



**Electronic Drinking Water Reporting System
(eDWRS)
XML Guide**



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1 Electronic Drinking Water Reporting Systems (eDWRS)

1.1 Introduction

The Electronic Drinking Water Reporting System (eDWRS) is a web-based information system that allows the regulated community to electronically submit reports to the Alabama Department of Environmental Management (ADEM).

The eDWRS provides the recommended alternative to submitting hand-written or paper-based reports that is faster, more efficient, and requires less processing for labs and ADEM. As a fully operational electronic reporting system, all of the necessary legal, security, and electronic signature functionalities have been included to serve as a completely paperless reporting system.

1.2 Purpose

eDWRS offers the ability to upload Chemical, Bacteriological, and Radiological Drinking Water Report data via XML file, which can then be electronically certified and submitted to ADEM. This guide provides the XML field name/description, schema mapping, and validation requirements for the XML files used to upload data to eDWRS.

1.3 eDWRS Coordinator Contact Information

The ADEM eDWRS Coordinator can be reached by email at edwr@adem.state.al.us or by phone at (334) 271-7726. You may contact the eDWRS Coordinator with problems or questions regarding eDWRS or your user account.

2 Data Requirements for Drinking Water Reports via XML

2.1 Choosing the Correct XML Schema

Due to variables specific to different analyte groups, five XML schema maps have been developed. The mapping of each XML schema to each analyte group is provided below.

XML Schema/Business Rules	Analyte Group
Chemical	Chlorite DBP Group Stage 2 Inorganics Input SOCS 504.1 SOCS 508.1 SOCS 515.1 SOCS 525.2 SOCS INPUT Total Organic Carbon VOC Input Water Quality Input
Coliform/E. coli – TCR Cryptosporidium Giardia	BACT Crypto LT2 Group
Lead and Copper	Lead and Copper
Radiologicals	Radiologicals

2.2 Chemical XML Data Requirements

2.2.1 Lab Identification Data Elements

	ID	Field Name/Description	Schema Mapping	Validation
L A B I D	1	LabAccreditationIdentifier - The Lab Certification Number assigned to the reporting Laboratory.	<eDWR> <EN:Submission> <EN:LabReport> <EN:LabIdentification> <EN:LabAccreditation> <EN:LabAccreditationIdentifier>	1. Required. 2. Must be a lab certification number that is active in eDWRS and is associated with the PWS.
	2	LabAccreditationAuthorityName - The authority which assigned the accreditation number.	<eDWR> <EN:Submission> <EN:LabReport> <EN:LabIdentification> <EN:LabAccreditation> <EN:LabAccreditationAuthorityName>	1. Required. 2. Valid Values: STATE or FEDERAL

2.2.2 Sample Identification Data Elements

	ID	Field Name/Description	Mapping to eDWRS Schema	Validation
S A M P L E	3	LabSampleIdentifier - A unique identifier assigned or used by the laboratory that will ensure that each received sample will allow the sample to be linked with the applicable result.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:LabSampleIdentifier>	1. Required. 2. A Reporting Lab (identified by the Lab Accreditation Identifier) may use a Lab Sample Identifier for only one sample in the same calendar year. 3. Field must not exceed 20 characters in length.

Chemical XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation	
L E	4	PWSIdentifier - The Public Water System (PWS) identification number (PWSID).	<p><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:PWSIdentifier></p>	<ol style="list-style-type: none"> 1. Required. 2. Must be a valid PWS ID and the Reporting Lab must be authorized to submit data on behalf of the PWS. 3. Field must be exactly 9 characters in length
	5	PWSFacilityIdentifier - Public Water System Facility Identification number. A list of valid Facility IDs can be found on the Reference page of eDWRs.	<p><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:PWSFacilityIdentifier></p>	<ol style="list-style-type: none"> 1. Required 2. Must be a valid PWS Facility ID for the PWS ID 3. Field must not exceed 12 characters in length.
	6	SampleRuleCode - Identifies the sample category as either Total Coliform/Lead & Copper/Chemical etc.	<p><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleRuleCode></p>	<ol style="list-style-type: none"> 1. Required. 2. Field must be exactly 2 characters in length. 3. Valid value for Analyte Group: GE – General Sample 4. Other Values: TC – Total Coliform Rule PB – Lead and Copper Rule
	7	SampleMonitoringTypeCode - Indicates whether the sample is taken for “Routine” purposes or is a “Repeat,” “Confirmation,” etc. Several types are available although not all may be used with samples taken for compliance.	<p><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleMonitoringTypeCode></p>	<ol style="list-style-type: none"> 1. Required. 2. Field must be exactly 2 characters in length. 3. Valid values: RT – Routine RP – Repeat CO – Confirmation SP – Special TG – Triggered MR – Max Residence Time FB – Field Blanks SB – Shipping Blanks

Chemical XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
8	ComplianceSampleIndicator - Indicates whether the sample is taken for compliance.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:ComplianceSampleIndicator>	1. Required. 2. Field must be exactly 1 character in length 3. Valid value if a Sample Rejection Reason Code is present: N – No 4. Valid values if Sample Monitoring Type Code is RT, RP, CO, and/or TG: Y – Yes N – No 5. Valid values if Sample Monitoring Type Code is <u>not</u> RT, RP, CO, and/or TG: N – No
9	AdditionalSampleIndicator - Indicates whether the sample is a replacement.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:AdditionalSampleIndicator>	1. Required. 2. Field must be exactly 1 character in length 3. Valid Values: Y – Yes (Replacement Sample –rare) N – No
10	OriginalSampleIdentifier - Identifies the original sample that this sample replaces, confirms, or is a repeat for. It also identifies the sample that triggered this sample.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:OriginalSampleIdentification> <EN:OriginalSampleIdentifier>	1. Required if SampleMonitoringTypeCode is CO, TG or RP or AdditionalSampleIndicator is Y (Replacement Sample). 2. Value must match sample in SDWIS or be included in this XML file. 3. If above criteria is not met, field is not allowed. 4. Must not exceed 20 characters.

Chemical XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
11	LabAccreditationIdentifier – Identifies the Lab ID of the original Lab that submitted the sample that this sample replaces, confirms, or is a repeat/triggered for.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:OriginalSampleIdentification> <EN:OriginalSampleLabAccreditation> <EN:LabAccreditationIdentifier>	1. Required if SampleMonitoringTypeCode is CO, TG or RP or AdditionalSampleIndicator is Y (Replacement Sample). 2. Value must match sample in SDWIS or be included in this XML file. 3. If above criteria is not met, field is not allowed.
12	LabAccreditationAuthorityName – Identifies the accreditation authority of the original Lab that submitted the sample that this sample replaces, confirms, or is a repeat/triggered for.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:OriginalSampleIdentification> <EN:OriginalSampleLabAccreditation> <EN:LabAccreditationIdentifier> <EN:LabAccreditationAuthorityName>	1. Required if SampleMonitoringTypeCode is CO, TG or RP or AdditionalSampleIndicator is Y (Replacement Sample). 2. Value must match sample in SDWIS or be included in this XML file. 3. If above criteria is not met, field is not allowed. 4. Valid values: STATE or FEDERAL
13	SampleCollectionEndDate - The calendar date when the sample was collected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleCollectionEndDate>	1. Required. 2. Must be a valid calendar date in format: yyyy-mm-dd (ie. 2016-12-29) 3. Cannot exceed current date.
14	SampleCollectionEndTime - The local time when the sample was collected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleCollectionEndTime>	1. Optional. 2. Must be a valid time. 3. Format is hh:mm:ss.

