

WQX User Call

October 26, 2023

There were approximately 42 participants on the call.

Agenda:

1. WQX Status Report
 - WQX/WQXWeb performance and updates (Kevin)
 - WQX helpdesk report (Shay)
2. WQP Status Report
 - WQP General Status Report (Candice/Lee)
3. Presentation: WQX / WQX Web Quick Tips and Continuous data guidance.
 - Kevin Christian (EPA-WDIB) [WQX/WQX Web - Home](#)
4. Open Discussion/Office Hours
 - WQP/WQX questions/comments
 - Any other topics/questions

Notes:

Welcome. We are trying out a new notes system during these meetings that is more in keeping with the practices of our other External User groups. Feel free to add your name to the attendance list so that we can have a better record of who is attending these meetings and receiving these updates.

1. WQX Status Report
 - WQX/WQXWeb performance and updates (Kevin)
 - i. The WQX shared node server performed scheduled maintenance on 10/19 Thursday, 10/20 Friday, and Tuesday 10/24 with the server restarted successfully
 - ii.
 - WQX helpdesk report (Shay)
 - i. 60 User inquiries
 - ii. SOPs for helpdesk tickets: trends, resources,
 - iii. Jessy helpdesk coordinator backup
2. WQP Status Report
 - WQP General Status Report (Candice/Lee)

- i. Profile development : User Testing begins Nov 6-10
 - 1. Narrow data profile
 - 2. [WQP Mesh \(waterqualitydata.us\)](http://waterqualitydata.us)
- ii. Blog posting
- iii.

WQX / WQX Web Quick Tips

Question: How to exchange data with WQX and Water Quality Portal?

https://docs.google.com/document/d/1bEMsHpuF9uKqGLi1uWbMPPq0tR0oYXS2FJ5MJ8_zeROU/edit?usp=sharing

ü [Upload Metadata](#)

1. Projects (WHY?) purpose, programs, funding.

Project ID	Project Name	Project Description
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Identifiers definition:

A series of letters, numbers and/or other characters that serve as a unique label for an [entity](#) or concept. In [WQX](#), IDs are not case-sensitive (e.g. "ABC-1" would be considered identical to "abc-1").

Most [entities](#) that you import have an [element](#) that is its ID (e.g. Project ID, Monitoring Location ID, Activity ID, Activity Group ID, Index ID, and Metric ID). Many other [elements](#) are constrained to a list of allowed values (i.e. [lookup table](#)), which are referenced by their ID (although the [element](#) may not include "ID" in its name). Examples include: Characteristic Name, Measurement Unit, Time Zone, and Result Qualifier Code.

2. Monitoring Locations (WHERE?) country, state, county, huc-8, huc-12, waterbody, ecoregion (alternate context)

<u>Monitoring Location Type</u>	Monitoring Location Latitude (DD.DDDD)	Monitoring Location Longitude (-DDD.DDDD)
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- Monitoring Location [Horizontal Collection Method](#)
- Monitoring Location [Horizontal Coordinate Reference System](#)

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Context definition:

In WQX Web, context often refers to the bounds within which an identifier must be unique. Most IDs, however, do not have an explicitly named "context".

Instead, the **WQX Organization** is the context for entities that are imported and for some organization-specific domain values. For all other domain values, the context is the entire **WQX System**.

In WQX, organizations can NOT share organization-specific lookup values. All organization-specific lookup values are mutually exclusive to one organization. Only national context are shared by all organizations ie USEPA, APHA, etc..

Excel Format basics

By default, all cells in Microsoft Excel worksheets are formatted with the General format. With the default formatting, anything you input into a cell is usually left as-is and displayed as typed.

In some cases, Excel may not display the cell value exactly as you've entered it, though the cell format is left as General. For example, if you have the number or method id 300.0 in some cell, the display shows zero decimal places, the number will appear as "300".

