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# A USER'S MANUAL FOR THE CHESAPEAKE MONITORING COOPERATIVE DATA EXPLORER



April 2023

Welcome to the Chesapeake Monitoring Cooperative's Chesapeake Data Explorer! The Data Explorer is an online application that allows groups around the Chesapeake watershed to upload water quality and benthic macroinvertebrate data to a centralized database. The Chesapeake Data Explorer was developed by Green Fin Studios and the Environmental Data Center at the Chesapeake Bay National Estuarine Research Reserve - VA(CBNERR-VA), Virginia Institute of Marine Science (CBNERR-VA/VIMS). The CBNERR-VA/VIMS continues the manage and update the Chesapeake Data Explorer.

Most data in the Data Explorer will be routinely uploaded to the Chesapeake Bay Program' through their Data Upload and Evaluation Tool (DUET) and stored in the Chesaepake Environmental Data Repository (CEDR). All data will be uploaded to the Environmental Protection Agencies Water Quality Exchange (WQX) annually. Additionally, data published in the Data Explorer are publicly available and may be downloaded and used by anyone.

This User's Manual will provide you with all of the information you need to obtain a Chesapeake Data Explorer account and to upload data. The Chesapeake Monitoring Cooperative appreciates your participation in this program and wishes you happy monitoring!

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# **BEFORE YOU BEGIN**

## **RESOURCES**

Before you get started or if you have any additional questions as you are reading the manual, check out the resources section of the Data Explorer. You do not need log in credentials to access the resources available. The resources section includes video tutorials, guides and this manual.

 The logo for the Chesapeake Monitoring Cooperative (CMC) features the acronym 'CMC' in a bold, blue, sans-serif font above the words 'Chesapeake Monitoring Cooperative' in a smaller, blue, serif font. A stylized wavy line graphic is positioned between the two lines of text.	<a href="#">Home</a>	<a href="#">About</a>	<a href="#">Contact</a>	<a href="#">Resources</a>
<p><b>Manual</b></p> <ul style="list-style-type: none"><li>• <a href="#">Chesapeake Data Explorer Manual</a></li><li>• <a href="#">Problem Code List</a></li><li>• <a href="#">Qualifier Code List</a></li></ul> <p><b>Homepage Tutorials</b></p> <ul style="list-style-type: none"><li>• <a href="#">Homepage walk through</a></li><li>• <a href="#">Query page</a></li><li>• <a href="#">Water quality data download file</a></li><li>• <a href="#">Metadata files</a></li></ul> <p><b>Data Upload Tutorials</b></p> <ul style="list-style-type: none"><li>• <a href="#">Creating a user account</a></li><li>• <a href="#">Submitting a station</a></li><li>• <a href="#">Uploading water quality data online form</a></li></ul> <p><b>Coordinator Tutorials</b></p> <ul style="list-style-type: none"><li>• <a href="#">Water Quality Bulk Upload Template</a></li><li>• <a href="#">Bulk Upload Process</a></li></ul> <p><b>Data Translation Macro</b></p> <ul style="list-style-type: none"><li>• <a href="#">Data Translation Macro Guide</a></li><li>• <a href="#">Data Translation Macro</a></li></ul>				

## **CONTACT**

For more information on citizen and non-agency monitoring in Virginia, visit Virginia DEQ's [Citizen Monitoring website](#). If you have questions or comments about the Chesapeake Monitoring Cooperative (CMC) or the Chesapeake Data Explorer or are interested in having your organization participate in the CMC, please contact Liz Chudoba ([lchudoba@allianceforthebay.org](mailto:lchudoba@allianceforthebay.org)), CMC Project Manager, or visit the [CMC website](#).

# 1

## GET AN ACCOUNT

Go to <https://cmc.vims.edu>. **Note – it is important to use https NOT http.** From the Menu Bar at the top of the screen, click the “Register” button.



On the register page, fill in the requested information.

- Email address, password, first name, last name, and monitoring group are mandatory.
- Click the arrow next to the “Select Group” box to select your monitoring group.
- Your username will be your email address and your password will be the one you created in this step. Please make a note of it!
- After clicking “Register”, you will receive an email asking you to confirm your email address.  
**Note - If you don't receive an email, please verify that it is not in your spam folder.**
- Click the link in the email to confirm your email address.

A screenshot of a registration form titled "Register". The form contains the following fields:

- Email (mandatory)
- Password (mandatory)
- Confirm password (mandatory)
- First Name (mandatory)
- Last Name (mandatory)
- Cell Phone
- Home Phone
- Emergency Phone
- Address First
- Address Second
- City
- State
- Zip
- Select Group (dropdown menu, currently "Nothing selected", mandatory)
- Profile Image (button to choose file, currently "no file selected")

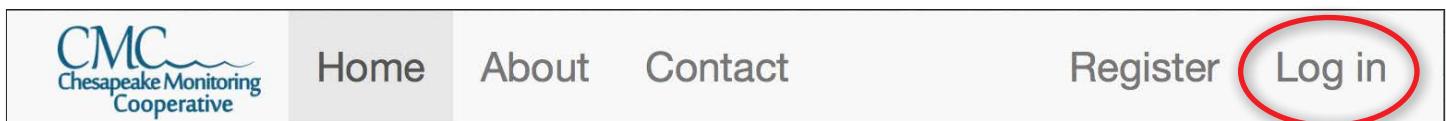
The "Register" button at the bottom is highlighted with a red circle.

Once your account request is approved by a CMC representative, you will receive an activation email and you will be able to log in to the CMC Chesapeake Data Explorer. **NOTE - If you are the coordinator for your monitoring group and are responsible for data management, you will be granted Coordinator privileges by the CMC representative that creates your account.**

# 2

## LOG IN

Once your account has been activated, go to <https://cmc.vims.edu>. **Note – it is important to use https NOT http.** From the Menu Bar at the top of the screen, click the “Log in” button.



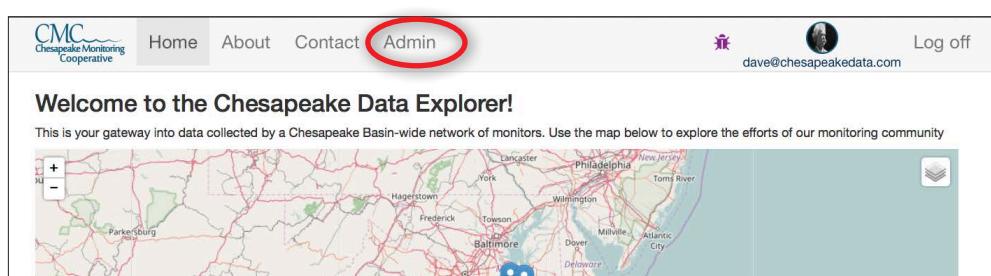
On the log in screen:

- Enter your username and password
- Click the “Log in” button.
- If you have forgotten your password, you can click “Forgot Password?” and step through the password recovery process.

A screenshot of the Chesapeake Monitoring Explorer login page. It features input fields for email and password, a 'Log in' button, and a 'Forgot Password?' link. A 'Register' link is also present. The CMC logo is at the top left, and a navigation bar with Home, About, Contact, Resources, Register, and Log in is at the top right.

Once you log in:

- The main page of the Chesapeake Data Explorer will open.
- “Admin” now appears in the navigation bar
- Your username and profile picture (if you uploaded one during the registration step) appears in the navigation bar.



# 3

## ADMIN AREA

From <https://cmc.vims.edu>, click “Admin” in the navigation bar to get to the Admin area of the Chesapeake Data Explorer. You must be in the Admin Area to access the functionality in sections 4, 5, 6 and 7.



The navigation page will open.

- The navigation bar will change to show buttons for “Admin”, “Data”, and “Profile”. If your account is a coordinator, you will also see a “Manage” button.
- The area under the greeting displays messages about items needing your attention.
- The Quick Links area has buttons serving as short cuts to frequently used functions.

A screenshot of the Chesapeake Data Explorer Admin area. The top navigation bar shows Admin, Data, Profile, and Resources. The user information on the right shows a purple dot, a profile picture (blue circle), the email monitor@cmcTest.org, and a Log off button. The main content area is titled "Chesapeake Data Explorer" and greets the user "Good Morning, Katie". It features a "Quick Links" section with two green buttons: "Upload Data" and "Contact CMC Service Provider". Below this, it displays "Virginia Institute of Marine Science's Activity this month" with two statistics: "NEW USERS" (0) and "NEW SAMPLES" (0).

# 4

## UPDATE YOUR PROFILE

From <https://cmc.vims.edu>, click “Admin” in the navigation bar to get to the Admin area of the Chesapeake Data Explorer.



Click the “Profile” button in the navigation bar.



The profile page displays the information you entered when you registered for access to the Chesapeake Data Explorer. Click the “Edit Profile” button to change your profile information.

On the edit profile page:

- You can edit all of your profile information (except monitoring group, role, or volunteer hours).
- You can upload or change the picture that the Date Explorer uses for your profile.
- You can change your password.
- Once you have made any changes, click “Save” to save the changes or “Cancel” to discard the changes.

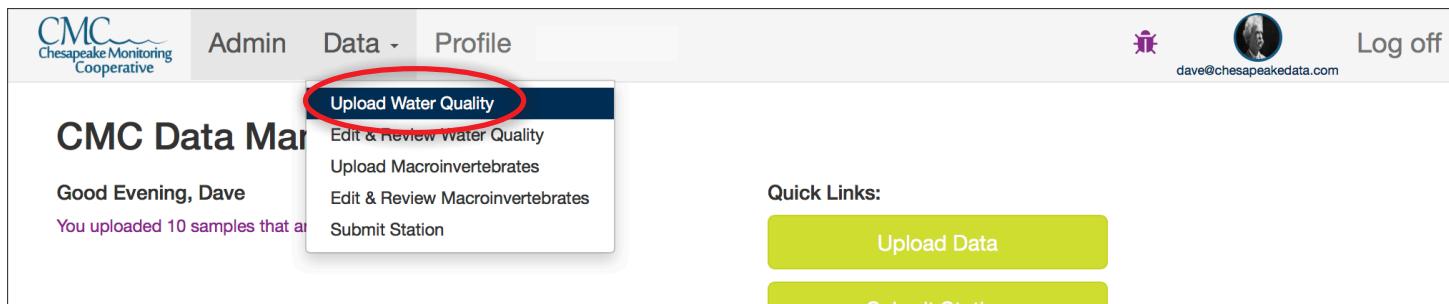
A screenshot of the Edit Profile page. At the top, it says "Change your account settings" and has a "Password" field with a "Change your password" link. Below that is a section for "Edit user information" with fields for Email, FirstName, LastName, Cell Phone, Home Phone, Emergency Phone, Address First, Address Second, City, Select State (Virginia), Zip, Select Group (Virginia Institute of Marine Science), Role (Admin), and VolunteerHours (100.0000000000). There is also a placeholder "Upload a different photo" with a "Choose File" button and "no file selected". At the bottom are "Save" and "Cancel" buttons.