Chemical XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
15	SampleRejectionReasonCode – A code that indicates the reason for rejecting the sample for analysis.	<pre><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleRejectionReasonCode ></pre>	<ol style="list-style-type: none"> Optional. If used ComplianceSample-Indicator must be N. Field must be exactly 2 characters in length Valid values: BP – Invalid Sampling Point BR – Broken CL – Chlorine Present EH – Exceeds Holding Time FZ – Frozen Sample HS – Excessive Headspace IN – Insufficient Sample IP – Invalid Sampling Protocol LA – Lab Accident LT – Leaked in Transit VO – Insufficient Volume
16	MeasurementValue – A number to identify the measurement value. This field is for Field Sample results such as chlorine residual, pH, turbidity, temperature or flow rate.	<pre><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SpecializedMeasurement > <EN:MeasurementValue></pre>	<ol style="list-style-type: none"> Optional. The MeasurementValue must be reported in the required units as determined by the SpecializedMeasurementTypeCode as follows: Flowrate – gal/min PH – pH unit Turbidity - NTU WaterTemperature – C or F TotalChlorineResidual – mg/L FreeChlorineResidual – mg/L

Chemical XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
17	MeasurementUnit – The unit of measure for the measurement value. Only used for temperature.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SpecializedMeasurement > <EN:MeasurementUnit>	1. Required if SpecializedMeasurementTypeCode indicates WaterTemperature. 2. Field must be exactly 1 character in length 3. Valid values: F – Fahrenheit C – Celsius
18	MeasurementSignificantDigit – The number of significant digits for the measurement value.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN: SpecializedMeasurement > <EN:MeasurementSignificantDigit>	Optional
19	SpecializedMeasurementTypeCode – Code identifying the type of measurement (field results).	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN: SpecializedMeasurement > <EN:SpecializedMeasurementTypeCode>	1. Optional. 2. Valid Values: Flowrate PH Turbidity WaterTemperature TotalChlorineResidual FreeChlorineResidual
20	Comments – The optional comment field for the sample, if included, will only accept a max of 2000 characters.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleComments> <EN:Comments>	1. Optional 2. Must not exceed 2000 characters in length

Chemical XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
21	SampleLocationIdentifier - The text describing the unique name, number, or code assigned to identify the Sample station/location. A list of valid Sample Point ID's can be found on the Reference page of eDWRs.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleLocationIdentification> <EN:SampleLocationIdentifier>	1. Required. 2. Must not exceed 11 characters in length.

2.2.3 Sample Analysis Results Data Elements

ID	Field Name/Description	Mapping to eDWR Schema	Validation	
S A M P L E A N A L Y S	22	LabAccreditationIdentifier - The Lab Certification Number assigned to the analysis Laboratory (the Laboratory that processed the samples).	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:LabAnalysisIdentification> <EN:LabAccreditation> <EN:LabAccreditationIdentifier>	1. Required. 2. Must be a lab certification number that is active in eDWRs. 3. If this lab certification number is different from the lab certification in the LabReport level, this lab certification number and lab name will be placed in the AnalysisResult comment.
	23	LabAccreditationAuthorityName - The authority which assigned the accreditation number.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:LabAnalysisIdentification> <EN:LabAccreditation> <EN:LabAccreditationAuthorityName>	1. Required. 2. Valid Values: STATE or FEDERAL

Chemical XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation	
I S R E S U L T S	24	MethodIdentifier - Number or code that indicates the type of method used. List of valid Method Codes can be obtained from Reference page of eDWRS.	<p><eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:LabAnalysisIdentification></p> <p><EN:SampleAnalyticalMethod></p> <p><EN:MethodIdentifier></p>	<ol style="list-style-type: none"> 1. Required. 2. Method must be valid for analyte code. 3. Field must not exceed 12 characters in length.
	25	AnalysisStartDate - The calendar date when the analysis was started.	<p><eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:LabAnalysisIdentification></p> <p><EN:AnalysisStartDate></p>	<ol style="list-style-type: none"> 1. Required. 2. Must be a valid calendar date in format: yyyy-mm-dd (ie. 2016-12-29). 3. Must be on or after SampleCollection-EndDate. 4. Cannot exceed current date.
	26	AnalysisStartTime - The local time when the analysis was started.	<p><eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:LabAnalysisIdentification></p> <p><EN:AnalysisStartTime></p>	<ol style="list-style-type: none"> 1. Optional. 2. Must be a valid time. 3. Format is hh:mm:ss.
	27	AnalyteCode - Analyte code assigned by the agency. List of valid Analyte Codes can be obtained from Reference page of eDWRS.	<p><eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:AnalyteIdentification></p> <p><EN:AnalyteCode></p>	<ol style="list-style-type: none"> 1. Required. 2. Must be a valid analyte code.

Chemical XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation	
C H E M I C A L R E S U L T S	28	MeasurementQualifier - When set to N, indicates that the analytical result is above either the lab reporting level (supplied by the lab) or the federal minimum detection limit.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementQualifier>	1. Required. 2. Field must be exactly 1 character in length 3. Valid values: N – analyte was detected. 4. Not allowed if DataQualityCode is R.
	29	MeasurementValue - If the analyte was detected, this is the concentration value of the result reported as a number.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementValue>	1. Required if MeasurementQualifier is set to N – analyte was detected. 2. Must be a numeric value and greater than or equal to 0. 3. Must not exceed 14 characters in length. 4. Not allowed if DataQualityCode is R.
	30	MeasurementUnit - If the analyte was detected, this is the unit of measure associated with concentration.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementUnit>	1. Required if MeasurementQualifier is set to N – analyte was detected. 2. Not allowed if DataQualityCode is R. 3. For most chemical analyses, it will be MG/L. ug/L is not accepted.

Chemical XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
31	MeasurementSignificantDigit – The number of significant digits for the measurement value.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementSignificantDigit>	Optional
32	DetectionLimitTypeCode - One of a list of client, regulation, or organization defined acronyms and/or statistic methodologies that specify the type of detection limit. This field is only used if the analyte was not detected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:DetectionLimitTypeCode>	1. Required if MeasurementQualifier is set to Y – analyte was not detected. 2. Valid Values: MDL – Federal Minimum Detection Limit MRL – Lab Reporting Level. 3. Not allowed if DataQualityCode is R.
33	MeasurementQualifier - When set to Y, indicates that the analytical result is less than either the lab reporting level (supplied by the lab) or the federal minimum detection limit.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:DetectionLimit> <EN:MeasurementQualifier>	1. Required if MeasurementQualifier is set to Y – analyte was not detected. 2. Field must be exactly 1 character in length 3. Valid values: Y – analyte was not detected. 4. Not allowed if DataQualityCode is R.

Chemical XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
34	MeasurementValue - If the analyte was not detected, this is the value that was used to determine the detection level. Either the MRL or the MDL.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:DetectionLimit> <EN:MeasurementValue>	<ol style="list-style-type: none"> 1. Required if MeasurementQualifier is set to Y – analyte was not detected. 2. Must be numeric. 3. Must not exceed 16 characters in length. 4. Not allowed if DataQualityCode is R.
35	MeasurementUnit - If the analyte was not detected, this is the unit of measure for the detection level. Must be MG/L for most analytes.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:DetectionLimit> <EN:MeasurementUnit>	<ol style="list-style-type: none"> 1. Required if MeasurementQualifier is set to Y – analyte was not detected. 2. For most chemical analyses, it will be MG/L. ug/L is not accepted. 3. Not allowed if DataQualityCode is R.
36	Comment - The optional comment field for the analysis result, if included, will only accept a max of 2000 characters.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:AnalysisResultComment> <EN:Comment>	<ol style="list-style-type: none"> 1. Optional 2. Must not exceed 2000 characters in length.

