WQX Web
User Guide

Version 2.06

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1.0 Introduction

The Water Quality Exchange (WQX) has been implemented to support the exchange of ambient water-quality data between EPA and its partners. WQX version 1.0 supported physical, chemical and fish tissue results. WQX version 2.0 incorporated biological and habitat data elements into the standard.

The WQX data standard is based on XML – a widely supported format for electronic data communication. Adopting the WQX standard frees a data provider from a dependency on any specific system, such as STORET, for managing and submitting data to EPA. However, this also means that a data provider must format their data in compliance with the WQX standard before it can be accepted by the EPA.

In the transition from STORET to WQX (and the Exchange Network), the EPA recognizes that new challenges have been presented for some of their data providers. In particular, many of the smaller organizations such as the nations' tribes, volunteer monitoring groups, and superfund programs may need support to produce the XML file required by WQX. Additionally, many of these organizations may not be familiar with, or have access to, the exchange network node software required to submit WQX files to the EPA.

WQX Web is a web-based application designed to assist organizations with these specific needs.

2.0 WQX Web Overview

2.1 What does WQX Web do?

WQX Web is a tool for converting tabular data files (such as data from a spreadsheet) into an XML file that complies with the WQX Data Standard. WQX Web also interacts with the Central Data Exchange (CDX), which is the EPA's portal through which all environmental data is expected to flow. WQX Web is also a data conversion and validation tool, providing support for user-defined file formats and user-defined translations to WQX domain values for Characteristics, Taxonomic Names, Analytical Methods, etc.

2.2 How does WQX Web fit into the big picture?

WQX Web integrates into a set of products and services provide by the EPA, as shown in figure 1 below. This set includes the following items:

- CDX-Web: This is CDX's web portal, providing access to applications and data flows within CDX that are accessible via a web browser. Before a user can use WQX Web, they must first register with CDX-Web, be given an Organization ID and granted access to the WQX Web application. Once you log into CDX-Web, you will see a link to the WQX Web application.
- WQX Web: The tool that will assist a user in converting a flat file into a WQX-compatible submission file.
- CDX: Central Data Exchange (EPA's Node on the Exchange Network). Once a WQX Submission File is created in WQX Web, it can be submitted directly to CDX.
- WQX: This is the backend system that processes a WQX Submission File and loads it into the WQX Database. This data is also loaded into the STORET Data Warehouse on a regular basis.

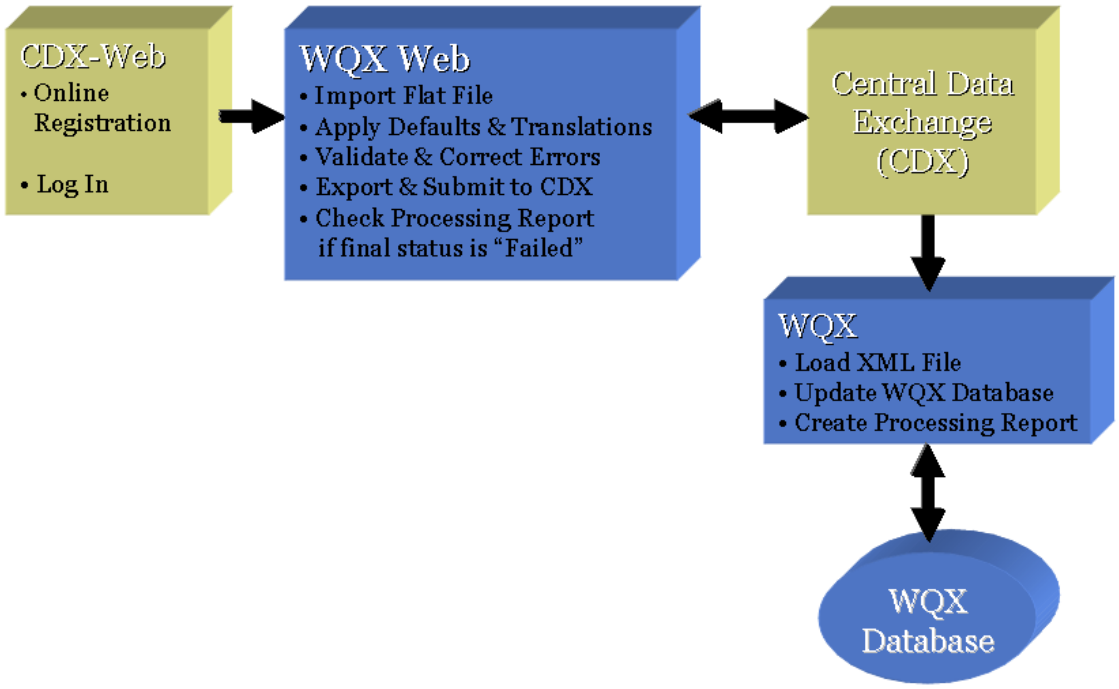


Figure 1 WQX Web Overview

With the addition of WQX Web in January 2009, organization had two options for submitting ambient water quality monitoring data to the EPA:

1. XML file sent directly to CDX:
    - This method requires a node on the Exchange Network and the ability to create a WQX-compatible XML file. This is the method commonly used by states and other large organizations with their own Information Technology support staff.
2. Tabular data file imported into WQX Web, converted to a WQX-compatible XML file and then submitted to CDX:
    - This method requires a text file (such as a CSV or TXT file created from products like Microsoft Excel or Access). This is the method anticipated to be used by smaller organizations without IT support staff or their own Exchange Network Node. Files that may not initially comply with the WQX standard can be converted to the standard.

A third, hybrid option for submitting data to EPA could be to use WQX Web to create a WQX-compatible submission file, then download the file and submit it CDX via your state or tribe's node. This may be appropriate if you have your own node on the Exchange Network, but don't have the ability to create a WQX-compatible XML File.

2.3 Overview of WQX Web Security

In order to access the WQX Web application, you must log into CDX-Web, as shown in Figure 2 below.

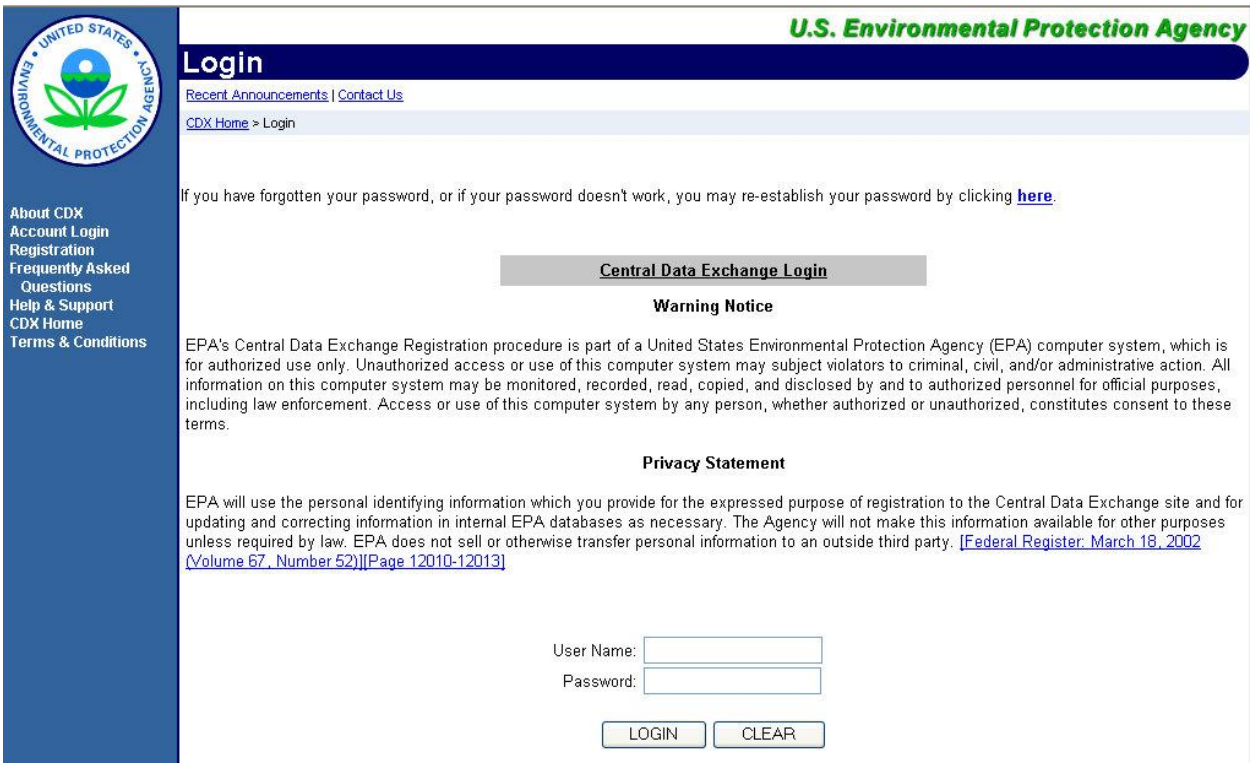


Figure 2 CDX-Web Login Page.

After successfully logging in, you will be placed on the MyCDX Page. If you've been granted access to the WQX Web System, you will see a link to it on the My CDX Page (see figure 3 below).

Figure 3 MyCDX Page.

Clicking on the "WQX: WQX Web" link will redirect you to the WQX Web Home Page below:

Figure 4 WQX Web Home Page.

The following is a summary of the security restrictions built into WQX Web:

- Users & Organizations: Each user must have an account in the system and must be assigned to at least one organization. Each organization has an ID that will be used throughout the system to relate data and settings to an organization. At least one user will be set up as the organization administrator, which will allow him/her to manage the lookup tables for the organization.
- Lookup tables: Most lookup tables are read-only and are managed by EPA staff. However, WQX has a couple of tables (e.g. "Analytical Method" and "Metric Type") which support organization-specific values as well as EPA managed values. WQX Web also supports a number of additional lookup tables that do not exist in WQX. These tables are used to simplify import files by allowing a file to reference a set of related fields by their ID. For example: A Sample Collection Method in WQX includes the following fields: Method ID, Context, Name, Qualifier Type, and Description. Rather than repeating all of this information on every sample in the import file, once you set up the Sample Collection Method in WQX Web's lookup table, you can reference it in your import file by its ID and all the details will be automatically inserted into your submission file when you export it. The WQX tables, Analytical Method and Metric Type work similarly. However, you must reference the ID and Context in your import file to identify one of these.

    - Only users that are assigned to a specific organization can use that organization's list of lookup values (in their import files).
        - Users assigned the "Admin" right for an organization are also allowed to edit or delete these organization-specific lookup values.

- System Administrator: One or more users will be designated as a System Administrator, which allows him/her to manage users, organizations and rights to those organizations. This designation is typically reserved for a few key EPA staff or contractors.
- Import Configurations: An import configuration is used to describe what an import file looks like. A user can create as many import configurations as he/she likes. By default the import configuration is only accessible by the user who created it. However, you can assign rights to any organization or to users within any organization to which you've been assigned. You can also restrict access to be "read-only", if you wish to allow someone to use it or create copies of it, but not be able to modify it.
- Datasets: a collection of data that has been imported for an organization is accessible by anyone who has been granted at least "read-only" rights to the organization.

2.4 Understanding the WQX Data Structure

To fully understand how to use WQX Web, it is necessary to first understand the types of data WQX supports and how they relate to one another.

All data within WQX relates to an organization. Each organization has a unique ID which will be used throughout the system to relate import configurations and datasets to an organization.

Once you have obtained an Organization ID, start by loading Projects into WQX Web. A Project can be described as the reason why a set of environmental data is being collected. For example, an organization may have several projects related to specific locations, events, or studies. An organization's projects must be submitted to WQX before other data can be submitted. Each Project is given a unique ID. Individual sampling activities and results are then associated with a project by referencing its ID. There is no limit to the number of projects an organization may have and no limit to the number of projects an activity relates to.

Next, you must import the locations from which you will be collecting data samples. These sampling sites are called Monitoring Locations in WQX. For example: if you have five locations along the Bear River where you plan to collect water samples, these five monitoring locations must be submitted to WQX before activity (i.e. sample) and result data can be submitted for this organization. Each Monitoring Location is given a unique ID that you can reference in your activity and result data.

In addition to Projects and Monitoring Locations, other meta-data is typically entered prior to importing your Sampling Activity and Results data. Examples of these meta-data are: Methods and Citations. Additionally, if you will be importing biological or habitat index data (such as IBI scores or habitat assessment scores), you may need to set up your Index Types and Metric Types.

Once your Projects and Monitoring Locations have been imported, and your meta-data entered into their respective lookup table, you are ready to import Sampling Activity and Result data. WQX supports water chemistry and biological sampling results as well as field measurements and observations. All results must be associated with an Activity which represents a sample or

group of field measurements or observations. Each Activity must be assigned a unique ID which is never reused.

2.5 Overview of WQX Web Work Flow

Figure 5 outlines the basic work flow for creating a WQX-compatible submission file with WQX Web.

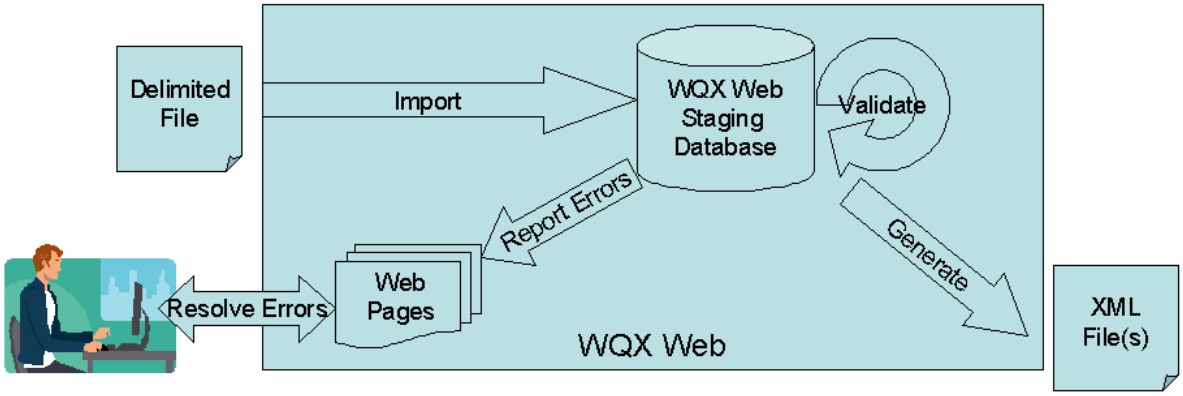


Figure 5 The WQX Web Work Flow

2.5.1 Prepare the Import File(s)

The user gathers their water quality monitoring data into a series of text files that are organized into rows and columns with the columns delimited by a predetermined character such as a comma or a tab. Rows will be designated by a carriage return or line feed. Microsoft Excel supports comma and tab-delimited files from its "Save As" menu. This is convenient for hand-entered data that is already in a spreadsheet. Lab data or data-logger is often in a format supported by WQX Web. In some cases you may need to load it into a spreadsheet to do clean up or to add additional values.

The following types of datasets are supported by WQX Web:

- Projects
- Monitoring Locations
- Monitoring Location Weights
- Biological/Habitat Indices
- Activities and Results
- Activities and Metrics
- Activity Groups
- IDs for Projects to be Deleted
- IDs for Monitoring Locations to be Deleted
- IDs for Biological/Habitat Indices to be Deleted
- IDs for Activities to be Deleted

- IDs for Activity Groups to be Deleted

2.5.2 Create Import Configurations

Before importing a file, a matching import configuration must be defined. An import configuration describes the columns in your import file and maps them to data elements in WQX. You can provide default values for elements that may not have a value or that are not included in the file. Additionally, you can define translations to convert values in your files to valid values in WQX. You may leverage existing import configurations that have been shared with you (if you belong to a group that follows a standard format for your import files), or you can create import configurations from scratch to match your own proprietary format.

2.5.3 Import a Data File

To import a file, you will need to indicate the associated import configuration that describes your import file format. Browse to your file and begin the import process. As the file is being processed, the system will display the percent complete and the number of warnings or errors that have been logged so far. Once the import has completed, a summary page will display the following:

- the number of valid and invalid records
- the number of times each type of validation error occurred.
- a link to a detailed log of all errors and warnings logged while processing the file.

2.5.4 Resolve Validation Errors in the Dataset

You can click on the links next to a specific type of validation error to navigate to a page where you can resolve the error. For example, if a value from your import file did not match a valid domain value in WQX, a resolution page will let you correct the value, and, if you wish, create a translation so you will not have to make the same correction in the future. At this time, however, not all validation errors can be corrected. If the error is one of these "other" errors, you may be required to correct your original file and then re-import it.

2.5.5 Export / Submit the Dataset to WQX

Once the validation errors have been resolved, you will be able to export and (optionally) submit your submission file to CDX. If you belong to an organization with its own Exchange Network Node, you may wish to download the file and submit the file to CDX via your own node, rather than having WQX Web perform this step.

If you submit your file to CDX from WQX Web, you will be notified of the status of that submission and be able to download related documents once it has been processed by the WQX System.

2.5.6 Review / QC your data in WQX

Once your submission file has loaded successfully into the WQX System, you can query WQX and review your data. This is a new feature in WQX Web version 2.0. There are a series of search/list pages that allow you to enter basic search criteria and view a list of records that match the criteria.

2.6 Standard Page Features

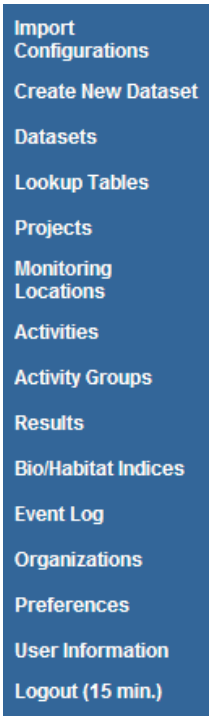
There are many features within WQX Web that are common to all pages or to a group of pages. These sections describe those common features.

2.6.1 General Page Features

- All dates in the system will be formatted as “MM-DD-YYYY”.
- Pages are designed for screens that are least 1,280 pixels wide (the size of a typical modern laptop).
- Breadcrumb navigation will be available at the top of the page to facilitate navigation to higher-level pages in a hierarchy (see below):

- Each page will have links at the bottom to access the STORET Home page, view the privacy notice or contact the STORET/WQX Support. Note: these links navigate out of the application. It's recommended that you right click on them and choose to open them in a new tab or new page (see below):

- A navigation panel will exist on the left side of the page to assist you in accessing the system's top-level pages (see below):



  - All of the links will navigate to a new page.

- The "Logout" link is a special case that deserves some explanation. When you click the link your session will be closed and you will return to the Login Page at CDX. This is a good practice when you are done using the application because it frees up resources that are used by your application session.
  - Also, the Logout link will display the time remaining before you will be automatically logged out (due to inactivity). The time is refreshed every 5 minutes. Any time you perform an action that causes a page to be accessed, the time will reset to its default (typically 45 minutes).

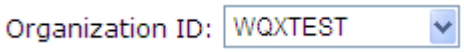
2.6.2 List Page Features

All pages whose purpose is to display a list/table of data will have the following standard features:

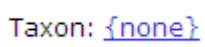
- Tables will display a user-specified number of rows (e.g. 100) as defined in your user preferences.
- Row numbers will be displayed to indicate what portion of the total rows you are viewing (e.g. Row 1 - 500 of 29072).
- First, Previous, Next and Last buttons will be available for paging through the list (when there are more than one page of data)
- Column headings can be clicked to sort the list by the selected column. One click will sort in ascending order. A second click will sort in descending order.
- The page will only display data which you have been granted access to.
- Return button – Returns you to the previous page or the page above it in the hierarchy.
- Add New button – Initiates the process of creating a new record for the type of list you are viewing (in most cases this takes you to a detail page where you can add a new record).

Pages with search criteria will include the following:

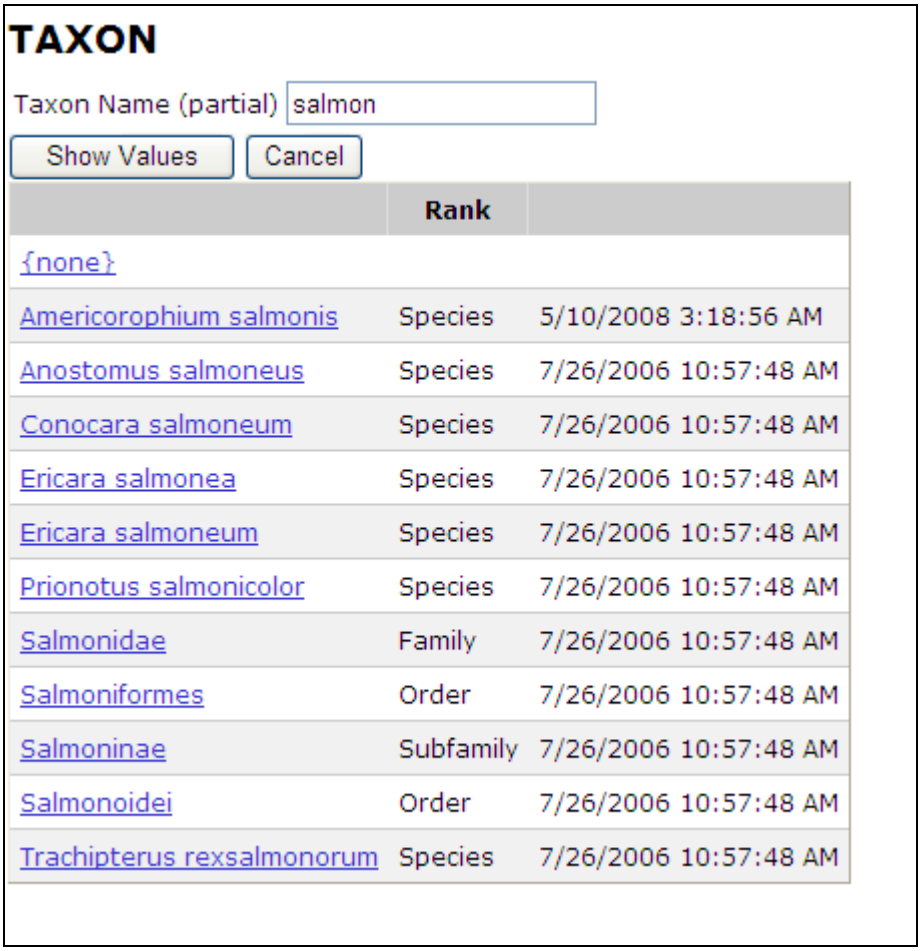
- Search button – this will initiate the query and return the results to the page.
- Clear button – this will clear the search criteria and previous results.
- Search Criteria – the following types of controls are used for search criteria:
  - Dropdown List (see example below)

    - provides you a list of allowed values for the criteria. If there is a blank row in the list, then the criteria is optional.
  - Link (see example below)

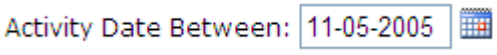
    

    - Click the link to view a full-page list of allowed values. Some lists (like Taxon or Characteristic may include search criteria to find the value you are looking for). If so, enter a partial name and click the Show Values button.



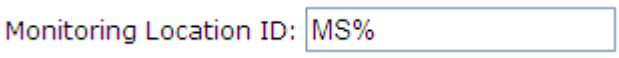
- Then click the value you are interested in, to select it.
  - A value of **{none}** indicates the criteria should be ignored

- Date (see example below)



  - You may enter a date in the box (with the keyboard), or click on the calendar icon to view a calendar, where you can select a date.
  - If there is a date range for criteria
    - entering just a beginning date, will find all values on or after that date
    - entering just an end date will find all values before or on that date
    - entering both dates will find a values between (and including) those dates.

- Text Box (see example below)



  - Allows you to enter any value you wish, as well as a special wildcard character "**%**" for partial matching.

- See below for criteria examples:
  - MS500
    - will find rows where the value is "MS500"
  - MS%
    - will find rows where the value starts with "MS"
  - %500
    - will find rows that end with "500"
  - %S5%
    - will find rows that contain "S5" anywhere

2.6.3 Detail Page Features

All pages whose purpose is to serve as a form for viewing and editing records will have the following standard features:

- The Save button – will validate the data that has changed and then save any changes made to data in the form and then refresh the page. If validation errors are found, the record will be redisplayed (and not saved) and the errors messages will be listed on the page. On exception exists: the Import Configuration Page will save your changes and mark the record invalid if there are validation errors, so you can return and correct them at a later time.
- The Return button – will save your changes (if any) and will return you to the previous page, as long as there were no errors while saving.
- The Cancel button – will abort any changes made to data on the page since the data was last saved (or since it was retrieved) and then return you to the previous page.
- The Delete button – will delete the record displayed on the page. The system will prompt you for confirmation before the record is deleted.
- An asterisk at the end of a field label will indicate that the field is always required. However, some fields will be conditionally required based on the existence/non-existence of other values and will not necessarily have an asterisk on their label. The system will notify you of these conditionally required fields when you save the record.

2.6.4 Hybrid Pages

Organization-specific lookup tables are hybrid pages that share most of the features of list pages and detail pages. See section 9.5 Managing Lookup Tables for more details.

3.0 Managing Import Configurations

An import configuration defines how WQX Web should interpret an import file. Import Configurations define each column that you will have in your import file, the data elements each column maps to and the format you will use for date, time, latitude, longitude, etc. A user can have an unlimited number of Import Configurations. Access to an Import Configuration can be limited to specific users or organizations.

The following types of import configurations are supported:

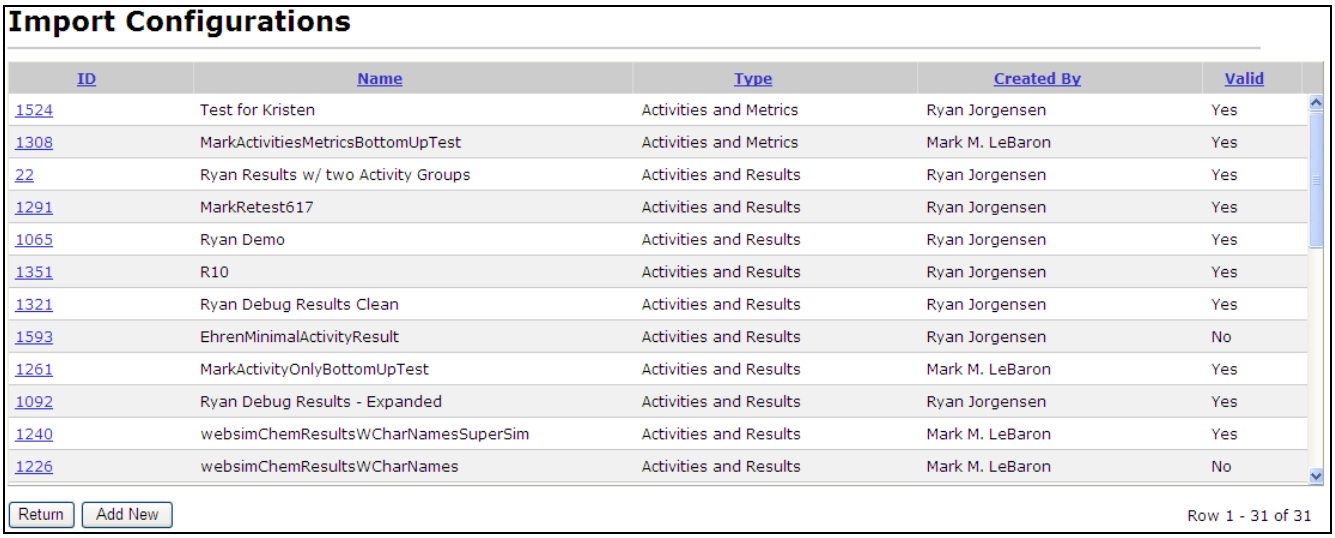
- Projects
- Monitoring Locations
- Monitoring Location Weights
- Biological/Habitat Indices
- Activities and Results [& Activity Groups]
- Activities and Metrics [& Activity Groups]
- Activity Groups

There are three methods for creating an Import Configuration:

1. Create a new import configuration from scratch.
2. Copy an existing import configuration
3. Create an import configuration from a saved file

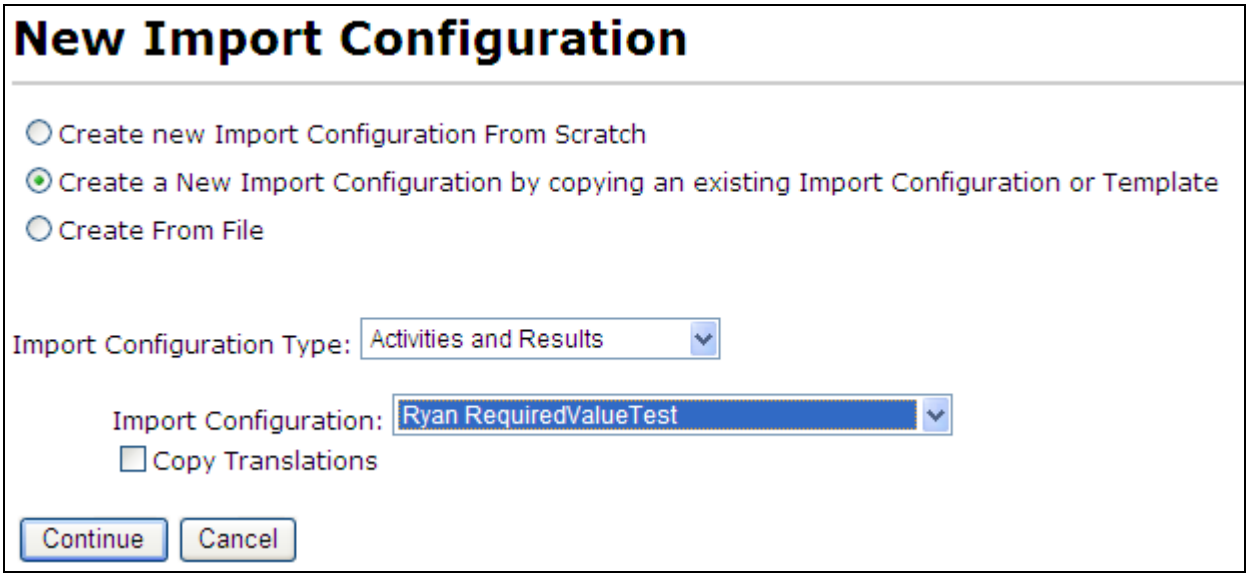
3.1 Creating a New Import Configuration

Click on the "Import Configurations" link on the navigation panel to display the Import Configurations List Page.



To add a new import configuration click the "Add New" button.