Resolution: Excel supports formatting ALL cells from General Format to TEXT format as a WISYWIG (store and display all values as entered). WQX also supports the following 300..0 for the cell to match lookup values 300.0

3. Organization-specific lookup values are in the following tables: Analytical Method, Citation, Index Type, Metric Type, Lab Sample Prep. Method, Sample Collection Method, and Sample Preparation Method.

- Analytical Methods: **OrgIDs** / MethodID, APHA / MethodID, USEPA / MethodID, etc...
- Local Aquifer: **OrgIDs** / AquiferID, APHA / AquiferID, USEPA / AquiferID, etc...
- Citations: **OrgIDs** / CitationID, APHA / CitationID, USEPA / CitationID, etc...

- Index Types: **OrgIDs** / IndexTypeID, APHA / IndexTypeID, USEPA / IndexTypeID, etc...
- Lab Sample Preparation Methods: **OrgIDs** / MethodID, APHA / MethodID, USEPA / MethodID, etc...
- Metric Types: **OrgIDs** / MetricTypeID, APHA / MetricTypeID, USEPA / MetricTypeID, etc...
- Sample Collection Methods: **OrgIDs** / MethodID, APHA / MethodID, USEPA / MethodID, etc...
- Sample Preparation Methods: **OrgIDs** / MethodID, APHA / MethodID, USEPA / MethodID, etc...
- [Request missing domain values](#) : WQX domain services (Email wqx@epa.gov)

ü [Upload Sample Results Metadata](#)

ActivityType	ActivityMediaName	SampleCollectionEquipmentName
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CharacteristicName	MethodSpeciation	ResultSampleFraction
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ResultUnit	AnalyticalMethodCONTEXT	AnalyticalMethodID
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A. [Characteristic \(CSV\)](#) :

WQXElementName	UniqueIdentifier	CASNumber	SRS ID	SampleFractionRequired	AnalyticalMethodRequired	MethodSpeciationRequired
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CharacteristicName	2519	(+)-cis-Permethrin	5477	171	642	7	78	Y	Y	N
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- Rule #17, ResultSampleFractionText may be required depending on the value provided for CharacteristicName.
- Rule #46, ResultAnalyticalMethod may be required depending on the value provided for CharacteristicName.
- Rule #47, MethodSpeciation may be required depending on the value provided for CharacteristicName.
- See the domain value list for [CharacteristicName](#) for more information

B. [ActivityType \(CSV\)](#) :

WQXElementName	UniqueIdentifier	Code	Description	AnalyticalMethodRequired	MonitoringLocationRequired
ActivityTypeCode	5	Sample-Integrated Time Series	A discrete/integrated sample, usually derived from a continuous time series of samples, representing some portion or segment of elapsed time within the overall activity duration or sample period. This Activity Type Code should not be used for Continuous Time Series data collected using a data logger (sensors).	Y	Y

- Rule #15, ActivityDescription's MonitoringLocationIdentifier may be required depending on the value provided for ActivityTypeCode.
- Rule #16, ResultAnalyticalMethod may be required depending on the value provided for ActivityTypeCode. However, ResultAnalyticalMethod

is never required if BiologicalIntentName is "Individual", "Population Census", "Frequency Class", or "Group Summary"

- See the domain value list for [ActivityTypeCode](#) for more information.

c. [NetType \(CSV\)](#) :

WQXElementName	UniqueIdentifier	Name	Description	LastChangeDate
NetType(NetTypeeName)	7	Net/Horizontal Tow	The most common method is to pull a fine mesh net through the water horizontally, and then collect the animals that have been retained by the net	2008-07-18T11:58:15-04:00
NetType(NetTypeeName)	8	Net/Non-Tow	This method reflects performance only at the point in time that the sample was collected, and then only if the sample was properly collected over as short a period as feasible	2008-07-18T11:58:16-04:00

- Rule #24, If **NetTypeName** is reported then the SampleCollectionEquipmentName must be one that relates to that type of equipment.
- See the domain value list for [SampleCollectionEquipmentName](#) for more information.