Chemical XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
37	DataQualityCode - Code indicating whether or not the analytical result meets established data quality criteria.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:QAQCSummary> <EN:DataQualityCode>	1. Required. 2. Field must be exactly 1 character in length 3. Valid values: A – Accepted R – Rejected P – Preliminary V – Validated
38	DataQualityRejectCode – Code indicating the reason the result was rejected when DataQualityCode is R.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:QAQCSummary> <EN:DataQualityRejectCode>	1. Required if DataQualityCode is R. 2. Field must be exactly 2 characters in length 3. Valid values: IF – Instrument Failure LE – Lab Error LC – Lab Not Certified OT – Other RC – Requester Cancelled WR – Water System Rejected
39	DataQualityRejectText – A short explanation of why the sample was rejected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:QAQCSummary> <EN:DataQualityRejectText>	1. Required if DataQualityCode is R. 2. Must not exceed 2000 characters in length.

2.3 Lead and Copper XML Data Requirements

2.3.1 Lab Identification Data Elements

	ID	Field Name/Description	Schema Mapping	Validation
L A B I D	1	LabAccreditationIdentifier - The Lab Certification Number assigned to the reporting Laboratory.	<eDWR> <EN:Submission> <EN:LabReport> <EN:LabIdentification> <EN:LabAccreditation> <EN:LabAccreditationIdentifier>	1. Required. 2. Must be a lab certification number that is active in eDWRS and is associated with the PWS.
	2	LabAccreditationAuthorityName - The authority which assigned the accreditation number.	<eDWR> <EN:Submission> <EN:LabReport> <EN:LabIdentification> <EN:LabAccreditation> <EN:LabAccreditationAuthorityName>	1. Required. 2. Valid Values: STATE or FEDERAL

2.3.2 Sample Identification Data Elements

	ID	Field Name/Description	Mapping to eDWRS Schema	Validation
L E A D / C	3	LabSampleIdentifier - A unique identifier assigned or used by the laboratory that will ensure that each received sample will allow the sample to be linked with the applicable result.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:LabSampleIdentifier>	1. Required. 2. A Reporting Lab (identified by the LabAccreditationIdentifier) may use a LabSampleIdentifier for only one sample in the same calendar year. 3. Field must not exceed 20 characters in length.

Lead and Copper XML Data Requirements

	ID	Field Name/Description	Mapping to eDWRs Schema	Validation
O P P E R S A M P L E	4	PWSIdentifier - The Public Water System (PWS) identification number (PWSID).	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:PWSIdentifier>	<ol style="list-style-type: none"> 1. Required. 2. Must be a valid PWS ID and the Reporting Lab must be authorized to submit data on behalf of the PWS. 3. Field must not exceed 9 characters in length
	5	PWSFacilityIdentifier - Public Water System Facility Identification number. A list of valid Facility IDs can be found on the Reference page of eDWRs.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:PWSFacilityIdentifier>	<ol style="list-style-type: none"> 1. Required 2. Must be a valid PWS Facility ID for the PWS ID 3. Field must not exceed 12 characters in length.
	6	SampleRuleCode - Identifies the sample category as either Total Coliform/Lead & Copper/Chemical etc.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleRuleCode>	<ol style="list-style-type: none"> 1. Required. 2. Field must be exactly 2 characters in length 3. Valid values: PB – Lead and Copper Rule 4. Other Values: TC – Total Coliform Rule GE – All others
	7	SampleMonitoringTypeCode - Indicates whether the sample is taken for "Routine" purposes or is a "Repeat," "Confirmation," etc. Several types are available although not all may be used with samples taken for compliance.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleMonitoringTypeCode>	<ol style="list-style-type: none"> 1. Required. 2. Field must be exactly 2 characters in length 3. Valid values: RT – Routine RP – Repeat CO – Confirmation SP – Special TG – Triggered MR – Max Residence Time FB – Field Blanks SB – Shipping Blanks

Lead and Copper XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
8	SampleCollectionTypeCode - is a code that details how the sample was collected. This is for Lead and Copper Rule samples only.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleCollectionTypeCode>	1. Required. 2. Field must be exactly 3 characters in length 3. Valid Values: FSD – First Draw ATS – At the Source FLS – Flush LSL – Lead Service Line
9	ComplianceSampleIndicator - Indicates whether the sample is taken for compliance.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:ComplianceSampleIndicator>	1. Required. 2. Field must be exactly 1 character in length 3. Valid value if a Sample Rejection Reason Code is present: N – No 4. Valid values if Sample Monitoring Type Code is MR, SB, FB, and/or CO: Y – Yes N – No 5. Valid values if Sample Monitoring Type Code is <u>not</u> MR, SB, FB, and/or CO: N – No
10	AdditionalSampleIndicator - Indicates whether the sample is a replacement.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:AdditionalSampleIndicator>	1. Required. 2. Field must be exactly 1 character in length 3. Valid Values: Y – Yes (Replacement Sample –rare) N – No

Lead and Copper XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
11	OriginalSampleIdentifier - Identifies the original sample that this sample replaces, confirms, or is a repeat for. It also identifies the sample that triggered this sample.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:OriginalSampleIdentification> <EN:OriginalSampleIdentifier>	<ol style="list-style-type: none"> 1. Required if SampleMonitoringTypeCode is CO, TG or RP or AdditionalSampleIndicator is Y (Replacement Sample). 2. Value must match sample in SDWIS or be included in this XML file. 3. If above criteria is not met, field is not allowed. 4. Must not exceed 20 characters.
12	LabAccreditationIdentifier – Identifies the Lab ID of the original Lab that submitted the sample that this sample replaces, confirms, or is a repeat/triggered for.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:OriginalSampleIdentification> <EN:OriginalSampleLabAccreditation> <EN:LabAccreditationIdentifier>	<ol style="list-style-type: none"> 1. Required if SampleMonitoringTypeCode is CO, TG or RP or AdditionalSampleIndicator is Y (Replacement Sample). 2. Value must match sample in SDWIS or be included in this XML file. 3. If above criteria is not met, field is not allowed.
13	LabAccreditationAuthorityName – Identifies the accreditation authority of the original Lab that submitted the sample that this sample replaces, confirms, or is a repeat/triggered for.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:OriginalSampleIdentification> <EN:OriginalSampleLabAccreditation> <EN:LabAccreditationIdentifier> <EN:LabAccreditationAuthorityName>	<ol style="list-style-type: none"> 1. Required if SampleMonitoringTypeCode is CO, TG or RP or AdditionalSampleIndicator is Y (Replacement Sample). 2. Value must match sample in SDWIS or be included in this XML file. 3. If above criteria is not met, field is not allowed. 4. Valid values: STATE or FEDERAL

Lead and Copper XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
14	SampleCollectionEndDate - The calendar date when the sample was collected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleCollectionEndDate>	1. Required. 2. Must be a valid calendar date in format: yyyy-mm-dd (ie. 2016-12-29). 3. Cannot exceed current date.
15	SampleCollectionEndTime - The local time when the sample was collected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleCollectionEndTime>	1. Optional. 2. Must be a valid time. 3. Format is hh:mm:ss.
16	SampleRejectionReasonCode – A code that indicates the reason for rejecting the sample for analysis.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleRejectionReasonCode >	1. Optional. If used ComplianceSample-Indicator must be N. 2. Field must be exactly 2 characters in length 3. Valid values: BP – Invalid Sampling Point BR – Broken CL – Chlorine Present EH – Exceeds Holding Time FZ – Frozen Sample HS – Excessive Headspace IN – Insufficient Sample IP – Invalid Sampling Protocol LA – Lab Accident LT – Leaked in Transit VO – Insufficient Volume