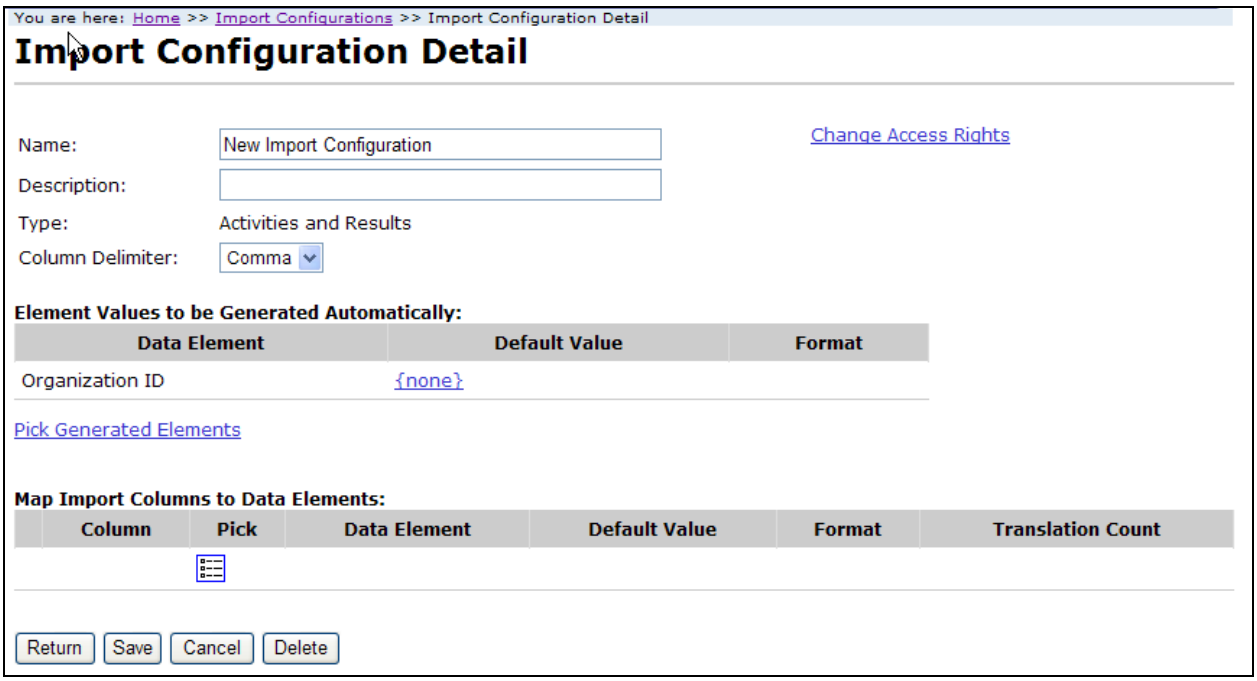
The New Import Configuration Page will display.



Select which method you wish to use to create a new import configuration.

- **Create a new import configuration from scratch**
  - Also, select the Import Configuration Type
- **Create a new import configuration by copying an existing import configuration or template**
  - Also, select the Import Configuration Type, then the Import Configuration
    - If you wish to also copy the translations from that import configuration, select the "Copy Translations" check box.
- **Create from file**
  - If you have previously saved an import configuration (as a file), then you can click the Browse button and select an import configuration file

Then click the Continue button to go to the Import Configuration Detail Page, where you can edit and save your new import configuration.



Now you can create an import configuration that matches your import file.

Name:

A new import configuration will begin with the name "New Import Configuration". You should change the name to something that is more meaningful.

Description:

This is optional if you wish to provide more information about the use of this import configuration.

Column Delimiter

This is the character you will use in your import file to designate the start of each new column. It's important to use a delimiter that would never be used within any of your data, because the system will assume that the character is the start of a new column and have errors reading your file. A pipe (|) or tilde (~) are typically the safest delimiters to use. When saving from Microsoft Excel, tab-delimited is preferable to the CSV (comma-delimited) format.

3.1.1 Generating Element Values Automatically

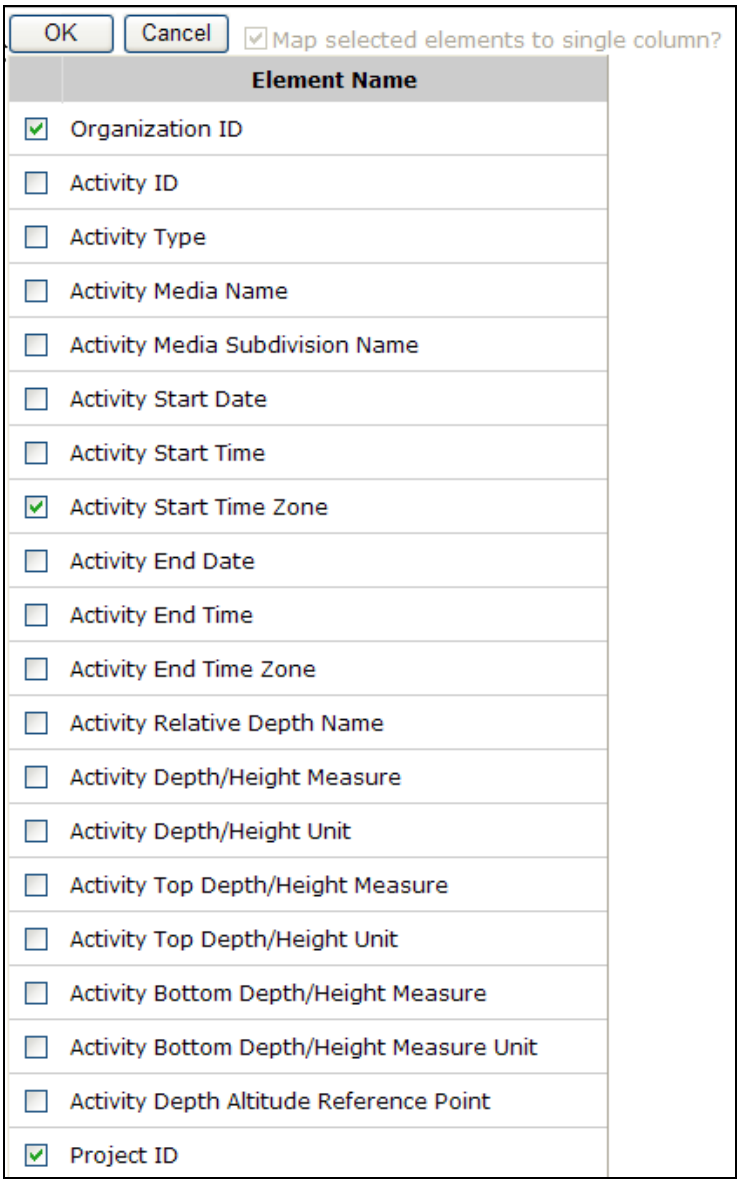
This section of the page is for managing a list of data elements for which the system will automatically generate values. This is useful for elements whose value is not included in your import file and whose value will be the same for every row.

1. New import configurations include one generated element by default: "Organization ID". Since WQX Submission Files only allow one organization per file, it's generally simpler to

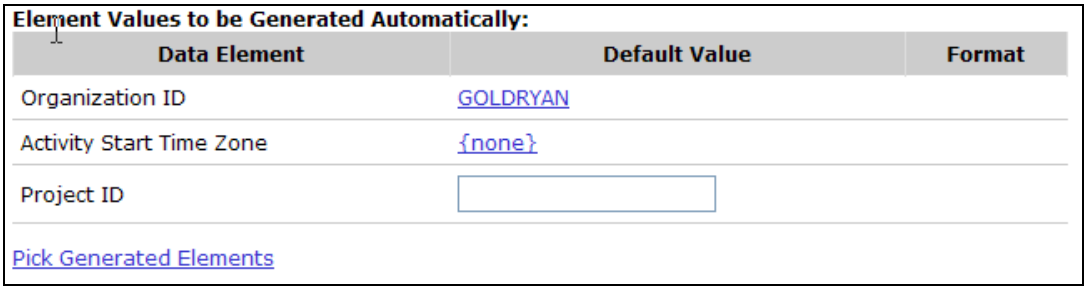
generate the Organization ID for each record, rather than provide the same value on every row of your import file.

3.1.2 Adding or Removing an Element to be Generated Automatically

You can click the "Pick Generated Elements" link to display a list of data elements.



When you check the box next to an element in the list and click the OK button, the system will add that element to the table of "Element Values to be Generated Automatically".

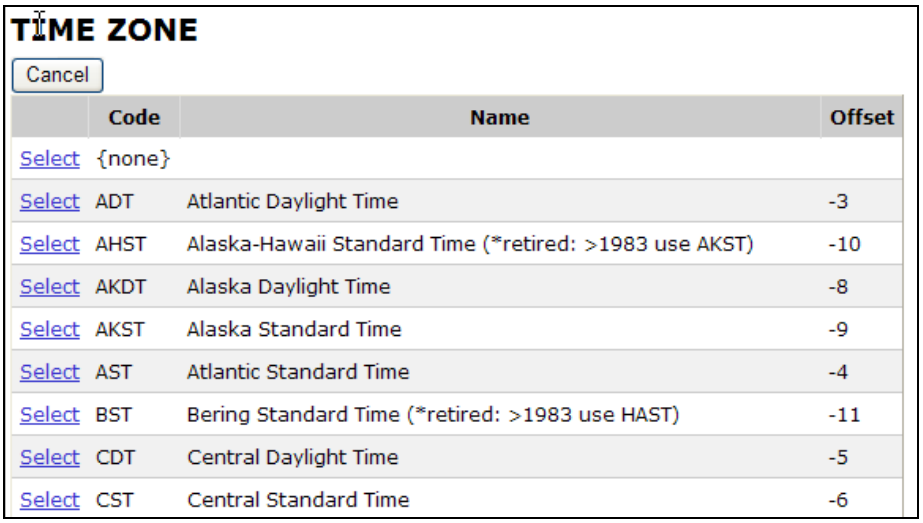


If you uncheck the box next to an element in the list and click the OK button, the element will be removed from the table of generated values.

Each row in the table of generated values includes the data element, its value, and, if appropriate, a format.

The default value is displayed in two different ways.

1. A Link: If the element is constrained by a list of allowed values, then it will be displayed as a link. In the example above, links are displayed for Organization ID and Activity Start Time Zone. Links display "{none}" when no value has been set. When you click the link, a list of allowed values will be displayed. For example: if Activity Start Time Zone was a generated value, clicking on the link for its default value would display the following list (abbreviated):

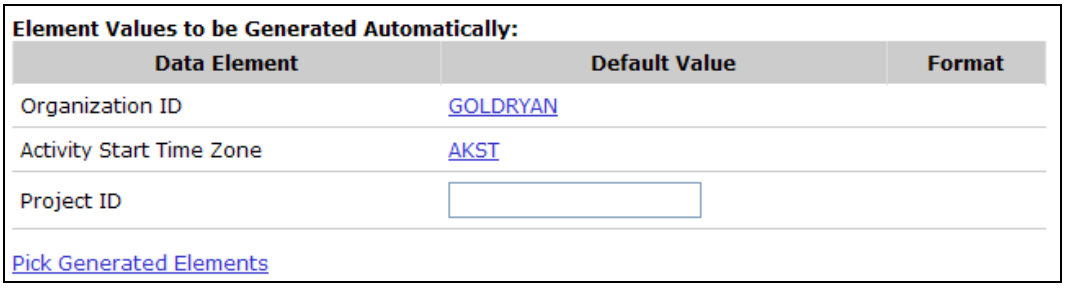


TIME ZONE

Cancel

	Code	Name	Offset
Select	{none}		
Select	ADT	Atlantic Daylight Time	-3
Select	AHST	Alaska-Hawaii Standard Time (*retired: >1983 use AKST)	-10
Select	AKDT	Alaska Daylight Time	-8
Select	AKST	Alaska Standard Time	-9
Select	AST	Atlantic Standard Time	-4
Select	BST	Bering Standard Time (*retired: >1983 use HAST)	-11
Select	CDT	Central Daylight Time	-5
Select	CST	Central Standard Time	-6

Click the "Select" link on the value you wish to use and the default value will now be set.

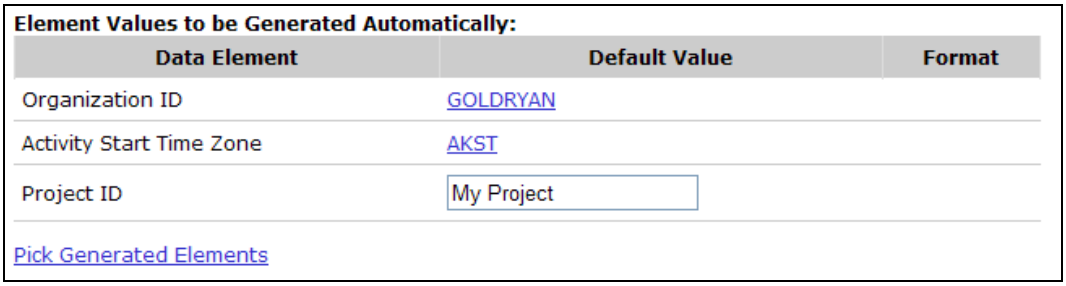


Element Values to be Generated Automatically:

Data Element	Default Value	Format
Organization ID	GOLDRYAN	
Activity Start Time Zone	AKST	
Project ID		

Pick Generated Elements

2. Text Box: If the element is not constrained by a list of values, it will be displayed in a text box. In this example, Project ID displays a text box. The text box allows any value you wish to enter.



Note: Although generated values must have a value when you import a file, it is not mandatory to set their value in your import configuration. You are given another opportunity to set generated values each time you import a file. *See Creating a New Dataset for more details.*

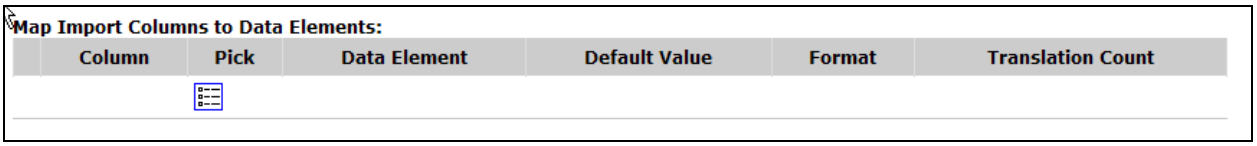
For example, suppose you have a policy of creating data files for each project that you have. You don't want to have to include the Project ID on every row of your file because it's always the same (within a file). It doesn't make sense to set the Project ID's value in your import configuration, because you don't use the same Project ID every time. In this case, you are allowed to have a generated value for Project ID in your import configuration and not set its value. Each time you import a file you will have the opportunity to set the Project ID for that import file.

Alternately, if you had the policy described above, but most of the time you use a specific Project ID, it might be a good idea to set that Project ID in the import configuration so that you didn't have to set it each time you import a file. You could then override it only when importing data for another project.

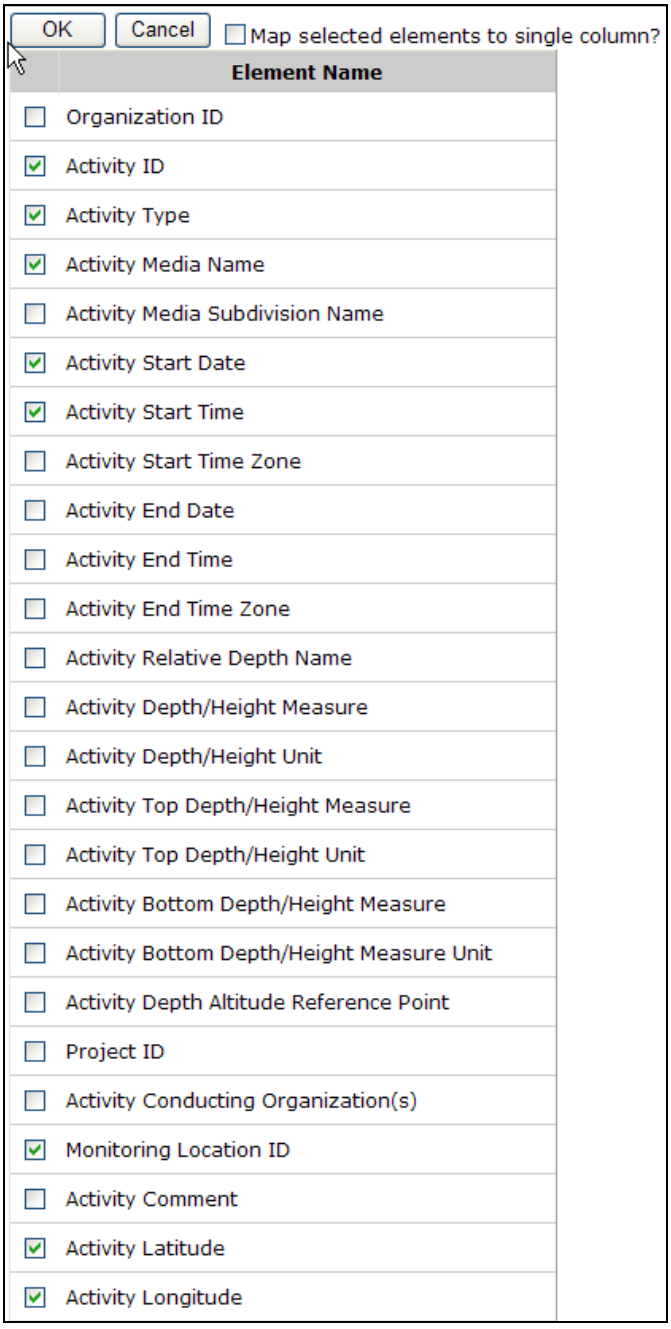
3.1.3 Mapping Import Columns to Data Elements

This section of the page contains a table used for describing the columns in your import file and mapping them to WQX Data Elements.

Initially the table has a single blank row:

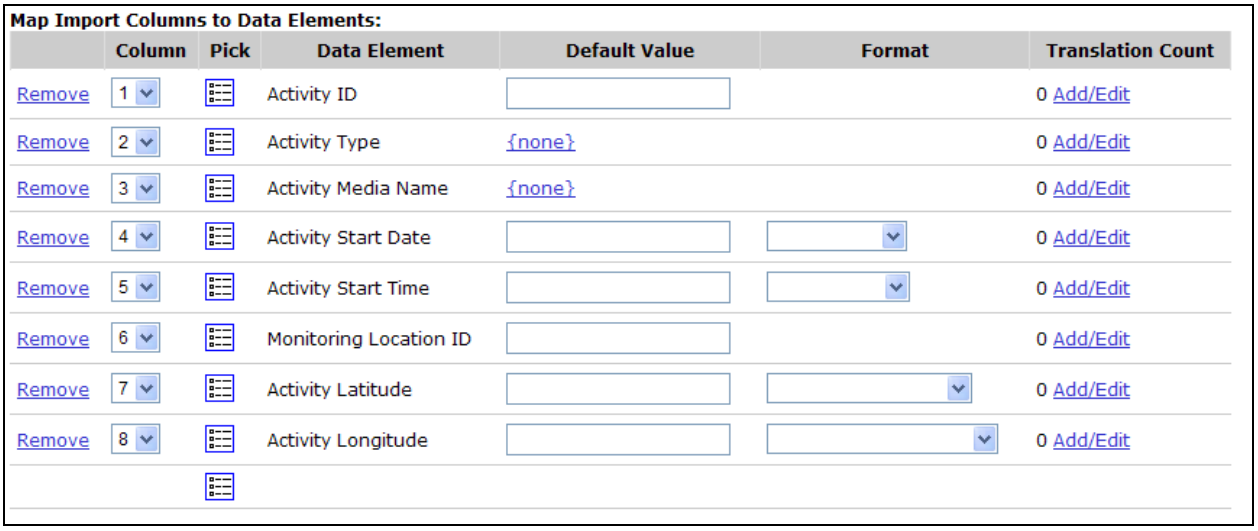


Click the Pick List button  to display a list of data elements.



Select the elements you wish to populate from values in your import file.

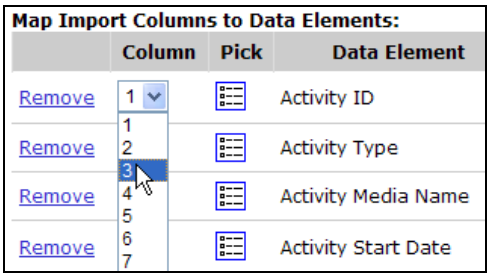
After you click the OK button, the table will display the elements you selected, each mapped to an assigned column position.



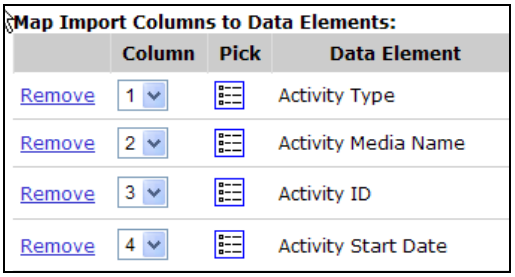
Each row in the table represents a column in your import file and describes how it maps to a data element.

Each row of the table has the following features.

- "Remove" Link: click this link to remove a row from the table.
- Column Position: this represents the column position in your import file used to populate each data element. The example above describes a file where Activity ID is in column 1 and Activity Type is in column 2 of an import file. To change a column's position, select a new value from the dropdown list.



After the new position is selected, the column positions update accordingly.



- Pick List Button  : Click this button on an existing row to change the data element(s) that are mapped to an existing column position. Click this button on the last (blank) row to add additional data elements to the table. You are allowed to map more than one data element to a column position. *See To assign a user rights* to an import configuration:

1. Choose the import configuration to manage rights for

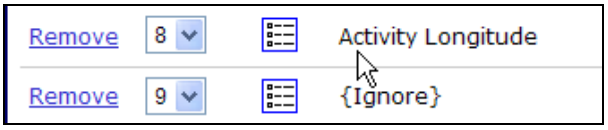
2. Navigate to the last row of the list labeled "Add".
3. In the "Add" row, choose the user.
4. Choose the access type you wish the user to have:
    a. Read Only – User can view the import configuration but can't modify or delete it.
    b. Edit – User can view and edit the import configuration but can't delete it.
    c. Edit/Delete – User can view, edit, and delete the import configuration.

To remove a user's rights to an organization:

1. Click the Delete link for the appropriate row.

Click the Save button to save your changes (and remain on the page). Click the Return button to save and return to the previous page.

- Import Configuration – Advanced Features *for more details.* You are also allowed to have a column mapped to no data elements. This tells the system to ignore the column in that position in your import file.
- Data Element: This shows the name of the data element(s) mapped to a specific column position. "{Ignore}" will be displayed for columns mapped to no data elements.



- Default Value: Set a default value if you wish to have the system fill in a value for this data element when one is not provided in your import file. As mentioned in the previous section, default values are displayed in two different ways: links or text boxes, depending on whether the element in constrained by a list of allowed values. When the default value is a link, and has not been set, it will display "{none}".
    a. Note: default values behave a bit differently when a column is mapped to more than one data element. *See To assign a user rights* to an import configuration:

5. Choose the import configuration to manage rights for
6. Navigate to the last row of the list labeled "Add".
7. In the "Add" row, choose the user.
8. Choose the access type you wish the user to have:
    a. Read Only – User can view the import configuration but can't modify or delete it.
    b. Edit – User can view and edit the import configuration but can't delete it.
    c. Edit/Delete – User can view, edit, and delete the import configuration.

To remove a user's rights to an organization:

2. Click the Delete link for the appropriate row.

Click the Save button to save your changes (and remain on the page). Click the Return button to save and return to the previous page.

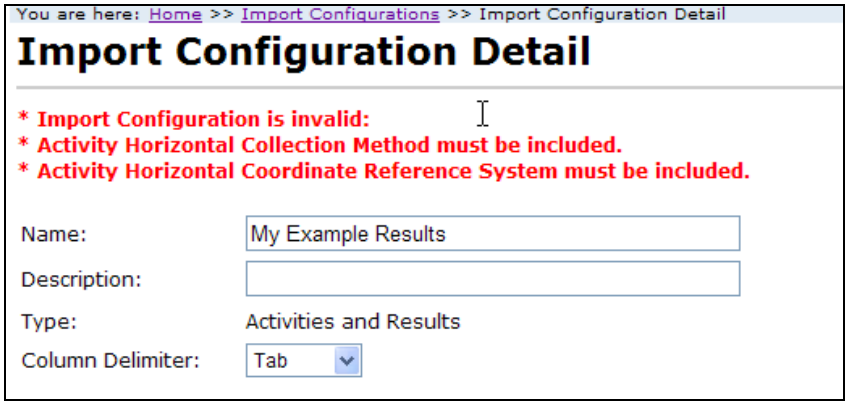
b. Import Configuration – Advanced Features *for more details.*

c. If you wish to remove the default value where the value is displayed as a link, click the link and select the value titled "{none}" from the list of values.

- Format: In order for the system to know how to interpret certain types of data in your import file, a format may need to be selected. The system requires that you indicate the format you plan to use for the following types of data: dates, times, latitude, longitude, and yes/no fields.
- Translation Count: Displays the number of translations that have been added for a specific import column. Also, provides a link to add or edit the list of translations. See the next section for details about translations.

Once you have completed the mapping process and filled in defaults and formats, click the Save button (or Return button) to save your changes.

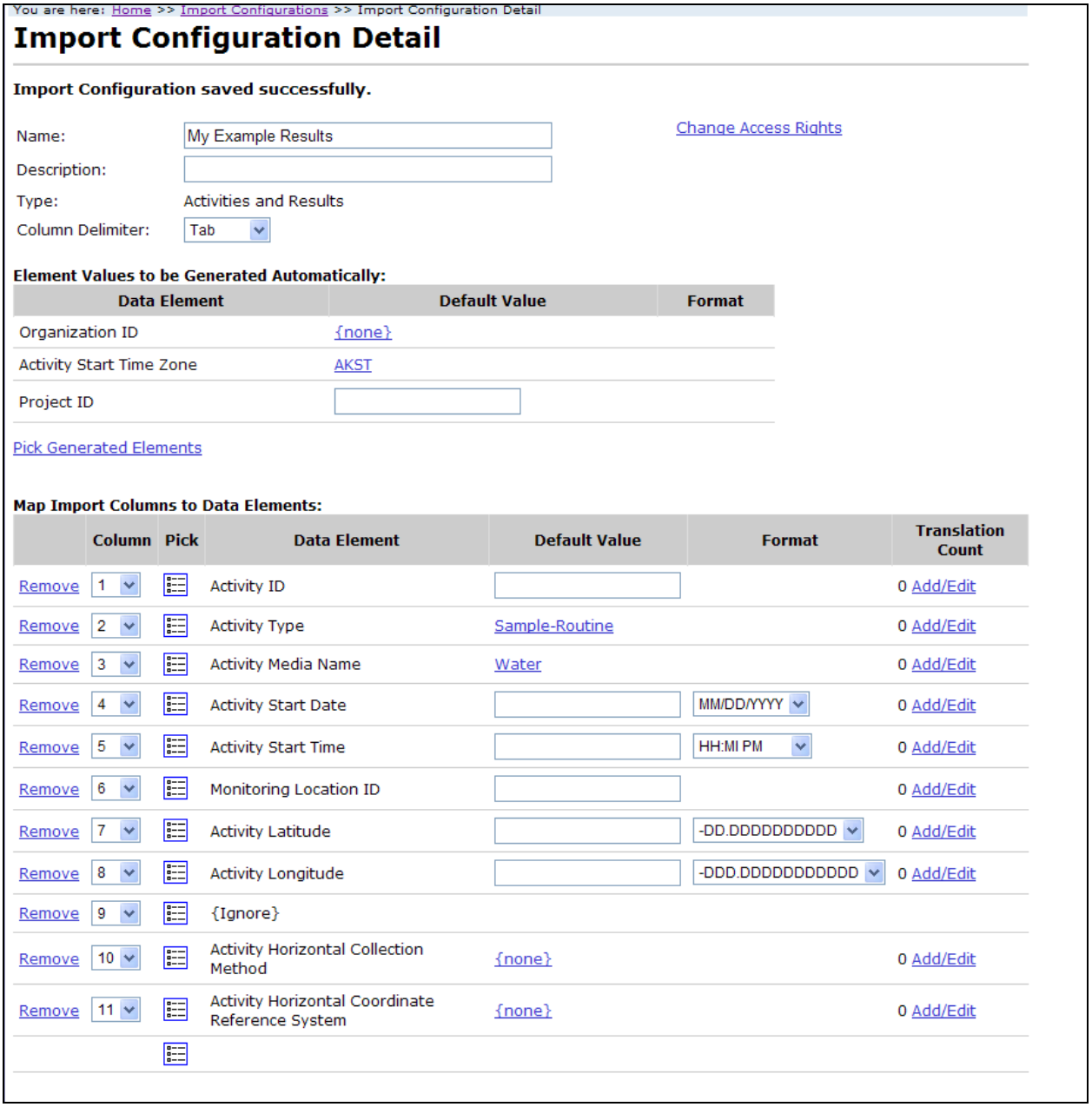
Your import configuration will be checked to make sure it is valid. If there are any issues with it, they will be displayed at the top of the page.



In this example, two additional elements are required to make the import configuration valid. Without these values you would not be able to produce a valid WQX Submission File.

Correct the issues described and save your changes again.

If the import configuration saves successfully and is valid, the validation errors will disappear and a message will state that the import configuration was saved successfully.


You are here: Home >> Import Configurations >> Import Configuration Detail

Import Configuration Detail

Import Configuration saved successfully.

Name: My Example Results — Change Access Rights

Description:

Type: Activities and Results

Column Delimiter: Tab

Element Values to be Generated Automatically:

Data Element	Default Value	Format
Organization ID	{none}	
Activity Start Time Zone	AKST	
Project ID		

Pick Generated Elements

Map Import Columns to Data Elements:

	Column	Pick	Data Element	Default Value	Format	Translation Count
Remove	1		Activity ID			0 Add/Edit
Remove	2		Activity Type	Sample-Routine		0 Add/Edit
Remove	3		Activity Media Name	Water		0 Add/Edit
Remove	4		Activity Start Date		MM/DD/YYYY	0 Add/Edit
Remove	5		Activity Start Time		HH:MI PM	0 Add/Edit
Remove	6		Monitoring Location ID			0 Add/Edit
Remove	7		Activity Latitude		-DD.DDDDDDDDD	0 Add/Edit
Remove	8		Activity Longitude		-DDD.DDDDDDDDDD	0 Add/Edit
Remove	9		{Ignore}			
Remove	10		Activity Horizontal Collection Method	{none}		0 Add/Edit
Remove	11		Activity Horizontal Coordinate Reference System	{none}		0 Add/Edit

3.1.4 Managing Translations for an Import Column

Translations are used to automatically convert a value in your import file to an alternate value in the dataset that will be sent to EPA. Most often, translations are used to convert a value that is not compatible with WQX into something that is. For example, a translation could be used to convert "DO" in your import file to "Dissolved oxygen (DO)" in your dataset (making the value valid for WQX).

Translations can also be used to convert one value in the import file to multiple values in your dataset. *See To assign a user rights* to an import configuration:

9. Choose the import configuration to manage rights for

10. Navigate to the last row of the list labeled "Add".
11. In the "Add" row, choose the user.
12. Choose the access type you wish the user to have:
    a. Read Only – User can view the import configuration but can't modify or delete it.
    b. Edit – User can view and edit the import configuration but can't delete it.
    c. Edit/Delete – User can view, edit, and delete the import configuration.

To remove a user's rights to an organization:

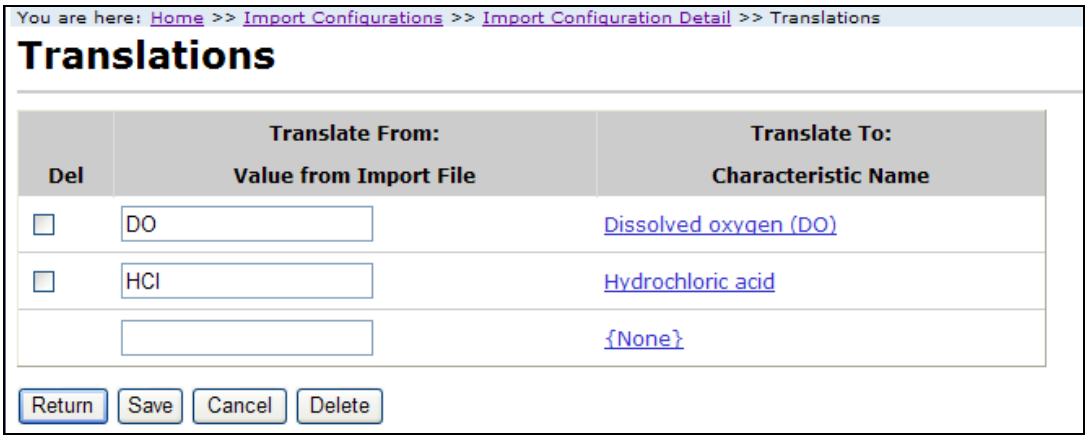
3. Click the Delete link for the appropriate row.

Click the Save button to save your changes (and remain on the page). Click the Return button to save and return to the previous page.

Import Configuration – Advanced Features *for more details.*

To add or edit translations:

Select the Add/Edit link in the Translations Count column of your import configuration. This takes you to the Translations Page for that import column.



