

WQX User Call May 27, 2021

There were approximately 35 participants.
The next WQX User call is June 24, 2021.

Agenda:

1. WQX QA/QC services PowerPoint
 - Webinar Documents: <ftp://newftp.epa.gov/storet/xfer/today/>
2. WQX Project Status Report
 - [Frequent Questions about WQX](#) webpage
 - [WQX Domain Values](#) webpage
3. Water Quality Portal Project Status Report
 - WQP download profiles workgroup meetings
 - Report WQP Tool issues using URL: “Copy To Clipboard”
 - Data download issues: Characteristics with contradicting Activity Media
4. Open Discussion

1) WQX QA/QC services PowerPoint

Webinar Documents: <ftp://newftp.epa.gov/storet/xfer/today/>

Currently, the WQX required the data to be documented but it doesn't require it to be Quality Assured / Quality Checked (QA/QC). The QA/QC Services WILL NOT prevent any data from being loaded. The QA/QC Services WILL NOT reject any data submission. Once data is validated it will be loaded into WQX and the QA/QC Services will run and generate a post processing report for data submitters to review and clean up their data's inaccuracy.

A post processing report will be available by the end of the Summer 2021. But the release will not be final.

2) WQX Project Status Report

- Please review [Frequent Questions about WQX](#) webpage

This information is available under the Learn More about WQX. Kevin asked the WQX Community to review and provide any feedback. It's a good reference and may provide some guidance to users as they are submitting data to WQX.

- Please review [WQX Domain Values](#) webpage

Earlier this year a user asked the help desk to consolidate all of the individual domain value files into one file. The entire library of domain values can now be downloaded from the WQX Domain Value Services page.

GetDomainValues

To download the domain lists (as zipped CSV files), click the links below:



- [All - The Entire Domain Lists \(ZIP\)](#) | [\(XML\)](#)
- [All-Individual Domains Library \(ZIP\)](#) | [\(XML\)](#)

Individual Domain Values Lists:

- [ActivityGroupType \(ZIP\)](#) | [\(XML\)](#)
- [ActivityMedia \(ZIP\)](#) | [\(XML\)](#)
- [ActivityMediaSubdivision \(ZIP\)](#) | [\(XML\)](#)
- [ActivityRelativeDepth \(ZIP\)](#) | [\(XML\)](#)

3) Water Quality Portal Project Status Report

- WQP download profiles workgroup meetings – It is not too late to join this group. The group is working on improving data profiles and provide recommendations on elements that should be in the profiles. Data profiles are selection of elements for downloading. Profile names will also be updated to accurately reflect their content.

Send an email to [wxq@epa.gov](mailto:wqx@epa.gov) if interested in joining this group.

- Report WQP Tool issues using URL: “Copy To Clipboard” – User’s who experience issues with their queries should contact the help desk at [wxq@epa.gov](mailto:wqx@epa.gov) and include your URL of your parameters of your query. This function is also great to SAVE and share your query searches with colleagues!

https://www.waterqualitydata.us/portal/#statecode=US%3A51&countycode=US%3A51%3A153&siteType=Aggregate%20surface-water-use&sampleMedia=Water&mimeType=csv

- For Data submitters, Reported Data continuity issues: e.g. Characteristics with contradicting Activity Media. Characteristics and Sample Media are not matching. There are instances where *temperature,air* with media *water* are showing up as results in WQP. This issue will be reported via the QAQC services.

- There is also a useability study of the WQP and a redesign of the portal underway: both webpages and tool. It will be available to view by the end of the calendar year 2021.



WQX QA/QC services

BY KEVIN CHRISTIAN



Date: 2021-05-27

WQX QA/QC services

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Problem:

WQX requires the data to be documented, but does not have any data quality checks built in (e.g. values outside of a reasonable range, parameters and units matching, monitoring locations matching other relevant geo-information, etc.)

Although most of the data are generally good, the occasional instances of erroneous data make data reuse more difficult.

Solution:

1. Provide services to identify data quality issues for WQX at the time of submittal.
2. Provide data quality report to submitter including identifying possible anomalies.
3. Expand QA/QC service to support any data retrieved from the WQP to allow users to QA/QC data prior to reuse.

Results:

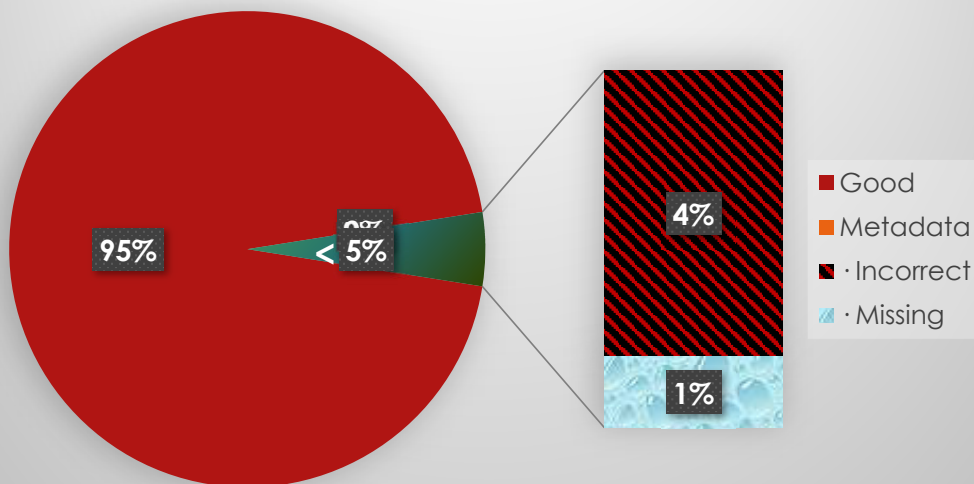
Setting data quality expectations

- Automated Quality Checks implement data profiling which lets anyone quickly identify data quality issues, discover hidden patterns, and spot anomalies.
- Fewer data quality issue yield public confidence and trust in the data source.

QA/QC Web services

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Water Quality Portal Data: Good vs Bad



Providing Automated QA/QC checks is a logical next phase for WQX:

1. Data guidance documents
2. WQX 3.0 schema business rules
3. Data owner and analyst forum: WQX/WQP User Calls monthly – developing better data profiles
4. QAQC web services

Conducting Usability Studies:

Identify areas where users struggle with WQX/WQP and foster recommendations for improvement. The goal is to improve data quality and submissions by eliminating any user frustration and better understand how real users interact with both WQX/WQP.

Note: All data exchanged via WQX is user supplied.

WQP warehouse: **399,661,772** sample results from **1,011,380** sites with an estimate of **< 5%** having data issues.

WQX QA/QC services

Project Timeline

Production Deployment

2019

Step 1. Business Rules

WQX 3.0 business rules supporting guidance documents

2021

Step 2. QAQC web services (Automated Checks)

WQX Workflow Data submission **post-** processing reports:

1. QAQCLocations.csv
2. QAQCResults.csv

Input file: xml (WQX schema)

2021

Step 3. WQP Tool revision

Water Quality Portal generates metadata to support query site parameters: country, state, county, HUC8, HUC12

WQP data profiles with generated metadata.

2022

Step 4. WQP with QAQC web services

Download data profiles optional QAQC reports:

1. QAQCLocations.csv
2. QAQCResults.csv

Source Input: Water Quality Portal data warehouse

2023

Step 5. QAQC web services 3rd Party (On Demand)

QAQC endpoint perform QAQC checks **pre-** data submission using a CSV input file to generate reports:

1. QAQCLocations.csv
2. QAQCResults.csv

WQX QA/QC services

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Any Questions