Lead and Copper XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
17	MeasurementValue – A number to identify the measurement value. This field is for Field Sample results such as chlorine residual, pH, turbidity, temperature or flow rate.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SpecializedMeasurement > <EN:MeasurementValue>	1. Optional. 2. The MeasurementValue must be reported in the required units as determined by the SpecializedMeasurementTypeCode as follows: Flowrate – gal/min PH – pH unit Turbidity - NTU WaterTemperature – C or F TotalChlorineResidual – mg/L FreeChlorineResidual – mg/L
18	MeasurementUnit – The unit of measure for the measurement value. Only used for temperature.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SpecializedMeasurement > <EN:MeasurementUnit>	1. Required if SpecializedMeasurementTypeCode indicates Temperature. 2. Field must be exactly 1 character in length 3. Valid values: F – Fahrenheit C – Celsius
19	MeasurementSignificantDigit – The number of significant digits for the measurement value.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN: SpecializedMeasurement > <EN:MeasurementSignificantDigit>	Optional

Lead and Copper XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
20	SpecializedMeasurementTypeCode – Code identifying the type of measurement.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SpecializedMeasurement > <EN:SpecializedMeasurementTypeCode>	1. Optional. 2. Valid Values: Flowrate PH Turbidity WaterTemperature TotalChlorineResidual FreeChlorineResidual
21	Comments – The optional comment field for the sample, if included, will only accept a max of 2000 characters.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleComments> <EN:Comments>	1. Optional 2. Must not exceed a max of 2000 characters
22	SampleLocationIdentifier - The text describing the unique name, number, or code assigned to identify the Sample station/location. A list of valid Sample Point ID's can be found on the Reference page of eDWRs.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleLocationIdentification> <EN:SampleLocationIdentifier>	1. Required. 2. Must not exceed 11 characters in length.

Lead and Copper XML Data Requirements

2.3.3 Sample Analysis Results Data Elements

ID	Field Name/Description	Mapping to eDWR Schema	Validation	
S A M P L E A N A L Y S I S R E S U L	23	LabAccreditationIdentifier - The Lab Certification Number assigned to the analysis Laboratory (the Laboratory that processed the samples).	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:LabAnalysisIdentification> <EN:LabAccreditation> <EN:LabAccreditationIdentifier>	1. Required. 2. Must be a lab certification number that is active in eDWRS. 3. If this lab certification number is different from the lab certification in the LabReport level, this lab certification number and lab name will be placed in the AnalysisResult comment.
	24	LabAccreditationAuthorityName - The authority which assigned the accreditation number.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:LabAnalysisIdentification> <EN:LabAccreditation> <EN:LabAccreditationAuthorityName>	1. Required. 2. Valid Values: STATE or FEDERAL
	25	MethodIdentifier - Number or code that indicates the type of method used. List of valid Method Codes can be obtained from Reference page of eDWRS.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:LabAnalysisIdentification> <EN:SampleAnalyticalMethod> <EN:MethodIdentifier>	1. Required. 2. Method must be valid for analyte code. 3. Field must not exceed 12 characters in length.

Lead and Copper XML Data Requirements

	ID	Field Name/Description	Mapping to eDWR Schema	Validation
T S	26	AnalysisStartDate - The calendar date when the analysis was started.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:LabAnalysisIdentification> <EN:AnalysisStartDate>	1. Required. 2. Must be a valid calendar date in format: yyyy-mm-dd (ie. 2016-12-29). 3. Must be on or after SampleCollection-EndDate. 4. Cannot exceed current date.
	27	AnalysisStartTime - The local time when the analysis was started.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:LabAnalysisIdentification> <EN:AnalysisStartTime>	1. Optional. 2. Must be a valid time. 3. Format is hh:mm:ss.
	28	AnalyteCode - Analyte code assigned by the agency. List of valid Analyte Codes can be obtained from Reference page of eDWRS.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalyteIdentification> <EN:AnalyteCode>	1. Required. 2. Must be a valid analyte code.
R E S U L	29	MeasurementQualifier - When set to N, indicates that the analytical result is above either the lab reporting level (supplied by the lab) or the federal minimum detection limit.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementQualifier>	1. Required. 2. Field must be exactly 1 character in length 3. Valid values: N – analyte was detected. 4. Not allowed if DataQualityCode is R.

Lead and Copper XML Data Requirements

	ID	Field Name/Description	Mapping to eDWR Schema	Validation
T S	30	MeasurementValue - If the analyte was detected, this is the concentration value of the result reported as a number.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementValue>	1. Required if MeasurementQualifier is set to N – analyte was detected. 2. Must be a numeric value and greater than or equal to 0. 3. Must not exceed 14 characters in length. 4. Not allowed if DataQualityCode is R.
	31	MeasurementUnit - If the analyte was detected, this is the unit of measure associated with concentration.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementUnit>	1. Required if MeasurementQualifier is set to N – analyte was detected. 2. Not allowed if DataQualityCode is R. 3. For most chemical analyses, it will be MG/L. ug/L is not accepted.
	32	MeasurementSignificantDigit – The number of significant digits for the measurement value.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementSignificantDigit>	Optional

Lead and Copper XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
33	DetectionLimitTypeCode - One of a list of client, regulation, or organization defined acronyms and/or statistic methodologies that specify the type of detection limit. This field is only used if the analyte was not detected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:DetectionLimitTypeCode>	1. Required if MeasurementQualifier is set to Y – analyte was not detected. 2. Valid Values: MDL – Federal Minimum Detection Limit MRL – Lab Reporting Level. 3. Not allowed if DataQualityCode is R.
34	MeasurementQualifier - When set to Y, indicates that the analytical result is less than either the lab reporting level (supplied by the lab) or the federal minimum detection limit. Typically set to Y for a non-detect result.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:DetectionLimit> <EN:MeasurementQualifier>	1. Required if MeasurementQualifier is set to Y – analyte was not detected. 2. Field must be exactly 1 character in length 3. Valid values: Y – analyte was not detected. 4. Not allowed if DataQualityCode is R.
35	MeasurementValue - If the analyte was not detected, this is the value that was used to determine the detection level. Either the MRL or the MDL.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:DetectionLimit> <EN:MeasurementValue>	1. Required if MeasurementQualifier is set to Y – analyte was not detected. 2. Must be numeric. 3. Must not exceed 16 characters in length. 4. Not allowed if DataQualityCode is R.

Lead and Copper XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
36	MeasurementUnit - If the analyte was not detected, this is the unit of measure for the detection level. Must be MG/L for most analytes.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:DetectionLimit> <EN:MeasurementUnit>	<ol style="list-style-type: none"> 1. Required if MeasurementQualifier is set to Y – analyte was not detected. 2. For most chemical analyses, it will be MG/L. ug/L is not accepted. 3. Not allowed if DataQualityCode is R.
37	Comment - The optional comment field for the analysis result, if included, will only accept a max of 2000 characters.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:AnalysisResultComment> <EN:Comment>	<ol style="list-style-type: none"> 1. Optional 2. Must not exceed a max of 2000 characters
38	DataQualityCode - Code indicating whether or not the analytical result meets established data quality criteria.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:QAQCSummary> <EN:DataQualityCode>	<ol style="list-style-type: none"> 1. Required. 2. Field must be exactly 1 character in length 3. Valid values: A – Accepted R – Rejected P – Preliminary V – Validated

Lead and Copper XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
39	DataQualityRejectCode – Code indicating the reason the result was rejected when DataQualityCode is R.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:QAQCSummary> <EN:DataQualityRejectCode>	1. Required if DataQualityCode is R. 2. Field must be exactly 2 characters in length 3. Valid values: IF – Instrument Failure LE – Lab Error LC – Lab Not Certified OT – Other RC – Requester Cancelled WR – Water System Rejected
40	DataQualityRejectText – A short explanation of why the sample was rejected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:QAQCSummary> <EN:DataQualityRejectText>	1. Required if DataQualityCode is R. 2. Must not exceed a max of 2000 Characters.

