

WebPortal Help Guide

Pennsylvania Department of Environmental Protection

Prepared by:

Mark Hoyer

Bureau of Clean Water

11th Floor: Rachel Carson State Office Building

Harrisburg, PA 17105

Table of Contents

Map View	3
View All Sites	4
View Sites with a Specific Parameter	5
Location View	7
Search for a Location	8
Select a Parameter from a Location	9
Download All Data from a Location	10
Data Set View	11
View Data in a Chart	12
View a List of Values	13
Download Data from a Specific Dataset	14
List View	15

Introduction

Pennsylvania Department of Environmental Protection's Bureau of Clean Water uses software from Aquatic Informatics called AQUARIUS to manage and store its continuous water quality data. Aquatic Informatics' WebPortal allows for the dissemination of these data through a web-interface. The purpose of the document is to provide guidance for the completion of the most common tasks in WebPortal. Additional information is available in Aquatic Informatics' AQUARIUS WebPortal User Manual by clicking the "?" icon in the upper right of the WebPortal.

Data provided through the WebPortal are limited to those that have undergone all internal quality assurance procedures.

Map View

View All Sites

The opening page of WebPortal includes a map of Pennsylvania showing the locations of all the CIM data, both historic and current (Figure 1). Hovering the cursor over a site provides some basic details about the site. Clicking the site will take you to a new page that will allow you to view or download the data. To return to this view, click the “Map” option in the menu on the left. To return to viewing all sites with any CIM parameter, choose “None” from the “Select Parameter” dropdown box.

