



# Canadian Aquatic Biomonitoring Network Database Handbook

---



Cat. No.: En84-336/2023E-PDF  
ISBN: 978-0-660-48779-3  
EC23118

Unless otherwise specified, you may not reproduce materials in this publication, in whole or in part, for the purposes of commercial redistribution without prior written permission from Environment and Climate Change Canada's copyright administrator. To obtain permission to reproduce Government of Canada materials for commercial purposes, apply for Crown Copyright Clearance by contacting:

Environment and Climate Change Canada  
Public Inquiries Centre  
12<sup>th</sup> Floor, Fontaine Building  
200 Sacré-Coeur Boulevard  
Gatineau QC K1A 0H3  
Telephone: 819-938-3860  
Toll Free: 1-800-668-6767 (in Canada only)  
Email: [enviroinfo@ec.gc.ca](mailto:enviroinfo@ec.gc.ca)

© His Majesty the King in Right of Canada, as represented by the Minister of Environment and Climate Change, 2023

Aussi disponible en français

# Canadian Aquatic Biomonitoring Network Database Handbook

## Contents

<b>INTRODUCTION</b> .....	<b>1</b>
<b>DATABASE BASICS</b> .....	<b>2</b>
Logging into the Database .....	2
Database Organization .....	2
Core CABIN Functions .....	3
CABIN Data Hierarchy.....	4
Data Types.....	5
System Profile Access & Study Permissions .....	5
<b>PROJECT MANAGER TOOLS</b> .....	<b>6</b>
Requesting a Study.....	6
Editing Study Information .....	6
Adding Users to a Study .....	7
Editing User Permission/Remove from a Study.....	8
<b>ENTERING DATA</b> .....	<b>9</b>
Selecting a Study .....	9
Adding a Site.....	9
Adding a Site Visit.....	10
Entering Location Data for Site Visit.....	12
Adding a Sample.....	13
Entering Field Sheet Data .....	15
Entering Other Habitat Data.....	15
Entering Channel Data (another option) .....	16
Adding Site Photos .....	16
Uploading Field Sheets .....	17
Adding Benthic Data.....	17
Step 1 – Enter Taxonomist and Sub-Sample Details.....	18
Step 2 – Search Taxa .....	18
Step 3 – Enter Taxa Counts .....	19
Data Upload Tool.....	22
Step 1. Download Templates.....	22
Step 2. Preparing Templates .....	22
Step 3. Upload Data.....	23
<b>DATA VERIFICATION AND VALIDATION</b> .....	<b>24</b>
View Data Entry Status for a Study.....	24
View Data Summary for Sample.....	24

<b>DATA EXPORT .....</b>	<b>25</b>
Option 1. Download Individual Sample Report .....	25
Option 2. Use the Export Data function .....	26
Step 1 – Select Data Export Criteria .....	26
Step 2 – Download & View data files .....	27
Export Reference Model Data only .....	27
<b>OTHER DATABASE FEATURES.....</b>	<b>28</b>
Manage Data .....	28
View Public Sites.....	28
Study Map .....	29
Study Dashboard .....	30
Add Non-Standard Habitat Data.....	31
Administration.....	32
Edit User Profile.....	32
Change Password .....	32
View User Study Access List .....	32
View Study and Permission Information .....	32
Taxonomy Tools: Search Taxa .....	32
Taxonomy Tools: Export Taxonomy .....	34
<b>TROUBLESHOOTING .....</b>	<b>35</b>



## Introduction

Access to the CABIN database requires a username and password acquired through CABIN training. Before entering data into a study users must either be a Project Manager or be given access to a CABIN study by a Project Manager. Tasks specific to certain database roles are clearly indicated throughout the handbook.

The primary purpose of this document is to assist in entering, verifying, and exporting data in the CABIN database. This document will also explain how to use additional database features. Instructions are given for each task to complete when managing data.

If problems are encountered when using the database refer to the troubleshooting section first. Contact the CABIN email for further assistance.



**Important:** Critical information about performing task.



**Tip:** Helpful information to perform tasks efficiently.



## Database Basics

### Logging into the Database

CABIN database access requires participation in CABIN Training where a username and password is provided. The CABIN database expects the user to be active while logged in. If a user is inactive after a period of 30 min, the user will receive a “Session timeout warning”. Data should be submitted frequently to avoid losing unsaved changes.

1. Go to **login page** for CABIN database.
2. Read **terms and conditions**. Scroll to the bottom of the terms and conditions then click the check box to confirm reading of Data Sharing agreement in order to be able to submit login credentials.
3. Enter user name and password.

**Important:** Database users receive a username and temporary password from an ECCC administrator. We advise changing this after logging in (see [Change Password](#)). Users are prompted to complete profile information before proceeding when logging in for the first time. Users receive a notification each year to update or confirm profile information.

### Database Organization

The CABIN web application is organized by core functions that are located at the top of the webpage. This [CABIN Database Handbook](#) provides guidance on three Core CABIN Functions: **Manage Data**, **Data Export**, and **Administration**. The remaining two Core CABIN Functions, **Data Analysis** and **Analytical Reports**, are explained in the [CABIN Analysis and Reporting Handbook](#). Each function may have a left-hand menu that provides additional options. Tabs appear in the primary activity panel to access specific tasks. Each section of this handbook identifies the breadcrumbs below the Core CABIN Functions that aid in database navigation.

### Core CABIN Functions

**Manage Data:** This is the default landing page where data are entered and managed in studies (refer to data hierarchy below). This is also where Project Managers can request a new study to be set up in the CABIN database.

**Data Analysis:** Data that have been entered into the CABIN database can be analysed from this page (Refer to the *Analysis and Reporting Handbook*).

**Analytical Reports:** Analyses that have been conducted in a CABIN analysis project can be summarized and presented in individual site reports from this page (Refer to the *Analysis and Reporting Handbook*).

**Data Export:** Data from one or more studies and reference models can be exported from this page.

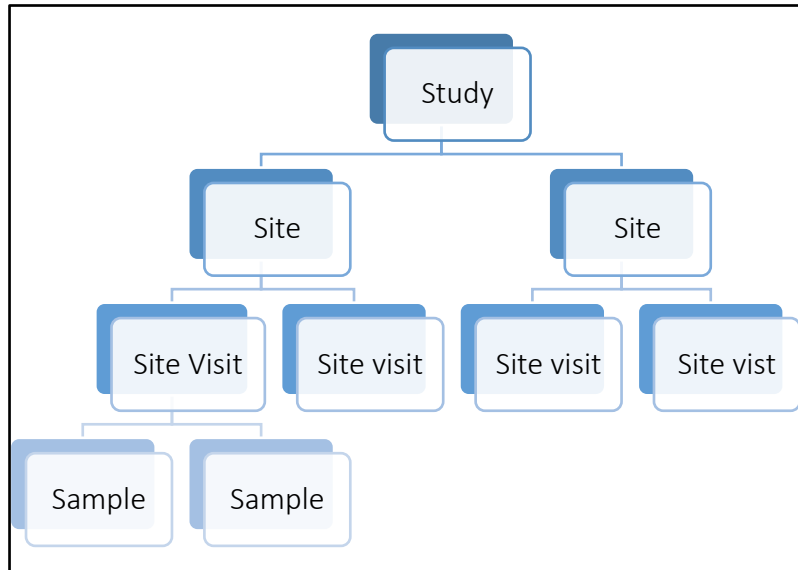
**Administration:** User profiles and passwords can be modified here. This page also provides additional features for Project Managers to manage user access to their studies. The CABIN taxonomy library is also found here.