2.4 Coliform/E. coli – TCR/BacT, Crypto, Giardia XML Data Requirements

2.4.1 Lab Identification Data Elements

	ID	Field Name/Description	Schema Mapping	Validation
L A B I D	1	LabAccreditationIdentifier - The Lab Certification Number assigned to the reporting Laboratory.	<eDWR> <EN:Submission> <EN:LabReport> <EN:LabIdentification> <EN:LabAccreditation> <EN:LabAccreditationIdentifier>	1. Required. 2. Must be a lab certification number that is active in eDWRS and is associated with the PWS.
	2	LabAccreditationAuthorityName - The authority which assigned the accreditation number.	<eDWR> <EN:Submission> <EN:LabReport> <EN:LabIdentification> <EN:LabAccreditation> <EN:LabAccreditationAuthorityName>	1. Required. 2. Valid Values: STATE or FEDERAL

2.4.2 Sample Identification Data Elements

	ID	Field Name/Description	Mapping to eDWRS Schema	Validation
S A M P	3	LabSampleIdentifier - A unique identifier assigned or used by the laboratory that will ensure that each received sample will allow the sample to be linked with the applicable result.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:LabSampleIdentifier>	1. Required. 2. A Reporting Lab (identified by the LabAccreditationIdentifier) may use a LabSampleIdentifier for only one sample in the same calendar year. 3. Field must not exceed 20 characters in length.

Coliform/E. coli – TCR/BacT, Crypto, Giardia XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation	
L E	4	PWSIdentifier - The Public Water System (PWS) identification number (PWSID).	<p><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:PWSIdentifier></p>	<ol style="list-style-type: none"> 1. Required. 2. Must be a valid PWS ID and the Reporting Lab must be authorized to submit data on behalf of the PWS. 3. Field must be exactly 9 characters in length
	5	PWSFacilityIdentifier - Public Water System Facility Identification number. A list of valid Facility IDs can be found on the Reference page of eDWRs.	<p><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:PWSFacilityIdentifier></p>	<ol style="list-style-type: none"> 1. Required 2. Must be a valid PWS Facility ID for the PWS ID 3. Field must not exceed 12 characters in length. 4. Value must be DS200 for Routine (RT) Total Coliform Rule (TCR) samples (Distribution BacT samples). For Repeat (RP), Triggered (TG), or Confirmation (CO) samples, and valid Facility ID is acceptable.
	6	SampleRuleCode - Identifies the sample category as either Total Coliform/Lead & Copper/Chemical etc.	<p><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleRuleCode></p>	<ol style="list-style-type: none"> 1. Required. 2. Field must be exactly 2 characters in length 3. Valid values: TC – Total Coliform (Distribution Samples and Triggered or Repeat Samples) GE – General Sample (nonDistribution System Samples except for Triggered or Repeat Samples)

Coliform/E. coli – TCR/BacT, Crypto, Giardia XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
7	SampleMonitoringTypeCode - Indicates whether the sample is taken for "Routine" purposes or is a "Repeat," "Confirmation," etc. Several types are available although not all may be used with samples taken for compliance.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleMonitoringTypeCode>	1. Required. 2. Field must be exactly 2 characters in length 3. Valid values: RT – Routine RP – Repeat CO – Confirmation SP – Special TG – Triggered MR – Max Residence Time FB – Field Blanks SB – Shipping Blanks
8	ComplianceSampleIndicator - Indicates whether the sample is taken for compliance.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:ComplianceSampleIndicator>	1. Required. 2. Field must be exactly 1 character in length 3. Valid value if a Sample Rejection Reason Code is present: N – No 4. Valid values if Sample Monitoring Type Code is RT, RP, CO, and/or TG: Y – Yes N – No 5. Valid values if Sample Monitoring Type Code is <u>not</u> RT, RP, CO, and/or TG: N – No
9	AdditionalSampleIndicator - Indicates whether the sample is a replacement.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:AdditionalSampleIndicator>	1. Required. 2. Field must be exactly 1 character in length 3. Valid Values: Y – Yes (Replacement Sample –rare) N – No

Coliform/E. coli – TCR/BacT, Crypto, Giardia XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
10	OriginalSampleIdentifier - Identifies the original sample that this sample replaces, confirms, or is a repeat for. It also identifies the sample that triggered this sample.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:OriginalSampleIdentification> <EN:OriginalSampleIdentifier>	1. Required if SampleMonitoringTypeCode is CO, TG or RP" or AdditionalSampleIndicator is Y (Replacement Sample). 2. Value must match sample in SDWIS or be included in this XML file. 3. If above criteria is not met, field is not allowed. Must not exceed 20 characters.
11	LabAccreditationIdentifier – Identifies the Lab ID of the original Lab that submitted the sample that this sample replaces, confirms, or is a repeat/triggered for.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:OriginalSampleIdentification> <EN:OriginalSampleLabAccreditation> <EN:LabAccreditationIdentifier>	1. Required if SampleMonitoringTypeCode is CO, TG or RP or AdditionalSampleIndicator is Y (Replacement Sample). 2. Value must match sample in SDWIS or be included in this XML file. 3. If above criteria is not met, field is not allowed.
12	LabAccreditationAuthorityName – Identifies the accreditation authority of the original Lab that submitted the sample that this sample replaces, confirms, or is a repeat/triggered for.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:OriginalSampleIdentification> <EN:OriginalSampleLabAccreditation> <EN:LabAccreditationIdentifier> <EN:LabAccreditationAuthorityName>	1. Required if SampleMonitoringTypeCode is CO, TG or RP or AdditionalSampleIndicator is Y (Replacement Sample). 2. Value must match sample in SDWIS or be included in this XML file. 3. If above criteria is not met, field is not allowed. 4. Valid values: STATE or FEDERAL

Coliform/E. coli – TCR/BacT, Crypto, Giardia XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
13	SampleCollectionEndDate - The calendar date when the sample was collected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleCollectionEndDate>	1. Required. 2. Must be a valid calendar date in format: yyyy-mm-dd (ie. 2016-12-29). 3. Cannot exceed current date.
14	SampleCollectionEndTime - The local time when the sample was collected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleCollectionEndTime>	1. Optional. 2. Must be a valid time. 3. Format is hh:mm:ss.
15	SampleRejectionReasonCode – A code that indicates the reason for rejecting the sample for analysis.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleRejectionReasonCode >	1. Optional. If used ComplianceSample-Indicator must be N. 2. Field must be exactly 2 characters in length 3. Valid values: BP – Invalid Sampling Point BR – Broken CL – Chlorine Present EH – Exceeds Holding Time FZ – Frozen Sample HS – Excessive Headspace IN – Insufficient Sample IP – Invalid Sampling Protocol LA – Lab Accident LT – Leaked in Transit VO – Insufficient Volume

Coliform/E. coli – TCR/BacT, Crypto, Giardia XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
16	MeasurementValue – A number to identify the measurement value. This field is for Field Sample results such as chlorine residual, pH, turbidity, temperature or flow rate.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SpecializedMeasurement > <EN:MeasurementValue>	<ol style="list-style-type: none"> 1. Optional 2. FreeChlorineResidual is Required for TC samples unless: <ol style="list-style-type: none"> a. State required Raw BacT Sample b. Triggered (TG) Raw BacT sample for Ground Water Rule (GWR) c. Compliance is N, or d. The PWS does not add chlorine - rare 3. Other values are optional. 4. The MeasurementValue must be reported in the required units as determined by the SpecializedMeasurementTypeCode as follows: Flowrate – gal/min PH – pH unit Turbidity - NTU WaterTemperature – C or F TotalChlorineResidual – mg/L FreeChlorineResidual – mg/L
17	MeasurementUnit – The unit of measure for the measurement value. Only used for temperature.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SpecializedMeasurement > <EN:MeasurementUnit>	<ol style="list-style-type: none"> 1. Required if SpecializedMeasurementTypeCode indicates Temperature. 2. Field must be exactly 1 character in length 3. Valid values: F – Fahrenheit C – Celsius