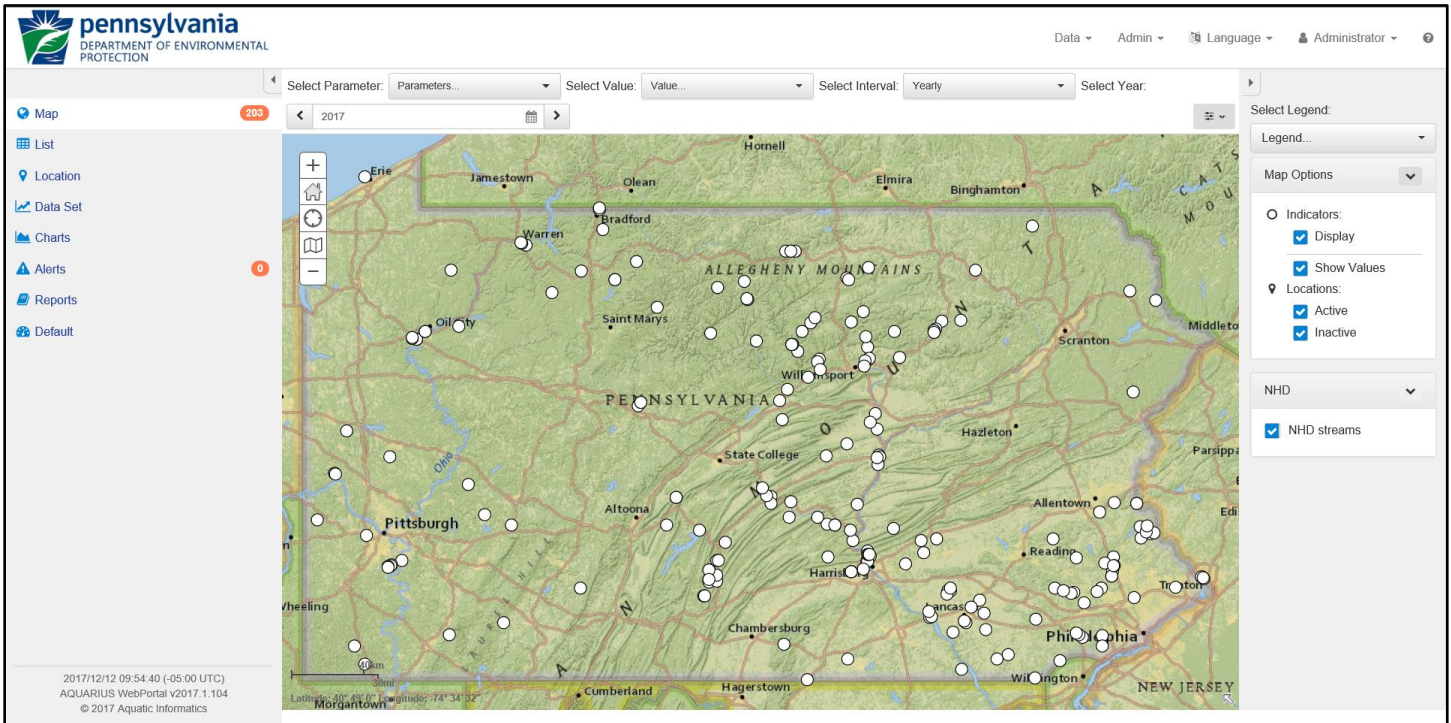


Figure 1. Opening page of WebPortal

View Sites with a Specific Parameter

To view the locations with only a specific parameter, use the “Select Parameter” dropdown box. Hovering over a site when a specific parameter has been selected provides details about that dataset, including the start and end of the dataset (Figure 2). Clicking the site will take you to new page will allow you to view or download the data.

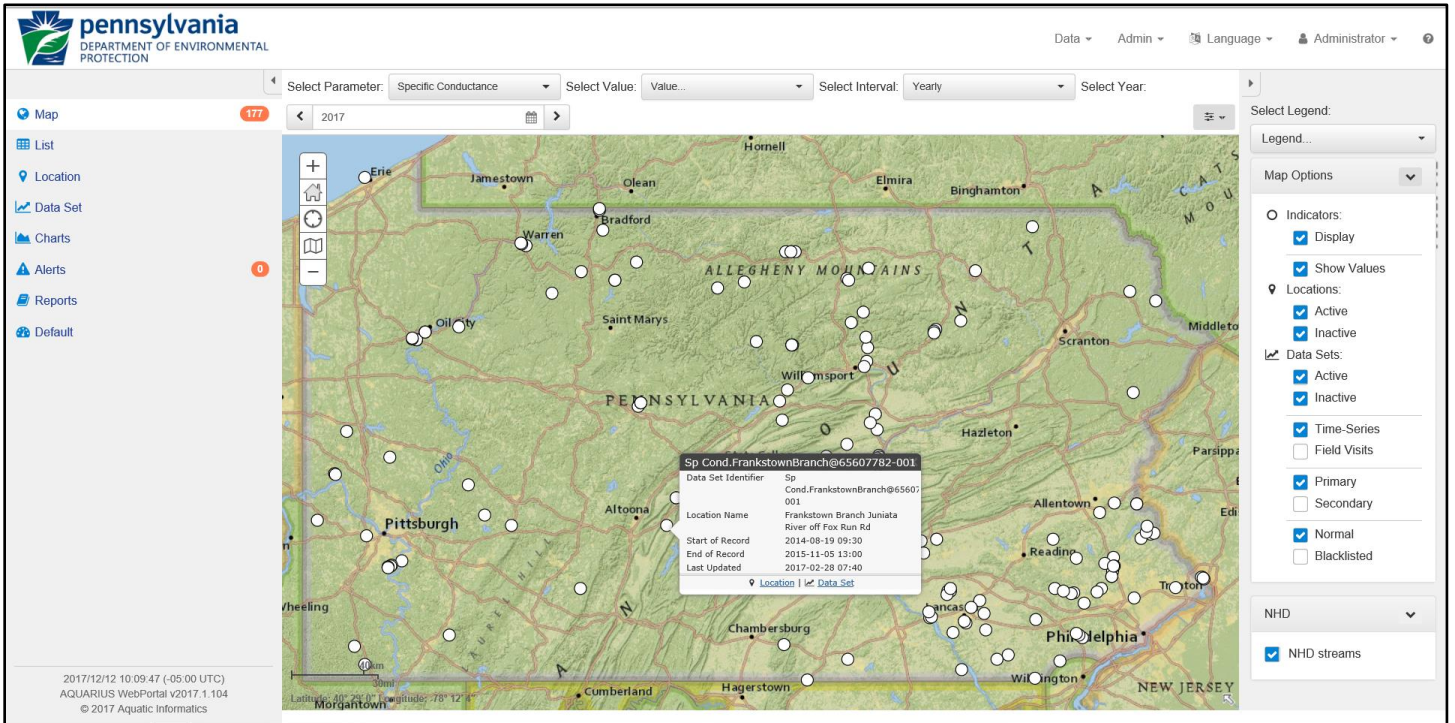


Figure 2. Map view with a parameter selected

Changing Base-map

To change the base-map to another layer such as Satellite Imagery, use the icon shown in Figure 3.