### CABIN Data Hierarchy

**Study:** Studies are created within the database to group project related data within the larger CABIN database. A CABIN study is a collection of data that belong to a person, group or organization. Each study has an author (i.e. project authority responsible for data ownership) and must be created by a Project Manager. A study contains a collection of sites usually sampled for a common purpose.

**Site:** A site is a unique location representing a reach that is 6x bankfull width. It may be sampled one time (i.e. single site visit) or it may be sampled multiple times over several years (i.e. many site visits).

**Site Visit:** A site visit refers to the date that the site was sampled. A site may be revisited every year to track changes over time. New site level information does not need to be entered each year; instead multiple site visits can be entered for a given site.



**Sample:** A sample refers to a benthic macroinvertebrate collection at a site location during a site visit. In most cases, a single CABIN kick net sample will be taken. In some cases, additional samples will be taken to assess within site variability. The first sample is considered the primary sample where the habitat data are entered. The additional benthic samples are considered QA/QC samples for the purpose of assessing biological variability and are all associated with the habitat data collected for sample 1 (see Data Types below).



Data Types

CABIN categorizes all data into two different types: Habitat and Benthic.

**Habitat data:** Data about the environment including site metadata, location coordinates, field sheet data, water and sediment chemistry data, and GIS-derived landscape data. These describe all environmental attributes about the site where the benthic macroinvertebrate sample was collected.

**Benthic data:** Benthic macroinvertebrate taxonomic data and associated metadata (i.e. taxonomist and subsample information).

System Profile Access & Study Permissions

CABIN System Profile Access identified in the CABIN User profile relates to the level of training and certification acquired and abilities permissible within the CABIN web application.

Training and Certification	CABIN System Profile Abilities
Project Manager	Request CABIN study in database Grant access permissions to other CABIN users Enter, edit, view and export data Analyse data
Data Analyst	Enter, edit, view and export data Analyse data
Field Technician	Enter, edit, view and export data
Data Technician	Enter, edit, view and export data
Field Assistant	No database access

A Project Manager can provide CABIN users access to their study. User permission levels for a given study are defined by the Project Manager. The Project Manager may grant study permissions based on the user’s level of training and certification. The Project Manager may choose to limit access to a subset of tasks regardless of the user’s training. Therefore, user permission levels for a study do not necessarily match the complete set of abilities.

User Permissions Level	Abilities within a CABIN study
Project Manager Access	Grant access permissions to other CABIN users Enter, edit, view and export data Analyse data
Data Analyst Access	Enter, edit, view and export data Analyse data
Data Manager Access	Enter, edit, view and export data
Data User Access	View or export data only

## Project Manager Tools

### Requesting a Study

1. Go to **Manage Data**.
2. Click **Request New Study** button on bottom left-hand corner of page.
3. Enter the study details.
  - a. *Study Type: select from drop-down*
  - b. *Political Boundary: selected from drop-down*
  - c. *Study Name:*
  - d. *Description: (A few sentences about who is doing the study, why and over what timeframe and geographic region)*
  - e. *Purpose: (A sentence about why the study was created)*
  - f. *Authority: select from drop down (i.e. sector that owns the data)*
  - g. *Date created:*
4. Click **Submit**. Study requests are automatically sent to the appropriate CABIN Regional Lead for validations. A confirmation email is sent when complete and ready for data entry.

**Important:** In the spirit of network collaboration and data sharing, CABIN data are publically available by default as per the data sharing terms and conditions on the CABIN login page. There are rare situations where data may be withheld from Open Data for a specified period of time (e.g. legal justification). An appropriate justification is required to set up a study that will remain private for a period of time. For inquiries regarding withholding data, please contact your CABIN regional lead.

### Editing Study Information

1. Go to **Administration** and select **Study Management** from the left-hand menu to access the **Search Study** page. Enter text to search for a study or select a study from the list.
2. Go to **Edit Study** tab.
3. Update study information as needed and click **Submit** to save changes.

**Important:** Refer back to the CABIN terms and conditions on the database login page to review the Data Sharing Agreement.

## Adding Users to a Study

[Login](#) → [Admin](#) → [Search Study](#) → Add New User

1. Go to **Administration**.
2. Select **Study Management** in the left-hand menu to access the **Search Study** page.
3. Enter text to search for a study or select a study from the list.
4. Go to the **Add Users** tab, to add user access permissions.
5. Select the Access Level you wish to grant from the drop-down menu.
6. Enter the name of the CABIN user in the filter items box.
7. Check the corresponding check box in the Selected User column.
8. Click **Add Users**.
9. The recently added user and their permission level should now be visible in the **User Permissions** tab.

The screenshot displays the 'Add Users' page within the Project Manager Tools. The top navigation bar includes 'Log out', 'ec.gc.ca', and several menu items: 'Manage Data', 'Data Analysis', 'Analytical Reports', 'Data Export', and 'Administration'. Below this, a breadcrumb trail reads 'Login → Admin → Search Study → Add New User'. The left sidebar contains a menu with categories: 'Users' (View/Edit user), 'Study' (Study Management), and 'Taxonomy' (Search Taxa, Export Taxonomy, View/Edit Taxonomists, Add Taxonomist). The main content area is titled 'Add Users' and features tabs for 'Study Summary', 'Edit Study', 'Add Users', 'User Permissions', and 'Delete Study'. The 'Add Users' tab is selected. Underneath, there is a 'Select Users' section with an 'Access Level (required):' dropdown menu currently set to 'Data Manager'. A search box labeled 'Filter items' is provided, with a pagination indicator showing 'Showing 1 to 10 of 2,398 entries' and a 'Show 10 entries' dropdown. At the bottom, a 'SELECTED USER:' section shows columns for 'Name' and 'Group', each with up/down arrows for sorting.

## Editing User Permission/Remove from a Study

[Login](#) → [Admin](#) → [Search Study](#) → User Permissions

1. Go to **Administration**.
2. Select **Study Management** in the left-hand menu to access the **Search Study** page. Enter text to search for a study or select a study from the list.
3. Go to **User Permissions** tab.
4. Use the drop-down list to select a different permission level OR **Remove from Study**.
5. Click **Submit**. After submitting, the updated user access level should be visible on the refreshed page. Any removed users should no longer be visible.

The screenshot shows the 'User Permissions' page in the Project Manager Tools interface. The top navigation bar includes 'Manage Data', 'Data Analysis', 'Analytical Reports', 'Data Export', and 'Administration'. The user is logged in as 'ec.gc.ca'. The breadcrumb trail is 'Login → Admin → Search Study → User Permissions'. The left-hand menu is expanded to 'User Permissions' under the 'Study' section. The main content area shows the 'User Permissions' tab selected, with a table of study details and a user permission list.

Details	
Study Name	Data Entry Tutorial Study / Didacticiel Entrée de données
Description	Data Entry Module Tutorial Study for revised Data Entry module
Author	Stephanie Strachan
Date	24-October-2022

User Permissions

Dana, Samerra:

## Entering Data

### Selecting a Study

[Login](#) → [Studies](#)

1. Go to **Manage Data**.
2. Click on the desired Study. If users have access to many studies, the **Filter items search field** can be used to efficiently search for a particular study. If a Study has not been set-up in the CABIN database, Project Managers can use the **Request New Study** button and follow the procedures to create a new study (see [Requesting a Study](#)).