Each translation has at least two parts: the value from the import file (labeled "Translate From") and the value for the data element(s) in the dataset (labeled "Translate To"). The example above shows a translation for "DO" in the import file that will create a value of "Dissolved oxygen (DO)" for the Characteristic Name element in your dataset.

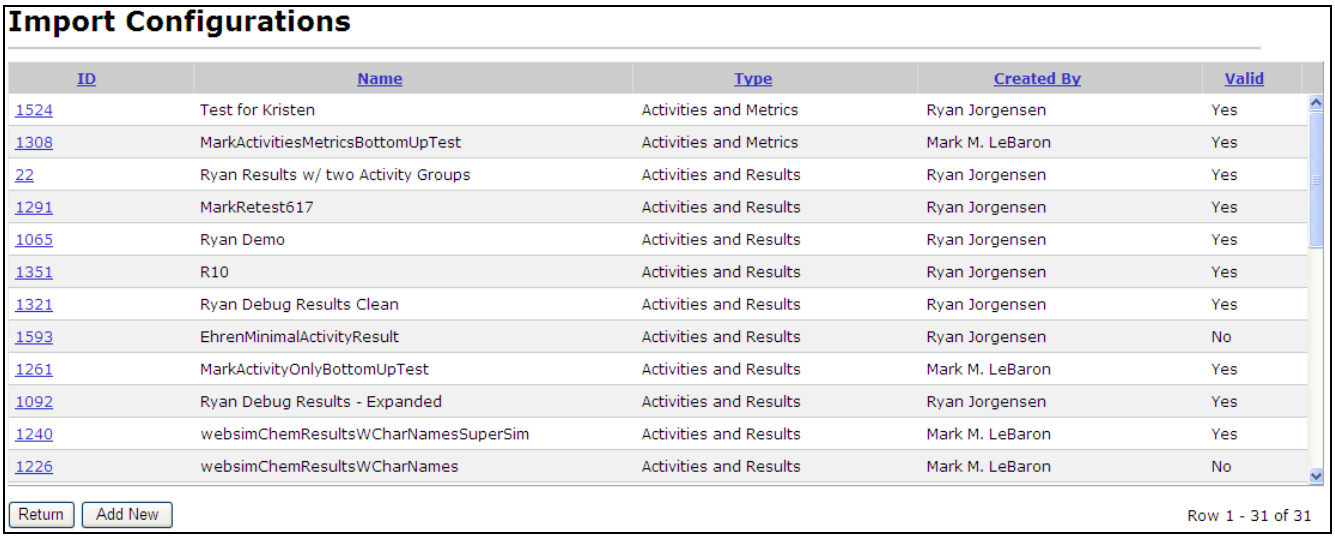
The bottom row of the table can be used for adding a new translation. Once you've entered the appropriate values on the bottom row, clicking the Save button will save your new translation and give you another blank row where you can add an additional translation if you wish.

To delete a translation:

1. Check the Del checkbox next to one or more translations
2. Click the Delete button to remove the translations
3. Click the Save button (or Return button) to save the changes.

3.2 Viewing/Editing an Import Configuration

Click on the "Import Configurations" link on the navigation panel or click on the "Create or Edit an Import Configuration" link on the Home Page to display the Import Configurations list page.



Import Configurations

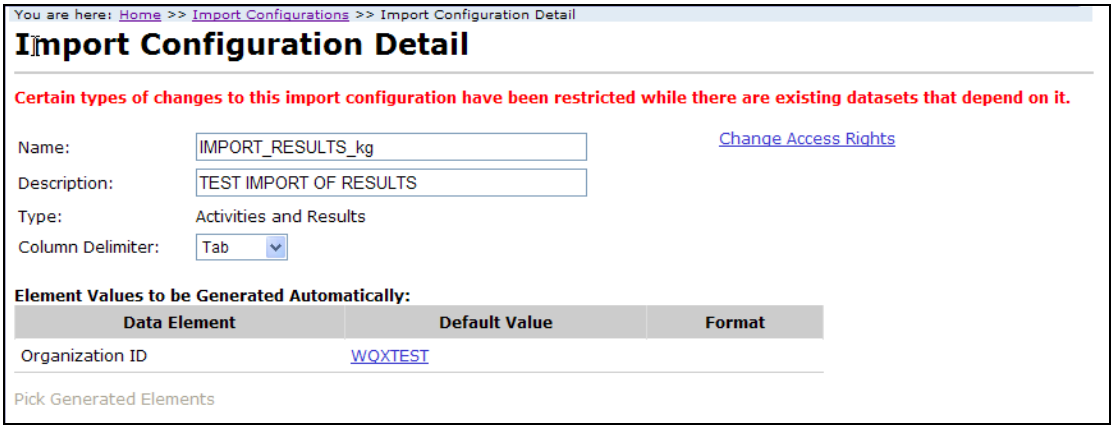
ID	Name	Type	Created By	Valid
1524	Test for Kristen	Activities and Metrics	Ryan Jorgensen	Yes
1308	MarkActivitiesMetricsBottomUpTest	Activities and Metrics	Mark M. LeBaron	Yes
22	Ryan Results w/ two Activity Groups	Activities and Results	Ryan Jorgensen	Yes
1291	MarkRetest617	Activities and Results	Ryan Jorgensen	Yes
1065	Ryan Demo	Activities and Results	Ryan Jorgensen	Yes
1351	R10	Activities and Results	Ryan Jorgensen	Yes
1321	Ryan Debug Results Clean	Activities and Results	Ryan Jorgensen	Yes
1593	EhrenMinimalActivityResult	Activities and Results	Ryan Jorgensen	No
1261	MarkActivityOnlyBottomUpTest	Activities and Results	Mark M. LeBaron	Yes
1092	Ryan Debug Results - Expanded	Activities and Results	Ryan Jorgensen	Yes
1240	websimChemResultsWCharNamesSuperSim	Activities and Results	Mark M. LeBaron	Yes
1226	websimChemResultsWCharNames	Activities and Results	Mark M. LeBaron	No

Return | Add New

Row 1 - 31 of 31

Click on the link for the Import Configuration you wish to view. The Import Configuration Details page will be displayed, where you can view or edit the import configuration.

Note: While you have a dataset in the system that relates to an import configuration, certain types of changes to the import configuration are not allowed (such as changing column positions, data elements that map to them, or deleting the import configuration). The system will display a message at the top of the Import Configuration Details page for any Import Configuration that has associated datasets. You will have to delete the associated dataset(s) before you will have full access to change the import configuration. See section 4.0 for an explanation datasets.



You are here: Home >> Import Configurations >> Import Configuration Detail

Import Configuration Detail

Certain types of changes to this import configuration have been restricted while there are existing datasets that depend on it.

Change Access Rights

Name: IMPORT_RESULTS_kg

Description: TEST IMPORT OF RESULTS

Type: Activities and Results

Column Delimiter: Tab

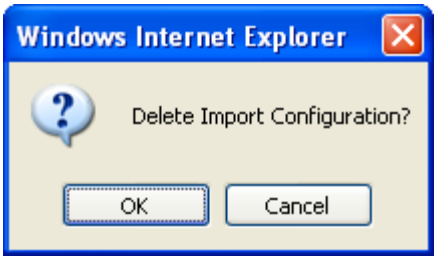
Element Values to be Generated Automatically:

Data Element	Default Value	Format
Organization ID	WQXTEST	

Pick Generated Elements

3.3 Deleting an Import Configuration

You can delete an import configuration by clicking the Delete button on the Import Configuration Detail page.

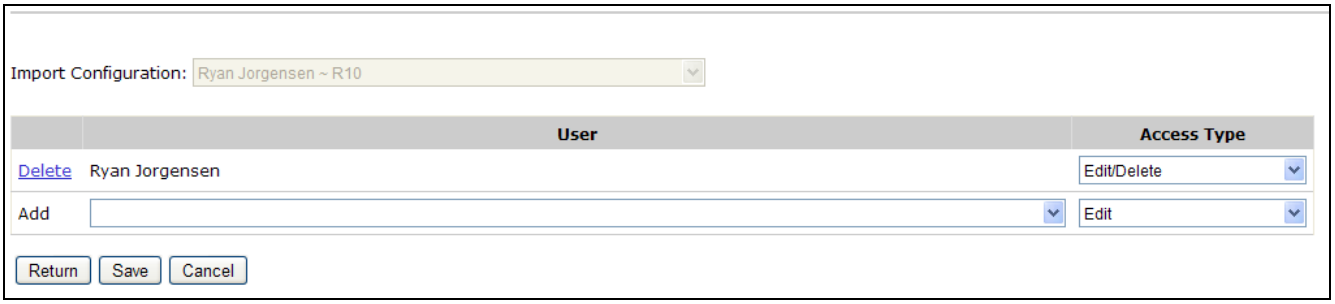


Confirm the deletion by clicking the OK button.

The system will return you to the Import Configuration list page after performing the delete.

3.4 Managing Access Rights for an Import Configuration

Click the "Change Access Rights" link on the top-right side of the Import Configuration Detail page and the User Rights page will be displayed.



To assign a user rights to an import configuration:

13. Choose the import configuration to manage rights for
14. Navigate to the last row of the list labeled "Add".
15. In the "Add" row, choose the user.
16. Choose the access type you wish the user to have:
    a. Read Only – User can view the import configuration but can't modify or delete it.
    b. Edit – User can view and edit the import configuration but can't delete it.
    c. Edit/Delete – User can view, edit, and delete the import configuration.

To remove a user's rights to an organization:

4. Click the Delete link for the appropriate row.

Click the Save button to save your changes (and remain on the page). Click the Return button to save and return to the previous page.

3.5 Import Configuration – Advanced Features

Import Configurations can be leveraged in a number of powerful ways. However, that power also comes with some extra complexity. This section will highlight some of the powerful features and provides some specific examples of how to solve some problems that you may be faced with.

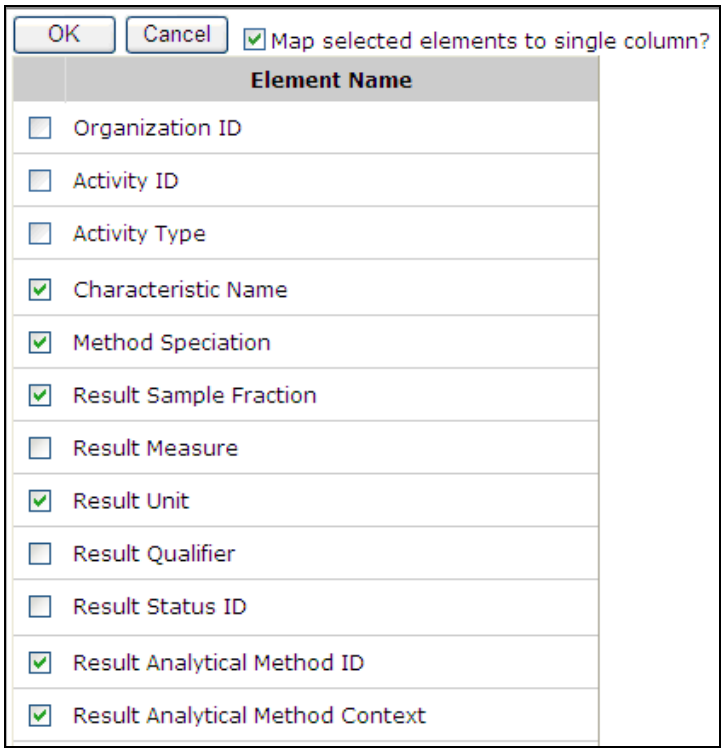
One of the most powerful features of an import configuration is the ability to map one import column to more than one data element in WQX. This allows you to populate multiple data elements with just one value in your import column.

3.5.1 Using Translations to Populate Many Related Data Elements

One common reason to map one column to more than one data element is when the value in your file contains more than one piece of information. Using translations you can break the value into its relevant components in WQX. For example: suppose your lab provides you with a file that includes a parameter code that specifies the analyte, sample fraction, units, and analytical method used for a particular result. You could open the file into something like Microsoft Excel, create four new columns, and manually type in the values for each of these items on every row, or you could map that one import column to the data elements you want to populate in WQX and then create translations to explain how to populate them. The advantage of this approach is that you only have to do it once in WQX Web and the system will perform the conversion every time you import a file.

To map a column to multiple data elements, do the following:

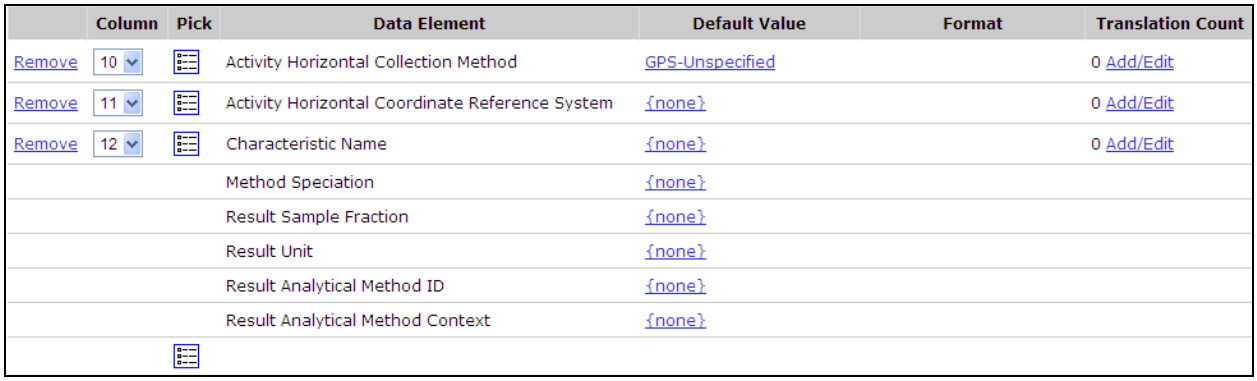
1. If you are adding a new import column, click the pick list button on the blank row at the bottom of the table. Otherwise, click the button on an existing row. The list of data elements will pop up.



2. Click the checkbox at the top of the list titled "Map selected elements to single column?".
    a. On a new import column, this checkbox is unchecked by default. On an existing import column, this is checked and locked by default. In other words, if you ever click the pick list button on an existing import column and then select additional

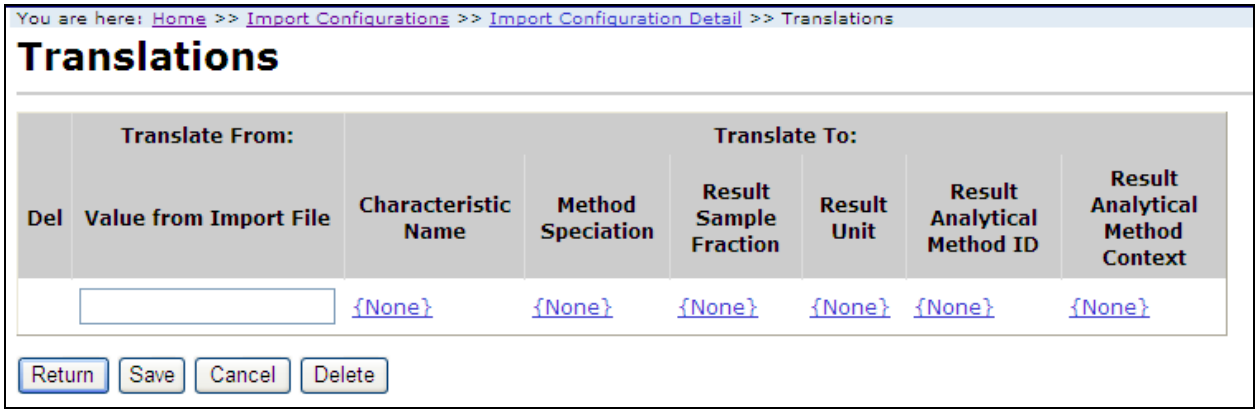
data elements from the list, they will always be mapped to a single import column. For a new column, you can choose whichever is appropriate.

3. Click the OK button. The elements you selected are now mapped to one import column (column 12 in the example below):



	Column	Pick	Data Element	Default Value	Format	Translation Count
Remove	10		Activity Horizontal Collection Method	GPS-Unspecified		0 Add/Edit
Remove	11		Activity Horizontal Coordinate Reference System	{none}		0 Add/Edit
Remove	12		Characteristic Name	{none}		0 Add/Edit
			Method Speciation	{none}		
			Result Sample Fraction	{none}		
			Result Unit	{none}		
			Result Analytical Method ID	{none}		
			Result Analytical Method Context	{none}		

4. Click the Add/Edit link for Column 12 to add translations. The Translations page will open.



You are here: Home >> Import Configurations >> Import Configuration Detail >> Translations

Translations

Del	Translate From: Value from Import File	Translate To: Characteristic Name	Method Speciation	Result Sample Fraction	Result Unit	Result Analytical Method ID	Result Analytical Method Context
		{None}	{None}	{None}	{None}	{None}	{None}

Return Save Cancel Delete

Notice that there is a text box under "Translate From" where you can place the value that will be in your import file. Under "Translate To" there are six fields (one for each element this import column maps to). These are the values you want to populate in your dataset when the value in "Translate From" shows up in your import file.

5. Fill in the appropriate values for the translations.
   a. Clicking the Save button will save your row and give you another blank row.

Del	Translate From: Value from Import File	Translate To: Characteristic Name	Method Speciation	Result Sample Fraction	Result Unit	Result Analytical Method ID	Result Analytical Method Context
☐	P71887	Nitrogen	as NO3	Total	mg/l	351.3(C)	USEPA
		{None}	{None}	{None}	{None}	{None}	{None}

6. Click the Return button to save and return to the Import Configuration Detail page.

If you imported a file using this import configuration (with the translation created above), and there was a value of "P71887" in column 12 of your file. The following values would be populated in the dataset created from your file:

Characteristic Name: **Nitrogen**

Method Speciation: **as NO3**

Sample Fraction: **Total**

Units: **mg/l**

Analytical Method: **351.3(C)**

Analytical Method Context: **USEPA**

This is a powerful feature for minimizing unnecessary data in your import file (when values can be inferred).

Note: It is very important to recognize that when you have a translation on a column that maps to more than one data element, you need to provide translations for every value that will be used in your import file. The system does not know how to interpret values that do not have translations (in this case). If one is encountered while importing a file, an error will be logged. You will need to add a new translation for this value and re-import the file.

3.5.2 Using Defaults to Conditionally Generate a Value

Remember that Generated Values are values that get populated automatically on every row of your file. For example, if you add the element "Activity Start Time Zone" to the section titled "Element Values to be Generated Automatically" and set its value to EDT, then every row of your imported data will get a generated value of EDT for Activity Start Time Zone. This would be appropriate if you always include a Start Time with every Activity you import. If there are activities that have a Start Time and some that do not, then this solution would not work for you because rows where the Time Zone is generated but there is no Time provided will get flagged as missing a required value (because every Time needs a Time Zone and visa versa). In this case what you need is to generate a value for Time Zone only when the Time column in your file is populated. This can be accomplished by adding the Time Zone as an additional data element mapped to the same import column as the Time. Then set a Default Value for the Time Zone.

The system will treat Activity Start Time Zone as a "conditionally" generated element. The Activity Start Time will get populated with the value from column 5 of the import file. Activity Start Time Zone will get a generated value of "EDT" whenever Activity Start Time has a value. This is a convenient way to generate a value, but only when a related value gets populated by a value from the import file.

There are many other examples of where you may wish to conditionally generate values. Here are a few examples:

- Generate the value for Horizontal Collection Method and Coordinate Reference System Datum on an Activity whenever latitude or longitude is provided on an Activity.
- Generate the value for a Unit Code whenever the related Measure Value is provided.
- Generate the value for Activity Group Type whenever an Activity Group ID is provided *(this special case is described in more detail in a subsequent section)*

Note: it's important to remember to that the system treats the Default Value for an element differently when an import column is mapped to one element than when it's mapped to more than one element.

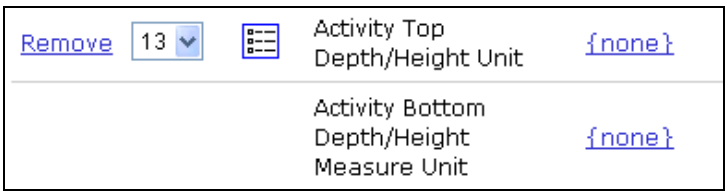
- When a column is mapped to only one element, the system will behave in the following manner when importing your file:
    - Read a value from a specific column in the import file. If no value was found, then the related data element gets the default value from the import configuration. Otherwise, it gets the value from the file.
- When a column is mapped to more than one element, the system will behave as follows:
    - Read a value from a specific column in the import file. If no value was found, then do nothing. Otherwise, the elements without a default, get the value from the file. The elements with a default, get the default value.

Note: In the previous two sections we've described how to map a column to multiple data elements and use translations (in the first example) to populate the elements or use default values (in the second example) to populate some of the elements. In most cases you will use one of these two methods (but not usually both) to describe to the system how to convert your data. Mixing Default Values and Translations can be done, but is not generally needed and can create more confusing import configurations. If you chose to mix these two methods, be aware of the following rule (when a column maps to more than one data element): **Translations have precedence over default values.** When your file is imported, the system will check whether a value in your file matches a translation. If there's a match, it will populate the element values from values in your translation. If there is no match, then it will copy the value from your file into the elements without a default and will populate the elements with defaults from the default value in your import configuration.

3.5.3 Populate Multiple Data Elements with the Same Value from your Import File

A less common reason to map one column to more than one data element is when you actually want to populate both elements with the same value from the import file. Although this is not common there may be times that it's useful. In this case, you would map the column to the data elements and make sure to not set the default values for any of them and to not create any translations on the column (because defaults and translations will change the behavior).

For example: suppose you want to provide a Top and Bottom Depth on an Activity and don't want to have to list the Units twice. You could map a column to the Unit Code element for both of them and populate them both with one value in your file.



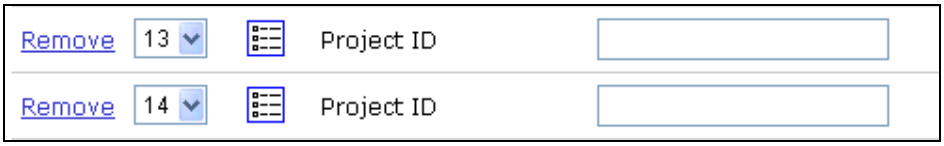
Keep in mind that this is only appropriate when you know you would always populate both of these values together. If it were not true that top and bottom depth are always provided together, it wouldn't be appropriate to always populate their measurement units together.

3.5.4 Use a Data Element Multiple Times in an Import Configuration

There are places in the WQX Data Model where an element can have multiple values per parent element. In a WQX Web environment, think of this as an element having multiple values per row in your import file. Here are some examples:

- A Monitoring Location can have multiple Alternate IDs
- An Activity can have multiple:
  - Project IDs
  - Conducting Organizations
- A Metric can have multiple Index IDs
- A Result can have multiple collections of:
  - Frequency Class Information
  - Detection Limit Information
  - Lab Sample Prep. Information
- A Taxon (within a Result) can have multiple:
  - Habits
  - Functional Feeding Groups

To model these scenarios in an import configuration, you should add the repeating elements as many times as needed (each to their own import column). For example: If you know that in your situation, an Activity can relate to up to two projects, you should add the Project ID twice.



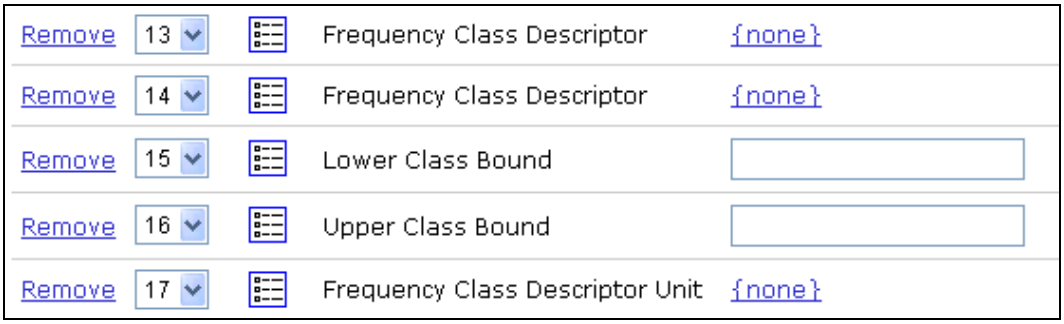
In this case, column 13 and 14 of your import file will be used for the Project ID (of an Activity). If an Activity is only used on one project, put the Project ID in column 13. If it is used on two projects, put the first Project ID in column 13 and the second one in column 14 of your file.

A more complex example might be something like Frequency Class Information, which is used to classify a group of taxa that are being counted in a biological survey. Frequency Classes include a descriptor, and for certain types of classes, an upper and lower range and units are required. For

example: You may be conducting a fish survey and counting the number of fish (of a particular species) and grouping them based on sex and weight. In this case, sex and weight are each Frequency Class Descriptors and the weight needs a range of values (with) units. Your import file would need two Frequency Class Descriptors and might contain values like the following (subset):

F.C. Descriptor	F.C. Descriptor	Lower Bound	Upper Bound	F.C. Units
Male	Weight	0	100	g
Female	Weight	101	300	g

To support this data your import configuration could look like the following:

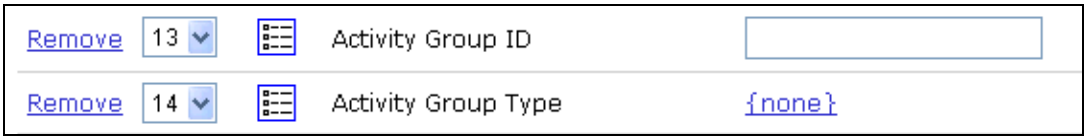


3.5.5 Special Case: Activity Groups in a file of Activities and Results

Another specific example of leveraging the flexibility of an import configuration is in modeling Activity Groups in a file of Activities and Results. Activity Groups are used to group a collection of Activities (i.e. samples) together for various purposes which include (Field Sets, Replicates, linking Samples and Subsamples, and linking Samples with their related QC Samples). The relationship between Activities and Activity Groups in data modeling is referred to as "many to many" which means that an Activity can belong to many Activity Groups and an Activity Group can contain many Activities. Addressing this complex relationship in a flat file could be challenging, but with the support of some specific features in WQX Web, there are ways to address this that are fairly simple.

In WQX an Activity Group contains the following elements: Activity Group ID, Type, Name (optional), and two or more Activity IDs. WQX Web understands the relationship between Activities and Activity Groups and does not require that you indicate the Activity ID (because you've already provided it elsewhere on the row for the Activity). So, at a minimum you will need a way to provide the Activity Group ID and Type (and optionally Activity Group Name).

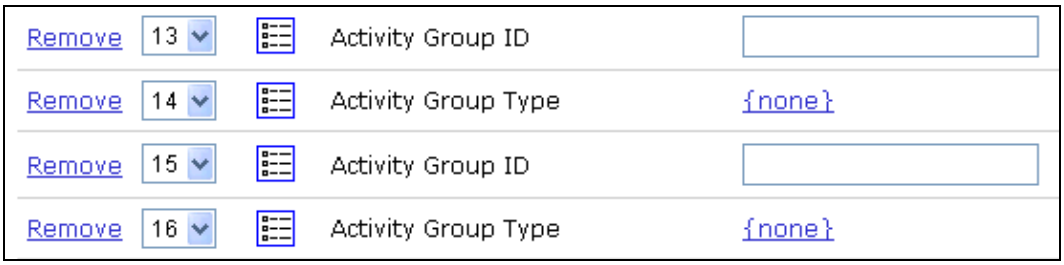
Following the other examples, one way to address this in your import configuration is to map one column to the Activity Group ID and another column to the Type. For Example:



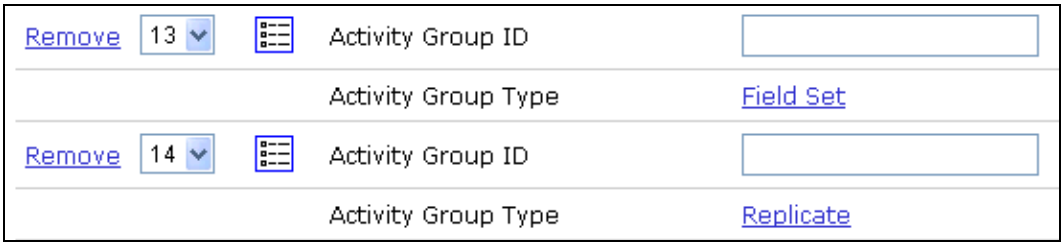
If you wanted to use the Activity Group Name element as well, you could map column 15 to that element.

In this example: if you wanted to include a specific Activity in an Activity Group, you would list the Activity Group's ID in column 13 and its Type in column 14.

If you wanted to allow an Activity to belong to two Activity Groups then you would need to repeat the Activity Group Elements again.



It might be tedious to have to keep typing the Activity Group Type every time you want to include an Activity in an Activity Group. An alternative to providing that value in your import file would be to (conditionally) generate it (as is explained in a previous section). To do that, map the Activity Group ID and Type to the same column and provide a default value for the type. For Example:



In this example, column 13 would be used for the Activity Group IDs for groups that are Field Sets and column 14 would be used for groups that are Replicates. In other words, you would not need to indicate the Type of Group in your file. Just by placing the ID in column 13 or 14 it would automatically be assigned a Type.

Here's a brief explanation of how this might be implemented in your import file. Suppose you receive a file from your lab with data that is 12 columns wide, which includes your main Activity and Result fields that you plan to import into WQX Web. You've already created an import configuration to address the 12 columns from the lab plus you added two additional columns (shown in the last example above). You load the file into something like Microsoft Excel. If not already done, you may want to label the columns on row 1 of your file so you know what each column contains. Label column 13 something like "Field Set Group ID" and column 14 something like "Replicate Group ID". Now you would go through the file and put the same Group ID on any activities you wanted to group together. For example: if you wanted to create an Activity Group for a Field Set that included activities on row 3, 7, and 12 and use a Group ID of "F2000-08-15B" you would put "F2000-08-15B" on rows 3, 7 and 12 (in column 13). If the activities on rows 7 and 9 were replicates then you would put the same Group ID value on rows 7 and 9 (in column 14).

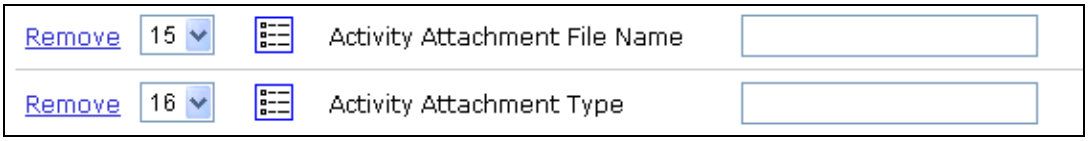
After you import your file into WQX Web, you will have two Activity Groups: one will be a Field Set with 3 activities in it and the other will be a Replicate group with two activities in it.

3.6 Attached Objects

WQX Web allows you to attach binary objects (like pictures, documents, etc) to any Project, Monitoring Location, Activity or Result. There are two parts to doing this:

- Reference the file name and type (for each attachment) where appropriate in your import file.
- Include all of the attachment files in an attachments zip file and upload it at the same time as your import file.

To support the file name and type in your import file you need to map two columns in your import file to those data elements in your import configuration.



The Attachment Type needs to contain the file's extension (e.g. JPG, PDF, etc) and the Attachment File Name needs to hold the complete file name, including the extension (e.g. QAPP.doc). If you need to support multiple files per Project, Activity, etc, then repeat these columns as many times as needed.

4.0 Working with Datasets

Datasets are the source for the submission file that's created by WQX Web (and sent to CDX). It represents the outcome of importing your data file, applying defaults and translations from your import configuration, and resolving any validation issues that the system identifies (most of which can be corrected within the system).