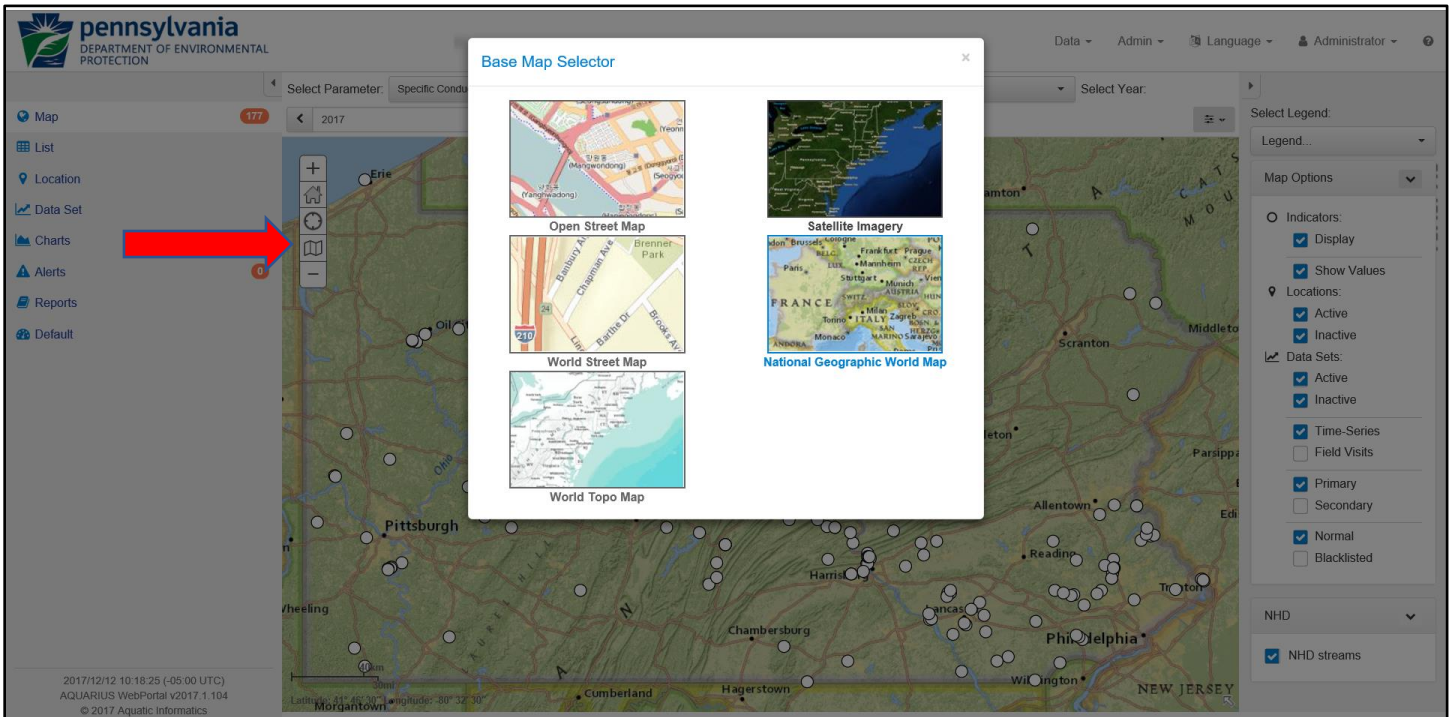


Figure 3. Changing the base-map in WebPortal

Location View

The location view can be accessed by clicking on a location in the map view or by choosing “Location” option from the menu on the left. The location view provides a few details about the location and a list of the parameters available at that site (Figure 4).

