

# South Florida/Caribbean Network

National Park Service  
Inventory and Monitoring Division



## Standard Operating Procedure WT12

### *Importing Data to Aquarius Database—Version 1.2*

Please cite this as:

South Florida/Caribbean Network. 2025. Importing data to Aquarius database—Version 1.2. South Florida/Caribbean Network Standard Operating Procedure NPS/SFCN/SOP—WT12. South Florida/Caribbean Network, Palmetto Bay, Florida.

## Purpose

This SOP describes how to import water temperature HOBO® data for upload to the NPS Aquarius database. Aquarius Time-Series is a database platform, developed and maintained by Aquarius Informatics, that provides time series analysis and long-term storage of environmental water quality observations. This SOP describes how the CSV files are uploaded into Aquarius.

The water temperature data used to be stored in a Microsoft Access database. In 2018, the program shifted water temperature data storage to Aquarius, a NPS-wide continuous water quality database. The software platform was updated from Aquarius v3.10 to Aquarius NG v2020.1, and later upgraded to v2022.1. The [DOI Aquarius Sharepoint](https://doi.gov/aquarius) site has additional resources that can be used to learn how to use the application. This SOP is for users that already have access to Aquarius v.2022.1 (<http://aquarius.nps.gov/AQUARIUS/>). If you do not have access, the SFCN Data Manager and/or Dean Tucker ([dean\\_tucker@nps.gov](mailto:dean_tucker@nps.gov)), the Natural Resource Specialist in the Water Resource Division.

Note that the NPS Aquarius WebPortal (<https://irma.nps.gov/aqwebportal>) is publicly available, allowing read-only access to published water quality data.

## Requirements

Login and access to Aquatic Informatics Aquarius NG v2022.1 (or “Aquarius” for short)

## Revision Log

| Revision Date | Author     | Changes Made                                                                                                                                | Reason for Change                             | New Version # |
|---------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|
| 10/20/20      | L. Richter | 1) Added Tutorials for Aquarius NG section<br><br>2) Updated procedures to upload data, using updated software platform Aquarius NG v2020.1 | Aquarius v3.1 updated to Aquarius NG v2020.1. | 1.1           |
| 9/27/22       | L. Richter | Changes due to update to Aquarius v2022.1                                                                                                   | Aquarius updated to v2022.1                   | 1.2           |

# Procedures

## Tutorials for Aquarius NG

Tutorials for Aquarius (documents and videos) are available on the NPS Aquarius Sharepoint site: <https://doimspp.sharepoint.com/sites/nps-nrss-wrd/data/Pages/AquariusNG.aspx>. Any user who plans to enter or edit SFCN water temperature data in Aquarius should familiarize themselves with these resources. They cover Aquarius operations in far more detail than this SOP and may be used as an additional reference. Specifically for this SOP, users should first review the following document and/or associated video: “02\_Creating\_TimeSeries\_Datasets.docx”.

## Importing Data to the Aquarius Database

1. Navigate to the Aquarius v2022.1 Springboard in your web browser:  
<http://aquarius.nps.gov/AQUARIUS/>.
2. Click the Windows Authentication button at the bottom of the window to sign in (Figure 1). You do not need a username or password, but you must be connected to an NPS server (or using Ivanti Secure Access Client) in order to sign in. If you are unable to sign in, contact Dean Tucker ([Dean\\_Tucker@NPS.gov](mailto:Dean_Tucker@NPS.gov)) and ask to reinstate your license. At the time of this writing, licenses for editing water quality data in Aquarius v2022.1 are limited and must be turned on/off to meet the demands across the entire NPS.

