



WQX Web: A Tool for Sharing Your Water Quality Data

Water Quality Exchange (WQX) Web is a newly-developed internet tool that allows organizations to share their data nationally with others

Background

The U.S. Environmental Protection Agency (EPA) has been working to improve the ease with which organizations large and small can store their water quality monitoring data in a national warehouse of water information. Once data are stored in this National STORET Data Warehouse, they are accessible to scientists, government policy makers, and the public.

The National STORET Data Warehouse is a repository for water quality monitoring data collected by federal agencies, states and territories, tribes, volunteer monitoring organizations, and universities. It contains over 70 million records of water quality data from across jurisdictional boundaries. Data in the Warehouse are used by many agencies and scientists in water quality reporting, research, and decision making through tools such as mapping applications, water quality models or statistical software, and automated services. Overall, sharing data nationally opens up opportunities for data access, reuse of data, and improved data quality.

WQX Web is a newly-developed internet tool that allows any organization with a connection to the web to share its data nationally with others. It works with EPA's Water Quality Exchange (WQX) framework (the successor to the STORET data system) to handle a complete suite of water quality monitoring data (physical, chemical, biological and habitat) that are used to determine the condition of waters.

Many groups across the country manage their water quality monitoring data using software tools such as Microsoft Excel or Access. WQX Web is designed to accept output from these types of applications for submittal to the National STORET Data Warehouse.

Benefits of Using WQX Web

There are a number of reasons why smaller organizations should consider using WQX Web. WQX Web allows you to share your organization's data with other groups, policy makers, scientists, and the public. It makes it possible for your data to be visible, accessible, and usable in the National STORET Data Warehouse alongside data from state, interstate, and federal agencies, tribes, universities, and volunteer water monitoring organizations. WQX Web relieves

you of the need to build special tools to create and submit your files – it translates and submits your files for you.

Having your data in the National STORET Data Warehouse offers an additional bonus: your data will remain publicly available even if your data managers leave your organization or data management technology evolves in new directions. WQX Web also provides a standard template that helps you organize your data using a software tool of your choice, such as Microsoft Excel.

Using WQX Web

System Requirements

WQX Web is free to use and has only a few basic system requirements:

- Internet access and a Web browser, such as Microsoft Internet Explorer 7 (IE7 or higher) or Firefox
- Pop-up blockers turned off for this site
- A WQX Web account and a Central Data Exchange (CDX) Web account. CDX is EPA's portal through which all environmental data is expected to flow

WQX Web Functionality

The main functions of WQX Web are to:

- Create WQX-compatible **XML files** from simple **text files** that are created from a group's local data management system, such as Microsoft Excel or Access
- Allow you, as the data submitter, to define **import configurations** to specify the format of your data, assign default values, and translate data to match WQX **domain values**
- Submit data via WQX to the National STORET Data Warehouse

Error Handling

WQX Web validates all submissions against a defined set of data rules within WQX. It provides access to validation and processing reports so you can troubleshoot errors. If errors are present, users either manually fix the original data and re-import it, or, in certain cases, use WQX Web functionality to individually address errors. For example, upon import, WQX Web allows you to easily add a translation to your data.

WQX Web Template

EPA has developed a WQX Web template in Microsoft Excel to help you put your data in a WQX Web-compatible format. The template has one spreadsheet for entering data and another that describes what fields are mandatory or optional. The template also includes the "allowable values" lists for the types of information you must include in order for the data to be successfully submitted to the STORET Data Warehouse. The WQX Web template is available at

http://www.epa.gov/storet/wqxweb_downloads.html.

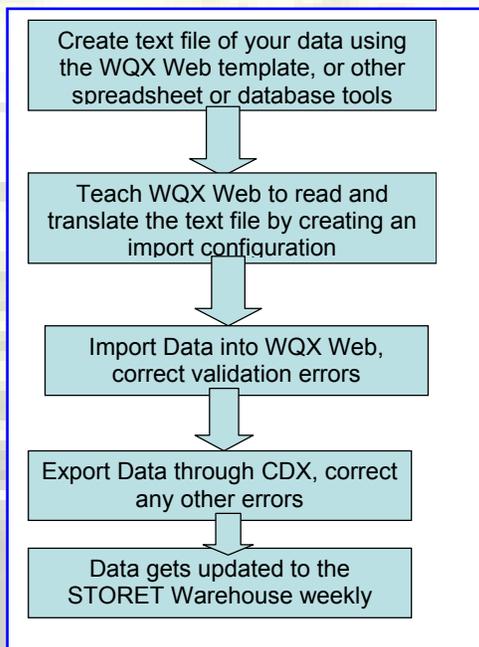
Some Definitions...

XML is an internet standard for sharing and viewing data on the internet. When a file is in XML format, it can be sent over the internet for placement in a database, or it can be used for viewing.

Text files are simple files containing data in plain text format separated by tabs or other delimiting characters. Text files can usually be opened in tools such as Notepad or Wordpad, and can be created from any spreadsheet or database software.

Import configurations are definitions of what data looks like in a file that a user is going to submit. Import configurations tell WQX Web what your data looks like so that it can import it in and submit it via WQX.

Domain values are standardized names that must be used for certain elements that are reported in the National STORET Data Warehouse. For example, the list of chemical names that WQX uses is part of a domain value list. STORET Data Warehouse and WQX domain values are the same. Sometimes domain values are also referred to as "allowable values".



At left: Steps for Submitting Data Using WQX Web: A set of steps bridges the gap from your internal database to the National STORET Data Warehouse

Web Resources and Additional Information

More information about using WQX Web is located at <http://www.epa.gov/storet/wqx.html>. There you will find information on setting up and using the WQX Web tool, including a WQX Web tutorial. For additional assistance, you can also contact the WQX/STORET team at storet@epa.gov or 1-800-424-9067.

USEPA Office of Water

EPA 841-F-07-002