The screenshot shows the Pennsylvania Department of Environmental Protection web portal. The navigation menu on the left includes options for Map, List, Location, Data Sets, Charts, Alerts, Reports, and Default. A red arrow points to the 'Location' option. The main content area displays the location view for site 65607782-001. The location details are as follows:

- Location Name: Frankstown Branch Juniata River off Fox Run Rd
- Location Type: Water Quality Site
- Folder: All Locations.Internal Data.Susquehanna.02050302.Frankstown Branch Juniata River
- Latitude / Longitude: 40° 28' 33", -78° 11' 45" (WGS 84)
- Elevation: 824 ft
- Time Zone: UTC-05:00
- Active:

Below the location details is a table of Data Sets:

Data Set Id	Parameter	Start of Record	End of Record	Last Updated	Active	Go To
O2 (Dis).FrankstownBra...	Dissolved Oxygen Conc...	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-28 07:40:22	<input checked="" type="checkbox"/>	Go To
pH.FrankstownBranch...	pH	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-08 10:35:35	<input checked="" type="checkbox"/>	Go To
Sp Cond.FrankstownBr...	Specific Conductance	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-28 07:40:22	<input checked="" type="checkbox"/>	Go To
Water Temp.Frankstow...	Temperature of Water	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-28 07:40:22	<input checked="" type="checkbox"/>	Go To

Figure 4. Location view

Search for a Location

Within location view you can change locations by using the “Search for a Location” dropdown box and typing in the search line. Sites matching your search will appear as you type (Figure 5).

The screenshot shows the Pennsylvania Department of Environmental Protection's Aquarius WebPortal. The search bar at the top contains "Juniata" and a dropdown menu displays several matching locations. The current location is 65607782-001, Frankstown Branch Juniata River off Fox Run Rd. The search results table below shows the following data sets:

Data Set Id	Parameter	Start of Record	End of Record	Last Updated	Active	Go To
O2 (Dis), FrankstownBra...	Dissolved Oxygen Conc...	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-28 07:40:22	✓	Go To
pH, FrankstownBranch...	pH	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-08 10:35:35	✓	Go To
Sp Cond, FrankstownBr...	Specific Conductance	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-28 07:40:22	✓	Go To
Water Temp, Frankstow...	Temperature of Water	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-28 07:40:22	✓	Go To

Figure 5. Searching for a location

Select a Parameter from a Location

Next to each parameter is a dropdown box title "Go To". This dropdown box contains options to view a chart, data grid, or export that parameter's dataset (Figure 6).

The screenshot displays the AQUARIUS WebPortal interface for the Pennsylvania Department of Environmental Protection. The top navigation bar includes 'Data', 'Admin', 'Language', and 'Administrator' menus. The main content area is divided into a left sidebar with navigation options (Map, List, Location, Data Set, Charts, Alerts, Reports, Default) and a central panel. The central panel shows a location summary for '65607782-001' with details like Elevation (824 ft), Time Zone (UTC-05:00), and Active status. Below this is a 'Data Sets' table with columns for Data Set Id, Parameter, Start of Record, End of Record, Last Updated, Active, and Go To. A red arrow points to the 'Go To' dropdown for the first row, which is open, showing options: Map, Data Set, Summary, Chart, Grid, Statistics, Alerts, and Export. The footer contains the date and time '2017/12/12 11:00:59 (-05:00 UTC)' and version information 'AQUARIUS WebPortal v2017.1.104 © 2017 Aquatic Informatics'.

Data Set Id	Parameter	Start of Record	End of Record	Last Updated	Active	Go To
O2 (Dis) FrankstownBra...	Dissolved Oxygen Conc...	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-28 07:40:22	✓	Go To
pH.FrankstownBranch...	pH	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-08 10:35:35		
Sp Cond.FrankstownBr...	Specific Conductance	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-28 07:40:22		
Water Temp.Frankstow...	Temperature of Water	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-28 07:40:22		

Figure 6. Options for individual parameters at a location

Download All Data from a Location

To download all data from all parameters at the location, choose the “Export all Data (CSV)” button (Figure 7). Each parameter will be downloaded as a separate file. Because PA DEP does not have any live-feed data, the “Export last 7 days (CSV)” button will download blank files in almost all cases. For more export options, choose the “Export” tab at the top of the location view pane.