**Tip:** Select the **Search Study** option in the left-hand menu to go to another study at any time.

Canadian Aquatic Biomonitoring Network (CABIN) Canada

Log out ec.gc.ca Manage Data Data Analysis Analytical Reports Data Export Administration

[Login](#) → [Studies](#)

### Study Search

Filter items  Showing 1 to 1 of 1 entries (filtered from 417 total entries)

Study Name	Study Type	Author	Regional Lead	Date Created
<a href="#">2022 CABIN Training Modules / Formation RCBA</a>	River	Timothy Pascoe	Timothy Pascoe	2022-04-14

### Adding a Site

[Login](#) → [Studies](#) → [Study Information](#) → [Add/Modify Site](#)

1. From the **Study Information** page, go to the **Add Site** tab.
2. Fill in the Site details fields. The “Alternate Site Code” is an optional field used by some organizations to cross-reference to data or projects stored outside of the CABIN database.

3. Click **Add Site** button at the bottom. If the site was successfully added the Database will return to the **Study Information** tab. The newly created site should now be visible from Site Code drop-down list.



**Tip:** It is most efficient to enter the data after all site codes have been entered.

### Adding a Site Visit

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Add/Edit Visit](#)

1. On the **Site Information** page, click on the **Add Visit** tab.
2. Enter the required information below. The CABIN standard requirements are provided in the screen shot of the following page.
  - a. *Sample Date*
  - b. *Season*
  - c. *Protocol:* Select one of the CABIN protocols relevant to the study from the drop-down menu. Other protocols in this drop down list may be legacy protocols or new research and development protocols.
  - d. *Sampling Device:* As organizations transition to CABIN protocols, comparison studies may be conducted. For this reason, other sampling device options can be selected if conducting sampling that does not adhere to CABIN protocols.
  - e. *# Benthic Replicates:* Do not change this number for stream samples. This number applies to mainly to box core samples for CABIN Open water protocols.
  - f. *Mesh size*
  - g. *Kick time*
  - h. *Sampling Crew*
  - i. *Site Description*
3. Click **Add Visit**. The Database will return to the **Site Information** tab where the new site visit data should be visible.

Manage Data | Data Analysis | Analytical Reports | Data Export | Administration | Log out | ec.gc.ca

[Login](#) → [Studies](#) → [Site Information](#) → Add/Edit Visit

## Manage Data

Change Study

# Add Visit

Study Name: [Data Entry Tutorial Study / Didacticiel Entrée de données](#)  
 Site Code: Site 1

View Site Information | Edit Site | Delete Site | **Add Visit**

### Visit Information

Sample Date (YYYY/MM/DD) (required):  /  /  Date should be within the standard CABIN sampling season of the sampling region

Season (required):  
 ▾

Protocol:  
 ▾ Habitat specific CABIN protocol (i.e., CABIN – Wadeable Streams)

Sampling Device:  
 ▾ Kick Net

# Benthic Replicates:  
 For wadeable stream samples do not change this number

Changing this value can have significant impacts on how community structure data is reported from the CABIN system. '# of Benthic Replicates' refers to collection methods within a sample, not the number of total samples collected at a station. Change this value with extreme caution.

Mesh Size (µm):  
 ▾ 400 µm

Kick Time (min):  
 3 minutes

Sampling Crew (Comma separated names):  
 Enter all crew members

Site Description:  
  
Transcribe geographical description/notes from CABIN field sheet

**Add Visit** **Cancel**

## Entering Location Data for Site Visit

Location coordinates are usually taken at the riffle that is sampled on each site visit (i.e. date of sampling). While the site code for the reach may be the same from year to year, the exact coordinates for the sample location may change slightly among site visits due access issues, water levels, or disturbance at the site. Location information can be entered from the site visit page (see instructions below) or from the Field Sheet data entry page (Refer to [Entering Field Sheet Data](#)). In some studies, multiple benthic macroinvertebrate samples may be collected within the reach but only one set of coordinates is entered for the site visit

**Important:** Coordinates must be entered as latitude and longitude or degrees/minutes/seconds formats. UTM data must be converted outside of the database.

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Visit Information](#) → Visit Location

1. On the *Visit Information* page, go to the *Lat/Long Coordinates* tab.
2. Choose either *Degrees/Minutes/Seconds* or *Decimal Degrees* coordinate format. The database will automatically convert to the other format.
3. Select *GPS Datum* in the details section and enter *elevation* information.
4. Click *Submit*. The page should refresh and display a map showing the approximate location of the site.



**Tip:** Coordinates can also be entered on the Field Sheet section of the Sample Details page. They only need to be entered in one place as the database will automatically update the other.



**Manage Data** | Data Analysis | Analytical Reports | Data Export | Administration | Log out | ec.gc.ca


[Login](#) → [Studies](#) → [Site Information](#) → [Visit Information](#) → Visit Location

**Manage Data**  
Change Study

## Visit Location

Study Name: [Data Entry Tutorial Study / Didacticiel Entrée de données](#)  
 Site Code: [Site 1](#)  
 Visit: 27-September-2012

Visit Information | Edit Visit | Delete Visit | **Lat/Long Coordinates** | Images | Add Sample



Enter coordinates in either degrees, minutes, decimal seconds OR decimal degrees

**Degrees/Minutes/Seconds**

Latitude (required)

Degrees:  Minutes:  Seconds:

Longitude (required)

Degrees:  Minutes:  Seconds:

**Decimal**

Latitude:  Longitude:

Details

GPS Datum (required):  
 ▼

Elevation:   ▼ Stored Elevation: 832 meters or 2729.66 feet

## Adding a Sample

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Visit Information](#) → Add Sample

1. On *Visit Information* page, click on the *Add Sample* tab.
2. Select sample status (Test, Potential Reference, or Reference). Sample status can be changed at any time on the on the *Sample Details* page (click *View Sample Data* button > *Edit Status* tab).

3. Click **Submit**. The database will return to the **Visit Information** tab where the new sample should be visible.
4. Repeat steps 1-3 to add an additional sample (e.g. QA/QC samples). Subsequent samples are automatically assigned test status by default.

The screenshot shows the CABIN website interface. At the top, there is a navigation bar with tabs for 'Manage Data', 'Data Analysis', 'Analytical Reports', 'Data Export', 'Administration', 'Log out', and 'ec.gc.ca'. A search bar is located on the right. Below the navigation bar, the breadcrumb trail reads 'Login → Studies → Site Information → Visit Information'. The main content area is titled 'Visit Information' and includes a sidebar with 'Study Options' (Search Study, Study Information, Upload Data). The visit details are as follows:

- Study Name: [Data Entry Tutorial Study / Didacticiel Entrée de données](#)
- Site Code: [Site 1](#)
- Visit: 27-September-2012

Below the visit details, there are buttons for 'Visit Information' (highlighted with a red box), 'Edit Visit', 'Delete Visit', 'Lat/Long Coordinates', 'Images', and 'Add Sample'. The 'Visit Details' section contains the following information:

Field Sheet PDF:	<a href="#">Upload Fieldsheet PDF</a>
Sample Date:	27-September-2012
Julian Day:	271
Season:	Fall
Protocol:	CABIN - Wadeable Streams
Sampling Device:	Kick Net
# Benthic Replicates:	1
Mesh Size (µm):	400
Kick Time (min):	3
Sampling Crew:	ZZ

The 'Sample(s) Taken' section contains a table with the following data:

Sample Number	Status	Action
1	Reference	<a href="#">View Sample Data</a>
2	Test	<a href="#">View Sample Data</a> <span style="float: right;">QA/QC Sample</span>

## Entering Field Sheet Data

The field sheet contains the required CABIN habitat data collected in the field. Most habitat data collected in the field can be entered from this data entry form.