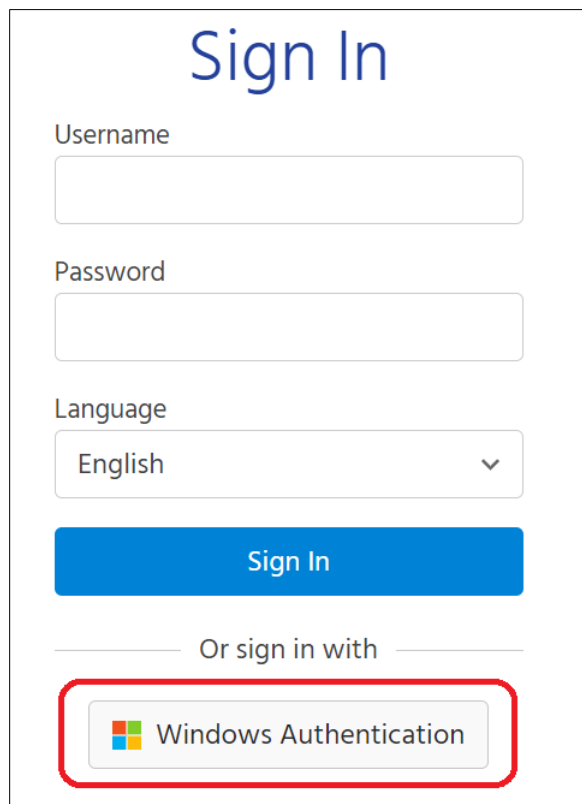


**Figure 1.** A screenshot of the sign in window. To sign in, the user must click the Windows Authentication button while connected to an NPS server (or using Ivanti Secure Access Client).

3. Once in the Springboard, search for the site with the data you wish to upload. Typing a few letters into the search panel at the left of the screen will bring up options (Figure 2).

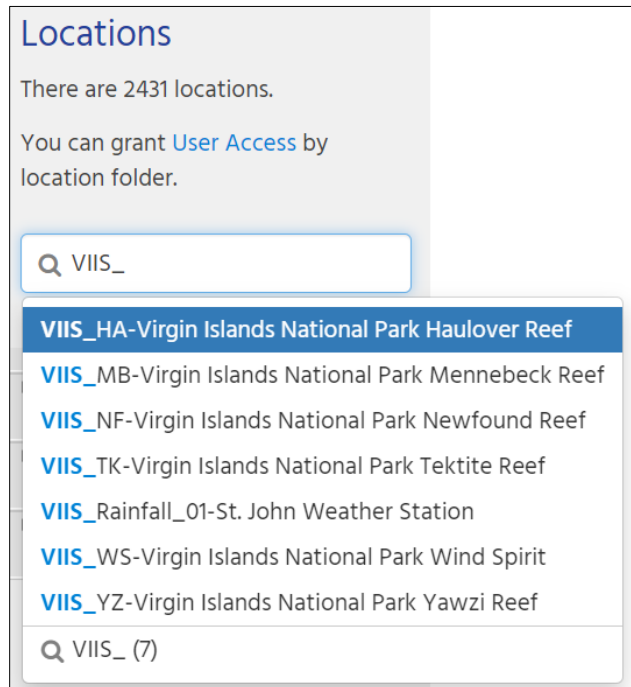


**Figure 2.** A screenshot of the search panel within Springboard to navigate a water temperature monitoring site. In the above example, typing “VIIS” brings up all water quality datasets associated with that park.

4. Once the temperature monitoring site is selected from the search panel, two datasets corresponding to each logger should populate the main panel in the screen. Click the Data Import icon in the top left of the screen to append newly collected data to the existing dataset. (Figure 3).

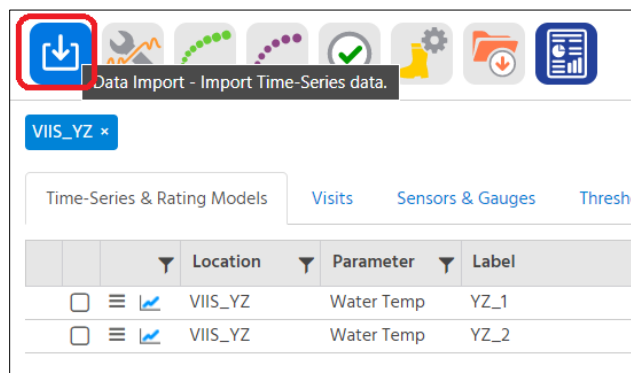


**Figure 3.** A screenshot of the Springboard of the two logger datasets at a site (e.g. VIIS\_YZ). The Data Import icon at the top left of the screen is clicked to append new data to the existing dataset.