The screenshot displays the Pennsylvania Department of Environmental Protection web portal. The top navigation bar includes the state logo, 'DEPARTMENT OF ENVIRONMENTAL PROTECTION', and user options like 'Data', 'Admin', 'Language', and 'Administrator'. A search bar is present with 'Search for a Location: Location...', 'Select Interval: Yearly', and 'Select Year: 2009'. The left sidebar contains navigation links: Map (293), List, Location, Data Set, Charts, Alerts (0), Reports, and Default. The main content area shows the location details for '65607782-001'. A red arrow points to the 'Export all Data (CSV)' button. Below this is a 'Data Sets' table with columns for Data Set Id, Parameter, Start of Record, End of Record, Last Updated, Active, and Go To.

Data Set Id	Parameter	Start of Record	End of Record	Last Updated	Active	Go To
O2 (Dis).FrankstownBra...	Dissolved Oxygen Conc...	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-28 07:40:22	✓	Go To
pH.FrankstownBranch...	pH	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-08 10:35:35	✓	Go To
Sp Cond.FrankstownBr...	Specific Conductance	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-28 07:40:22	✓	Go To
Water Temp.Frankstow...	Temperature of Water	2014-08-19 09:30:32	2015-11-05 13:00:00	2017-02-28 07:40:22	✓	Go To

Figure 7. Downloading data from all parameters

Data Set View

The data set view provides information about the dataset of one parameter at one site (Figure 8). Within this view you can also view the data as a chart, a list of data readings, or export the data. To access this view select a site in map view after choosing the parameter of interest, or select “Data Set” from the menu on the left and then select the location and parameter you are interested in.

The screenshot displays the 'Data Set View' in the AQUARIUS WebPortal. The interface includes a top navigation bar with 'Data', 'Admin', 'Language', and 'Administrator' menus. A left sidebar contains navigation options: 'Map', 'List', 'Location', 'Data Set', 'Charts', 'Alerts', and 'Reports'. A red arrow points to the 'Data Set' option. The main content area shows the following details for the data set 'Sp Cond. FrankstownBranch@65607782-001':

Data Set: Sp Cond. FrankstownBranch@65607782-001	
Location Identifier	65607782-001
Location Name	Frankstown Branch Juniata River off Fox Run Rd
Parameter	Specific Conductance
Unit	Microsiemens per centimetre
Start of Record	2014-08-19 09:30 (UTC-05:00)
End of Record	2015-11-05 13:00 (UTC-05:00)
Last Updated	2017-02-28 07:40 (UTC-05:00)
Active	✓

Below the table are two buttons: 'Export last 7 days (CSV)' and 'Export all Data (CSV)'. On the right side, a metadata table provides further details:

Location Name	Frankstown Branch Juniata River off Fox Run Rd (Map)
Parameter	Specific Conductance
Unit	Microsiemens per centimetre
Start of Record	2014-08-19 09:30 (UTC-05:00)
End of Record	2015-11-05 13:00 (UTC-05:00)
Last Updated	2017-02-28 07:40 (UTC-05:00)

At the bottom left, the footer text reads: '2017/12/12 12:12:54 (-05:00 UTC) AQUARIUS WebPortal v2017.1.104 © 2017 Aquatic Informatics'.

Figure 8. Data set view

View Data in a Chart

To view a dataset in a chart, choose the “Chart” tab within the data set view pane. By default, the view will be of the current year. Because of the number of sites that contain only historic data, and the delay before data appear due to the quality assurance procedures, it is unlikely that data will appear in the current year view, in most circumstances. The start and end of record dates are provided in the menu on the right (Figure 9). The start and end records are also links and can be used to quickly access those years. There is also a year selector box along the top of the screen. Individual values can be seen by moving the cursor along the data. Zooming can be performed by selecting a region with the cursor. There is a “Reset Zoom” button at the bottom of the menu on the right to zoom back out, or use the selection pane below the main chart window.