**Tip:** The Field Sheet tab is the most efficient method to enter the CABIN Field Sheet data.

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Visit Information](#) → [Sample Details](#) → Field Sheet

1. On *Visit Information* page, click on *View Sample Data* button.
2. Click on the *Field Sheet* tab.
3. Transcribe data from hard copy of field sheet into the matching fields in the database (*note that the database does not follow the exact order as seen on CABIN Field Sheet*). There are various drop-down lists, check boxes, and value fields to fill in.
4. Scroll to bottom of *Field Sheet* page and click *Submit* to save data. If complete, the database will return to the *Summary* tab for the sample. If incomplete, the page will refresh and identify any incomplete (missing) at the top of the page.

**Important:** Click the submit button at bottom page to any point to ensure data are saved before the database detects inactivity. CABIN will provide notifications of missing info that has yet to be entered.

## Entering Other Habitat Data

This section describes how you can enter habitat data that are not on the CABIN field sheet. Water or sediment chemistry and GIS-derived data, not collected in the field, can be entered from the Habitat Tab once data are obtained from the lab or analyst. Note that the [Data Upload tool](#) is much more efficient for large datasets.

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Visit Information](#) → [Sample Details](#) → Habitat Data

1. On the *Sample Details* page, select the *Habitat* tab.
2. Use the *Data to enter* drop-down to select the category of habitat data.
3. Click on the *Show Variables* button. This must be done each time a different habitat category is selected to see the associated variable list.
4. Click on the *Variable (Unit)* drop-down to select the variable to enter. Check to make sure the units are correct.
5. Enter the *Value* from a field sheet or other data source
6. Click *Add Habitat Data* to save the data. The Variable table at the bottom of the page should refresh to display the recently added variable value.



**Tip:** The [Data Upload tool](#) is more efficient for larger datasets such as water chemistry and GIS-derived data. The Field Sheet tab is the more efficient way to enter the field recorded habitat measurements like velocity and depth.

## Entering Channel Data (another option)

Channel data includes reach data about widths, depths, velocity, slope, vegetation and aquatic habitats present. The Field Sheet tab is the most effective way to enter the field collected channel data. This tab is another option for entering the same information.



**Tip:** The *Field Sheet* tab is the most effective way to enter the field collected channel data.

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Visit Information](#) → [Sample Details](#) → [Channel Data](#)

1. On the *Visit Information* page, select the *Channel Data* tab (if all field data were entered in the *Field Sheet* tab, several channel variables will be already be visible. This is done automatically by the database.)
2. Enter channel data from field sheet or other data source for non-standard CABIN channel variables.
3. Click *Submit Site Channel Data*.

## Adding Site Photos

The CABIN database provides the ability to store site photos. Photos can provide additional information about a site while looking at the data.

[Study Information](#) → [Site Information](#) → [Visit Information](#) → [Site Images](#)

1. On the *Visit Information* page, click on the *Images* tab.
2. Click on the *Add Image* tab (*appears to right of Images tab after clicking on it*).
3. Press the *Choose File* button and select file to upload. All images must be in jpg/.jpeg format.
4. Select photo description using the drop-down.
5. Select the *Submit* button (*this may take a few minutes*).
6. Click the *Images tab* to see that they are uploaded and labeled correctly. Photos can also be viewed in the slide show feature that plays in the *Summary tab* for the sample.

**Important:** CABIN will compress any individual files greater than 2 MB. The database will display a warning notification if compression occurred.

## Uploading Field Sheets

The CABIN database provides the ability to store field sheets in a PDF file. It can be very helpful to have access to field sheets while looking at the data.

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Visit Information](#)

1. On the *Visit Information* page, click on the *Upload Fieldsheet PDF* button.
2. Choose the .pdf file.
3. Click **Submit**. This may take a few seconds.
4. When complete, the database will go back to the *Visit Information* tab where buttons to *View Fieldsheet* and *Download* should now be visible.

## Adding Benthic Data

CABIN supports the analysis of benthic macroinvertebrate data at the **Family** level, but recommends that if possible, samples be identified to genus level for reference samples. Some identifications may remain at higher taxonomic level than requested. This may be due to immature or damaged specimens making them difficult to confidently identify. CABIN has a standard taxonomic hierarchy for all levels of benthic macroinvertebrates (Standard Taxonomic Effort). See [CABIN Laboratory Methods Manual](#) for more information.



**Tip:** The [Data Upload Tool](#) is a more efficient method to upload community structure data.

Step 1 – Enter Taxonomist and Sub-Sample Details

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Visit Information](#) → [Sample Details](#) → Site Community

1. On the **Sample Details** page, go to the **Community Structure** tab (*this will go to a new Sub-Sample tab*).
2. Select taxonomist. If the taxonomist is not on the list, they will need to be added by a CABIN Administrator. Contact the CABIN Regional Lead with the taxonomist’s name and information.
3. Select subsampling method (*Marchant Box* or *By Mass/Weight*).
4. Enter number of *Cells* or *Weight Processed / Total Cells* or *Sample Weight*. The taxonomist will report the proportion of the sample that was subsampled.
  - a. *Marchant Box*: method, enter the number of cells counted in the left-hand box, and the total cells (100) in the right-hand box. If the sample was completely counted (all cells counted in the Marchant box), enter 100 cells/100 total cells.
  - b. *By Mass or Weight method*: enter the proportion that was sub-sampled. For example, if the sample weighed a total of 515.7g and the subsample was 65.2g, the subsample was 12.6% of the total weight (65.2g/515.7g) and would enter 12.6/100.
5. Click **Submit** to save Sub-Sample Information. The database will return to the **Community Structure** tab where taxa and counts can be entered (see Step 2). If needed, go to the **Edit Sub-sample** option in the left-hand menu to edit taxonomist or sub-sample details.

Step 2 – Search Taxa

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Visit Information](#) → [Sample Details](#) → Site Community

1. On the **Sample Details** page, go to **Community Structure** tab.
2. Search taxa using one of the two following options:
  - a. *Option 1: Search by Taxa (Text/ITIS)*:
    - i. Enter the name at the lowest taxonomic resolution (i.e. Genus).
    - ii. Click the hyperlink of the desired taxon. For some names, CABIN may return several options. Review the hierarchy for the options by clicking on each link until the correct one is found. CABIN displays the complete hierarchy for each link in the Search Results section of the **Community Structure** tab.
    - iii. The ITIS (Integrated Taxonomic Information System) TSN (Taxonomic Serial Number) can also be used in the search box but is more likely to be used only by taxonomists. Refer to [Taxonomy Tools: Export Taxonomy](#) section.
  - b. *Option 2: Search by classification (Hierarchical)*:
    - i. Select either Phylum, Class, or Order as the starting point and click **Go**.

- ii. Progressively select each taxonomic hierarchy of the taxon by using the drop-down and clicking the **Go** button. The CABIN database displays the complete hierarchy for each link in the Search Results section of the *Community Structure* tab.



**Tip:** Refer to the [CABIN Laboratory Methods Manual](#) for accepted nomenclature.

**Important:** Empty search results could be a taxon not found in the CABIN database or an invalid name. New taxa can be entered with an ITIS (Integrated Taxonomic Information System) TSN (Taxonomic Serial Number) using the “Add New Taxon” button in the left-hand menu (see screenshot). The data will be marked unverified until a voucher is sent to the National Taxonomy lab to be verified and included in the National Reference Collection. Refer to the [CABIN Laboratory Methods Manual](#).