5. Click the Import and Configure link on the left side of the window.

6. In the Import and Configure window, click the “Choose File” button and navigate to the CSV file exported from HOBOWare that you wish to append to the existing dataset. Once selected, click “Next”.

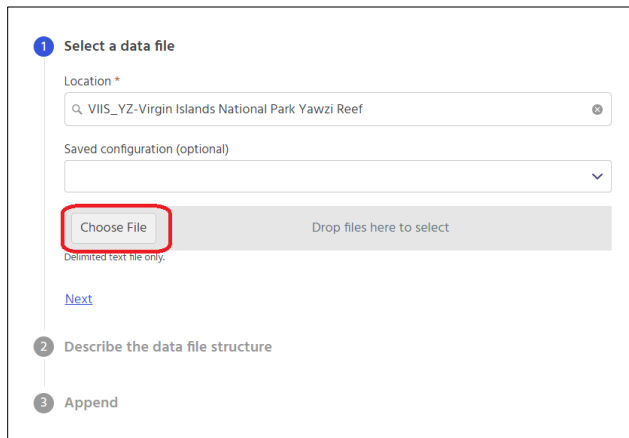


**Figure 4.** A screenshot of the Import and Configure window. Select Choose File to navigate to the CSV file to append to the existing dataset.

7. Describe the data file structure. The CSV exports from HOBOWare should all have the same structure, but review the file to ensure accuracy. The following fields should be as follows (Figure 5):
  - a. Configuration type: Delimited
  - b. Column separator: Comma
  - c. Number of heading rows: 2
  - d. Time zone: -04:00
  - e. Not a Number (NaN): leave blank
  - f. Comment Characters: leave blank

2

Describe the data file structure

Configuration type \*

Delimited

Column separator \*

Comma

Number of heading rows \*

2

Timezone

- 04:00

Not a number (NaN)

Add

Add any values in your file that are not numbers. The import tool will ignore these values.

Comment characters

Add

The import tool will ignore any lines starting with these characters.

**Figure 5.** A screenshot of the Data Import window to describe the data structure. Only the “Number of heading rows” and “Timezone” fields will need to be changed. These fields are based on the CSV files exported from HOBOWare.

- Next, identify the column of data with timestamp information (Figure 6). In this example, in the preview of the CSV file below, click Column B. Then check the box for “Select column for import”. In the column type, select Timestamp. Type in the format. This is very specific (case-sensitive) and will cause the import to fail if typed incorrectly. Without the quotation marks, the format should be: “MM/dd/yy hh:mm:ss tt”. Click Apply.