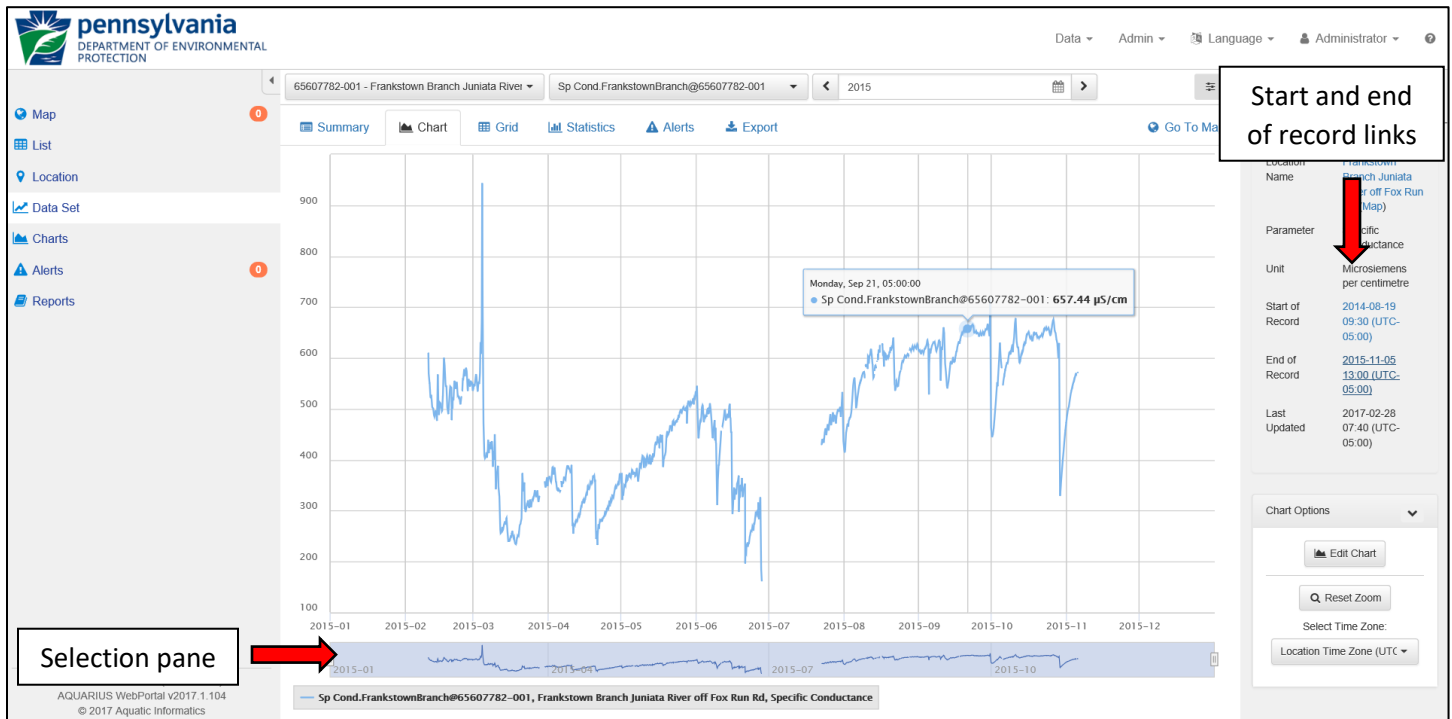


Figure 9. Viewing data in a chart

View a List of Values

To view a list of values for the selected dataset, choose the “Grid” tab within the data set view pane. Choose the filter icon in the Timestamp column header to limit the view to a range of dates (Figure 10).