# 5

# DATA UPLOAD FORM

## WATER QUALITY DATA

From the Data drop down menu, choose “Upload Water Quality”.



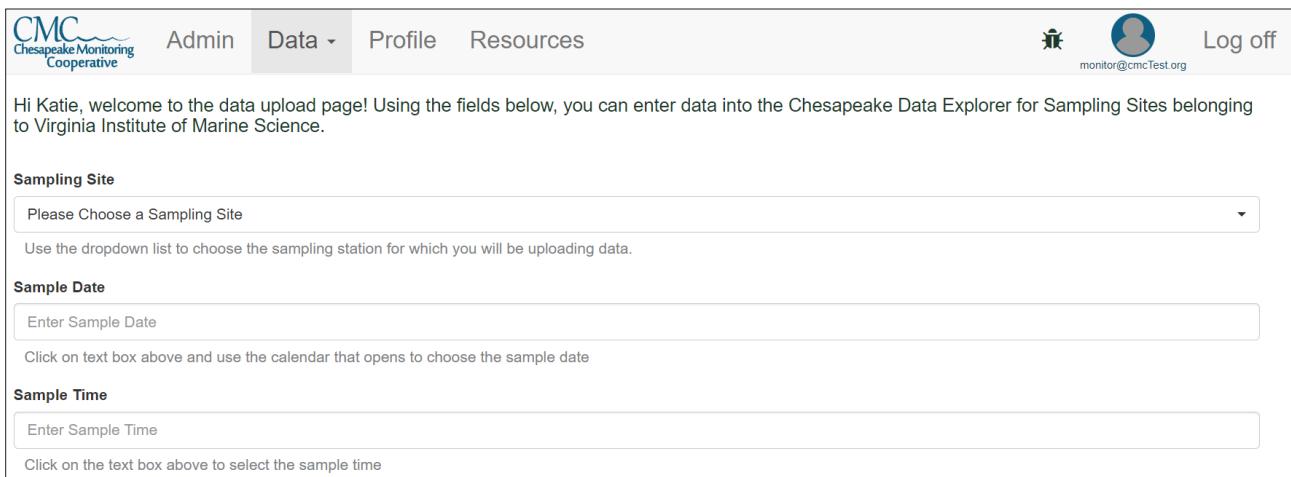
The screenshot shows the CMC Data Manager dashboard. At the top, there's a navigation bar with 'Admin', 'Data', and 'Profile'. On the right, there's a user profile icon and 'Log off'. Below the navigation, it says 'CMC Data Manager' and 'Good Evening, Dave'. It also mentions 'You uploaded 10 samples that are pending review'. A dropdown menu is open under 'Data', with 'Upload Water Quality' highlighted by a red circle. Other options in the dropdown include 'Edit & Review Water Quality', 'Upload Macroinvertebrates', 'Edit & Review Macroinvertebrates', and 'Submit Station'. To the right of the dropdown, there's a 'Quick Links' section with 'Upload Data' and 'Submit Station' buttons.

**Note - Monitor accounts will take the user directly to the data upload form, Coordinator accounts will be able to choose between the data upload form and the bulk upload.**

### Sampling Information

The form that opens will be custom formatted for you based on information provided by your monitoring group coordinator. Fill out the information for the sample site, date and time first.

- Sample Site: Select your sampling station from the drop down menu, this menu is filled only with stations assigned to your group. You can use the search bar at the top to easily find your site.  
**Note- make sure you choose the correct station for the data you are uploading.**
- Sample Date: Make sure you are on the correct year (defaults to current year), then select the month and day.
- Sample Time: Select hour and then select minutes.

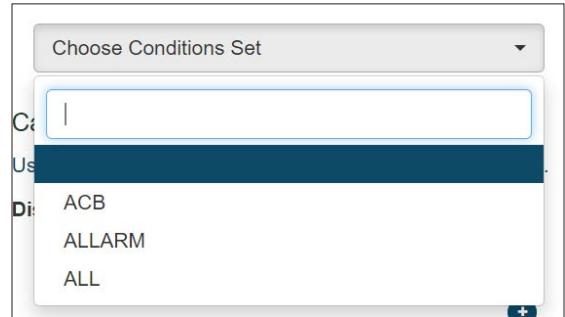


The screenshot shows the data upload page. At the top, there's a navigation bar with 'Admin', 'Data', 'Profile', and 'Resources'. On the right, there's a user profile icon and 'Log off'. Below the navigation, it says 'Hi Katie, welcome to the data upload page! Using the fields below, you can enter data into the Chesapeake Data Explorer for Sampling Sites belonging to Virginia Institute of Marine Science.' There are three main input fields: 'Sampling Site' (dropdown menu with placeholder 'Please Choose a Sampling Site'), 'Sample Date' (text input with placeholder 'Enter Sample Date'), and 'Sample Time' (text input with placeholder 'Enter Sample Time'). Each field has a descriptive note below it: 'Use the dropdown list to choose the sampling station for which you will be uploading data.', 'Click on text box above and use the calendar that opens to choose the sample date.', and 'Click on the text box above to select the sample time.'

## Conditions During Sampling

Under "Conditions During Sampling", use "Choose Conditions Set" to:

- Get the sampling conditions required by Alliance for the Chesapeake Bay (ACB).
- Get the sampling conditions required by the Alliance for Aquatic Resource Monitoring (ALLARM).
- Get all of the options for conditions parameters.
- It is not mandatory that you enter values for any of the "Conditions During Sampling" parameters. Please leave blank any fields your monitoring group does not collect.***



The image below shows the "Conditions During Sampling" section after choosing "ACB".

Conditions During Sampling

First choose the set of conditions that you would like to include on the form. Next, use the added fields to describe conditions at the sampling location at the time sampling occurred.

Water Surfaces Choose a water surface condition	Stream Flow Choose stream flow condition	Weather Conditions Today Choose weather conditions Today
Tidal Stage Choose a tidal stage	Other Conditions Choose other conditions	Water Color Choose a water color
Water Color Description Enter Water Color Description (ex. "Clear, Brown, Green, etc")	Rainfall Enter Rainfall (Total in mm the week prior to sampling; ex. 2.3)	Rainfall Within 24 Hours Enter Rainfall Within 24 Hours (Total in mm 24 hours prior to sampling; ex. 1.2)
Rainfall Within 48 Hours Enter Rainfall Within 48 Hours (Total in mm 48 hours prior to sampling; ex. 1.2)	Other Comments Enter Other Comments	

## Calibration

If your monitoring group collects instrument calibration data, a "Calibration" section will be on the form.

- The data to fill in this section can be found on your field sheet.
- If a second calibration check was conducted for a parameter, click the  button to add a duplicate field.

Calibration

Use the fields in this section to input calibration information.

Dissolved Oxygen Sodium Thiosulfate Check (mg/L)

Note: Conduct second test if results are < 9.4 or > 10.0.  
Do not run DO test if 2 sodium thiosulfate check results are not within 0.4 mg/l of each other.



Enter Dissolved Oxygen Sodium Thiosulfate Check (mg/L)

DO Probe Calibration Temperature (deg C)

Enter DO Probe Calibration Temperature (deg C)

DO Probe Calibration Barometric Pressure (mmHg)

Enter DO Probe Calibration Barometric Pressure (mmHg)

DO Probe Calibration Theoretical Value (mg/L)

Enter DO Probe Calibration Theoretical Value (mg/L)

## Surface Sample

- If your sample depth is different than 0.3m, click the  button to enter your depth.
- If you do not know or did not record your sampling depth, use the default (0.3 m) option.
- If a parameter was not measured, leave the data entry field blank.
  - If a duplicate measurement was taken for a parameter, click the  button above the data entry field for that parameter.
  - If you need to enter a Problem Code (**See Table 2**), click the  button and choose a problem code from the list.
  - If you need to add a Qualifier (**See Table 1**) to the value you entered, click the  button and choose a Qualifier from the list.

**Surface Sample**

Use the fields in this section to input data that is taken at the surface (default is 0.3m) 

**Alkalinity (mg/L)**

**Air temperature (deg C)**

**Dissolved oxygen (mg/L)**

**Bacteria (E.Coli) (CFU/100mL)**

**pH (SU)**

*Table 1 - Commonly used qualifier codes. For a full list of qualified codes see the Resources Tab on the Data Explorer.*

Code	Definition
<	Less than the Lower Method Detection Limit (MDL)
>	Greater than the Upper Method Detection Limit (MDL)

*Table 2 - Commonly used problem codes. For a full list of problem codes see the Resources Tab on the Data Explorer.*

Code	CBP Definition	CMC Definition
A	Laboratory Accident	Lab Data Only
C	Instrument Failure	Field Data - post-sample check failure and data questionable.
D	Insufficient Sample	Lab Data Only
E	Sample Received After Holding Time	Lab Data Only
F	Post-Calibration Failure	Field Data - post-sample check failure but data appear normal.
GG	Sample Analyzed After Holding Time	Lab Data Only
V	Sample Results Rejected Due To Bad Field Conditions	Field Data - any other QA issue, will null the record when uploading to CBP.
X	Sample Not Preserved Properly	Lab Data Only

## Depth Profile

If your monitoring group collects samples at depths below the surface, there will be a **Depth Profile** section on the form.

- Duplicate measurements, Problem Codes, and Qualifiers are handled the same way here as they are in the **Surface Sample** section.
- Additional depths can be added using the “Add Sample Depth” button.