Datasets are temporary and do not represent data that is in WQX. Importing, correcting, deleting datasets has no effect on the data that is in WQX (the official repository of ambient water quality data at the EPA).

The data in a dataset only becomes permanent once a submission file has been exported, submitted to CDX and processed successfully by the WQX System (which is separate from WQX Web).

You can work with a dataset in WQX Web for a maximum number of days at which time it will be automatically purged from this system to keep the system from being overloaded with temporary data. Currently the system allows about two weeks for you to work with your dataset.

Once you have submitted your dataset to CDX and it has loaded successfully, you are encouraged to delete your dataset from WQX Web (since it is no longer needed).

4.1 Dataset Purpose and Type

Dataset Purpose

A dataset can be created for the purpose of either Adding & Updating data or for Deleting data in the WQX System. Add/Update datasets contain a full set of data and will update records in WQX where the ID for the record matches an existing value. If no match is found then the data will be added to WQX. Delete datasets include just one column which contains the unique ID of the record(s) you wish to delete from the WQX System.

Once a dataset is created in WQX Web, it will be available to anyone with rights to the organization referenced in the import file. Other users will not see it.

Dataset Types

The types of datasets supported by WQX Web are as follows:

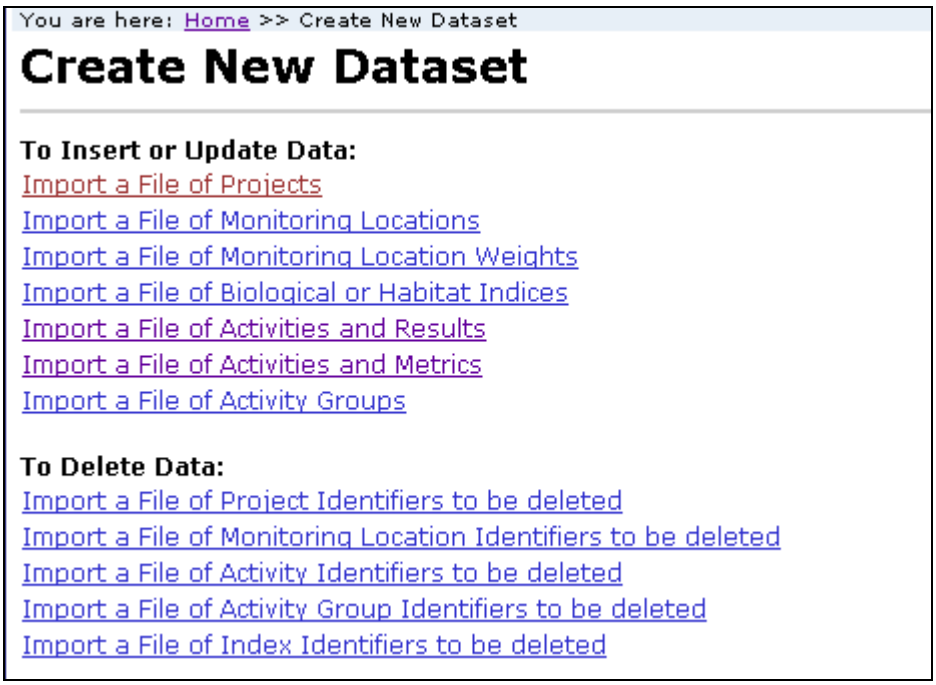
- Projects
- Monitoring Locations
- Monitoring Location Weights
- Biological or Habitat Indices
- Activities and Results
- Activities and Metrics
- Activity Groups
- Delete Projects

- Delete Monitoring Locations
- Delete Activities
- Delete Activity Groups
- Delete Biological or Habitat Indices

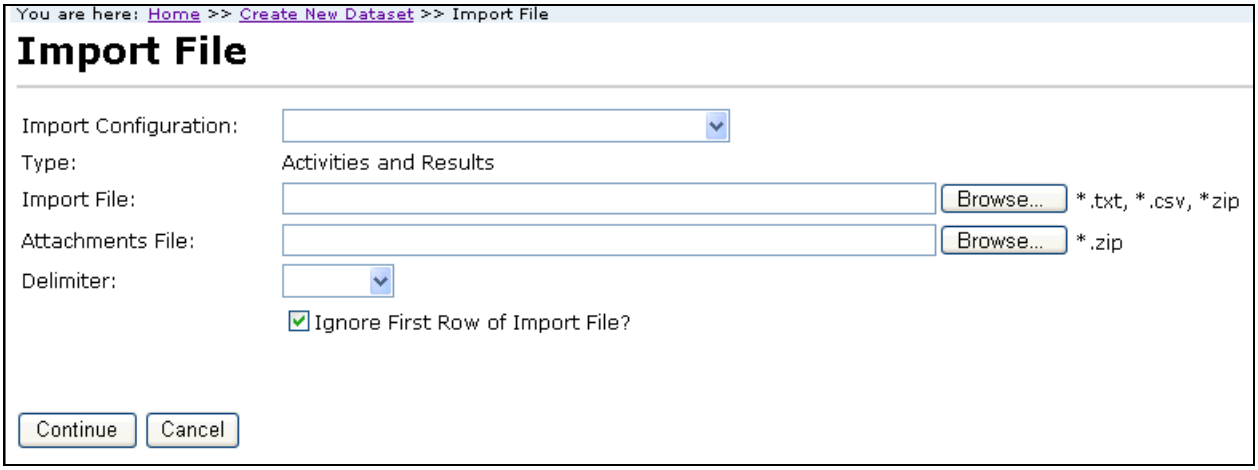
4.2 Creating a New Dataset

Click the "Create New Dataset" link on the navigation panel.

On the Create New Dataset page, select the method and type of dataset you wish to create (e.g. Import a File of Projects).



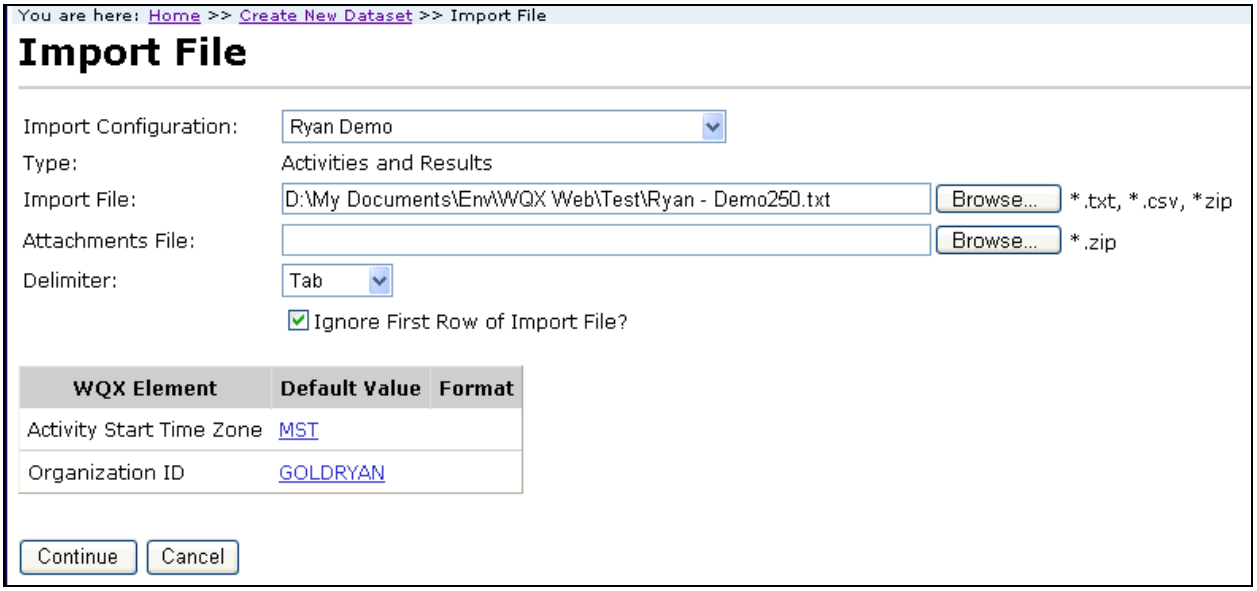
The system will display the Import File page.



Note: If you selected to create one of the "Delete" datasets on the previous page, then the following fields/sections will not be displayed:

- Import Configuration dropdown list,
- Attachments Zip File,
- Delimiter dropdown list,
- Default Values section.

Select an import configuration from the dropdown list. Note: The list will be filtered to only show Import Configurations that match the type you clicked on the previous page.



Use the Browse button on the Import File field to browse and find the file to be imported. You can also type the path and name of the file in the field if you know it.

The file you select must have an extension of TXT, CSV or ZIP. If it is a zip file, it must contain a TXT or CSV file inside it.

If you have attachments referenced in your import file, then use the Browse button on the Attachments File field to browse and find the zip file that holds all of the attachments. The file must be a ZIP file.

If necessary, change the delimiter to match that of your import file. It will default to the delimiter specified in the selected import configuration.

If the first row of your import file has column headings, select the "Ignore First Row of Import File?" check box, so that the first row will not be interpreted as data.

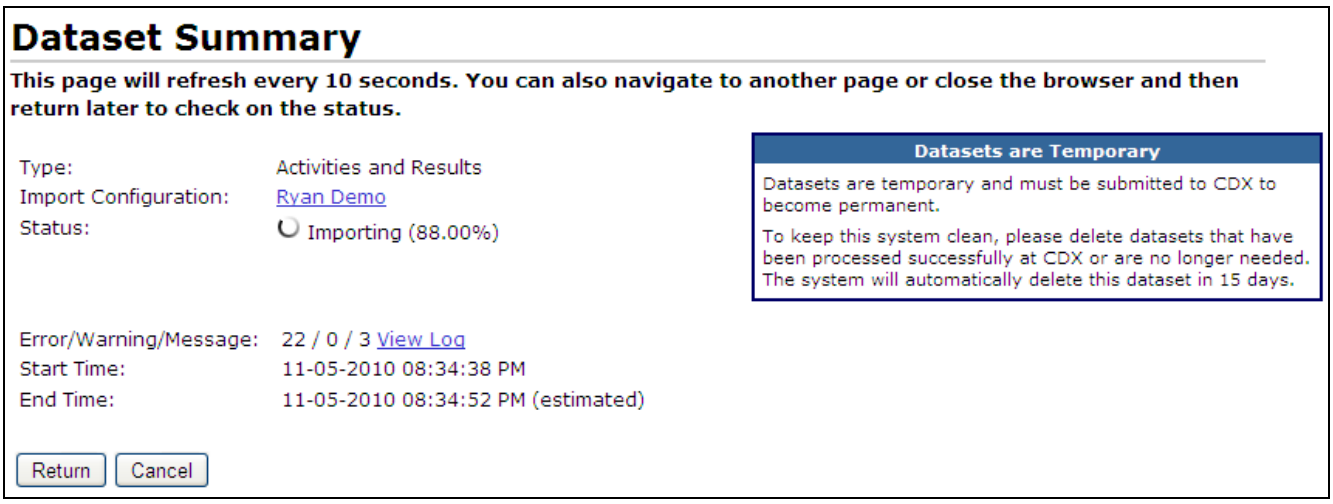
Review the table showing the generated values that will be used when importing this file. The Default Values are from the selected import configuration and can be overridden here for this file (without affecting the values in the import configuration). Change any values as needed.

Click the Continue button.

The system will begin importing the file(s) and validating the imported data. Validation will check for the following types of errors:

- Values that exceed the maximum allowed length
- Values that do not match a related lookup table value
- Values that are not in the correct format
- Values that are missing but are required in WQX.
- Other data rules as defined in the WQX Flow Configuration Document. This is new to WQX Web version 2.00.

The system will display the Dataset Summary page. The Dataset Summary page provides information regarding the status of a dataset, including the percent complete and a count of any warnings or errors logged so far. An animated image will spin to remind you that an active process is running on the server.



During the import process the status will be one of the following:

- **Waiting to Import** – The dataset has been queued for importing but has not yet started. Generally a dataset only has this status for a fraction of a second. In many cases you will not even see this status. However, in some cases when the server is

heavily loaded, a dataset may remain in this state for an extended period of time waiting for other datasets to finish processing.

- **Importing** – The dataset is being imported. Percent Complete and a count of Errors & Warnings will be displayed. If you wish to review the errors while the file is being processed, you can click the "View Log" link.

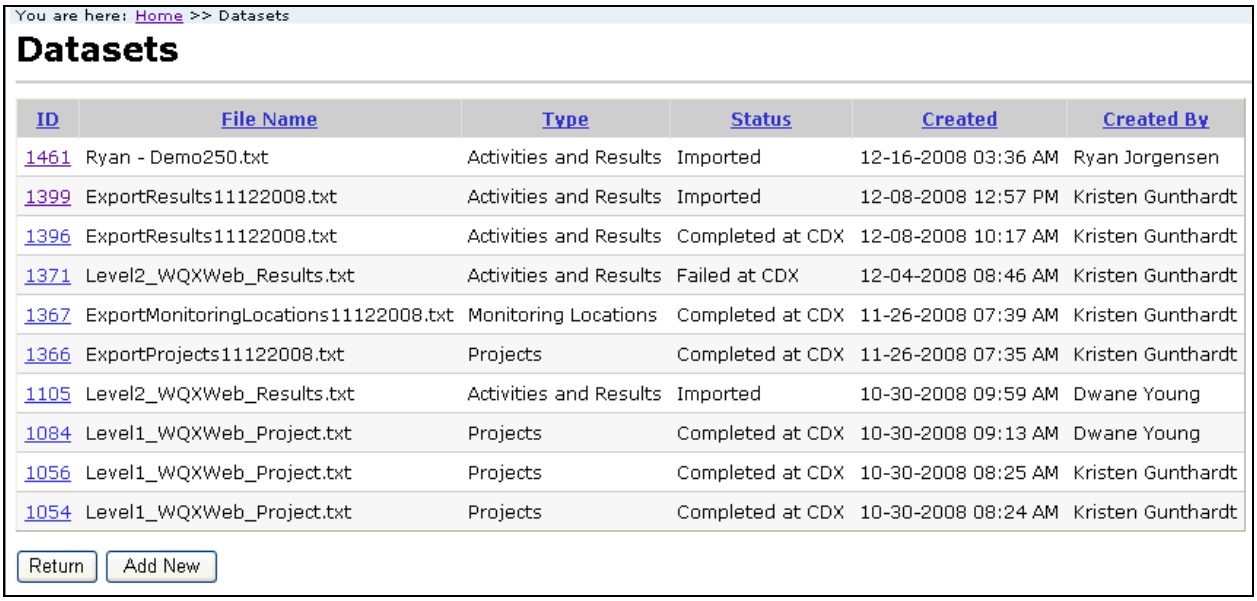
This page will refresh automatically and update the status, percent complete, and provide an estimated end time for the import process. If it appears that it will take more than a few minutes to complete you can choose to navigate elsewhere in the system and perform other tasks or leave the system entirely and come back at a later time. The process will continue on its own and you can check back at any time by following the instructions in the next section. When the import process completes it will have one of the following statuses:

- **Imported** – The dataset has been imported and validation errors, if any, may be reviewed and resolved. Record counts are displayed.
- **Import Failed** – Either the import was cancelled or there were serious errors that prevented the file from being imported. If you did not cancel the import, then you should click the "View Log" link to investigate what happened. One common cause of failure is when your import configuration doesn't match your import file. If you believe the error that was logged is a bug in the system, you should report it to the STORET help desk.

At this point, the Dataset Summary Page will display additional information about your dataset. See the next section for more information about the Dataset Summary Page.

4.3 Continuing with an Existing Dataset

Select the “Datasets” link on the Navigation Panel. This will navigate to the Datasets List Page. The page displays a list of datasets that you have created (or were created by other users in your organization).

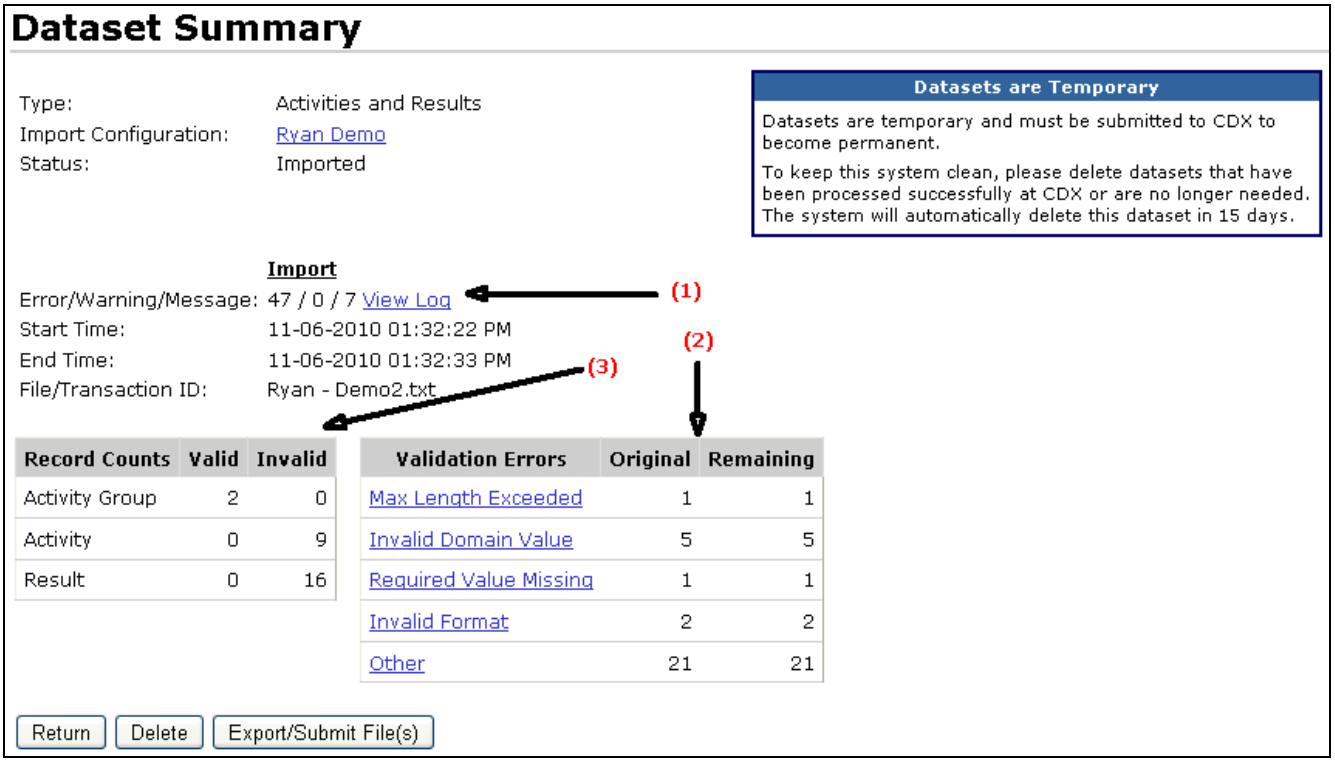

You are here: Home >> Datasets

Datasets

ID	File Name	Type	Status	Created	Created By
1461	Ryan - Demo250.txt	Activities and Results	Imported	12-16-2008 03:36 AM	Ryan Jorgensen
1399	ExportResults11122008.txt	Activities and Results	Imported	12-08-2008 12:57 PM	Kristen Gunthardt
1396	ExportResults11122008.txt	Activities and Results	Completed at CDX	12-08-2008 10:17 AM	Kristen Gunthardt
1371	Level2_WQXWeb_Results.txt	Activities and Results	Failed at CDX	12-04-2008 08:46 AM	Kristen Gunthardt
1367	ExportMonitoringLocations11122008.txt	Monitoring Locations	Completed at CDX	11-26-2008 07:39 AM	Kristen Gunthardt
1366	ExportProjects11122008.txt	Projects	Completed at CDX	11-26-2008 07:35 AM	Kristen Gunthardt
1105	Level2_WQXWeb_Results.txt	Activities and Results	Imported	10-30-2008 09:59 AM	Dwane Young
1084	Level1_WQXWeb_Project.txt	Projects	Completed at CDX	10-30-2008 09:13 AM	Dwane Young
1056	Level1_WQXWeb_Project.txt	Projects	Completed at CDX	10-30-2008 08:25 AM	Kristen Gunthardt
1054	Level1_WQXWeb_Project.txt	Projects	Completed at CDX	10-30-2008 08:24 AM	Kristen Gunthardt

Return Add New

Click the link on the ID of the dataset you wish to work with. The system will display the Dataset Summary page.



When the system processes an import file, it records three key items (annotated above), which are summarized on this page:

(1) As errors and warnings are identified, they are logged to an event log. This page summarizes the number of errors and warnings (as well the number of informational messages). See Section 4.4.1 for more information.

(2) Each error is categorized. The Validation Errors Table summarizes the number of each type of error. If no categorized errors were found, this table will not display. See Section 4.4 for more information.

(3) The record that is being processed is flagged as "Invalid" (if errors occurred) or "Valid" otherwise. The Valid/Invalid Table summarizes the type of record (e.g. Project, Activity, Result, …) and the number that are valid or invalid.

4.4 Resolving Validation Errors in a Dataset

As mentioned previously, the import process performs validation checks on the data in your import file. A summary of the findings are displayed in a "Validation Errors" table on the Dataset Summary Page.

Validation Errors	Original	Remaining
Max Length Exceeded	1	1
Invalid Domain Value	5	5
Required Value Missing	1	1
Invalid Format	2	2
Other	21	21

There are two main approaches to resolving errors that occurred while processing your import file.

1. Use "Resolution Pages" in WQX Web designed to fix specific types of errors. Currently not all errors can be corrected in WQX Web, so there are limitations to this approach.
   - If none of the errors listed in the Validation Errors Table are "Other" errors, then there is a good chance of being able to resolve all of your errors in WQX Web.
   - Otherwise, it's recommended that you use approach #2 below
2. Review the Event Log, correct your import file and then re-import it. See Section 4.4.1 for more information.
   - Even if you plan to re-import a corrected file, you may still consider addressing any "Invalid Domain Values" listed in the Validation Errors Table in order to create some translations for values you plan to continue to use that are not compatible with WQX. See Section 4.4.2 for more information.
3. You could consider using a hybrid approach to correcting errors.
   - Correct only the "other" errors and then re-import you file.
   - Then use the Resolution Pages to correct the remaining errors.

   The main advantage to this approach is that most Resolution Pages can fix a batch of issues with one change. For example, if an invalid domain value was used 100 time s in your file, you can make a single correction and all 100 occurrences will be corrected. However, the hybrid approach is not convenient right now, because the Event Log does not provide a way to distinguish between "other" errors and correctable errors. This is something that may be addressed in a future version of WQX Web.

Each type of error listed in the Validation Errors Table has a link to another page. Generally, these are Resolution Pages to allow you to correct the error (without having to re-import your data)

There are four types of validation errors that can be corrected in the system:

1. Invalid Domain Value – A value in the import file didn't match any of the allowed values in the lookup table for the corresponding data element. See Section 4.4.2
2. Invalid Format – The format of a value in the import file didn't match the format you specified in your import configuration for the corresponding data element. See Section 4.4.3

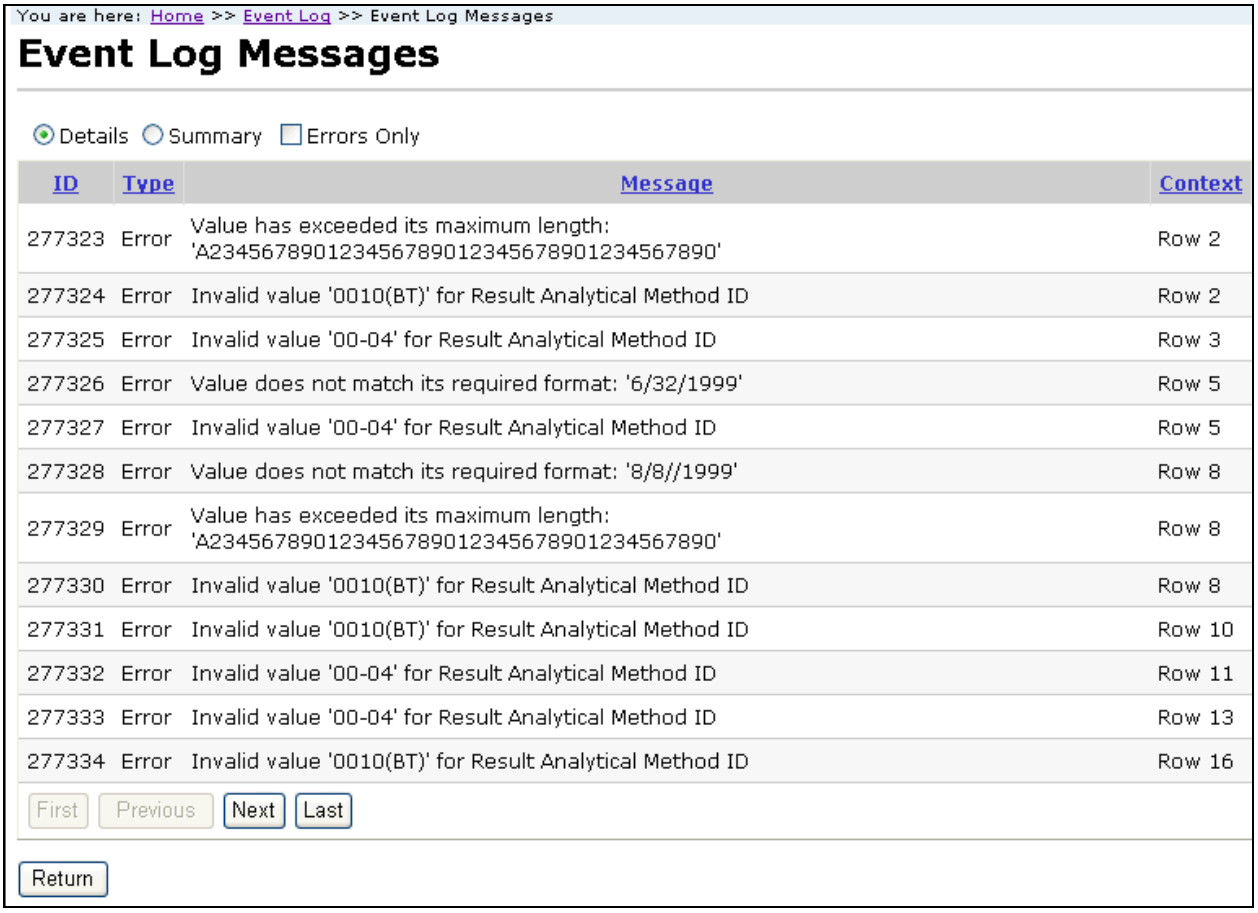
3. Maximum Length Exceeded – The length of a value in the import file exceeded the maximum allowable length of the corresponding data element. See Section 4.4.4
4. Required Value Missing – The import file was missing a value that is required to create a valid WQX Submission File. See Section 4.4.5

The following types of validation errors cannot be corrected in WQX Web:

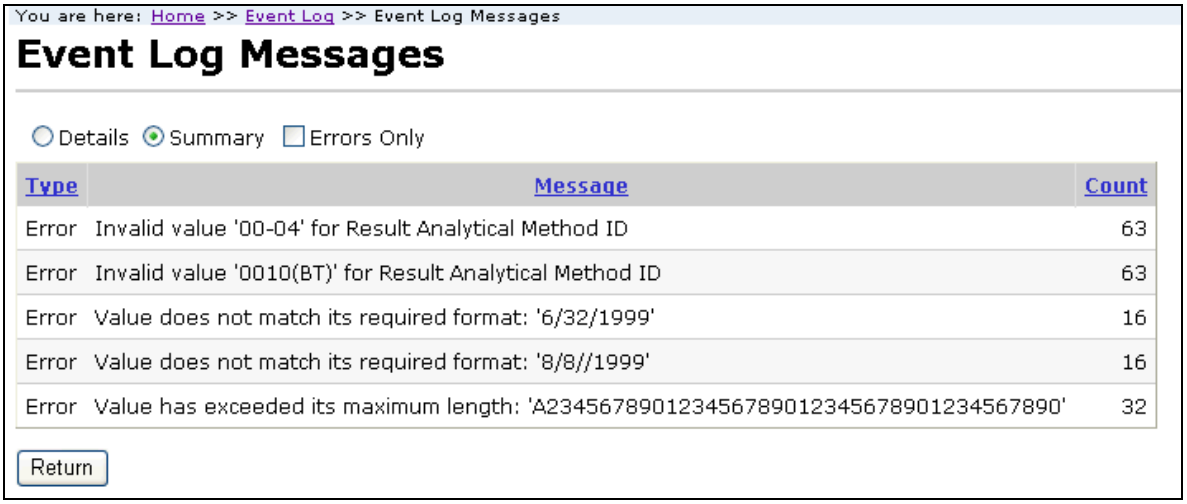
5. Invalid Translation – this is a rare error to occur, but it indicates that a value in your import file did not match a translation in the import configuration and the import column is mapped to more than one WQX data element. If you have at least one translation on this column and no defaults (in the import configuration) then a translation is required for every value in that column position in your import file. See the Section 3.5.1 (*Using Translations to Populate Many Related Data Elements)* for more information.
6. Other – starting in WQX Web version 2.00, all the data rules defined in the WQX Flow Configuration Document (FCD) are now validated on an import file. At this point, WQX Web validates the exact same rules as WQX. Errors relating to these rules are all categorized as "Other" in the Validation Errors Table. Currently there is no way to corrected them (without re-importing your file).

4.4.1 View Event Log Messages:

To review the list of errors, warnings and messages logged while your import file was processed, click the "View Log" link on the Dataset Summary Page. This will display the Event Log Messages Page.



You can select the "Summary" radio button at the top of the page to get a summary of each error or warning (and the number of times it occurred). This is a quick way to assess the specific issues that need to be resolved.

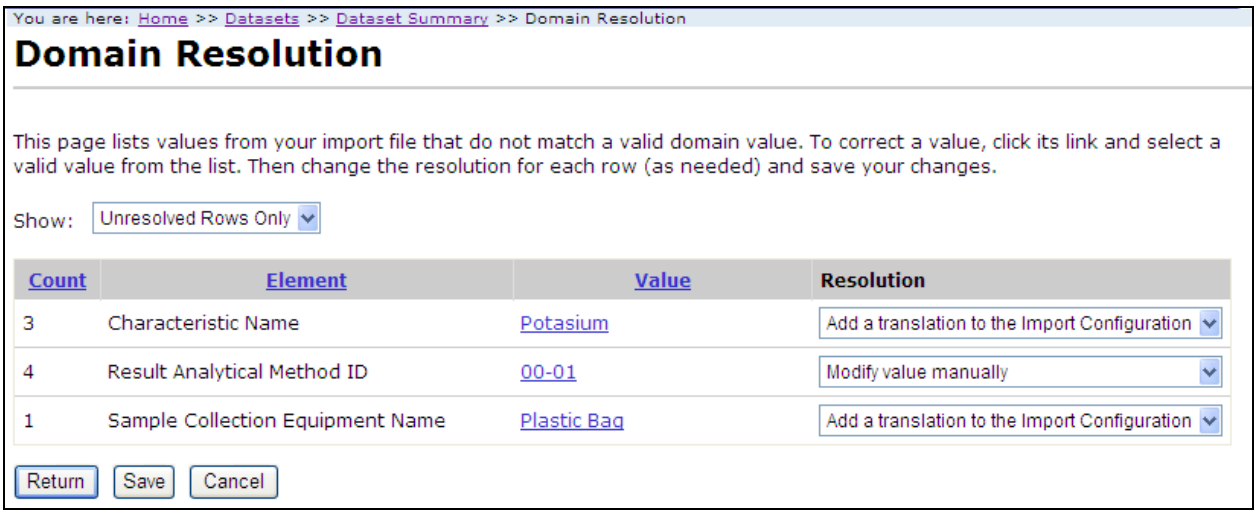


Check the "Errors Only" checkbox if you want to hide warnings and informational messages.