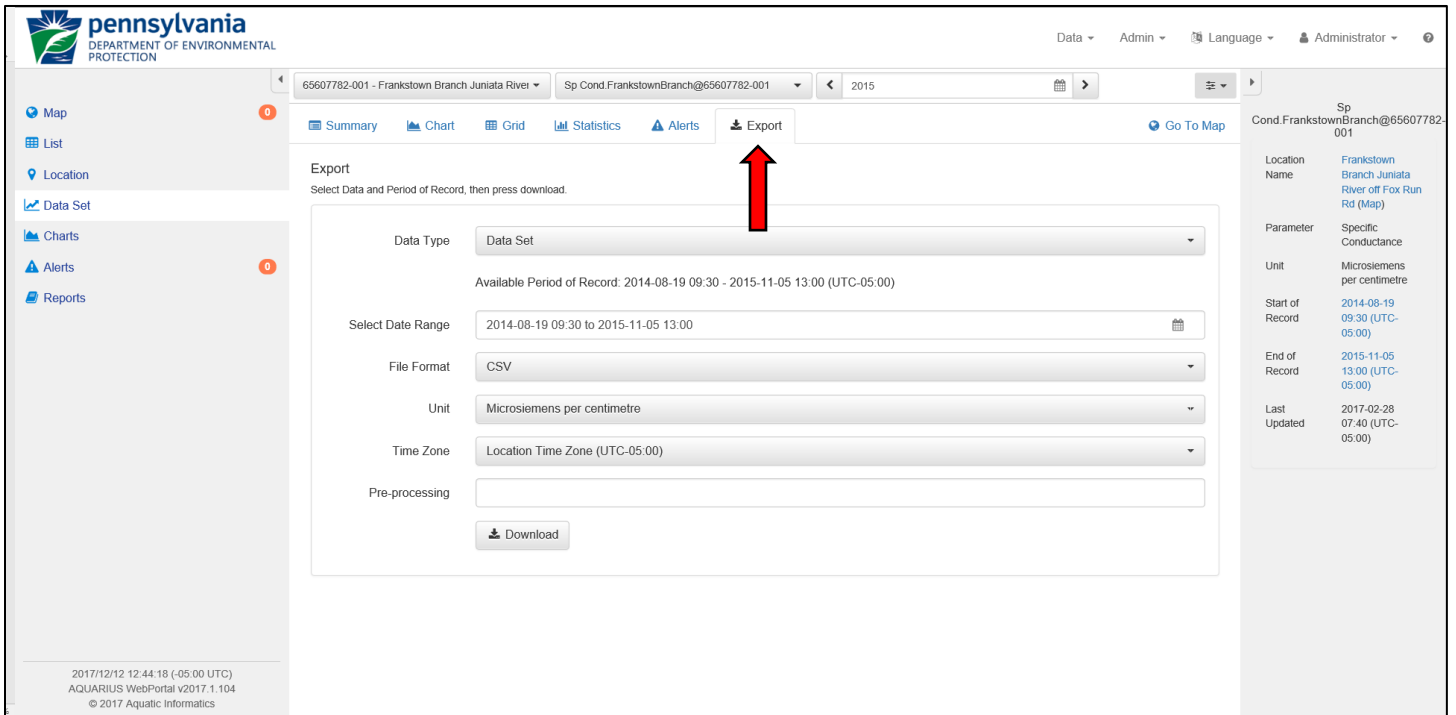
The screenshot displays the Pennsylvania Department of Environmental Protection's web portal. The main content area shows a grid view of a dataset for 'Sp Cond.FrankstownBranch@65607782-001'. The grid has three columns: 'Timestamp', 'Specific Conductance (microsiemens per centim...', and 'Interpolation Type'. A red arrow points to the filter icon in the 'Timestamp' column header, with a text box stating 'Filter icon to select date range'. The right sidebar shows metadata for the dataset, including Location Name, Parameter, Unit, Start of Record, End of Record, and Last Updated. The bottom left corner shows the date and time: '2017/12/12 12:36:20 (-05:00 UTC)'. The bottom right corner shows 'Items Displayed: 11720'.

Timestamp	Specific Conductance (microsiemens per centim...	Interpolation Type
2015-11-05 13:00:00	571.287695064233	1 - Inst. Values
2015-11-05 12:30:00	571.28646987245	1 - Inst. Values
2015-11-05 12:00:00	571.285244680666	1 - Inst. Values
2015-11-05 11:30:00	571.993969270554	1 - Inst. Values
2015-11-05 11:00:00		1 - Inst. Values
2015-11-05 10:30:00		1 - Inst. Values
2015-11-05 10:00:00		1 - Inst. Values
2015-11-05 09:30:00		1 - Inst. Values
2015-11-05 09:00:00	571.987832110855	1 - Inst. Values
2015-11-05 08:30:00	572.088024156163	1 - Inst. Values
2015-11-05 08:00:00	572.086796404201	1 - Inst. Values
2015-11-05 07:30:00	572.694081675456	1 - Inst. Values
2015-11-05 07:00:00	572.185759417457	1 - Inst. Values
2015-11-05 06:30:00	571.880276753997	1 - Inst. Values
2015-11-05 06:00:00	572.284721150623	1 - Inst. Values
2015-11-05 05:30:00	571.979240087276	1 - Inst. Values
2015-11-05 05:00:00	571.978012655336	1 - Inst. Values
2015-11-05 04:30:00	572.281035974603	1 - Inst. Values
2015-11-05 04:00:00	572.076974388503	1 - Inst. Values
2015-11-05 03:30:00		1 - Inst. Values

Figure 10. Grid view of a dataset

Download Data from a Specific Dataset

Under the “Summary” tab of the data set view pane, there are two buttons for exporting data. The “Export last 7 days (CSV)” button will likely not provide any data for the reasons described above. The “Export all Data (CSV)” button will download all data for the selected location and parameter. For more options on downloading data from a given dataset, choose the “Export” tab at the top of the data set view pane (Figure 11).