Coliform/E. coli – TCR/BacT, Crypto, Giardia XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
18	MeasurementSignificantDigit – The number of significant digits for the measurement value.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN: SpecializedMeasurement > <EN:MeasurementSignificantDigit>	Optional
19	SpecializedMeasurementTypeCode – Code identifying the type of measurement.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN: SpecializedMeasurement > <EN:SpecializedMeasurementTypeCode>	1. Optional 2. FreeChlorineResidual is Required for TC samples unless: <ol style="list-style-type: none"> a. State required Raw BacT Sample b. Triggered (TG) Raw BacT sample for Ground Water Rule (GWR) c. Compliance is N, or d. The PWS does not add Chlorine - rare 3. Other values are optional. 4. Valid Values: Flowrate PH Turbidity WaterTemperature TotalChlorineResidual FreeChlorineResidual
20	Comments - The optional comment field for the sample, if included, will only accept a max of 2000 characters.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleComments> <EN:Comments>	1. Optional 2. Must not exceed a max of 2000 characters

Coliform/E. coli – TCR/BacT, Crypto, Giardia XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
21	SampleLocationIdentifier - The text describing the unique name, number, or code assigned to identify the Sample station/location. A list of valid Sample Point ID's can be found on the Reference page of eDWRs.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleLocationIdentification> <EN:SampleLocationIdentifier>	1. Required. 2. Must not exceed 11 characters in length.

2.4.3 Sample Analysis Results Data Elements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
S A M P L E A N A L Y S	22	LabAccreditationIdentifier - The Lab Certification Number assigned to the analysis Laboratory (the Laboratory that processed the samples).	1. Required. 2. Must be a lab certification number that is active in eDWRs. 3. If this lab certification number is different from the lab certification in the LabReport level, this lab certification number and lab name will be placed in the AnalysisResult comment.
	23	LabAccreditationAuthorityName - The authority which assigned the accreditation number.	1. Required. 2. Valid Values: STATE or FEDERAL

Coliform/E. coli – TCR/BacT, Crypto, Giardia XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation	
I S R E S U L T S	24	MethodIdentifier - Number or code that indicates the type of method used. List of valid Method Codes can be obtained from Reference page of eDWRS.	<p><eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:LabAnalysisIdentification></p> <p><EN:SampleAnalyticalMethod></p> <p><EN:MethodIdentifier></p>	<ol style="list-style-type: none"> 1. Required. 2. Method must be valid for analyte code. 3. Field must not exceed 12 characters in length.
	25	AnalysisStartDate - The calendar date when the analysis was started.	<p><eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:LabAnalysisIdentification></p> <p><EN:AnalysisStartDate></p>	<ol style="list-style-type: none"> 1. Required. 2. Must be a valid calendar date in format: yyyy-mm-dd (ie. 2016-12-29). 3. Must be on or after SampleCollection-EndDate. 4. Cannot exceed current date.
	26	AnalysisStartTime - The local time when the analysis was started.	<p><eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:LabAnalysisIdentification></p> <p><EN:AnalysisStartTime></p>	<ol style="list-style-type: none"> 1. Optional. 2. Must be a valid time. 3. Format is hh:mm:ss.
	27	AnalyteCode - Analyte code assigned by the agency. List of valid Analyte Codes can be obtained from Reference page of eDWRS.	<p><eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:AnalyteIdentification></p> <p><EN:AnalyteCode></p>	<ol style="list-style-type: none"> 1. Required. 2. Must be a valid analyte code.

Coliform/E. coli – TCR/BacT, Crypto, Giardia XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation	
M I C R O B I A L R E S U L T S	28	MeasurementQualifier - Presence/Absence indicator - P indicates that the microbiological result is positive while A indicates a negative result.	<p><EN:eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:AnalysisResult></p> <p><EN:Result></p> <p><EN:MeasurementQualifier></p>	<ol style="list-style-type: none"> 1. Required. 2. Field must be exactly 1 character in length 3. Valid values: A – Absence P – Presence 4. Not allowed if DataQualityCode is R.
	29	MeasurementValue - Value greater than 0 indicates a positive microbiological result.	<p><EN:eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:AnalysisResult></p> <p><EN:Result></p> <p><EN:MeasurementValue></p>	<ol style="list-style-type: none"> 1. Optional 2. Field is not allowed if Measurement-Qualifier is A 3. Must be an integer (if decimals are to be reported, the value can be included in analysis comments) 4. Not allowed if DataQualityCode is R.
	30	MeasurementUnit - Type of microbiological unit that is being counted per specified count unit. Count type varies with the microbiological organism where count is being recorded.	<p><EN:eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:AnalysisResult></p> <p><EN:Result></p> <p><EN:MeasurementUnit></p>	<ol style="list-style-type: none"> 1. Optional 2. Field is not allowed if Measurement-Qualifier is A 3. Must be: <ol style="list-style-type: none"> a. 100ML – Coliform or E. coli b. LITER – Crypto or Giardia 4. Not allowed if DataQualityCode is R.

Coliform/E. coli – TCR/BacT, Crypto, Giardia XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
31	MeasurementSignificantDigit – The number of significant digits for the measurement value.	<EN:eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementSignificantDigit>	1. Optional 2. Not allowed if DataQualityCode is R.
32	MicrobialResultCountTypeCode - Type of microbiological unit that is being counted per specified count unit. Count type varies with the microbiological organism.	<EN:eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MicrobialResultCountTypeCode>	1. Optional 2. Field is not allowed if Measurement-Qualifier is A 3. Must be: <ul style="list-style-type: none"> a. Coliform or E. coli – COLONIES b. Crypto – OCYSTSC c. Giardia – CYSTSC 4. Not allowed if DataQualityCode is R.
33	Comment - The optional analysis comment field for the analysis result, if included, will only accept a max of 2000 characters.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:AnalysisResultComment> <EN:Comment>	1. Optional 2. Must not exceed a max of 2000 Characters

Coliform/E. coli – TCR/BacT, Crypto, Giardia XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
34	DataQualityCode - Code indicating whether or not the analytical result meets established data quality criteria.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:QAQCSummary> <EN:DataQualityCode>	1. Required. 2. Field must be exactly 1 character in length 3. Valid values: A – Accepted R – Rejected P – Preliminary V – Validated
35	DataQualityRejectCode – Code indicating the reason the result was rejected when DataQualityCode is R.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:QAQCSummary> <EN:DataQualityRejectCode>	1. Required if DataQualityCode is R 2. Field must be exactly 2 characters in length 3. Valid values: IF – Instrument Failure LE – Lab Error LC – Lab Not Certified OT – Other RC – Requester Cancelled WR – Water System Rejected
36	DataQualityRejectText – A short explanation of why the sample was rejected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:QAQCSummary> <EN:DataQualityRejectText>	1. Required if DataQualityCode is R 2. Must not exceed a max of 2000 Characters

2.5 Radiological XML Data Requirements

2.5.1 Lab Identification Data Elements

	ID	Field Name/Description	Schema Mapping	Validation
L A B I D	1	LabAccreditationIdentifier - The Lab Certification Number assigned to the reporting Laboratory.	<eDWR> <EN:Submission> <EN:LabReport> <EN:LabIdentification> <EN:LabAccreditation> <EN:LabAccreditationIdentifier>	1. Required. 2. Must be a lab certification number that is active in eDWRS and is associated with the PWS.
	2	LabAccreditationAuthorityName - The authority which assigned the accreditation number.	<eDWR> <EN:Submission> <EN:LabReport> <EN:LabIdentification> <EN:LabAccreditation> <EN:LabAccreditationAuthorityName>	1. Required. 2. Valid Values: STATE or FEDERAL

2.5.2 Sample Identification Data Elements

	ID	Field Name/Description	Mapping to eDWRS Schema	Validation
S A M P	3	LabSampleIdentifier - A unique identifier assigned or used by the laboratory that will ensure that each received sample will allow the sample to be linked with the applicable result.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:LabSampleIdentifier>	1. Required. 2. A Reporting Lab (identified by the LabAccreditationIdentifier) may use a LabSampleIdentifier for only one sample in the same calendar year. 3. Field must not exceed 20 characters in length.

