# WQX User Meeting
## January 28, 2021

Agenda:
1. WQX Project Status Report
2. Water Quality Portal Project Status Report
3. Open Discussion

The next User Meeting is scheduled Thursday, February 25, 2021 at 12 p.m. EST

## 1. WQX Project Status Report

For the next two quarters the WQX project will focus on the following tasks:
- O&M -- Operation and Maintenance: Bugfixes and enhancements
- QAQC Services - The WQX team is still working through the requirements for this service. It will be a post processing report that is downloadable from the data submission report files in WQX. These new files will be included with the Processing report and the schema validation file.

  The Monitoring Location QAQC Report will evaluate the latitude/longitude which are the only the mandatory geographical fields for monitoring locations. The QAQC service will evaluate the 3-digit decimal precision of the lat/long, identify duplicates, and it will generate state, county, and HUC information. This may facilitate increased accuracy in latitude and longitude info for data owner monitoring locations.

## 2. Water Quality Portal Project Status Report

The WQP has migrated to an Amazon platform environment and from an Oracle to Postgres hosting environment. The develop team is fine tuning the performance of this application and addressing issues outlined in the (Link to Open WQP Tickets) Querying by Projects is a known bug and is slated to be resolved by the next quarter.

- Usability Testing Group - This will focus on the Water Quality Portal application and website. Various target groups will be identified to visit the application and identify whether the tool is intuitive for certain use cases.
- WQP Download Profiles Workgroup -
  This is a formal workgroup with bi-weekly meetings. The workgroup objectives are to streamline the data download profiles, rename the file names, define the selected elements returned in each file. If you want to join this workgroup, contact the help desk at wqx@epa.gov.

## 3. Open Discussion / Other items:

As a preliminary usability study, the WQX Team is archiving selected helpdesk ticket responses in the homepage's (Frequently Asked Questions) FAQs webpage. This will assist with application troubleshooting and data submission resolutions. New questions will be integrated with the current FAQs via URL located here:
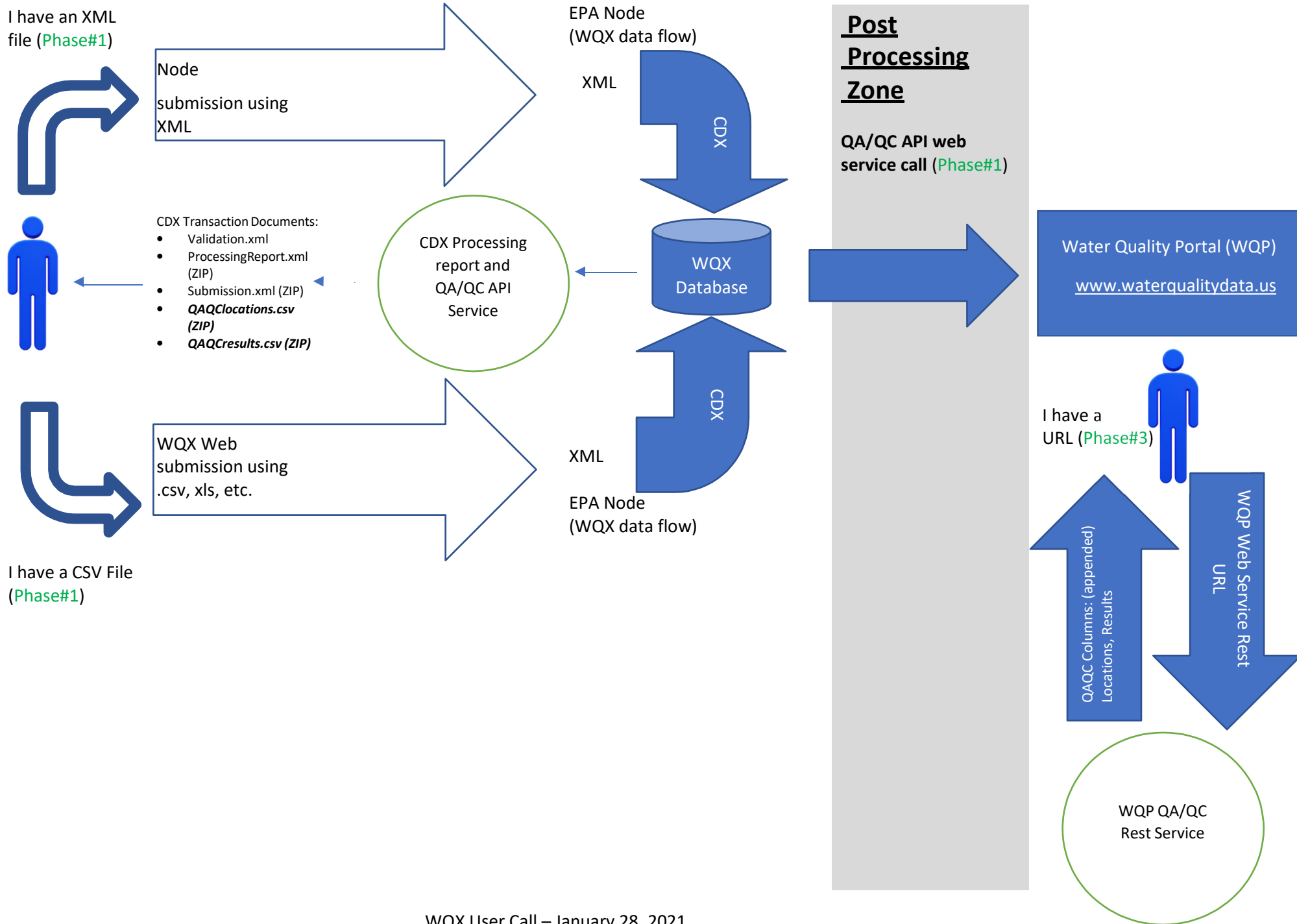
https://www.epa.gov/waterdata/frequent-questions-water-quality-exchange-wqx