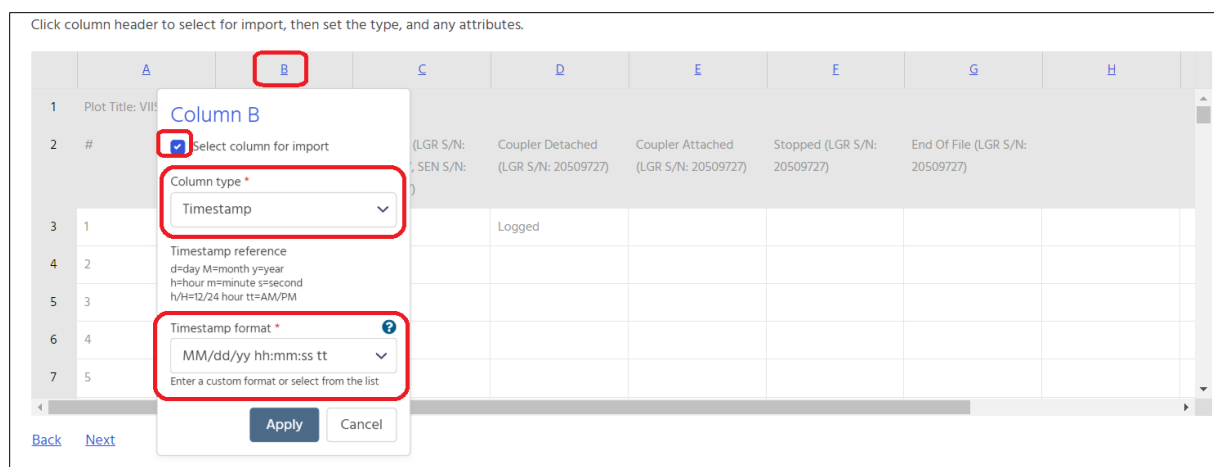


**Figure 6.** A screenshot of the Data Import window. Column B in the loaded CSV file has timestamp information. Select the column to include and type the custom timestamp format (case-sensitive).

9. Next, identify the column with water temperature time-series data (Figure 7). In this example, in the preview of the CSV file below, click Column C. Then check the box for “Select column for import”. Select “Time-Series point” from the Column Type field. In the Import Data to Time Series field, type the site code (e.g. YZ for Yawzi) to bring up the possible datasets to append the data to. Select the appropriate one (there are two datasets at each site), then click Apply.

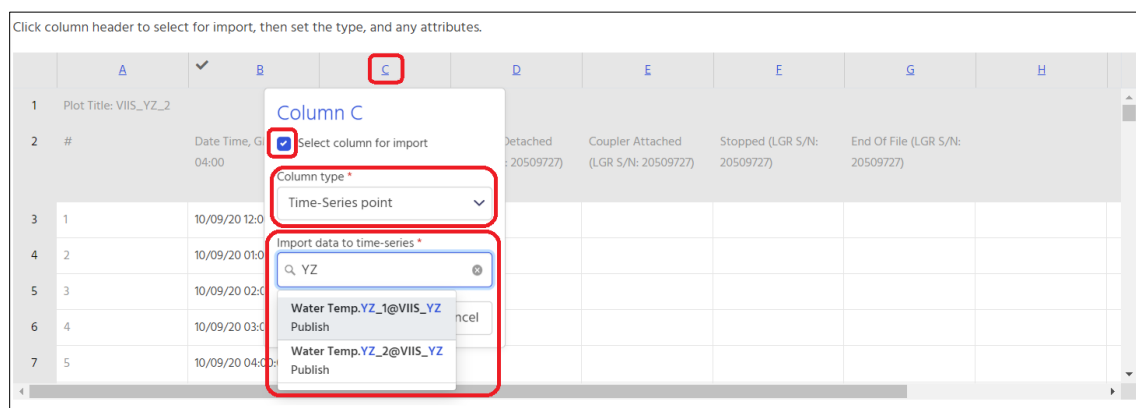


**Figure 7.** A screenshot of the Data Import window. Column C in the loaded CSV file has the time-series temperature information for upload. Select the column for import, select “Time-series” as Column Type, and type in the site code in the search box to populate possible time-series you wish to append the dataset to. Select the appropriate dataset, then click Apply.

10. Click Next. In the following window, click the Append Data button. Please review the results to make sure data was appended correctly. A few common errors include:
  - a. *Timestamp format was typed incorrectly:* In this case, you’ll receive a “Failure to parse” column. Check to ensure the date/time format was entered correctly.

- b. *Not all points appended:* Check the number of points actually appended and ensure that it makes sense. A year of data has around 4,000 points.
  - c. *Grade/Approval rating of previous data overlaps with new dataset:* Aquarius will default to the current date and time of the day you are using it. It is possible to accidentally approve a dataset up to a date where there is not actual data yet. When a new dataset is uploaded, the new points will not be appended to an area that has previously been approved, even if blank. In this case, you will need to unapprove that section of data, and re-append the data to make sure the full complement of the new data is appended correctly.
11. Repeat steps 4–10 for the second logger at the site to ensure that both datasets are appended appropriately. You may also click the “Do another import” link at the bottom of the window after successfully completing step 10.