if unknown. A list of possible options is available at this link: AgencyLookUpList
SampleComments	Sample Comments	Plain Text	Used for any notes or comments specifically related to the sampling event at a particular station and/or the verification of GIS station information.
SampleDate	Sample Date	Date/Time	Refers to the date the sample was collected in the field. Default value equals "01/01/1950" for unknown or null values. For samples with collection times that last longer than one day, like auto samplers, the SampleDate is the date in which sampling began.
SampleID	Sample ID	Plain Text	A unique identifier supplied by the sampling agency, and is used to track the sample throughout the sampling and analysis processes. This field can be used to tie a result to the sample.

SampleTypeCode	Sampling Type	Plain Text	Refers to the type or purpose of the sample that is collected or analyzed (i.e. indicates if the sample was used as a control, for calibration purposes, is a combination of multiple samples, used for algae bioassessment, etc.) Default value equals "Not Recorded" if unknown. A list of possible options is at this link: SampleTypeLookUpList
SigEffectCode	Toxicity Significant Effect Code	Plain Text	The toxicity significant effect code that indicates whether the sample result is significantly different from the control and can include whether or not it is greater or less than the evaluation threshold. Default value equals "NR" for environmental samples. Default value equals "NA" for LABQA. A list of possible options is available at this link: SigEffectLookUpList
StartingBank	Starting Bank	Plain Text	The bank of the stream from which measurements began (i.e. on the left bank or right bank) A list of possible options is available at the following site (Note: search the first column in the table for "StartingBankList"): VariableCodesLookUpList
StationCode	Station Code	Plain Text	An alphanumeric code that represents the sampling site at which the sample was collected. The format is ###ABC123, where ### is the Hydrologic Unit number and ABC123 is an alphanumeric description of the station. An example is "111EELBRN", which is Hydrologic Unit 111 and an abbreviated code to indicate "Eel River - South Fork near Branscomb." Some stations may have a code that deviates from this format because the program or organization collecting the sample has their own code system. A complete list of stations and station information is available at this link: StationLookUpList
StationName	Station Name	Plain Text	The name of the station at which the sample was collected. A complete list of stations and station information is available at this link: StationLookUpList
StationWaterDepth	Station Water Depth	Number	Depth of the water at the area where the sampling station is located. Default value is "None" if unknown or not applicable.
StatMethod	Statistical Method	Plain Text	The statistical test or method used to calculate the probability of whether a result is significantly different from the control or not. Default value equals "NR" when unknown. A list of possible options is available at the following site (Note: search the first column in the table for "StatMethLookUp" and "StatMethodList"): VariableCodesLookUpList
StdDev	Standard Deviation	Number	Stands for standard deviation, which is a statistic that indicates how tightly all the replicates are clustered around the mean in a set of data. This calculation includes all the applicable replicates from a single sample.

SubmittingAgency	Submitting Agency	Plain Text	The organization or agency that is responsible for submission of the data to the database. A list of possible options is available at this link: AgencyLookUpList
TIENarrative	Toxicity Identification Evaluation	Plain Text	Short narrative on the results of the toxicity identification evaluation (TIE).
TimePointComments	Time Point Comments	Plain Text	Comments related to the TimePointName field.
TimePointName	Time Point Name	Plain Text	Refers to the point in time during the test at which water quality measurements were taken, or the day on which the endpoints were recorded. For example, if a test was originally going to last 7 days but the endpoint measurements of growth (or survival, etc.) were taken on the 6th day, then the TimePointName would indicate "Day 6". A list of possible options is available at this link: TimePointLookUpList
ToxBatch	Tox Batch	Plain Text	A unique code, provided by the laboratory, which represents a group of samples processed together for toxicity. It groups all environmental samples with their supporting QC samples and will be used to verify completeness. Batches should only include one species and should not combine test types (i.e. reference toxicants and sample results should not be in the same batch).
ToxBatchComments	Tox Batch Comments	Plain Text	Records any comments and explains any irregularities in sample processing and/or execution of the testing procedures for the Toxicity Batch (ToxBatch field) as a whole.
ToxBatchStartDate	Toxicity Batch Start Date	Date/Time	Refers to the date the toxicity test began. Default value equals "Jan/01/1950 12:00AM" if unknown.
ToxPointMethod	Toxicity Point Method	Plain Text	Identifies the type of measure that is reported for the toxicity test. Toxicity replicate and summary data have a default value of "None" unless a method other than the test MethodName is used for the calculations. Water quality measurement results have a default value of "ToxWQMeasurement."
ToxResultComments	Tox Result Comments	Plain Text	Notes any comments necessary to describe special circumstances for the toxicity results data for the specific record. These could clarify any portion of the analysis which is not described in any other field. Examples include: survival may be low due to lost individuals, questionable hardness due to probe variances, etc.

ToxResultQACode	Tox Result QA Code	Plain Text	Used to further qualify the analytical result of the sample. Default value equals "None." A list of possible options is available at this link: ToxResultQALookUpList
ToxTestComments	Tox Test Comments	Plain Text	Comments related to the toxicity test results. Usually provided by the laboratories or QA personnel. Examples include: comments about sample test anomalies, temperature changes, high DO values that may affect all other results, etc.
ToxTestDurCode	Test Duration	Plain Text	Indicates the duration of the toxicity test as a number and includes the associated units.
Treatment	Treatment	Plain Text	Refers to any treatment performed on the sample, such as a pH adjustment. Default value is "None."
Treatment Concentration	Treatment Concentration	Number	Refers to the adjusted final concentration or value of the treatment applied to the toxicity sample, expressed as a number. Default value is "0".
Unit	Unit	Plain Text	Indicates the units used in the measurement of the analyte. Chemistry results are indicated by weight of analyte/volume of sample (e.g. "ng/L"). Results from sediment and tissue samples are indicated by weight/weight and includes whether the sample result is reported as wet weight (ww) or dry weight (dw) (e.g. "ng/g ww"). Surrogate recovery results use a unit of "%". Toxicity test results are recorded as percent that survived ("%"), weight of surviving individuals ("mg/ind"), cells per volume ("cells/ml"), reproduction rate ("neonates/adults"), etc. Taxonomic units are indicated by "count" or volume/area (e.g. "um3/cm2"). A list of possible options is available at this link: UnitLookUpList
UnitCollectionDepth	Unit Collection Depth	Plain Text	The units used to measure the CollectionDepth. A list of possible options can be found at this link: UnitLookUpList
UnitDistanceFrom Bank	Unit Distance From Bank	Plain Text	The units used to measure the DistanceFromBank. A list of possible options can be found at this link: UnitLookUpList
UnitStationWater Depth	Unit Station Water Depth	Plain Text	The units used to measure the StationWaterDepth. A list of possible options can be found at this link: UnitLookUpList
UnitStreamWidth	Unit Stream Width	Plain Text	The units used to measure the StreamWidth. A list of possible options can be found at this link: UnitLookUpList
UnitTreatment	Unit Treatment	Plain Text	The units of the substance used in the treatment. When the treatment is "None," the default for unit is "None." A list of possible options can be found at this link: UnitLookUpList

UpstreamLength	Upstream Length	Number	The measured distance upstream where the recorded sample was taken. Default value is "None" if not applicable.
WQSource	Water Quality Source	Plain Text	Indicates whether water quality measurements were taken in overlying water or interstitial (i.e. subterranean water in pores of rocks) water. Default value equals "Not Applicable" for toxicity endpoints.

For questions, comments, or concerns regarding these field names and definitions, please send an email with the subject line, "Toxicity Data Dictionary," to: OIMA-Helpdesk@waterboards.ca.gov