**Depth Profile**

Use the fields in this section to enter samples. You can enter data for additional depths by clicking the “Add Sample Depth” button. This will add another complete set of water quality data fields (referred to as “Water Quality Sample Sets”). If you do not sample all parameters each depth, please leave those fields blank.

**Sample Depth (m)** Note: If surface sample, enter 0.0 for Sample Depth

Enter Sample Depth (m)

**Orthophosphate (mg/L)**

Enter Orthophosphate (mg/L)

**Salinity (mg/L)**

Enter Salinity (mg/L)

**Water temperature (deg C)**

Enter Water temperature (deg C)

**Add Sample Depth**

## Volunteer Hours

You can enter the number of hours spent collecting and entering data by yourself and members from your team.

- Click on the + button in the Volunteer Hours section, choose yourself and enter the number of hours.
- Click the + button again to add another entry for members of your monitoring team. Continue clicking the + button to enter hours for all members of your team.

**Volunteer Hours**

Use the field in this section to enter volunteer hours spent monitoring. Be sure to select yourself, as well as, any additional monitors participating in this sampling event.

Choose Monitor

Enter Monitoring Hours for selected User

## Save

Once you have finished entering data, click the **Save** button.

**Volunteer Hours**

Use the field in this section to enter volunteer hours spent monitoring. Be sure to select yourself, as well as, any additional monitors participating in this sampling event.

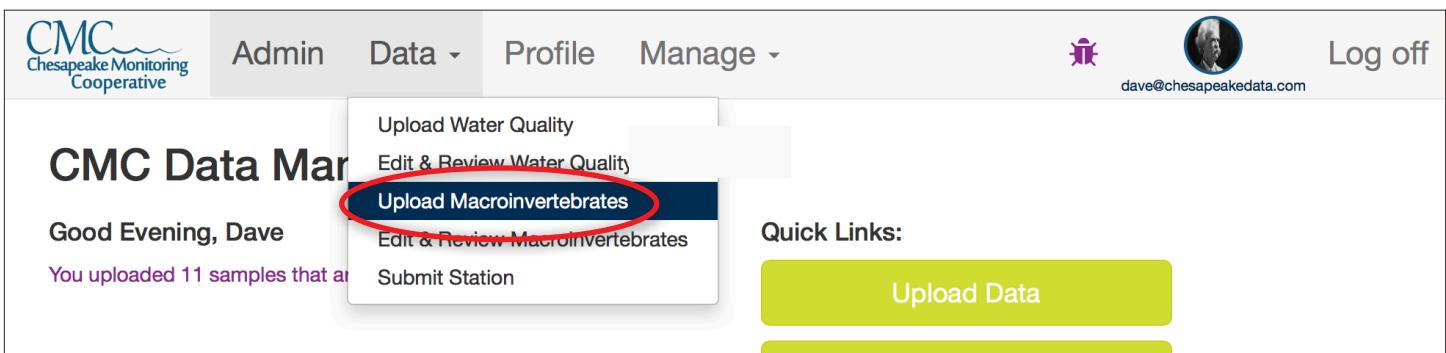
**Comments**

Enter Comments

**Save**

# BENTHIC MACROINVERTEBRATE DATA

From the Data drop down menu, choose “Upload Macroinvertebrates”.



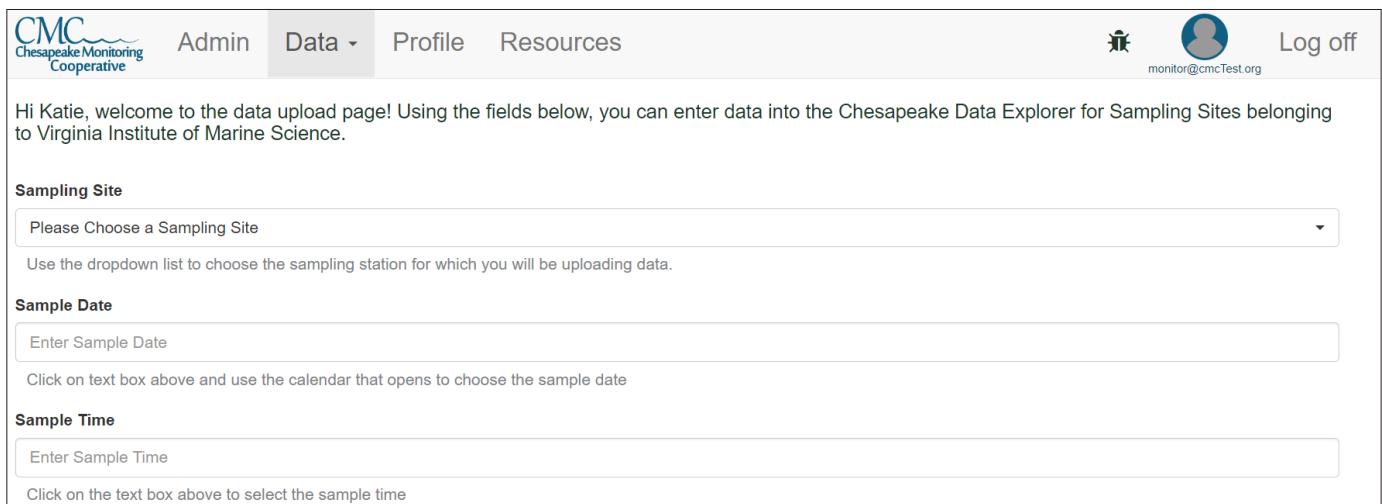
The screenshot shows the CMC Data Manager dashboard. At the top, there's a navigation bar with 'Admin', 'Data', 'Profile', and 'Manage'. On the right, there's a user profile picture and 'Log off'. Below the navigation, it says 'CMC Data Manager' and 'Good Evening, Dave'. It also mentions 'You uploaded 11 samples that are pending review'. A dropdown menu is open under 'Data', showing options like 'Upload Water Quality', 'Edit & Review Water Quality', 'Upload Macroinvertebrates' (which is circled in red), 'Edit & Review Macroinvertebrates', and 'Submit Station'. To the right of the dropdown is a 'Quick Links' section with a large green button labeled 'Upload Data'.

**NOTE - macroinvertebrate data can only be entered by groups using the IWLA or ALLARM collection methods. If another collection method is used, data can be uploaded via the bulk upload functionality. (see Chapter 8).**

## Sampling Information

The form that opens will be custom formatted for you based on information provided by your monitoring group coordinator. Fill out the information for the sample site, date and time first.

- Sample Site: Select your sampling station from the drop down menu, this menu is filled only with stations assigned to your group. You can use the search bar at the top to easily find your site.  
**Note- make sure you choose the correct station for the data you are uploading.**
- Sample Date: Make sure you are on the correct year (defaults to current year), then select the month and day.
- Sample Time: Select hour and then select minutes.



The screenshot shows the 'Sampling Site' page. At the top, there's a navigation bar with 'Admin', 'Data', 'Profile', and 'Resources'. On the right, there's a user profile picture and 'Log off'. The main content area starts with a welcome message: 'Hi Katie, welcome to the data upload page! Using the fields below, you can enter data into the Chesapeake Data Explorer for Sampling Sites belonging to Virginia Institute of Marine Science.' Below this, there are three sections: 'Sampling Site' (with a dropdown menu and a note about using the search bar), 'Sample Date' (with a text input field and a note about using the calendar), and 'Sample Time' (with a text input field and a note about using the text box). Each section has a small explanatory note below its respective input field.

## Conditions During Sampling

The fields in the Conditions During Sampling section should match the same fields from your field sheet. Any missing values should be left blank.

Conditions During Sampling  
Use the fields in this section to describe conditions at the sampling location at the time sampling occurred.

Vegetated Enter Vegetated	Snags/Logs Enter Snags/Logs	Aquatic Veg/Decaying Matter Enter Aquatic Veg/Decaying Matter
Silt/Sand/Gravel Enter Silt/Sand/Gravel	Vegetated Jabs Enter Vegetated Jabs	Snags/Logs Jabs Enter Snags/Logs Jabs
Aquatic Veg/Decaying Matter Jabs Enter Aquatic Veg/Decaying Matter Jabs	Silt/Sand/Gravel Jabs Enter Silt/Sand/Gravel Jabs	Weather Conditions Choose Weather Condition
Precipitation Choose Precipitation Description		

## Macroinvertebrate Tallies

The fields in the Macroinvertebrate Tallies section should match the same fields from your field sheet.

- Enter the values from your field sheet in the corresponding fields in the online form.

Macroinvertebrate Tallies  
Use the fields in this section to input benthic macroinvertebrate counts for this sampling event

Water Penny Larva 13	Hellgrammites 5
Mayfly Nymphs 2	Gilled Snails 0
Riffle Beetle 23	Stonefly Nymphs 2
Non Net-spinning Caddisfly Larva 0	Beetle Larva 3
Clams 0	Cranefly Larva 12

## Metrics

The values in the Metrics section will calculate automatically once you start entering values in the Macroinvertebrate Tallies section.

Metrics  
These metric calculations will update automatically as the user inputs counts in the 'Macroinvertebrate Tallies' section of this form.

Group I Index Value 26.20	Group II Index Value 23.20	Group III Index Value 5.80
Water Quality Score 55.20 : Water quality conditions are Poor		

## Volunteer Hours

Enter the number of hours spent collecting and entering data by yourself or others in your group by using the drop-down lists to select the volunteer(s) and enter the hours in the fields to the right.

Volunteer Hours

Choose Monitor	Enter Monitoring Hours for selected User
Choose Monitor	Enter Monitoring Hours for selected User
Choose Monitor	Enter Monitoring Hours for selected User

Comments  
Enter Comments

**Save**

## Save

Once you have finished entering data, click the Save button.

# 6

## EDIT & REVIEW DATA

Monitors and coordinators have different capabilities on the website when editing and reviewing their data. Keep in mind that monitors can only see and edit their own data. Coordinators can see and edit data from all monitors in their group, as well as their own data. Some coordinators have the ability to publish data. When data is Published, it means that it has been verified and submitted to the Data Explorer data base. Published data will also be uploaded to the Chesapeake Bay Program database. Monitors cannot publish data.