### Step 3 – Enter Taxa Counts

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Visit Information](#) → [Sample Details](#) → Site Community

1. In the *From Bench Sheet* section of the *Community Structure* tab, enter the raw count of taxa from the original data source. The total count will be generated automatically based on the number of sub-samples previously entered. Include any relevant taxonomist notes.
2. Click **Enter/Edit taxa counts** to save data. Pay attention to any warnings about unverified taxa beside the name. The footnote indicates a voucher specimen needs to be sent to

the National Taxonomy Laboratory for verification. Refer to the [CABIN Laboratory Methods Manual](#) for more information.

Genus				
Taxa	Raw Count	Sample Total	Note	Delete
Gyratrix ⓘ	7	70		<a href="#">Delete Taxon</a>

ⓘ This Taxon is unverified. Please send a voucher to the national lab for verification.



**Tip:** To see the entered counts, click the *Community Structure* bar at the bottom of the page (see screenshot).

**Important:** If a correction to an entered taxon name or the number counted is needed (i.e., after a QA/QC audit), the individual entry will need to be deleted and re-entered with the correct name and number. In the event all taxa entries need to be removed for a sample, they can be deleted one-by-one or by deleting the entire sample and all other CABIN data associated with it (field sheet, habitat data, etc.)



<a href="#">Manage Data</a>	<a href="#">Data Analysis</a>	<a href="#">Analytical Reports</a>	<a href="#">Data Export</a>	<a href="#">Administration</a>	<a href="#">Log out</a>	<a href="#">ec.gc.ca</a>
-----------------------------	-------------------------------	------------------------------------	-----------------------------	--------------------------------	-------------------------	--------------------------

[Login](#) → [Studies](#) → [Site Information](#) → [Visit Information](#) → [Sample Details](#) → Site Community

**Manage Data**

[Change Study](#)

[Add New Taxon](#)

[Edit Sub-sample](#)

[Show Raw data](#)

## Sample Details - Community Structure

Study Name: [Data Entry Tutorial Study / Didacticiel Entrée de données](#)  
 Site Code: [Site 1](#)  
 Visit: [27-September-2012](#)  
 Sample: Sample Number (1)

Summary
Field Sheet
Habitat Data
Channel Data
Community Structure
Edit Status

Delete Sample

**Taxa Search - Text/ITIS**

Taxa

**Taxa Search - Hierarchical**

Starting at  Phylum  Class  Order

Taxa

**Search Results**

[Arthropoda \(Phylum\)](#) → [Insecta \(Class\)](#) → [Ephemeroptera \(Order\)](#) → [Baetidae \(Family\)](#) → [Baetis \(Genus\)](#)

From Bench Sheet:

Entering: Baetis (Genus)

Sub Sample: 22/100  
 Replicate 1 (required)  /

Note:

▶ Community Structure

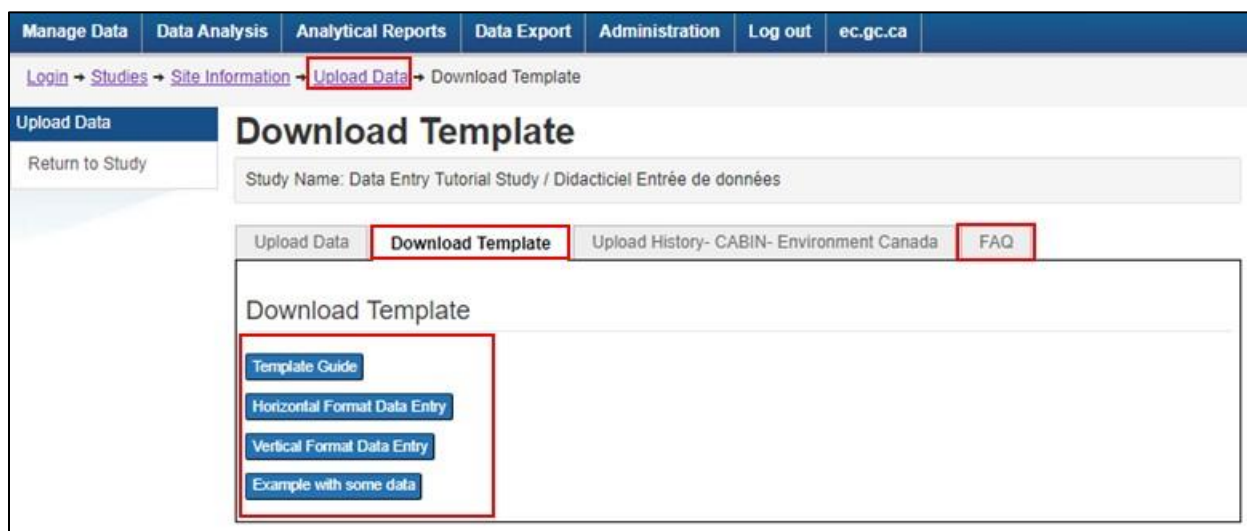
## Data Upload Tool

The data upload tool is particularly useful for data not entered on the standard CABIN Field Sheet. These include taxonomy, water chemistry parameters, and GIS-derived landscape variables. It is more efficient to upload these large datasets into CABIN using the data upload tool. Direct entry is more efficient for creating sites, adding site visits, adding samples, and entering Field Sheet data.

### Step 1. Download Templates

[Login](#) → [Studies](#) → [Site Information](#) → [Upload Data](#) → Download Template

1. On the **Study Information** page, select **Upload Data** on the left-hand menu.
2. Click on the **Download Template** tab.
3. Click on each blue button to download the desired spreadsheet
  - a. **Template Guide**: describes all the variables that can be uploaded to CABIN and formatting specifics for the spreadsheet.
  - b. **Horizontal Format Data Entry**: Flat file where one row represents one site and one parameter.
  - c. **Vertical Format Data Entry**: One row represents one parameter for all sites across the top.
  - d. **Example with some data**.
4. Click on the **FAQ** tab to review General Information about the data upload.



### Step 2. Preparing Templates

Templates should be prepared in Excel. The Excel template contains five different worksheets: Sites, Visits, Habitat, Chemistry, and Taxonomy. Use the Template Guide document to input data. Data should be QA/QC'd prior to upload (see [CABIN Data QAQC Checklist](#)). Common errors

include incorrect cell format, missing or additional spaces in variable fields, and longitude missing the negative sign.



**Tip:** The CABIN database will truncate data to a maximum of seven (7) decimal places. This is usually only a concern with calculated or GIS derived data. To avoid analytical discrepancies due to decimal places, ensure that the spreadsheet displays values to the maximum number of decimal places.

**Important:** It is critical that the upload template conforms to units, formats and naming standards found in the Template Guide. The Taxonomy list found in the Administration menu will provide ITIS TSN numbers required for uploading benthic data (see [Taxonomy Tools: Export Taxonomy](#)).

### Step 3. Upload Data

[Login](#) → [Studies](#) → [Site Information](#)

1. On **Study Information** page, select **Upload Data** on the left-hand menu.
2. Choose file to upload.
3. Select on either **View** or **Download Only** for report options.
  - a. **View** option will return a **Finish Upload** tab with a link to **Download Report** (excel file) as well as a summary of the worksheets uploaded and a webpage view of records with upload errors or notes. Always save the download report to check and track errors.
  - b. **Download only** option will return a **Finish Upload** tab with a link to **Download Report** (excel file) as well as a summary of the worksheets. This option will not provide a webpage display of the results. Always save the download report to check and track errors.