The screenshot displays the Aquarius WebPortal interface for the Pennsylvania Department of Environmental Protection. The main content area is titled "Export" and contains the following fields and options:

- Data Type:** Data Set
- Available Period of Record:** 2014-08-19 09:30 - 2015-11-05 13:00 (UTC-05:00)
- Select Date Range:** 2014-08-19 09:30 to 2015-11-05 13:00
- File Format:** CSV
- Unit:** Microsiemens per centimetre
- Time Zone:** Location Time Zone (UTC-05:00)
- Pre-processing:** (empty text field)
- Download:** (button)

A red arrow points to the "Export" tab in the top navigation bar. The right sidebar shows metadata for the dataset:

Location Name	Frankstown Branch Juniata River off Fox Run Rd (Map)
Parameter	Specific Conductance
Unit	Microsiemens per centimetre
Start of Record	2014-08-19 09:30 (UTC-05:00)
End of Record	2015-11-05 13:00 (UTC-05:00)
Last Updated	2017-02-28 07:40 (UTC-05:00)

Footer text: 2017/12/12 12:44:18 (-05:00 UTC) AQUARIUS WebPortal v2017.1.104 © 2017 Aquatic Informatics

Figure 11. Export tab of the data set view

List View

The list view provides the ability to create lists of sites or datasets that may be of interest. Use the filter icons for the respective columns to limit the data (Figure 12). For example, these filters could be used to look for specific conductance datasets in the Susquehanna River basin. To do this example, first select the Specific Conductance parameter from the “Parameters...” dropdown at the top of the list view pane. Then select the filter icon for the “Location Folder” column. This icon provides good utility for selecting within watersheds as the locations are organized into folders in this manner. The folder structure starts with All Locations, then Internal Data, the major basin, the HUC12 number, and finally the stream name. To limit the specific conductance datasets to those within the Susquehanna River basin, you could simply enter “Susquehanna” in the first box of the filter for the “Location Folder”. This would search the entire folder chain for that string of characters. If you were concerned there may be something like “Susquehanna Creek” in the Delaware River basin that would accidentally get returned with the other results, you could enter the folder structure through the basin name, in this case “All Locations.Internal Data.Susquehanna”.

Though you cannot download all data from the sites or datasets you select using the list view, you can use these lists to guide you to the datasets you may want and download these datasets individually.

The screenshot displays the Pennsylvania Department of Environmental Protection's data management interface. The top navigation bar includes the state logo, 'DEPARTMENT OF ENVIRONMENTAL PROTECTION', and user controls for 'Data', 'Admin', 'Language', and 'Administrator'. A sidebar on the left contains navigation icons for 'Map', 'List', 'Locations', 'Data Set', 'Charts', 'Alerts', and 'Reports'. The main content area shows a table of data records with columns for 'Data Set', 'Location', 'Location Folder', 'Start of Record', 'End of Record', 'Value', 'Status', and 'Go To'. A filter dropdown is open over the 'Location Folder' column, showing a search box with 'Susquehanna' entered and a 'Filter' button. A callout box labeled 'Filter options for Location Folder column' points to this dropdown. Another callout box labeled 'Select parameter' points to the 'Specific Conductance' dropdown at the top of the table. On the right side, there is a 'List Options' panel with checkboxes for 'Active', 'Inactive', 'Data Sets', 'Time-Series', 'Field Visits', 'Primary', 'Secondary', 'Normal', and 'Blacklisted'. The footer of the page shows the date and time '2017/11/21 13:13:38 (-05:00 UTC)', the version 'AQUARIUS WebPortal (2017.1.104)', and the copyright '© 2017 Aquatic Informatics'.

Figure 12. List view filtering example