Radiological XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation	
L E	4	PWSIdentifier - The Public Water System (PWS) identification number (PWSID).	<p><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:PWSIdentifier></p>	<ol style="list-style-type: none"> 1. Required. 2. Must be a valid PWS ID and the Reporting Lab must authorized to submit data on behalf of the PWS. 3. Field must not exceed 9 characters in length
	5	PWSFacilityIdentifier - Public Water System Facility Identification number. A list of valid Facility IDs can be found on the Reference page of eDWRs.	<p><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:PWSFacilityIdentifier></p>	<ol style="list-style-type: none"> 1. Required 2. Must be a valid PWS Facility ID for the PWS ID 3. Field must not exceed 12 characters in length.
	6	SampleRuleCode - Identifies the sample category as either Total Coliform/Lead & Copper/Chemical etc.	<p><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleRuleCode></p>	<ol style="list-style-type: none"> 1. Required. 2. Field must be exactly 2 characters in length 3. Valid values: GE – General Sample 4. Other Values: TC – Total Coliform Rule PB – Lead and Copper Rule
	7	SampleMonitoringTypeCode - Indicates whether the sample is taken for “Routine” purposes or is a “Repeat,” “Confirmation,” etc. Several types are available although not all may be used with samples taken for compliance.	<p><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleMonitoringTypeCode></p>	<ol style="list-style-type: none"> 1. Required. 2. Field must be exactly 2 characters in length 3. Valid values: RT – Routine RP – Repeat CO – Confirmation SP – Special TG – Triggered MR – Max Residence Time FB – Field Blanks SB – Shipping Blanks

Radiological XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
8	ComplianceSampleIndicator - Indicates whether the sample is taken for compliance.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:ComplianceSampleIndicator>	<ol style="list-style-type: none"> 1. Required. 2. Field must be exactly 1 character in length 3. Valid value if a Sample Rejection Reason Code is present: N – No 4. Valid values if Sample Monitoring Type Code is RT, RP, CO, and/or TG: Y – Yes N – No 5. Valid values if Sample Monitoring Type Code is <u>not</u> RT, RP, CO, and/or TG: N – No
9	AdditionalSampleIndicator - Indicates whether the sample is a replacement.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:AdditionalSampleIndicator>	<ol style="list-style-type: none"> 1. Required. 2. Field must be exactly 1 character in length 3. Valid Values: Y – Yes (Replacement Sample –rare) N – No
10	OriginalSampleIdentifier - Identifies the original sample that this sample replaces, confirms, or is a repeat for. It also identifies the sample that triggered this sample.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:OriginalSampleIdentification> <EN:OriginalSampleIdentifier>	<ol style="list-style-type: none"> 1. Required if SampleMonitoringTypeCode is CO, TG or RP or AdditionalSampleIndicator is Y (Replacement Sample). 2. Value must match sample in SDWIS or be included in this XML file. 3. If above criteria is not met, field is not allowed. 4. Must not exceed 20 characters.

Radiological XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
11	LabAccreditationIdentifier – Identifies the Lab ID of the original Lab that submitted the sample that this sample replaces, confirms, or is a repeat/triggered for.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:OriginalSampleIdentification> <EN:OriginalSampleLabAccreditation> <EN:LabAccreditationIdentifier>	<ol style="list-style-type: none"> 1. Required if SampleMonitoringTypeCode is CO, TG or RP or AdditionalSampleIndicator is Y (Replacement Sample). 2. Value must match sample in SDWIS or be included in this file. 3. If above criteria is not met, field is not allowed.
12	LabAccreditationAuthorityName – Identifies the accreditation authority of the original Lab that submitted the sample that this sample replaces, confirms, or is a repeat/triggered for.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:OriginalSampleIdentification> <EN:OriginalSampleLabAccreditation> <EN:LabAccreditationIdentifier> <EN:LabAccreditationAuthorityName>	<ol style="list-style-type: none"> 1. Required if SampleMonitoringTypeCode is CO, TG or RP or AdditionalSampleIndicator is Y (Replacement Sample). 2. Value must match sample in SDWIS or be included in this XML file. 3. If above criteria is not met, field is not allowed. 4. Valid values: STATE or FEDERAL
13	SampleCollectionEndDate - The calendar date when the sample was collected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleCollectionEndDate>	<ol style="list-style-type: none"> 1. Required. 2. Must be a valid calendar date in format: yyyy-mm-dd (ie. 2016-12-29). 3. Cannot exceed current date.
14	SampleCollectionEndTime - The local time when the sample was collected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleCollectionEndTime>	<ol style="list-style-type: none"> 1. Optional. 2. Must be a valid time. 3. Format is hh:mm:ss.

Radiological XML Data Requirements

ID	Field Name/Description	Mapping to eDWRs Schema	Validation
15	SampleRejectionReasonCode – A code that indicates the reason for rejecting the sample for analysis.	<pre><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleRejectionReasonCode ></pre>	<ol style="list-style-type: none"> Optional. If used ComplianceSample-Indicator must be N. Field must be exactly 2 characters in length Valid values: BP – Invalid Sampling Point BR – Broken CL – Chlorine Present EH – Exceeds Holding Time FZ – Frozen Sample HS – Excessive Headspace IN – Insufficient Sample IP – Invalid Sampling Protocol LA – Lab Accident LT – Leaked in Transit VO – Insufficient Volume
16	MeasurementValue – A number to identify the measurement value. This field is for Field Sample results such as chlorine residual, pH, turbidity, temperature or flow rate.	<pre><eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SpecializedMeasurement > <EN:MeasurementValue></pre>	<ol style="list-style-type: none"> Optional. The MeasurementValue must be reported in the required units as determined by the SpecializedMeasurementTypeCode as follows: Flowrate – gal/min PH – pH unit Turbidity - NTU WaterTemperature – C or F TotalChlorineResidual – mg/L FreeChlorineResidual – mg/L

Radiological XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
17	MeasurementUnit – The unit of measure for the measurement value. Only used for temperature.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SpecializedMeasurement > <EN:MeasurementUnit>	1. Required if SpecializedMeasurementType-Code indicates Temperature. 2. Field must be exactly 1 character in length 3. Valid values: F – Fahrenheit C – Celsius
18	MeasurementSignificantDigit – The number of significant digits for the measurement value.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN: SpecializedMeasurement > <EN:MeasurementSignificantDigit>	Optional
19	SpecializedMeasurementTypeCode – Code identifying the type of measurement.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN: SpecializedMeasurement > <EN:SpecializedMeasurementTypeCode>	1. Optional. 2. Valid Values: Flowrate PH Turbidity WaterTemperature TotalChlorineResidual FreeChlorineResidual
20	Comments – The optional comment field for the sample, if included, will only accept a max of 2000 characters.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleIdentification> <EN:SampleComments> <EN:Comments>	1. Optional 2. Must not exceed a max of 2000 characters

Radiological XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
21	SampleLocationIdentifier - The text describing the unique name, number, or code assigned to identify the Sample station/location. A list of valid Sample Point ID's can be found on the Reference page of eDWRs.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:SampleLocationIdentification> <EN:SampleLocationIdentifier>	1. Required. 2. Must not exceed 11 characters in length.