**Important:** This is the only opportunity to save the *Download Report*. The ability to download this document is not available after navigating away from this page.



**Tip:** Upload history is helpful to see when data were previously uploaded.



**Tip:** Unused worksheet tabs can be left empty or deleted for upload. This may occur if bulk upload tool is used only for water chemistry, GIS-derived habitat variables, or taxonomy data.

## Data Verification and Validation

**Data verification** is the process of making sure sample data have been entered completely and accurately from primary sources like field sheets and lab reports. It involves making sure the correct number of sites/samples are present in the database and none have been missed or accidentally duplicated. It also involves checking sample data for missing or incorrectly entered values.

**Data validation** occurs after data have been verified for completeness and accuracy. It involves making sure sample data are ‘good’ – i.e. reasonable in the context of what is known about the site. Data validation can include comparing sample data to data from nearby sites, or to previous years’ samples at the same site. It can also include checking that values are within a reasonably expected range for that variable.

For Studies with multiple sites, samples, and years of data it may be most efficient to completely verify and validate data in an exported spreadsheet (see [Data Export](#)), however data verification can also be done within the database environment using Data Entry Status and Sample Details. That process is described below.

### View Data Entry Status for a Study

**Important:** The data entry status page will only confirm that data were entered for a site(s), not whether the data entry is complete.

[Login](#) → [Studies](#) → [Study Information](#) → Data Entry Status

1. Go to **Manage Data**
2. Select the study of interest from the *Study Search*.
3. Go to the **Data Entry Status** tab.
4. Scroll through the page to verify:
  - a. that location, habitat, and benthic data have been entered.
  - b. if any sites are lacking records compared to others.
5. If there appears to be any missing data, **View the Data Summary** (next section) for the sample to confirm/complete data entry as needed.

### View Data Summary for Sample

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Visit Information](#) → Sample Details

1. From the **Study Information** page, select a *Site* from the drop-down menu
2. Click **View Site Information**.

3. Click **View Visit Data** for the appropriate sampling date.
4. Click **View Sample Data** for the sample of interest (primary sample should be Sample Number 1; QA/QC samples, if present, should be Sample 2, Sample 3, etc.).
5. On the **Summary** tab of the **Sample Details** page, scroll down to see all data entered for the sample.
6. Check against original data sources to verify that all data were entered.
7. Complete any missing data, if required.
8. Check data entry accuracy by comparing sample values to original field sheets, GIS or lab reports.



**Tip:** CABIN recommends checking 10% of the sites entered into a study for data entry errors. If errors are found, they should be corrected and another 10% of the remaining sites should be checked until no errors are found.

## Data Export

Exporting data into a spreadsheet can make data verification and validation more efficient. Exporting data also allows for additional analyses to be done outside of the CABIN web application. Where Reference Models exist, data from the appropriate reference model may be exported, either on its own or with Study data, to pursue additional analyses outside of the CABIN web application.



**Tip:** An advantage of exporting Reference Model and Study data together is that variable columns will be seamlessly merged together for analyses.

There are two ways to export data:

1. Download individual sample reports. This is the simplest option for one or a few sites.
2. Use the Export Data function. This is a more efficient option to verify and validate or perform calculations on data from multiple sites.

### Option 1. Download Individual Sample Report

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Visit Information](#) → Sample Details

1. Go to **Sample Details** page for Sample of interest (See steps 1-4, [View Data Summary for Sample](#)).
2. Select **Download sample report** from the left-hand menu. This will generate an Excel file containing four different worksheets: Site, Habitat, Chemistry, and Taxonomy. The file will automatically download.



**Tip:** **Download sample report** will provide only the final calculated values. Some raw values, like each pebble diameter and individual velocity measurements, are not included in the report.

## Option 2. Use the Export Data function

[Login](#) → Data Export

### Step 1 – Select Data Export Criteria

1. Go to **Data Export**.
2. Select the *Study(ies)* from which to export data. One or multiple studies can be selected.
3. Scroll to the bottom of the page and click **Next: Filter Options**. The pages that follow provide several selection criteria to narrow the data export.
  - a. Include *all data or filtered* data (by date, site or taxa).
  - b. *Site status* to include in the export (QA/QC, Reference, test, potential reference).
  - c. Option to *include reference model data* with the export (select appropriate model from the drop-down list).
  - d. Option to *select one or both data types* (Benthic and Habitat). Bioassay data is only relevant to the Great Lake CABIN Open Water protocol.
  - e. Options to *refine the data export* for both the Benthic selection (i.e. reduce the export to a specific taxonomic level) and the Habitat selection (i.e. reduce the export to include a specific set of variables).
  - f. Option to select *how the data will be exported* either in a typical site by variable matrix (Horizontal file) or a flat file where each site and variable is a row in the spreadsheet (Vertical file).

The screenshot shows the 'Data Export' web interface. At the top, there is a navigation bar with tabs: Manage Data, Data Analysis, Analytical Reports, Data Export, Administration, Log out, and ec.gc.ca. Below the navigation bar, there is a breadcrumb trail: Login → Data Export → Build Report. The main content area is titled 'Data Export' and contains a sidebar on the left with 'Data Export' and 'Reference Models' options. The main content area displays the following information:

You have selected the following options for export:

**Study List**

Data Entry Tutorial Study / Didacticiel Entrée de données

**Selected Filter Options**

All Dates  
All Sites  
All Taxa  
Site Status Included: Reference sites Test sites Potential Reference Sites

**Selected Benthic Options**

Export Level: Lowest

**Selected Habitat Options**

Selected Habitat  
All Variables  
Data Layout: Horizontally - All variables are displayed as columns

**File Type**

Excel 2010

Previous Finish

4. After all export criteria have been selected, the database will show a summary of all export options chosen.
5. If everything looks correct, click **Finish** to generate the export data file(s). This may take the CABIN database a few minutes to process depending on the size of file(s).



**Tip:** Use the Previous button to navigate back through selection criteria to make changes if needed.

### Step 2 – Download & View data files

1. After clicking **Finish**, the **Data Export Results** page will appear. Click on the hyperlink(s) to download the file(s).
2. A summary of exported records is displayed on the page. Benthic and Habitat exports may contain a different number of data records. This could happen due to time lag in Benthic data upload, or when multiple benthic samples were taken. The matching Habitat and Benthic records can be cross-referenced using the Sample ID field.
3. Notification of any unverified benthic taxa will also appear on the **Data Export Results** page. All unverified benthic data entries are exported in a separate .csv file or .xls tab.



**Tip:** Choosing Excel 2010 (.xls) export format will result in a single file containing multiple worksheets. Choosing .csv export format will result in separate files for each data type. When opening the .xls file, an error message and a repair message may appear. **Click yes** – there are not any actual errors in the file.



**Tip:** It is recommended to save all exported files for future reference.

### Export Reference Model Data only

Any reference model uploaded to the CABIN database can be exported for users to explore the data. Exporting reference model data with user study data was described above (see [Option 2. Use the Export Data function](#)). To export the data for a specific Reference Model without any user study or test site data, follow these direct export steps:

1. Go to **Data Export**
2. Select **Reference Models** in the left-hand menu.
3. Select desired export criteria.
4. Click **Finish** to generate the Reference Model data file. This may take the CABIN database a few minutes to process.