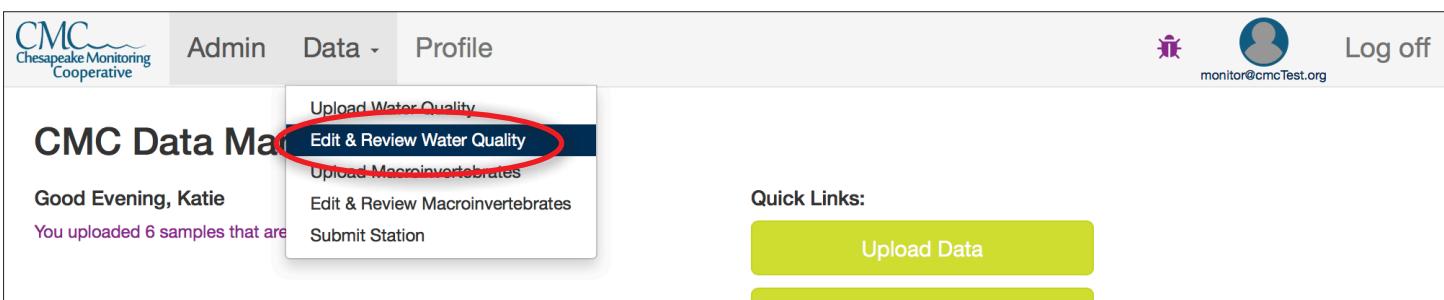
## EDITING WATER QUALITY DATA

### MONITORS

After you upload data to the Data Explorer, you can review and edit this data if needed. From <https://cmc.vims.edu>, click “Admin” in the navigation bar to get to the Admin area of the Chesapeake Data Explorer.



From the Data drop down menu, choose “Edit & Review Water Quality”.



On the screen that opens, sampling events that you have uploaded data for will be listed by station.  
**Note: If your monitoring group coordinator has already published your data, it will not appear in the list.**

Hi Katie, welcome to the Data Edit & Review page!

Here, you can review data that you uploaded for LeTort Regional Authority. The table below displays sampling events for the selected sampling location. Click the check-mark (✓) next to the sampling event you would like to review and the data will appear below the graph in a format similar to the data upload form. Any data in the form that has the "Uploaded" designation, means that it has not yet been verified by the LeTort Regional Authority's Group Coordinator, so you can still review the data and correct any possible errors made when entering it. Make any needed edits directly to the values within the form fields and then click the Save button at the bottom of the page.

LT1
-----

Use the dropdown list to choose the sampling station for which you will be editing data.

✓ Station	Sample Time	Group	Samples To Publish
LT1	02/06/2018 06:18 PM	LeTort Regional Authority	6

Download  
Download Data

Plot Controls  
Show Plot

Click the “Download Data” button if you want to obtain a .csv file of the selected data.

✓ Station	Sample Time	Group	Samples To Publish
LT1	02/06/2018 06:18 PM	LeTort Regional Authority	6

Download  
Download Data

Plot Controls  
Show Plot

Click the data you wish to edit by clicking the check mark next to the row. To edit the data, click the “Edit Selected Event” button that appears to the right.

✓ Station	Sample Time	Group	Samples To Publish
LT1	02/06/2018 06:18 PM	LeTort Regional Authority	6

You selected samples collected from LT1 on 02/06/18, submitted by Katie Monitor.

Edit  
Edit Selected Event

The data for the selected sampling event will appear on the page. Edit any values you wish to update.

Edit Event  
These data were originally submitted by Katie Monitor, [View](#)

**Group**  
LeTort Regional Authority

**Sampling Site**  
LT1  
Use the dropdown list to choose the sampling station for which you will be uploading data.

**Sample Date**  
2018-02-06  
Click on text box above and use the calendar that opens to choose the sample date

**Sample Time**  
6:18 PM  
Click on the text box above to select the sample time

**Conditions During Sampling**  
Use the fields in this section to describe conditions at the sampling location at the time sampling occurred.

Water Surfaces	Stream Flow	Weather Conditions Today
Choose a water surface condition	Choose stream flow condition	Choose weather conditions Today
Weather Conditions Yesterday	Weather Conditions Day Before Yesterday	Tidal Stage
Choose weather condition Yesterday	Choose weather conditions the day before yesterday	Choose a tidal stage
Sea State	Wind Direction	Wind Speed
Choose a sea state	Choose a wind direction	Choose a wind speed
Cloud Cover	Other Conditions	Water Color
Choose cloud cover conditions	Choose other conditions	Choose a water color

Click the save button once you have finished making updates.

**Volunteer Hours**

General User	1
General User	1

**Save**

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## COORDINATORS

Coordinators can navigate to the Edit Water Quality section in the same way. Remember, coordinators can see all the data from all monitors in the group they coordinate.

Station	Sample Time	Group	Samples To Publish	Download	Plot Controls	Edit
GI	07/13/2017 10:46 AM	Virginia Institute of Marine S...	1	<a href="#">Download Data</a>	<a href="#">Show Plot</a>	<a href="#">Edit Selected Event</a>
GI	07/06/2017 10:54 PM	Virginia Institute of Marine S...	0			
GI	09/28/2017 10:59 PM	Virginia Institute of Marine S...	0			
GI	01/09/2018 09:57 PM	Virginia Institute of Marine S...	4			
GI	02/13/2018 05:53 PM	Virginia Institute of Marine S...	1			
GI	02/15/2018 09:33 AM	Virginia Institute of Marine S...	2			
GI	02/14/2018 10:10 AM	Virginia Institute of Marine S...	3			
GI	02/15/2018 01:50 PM	Virginia Institute of Marine S...	2			
GI	02/14/2018 01:06 PM	Virginia Institute of Marine S...	10			
GI	02/21/2018 11:58 PM	Virginia Institute of Marine S...	4			
GI	02/21/2018 01:30 AM	Virginia Institute of Marine S...	2			

Some coordinators have the ability to publish data for their group. Remember, publishing data shows it on the homepage and includes it in any data uploads to the Chesapeake Bay Program and EPA.

Coordinators that have publishing permissions will see a “Bulk Action” button next to their tables. To publish or delete multiple data events, check the corresponding rows and choose your desired “Bulk Action”. **Note - if data is deleted from the system, the CMC team does not keep a backup of any kind.**

	Station	Sample Time	Group	Samples To Publish	
✓	GI	07/13/2017 10:46 AM	Virginia Institute of Marine S...	1	
✓	GI	07/06/2017 10:54 PM	Virginia Institute of Marine S...	0	
✓	GI	09/28/2017 10:59 PM	Virginia Institute of Marine S...	0	
✓	GI	01/09/2018 09:57 PM	Virginia Institute of Marine S...	4	
✓	GI	02/13/2018 05:53 PM	Virginia Institute of Marine S...	1	
✓	GI	02/15/2018 09:33 AM	Virginia Institute of Marine S...	2	
✓	GI	02/14/2018 10:10 AM	Virginia Institute of Marine S...	3	
✓	GI	02/15/2018 01:50 PM	Virginia Institute of Marine S...	2	
✓	GI	02/14/2018 01:06 PM	Virginia Institute of Marine S...	10	
✓	GI	02/21/2018 11:58 PM	Virginia Institute of Marine S...	4	
✓	GI	02/21/2018 01:30 AM	Virginia Institute of Marine S...	2	

Before you can delete or publish data, you will see pop-up boxes like these asking you to confirm your choice before your action is completed.

**Delete?**

Are you sure you want to delete this sampling event and all associated samples?

Yes     No

**Publish?**

Are you sure you want to publish this sampling event and all associated samples?

Yes     No

Coordinators with publishing permissions will be able to see this drop-down menu after clicking “Edit Selected Event”. This allows the user to upload all samples at once.

**Bulk Action**

Set All Status Dropdowns To:

Set All Samples to Uploaded

Coordinators with publishing permissions can also change the “data status” on the right under Surface Sample and Depth Profile.

**Surface Sample**

Use the fields in this section to input data that is taken at the surface (default is 0.3m)

Alkalinity (Titration) (mg/L)	<input type="button"/> Add Duplicate Sample	Data Status	<input checked="" type="button"/> Uploaded
Enter Alkalinity (Titration) (mg/L)	Choose Problem	Choose Qualifier	
Air Temperature (deg C)	<input type="button"/> Add Duplicate Sample	Data Status	
10	Choose Problem	Choose Qualifier	<input type="button"/> Published
Air Temperature (deg C)	<input type="button"/> Add Duplicate Sample		

# EDITING MACROINVERTEBRATE DATA

## MONITORS

From the Data drop down menu, choose “Edit & Review Macroinvertebrates”.

The screenshot shows the CMC Data Manager dashboard. At the top, there are navigation links: Admin, Data (with a dropdown arrow), and Profile. On the right, there is a user icon and the email address monitor@cmcTest.org. Below the navigation, a message says "Good Evening, Katie" and "You uploaded 6 samples that are". A dropdown menu is open under the Data link, showing options: Upload Water Quality, Edit & Review Water Quality, Upload Macroinvertebrates, and Edit & Review Macroinvertebrates. The "Edit & Review Macroinvertebrates" option is highlighted with a red oval. To the right of the dropdown, there is a section titled "Quick Links" with two buttons: "Upload Data" and "Submit Station".

Remember, as a monitor, you can only edit your own data. **Note: If your monitoring group coordinator has already published your data, it will not appear in the list.**

The screenshot shows the "Data View & Download" page. At the top, there are navigation links: Admin, Data (with a dropdown arrow), and Profile. A message says "Hi Katie, Welcome to the Data View & Download page." Below this, instructions say: "Here, you can edit and review benthic data for Virginia Institute of Marine Science. Complete any or all of these filters and then click the 'Get Filtered Events' button to return a list of sampling events from the database for your group." A grid table is displayed with columns: Station, Sample Time, Collection Time (N.Y.), Collection Time (N.Y.), Collection Time (N.Y.), and Collection Time (N.Y.). The first row has a checkmark in the first column and the value "GI" in the second column. The second row has a checkmark in the first column and the value "04/04/2018 09:45 AM" in the second column. The third column contains the value "90".