d. [SampleCollectionEquipmentName](#)

WQXElementName	UniqueIdentifier	Name	Type	Description	LastChangeDate	Abbreviation
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SampleCollectionEquipmentName)	85	A-Frame Net	Net/Non-Tow	A-frame dip nets are mostly used for catching smelt and are based on a Native American design that has been used on the California coast for many thousands of years.	2006-08-12T12:51:17-04:00	AN
SampleCollectionEquipmentName)	71	Beam Trawl	Net/Horizontal Tow	A beam trawl consists of a cone-shaped body ending in a bag or codend, which retains the catch. In these trawls the horizontal opening of the net is provided by a beam, made of wood or metal, which is up to 12 m long. The vertically opening is provided by two hoop-like trawl mostly made from steel. No hydrodynamic forces are needed to keep a beam trawl open.heads/shoes	2006-08-12T12:51:17-04:00	BT

EPA Guidance on Continuous Time Series (High Frequency) Data Sharing (*draft*)

Water Quality eXchange (WQX) Data Submission Guidance

WQX supports a discrete data summary for continuous time series (high frequency) data. Our recommendation is to report a single week, month, or year activity in which you store the sensor measurements as daily statistics using the StatisticalBaseCode element (for example,

using the allowable values: “Standard Deviation”, “Daily Mean”, “Daily Median”, “Daily Minimum”, and “Daily Maximum” (24-hour period from 12:00 AM to 12:00AM). In addition, data submitters should attach at the activity level a binary object (ActivityFileURL) formatted as plain text (".txt") file or compressed (".zip") file format for archiving the complete raw set of probe measurements corresponding to the week, month, or year activity downloaded from the data logger (fixed/portable). Once submitted to WQX, it takes about a week for the data to show up in the WQP.

WQP Discoverability: Data Retrieval Guidance and Examples

You cannot query the WQP directly for all continuous time series data, but after you download data, you can filter the dataset using the ActivityTypeCode (“Field Msr/Obs-Continuous Time Series”, “Field Msr/Obs-Portable Data Logger”, and “Sample-Integrated Time Series” include different types of continuous data). For discoverability via WQP, data owners can assign the Project_ID, “EPACONTINUOUS”, to all activity types that composed of time series data.

WQX Web Template for Continuous Time-Series Data (draft)

Activity Type Code ([ActivityType \(ZIP\)](#) | [\(XML\)](#) | [\(CSV\)](#))

ActivityTypeCode	Description	Updates (description)
Field Msr/Obs-Continuous Time Series	Measurements made in the field by an automated data logging device, running "attended or unattended" are stored as STATISTICALLY SUMMARIZED data values.	Continuous time series (sensor) data submitted as calculated statistics (up to 6 per day), with the full time series included as a text file attachment. Measurements are automatically collected in the field by a fixed, deployed single or multi-parameter data logger.

<p>Field Msr/Obs-Portable Data Logger</p>	<p>Measurements made in the field by an automated data logging device, running "attended or unattended" and producing a suite of data values at repeating intervals set by its owner/operator.</p>	<p>Continuous time series (sensor) data collected and submitted as a series of measurements with equal time steps in between. Measurements are collected in the field by an "attended or unattended" single or multi-parameter data logger. This Activity Type Code should only be used for short deployments (less than two weeks). For longer deployments, please submit data using the "Field Msr/Obs-Continuous Time Series" Activity Type Code.</p>
<p>Sample-Integrated Time Series</p>	<p>A discrete/integrated sample, usually derived from a continuous record, representing some portion or segment of elapsed time within the overall activity duration or sample period.</p>	<p>A discrete/integrated sample, usually derived from a continuous time series of samples, representing some portion or segment of elapsed time within the overall activity duration or sample period. This Activity Type Code should not be used for Continuous Time Series data collected using a data logger (sensors).</p>