**Tip:** Some reference models have updated versions (indicated by year). Older versions remain in the CABIN database for reference. Make sure to choose the correct version of the reference model.

## Other Database Features

### Manage Data

[View Public Sites](#)

[Login](#) → Studies

Public studies as they are referred to in the CABIN web application are studies that are viewable to the participants of the CABIN Network. As a participant in the CABIN network, public studies can also be filtered in **Manage Data** through the **Study Search** feature. The **Study Search** defaults to a list of studies where you have been granted access. Some studies in CABIN have been made available for viewing to the participants in the network. You can see those by changing the filter option from “My Studies” to “Include studies with public sites”.

Manage Data
Data Analysis
Analytical Reports
Data Export
Administration
Log out
ec.gc.ca

[Login](#) → Studies

## Study Search

Filter items  Showing 1 to 5 of 440 entries |

Study Name	Study Type	Author	Regional Lead	Date Created
<a href="#">2012 CABIN Training Modules</a>	River	Stephanie Strachan	Timothy Pascoe	2012-02-06
<a href="#">2013 CABIN Training Modules</a>	River	Lesley Carter	Timothy Pascoe	2013-05-02
<a href="#">2014 CABIN Training Modules</a>	River	Lesley Carter	Timothy Pascoe	2014-05-09
<a href="#">2014 ME Test Study</a>	River	Stephanie Strachan	Stephanie Strachan	2014-04-08
<a href="#">2015 CABIN Training Modules</a>	River	Lesley Carter	Timothy Pascoe	2015-05-01

1
2
3
4
5
88
Next →

Request New Study

Include studies with

My Studies
Include studies with public sites

Filter Studies

Terms and conditions
Transparency



Study Map

[Login](#) → [Studies](#) → [Study Information](#) → Study Map

For each study, a map can be displayed showing all the sites entered into the database and associated metadata. Go to the **View Map** tab from the **Study information** page. Click on the **Map Instructions** drop down arrow for more information on navigating the map. Zoom into your study area. Click on a site of interest to see site and visit appear below the map.

<a href="#">Manage Data</a>	<a href="#">Data Analysis</a>	<a href="#">Analytical Reports</a>	<a href="#">Data Export</a>	<a href="#">Administration</a>	<a href="#">Log out</a>	ec.gc.ca
-----------------------------	-------------------------------	------------------------------------	-----------------------------	--------------------------------	-------------------------	----------

[Login](#) → [Studies](#) → Study Map

<b>Study Options</b>	<h2>View Map</h2>					
Search Study	Study Name: Data Entry Tutorial Study / Didacticiel Entrée de données					
Study Information	<table border="1"> <tr> <td>Sites</td> <td>Study Dashboard</td> <td><b>View Map</b></td> <td>Data Entry Status</td> <td>Add Site</td> </tr> </table>	Sites	Study Dashboard	<b>View Map</b>	Data Entry Status	Add Site
Sites	Study Dashboard	<b>View Map</b>	Data Entry Status	Add Site		
Upload Data	<div style="display: flex;"> <div style="flex: 1;"> <p>The map displays the political boundaries of North America, including the United States and Canada. A green dot is located in the western part of British Columbia, near the Fraser River. The map includes labels for various regions, provinces, and territories, as well as major bodies of water like the Arctic Ocean, Beaufort Sea, and Hudson Bay.</p> </div> <div style="flex: 0.5;"> <p><b>Map Instructions</b></p> <p><b>Zoom In/Zoom out</b> </p> <p>Zoom Selected Area - Permits the user to zoom in on a user-defined map extent by clicking and dragging a rectangle around the area of interest.</p> <p>Zoom Out - Zooms the map out a pre-set amount, from the center of the current map view.</p> <p><b>Pan</b> </p> <p>Pan - Permits the user to pan the viewable extent of the map by holding down the mouse button and moving the pointer. Releasing the mouse button refreshes the map.</p> <p><b>Identify</b> </p> <p>Identify - Allows the user to click on a sample site and retrieve information about the site selected.</p> </div> </div>					

<b>Site: Site 2</b>	
Political Boundary:	British Columbia
Local Basin Name:	Fraser River

Study Dashboard

[Login](#) → [Studies](#) → [Study Information](#) → Study Dashboard

The study *Dashboard* provides a quick overview of the metadata within a study. As studies expand over many years with numerous sites, this dashboard provides simple graphics illustrating the sites sampled each year, the number of reference and test sites, and the number of sites within each standard basin (KYW; Know Your Watershed). This page will also provide a list of site codes, site visits, stream names and whether the data are visible to the CABIN network or to the public through Open Data.

Manage Data
Data Analysis
Analytical Reports
Data Export
Administration
Log out
ec.gc.ca

[Login](#) → [Studies](#) → Study Dashboard

Study Options

## Study Dashboard

Study Name: Data Entry Tutorial Study / Didacticiel Entrée de données

Sites

Study Dashboard

View Map

Data Entry Status

Add Site

**Number of Sites: 3**

**Number of Visits: 13**

**Years: 2005-2013**

**Top 26 Families**

Filter items  Showing 1 to 13 of 13 entries | Show  entries

Sites

Site Code <input type="button" value="↑↓"/>	Visit Date <input type="button" value="↑↓"/>	Stream <input type="button" value="↑↓"/>	Cabin Release <input type="button" value="↑↓"/>	Open <input type="button" value="↑↓"/>
<a href="#">Site 1</a>	30-September-2008	Coldwater River	True	False
<a href="#">Site 1</a>	23-September-2009	Coldwater River	True	False
<a href="#">Site 1</a>	14-September-2010	Coldwater River	True	False
<a href="#">Site 1</a>	13-September-2011	Coldwater River	True	False

Add Non-Standard Habitat Data

[Login](#) → [Studies](#) → [Study Information](#) → [Site Information](#) → [Visit Information](#) → [Sample Details](#) → Habitat Data

Other field measured habitat data may be collected in some monitoring programs that are not part of the standard CABIN protocol such as Rapid Bioassessment Habitat Scores and particle size (Physical Variables) or % of the reach comprised of riffles or pools (field measured Hydrology variables). While CABIN does not provide protocols for these variables, data entry for a sample from a given site and site visit is permitted on the **Habitat Data** tab through **Manage Data**.

The screenshot displays the 'Sample Details - Habitat Data' page in the CABIN system. The top navigation bar includes 'Manage Data', 'Data Analysis', 'Analytical Reports', 'Data Export', 'Administration', 'Log out', and 'ec.gc.ca'. The breadcrumb trail shows the path: Login → Studies → Site Information → Visit Information → Sample Details → Habitat Data. On the left, the 'Manage Data' sidebar contains 'Change Study' and 'Variable'. The main content area has tabs for 'Summary', 'Field Sheet', 'Habitat Data', 'Channel Data', 'Community Structure', and 'Edit Status'. The 'Habitat Data' tab is selected, showing a 'Delete Sample' button and a 'Details' section. In the 'Details' section, there is a 'Data to enter:' dropdown menu with 'Bedrock Geology' selected. A 'Show Variables' button is next to it. Below the dropdown is a text input field with a 'correct units!' message. An 'Add Habitat Data' button is located below the input field. At the bottom, a table is partially visible with columns: Variable, MDL, Value, Unit, Note, and Action.

## Administration

There are different tabs within the Administration function that display information specific to the user while other tabs allow specific actions.