2.5.3 Sample Analysis Results Data Elements

ID	Field Name/Description	Mapping to eDWR Schema	Validation	
S A M P L E A N A L Y S	22	LabAccreditationIdentifier - The Lab Certification Number assigned to the analysis Laboratory (the Laboratory that processed the samples).	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:LabAnalysisIdentification> <EN:LabAccreditation> <EN:LabAccreditationIdentifier>	1. Required. 2. Must be a lab certification number that is active in eDWRs. 3. If this lab certification number is different from the lab certification in the LabReport level, this lab certification number and lab name will be placed in the AnalysisResult comment.
	23	LabAccreditationAuthorityName - The authority which assigned the accreditation number.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:LabAnalysisIdentification> <EN:LabAccreditation> <EN:LabAccreditationAuthorityName>	1. Required. 2. Valid Values: STATE or FEDERAL

Radiological XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation	
I S R E S U L T S	24	MethodIdentifier - Number or code that indicates the type of method used. List of valid Method Codes can be obtained from Reference page of eDWRS.	<p><eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:LabAnalysisIdentification></p> <p><EN:SampleAnalyticalMethod></p> <p><EN:MethodIdentifier></p>	<ol style="list-style-type: none"> 1. Required. 2. Method must be valid for analyte code. 3. Field must not exceed 12 characters in length.
	25	AnalysisStartDate - The calendar date when the analysis was started.	<p><eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:LabAnalysisIdentification></p> <p><EN:AnalysisStartDate></p>	<ol style="list-style-type: none"> 1. Required. 2. Must be a valid calendar date in format: yyyy-mm-dd (ie. 2016-12-29). 3. Must be on or after SampleCollection-EndDate. 4. Cannot exceed current date.
	26	AnalysisStartTime - The local time when the analysis was started.	<p><eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:LabAnalysisIdentification></p> <p><EN:AnalysisStartTime></p>	<ol style="list-style-type: none"> 1. Optional. 2. Must be a valid time. 3. Format is hh:mm:ss.
	27	AnalyteCode - Analyte code assigned by the agency. List of valid Analyte Codes can be obtained from Reference page of eDWRS.	<p><eDWR></p> <p><EN:Submission></p> <p><EN:LabReport></p> <p><EN:Sample></p> <p><EN:AnalysisResultInformation></p> <p><EN:AnalyteIdentification></p> <p><EN:AnalyteCode></p>	<ol style="list-style-type: none"> 1. Required. 2. Must be a valid analyte code.

Radiological XML Data Requirements

	ID	Field Name/Description	Mapping to eDWR Schema	Validation
R A D I O L O G I C A L R E S U L T S	28	MeasurementQualifier - When set to N, indicates that the analytical result is above either the lab reporting level (supplied by the lab) or the federal minimum detection limit.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementQualifier>	1. Required. 2. Field must be exactly 1 character in length 3. Valid values: N – analyte was detected. 4. Not allowed if DataQualityCode is R.
	29	MeasurementValue - If the analyte was detected, this is the concentration value of the result reported as a number.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementValue>	1. Required if MeasurementQualifier is set to N – analyte was detected. 2. Must be a numeric value and greater than or equal to 0. 3. Must not exceed 14 characters in length. 4. Not allowed if DataQualityCode is R.
	30	MeasurementUnit - If the analyte was detected, this is the unit of measure associated with concentration.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementUnit>	1. Required if MeasurementQualifier is set to N – analyte was detected. 2. Not allowed if DataQualityCode is R. 3. For most chemical analyses, it will be MG/L. ug/L is not accepted.

Radiological XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
31	MeasurementSignificantDigit – The number of significant digits for the measurement value.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:Result> <EN:MeasurementSignificantDigit>	Optional
32	DetectionLimitTypeCode - One of a list of client, regulation, or organization defined acronyms and/or statistic methodologies that specify the type of detection limit. This field is only used if the analyte was not detected.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:DetectionLimitTypeCode>	1. Required if MeasurementQualifier is set to Y – analyte was not detected. 2. Valid Values: MDL – Federal Minimum Detection Limit MRL – Lab Reporting Level. 3. Not allowed if DataQualityCode is R.
33	MeasurementQualifier - When set to Y, indicates that the analytical result is less than either the lab reporting level (supplied by the lab) or the federal minimum detection limit.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:DetectionLimit> <EN:MeasurementQualifier>	1. Required if MeasurementQualifier is set to Y – analyte was not detected. 2. Field must be exactly 1 character in length 3. Valid values: Y – analyte was not detected. 4. Not allowed if DataQualityCode is R.

Radiological XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
34	MeasurementValue - If the analyte was not detected, this is the value that was used to determine the detection level. Either the MRL or the MDL.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:DetectionLimit> <EN:MeasurementValue>	<ol style="list-style-type: none"> 1. Required if MeasurementQualifier is set to Y – analyte was not detected. 2. Must be numeric. 3. Must not exceed 16 characters in length. 4. Not allowed if DataQualityCode is R.
35	MeasurementUnit - If the analyte was not detected, this is the unit of measure for the detection level. Must be MG/L for most analytes.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:DetectionLimit> <EN:MeasurementUnit>	<ol style="list-style-type: none"> 1. Required if MeasurementQualifier is set to Y – analyte was not detected. 2. For most chemical analyses, it will be MG/L. ug/L is not accepted. 3. Not allowed if DataQualityCode is R.
36	RadiologicalResultCountError - The count error estimated by the lab due to turbidity in the sample or other anomalies.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:RadiologicalResultCountError>	<ol style="list-style-type: none"> 1. Optional. 2. Numeric value only, do not include +/-.

Radiological XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
37	Comment - The optional comment field for the analysis result, if included, will only accept a max of 2000 characters.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:AnalysisResult> <EN:AnalysisResultComment> <EN:Comment>	1. Optional 2. Must not exceed a max of 2000 characters
38	DataQualityCode - Code indicating whether or not the analytical result meets established data quality criteria.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:QAQCSummary> <EN:DataQualityCode>	1. Required. 2. Field must be exactly 1 character in length 3. Valid values: A – Accepted R – Rejected P – Preliminary V – Validated
39	DataQualityRejectCode – Code indicating the reason the result was rejected when DataQualityCode is R.	<eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:QAQCSummary> <EN:DataQualityRejectCode>	1. Required if DataQualityCode is R. 2. Field must be exactly 2 characters in length 3. Valid values: IF – Instrument Failure LE – Lab Error LC – Lab Not Certified OT – Other RC – Requester Cancelled WR – Water System Rejected

Radiological XML Data Requirements

ID	Field Name/Description	Mapping to eDWR Schema	Validation
40	DataQualityRejectText – A short explanation of why the sample was rejected.	<pre> <eDWR> <EN:Submission> <EN:LabReport> <EN:Sample> <EN:AnalysisResultInformation> <EN:QAQCSummary> <EN:DataQualityRejectText> </EN:QAQCSummary> </EN:AnalysisResultInformation> </EN:Sample> </EN:LabReport> </EN:Submission> </eDWR> </pre>	<ol style="list-style-type: none"> 1. Required if DataQualityCode is R. 2. Must not exceed a max of 2000 Characters.