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Water Quality Data Elements for Sensors ("Continuous" Monitoring)

Category No.	Category Name (& WQDE Module)	Group No.	Group Name	Subject No.	Subject Name	Field ID	Field name
1	Monitoring Project ("Contact")	1	Project Identifiers	1.1.1	Identity	1.1.1.1	Project ID
1						1.1.1.2	Project Name
1		1		1.1.2	Descriptors	1.1.2.1	Project Duration
1		2	Organization identifiers	1.2.1	Identity	1.2.1.1	Organization ID
1		2				1.2.1.2	Organization Name
1		2		1.2.2	Organization Descriptors	1.2.2.1	Organization Category
1		2				1.2.2.2	Organization Type
						1.2.2.3	**Organization Function in Project**
1		3	Project Contacts	1.3.1	Person	1.3.1.1	Contact Last name
1		3				1.3.1.2	Contact First name
1		3				1.3.1.3	Contact Role
1		3		1.3.2	"Essentials"	1.3.2.1	Address Line 1
1		3				1.3.2.2	Address Line 2
1		3				1.3.2.3	City
1		3				1.3.2.4	State
1		3				1.3.2.5	Zip
1		3				1.3.2.6	Phone at Work
1		3				1.3.2.7	Extension
1		3				1.3.2.8	Fax
1		3				1.3.2.9	Phone-Mobile
1		3				1.3.2.10	Email
1		3				1.3.2.11	URL/Website
2	Result ("Result")	1	Result (how much?)	2.1.1	Value	2.1.1.1	Result Value
2		1		2.1.2	Unit	2.1.2.1	Result Unit
2		1		2.1.3	Result Batch Affiliation	2.1.3.1	Result Batch ID
2		1				2.1.3.2	Result Batch Type

						2.1.3.3	Primary Dataset ID
						2.1.3.4	Secondary Dataset ID
2		2	Characteristic (of what?)	2.2.1	Characteristic Name	2.2.1.1	Characteristic
2		3	Result descriptors	2.3.1	Result Type	2.3.1.1	Result Type
2		3				2.3.1.2	Endpoint Type
2		3		2.3.2	Result Qualifiers	2.3.2.1	Result Qualifier Code
2		3				2.3.2.2	Batch Qualifier Code
2		3		2.3.3	Result-Specific procedures/outcomes	2.3.3.1	MDL
2		3				2.3.3.2	Reporting Limit or PQL
2		3		2.3.4	Repeated Results	2.3.4.1	Duplicate Measurement Result
2		3		2.3.5	Instrument-/batch- specific D	2.3.5.1	Accuracy (Percent Bias)
2		3				2.3.5.2	Precision (RPD)
2		3		2.3.6	Project or Dataset's Measure	2.3.6.1	accuracy
2		3				2.3.6.2	precision
2		3				2.3.6.3	accuracy MQO met?
2		3				2.3.6.4	precision MQO met?
3	Study-Dataset ("Reason")	1	Identifier	3.1.1	Identity	3.1.1.1	Study Dataset ID
3				3.1.2	Scenario	3.1.2.1	Scenario or Question
3						3.1.2.2	Season of Interest
3		2	Intent (Why?)	3.2.1	Spatial intent	3.2.1.1	Station Selection Intent
3				3.2.2	Temporal Intent	3.2.2.1	Sample Timing Intent
3		3	Design	3.3.1	Spatial design	3.3.1.1	Reach Selection Design
3						3.3.1.2	Station Selection Design
3				3.3.2	Temporal design	3.3.2.1	Seasonal Sampling Design
3						3.3.2.2	Diurnal Sampling Design
3				3.4.2	Documentation of change	3.4.2.1	Sampling Frequency
3						3.4.2.2	Sampling Interval
4	Site Visit ("Date/tim	1	Trip	4.1.1	identity	4.1.1.1	Trip ID
4				4.1.2	crew	4.1.2.1	Crew ID
4				4.1.3	dates	4.1.3.1	Trip Start Date
4						4.1.3.2	Trip Start Time
4						4.1.3.3	Trip End Date
4		2	Visit	4.2.1	identity	4.2.1.1	Station Visit ID
				4.2.2	date/time	4.2.2.1	Station Visit Date