Click the check mark on the left to choose an event to edit, then click “Edit Selected Event” on the right.

The screenshot shows the "Data View & Download" page. At the top, there is a message "Hi Katie, Welcome to the Data View & Download page." Below this, instructions say: "Here, you can edit and review benthic data for Virginia Institute of Marine Science. Complete any or all of these filters and then click the 'Get Filtered Events' button to return a list of sampling events from the database for your group." A grid table is displayed with columns: Station, Sample Time, Collection Time (N.Y.), Collection Time (N.Y.), Collection Time (N.Y.), and Collection Time (N.Y.). The first row has a checkmark in the first column and the value "GI" in the second column. The second column contains the value "04/04/2018 09:45 AM". The third column contains the value "90". In the bottom right corner of the grid, there is a blue button with the text "Edit Selected Event" and a small edit icon. This button is highlighted with a red oval.

Two tables will open on the page. The first table contains all of the parameters and the values you entered for them. You can edit a value by double-clicking it. Make your edit, hit your return key, and the value will be automatically updated. (Parameter Names cannot be changed, and Check Counts will automatically change when the value is over 100).

	Parameter Name	Value	Qa Flag	Check Count	
✓	Flatworms	11	Uploaded		
✓	Crayfish	2	Uploaded		
✓	Leeches	102	Published	Count > than 100	
✓	Scuds	90	Uploaded		
✓	Sowbugs	2000	Uploaded	Count > than 100	
✓	Worms	2	Uploaded		
✓	Dragonflies and Damself...	45	Uploaded		
✓	Hellgrammites, Fishflies,...	5	Uploaded		
✓	Mayflies	7	Uploaded		
✓	Beetles	2	Uploaded		
✓	Most Caddisflies	52	Uploaded		

You can also export data and hide or show columns by clicking the menu in the top right corner.

	Parameter Name	Value	Qa Flag	Check Count	
✓	Flatworms	11	Uploaded		
✓	Crayfish	2	Uploaded		
✓	Leeches	102	Published	Count > than 100	
✓	Scuds	90	Uploaded		
✓	Sowbugs	2000	Uploaded	Count > than 100	
✓	Worms	2	Uploaded		
✓	Dragonflies and Damself...	45	Uploaded		
✓	Hellgrammites, Fishflies,...	5	Uploaded		
✓	Mayflies	7	Uploaded		
✓	Beetles	2	Uploaded		
✓	Most Caddisflies	52	Uploaded		

Finally, you can edit volunteer hours by double clicking a cell you want to change.

You may edit volunteer hours below by double clicking on the cell.		
	User	Hours
✓	Dave Jasinski	9
✓	Dave Parrish	12

# COORDINATORS

Coordinators can edit data from all monitors in their group. Once in the macroinvertebrate editing area, coordinators can choose to edit data for specific stations and/or data ranges. Enter your parameters, then click “Get Filtered Events.”

The screenshot shows the CMC Chesapeake Monitoring Cooperative Data View & Download page. At the top, there are navigation links: Admin, Data, Profile, and Manage. On the right, there is a user icon and the email address coordinator@cmcTest.org. Below the header, a welcome message says "Hi Dave, Welcome to the Data View & Download page." A note below it states: "Here, you can edit and review benthic data for Virginia Institute of Marine Science. Complete any or all of these filters and then click the 'Get Filtered Events' button to return a list of sampling events from the database for your group." There are three input fields: "Sampling Site" (dropdown menu showing "All Stations"), "Start Date" (text input showing "2016-06-13"), and "End Date" (text input showing "2018-07-27"). Below these is a blue button with a checkmark icon and the text "Get Filtered Events". This button is circled in red.

The second table populates with your search results. Click the check mark next to the event you wish to edit, then choose “Edit Selected Event”.

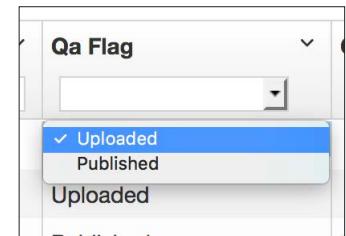
The screenshot shows a data grid of sampling events. The columns are: Sampling Site (dropdown menu showing "All Stations"), Start Date (text input showing "2016-06-13"), and End Date (text input showing "2018-07-27"). Below these is a blue button with a checkmark icon and the text "Get Filtered Events". The main area contains a table with several rows of data. Each row has a checkbox in the first column. To the right of the table is a vertical toolbar with the word "Edit" and a blue button labeled "Edit Selected Event" with a checkmark icon. This "Edit Selected Event" button is circled in red.

Sampling Site	Start Date	End Date			
All Stations	2016-06-13	2018-07-27			
<input checked="" type="button"/> Get Filtered Events					
Select a row and then use the buttons to the right of the grid to edit, publish or delete sampling events. You may delete or publish multiple sampling events at a time, but you can only edit data for a single event at a time. To edit counts, please select a single row by click the appropriate check mark on the left side of the grid and then pressing the 'Edit Selected Event' button that then appears to the right of the grid. Please note the menu button at the top right of the grid with additional grid controls, including download options.					
Station	Sample Time	Collection Time (N.Y.)	Collection Time (N.Y.)	Collection Time (N.Y.)	Collection Time (N.Y.)
GI	06/14/2016 06:54 PM	21-89			
GI	07/07/2016 10:10 AM		90		
GI	06/06/2017 05:57 PM	90		20	
GI	06/20/2017 01:49 PM		21-89		
tes10	06/20/2017 05:53 PM				
GI	06/20/2017 10:58 PM	21-89			
GI	07/02/2017 12:39 PM	21-89	20	90	21-89
GI	07/12/2017 05:49 PM		21-89		
GI	07/12/2017 05:53 PM				
GI	07/20/2017 01:49 PM				
GI	10/31/2017 09:57 PM			20	

Two tables will open on the page. The first table contains all of the parameters and the values you entered for them. You can edit a value by double-clicking it. Make your edit, hit your return key, and the value will be automatically updated. (Parameter Names cannot be changed, and Check Counts will automatically change when the value is over 100).

When you double-click a value in the Qa Flag column, coordinators have the option to publish data.

	Parameter Name	Value	Qa Flag	Check Count	
	Flatworms	11	Uploaded		
	Crayfish	2	Uploaded		
	Leeches	102	Published	Count > than 100	
	Scuds	90	Uploaded		
	Sowbugs	2000	Uploaded	Count > than 100	
	Worms	2	Uploaded		
	Dragonflies and Damself...	45	Uploaded		
	Hellgrammites, Fishflies,...	5	Uploaded		
	Mayflies	7	Uploaded		
	Beetles	2	Uploaded		
	Most Caddisflies	52	Uploaded		



You can also export data and hide or show columns by clicking the menu in the top right corner.

	Parameter Name	Value	Qa Flag	Check Count	
	Flatworms	11	Uploaded		
	Crayfish	2	Uploaded		
	Leeches	102	Published	Count > than 100	
	Scuds	90	Uploaded		
	Sowbugs	2000	Uploaded	Count > than 100	
	Worms	2	Uploaded		
	Dragonflies and Damself...	45	Uploaded		
	Hellgrammites, Fishflies,...	5	Uploaded		
	Mayflies	7	Uploaded		
	Beetles	2	Uploaded		
	Most Caddisflies	52	Uploaded		

Clear all filters  
 Export all data as csv  
 Export visible data as csv  
 Columns:  
 Parameter Name  
 Value  
 Qa Flag  
 Check Count  
 Sample Set Id

Finally, you can edit volunteer hours by double clicking a cell you want to change.

You may edit volunteer hours below by double clicking on the cell.		
User	Hours	
Dave Jasinski	9	
Dave Parrish	12	

## 7

# BULK UPLOAD (COORDINATORS ONLY)

## WATER QUALITY DATA

The following instructions detail how to enter data using the bulk data upload functionality. If you have not done this before, your **first step** is to obtain a copy of the [Bulk Data Upload Template](#). Using the bulk data upload functionality, you will be able to upload data for multiple stations and/or dates at once.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Source	Station	Date	Time	SampleDepth	SampleId	ParameterType	ParameterName	Value	Qualifier	Problem		
2	ACB	ACB.35	2/5/2016	9:00:00 PM			Condition	R	33.274				
3	ACB	ACB.35	2/5/2016	9:00:00 PM			Condition	SF	High				
4	ACB	ACB.35	2/5/2016	9:00:00 PM			Condition	WC	Normal				
5	ACB	ACB.35	2/5/2016	9:00:00 PM			Condition	WCD	Dark brown				
6	ACB	ACB.35	2/5/2016	1:00:00 PM			Monitor	ACB.Joe.Smith	2				
7	ACB	ACB.35	2/5/2016	9:00:00 PM			Comments	COMMENTS	Very high - snow melt and rain in previous week				
8	ACB	ACB.35	2/5/2016	9:00:00 PM	0.3	1	WaterQuality	AT.2	8.9				
9	ACB	ACB.35	2/5/2016	9:00:00 PM	0.3	1	WaterQuality	DO.1	9.7				
10	ACB	ACB.35	2/5/2016	9:00:00 PM	0.3	2	WaterQuality	DO.1	9.4				
11	ACB	ACB.35	2/5/2016	9:00:00 PM	0.3	1	WaterQuality	PH.1	6.87				
12	ACB	ACB.35	2/5/2016	9:00:00 PM	0.3	1	WaterQuality	TD.1	0.5				
13	ACB	ACB.35	2/5/2016	9:00:00 PM	0.3	1	WaterQuality	WT.2	7.4				
14													

To use the bulk data upload functionality of the Chesapeake Data Explorer tool, your data needs to be in a very specific format which is depicted in the example above. In this format, the data are arrayed vertically. This means that each parameter collected at a specific location, date, time, and depth has its own row in the data table. This includes not only the parameters collected in the water but also the site condition parameters such as air temperature, water color, etc. The person collecting the data (Monitor) is also a parameter in this format.

In the vertical format, the Source, Station, Date, and Time fields are repeated for every parameter at every depth sampled during a sampling event (When a monitor visits a location at a specific location and time and collects data, this is referred to as a sampling event). It is very important that the columns are in the order (left to right) shown in the example above. Failure to format your data with the columns in this order will result in an error and you will not be able to upload your data until you correct the issue.