### *Edit User Profile*

[Login](#) → [Admin](#) → [User Profile Details](#) → Edit User profile Details

The **User Profile Detail** tab lists the current profile information for the user. On the **Edit User Profile Details** tab, most field can be edited. Some information can not be edited by the user. If updates are required, please contact [rcba-cabin@ec.gc.ca](mailto:rcba-cabin@ec.gc.ca).

### *Change Password*

[Login](#) → [Admin](#) → [User Profile Details](#) → Change Password

During CABIN training, a username and temporary password is provided to the user. It is recommended to change this temporary password on the first login to the database. This action can be done on the **Change Password** tab.

### *View User Study Access List*

[Login](#) → [Admin](#) → [User Profile Details](#) → User Study Access List

The **User Study Access List** tab provides the list of studies for which access has been granted and the level of access granted. Clicking the hyperlink for a given study provides information about the study including the study author. Contact the author if a different level of access is required.

### *View Study and Permission Information*

[Login](#) → [Admin](#) → Search Study

The **Search Study** option available through the **Study Management** option on the left-hand menu is another way to search for study information, including CABIN user study access. Clicking the hyperlink for a given study provides information about the study including the study author and a list of user permission for that study.

### *Taxonomy Tools: Search Taxa*

[Login](#) → [Admin](#) → Search Taxa

An image library has been created from all aquatic benthic macroinvertebrates held in the CABIN National Reference Collection and searchable within the database. A taxon can be searched in

two ways from the **Search Taxa** option on the left-hand menu in the **Administration** page. The information page about the taxon displays useful information about taxon hierarchy, images of features and a site occurrence mapping tool.

*Option 1: Search by Text:*

1. Type in the taxon name or a portion of the name.
2. Press the **Search** button.

*Option 2: Search by Category:*

1. Select a classification level from the drop-down menu.
2. Pressing the **Search** button will yield a list of all taxa at the chosen level that are in the CABIN database.
3. Click the hyperlink for the desired taxon.

The screenshot displays the 'Search Taxa' page in the CABIN database. At the top, there is a navigation bar with links for 'Manage Data', 'Data Analysis', 'Analytical Reports', 'Data Export', 'Administration', 'Log out', and 'ec.gc.ca'. Below this, a breadcrumb trail shows 'Login → Admin → Search Taxa'. On the left, a sidebar menu lists various functions: 'Users', 'Study', 'Taxonomy', 'Manage Habitat Variables', and 'Search Variable'. The 'Search Taxa' option is highlighted in red. The main content area is titled 'Search Taxa' and contains a search form with 'Text' and 'Category' input fields, a 'Search' button, and a dropdown menu for 'Select Cate'. Below the search form, a section titled 'About the CHEUMATOPSYCHE Genus' provides key information: ITIS TSN (115408), CABIN Status (Valid), and Site Occurrences (1103). This information is presented in a table-like format. Underneath, there is a 'Details' section with an image of the insect and a map of Canada showing its distribution. A scale bar indicates 1000 km and 1000 mi. A 'Map Instructions' link is also present. At the bottom, a 'Hierarchy' section lists the taxonomic classification: Phylum: Arthropoda (ITIS Record), Class: Insecta (ITIS Record), Order: Trichoptera (ITIS Record), Family: Hydropsychidae (ITIS Record), Genus: Cheumatopsyche (ITIS Record), and Species: petiti (ITIS Record).

*Taxonomy Tools: Export Taxonomy*

A list of all taxa found in the CABIN database can be viewed and exported. This list includes the names and verification status of all taxa found in CABIN samples collected across the country. The list also includes the ITIS (Integrated Taxonomic Information System) TSN (Taxonomic Serial Number) associated with each taxon. This is important for bulk uploading benthic data to the CABIN database. Viewing the entire list is helpful for researchers interested in aquatic benthic macroinvertebrates collected in Canada. The list is found on the **Administration** page from the **Export Taxonomy** option on the left-hand menu.



Photo credits: ECCC

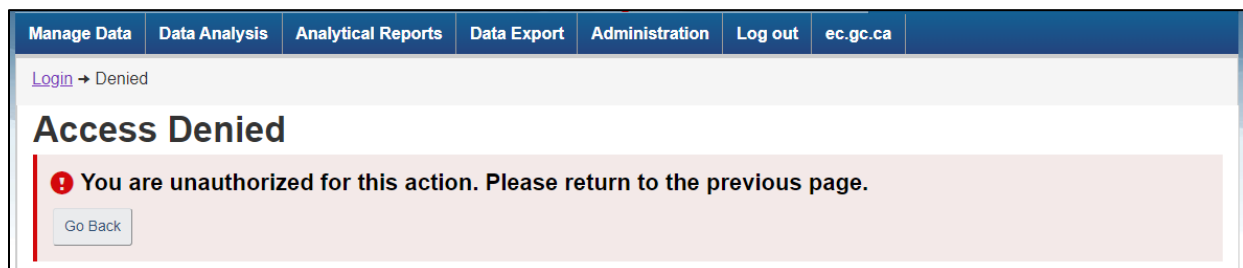
## Troubleshooting

### 1. Why is my data not showing up after submitting data?

Try leaving the page and then returning to the page.

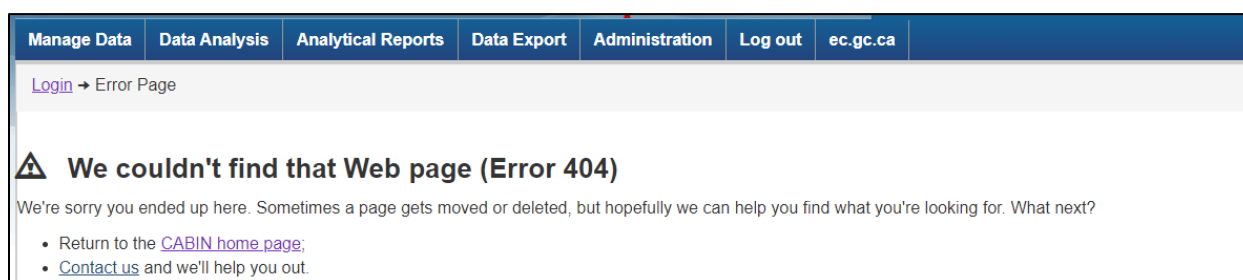
### 2. Why am I getting an Access Denied message?

Ability to use a database feature depends on your certification and assigned permission to a given study. Certain functions in the CABIN database are only accessible by the CABIN Regional Leads (administrators). Go to [Study and Permission Information](#) to see how to confirm your assigned study permissions. If there is an error with your permissions, please contact the Project Manager.



### 3. Why am I getting an error message?

This means the database feature is not working properly. Please notify the generic CABIN email including details of the task you are trying to complete, the function, study, and if relevant – site code and site visit.



#### 4. Can I edit and delete data after submitting?

There may be cases where you need to edit or even delete a sample or site visit. **Please do this carefully.** If you do need to delete something, you will receive a message similar to the one below (deleting a site visit, as an example).

Visit Information
Edit Visit
**Delete Visit**
Lat/Long Coordinates
Images
Add Sample

**Alert: Confirm Visit Deletion**

Are you sure you want to delete visit dated at 19-October-2021 with the following description:  
 Parked on Cow bay rod. before bridge. Site located approximately 50 m downstream of bridge, walk through forest and tall grasses to reach site.

Delete Visit
Cancel



**Tip:** If you are experiencing other database errors contact the CABIN generic email.