4						4.2.2.2	Station Visit Start Time
4						4.2.2.3	Station Visit End Time
4				4.2.3	conditions	4.2.3.1	Wet/Dry Weather
4						4.2.3.2	Antecedent Dry Period (days)
4						4.2.3.3	Phase in Hydrograph
						4.2.3.4	Hydrograph File ID
5	Location ("Location	1	Site identity	5.1.1	Station identity	5.1.1.1	Station ID
5		1				5.1.1.2	Station Name
5		1				5.1.1.3	Date Established
5		1		5.1.2	Adjacent identifiers	5.1.2.1	USGS Gauge Number
						5.1.2.2	Monument ID
						5.1.2.3	Sub-Station ID
5		1				5.1.2.4	Station Verification Reference
5		2	Site descriptors	5.2.1	Station type	5.2.1.1	Station Type
5		2		5.2.2	Regulated Facility	5.2.2.1	Facility ID
5		2				5.2.2.2	Facility Type
5		2		5.2.3	Regulatory Driver	5.2.3.1	Regulatory Point Type
5		2				5.2.3.2	Regulatory Action Type/Program
5		2				5.2.3.3	Permit Type
5		2				5.2.3.4	Permit ID
5		2		5.2.4	Drainage	5.2.4.1	Land Use Setting
5		2				5.2.4.2	Land Use Activity or (unregulated) Facility
5		2				5.2.4.3	Drainage Area
5		2				5.2.4.4	(more fields describing drainage
5		3	Watershed/aquifer	5.3.1	Watershed	5.3.1.1	Watershed Name
5		3				5.3.1.2	Sub-Watershed
5		3				5.3.1.3	Waterbody Name
5		3		5.3.2	Aquifer	5.3.2.1	Aquifer Name
5		3				5.3.2.2	(more info about the aquifer)
5		4	Site Location	5.4.1	Mapping references	5.4.1.1	Hydrologic Unit
5		4				5.4.1.2	Nearest Milepost
5		4				5.4.1.3	Station City
5		4				5.4.1.4	Station County
5		4				5.4.1.5	Station State
5		4		5.4.2	Location Description	5.4.2.1	Station Location Description
		4				5.4.2.2	Landmarks /Monuments
5		4				5.4.2.3	Access to Station

5		5	Geospatial information	5.5.1	Station 'official' coordinates	5.5.1.1	Latitude
5		5				5.5.1.2	Longitude
5		5				5.5.1.3	Datum for GPS
5		5				5.5.1.4	Coordinates Format
5		5				5.5.1.5	Map Used
5		5		5.5.2	Station elevation	5.5.2.1	Elevation Result
5		5				5.5.2.2	Elevation Units
5		5				5.5.2.3	Elevation Reference
5		5		5.5.3	Surveying information	5.5.3.1	Survey Benchmark ID
		5				5.5.3.2	Survey Benchmarks System Agency
5		5				5.5.3.4	Date Surveyed
5		5				5.5.3.5	Surveyor Name
6	Activity-Field ("sam	1	Activity descriptors (common to all Activities)	6.1.1	Identifiers	6.1.1.1	Activity/Sample ID
6		1				6.1.1.2	Activity Time
6		1		6.1.2	Activity type	6.1.2.1	Activity Category
6		1				6.1.2.2	Activity Type
6		1		6.1.3	Operators	6.1.3.1	Team Name
6		1				6.1.3.2	Operator Name
6		1		6.1.4	Guidance	6.1.4.1	Activity SOP/Method
6		3	Activity - how performed?	6.3.1.	Activity Fixtures (common)	6.3.1.1	Activity Installed Fixture
6		3				6.3.1.2	Activity Temporary Fixture
6		3		6.3.2	Activity Access (common)	6.3.2.1	Activity Access
6		3		6.3.3	Activity Devices (common)	6.3.3.1	Device Function
6		3				6.3.3.2	Device Type
6		4	Activity Records	6.4.1	Recording Methods/Devices	6.4.1.1	Scribe Name
6		4				6.4.1.2	Recording media
6		4				6.4.1.3	Computer file name
6		4				6.4.1.4	Datasheet custodian
6		4		6.4.2	Correctness of Data Entry	6.4.2.1	Correctness Test ID
6		4				6.4.2.2	Correctness Test Date
6		4				6.4.2.3	Number of Records Entered (total)
6		4				6.4.2.4	Number of Mismatched Records
6		4				6.4.2.5	Percent Incorrectly-Entered Recor