Once your data is formatted, it must be saved as a .csv file. **Note - If you are storing your data in Excel and exporting as a .csv, please be sure the date is displaying in the proper “m/d/yyyy” format before exporting. If the date is displaying as “m/d/yy”, Excel will truncate the date and you will not be able to upload your data!**

## An explanation of the fields:

1. Source - The monitoring group that collected the data. The value entered into the source field should be the “Group Code” for that group. For example, the group code for the Alliance for the Chesapeake Bay is ACB. Group coordinators can find the Group Code for their group on their group’s profile page.
2. Station - The sampling location where the data was collected. The value entered into the station field should be the “Station Code”, the unique station ID assigned in the Data Explorer. This code typically includes a short alpha-numeric ID preceded by the group code and a period (“.”). For example - ACB.35. A full list of station codes can be downloaded for your group from the “Manage Stations” page.
3. Date - The date that the sampling event took place. This must be in m/d/yyyy format. For example 2/5/2016.
4. Time - The time of day sampling occurred. This must be in hh:mm:ss AM/PM format. For example 1:00:00 PM.
5. Depth - The depth at which sampling occurred in meters. All surface sample measurements must have a depth of 0.3, 0.5 or 1.0m.
6. SampleId - For water quality parameters only, this is the replicate or duplicate number. First replicate SampleID will be 1 and second replicate SampleID will be 2. If no replicate is taken, the SampleID is 1.
7. ParameterType - Indicates the type of parameter collected, there are four parameter type options: “Condition”, “Monitor”, “Comments” or “WaterQuality” parameters. Condition parameters are observational variables like Tide and Water Color. Monitor indicates the person who collected the data. Comments include any additional information about the sampling day. Water Quality parameters include all water quality data collected.
8. ParameterName - The specific and unique “Parameter Code” for all parameters included in a dataset, this field links to the “Value” field to the correct parameter. In the case of water quality parameters, this code links the data to the specific sampling method, equipment type and tier for each data point. Your CMC Service Provider will give you the list of individual codes associated with your monitoring group, you can see a full list of parameter codes on the Resources tab.
9. Value - The field reading or value. If the parameter is the Monitor who collected the data, then the value is the monitoring or volunteer hours associated with collecting data for this monitoring event. For example, one hour and 30 minutes would be entered as **1.5**.
10. Qualifier - Any necessary qualifier code is entered here. Acceptable qualifiers are shown in Table 1.
11. Problem - Any necessary problem code is entered here. Acceptable problem codes are shown in Table 2.

Most groups store data in a horizontal format instead of this vertical format. The CMC has developed an Excel Macro Template to make it easy to convert your data into the appropriate vertical format. You can find the macro on the Resources section of the Data Explorer or linked here - [Data Macro](#) and [Data Macro Guide](#).

## Data Upload

To begin the bulk data upload process, from the Admin Area Home screen, choose “Upload Water Quality” from the Data drop down menu.

CMC Chesapeake Monitoring Cooperative Admin Data Profile Manage Log off dave@chesapeakedata.com

CMC Data Manager Good Morning, Dave You uploaded 10 samples that were added this month

Quick Links: Upload Data, Submit Station, Contact Your CMC Administrator

Virginia Institute of Marine Science's Activity this month

7 NEW USERS

19 NEW SAMPLES

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Click the “Bulk file” button.

CMC Chesapeake Monitoring Cooperative Admin Data Profile Manage Log off dave@chesapeakedata.com

There are two different methods for uploading data to the Data Explorer: Single sample event data uploads through a data entry form OR multiple sample event uploads by uploading a spreadsheet file. The file for latter method needs to adhere to a very specific file format, a template for which can be downloaded [here](#). Additional details can be found in the [Data Explorer User's Manual](#).

Choose the type of upload you would like to do today:

Form (button)

Bulk File (button, circled in red)

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Click “Choose File” from the screen that opens. A window will open, allowing you to choose the bulk upload file that you have pre-prepared using the format detailed above.

CMC Chesapeake Monitoring Cooperative Home Data Profile Manage Log off dave@chesapeakedata.com

File Choose File | no file selected

Save (button)

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Your file name will appear next to the “Choose File” button. Click “Save”.

CMC Chesapeake Monitoring Cooperative Home Data Profile Manage Log off dave@chesapeakedata.com

File Choose File TestData2.csv

Save (button, circled in red)

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If your file uploads successfully, a green box will appear in the lower right hand corner of your screen indicating that the data was successfully added.

CMC Chesapeake Monitoring Cooperative Admin Data Profile Manage Log off dave@chesapeakedata.com

File Choose File | no file selected Must Select a File

Save (button)

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Adding Samples Successfully added new samples.

If your file was not uploaded successfully, you will have either warnings (in yellow text) or errors (in red text) that you will need to address before uploading.

If your file contains errors (red text) that file cannot be uploaded. Errors include date or time formatting issues, invalid station codes, invalid group codes, etc. The application will show which line(s) are causing the issue. Review your file, fix the errors in the designated lines, and attempt to upload it again. The application will only show 200 errors at a time, so if you have a lot of issues, you may need to upload it multiple times to figure out all of the errors.

The screenshot shows a web page from the Chesapeake Monitoring Cooperative (CMC) with a navigation bar at the top. The 'Data' menu is open, showing 'Profile' and 'Manage'. Below the navigation, there is a list of validation errors:

- The group code provided in row 2 is invalid. Please check the data file submitted.
- The date/time provided in row 2 is invalid. The date pattern should be 'M/d/yyyy' and the time pattern should be 'H:mm:ss'. Please check the data file submitted.
- Unable to create or find the event. The row at line 2 is invalid. Please check the data file submitted.
- The group code provided in row 3 is invalid. Please check the data file submitted.
- The date/time provided in row 3 is invalid. The date pattern should be 'M/d/yyyy' and the time pattern should be 'H:mm:ss'. Please check the data file submitted.
- Unable to create or find the event. The row at line 3 is invalid. Please check the data file submitted.
- The group code provided in row 4 is invalid. Please check the data file submitted.
- The date/time provided in row 4 is invalid. The date pattern should be 'M/d/yyyy' and the time pattern should be 'H:mm:ss'. Please check the data file submitted.
- Unable to create or find the event. The row at line 4 is invalid. Please check the data file submitted.
- The group code provided in row 5 is invalid. Please check the data file submitted.
- The date/time provided in row 5 is invalid. The date pattern should be 'M/d/yyyy' and the time pattern should be 'H:mm:ss'. Please check the data file submitted.
- Unable to create or find the event. The row at line 5 is invalid. Please check the data file submitted.
- The group code provided in row 6 is invalid. Please check the data file submitted.
- The date/time provided in row 6 is invalid. The date pattern should be 'M/d/yyyy' and the time pattern should be 'H:mm:ss'. Please check the data file submitted.
- Unable to create or find the event. The row at line 6 is invalid. Please check the data file submitted.
- The group code provided in row 7 is invalid. Please check the data file submitted.
- The date/time provided in row 7 is invalid. The date pattern should be 'M/d/yyyy' and the time pattern should be 'H:mm:ss'. Please check the data file submitted.
- Unable to create or find the event. The row at line 7 is invalid. Please check the data file submitted.
- The group code provided in row 8 is invalid. Please check the data file submitted.
- The date/time provided in row 8 is invalid. The date pattern should be 'M/d/yyyy' and the time pattern should be 'H:mm:ss'. Please check the data file submitted.
- Unable to create or find the event. The row at line 8 is invalid. Please check the data file submitted.
- The group code provided in row 9 is invalid. Please check the data file submitted.
- The date/time provided in row 9 is invalid. The date pattern should be 'M/d/yyyy' and the time pattern should be 'H:mm:ss'. Please check the data file submitted.

If your file contains warnings (yellow text), you can choose to upload that file or fix the issues. Warnings only check for whether a value is within a specified range for that parameter and will highlight values outside of that range. This checks for potential typos (someone misplaces a decimal place) or incorrect codes (DO values are listed as pH values). Review your file and either click "Cancel" to fix the issue and reupload the file, or if the values are correct click "Proceed with upload" at the bottom.

The screenshot shows the 'bulk data upload' page. At the top, there are navigation links: Admin, Data (with a dropdown), Profile, Manage (with a dropdown), and Resources. On the right, there is a user icon and the email address lchudoba@allianceforthebay.org. Below the navigation, a welcome message states: "Welcome to the bulk data upload page! Here you can upload a spreadsheet file (.csv) containing data for multiple sampling locations and dates for any monitoring group in the Data Explorer. The file needs to adhere to a very specific file format, a template for which can be downloaded here. Additional details can be found in the Data Explorer User's Manual." A section titled "Errors" indicates "There are no errors detected in the file." A section titled "Warnings" notes that the file has not been uploaded and lists three specific warnings:

- The value provided in row 3 is higher than the upper range check for this parameter
- The value provided in row 8 is higher than the upper range check for this parameter
- The value provided in row 19 is higher than the upper range check for this parameter

A "File" section shows a "Choose File" button with the path "MCO1 Data ...ad TEST.csv". A checkbox asks, "Would you like to immediately publish all samples on upload?". At the bottom, there are two buttons: "Proceed with Upload" (highlighted with a red oval) and "Cancel".

# UPLOADING BENTHIC MACROINVERTEBRATE DATA

The following instructions detail how to enter data using the bulk data upload functionality. If you have not done this before, your **first step** is to obtain a copy of the [Bulk Data Upload Template](#). Using the bulk data upload functionality, you will be able to upload data for multiple stations and/or dates.