Select the Return button to navigate back to the Dataset Summary page.

4.4.2 Resolving Invalid Domain Values

To resolve domain value errors, click the "Invalid Domain Value" link on the Dataset Summary page. The system will display the Domain Resolution page.



This page allows you to resolve errors where the value in your import file did not match an allowed value for that data element.

- Count – This column displays the number of times the error occurred (in a particular import column position).
- Element – This column displays the name of the data element that was used for validation.
- Value – This column displays the current value for the data element. Before the value is corrected, this displays the value from your import file. After it's been corrected, it displays the corrected value.
- Resolution – This column displays a dropdown list allowing you to select the method of resolving the validation error:
    - *Add a translation to the Import Configuration*: selecting this will create a translation in your Import Configuration so that any future file having the same value (in the same column) will be corrected automatically.
    - *Modify value manually*: selecting this will update the value(s) in this dataset, but will not create a translation in your Import Configuration.

  Note: there is a preference on the User Preference Page where you can set the default value for the Resolution dropdown list so that you only have to change the selection when it doesn't match your standard choice for Resolution.

Repeat the following three steps on each row on the page (to correct all domain value errors):

1. Click the link in the Value column. A list of allowed values for that element will be displayed.

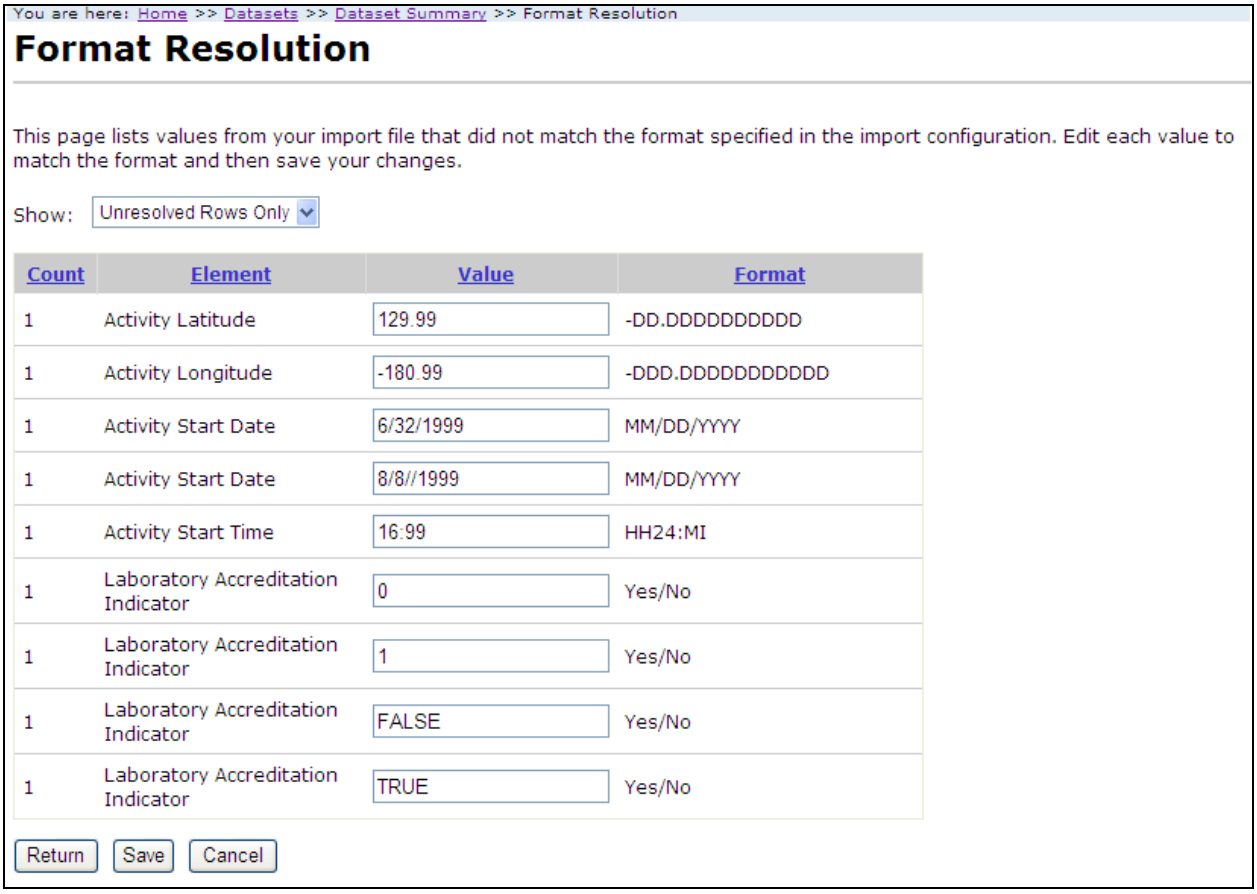
2. Click the value you wish to select. The new value will now be displayed on the Resolution Page.
    a. Note that although "{none}" is a standard choice in all lists of values, the resolution page will not allow it.
3. Change the "Resolution" value, if needed.

Click the Save button to save your changes and refresh the page (showing the remaining unresolved rows). This is particularly useful if there is more than one page of errors. Otherwise you can click the Return button to save your changes and return to the Dataset Summary page.

The dataset summary page will update the counts in the Validation Error Table to account for the records you corrected. However, the counts in the Valid/Invalid Table will not change. In order for that table to be updated, you must click the "Revalidate Changes" button that will now be visible on the Dataset Summary Page. This is a manual step, because it can take a fair amount of time on large datasets. It is only required that you click this button once before you export your data (so that all changed data will be rechecked before exporting – because only valid records are exported).

4.4.3 Resolving Invalid Formats

To resolve format errors, click the “Invalid Format” link on the Dataset Summary page. The system will display the Format Resolution page.



This page allows you to resolve errors where the value in your import file did not match the format you specified in your import configuration.

- Count – This column displays the number of times the error occurred (in a particular import column position).
- Element – This column displays the name of the data element that was used for validation.
- Value – This column displays the current value for the data element. Before the value is corrected, this displays the value from your import file. After it's been corrected, it displays the corrected value.
- Format – This column displays the format (from your import configuration) that the value must match.

Update the Value column on each row to an appropriate value that matches the required format.

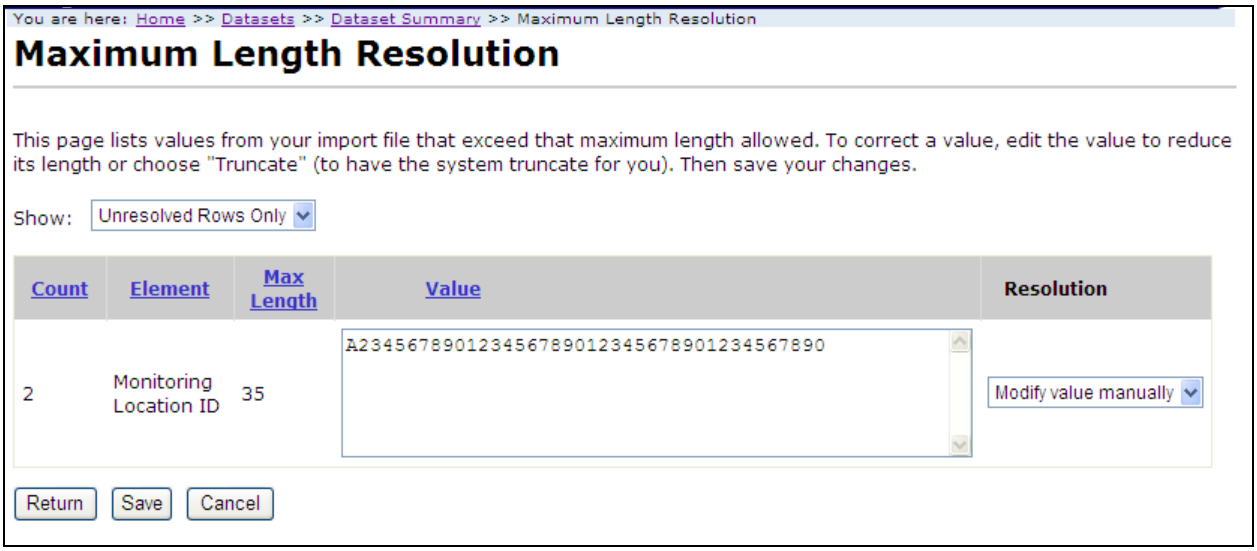
Click the Save button to save your changes and refresh the page (showing the remaining unresolved rows). This is particularly useful if there is more than one page of errors. Otherwise you can click the Return button to save your changes and return to the Dataset Summary page.

The dataset summary page will update the counts in the Validation Error Table to account for the records you corrected. However, the counts in the Valid/Invalid Table will not change. In order for that table to be updated, you must click the "Revalidate Changes" button that will now be visible on the Dataset Summary Page. This is a manual step, because it can take a fair amount of time on large datasets. It is only required that you click this button once before you export your

data (so that all changed data will be rechecked before exporting – because only valid records are exported).

4.4.4 Resolving Values that Exceed Maximum Length

To resolve maximum length errors, click the "Max Length Exceeded" link on the Dataset Summary page. The system will display the Maximum Length Resolution page.



This page allows you to resolve errors where the value in your import file exceeded the maximum length allowed for a data element.

- Count – This column displays the number of times the error occurred (in a particular import column position).
- Element – This column displays the name of the data element that was used for validation.
- Max Length – This column display the maximum length for the data element
- Value – This column displays the current value for the data element. Before the value is corrected, this displays the value from your import file. After it's been corrected, it displays the corrected value.
- Resolution – This column displays a dropdown list allowing you to select the method of resolving the validation error:
    - *Truncate value to fit*: selecting this will tell the system to automatically trim off any excess characters from the value so that it will fit within the allowed size. No change to the value is needed. If you change the value manually to fit within the allowed size, this instruction will be ignored and your new value will be used.
    - *Modify value manually*: selecting this will tell the system that you have updated the value manually to something that fits within its allowed size.

Note: there is a preference on the User Preference Page where you can set the default value for the Resolution dropdown list, so that you only have to change the selection when it doesn't match your standard choice for Resolution.

Change the "Resolution" value, as needed, on each row.

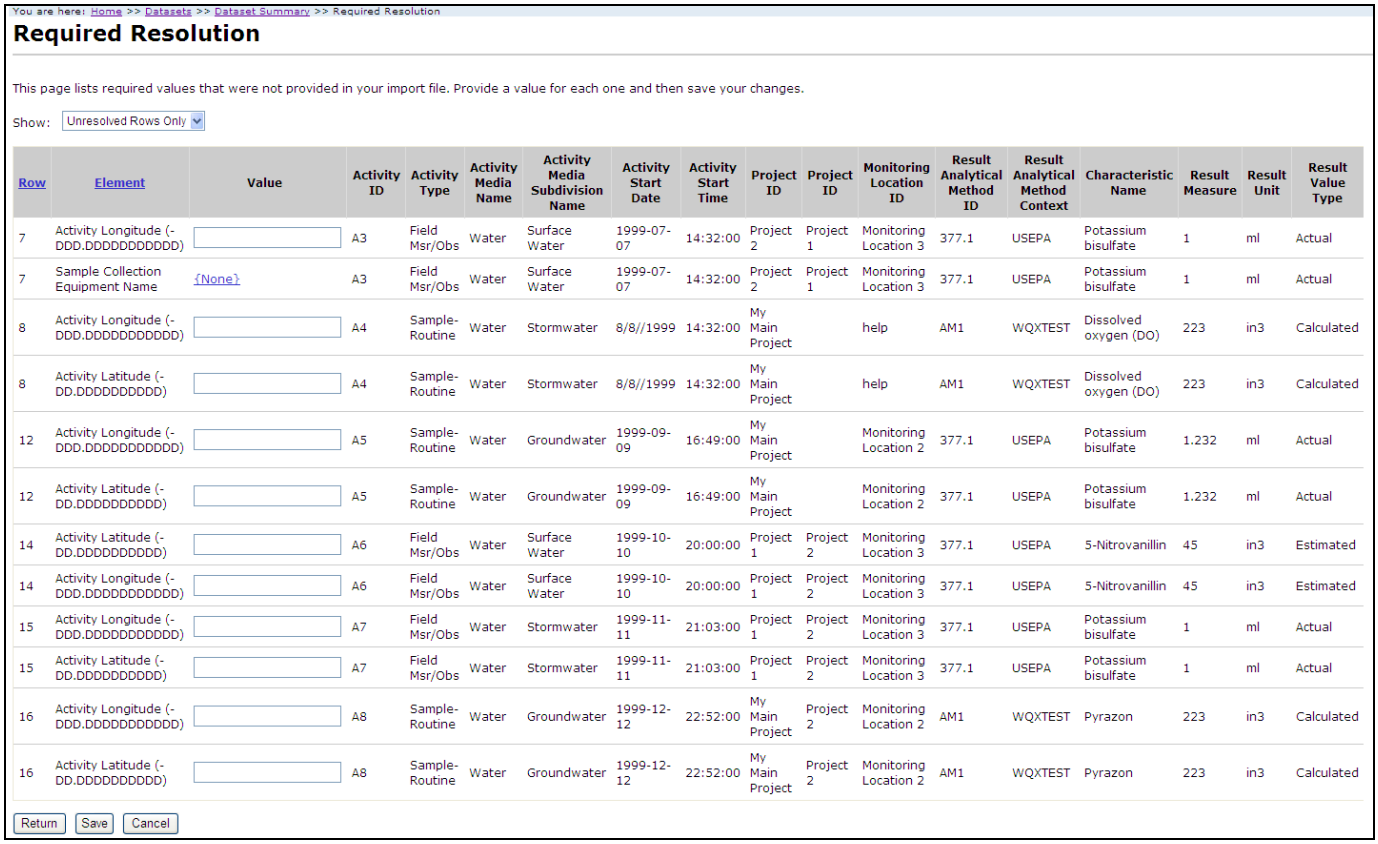
Update any rows where the resolution selected is "Modify value manually". Otherwise, you can leave the values unchanged.

Click the Save button to save your changes and refresh the page (showing the remaining unresolved rows). This is particularly useful if there is more than one page of errors. Otherwise you can click the Return button to save your changes and return to the Dataset Summary page.

The dataset summary page will update the counts in the Validation Error Table to account for the records you corrected. However, the counts in the Valid/Invalid Table will not change. In order for that table to be updated, you must click the "Revalidate Changes" button that will now be visible on the Dataset Summary Page. This is a manual step, because it can take a fair amount of time on large datasets. It is only required that you click this button once before you export your data (so that all changed data will be rechecked before exporting – because only valid records are exported).

4.4.5 Resolving Required Values that are Missing

To resolve required value errors, click the “Required Value Missing” link on the Dataset Summary page. The system will display the Required Resolution page.



You are here: Home >> Datasets >> Dataset Summary >> Required Resolution

Required Resolution

This page lists required values that were not provided in your import file. Provide a value for each one and then save your changes.

Show: Unresolved Rows Only

Row	Element	Value	Activity ID	Activity Type	Activity Media Name	Activity Media Subdivision Name	Activity Start Date	Activity Start Time	Project ID	Project ID	Monitoring Location ID	Result Analytical Method ID	Result Analytical Method Context	Characteristic Name	Result Measure	Result Unit	Result Value Type
7	Activity Longitude (-DDD.DDDDDDDDDD)		A3	Field Msr/Obs	Water	Surface Water	1999-07-07	14:32:00	Project 2	Project 1	Monitoring Location 3	377.1	USEPA	Potassium bisulfate	1	ml	Actual
7	Sample Collection Equipment Name	{None}	A3	Field Msr/Obs	Water	Surface Water	1999-07-07	14:32:00	Project 2	Project 1	Monitoring Location 3	377.1	USEPA	Potassium bisulfate	1	ml	Actual
8	Activity Longitude (-DDD.DDDDDDDDDD)		A4	Sample-Routine	Water	Stormwater	8/8//1999	14:32:00	My Main Project		help	AM1	WQXTEST	Dissolved oxygen (DO)	223	in3	Calculated
8	Activity Latitude (-DD.DDDDDDDDD)		A4	Sample-Routine	Water	Stormwater	8/8//1999	14:32:00	My Main Project		help	AM1	WQXTEST	Dissolved oxygen (DO)	223	in3	Calculated
12	Activity Longitude (-DDD.DDDDDDDDDD)		A5	Sample-Routine	Water	Groundwater	1999-09-09	16:49:00	My Main Project		Monitoring Location 2	377.1	USEPA	Potassium bisulfate	1.232	ml	Actual
12	Activity Latitude (-DD.DDDDDDDDD)		A5	Sample-Routine	Water	Groundwater	1999-09-09	16:49:00	My Main Project		Monitoring Location 2	377.1	USEPA	Potassium bisulfate	1.232	ml	Actual
14	Activity Latitude (-DD.DDDDDDDDD)		A6	Field Msr/Obs	Water	Surface Water	1999-10-10	20:00:00	Project 1	Project 2	Monitoring Location 3	377.1	USEPA	5-Nitrovanillin	45	in3	Estimated
14	Activity Longitude (-DDD.DDDDDDDDDD)		A6	Field Msr/Obs	Water	Surface Water	1999-10-10	20:00:00	Project 1	Project 2	Monitoring Location 3	377.1	USEPA	5-Nitrovanillin	45	in3	Estimated
15	Activity Longitude (-DDD.DDDDDDDDDD)		A7	Field Msr/Obs	Water	Stormwater	1999-11-11	21:03:00	Project 1	Project 2	Monitoring Location 3	377.1	USEPA	Potassium bisulfate	1	ml	Actual
15	Activity Latitude (-DD.DDDDDDDDD)		A7	Field Msr/Obs	Water	Stormwater	1999-11-11	21:03:00	Project 1	Project 2	Monitoring Location 3	377.1	USEPA	Potassium bisulfate	1	ml	Actual
16	Activity Longitude (-DDD.DDDDDDDDDD)		A8	Sample-Routine	Water	Groundwater	1999-12-12	22:52:00	My Main Project	Project 2	Monitoring Location 2	AM1	WQXTEST	Pyrazon	223	in3	Calculated
16	Activity Latitude (-DD.DDDDDDDDD)		A8	Sample-Routine	Water	Groundwater	1999-12-12	22:52:00	My Main Project	Project 2	Monitoring Location 2	AM1	WQXTEST	Pyrazon	223	in3	Calculated

Return Save Cancel

This page allows you to provide a value for a data element that was not provided in the import file but is required by WQX. Unlike the other resolution pages that group related changes together to save you time, this page requires that you address each missing value individually.

- Row – This column displays the row where the missing value originated.
- Element – This column displays the name of the data element that is missing a required value.
- Value – This column displays the current value for the data element. Before the value is corrected, this will display {none} or an empty text box. After it's been corrected, it displays the corrected value.
- Other element value columns – The rest of the columns are there to provide you with sufficient context information so that you can assess what the missing value should be. These columns display the current values for data elements that came from the same row of the import file.

Fill in a value (in the Value column) on each row. If the value is constrained by a list of values, click the {none} link to display and select the desired value.

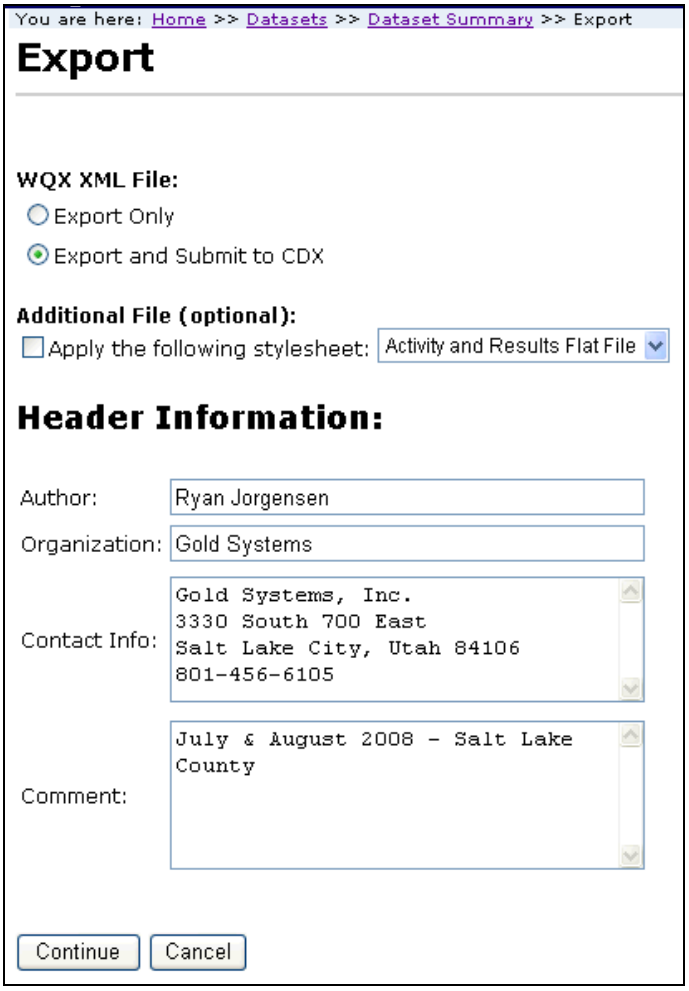
Click the Save button to save your changes and refresh the page (showing the remaining unresolved rows). This is particularly useful if there is more than one page of errors. Otherwise you can click the Return button to save your changes and return to the Dataset Summary page.

The dataset summary page will update the counts in the Validation Error Table to account for the records you corrected. However, the counts in the Valid/Invalid Table will not change. In order for that table to be updated, you must click the "Revalidate Changes" button that will now be visible on the Dataset Summary Page. This is a manual step, because it can take a fair amount of time on large datasets. It is only required that you click this button once before you export your data (so that all changed data will be rechecked before exporting – because only valid records are exported).

4.5 Exporting / Submitting a Dataset to CDX

Before a dataset becomes final it must be submitted to CDX where it will be processed by the WQX System and loaded into the WQX Database.

1. Click the “Export/Submit File(s)” button on the Dataset Summary Page.
2. If you have made changes to your data (using the Resolution Pages) and have not yet clicked the "Revalidate Changes" button, you will prompted to do so. The system must revalidate any changed data before exporting to determine if there are any invalid records (which will not be exported).
3. The system will now display the Export Page.



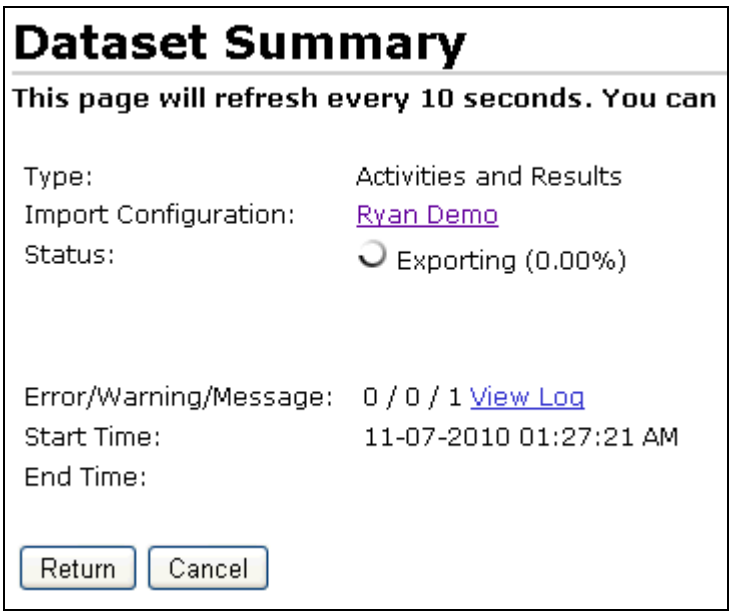
4. You have two choices when exporting. If you do not wish to submit to CDX (because you have your own node, or you have already submitted this dataset), then choose "Export Only". Otherwise, leave the default choice of "Export and Submit to CDX"
5. If the dataset is one of the following three types you also have the option of applying a stylesheet to convert your WQX XML file to a flat file.
    a. Monitoring Locations
    b. Activities and Results
    c. Activities and Metrics

    The flat file version of your export file can be useful if you wish to review or archive your export data in a more user-friendly format. Remember that if you've already submitted your dataset to CDX and just want to create a flat file this time, choose the "Export Only" option (as described in the previous step).

    If you check the box to apply a stylesheet to your XML File, the export process will create two files (described later).
6. The Header Information is used to populate the header that is part of every Exchange Network Submission File. This section is automatically populated from the data from your User Detail Page. Correct any of the header information as necessary. It helps

identify who submitted the file and allows you to add any comments that might be helpful (mostly for your own use) in understanding what this dataset includes.

7. Click the Continue button to begin the export.
8. The system will display the Dataset Summary page. When datasets are being imported or exported the Dataset Summary Page has a simplified layout (as seen below). The page provides information regarding the status of a dataset, including the percent complete and a count of any warnings or errors logged so far. An animated image will spin to remind you that an active process is running on the server.



The status of the dataset is displayed. During the export process the status will be one of the following:

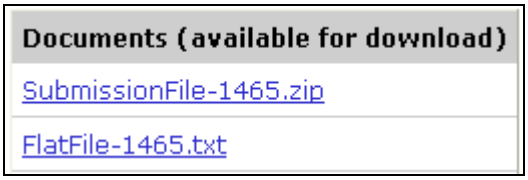
- Waiting to Export – The dataset has been queued for exporting but has not yet started. Generally a dataset only has this status for a fraction of a second. In many cases you will not even see this status. However, in some cases when the server is heavily loaded, a dataset may remain in this state for an extended period of time waiting for other datasets to finish processing.
- Waiting to Export and Submit – Same as previous status, but only used when submitting to CDX
- Exporting – The dataset is being exported.

This page will refresh automatically and update the status, percent complete, and provide an estimated end time for the export process. If it appears that it will take more than a few minutes to complete you can choose to navigate elsewhere in the system and perform other tasks or leave the system entirely and come back at a later time. The process will continue on its own and you can check back at any time by following the instructions in the next section.

9. When the export process completes the dataset will have one of the following statuses:

- Exported – The dataset has been exported. This is only used when you are not submitting to CDX. When submitting to CDX this status is skipped.
- Processing at CDX – The submission file has been submitted to CDX and is being processed there. Keep in mind that the percent complete and estimated end time will remain fixed at this point (until the file is completed at CDX), because WQX Web doesn't know about incremental progress at CDX.

At this point, the Dataset Summary Page will display an additional table with links to files that you can download.



One or two documents will be available after the export has completed.

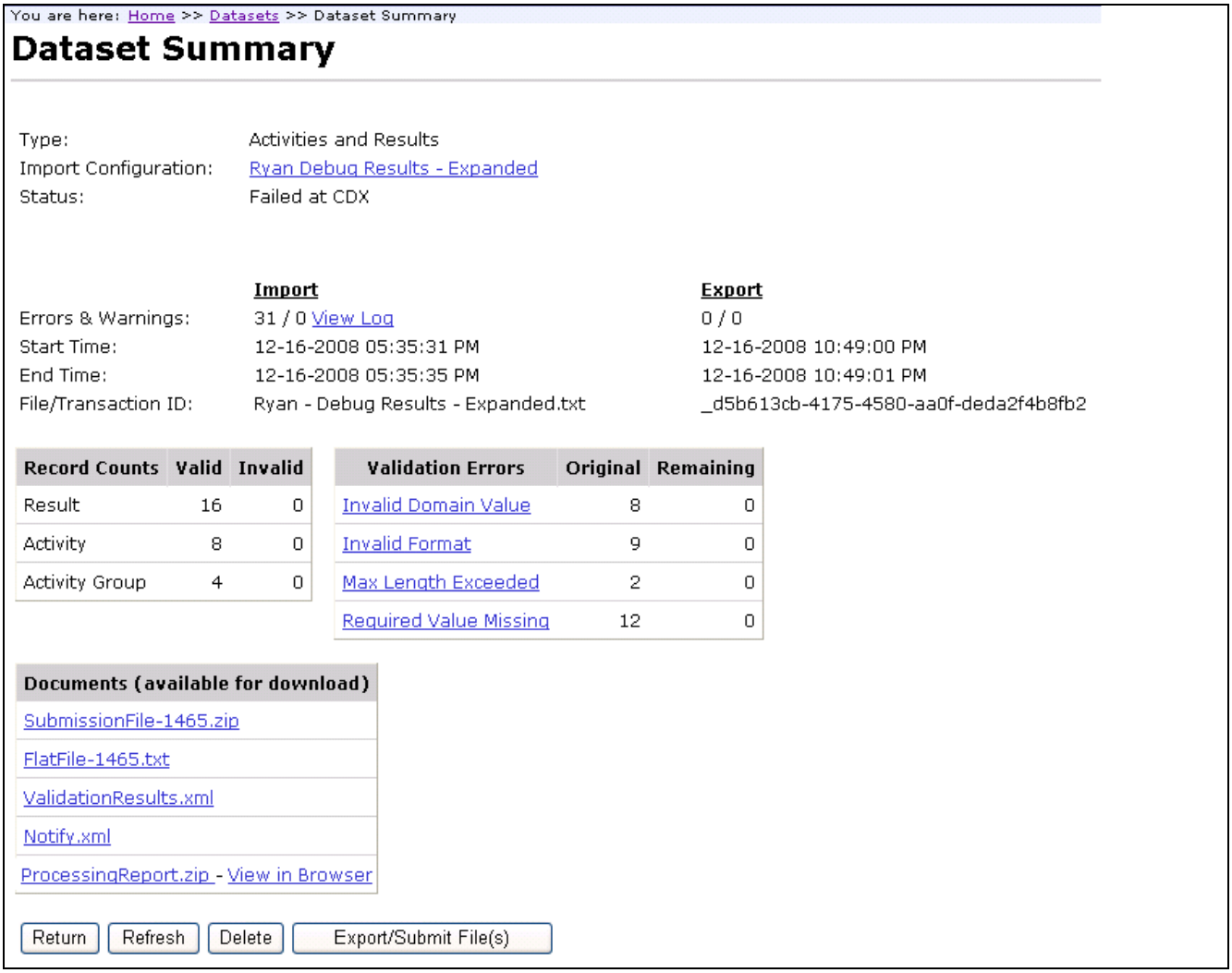
- SubmissionFile-9999.zip – This is your WQX Submission File (zipped up). The numeric portion of the name will be different each time.
- FlatFile-9999.txt – If you chose to apply a stylesheet to create a flat file version of your dataset, you will also have this file available for download.

For further explanation of these files see the section titled "Downloading Files" below.

10. When the processing at CDX is completed, the dataset will have one of the following statuses:

- Failed at CDX – At least one error was logged while processing the file in the WQX System at CDX.
- Completed at CDX – No errors were found while processing the file in the WQX System at CDX. All of your data successfully loaded.

At this point, the list of Documents will include all of the documents created during the processing at CDX (in addition to the ones mentioned previously).