6		4		6.4.3	Evaluative Field Activities Records	6.4.3.1	Picture ID
6		4		6.4.4	Data logger file	6.4.4.1	Logger Instrument ID
6		4				6.4.4.2	Logger File Name
6		4				6.4.4.3	Date Deployed
6		4				6.4.4.4	Date Retrieved
6		4				6.4.4.5	Datalogger Data Dump Number
6		4				6.4.4.6	Array Number
6		4		6.4.6	Binary Object	6.4.6.1	Binary Object ID
6		4				6.4.6.2	Binary Object Type
7	Measurement System - field&lab ("Sample Analysis")	1	Methodology (common)	7.1.1	Methodology General Information	7.1.1.1	Method Area of Inquiry
7		1				7.1.1.2	Methodology Name
7		1				7.1.1.3	Method Function
7		1				7.1.1.5	Method Principle
7		1		7.1.2	Identifiers and References (common)	7.1.2.1	Method #
7		1				7.1.2.2	Method Name
7		1		7.1.3	Citation	7.1.3.1	Protocol Reference
						7.1.3.2	(more)
7		3	Instruments (Field)	7.3.1	Identity	7.3.1.1	Instrument ID
7		3				7.3.1.2	Instrument ID (Secondary)
7		3				7.3.1.3	Agency Inventory #
7		3				7.3.1.4	Serial #
7		3		7.3.2	Instrument/kit Descriptors	7.3.2.1	Common Name
7		3				7.3.2.2	Type /Method
7		3				7.3.2.3	Features
7		3				7.3.2.4	Model
7		3				7.3.2.5	Calibration Mode
7		3				7.3.2.6	Range
7		3				7.3.2.7	Units
7		3				7.3.2.8	Resolution (Increments)
7		3				7.3.2.9	Manufacturer (Make)

7	3		7.3.3	Instrument Service Records	7.3.3.1	Service Date
7	3				7.3.3.2	Service Outcome
7	9	Actions to Affect Data Quality	7.9.1	Operator Training	7.9.1.1	Trainee Operator Name
7	9				7.9.1.2	Training Start Date and Time
7	9				7.9.1.3	Training Duration
7	9				7.9.1.4	Course Name
7	9				7.9.1.5	Course ID
7	9				7.9.1.6	Course Provider Organization Nan
7	9				7.9.1.7	Course Instructor Name
7	9		7.9.2	Operator certification	7.9.2.1	Certified Operator Name
7	9				7.9.2.2	Proficiency Test Reason
7	9				7.9.2.3	Proficiency Test Date
7	9				7.9.2.4	Procedure Name
7	9				7.9.2.5	Procedure SOP or Checklist
7	9				7.9.2.6	Operator Certificate Type
7	9				7.9.2.7	Certifying Entity
7	9				7.9.2.8	Certifying Person
7	9				7.9.2.9	Certificate Expiration Date
7	9		7.9.3	Field Instrument Calibration	7.9.3.1	Calibration Date
7	9				7.9.3.2	Calibration Time
7	9				7.9.3.3	Calibrator Standard Material
7	9				7.9.3.4	Theoretical ("True") Value
7	9				7.9.3.5	Initial Reading Before Calibration Adjustment
7	9				7.9.3.6	Calibration Action
7	9				7.9.3.7	Reading After Calibration Adjustment
7	9				7.9.3.8	Calibration Operator Name
7	9		7.9.4	Calibration conditions	7.9.4.1	Calibration environment property (**T**a**P**a**S**)
7	9				7.9.4.2	Calibration environment property Unit
7	9				7.9.4.3	Calibration environment property Value
7	9				7.9.4.4	Instrument Performance Diagnostic Attribute