	A	B	C	D	E	F	G	H
1	Source	Station	Date	Time	ParameterType	ParameterName	Value	Comments
2	VIMS	VIMS.gi	7/2/17	12:39:00 PM	condition	CT.1	21-89	
3	VIMS	VIMS.gi	7/2/17	12:39:00 PM	condition	CT.2	20	
4	VIMS	VIMS.gi	7/2/17	12:39:00 PM	condition	CT.3	90	
5	VIMS	VIMS.gi	7/2/17	12:39:00 PM	condition	CT.4	21-89	
6	VIMS	VIMS.gi	7/2/17	12:39:00 PM	Monitor	VIMS.david.parrish	1.5	
7	VIMS	VIMS.gi	7/2/17	12:39:00 PM	condition	V	7	
8	VIMS	VIMS.gi	7/2/17	12:39:00 PM	condition	SL	10	
9	VIMS	VIMS.gi	7/2/17	12:39:00 PM	condition	M	Moderate	
10	VIMS	VIMS.gi	7/2/17	12:39:00 PM	condition	TM	coal	
11	VIMS	VIMS.gi	7/2/17	12:39:00 PM	tally	W	10	
12	VIMS	VIMS.gi	7/2/17	12:39:00 PM	tally	F	1	
13	VIMS	VIMS.gi	7/2/17	12:39:00 PM	tally	L	0	

To use the bulk data upload functionality of the Chesapeake Data Explorer tool, your data needs to be in a very specific format which is depicted in the example above. In this format, the data are arrayed vertically. This means that each parameter collected at a specific location, date, time, and depth has its own row in the data table. This includes not only the parameters collected in the water but also the site condition parameters such as air temperature, water color, etc. The person collecting the data (Monitor) is also a parameter in this format.

In the vertical format, the Source, Station, Date, Time, and Comments fields are repeated for every parameter at every depth sampled during a sampling event (When a monitor visits a location at a specific location and time and collects data, this is referred to as a sampling event). It is very important that the columns are in the order (left to right) shown in the example above. Failure to format your data with the columns in this order will result in an error and you will not be able to upload your data until you correct the issue.

Once your data is formatted, it must be saved as a .csv file. **Note - If you are storing your data in Excel and exporting as a .csv, please be sure the date is displaying in the proper “m/d/yyyy” format before exporting. If the date is displaying as “m/d/yy”, Excel will truncate the date and you will not be able to upload your data!**

## An explanation of the fields:

1. Source - The monitoring group that collected the data. The value entered into the source field should be the “Group Code” for that group. For example, the group code for the Virginia Institute of Marine Science is VIMS. Group coordinators can find their Group Code on their group’s profile page.
2. Station - The sampling location where the data was collected. The value entered into the station field should be the “Station Code”, the unique station ID assigned in the Data Explorer. This code typically includes a short alpha-numeric ID preceded by the group code and a period (“.”). For example - VIMS.gi. A full list of station codes can be downloaded for your group from the “Manage Stations” page.
3. Date - The date that the sampling event took place. This must be in m/d/yyyy format. For example 2/5/2016.
4. Time - The time of day sampling occurred. This must be in hh:mm:ss AM/PM format.
5. ParameterType - Indicates if the parameter is a “Condition”, “Monitor”, “Comments”, or “Tally” parameter. Condition parameters are observational variables like vegetated cover, stream bed conditions, and weather conditions. Monitor indicates the person who collected the data. Comments include any additional information about the sampling day. Tally includes all the counts for each macroinvertebrate family or order identified.
6. ParameterName - The specific and unique “Tally Code” for all benthic macroinvertebrate family or order classifications included in a dataset. Your CMC Service Provider will give you the list of individual codes to use based on your monitoring method.
7. Value - The tally or count of that type of organism in the dataset. If the parameter is the Monitor who collected the data, then the value is the monitoring or volunteer hours associated with collecting data for this monitoring event. For example, one hour and 30 minutes would be entered as **1.5**.

Most groups store data in a horizontal format instead of this vertical format. The CMC has developed an Excel Macro Template to make it easy to convert your data into the appropriate vertical format. You can find the macro on the Resources section of the Data Explorer or linked here - [Data Macro](#) and [Data Macro Guide](#).

## Data Upload

To begin the bulk data upload process, from the Admin Area Home screen, choose “Upload Macroinvertebrates” from the Data drop down menu.

The screenshot shows the CMC Admin Area Home screen. At the top, there is a navigation bar with links for Admin, Data (with a dropdown arrow), Profile, and Manage (with a dropdown arrow). On the far right, there is a user icon and the email address dave@chesapeakedata.com, with a Log off link. Below the navigation bar, the main content area has a header "CMC Data Manager". On the left, a greeting says "Good Evening, Dave" and "You uploaded 11 samples that are pending review". In the center, a dropdown menu is open under the "Data" link. The menu items are: Upload Water Quality, Edit & Review Water Quality, Upload Macroinvertebrates (this item is circled in red), Edit & Review Macroinvertebrates, and Submit Station. To the right of the dropdown menu, there is a "Quick Links" section with a large green button labeled "Upload Data".

On the page that opens, click the “Bulk file” button.

The screenshot shows a user interface for data entry. At the top, there's a navigation bar with 'Admin', 'Data', 'Profile', and 'Manage' tabs. On the right, there's a user profile icon and a 'Log off' link. Below the navigation, a message states: 'There are two different methods for uploading data to the Data Explorer: Single sample event data uploads through a data entry form OR multiple sample event uploads by uploading a spreadsheet file. The file for latter method needs to adhere to a very specific file format, a template for which can be downloaded [here](#). Additional details can be found in the Data Explorer User's Manual.' A sub-navigation bar below this includes 'Form' and 'Bulk File'. The 'Bulk File' button is circled in red. At the bottom, it says '© 2018 - Chesapeake Monitoring Cooperative'.

Click “Choose File” from the screen that opens. A window will open, allowing you to choose the bulk upload file that you have pre-prepared using the format detailed above.

Your file name will appear next to the “Choose File” button. Click “Save”.

This screenshot shows the 'bulk data upload page'. It has a similar header with 'Admin', 'Data', 'Profile', and 'Manage' tabs, and a user profile icon. The main content area says: 'Welcome to the bulk data upload page! Here you can upload a spreadsheet file (.csv) containing data for multiple sampling locations and dates for any monitoring group in the Data Explorer. The file needs to adhere to a very specific file format, a template for which can be downloaded [here](#). Additional details can be found in the Data Explorer User's Manual.' Below this, there's a 'File' section with a 'Choose File' input field containing 'cmcBulkBenthicSamples.csv'. A 'Save' button is present. Underneath, it says 'Samples bulk upload file format:' followed by a link to 'Bulk Samples Template'. At the bottom, it says '© 2018 - Chesapeake Monitoring Cooperative'.

If your file uploads successfully, a green box will appear in the lower right hand corner of your screen indicating that the data was successfully added.

**Adding Samples**  
Successfully added new samples.

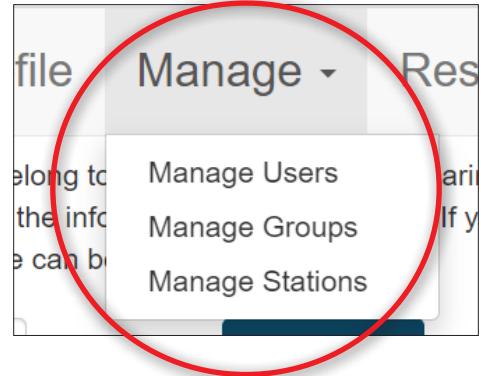
If your file was not uploaded successfully, the errors in your file needing correction will be shown in red text. Review your file, fix the errors, and attempt to upload it again.

This screenshot shows an error message page. At the top, there's a navigation bar with 'Home', 'Data', 'Profile', and 'Manage' tabs. Below the navigation, a large block of red text lists numerous validation errors for a CSV file. Some examples include: 'The group code provided in row 2 is invalid. Please check the data file submitted.', 'The date/time provided in row 2 is invalid. The date pattern should be 'M/d/yyyy' and the time pattern should be 'H:mm:ss'. Please check the data file submitted.', and 'The group code provided in row 4 is invalid. Please check the data file submitted.' The errors continue through rows 5 to 9, with each row having its own specific validation issue related to date and time patterns.

# 8

# MANAGE INFORMATION (COORDINATORS ONLY)

In addition to the ability to upload, edit, and review data, coordinators will have a Manage tab in order to manage various aspects of their program within the Data Explorer. Coordinators are able to manage their users, group and stations as updates are made to their program. Your CMC service provider will review these processes during your coordinator training but the following sections outline the basic functionality.

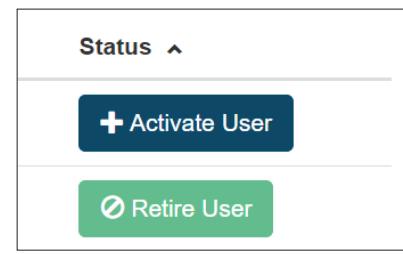


## MANAGE USERS

If your program has multiple users who upload or review data, you can manage accounts using the Manage Users section. All users who have a registered account with your monitoring group will appear on this list. You can download the list of users by clicking the Download User button, or view details about the user by clicking the View Details/Edit button next to each user.

Users					Filter	Search Users...	Bulk File	Download Users
First Name	Last Name	Role	State	Group	Status ▾			
Fake	User	Monitor	VA	Virginia Institute of Marine Science		<a href="#">View Details / Edit</a>		<a href="#">Retire User</a>
David	Parrish	Coordinator	VA	Virginia Institute of Marine Science		<a href="#">View Details / Edit</a>		<a href="#">Retire User</a>

Any user that registers an account on the Data Explorer must have that account activated. When a new user registers an account with a specific monitoring group, the group coordinator will get an email notification and must activate that account before the user can log on. Click on the “Activate User” button next to their name in the list. Users that need activating will be at the top of the list.



If a user is no longer monitoring with your program you can also deactivate their account by clicking the “Retire User” button next to their name. You can reactivate retired users at any point.

Users can also be bulk uploaded if they are not actively uploading data but you want to track who collected the data and volunteer hours. Use the “Bulk File” button at the top of the table to access the bulk upload template. Any user that is bulk uploaded will have a dark green “Register” button next to their name. You can click that button if you want to activate an account so they can upload data.