The documents available for download are as follows (in the order they are created in the export/submit process):

- SubmissionFile-9999.zip – This is your WQX Submission File that was created in the export process. The numeric portion of the name will be different for each dataset. This is an XML document contained inside a Zip File.
    - Even if you submitted this file directly to CDX, you are encouraged to download a copy of this for your own records (so that you have a backup copy of each file sent to EPA).
- FlatFile-9999.txt – If you chose to apply a stylesheet to create a flat file version of your dataset during the export process, you will also have this file available for download. The numeric portion of the name will be different for each dataset. This is a tab-delimited text file that contains the same information in it that was contained in your XML submission file. This file can be a useful way to review the data that was sent in your submission file, because it can be easily opened with tools like Microsoft Excel. Keep in mind that this is a one-size-fits-all file that contains columns for every data element available in an import configuration (whether you use them or not), so you may have a large number of columns

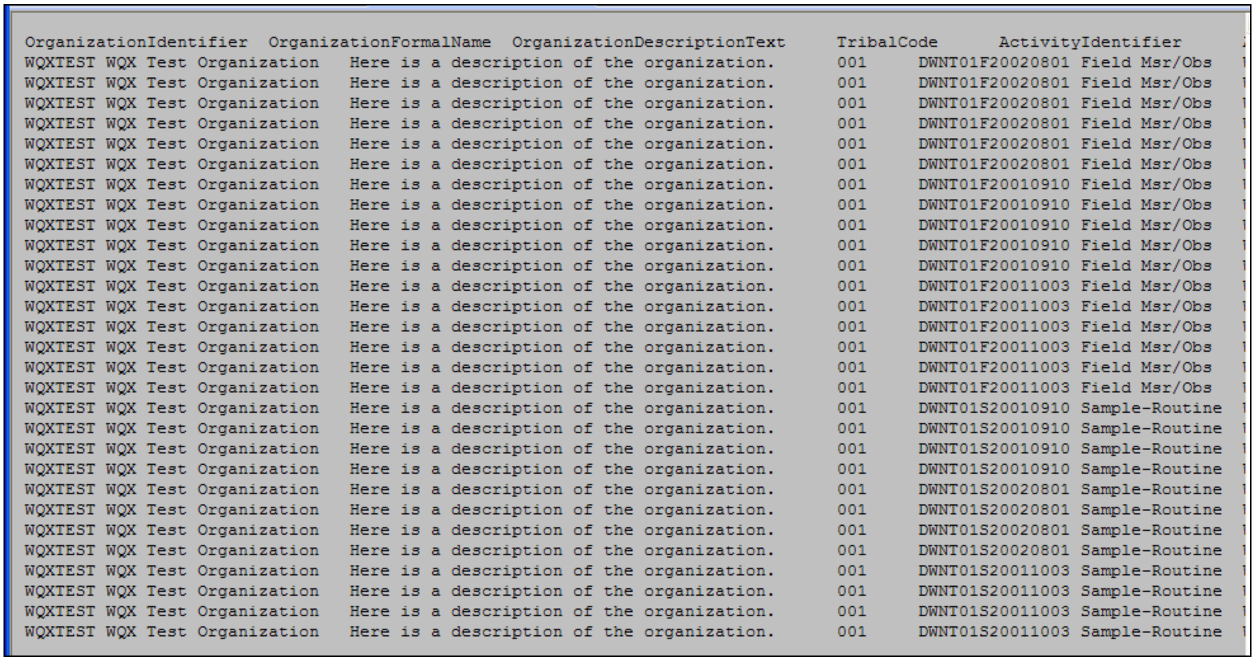
without any data in them. It will also create several columns for elements that are allowed to repeat multiple times in WQX (such as a Project ID for an Activity).

- ValidationResults.xml – This is a report produced by CDX when it compares your submission file against the WQX XML Schema document (which is a document that describes the format that every WQX Submission File must follow). Typically you will not need to view this document because it will just say that the document was valid. If, for some reason, you never receive the next two documents mentioned below, you should view this document to see if it describes a problem with your file. If it does, you should follow up with EPA because this may suggest a bug in the system that needs to be resolved.
- Notify.xml – This is copy of the final response that the WQX System sent to CDX when it was done processing your submission file. Typically you will not need to view this document because it will just state the final status of your submission (which you already have on this page) and remind you to view the Processing Report (next) to view the outcome of your submission. Once again, if, for some reason, you never receive the next document mentioned below, you should view this document to see if it describes a problem that occurred in the WQX System. If it does, you should follow up with EPA because this may suggest an issue in the WQX System that needs to be resolved.
- ProcessingReport.zip – This is a report of everything that was logged in the WQX System while processing your submission file. It's not critical to look at this file if your dataset status is "Completed at CDX" because all of your data loaded successfully and there is nothing more you need to do. It still may be useful to download and save this file for your records because it contains information that could be useful to you or EPA at some future time. If your final dataset status is "Failed at CDX" (which should be rare), this file is critical for you to look at, because it contains information about errors while processing your submission file.

A few details to note when downloading documents from the Dataset Summary Page:

Certain types of documents will often load in your browser window. Typically this is true for .txt and .xml files.

For example, if you click on the FlatFile-9999.txt link you will typically see the file in a separate browser window.

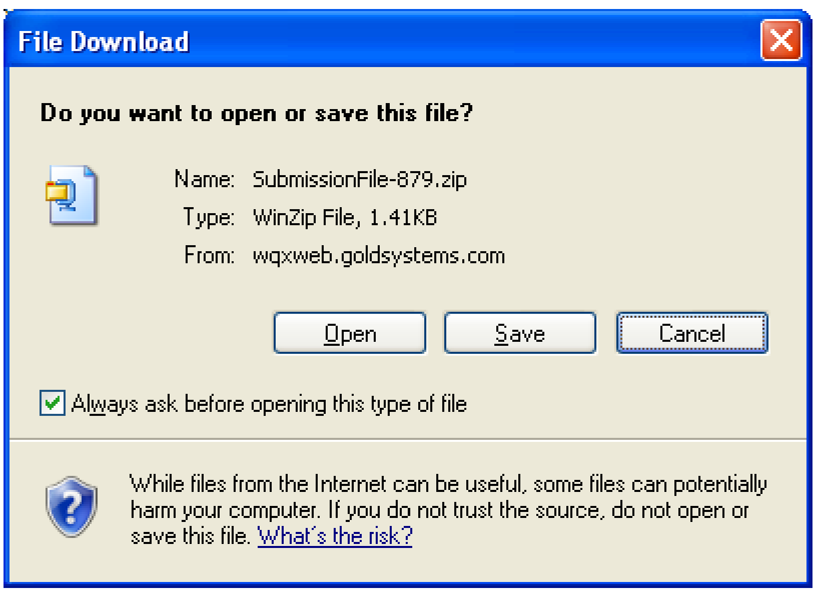


OrganizationIdentifier	OrganizationFormalName	OrganizationDescriptionText	TribalCode	ActivityIdentifier	:
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20020801 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20020801 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20020801 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20020801 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20020801 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20020801 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20010910 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20010910 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20010910 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20010910 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20010910 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20011003 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20011003 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20011003 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20011003 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20011003 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01F20011003 Field Msr/Obs	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01S20010910 Sample-Routine	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01S20010910 Sample-Routine	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01S20010910 Sample-Routine	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01S20010910 Sample-Routine	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01S20020801 Sample-Routine	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01S20020801 Sample-Routine	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01S20020801 Sample-Routine	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01S20020801 Sample-Routine	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01S20011003 Sample-Routine	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01S20011003 Sample-Routine	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01S20011003 Sample-Routine	1
WQXTEST	WQX Test Organization	Here is a description of the organization.	001	DWNT01S20011003 Sample-Routine	1

If the file does not open, you may need to tell your pop-up blocker to allow pop-ups on this site.

If you want to download and save a local copy of the file, you can right click on the FlatFile-9999.txt link (in Internet Explorer 7) and chose the "Save Target As…" menu. This will open a file window where you can specify the location that you want to save the file.

Zip files will download by default, so you can click their links and you will be given the opportunity to specify the location that you want to save the file.



Unzip the file locally and then open the XML File found inside (ProcessingReport.xml). The Processing Report also has a "View in Browser" link. If you click this link it will be converted to a web-based report using a stylesheet created by EPA. This provides a more user-friendly format (see below).

Here's an example of what the log portion of the processing report looks like when viewed in the browser:

Processing Log

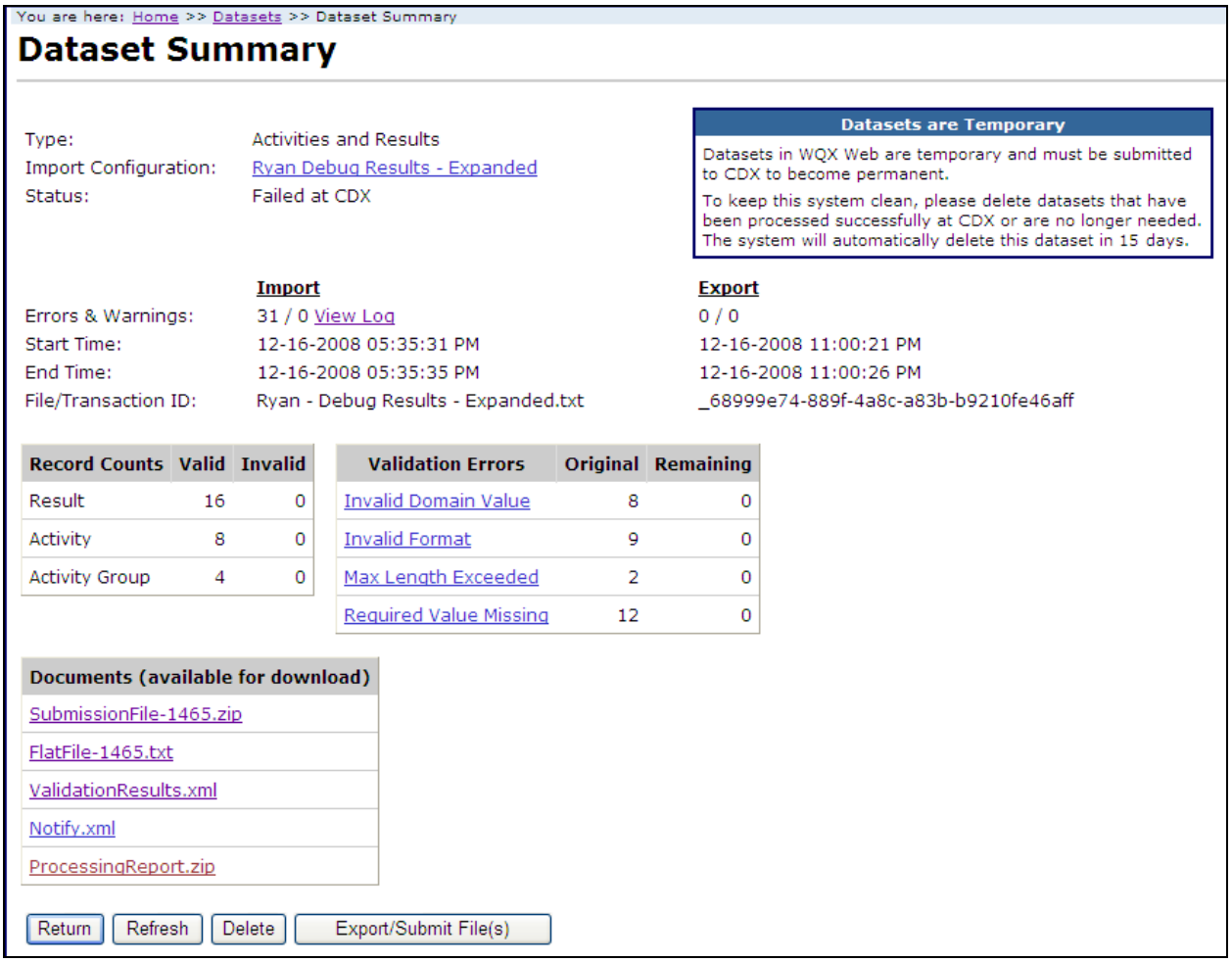
*This table shows unique errors. For line-specific errors, view the source XML file by viewing the Page Source in the Browser	
Message	Parse and Load started at 12/16/2008 11:00:58 PM
Error	Project Identifier "My Main Project" is invalid
Error	Analytical Method Identifier Context (WQXTEST) is invalid. The value must match a value from the domain list or be the same as your Organization Identifier if it's your own private method).
Error	Sample Fraction Name is required when Characteristic Name = "Pyrazon"
Error	Characteristic Name and Result Status Identifier are required when Result Measure is reported
Error	Characteristic Name must be "Count" when Biological Intent Name is "Frequency Class"
Error	Sample Fraction Name is required when Characteristic Name = "Potassium bisulfate"
Error	Monitoring Location Identifier "Monitoring Location 2" is invalid
Error	Project Identifier "Project 2" is invalid
Error	Project Identifier "Project 1" is invalid
Error	Sample Fraction Name is required when Characteristic Name = "5-Nitrovanillin"
Error	Characteristic Name must be "Count" or "Total Sample Weight" when Biological Intent Name is "Population Census"
Error	Monitoring Location Identifier "Monitoring Location 3" is invalid
Error	Sample Collection Method is required when Activity Type Code contains the word "Sample"
Error	Activity Identifier "A1" is invalid
Error	Activity Identifier "A2" is invalid
Message	Parse and Load completed at 12/16/2008 11:01:04 PM

4.6 Deleting a Dataset

Datasets in WQX Web are temporary and only become final after they have been submitted to CDX and loaded successfully in the WQX System. You are encouraged to delete your datasets once they have received a status of “Completed at CDX”. Deleting a dataset will have no effect on

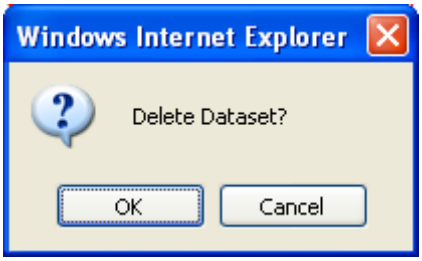
data that has been submitted to CDX. You are only deleting the temporary data that was used to create the submission file that sent to CDX.

To keep the system clean, datasets that reach a certain age will be automatically removed from the system. The dataset summary page will tell you how many days are remaining before the dataset will be automatically deleted.



To delete a dataset manually, click the Delete button on the Dataset Summary Page.

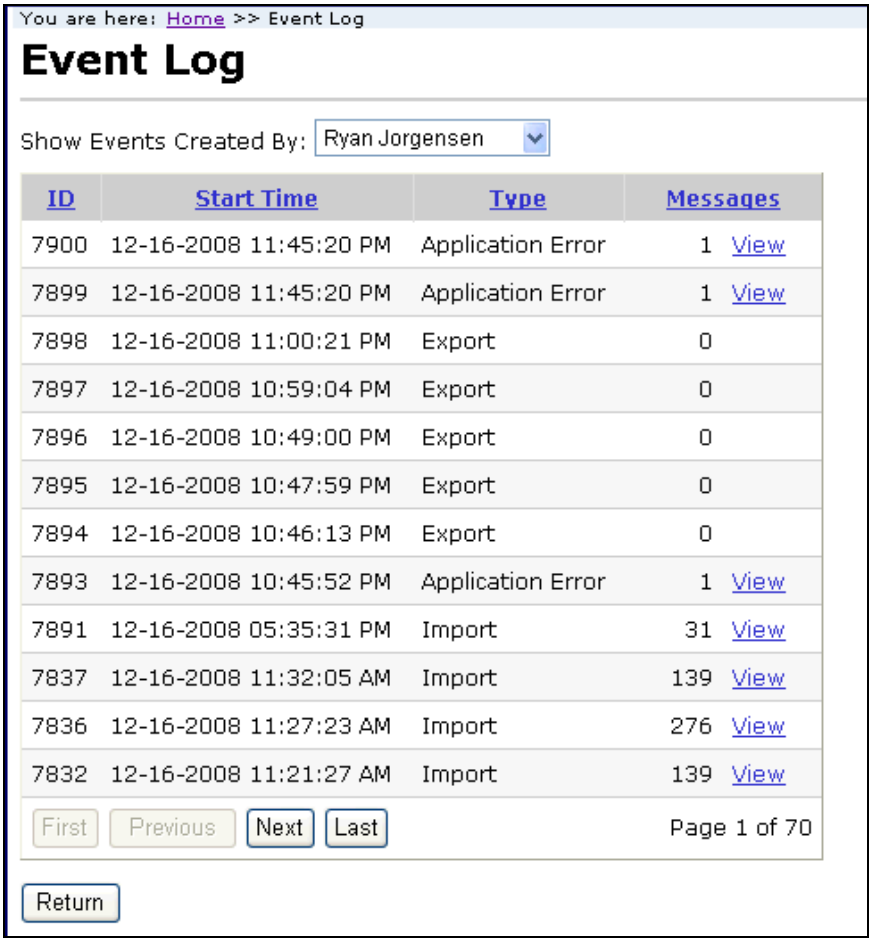
You will be asked to confirm before the dataset is actually deleted.



You will then be returned to the Datasets list page.

5.0 Viewing the Event Log

Click on the “Event Log” link on the navigation panel to view the Event Log.

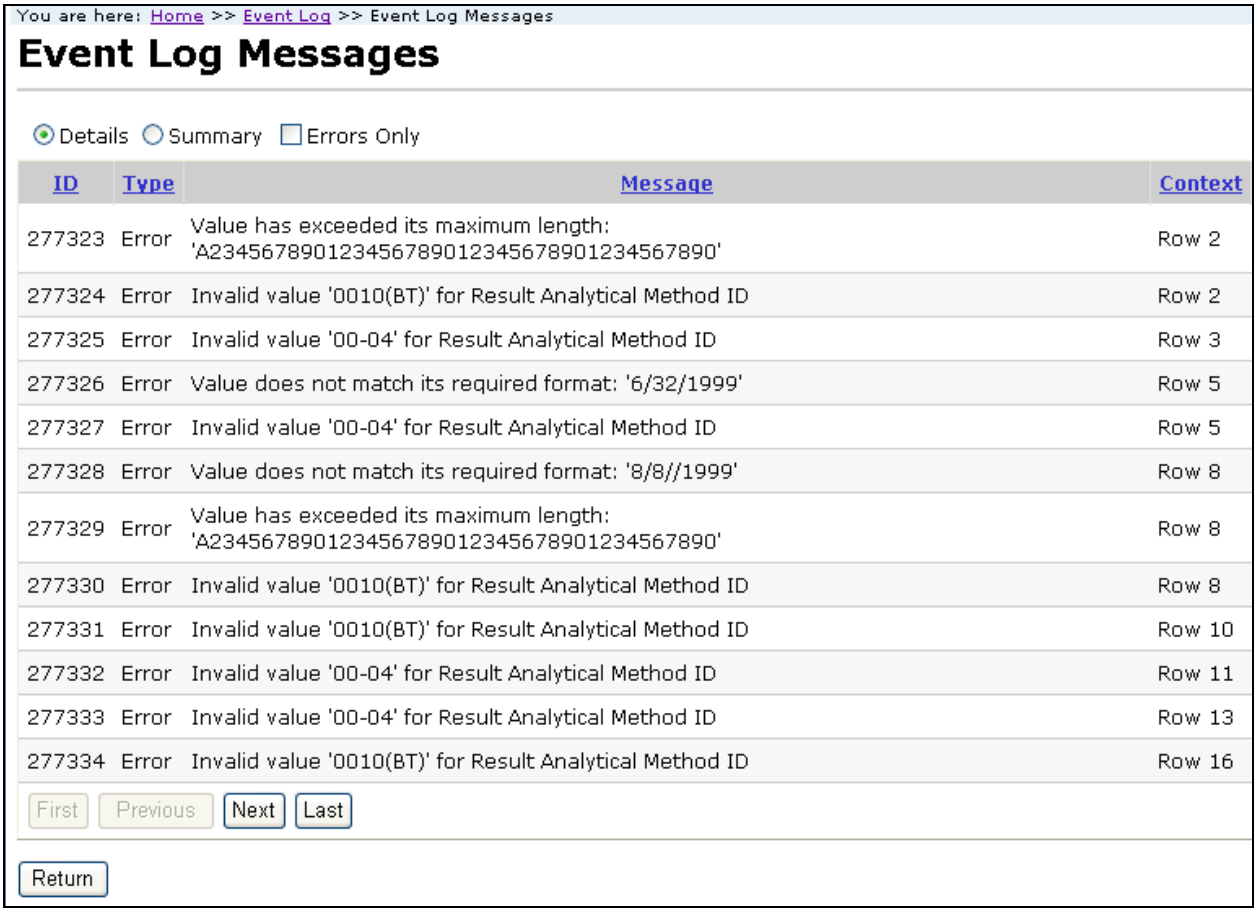


The filter for the event log will automatically be set to show events for the current user.

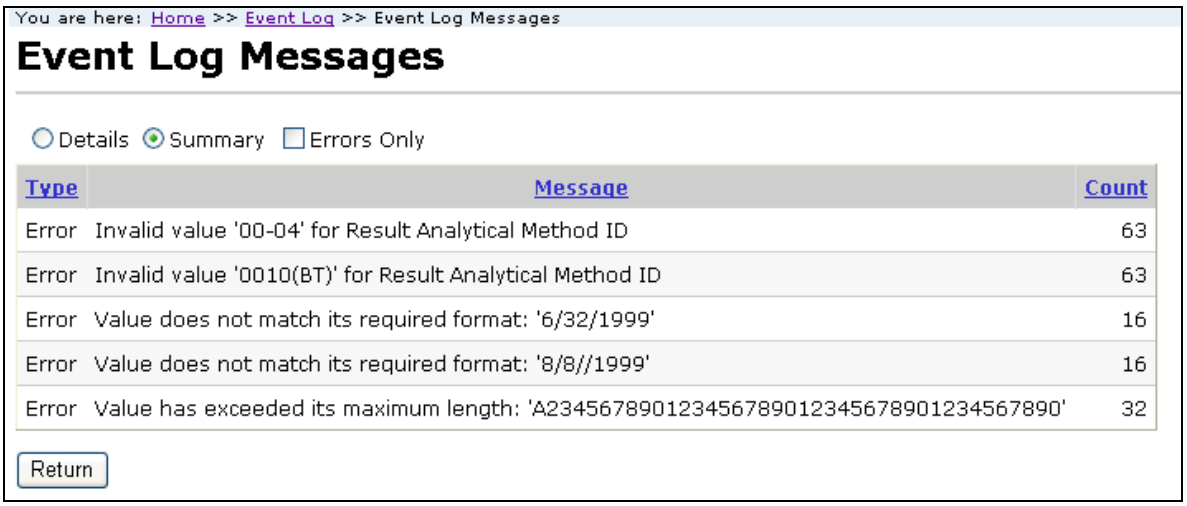
Pick a different user from the dropdown list titled "Show Events Created By:" to change the filter to another user. The dropdown list only includes users that belong to the same organizations that you belong to. If you are a system administrator you can also view system events by picking "System" from the dropdown list.

To view individual event log messages use the following steps:

Click the "View" link in the Message column. This will display the Event Log Messages page.



You can select the Summary radio button at the top of the page to get a summary of each error or warning (and the number of times it occurred).



Check the "Errors Only" checkbox if you want to only view errors (and hide warnings and messages)

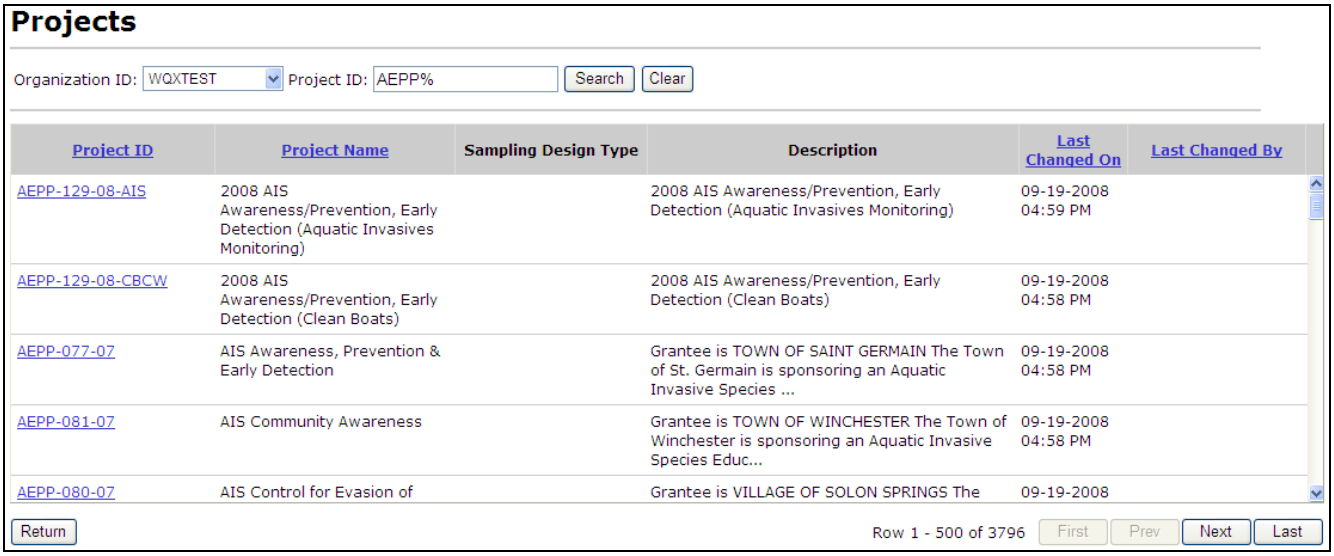
6.0 Reviewing Data in WQX

Once your submission file has loaded successfully into the WQX System, you can query WQX and review your data. This is a new feature in WQX Web version 2.0. There are a series of search/list pages that allow you to enter basic search criteria and view a list of records in WQX that match the criteria.

6.1 Projects List Page

Please review Section 2.6.2 "List Page Features" for an explanation of features common to all list pages.

Click the "Projects" link in the Navigation Panel to open the Projects List Page. This page allows you to enter search criteria and then query WQX for matching project records.



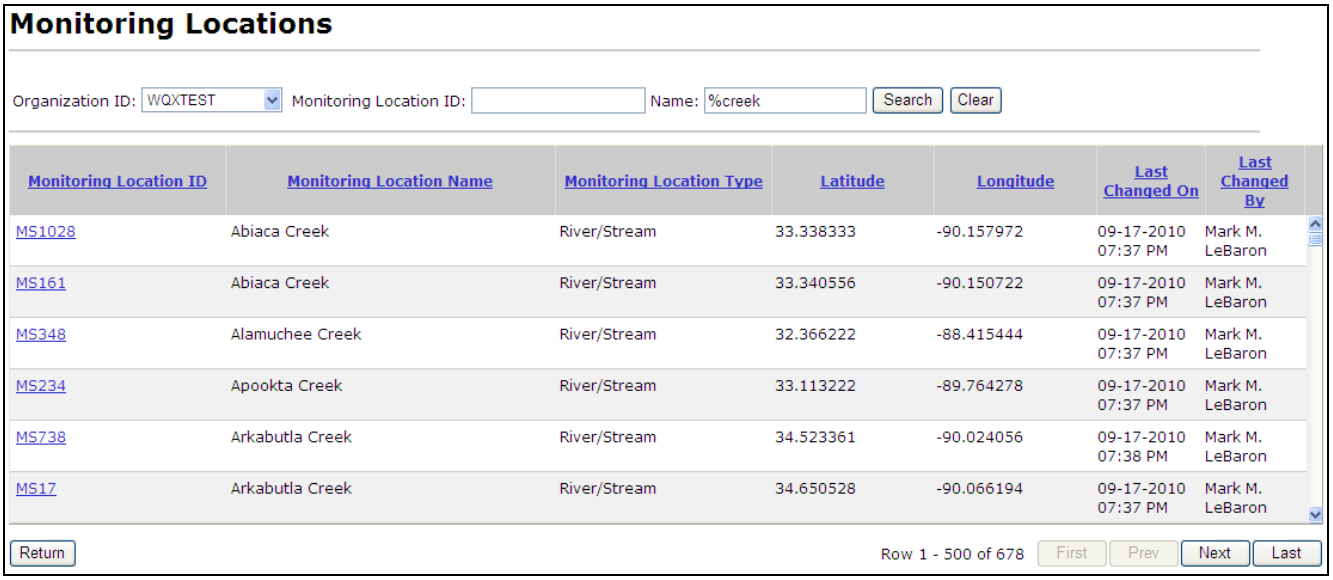
The "Project ID" search criteria supports partial matching by using a special wildcard character "%" to represent "any value"

Clicking on the links in the Project ID column in the table will navigate to the Activities List Page and filter the list to display the activities for the selected project.

6.2 Monitoring Locations List Page

Please review Section 2.6.2 "List Page Features" for an explanation of features common to all list pages.

Click the "Monitoring Locations" link in the Navigation Panel to open the Monitoring Locations List Page. This page allows you to enter search criteria and then query WQX for matching monitoring location records.



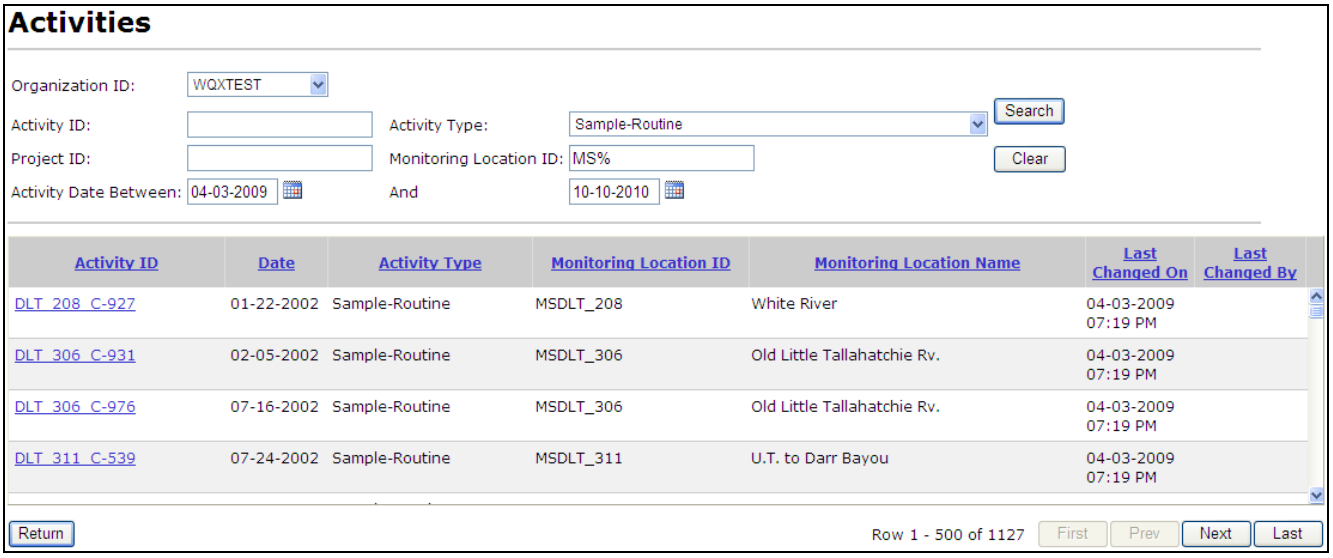
The "Monitoring Location ID" and "Name" search criteria support partial matching by using a special wildcard character "%" to represent "any value"

Clicking on the links in the Monitoring Location ID column in the table will navigate to the Activities List Page and filter the list to display the activities for the selected monitoring location.

6.3 Activities List Page

Please review Section 2.6.2 "List Page Features" for an explanation of features common to all list pages.

Click the "Activities" link in the Navigation Panel to open the Activities List Page. This page allows you to enter search criteria and then query WQX for matching activity records.