7	9				7.9.4.5	Instrument Performance Diagnostic Attribute Value
7	9				7.9.4.6	Instrument Performance Diagnostic Attribute acceptable range
					7.9.4.7	Instrument Performance Diagnostic Attribute Value within range?
					7.9.4.8	Calibration Comments
7	9		7.9.5	Calibration Standards used	7.9.5.1	Standard ID
7	9				7.9.5.2	Manufacturer
7	9				7.9.5.3	Lot Number
7	9				7.9.5.4	Expiration Date
7	9				7.9.5.5	Standard Description
7	9				7.9.5.6	NIST/ASTM Tracking Information
7	9				7.9.5.7	Pigment
7	9				7.9.5.8	Bottle Volume & Unit
7	9		7.9.6	Instrument Maintenance and	7.9.6.1	Instrument ID (Maintained)
7	9				7.9.6.2	Maintenance Date and time
7	9				7.9.6.3	Maintenance Operator Name
7	9				7.9.6.4	Fouling Pictures Group ID
7	10	Actions to Check Quality	7.10.1	Quality Check descriptors	7.10.1.1	Quality Check Category
7	10				7.10.1.2	Quality Check Type
7	10				7.10.1.3	Quality Check Date
7	10				7.10.1.4	Quality Check Time
7	10				7.10.1.5	Quality Check Operator
7	10		7.10.2	Paired Quality Checks (comp	7.10.2.1	Batch Type
7	10				7.10.2.2	Batch Entity Name
7	10				7.10.2.3	Batch Entity ID
7	10				7.10.2.4	Batch Date or Period
7	10				7.10.2.5	DQ aspect addressed
7	10					**(characteristic)**
7	10					(Result unit)
7	10				7.10.2.7	**Expected or 1st Value Type**
7	10				7.10.2.8	**Expected or 1st Result**
7	10				7.10.2.9	**Observed or 2nd Value type**

7	10			7.10.2.10	**Observed or 2nd Result**
7	10			7.10.2.11	differential or drift
7	10			7.10.2.12	Data Quality Indicator Name
7	10			7.10.2.13	QC outcome computation
7	10			7.10.2.14	QC Outcome
7	10			7.10.2.15	QC Outcome unit
7	10	7.10.3	Quality check conditions	7.10.3.1	Quality Check environment property (**T**a**P**a**S**)
7	10			7.10.3.2	Quality Check environment property Unit
7	10			7.10.3.3	Quality Check environment property Value
7	10			*(7.9.4.4)*	Instrument Performance Diagnostic Attribute
7	10			*(7.9.4.5)*	Instrument Performance Diagnostic Attribute Value
7	10			*(7.9.4.6)*	Instrument Performance Diagnostic Attribute acceptable range
7	10	7.10.4	Standard solutions used	7.10.4.1	Verification Standard ID
7	10			(7.9.5.x)	Manufacturer
7	10			(7.9.5.x)	Lot Number
7	10			(7.9.5.x)	Expiration Date
7	10			(7.9.5.x)	Standard Description
7	10			(7.9.5.x)	NIST/ASTM Tracking Information
7	10			(7.9.5.x)	Pigment
7	10			(7.9.5.x)	Bottle Volume & Unit

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