# MANAGE GROUP

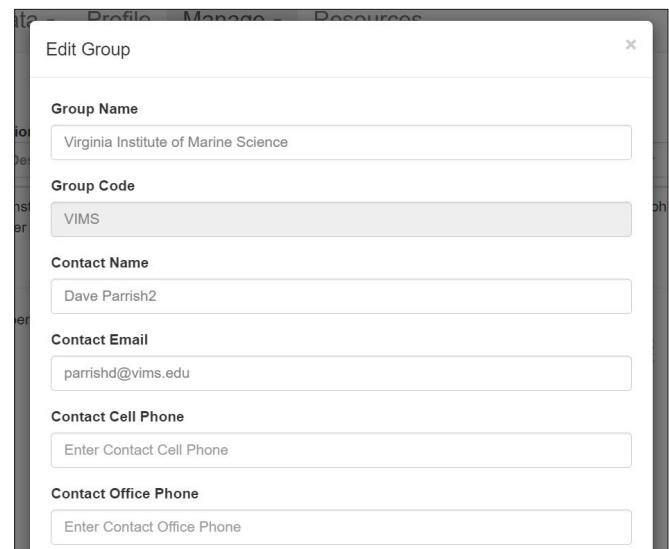
Your CMC Service Provider will set up your group in the Data Explorer, but Coordinators have the ability to make any edits or updates as needed as you change parameters or personnel. The table on this page will default to only showing the group you are the coordinator for, if you would like to see all of the groups you can click the “Show All Groups” button and the table will show all of the groups registered in the application or you can click the “Download Groups” button to download a .csv file of all groups. You only have access to edit the group that your account is associated with.

The screenshot shows the 'Manage' tab selected in the top navigation bar. Below it, there's a table with columns for Name, Description, Email, and Cmc Members. A 'Groups' header is at the top left, with buttons for 'Show All Groups' and 'Download Groups'. Filter boxes are available for Name, Description, Email, and Cmc Members. A specific row is highlighted for 'Virginia Institute of Marine Science'.

Name	Description	Email	Cmc Members
Virginia Institute of Marine Science	Virginia Institute of Marine Science is located in Gloucester Point, Va.	parrishd@vims.edu	Jane Member; John Officer

To edit information about your group, click the “View Details/Edit” button next to your group name. This will open a popup window with your group information.

The first section includes contact information for the group coordinator. The only field that cannot be updated is the Group Code, which is assigned by the Data Explorer when a new group is created.



This pop-up window will also have a parameters table where you can select or deselect specific parameters associated with your group. Parameters that have a blue check box next to them are associated with your group so will appear on the data upload form and allow data upload via the bulk upload process. You can click the red plus box to add additional parameters to your program. Use the resources tab to access the full list of parameters or contact your CMC Service Provider for the appropriate parameter.

A table showing parameters for the group. The columns are Name, Code, Units, Equipment, and Tier. Red plus signs are in the last column, and blue checkmarks are in some rows. The table has a footer with navigation arrows.

Name	Code	Units	Equipment	Tier	
Air temperature	AT.9	deg C	Digital Thermometer (Ex. Hanna 98509)	p2	<span style="color: red;">+</span>
Air temperature	AT.10	deg C	Armored Thermometer (ex. LaMotte 1066)	p1	<span style="color: red;">+</span>
Air temperature	AT.1	deg C	Armored Thermometer (ex. LaMotte 1066)	2	<span style="color: blue;">✓</span>
Air temperature	AT.2	deg C	Digital Thermometer (Ex. Hanna 98509)	2	<span style="color: red;">+</span>
Air temperature	AT.3	deg C	Multiparameter Probe (Ex. LaMotte 1761)	2	<span style="color: red;">+</span>

If any of your parameters have calibration requirements or are lab parameters two additional tables will appear below the parameter table to select that information.

# MANAGE STATIONS

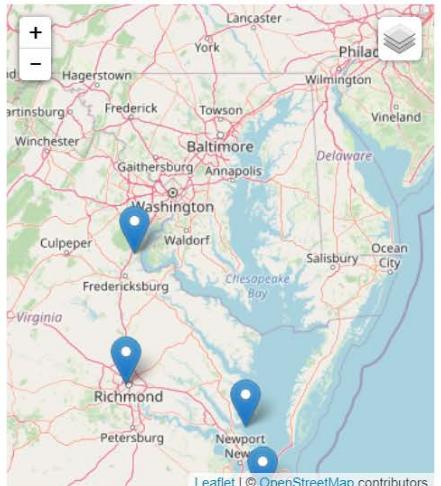
Your CMC Service Provider will set up your stations in the Data Explorer, but you can use the Manage Stations page to edit, add or remove sites as needed. The table on this page will only show the stations associated with your monitoring group. Use the “Download Station” button to download a .csv file with the full list of all of your stations.

CMC Chesapeake Monitoring Cooperative Admin Data Profile Manage Resources Log off coordinator@cmcTest.org

+ Add New Station Upload Bulk Stations Download Stations

Filter Search stations in table... X

Name	Group Name(s)	Latitude	Longitude	Action	Action
35	Virginia Institute of Marine Science	37.52	-77.47	<input checked="" type="checkbox"/>	+ Activate Station
A2	Virginia Institute of Marine Science	38.46	-77.38	<input checked="" type="checkbox"/>	Ø De-Activate Station
GI	Virginia Institute of Marine Science	37.22	-76.39	<input checked="" type="checkbox"/>	Ø De-Activate Station
test2	Virginia Institute of Marine Science	37.28	-79.93	<input checked="" type="checkbox"/>	Ø De-Activate Station
test4	Virginia Institute of Marine Science	36.74	-76.23	<input checked="" type="checkbox"/>	Ø De-Activate Station



Leaflet | © OpenStreetMap contributors

## Add New Stations

You can add new stations to your monitoring program via the “Add New Station” button, which will open a form to upload a single station. At a minimum you will need a Station Name and Latitude and Longitude coordinates in decimal degrees to 4 decimal places. The Data Explorer will automatically create a unique Station Code.

You can use the “Upload Bulk Stations” button to upload multiple stations at once. Use the template provided on the Upload Bulk Stations page. At a minimum you will need a Station Code, Station Name, Long Name, Description, and latitude and longitude coordinates in decimal degrees to 4 decimal places to upload a station. You will need to create the unique Station Code using your group code, followed by a “.” and then your Station Name.

Add Station

Hi, on this page you can add a monitoring location. If you do not know the coordinates of the monitoring location you are suggesting, click the check-box below the form to choose your sampling location using a map.

Note: All Latitude and Longitude submissions must be geographic coordinates (decimal degrees) on the North America Datum of 1983 (NAD83).

Station Name

Station Code

Station Long Name

Station Description

Sampling Method

Latitude

Longitude

## Edit Stations

You can edit any of your stations if anything changes (ie. the lat/long coordinates are updated) by clicking the blue edit box next to the station. A pop-up window will open and you can update any of the information. Note: there are some fields that the Data Explorer completes in addition to the information you upload.

Name	Group Name(s)	Latitude	Longitude	Action
35	Virginia Institute of Marine Science	37.52	-77.47	<a href="#">+ Activate Station</a>
A2	Virginia Institute of Marine Science	38.46	-77.38	<a href="#">∅ De-Activate Station</a>
GI	Virginia Institute of Marine Science	37.22	-76.39	<a href="#">∅ De-Activate Station</a>
test2	Virginia Institute of Marine Science	37.28	-79.93	<a href="#">∅ De-Activate Station</a>
test4	Virginia Institute of Marine Science	36.74	-76.23	<a href="#">∅ De-Activate Station</a>

## Activate and Deactivate Stations

All stations that are uploaded are automatically activated in the system. All active stations will have a red “De-Activate Station” button next to it.

You can leave all stations active even if you stop monitoring. However, if your group uses the Data Upload Form, it may be helpful to deactivate stations that are no longer in use, deactivated stations will not appear on the drop down menu on the Data Upload Form.

Once a station becomes deactivated this button will change to a blue “Activate Station” button. If you start monitoring that station again you can re-activate it at any time and it will appear in the drop down menu again.

If you de-activate a station and bulk upload data, you will receive a “warning” that the station is not active in the Data Explorer. If you are uploading historic data and the station is still currently inactive, you click “Proceed with Upload” to accept the warning and upload the data. If the station is currently being monitored, you can activate the station and then upload the data to remove the warning for future data uploads.

Name	Group Name(s)	Latitude	Longitude	Action
35	Virginia Institute of Marine Science	37.52	-77.47	<a href="#">+ Activate Station</a>
A2	Virginia Institute of Marine Science	38.46	-77.38	<a href="#">∅ De-Activate Station</a>
GI	Virginia Institute of Marine Science	37.22	-76.39	<a href="#">∅ De-Activate Station</a>
test2	Virginia Institute of Marine Science	37.28	-79.93	<a href="#">∅ De-Activate Station</a>
test4	Virginia Institute of Marine Science	36.74	-76.23	<a href="#">∅ De-Activate Station</a>

Name	Group Name(s)	Latitude	Longitude	Action
35	Virginia Institute of Marine Science	37.52	-77.47	<a href="#">+ Activate Station</a>
A2	Virginia Institute of Marine Science	38.46	-77.38	<a href="#">∅ De-Activate Station</a>
GI	Virginia Institute of Marine Science	37.22	-76.39	<a href="#">∅ De-Activate Station</a>
test2	Virginia Institute of Marine Science	37.28	-79.93	<a href="#">∅ De-Activate Station</a>
test4	Virginia Institute of Marine Science	36.74	-76.23	<a href="#">∅ De-Activate Station</a>

Errors  
There are no errors detected in the file.

Warnings  
The file you submitted has not been uploaded. The file has the following associated warnings. Please double check these warnings and click the “Proceed with Upload” button at the bottom of this form if these warnings are acceptable, otherwise, click the “Cancel” button and reupload the file with any additional changes.

- The station provided in row 2 is associated with a station that is deactivated. If you would like to activate this station, please navigate to the ‘Manage Stations’ tool.
- The station provided in row 3 is associated with a station that is deactivated. If you would like to activate this station, please navigate to the ‘Manage Stations’ tool.
- The station provided in row 4 is associated with a station that is deactivated. If you would like to activate this station, please navigate to the ‘Manage Stations’ tool.
- The station provided in row 5 is associated with a station that is deactivated. If you would like to activate this station, please navigate to the ‘Manage Stations’ tool.

File

Would you like to immediately publish all samples on upload?