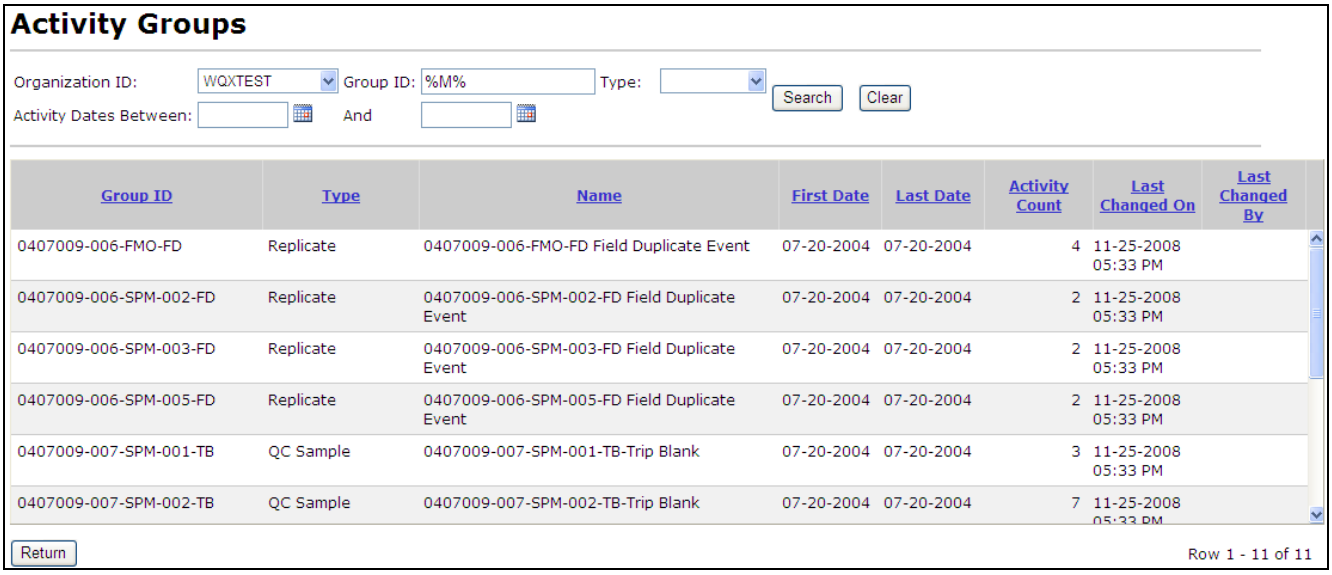
The "Activity ID", "Project ID" and "Monitoring Location ID" search criteria support partial matching by using a special wildcard character "%" to represent "any value"

Clicking on the links in the Activity ID column in the table will navigate to the Results List Page and filter the list to display the results for the selected activity.

6.4 Activity Groups List Page

Please review Section 2.6.2 "List Page Features" for an explanation of features common to all list pages.

Click the "Activity Groups" link in the Navigation Panel to open the Activity Groups List Page. This page allows you to enter search criteria and then query WQX for matching activity group records.

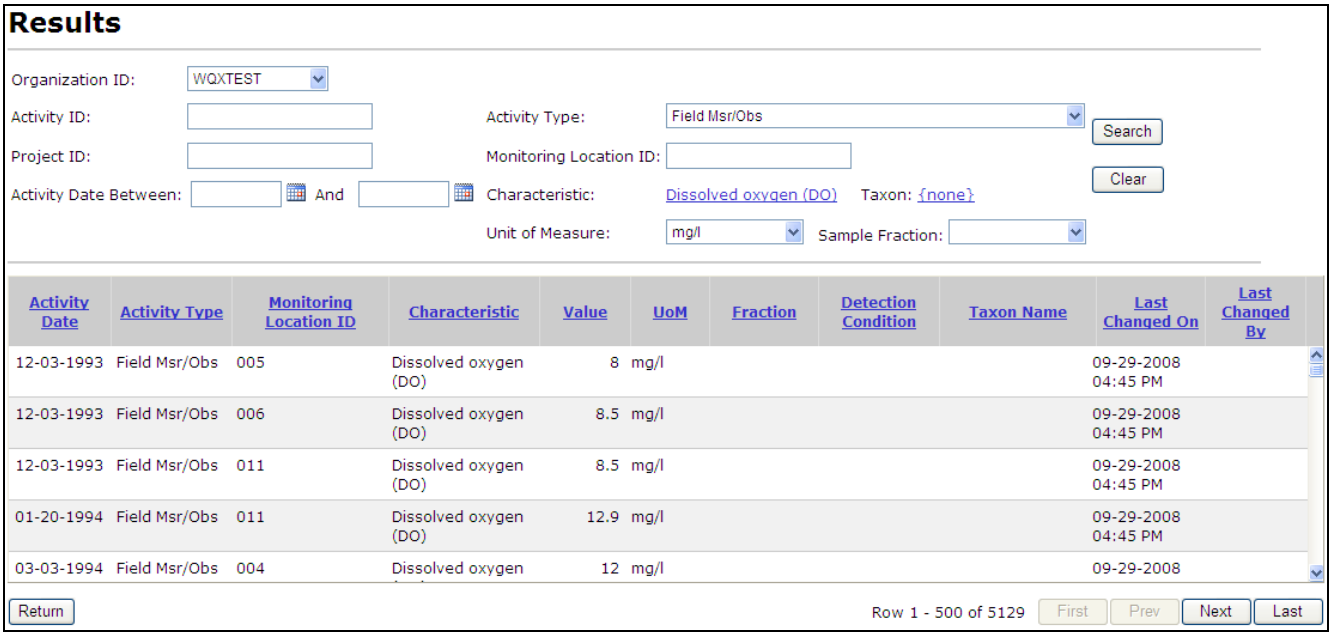


The "Activity Group ID" search criteria supports partial matching by using a special wildcard character "%" to represent "any value"

6.5 Results List Page

Please review Section 2.6.2 "List Page Features" for an explanation of features common to all list pages.

Click the "Results" link in the Navigation Panel to open the Results List Page. This page allows you to enter search criteria and then query WQX for matching result records.

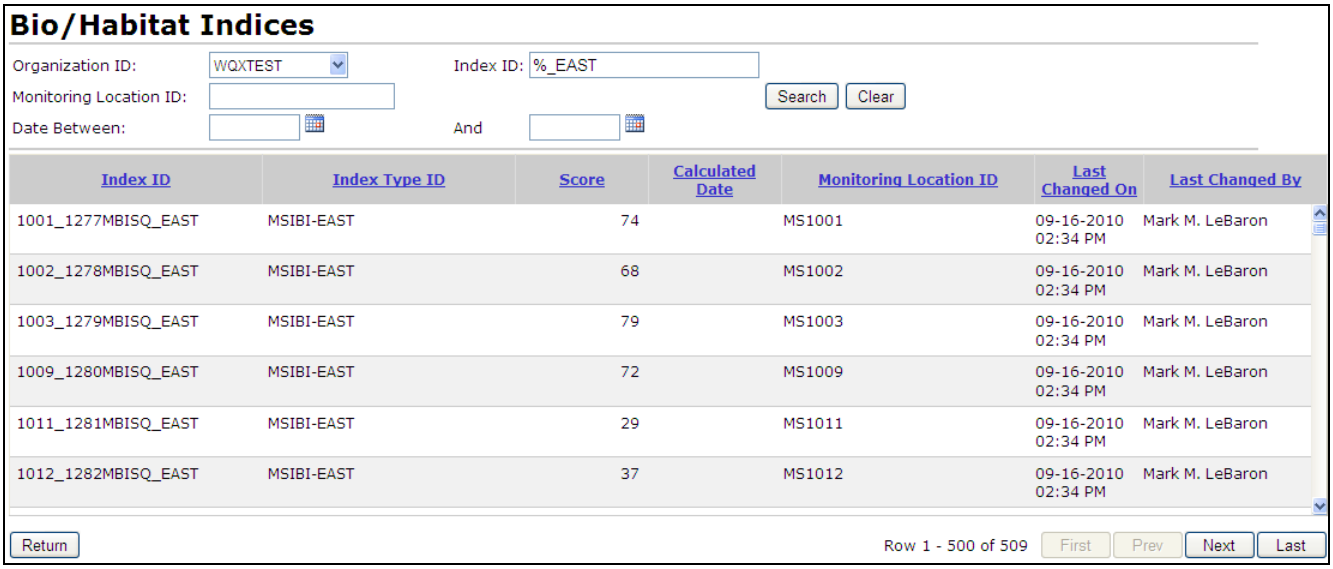


The "Activity ID", "Project ID" and "Monitoring Location ID" search criteria support partial matching by using a special wildcard character "%" to represent "any value"

6.6 Bio/Habitat Indices List Page

Please review Section 2.6.2 "List Page Features" for an explanation of features common to all list pages.

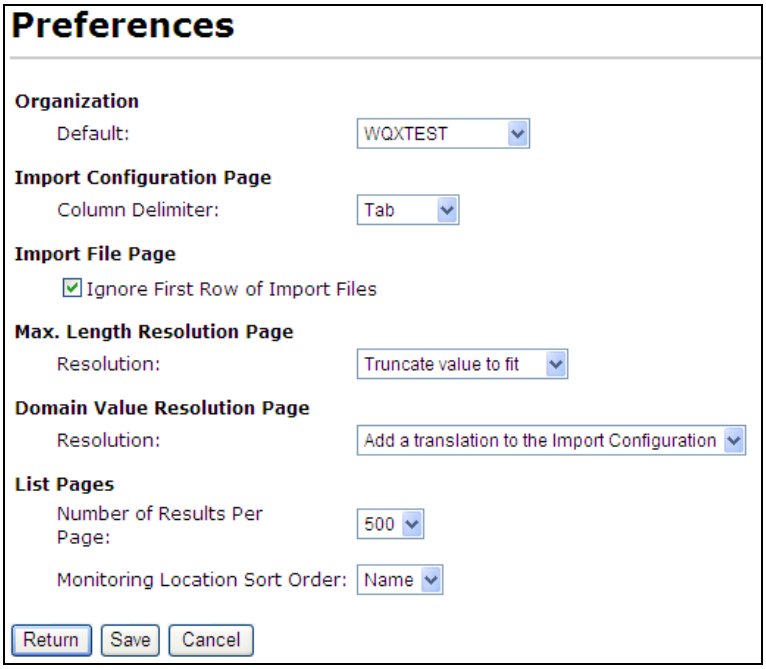
Click the "Bio/Habitat Indices" link in the Navigation Panel to open the Biological/Habitat Indices List Page. This page allows you to enter search criteria and then query WQX for matching index records.



The "Monitoring Location ID" search criteria supports partial matching by using a special wildcard character "%" to represent "any value"

7.0 Setting User Preferences

Click on the "Preferences" link in the Navigation Panel to open the Preferences Page. Use this page to customize the way you want the system to behave.



The preferences currently available are:

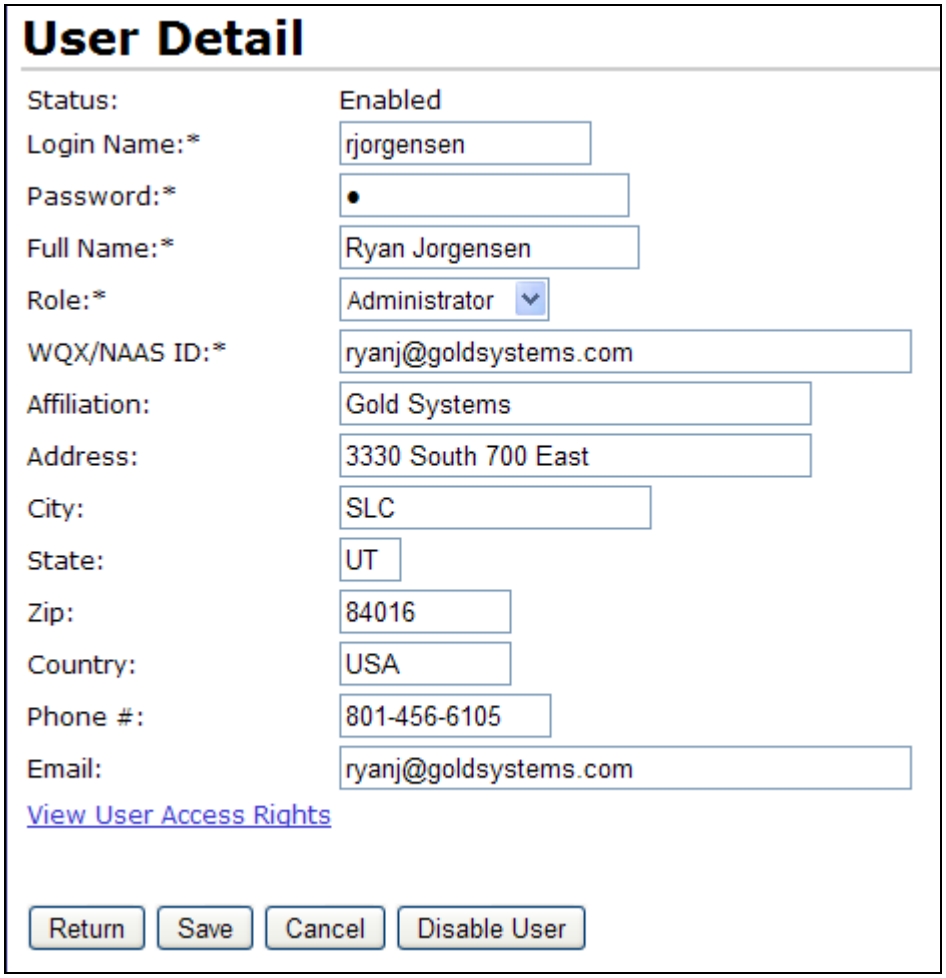
- **Organization Default**: Indicates the default Organization ID to select as criteria on the list pages
- **Import Configuration Page, Column Delimiter**: This sets the default value for the Column Delimiter field on a new import configuration. It can be overridden each time you create an import configuration.
- **Import File Page, Ignore First Row of Import Files**: This sets the default value for this check box on the Import File Page and can be overridden each time you import a file
- **Max Length Resolution Page, Resolution**: This sets the default value for this field on the Max Length Resolution Page. See the Max Length Resolution Page for more information.
- **Domain Value Resolution Page, Resolution:** This sets the default value for this field on the Domain Value Resolution Page. See the Domain Value Resolution Page for more information.
- **List Pages, Number of Results Per Page**: Indicates the number of rows to display on each page of a list page. A high number will result in fewer pages to page through, but will also make each page return a bit slower.

- **List Pages, Monitoring Location Sort Order**: The default sort order for the Monitoring Locations List Page.

8.0 Changing Your User Information

The User Detail Page allows you to change your contact information (Name, Address, Email, etc). The information on this page is also used on the Export Page. Each time you create a WQX Submission file you are given an opportunity to include contact information in your file. That page will be filled out with the information you provide on this page. See the Export Page for more information.

Click the "User Information" link on the navigation panel to open the User Detail Page. *Depending on the role of the user, this link will behave differently (see the next section for details).*



9.0 Administration

This section describes features available to administrators, support, and standard users.

9.1 Roles

Each user is assigned a role in WQX Web. It's useful to have an understanding of the various roles and their rights as you read through the rest of this section.

Roles determine a user's rights to certain pages or features within the system. Roles are not, for the most part, used to assign rights to data. Rights to data is managed separately. The following roles (and related rights) exist in WQX Web:

Administrator

- Can add, edit, enable, and disable users
- Can add organizations
- Can manage any user's rights on any organization or import configuration
    - An administrator does not have rights to all data in the system by default. Instead an administrator grants himself/herself whatever rights are needed or wanted. It is typical to grant at least read-only rights to all organizations and all import configurations so that he/she can view everything in the system.
- Can add/edit/delete values in all lookup tables except organization-specific lookup values (whose rights are assigned via organization rights, rather than roles)
- Can view event logs for all users including system events.
- Can access all pages within the system

Support User

- Can view all users and edit their information (except for their Login Name, Role, or WQX/NAAS ID)
    - Cannot add, enable or disable users
- Can view all users' rights on organizations
- Can manage all users' rights on import configurations
- Can view values in all lookup tables except organization-specific lookup values (whose rights are assigned via organization rights, rather than roles)
- Can view event logs for all users including system events.
- Can access all pages within the system

Standard User

- Can view his/her own user account and edit his/her own contact information, but cannot edit certain fields that are limited to administrators (such as Login Name, Role, or WQX/NAAS ID.
    - Cannot view the Users List Page

Training User

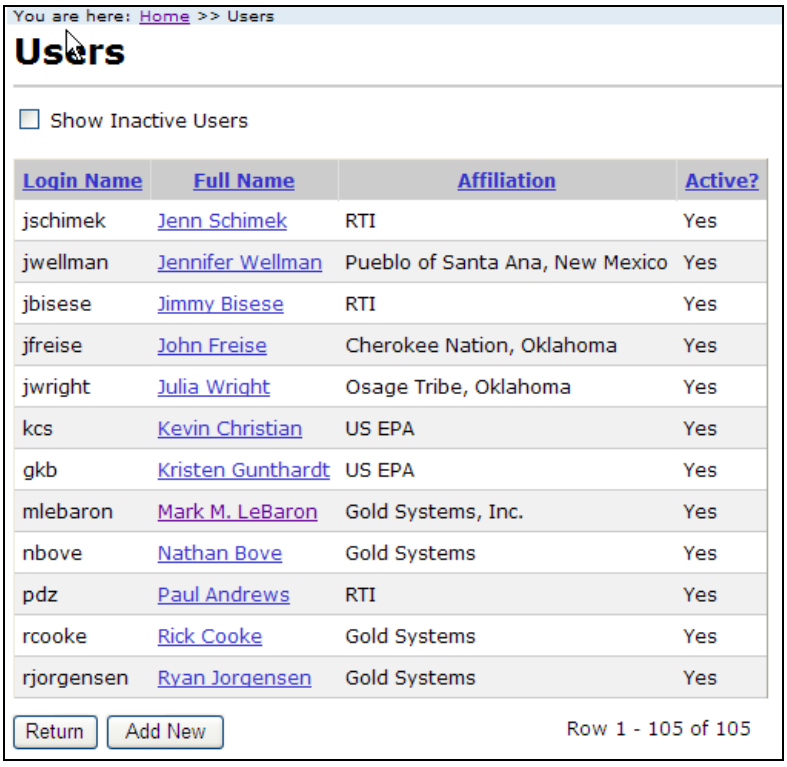
This role is only to be used on training accounts for WQX Web. To work correctly, a training user must be assigned only one organization (with Administrator rights on that organization). This role will provide a user with all the same rights as a Standard User, in addition to the following:

- Can click a Reset Button on the Home Page which will delete all datasets and import configurations created by the user, and then restore a standard set of import configurations that are used for training purposes.

9.2 Managing Users

To edit a user's information, click on the "User Information" link on the navigation panel.

Note: the User Information link behaves differently for administrator and support users than it does for standard users. For administrators and support users, rather than going directly to the User Detail Page (for your own user account), this link will take you to the Users List Page where you can select the specific user account you wish to edit.


You are here: Home >> Users

Users

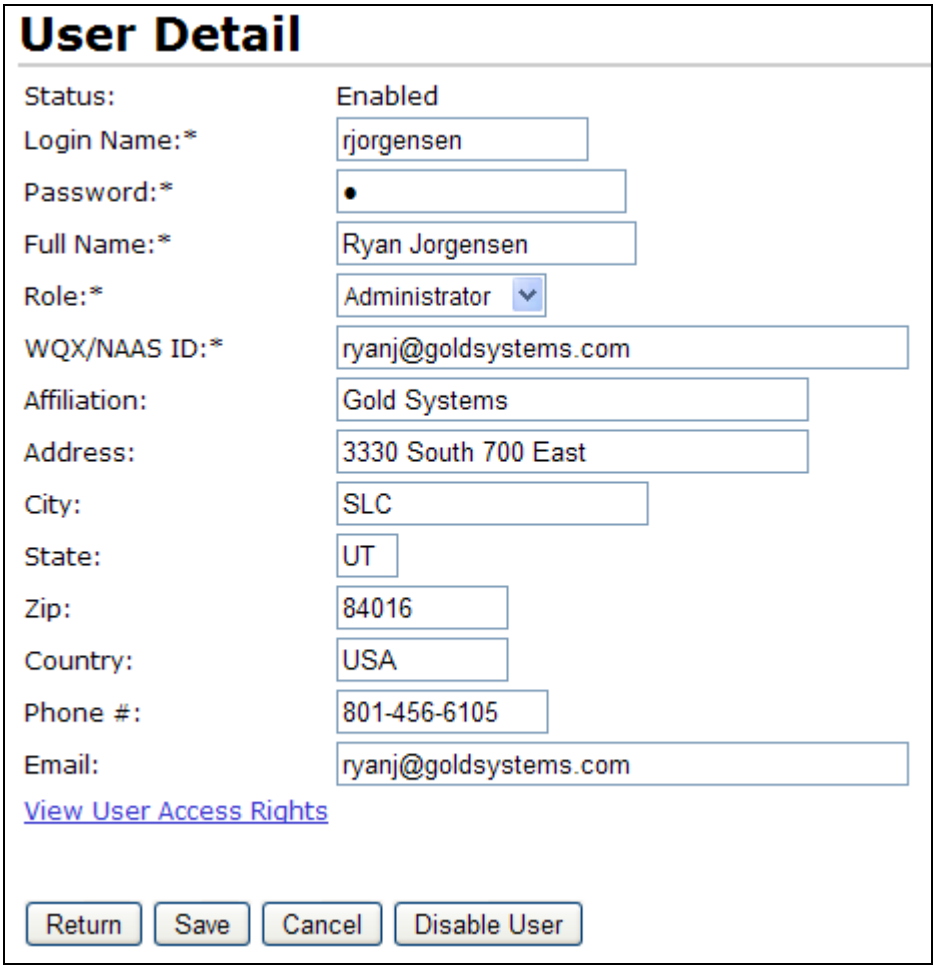
Show Inactive Users

Login Name	Full Name	Affiliation	Active?
jschimek	Jenn Schimek	RTI	Yes
jwellman	Jennifer Wellman	Pueblo of Santa Ana, New Mexico	Yes
jbisese	Jimmy Bisese	RTI	Yes
jfreise	John Freise	Cherokee Nation, Oklahoma	Yes
jwright	Julia Wright	Osage Tribe, Oklahoma	Yes
kcs	Kevin Christian	US EPA	Yes
gkb	Kristen Gunthardt	US EPA	Yes
mlebaron	Mark M. LeBaron	Gold Systems, Inc.	Yes
nbove	Nathan Bove	Gold Systems	Yes
pdz	Paul Andrews	RTI	Yes
rcooke	Rick Cooke	Gold Systems	Yes
rjorgensen	Ryan Jorgensen	Gold Systems	Yes

Return Add New Row 1 - 105 of 105

From the Users list page, you can view/edit an existing user by clicking the appropriate link in the “Full Name” column of the list. To add a new user, click the “Add New” button.

The User Detail page will be displayed.



Fill in the user information, as appropriate.

Login Name:

This is the user's CDX-Web account name. Note: A user must have a valid CDX-Web account and be granted rights to the WQX: WQX Web application before they will have access to this application.

WQX/NAAS ID:

This is the account name used when submitting a WQX Submission File to CDX. This should match the account name created for this user in the WQX System. If a user has an Exchange Network NAAS Account, use it. Otherwise, it's recommended that you fill in the user's email address here (and use their email address as their account name in the WQX System).

Role:

Places the user into a group with certain rights in the system. See the section above for a full explanation on the roles available.

9.2.1 Enabling/Disabling a User Account

Before a user is allowed access to the system, their user account must be enabled. Click the "Enable User" button on the User Details page to enable a new user (or previously disabled user).

To prevent a user from accessing the system, you can disable their account. Click the "Disable User" button on the User Details page to disable a user.

9.3 Managing User Rights to Organizations and Import Configurations

A user's rights to organizations and import configurations are managed on the "User Rights" Page. This page can be accessed from several different pages within the system and has a different layout depending on the page from which it is accessed. An administrator can also change this context-specific layout by changing the value in the [Show] "Rights For" drop-down list at the top of the page.

There are three values in this dropdown list (that control the page layout):

- User

  The page shows a tabbed form where rights on organizations and import configurations can be assigned to a specific user.

- Organization

  The page shows users and their rights on a specific organization.

- Import Configuration

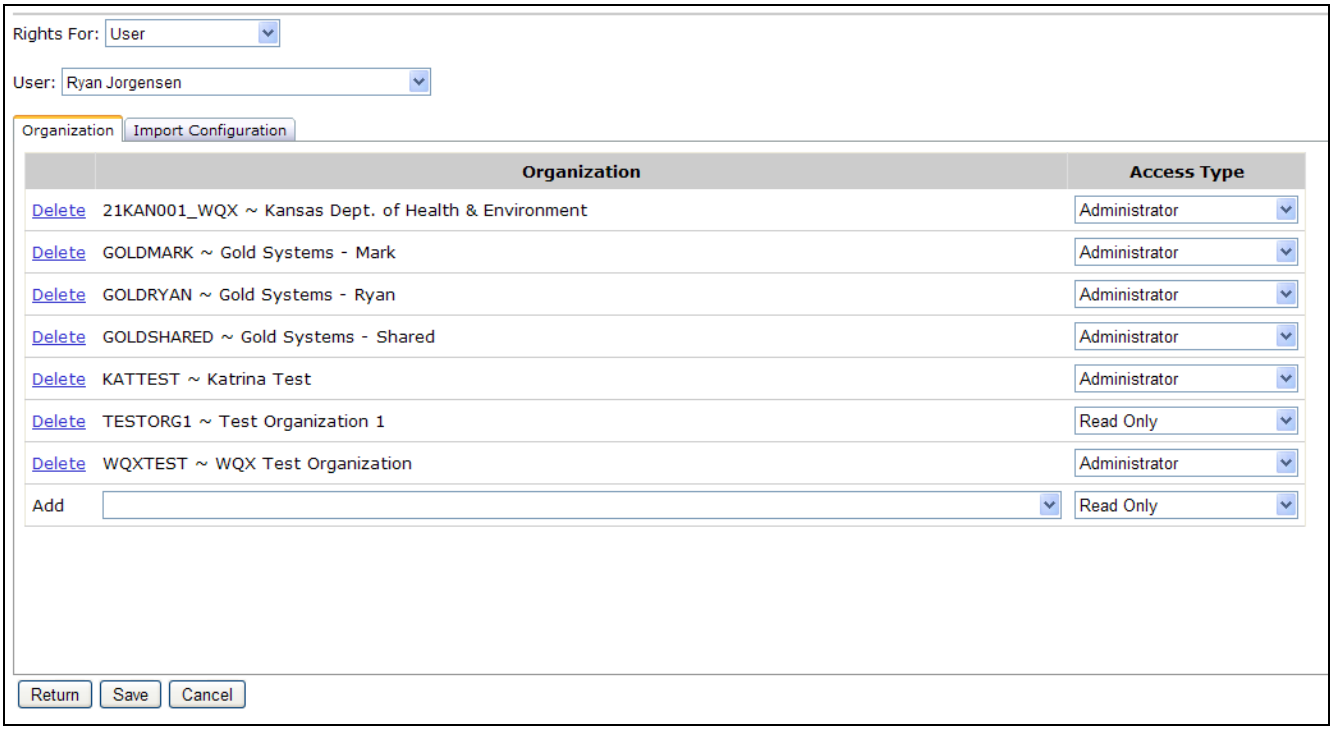
  The page shows users and their rights on a specific import configuration.

9.3.1 Viewing and Changing Rights for a User

When a user accesses the User Rights Page from the User Detail Page or when an administrator changes the "Rights For" dropdown list to "User", then this page will have a layout appropriate for viewing all the rights for a specific user

The page has two tabs: one for the user's rights on organizations and one for the rights on import configurations.

Organization (tab):



Note: Standard Users and Support Users have read-only access on this tab.

To assign rights on a new organization:

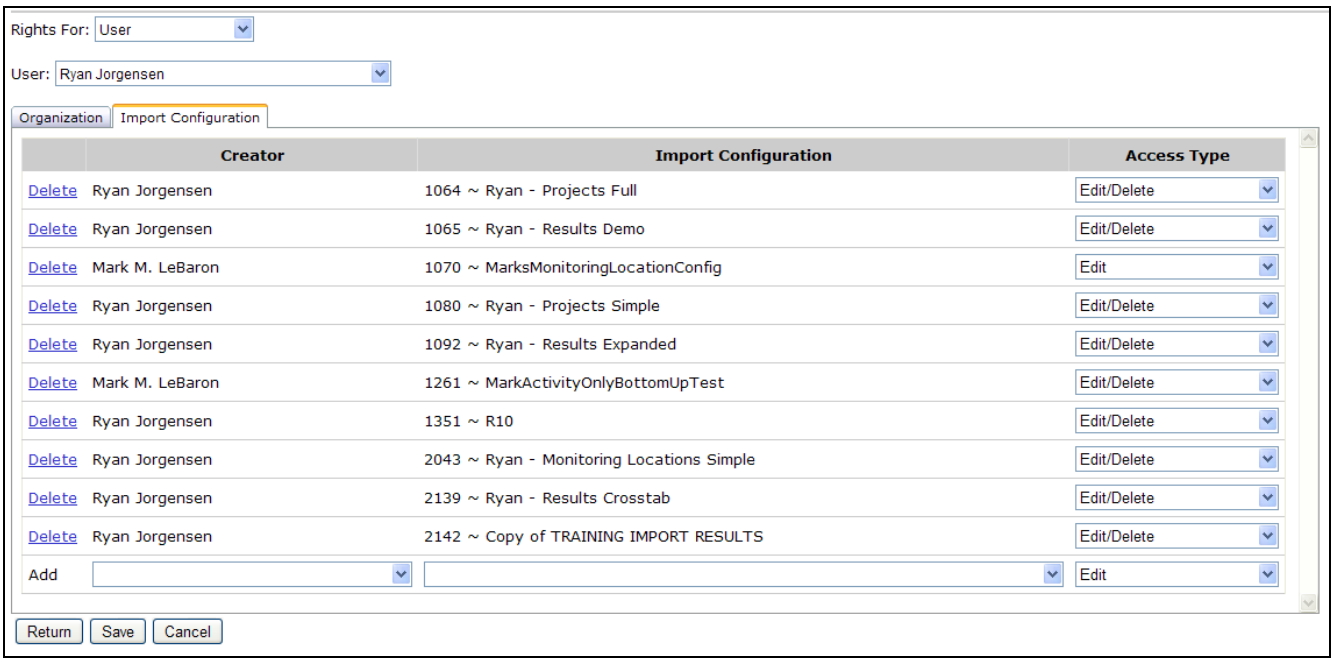
1. Navigate to the last row of the list labeled “Add”.
2. In the “Add” row, choose the organization for which you wish to grant rights.
    a. There is also a special value of "*All Organizations" which can be used to grant rights on all organizations. A user's rights on a specific organization will override his/her rights to "All Organizations".
3. Choose the Access Type you wish the user to have:
    a. Administrator: allows a user to view/manage an organization's data, imported datasets and organization-specific lookup values in the following tables: Analytical Method, Citation, Index Type, Metric Type, Lab Sample Prep. Method, Sample Collection Method, and Sample Preparation Method.
    b. Read Only: allows a user to view an organization's data, imported datasets and lookup table values.

To remove a user’s rights on an organization:

1. Click the Delete link for the appropriate row.

Click the Save button to save your changes (and remain on the page). Click the Return button to save and return to the previous page.

Import Configuration (tab):



Note: Standard Users have read-only access on this tab. Support Users have full access.

To assign rights on a new import configuration:

1. Navigate to the last row of the list labeled “Add”.
2. In the “Add” row, choose the creator of the import configuration you are interested in (this will act as a filter on the Import Configuration list in the next column).
    a. If you assigning rights on all import configurations (see below), then the "Creator" may be left blank.
3. Choose the Import Configuration
    a. There is also a special value of "*All Import Configurations" which can be used to grant rights on all import configurations. A user's rights on a specific import configuration will override his/her rights on "All Import Configurations".
4. Choose the Access Type you wish the user to have:
    a. Read Only – User can view and use the import configuration.
    b. Edit – User can make modifications to (and use) the import configuration.
    c. Edit/Delete – User can make modifications to and delete (and use) the import configuration.