Domain Value Services – The characteristic/taxon submissions can be submitted based on alias type = "WQX SYNONYM REGISTRY (validation)" which identifies allowable values --valid for submission.  i.e., WQX supports submitting CAS # for the characteristic name.  The Taxon domain uses the same alias type = "WQX SYNONYM REGISTRY (validation)" that flags allowable ITIS synonyms for registered taxon. Remember to submit the optional elements "Characteristic User Supplied" and "Subject Taxonomic Name User Supplied" to store the synonym name for retrieval. Data submitters may email request for registering synonyms recognized by authoritative resource.

**Need help?  Contact the WQX Help Desk at [wqx@epa.gov](mailto:wqx@epa.gov) OR at 1-800-424-9067**

**Want to Join Our List Serve?** To be notified of user calls and water data updates, sign up for our List serve by sending a blank email to subscribe-storetinfo@lists.epa.gov. To unsubscribe, send another blank email to unsubscribe-storetinfo@lists.epa.gov.

**WQX QAQC Dataflow Diagram:**

I have an XML file (Phase#1)

Node submission using XML

EPA Node (WQX data flow)

XML

CDX

CDX Transaction Documents:
- Validation.xml
- ProcessingReport.xml (ZIP)
- Submission.xml (ZIP)
- **_QAQClocations.csv (ZIP)_**
- **_QAQCresults.csv (ZIP)_**

CDX Processing report and QA/QC API Service

WQX Database

**Post Processing Zone**

**QA/QC API web service call** (Phase#1)

Water Quality Portal (WQP)

www.waterqualitydata.us

WQX Web submission using .csv, xls, etc.

XML

EPA Node (WQX data flow)

CDX

I have a CSV File (Phase#1)

I have a URL (Phase#3)

QAQC Columns: (appended) Locations, Results

WQP Web Service Rest URL

WQP QA/QC Rest Service

# WQX QAQC Dataflow Diagram: continued

**Post Processing Zone**

**QA/QC API web service call**

User Authentication:

- NAAS_ID, CDX Username (Phase#1 and Phase#2)

NO Authentication:
- Develop Java Rest API form (Phase#4)
- Web page
- WQP(Phase#3) download
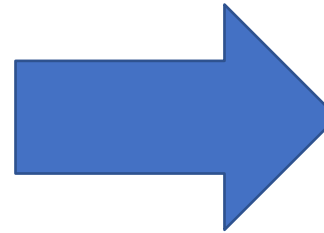
**Mandatory Columns**

Locations:
Latitude, longitude

Results:
Characteristic

QAQC Download Reports:
1. QAQClocations.csv
2. QAQCresults.csv

**QAQC COLUMNS**:
**Locations**: Duplicate, and Precision Country, State, County, HUC8, HUC12
**Results**: Notes_Recommendation, RangeLowerMeasureValue, RangeUpperMeasureValue, RangeMeasureUnitCode, Below_Lower_Range_YN Above_Upper_Range_YN Invalid_Unit_YN Invalid_Speciation_YN Invalid_Method_YN QAPP_Approved_YN ConvertedResultMeasureValue, ConvertedResultMeasureUnitCode,

QAQC Direct Submit a CSV file (Phase#2)

# WQX QAQC Dataflow Diagram: continued

Summary of Service Requirements:

| QAQC REQUIREMENTS SUMMARY | MonitoringLocation | ActivityResults | Projects |
|---|---|---|---|
| **Goals** | • Geospatial checks on monitoring locations to ensure that the location is accurate<br>• Provide Country, State, County based on lat/long<br>• Provide NHD reachcode and/or HUC8, HUC12 for a location<br>• Validate 3-digit decimal precision for lat/long<br>• Identify duplicate monitoring locations based on 3-digit decimal lat/long | • Flag special characters in Result Value (i.e. not using '<' or '&lt;' or less than, '>' or '&gt;' or less than, 'Non Detect', etc.).<br>• Water Quality Portal (WQP) URL validation for QAQC schema elements<br>• Dataflow QAQC checks for XML submission and direct CSV files.<br>• Characteristic metadata combination checks on results to ensure data is accurate<br>• Flag data outside of range<br>• Units conversion to Targeted Unit<br>• Notify user of incorrect metadata and characteristic combinations<br>• Provide metadata best practices | • QAPP (DocumentGraphic Upload): documentation for organizational method(s)<br>• QAPP Approved Element = Yes/No<br>• Report attachment (out-of-date documents) |