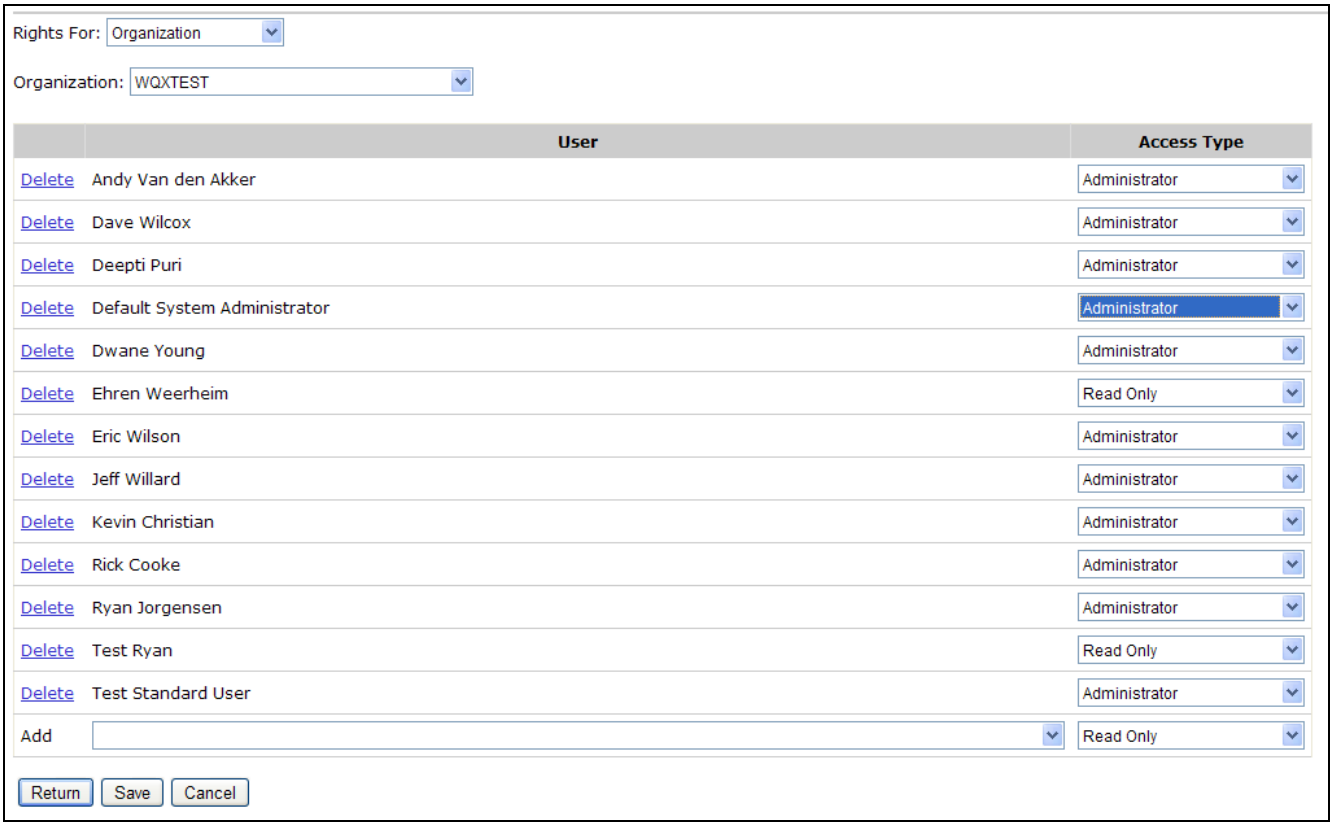
To remove a user’s rights on an organization:

1. Click the Delete link for the appropriate row.

Click the Save button to save your changes (and remain on the page). Click the Return button to save and return to the previous page.

9.3.2 Viewing and Changing Rights on an Organization

When a user accesses the User Rights Page from the Organization Detail Page or when an administrator changes the "Rights For" dropdown list to "Organization", then this page will have the following layout (appropriate for viewing the users and their rights on a specific organization)



Note: Standard Users and Support Users have read-only access in this mode.

To assign users and their rights to an organization:

1. Choose the organization for which you wish to manage rights from the organization dropdown list. A list of users already associated with the organization will be displayed.
2. Navigate to the last row of the list labeled “Add”.
3. In the “Add” row, choose the User for whom you wish to grant rights to the organization.
4. Choose the Access Type you wish the user to have:
    a. Administrator: allows a user to view/manage an organization's data, imported datasets and organization-specific lookup values in the following tables: Analytical Method, Citation, Index Type, Metric Type, Lab Sample Prep. Method, Sample Collection Method, and Sample Preparation Method.

b. Read Only: allows a user to view an organization's data, imported datasets and lookup table values.

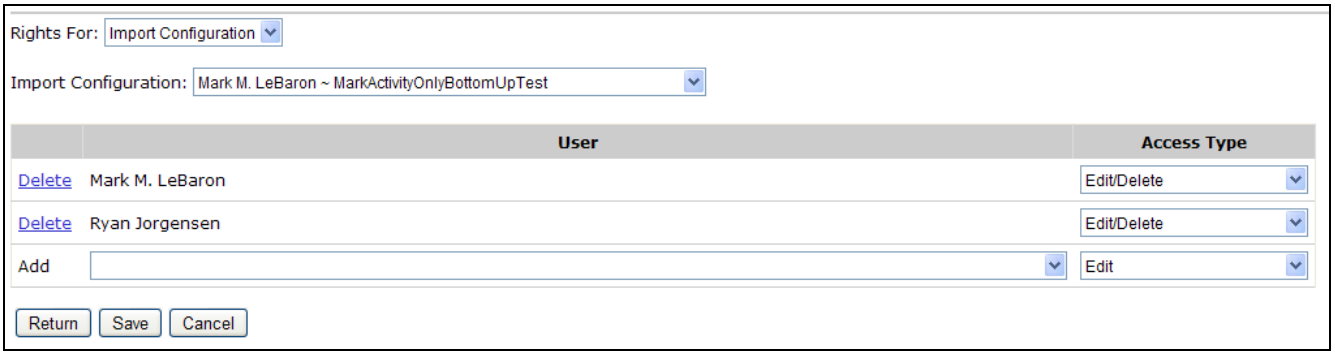
To remove a user's rights to an organization:

1. Click the Delete link for the appropriate row.

Click the Save button to save your changes (and remain on the page). Click the Return button to save and return to the previous page.

9.3.3 Viewing and Changing Rights on an Import Configuration

When a user accesses the User Rights Page from the Import Configuration Detail Page or when an administrator changes the "Rights For" dropdown list to "Import Configuration", then this page will have the following layout (appropriate for viewing the users and their rights on a specific import configuration)



Note: Standard Users have read-only access in this mode. Support Users have full access.

To assign a user rights to an import configuration:

17. Choose the import configuration to manage rights for
18. Navigate to the last row of the list labeled "Add".
19. In the "Add" row, choose the user.
20. Choose the access type you wish the user to have:
    a. Read Only – User can view the import configuration but can't modify or delete it.
    b. Edit – User can view and edit the import configuration but can't delete it.
    c. Edit/Delete – User can view, edit, and delete the import configuration.

To remove a user's rights to an organization:

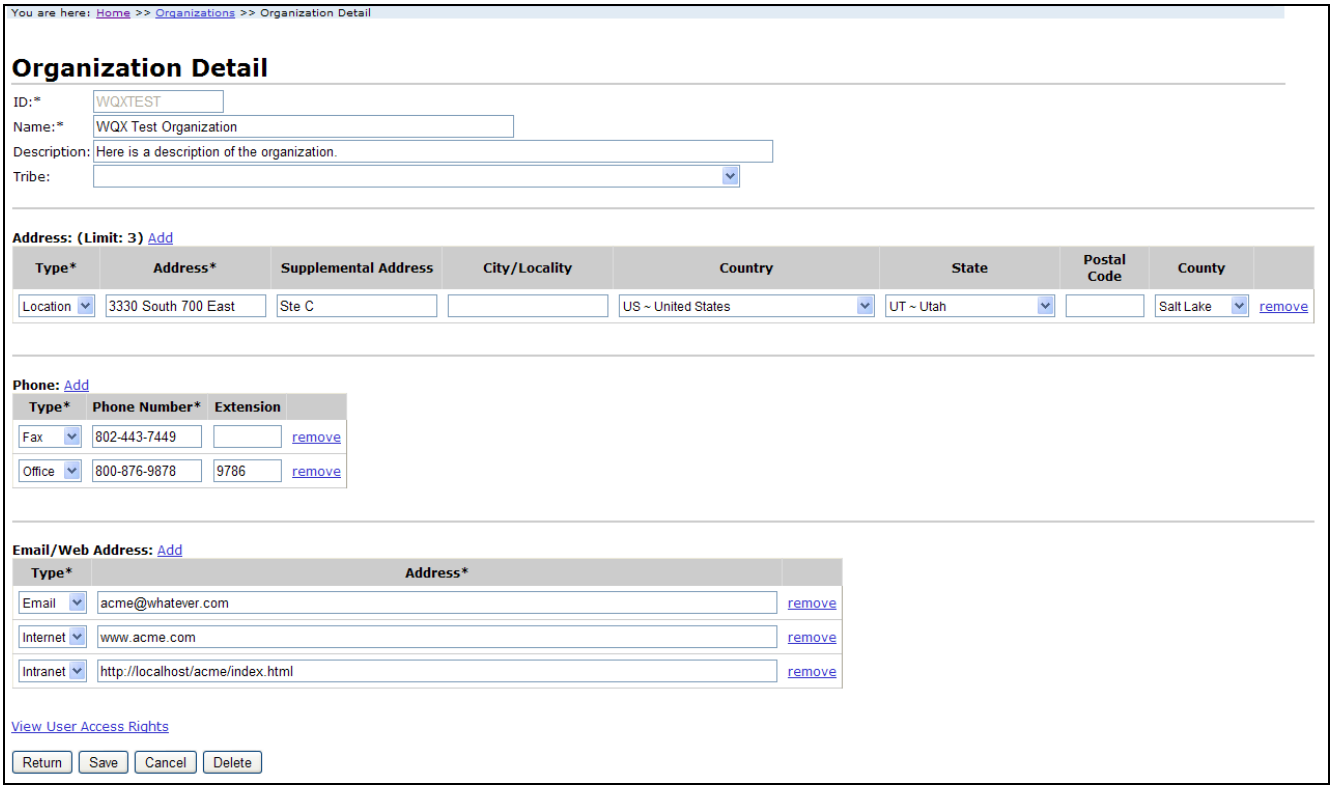
5. Click the Delete link for the appropriate row.

Click the Save button to save your changes (and remain on the page). Click the Return button to save and return to the previous page.

9.4 Managing Organizations

1. Click on the Organizations link on the navigation panel to open the Organizations list page.

2. To create a new organization, click the Add New button. Otherwise click the link for a specific organization that you wish to view/edit. The Organization Details page will be displayed.



3. Fill in the Organization information
    a. Use the Add link to add up to 3 Organization Addresses.
    b. Use the Add link to add Organization Phone Numbers.
    c. Use the Add link to add Organization Email/Web Addresses.
4. Click the Save button or the Return button to save the new organization
5. Click the View User Access Rights to manage the rights for the new organization.

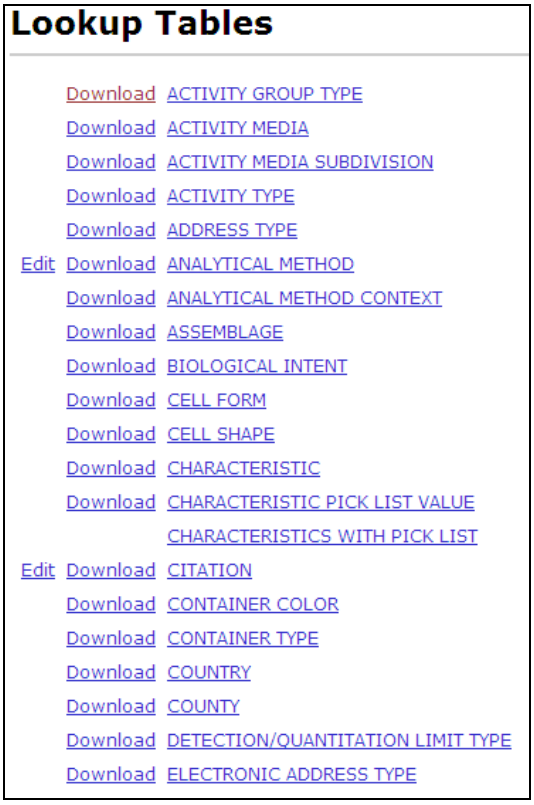
To remove an address, phone number etc, click the Remove link on the row you wish to remove. Click the Save or the Return button to save the changes.

9.5 Managing Lookup Tables

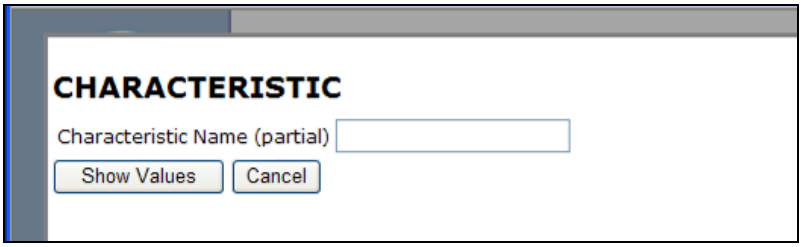
Lookup tables are a list of allowed values for a given data element. The lists can be used as a reference for the allowable values for an element. Most lookup tables are controlled by EPA and are read-only. A few lookup tables are also editable.

9.5.1 Viewing the values in a lookup table

Click on the “Lookup Tables” link in the Navigation Panel to view the list of lookup tables.

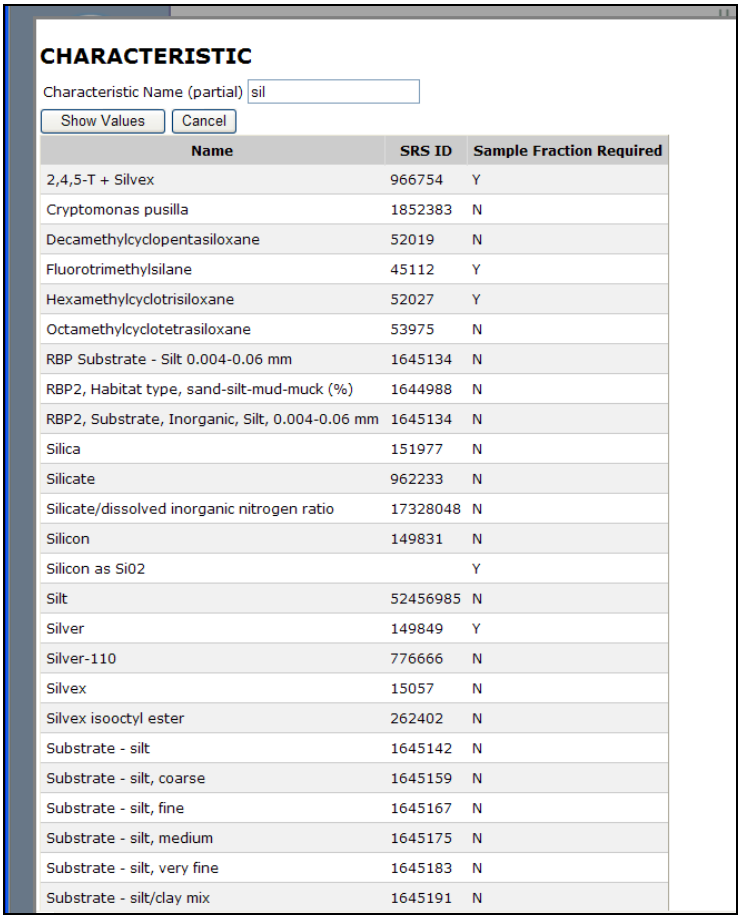


Select the link for the table you wish to view (for example, select the Characteristic link).



Type in a partial characteristic name such as “sil”.

Click the Show Values button. The system will display any matches it finds in the table.



CHARACTERISTIC

Characteristic Name (partial) sil

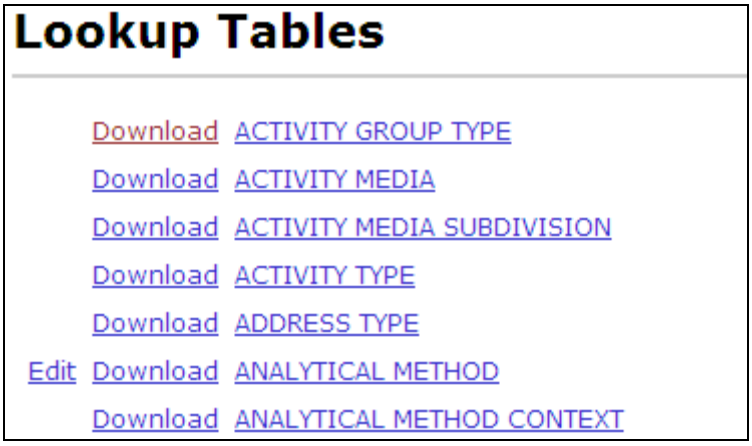
Show Values Cancel

Name	SRS ID	Sample Fraction Required
2,4,5-T + Silvex	966754	Y
Cryptomonas pusilla	1852383	N
Decamethylcyclopentasiloxane	52019	N
Fluorotrimethylsilane	45112	Y
Hexamethylcyclotrisiloxane	52027	Y
Octamethylcyclotetrasiloxane	53975	N
RBP Substrate - Silt 0.004-0.06 mm	1645134	N
RBP2, Habitat type, sand-silt-mud-muck (%)	1644988	N
RBP2, Substrate, Inorganic, Silt, 0.004-0.06 mm	1645134	N
Silica	151977	N
Silicate	962233	N
Silicate/dissolved inorganic nitrogen ratio	17328048	N
Silicon	149831	N
Silicon as Si02		Y
Silt	52456985	N
Silver	149849	Y
Silver-110	776666	N
Silvex	15057	N
Silvex isooctyl ester	262402	N
Substrate - silt	1645142	N
Substrate - silt, coarse	1645159	N
Substrate - silt, fine	1645167	N
Substrate - silt, medium	1645175	N
Substrate - silt, very fine	1645183	N
Substrate - silt/clay mix	1645191	N

Click the Cancel button to return to the Lookup Tables page.

9.5.2 Downloading the values in a lookup table

Click on the “Lookup Tables” link in the Navigation Panel to view the list of lookup tables.

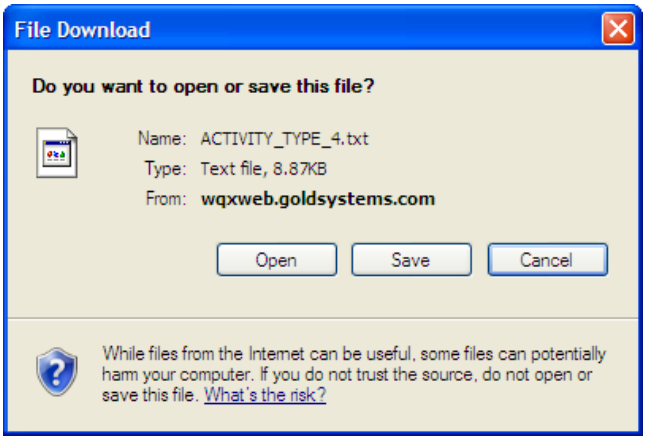


Lookup Tables

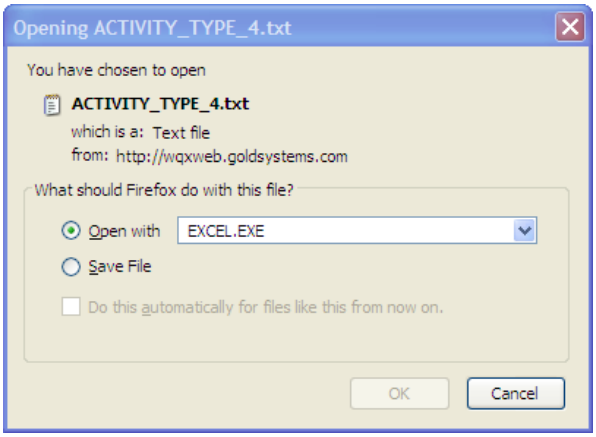
Download ACTIVITY GROUP TYPE
Download ACTIVITY MEDIA
Download ACTIVITY MEDIA SUBDIVISION
Download ACTIVITY TYPE
Download ADDRESS TYPE
Edit Download ANALYTICAL METHOD
Download ANALYTICAL METHOD CONTEXT

Select the "Download" link for the table you wish to download (for example, select the Download link next to "Activity Type").

Each type of browser behaves slightly different at this point. Internet Explored and Firefox will pop-up a dialog window and ask if you want to Open or Save the file.

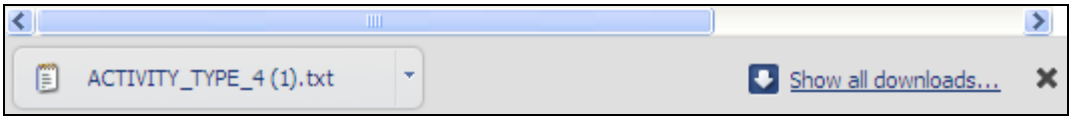


Internet Explorer

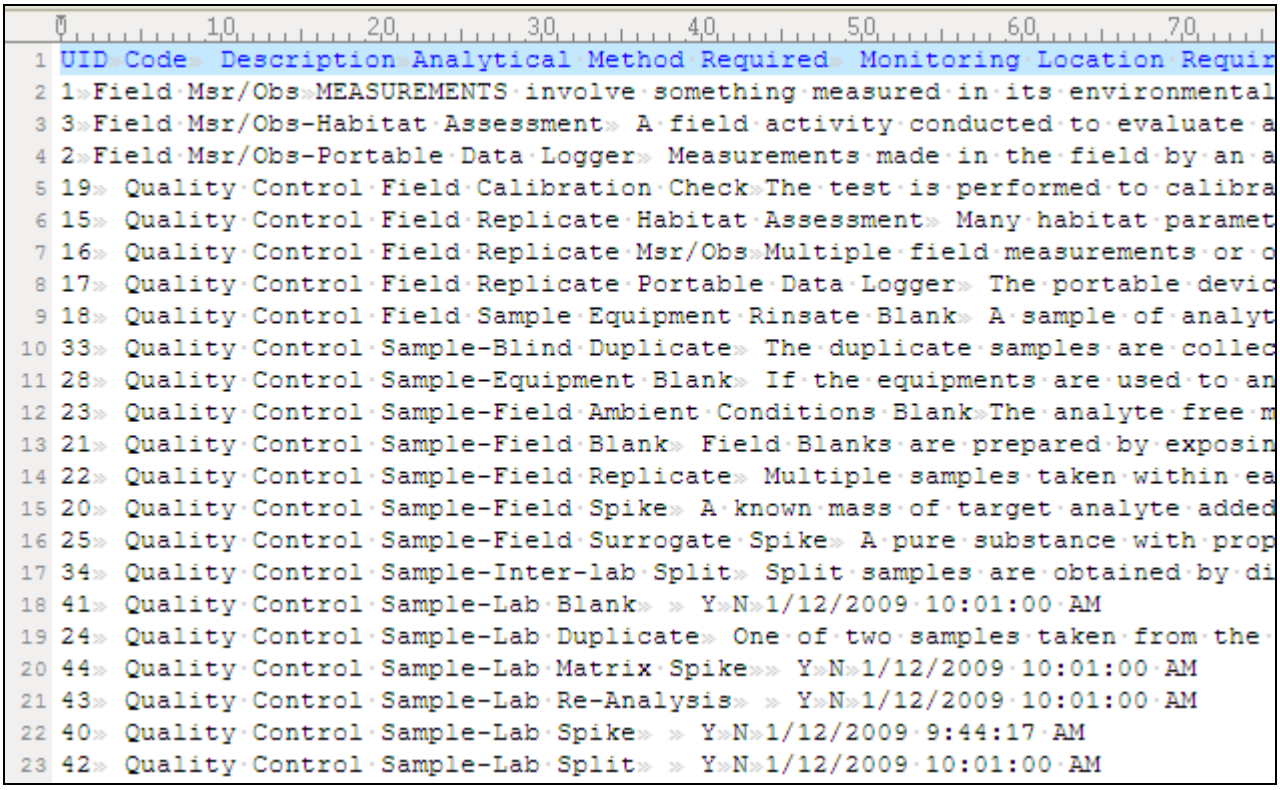


Firefox

Google Chrome will download the file and provide a button at the bottom left corner of the window to open it.



Unless the browser (e.g. Firefox) asks you what program to use to open the file, it will open with whatever program is assigned to the ".TXT" file extension (e.g. Notepad, Excel, etc).



```
UID	Code	Description	Analytical Method Required	Monitoring Location Requir
1	Field Msr/Obs	MEASUREMENTS involve something measured in its environmental
3	Field Msr/Obs-Habitat Assessment	A field activity conducted to evaluate a
2	Field Msr/Obs-Portable Data Logger	Measurements made in the field by an a
19	Quality Control Field Calibration Check	The test is performed to calibra
15	Quality Control Field Replicate Habitat Assessment	Many habitat paramet
16	Quality Control Field Replicate Msr/Obs	Multiple field measurements or c
17	Quality Control Field Replicate Portable Data Logger	The portable devic
18	Quality Control Field Sample Equipment Rinsate Blank	A sample of analyt
33	Quality Control Sample-Blind Duplicate	The duplicate samples are collec
28	Quality Control Sample-Equipment Blank	If the equipments are used to an
23	Quality Control Sample-Field Ambient Conditions Blank	The analyte free m
21	Quality Control Sample-Field Blank	Field Blanks are prepared by exposin
22	Quality Control Sample-Field Replicate	Multiple samples taken within ea
20	Quality Control Sample-Field Spike	A known mass of target analyte added
25	Quality Control Sample-Field Surrogate Spike	A pure substance with prop
34	Quality Control Sample-Inter-lab Split	Split samples are obtained by di
41	Quality Control Sample-Lab Blank		Y	N	1/12/2009 10:01:00 AM
24	Quality Control Sample-Lab Duplicate	One of two samples taken from the
44	Quality Control Sample-Lab Matrix Spike		Y	N	1/12/2009 10:01:00 AM
43	Quality Control Sample-Lab Re-Analysis		Y	N	1/12/2009 10:01:00 AM
40	Quality Control Sample-Lab Spike		Y	N	1/12/2009 9:44:17 AM
42	Quality Control Sample-Lab Split		Y	N	1/12/2009 10:01:00 AM
```

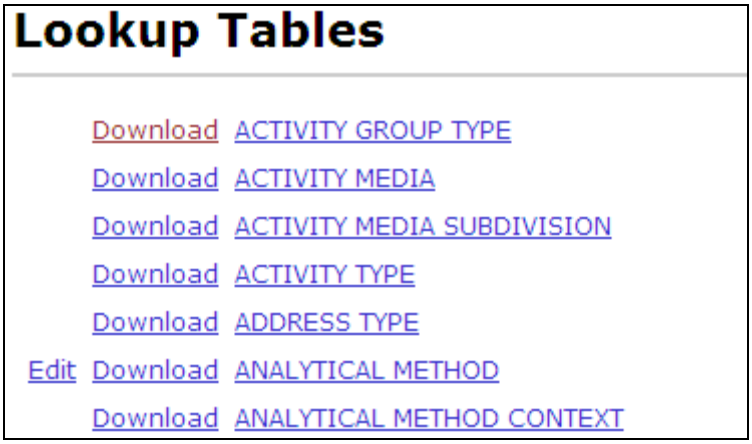
The file consists of a number of columns delimited by a tab character.

If the file does not open in Microsoft Excel, you can copy and paste the contents of the file into Excel which will format the table into rows and columns (which may easier to read).

	A	B	C	D	E	F
1	UID	Code	Description	Analytical Method Required	Monitoring Location Required	Last Change Date
2	1	Field Msr/Obs	MEASUREMENTS involve something measured in its environmental setting usually using some type of equipment. OBSERVATIONS are made by people, usually without the use of equipment, and are frequently qualitative.	N	Y	7/26/2006 10:57
3	3	Field Msr/Obs-Habitat Assessment	A field activity conducted to evaluate a habitat, according to an organization's pre-defined habitat assessment scheme.	N	Y	7/26/2006 10:57
4	2	Field Msr/Obs-Portable Data Logger	Measurements made in the field by an automated data logging device, running unattended and producing a suite of data values at repeating intervals set by its owner/operator.	N	Y	7/26/2006 10:57
5	19	Quality Control Field Calibration Check	The test is performed to calibrate the instrument for assuring the quality. Calibration checks are recommended at the beginning of the tests and every four hours.	N	N	7/26/2006 10:57

9.5.3 Managing Organization-Specific Lookup Tables

Click on the “Lookup Tables” link in the Navigation Panel to view the list of lookup tables.

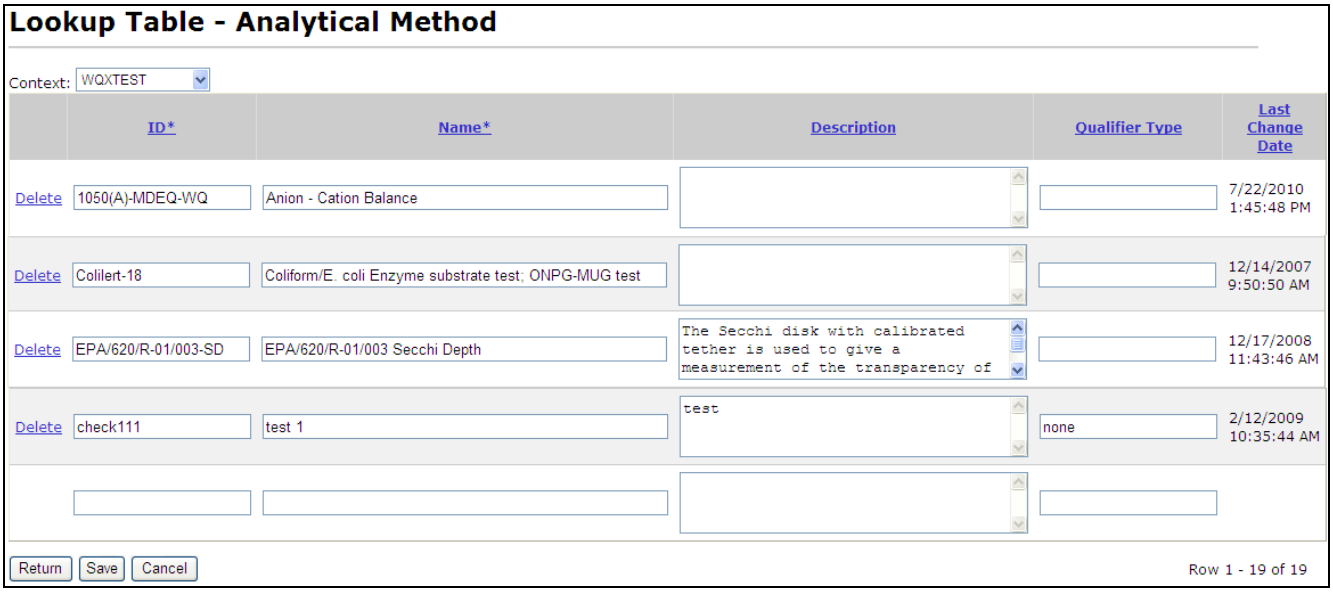


Lookup tables that contain organization-specific values will have an “Edit” link next to them. Only users that have been granted the "Admin" right on an organization can edit that organization's set of lookup values.

Select the “Edit” link next to the table name in the list. For example, select the Edit link next to “ANALYTICAL METHOD”. The system will display the edit page for the lookup table.

All of the editable lookup tables are filtered by Context or Organization.

Select a context from the dropdown list at the top of the page. The list will be filtered to display only values for the context chosen. Some lookup tables (e.g. Analytical Method and Metric Type) have certain contexts that are read-only and certain contexts that belong to specific organizations. If you select a context for an organization that you have been granted "Admin" rights on, then the list is editable. Otherwise, the list will be read-only.



Changing a Value in a Lookup Table

Make the changes to any row as necessary.

Click the “Save” button to save the changes

Adding a New Value

Add the new Analytical Method into the empty text boxes provided at the bottom of the list.

Click the "Save" button to save the new row. The row will be added and a new blank row will be displayed, where you can add another analytical method, if necessary.

Deleting a Value from a Lookup Table

To delete a row from a lookup table, simply click the Delete link next to the row you wish to delete.