Volunteer Water Quality Monitoring

Instructions for use of the Data Entry Portal

Programmer Information

The code for the program was written by one of our Waccamaw River water quality monitoring volunteers, Dr. Forrest Meiere, who saw the need to reduce the work load on our volunteer monitoring coordinator and taught himself php to help us! Dr. Meiere also wrote the php code for a control charting module which is used by the volunteer monitoring coordinator to review the meter replicates.

We are much indebted to his efforts on our behalf!

The purpose of this program

This program is designed for volunteer water quality monitors to enter their biweekly data. The data are then available to the volunteer monitoring coordinator to verify for completeness and accuracy before transfer to an online database. The public has access to the latter. By having the volunteers post their data online, a more rapid review of the data is accomplished. This provides more timely access to the public and to the project managers and funding partners who are alerted to all contraventions of water quality standards. See the project Quality Assurance Project Plan (http://www.coastal.edu/wwa/vm/qapp.html) for a complete description of data management and use.

Entering Data

1. Go to: https://bcmw.coastal.edu/volunteermonitoring/wr/index.php for the Waccamaw River or https://bcmw.coastal.edu/volunteermonitoring/mi/index.php for Murrells Inlet.
2. Left click on the tab at the top of the page entitled "Add Data"
3. This opens up a new browser window and brings you to the screen entitled "Remote Data Entry"
4. Enter your User Name and Password, and the Collection Date. Then left click on the "Log In" button.
5. This updates the "Remote Data Entry" screen to verify that you are logged in.
6. Next, use the drop down menu to select a project. And the button to select a site. You will only see the project and site where you sample.
7. This updates the Remote Data Entry screen to allow you to enter data. (For Super Users: You will be presented with an option on this screen that will enable you to transfer data from the temporary to the permanent database.)[1]
8. If you are adding data, let click on the "Enter Data" button.
9. This brings you to a page where you can type in your data. The format is close to that of your field data sheet. The first two rows are automatically populated with the site and collection date information. Type in the collection time in the following format: HH:MM, where time ranges from 00:00 to 23:59. This format eliminates the need for specifying AM or PM.
10. For the meter data, type in the values of all three replicates. For the nutrients, *E. coli* and Total coliform, you will have only one value.
11. Enter the names of the samplers, date of the last rain, using the date format of YYYY-DD-MM.

12. Use the drop down menus to select the proper descriptors for the amount of rain, sun, and water flow.
13. Type in any comments, such as the presence of an illicit discharge at your sampling site.
14. The only data that are required are the first two rows which are automatically populated and the Date of last rain.
15. You now have four choices: (1) Log out – (none of your work will be saved), (2) View latest entries (this takes you to a screen that lets you select a site and date range to view data. This is handy as it lets you see what data's been entered thus far), (3) Return to the Volunteer Monitoring Home Page (none of your work will be saved) - and (4) Verify data.
16. When you click on "Verify data", the data entry screen is updated. A message will appear at the top of the screen telling you that data have been accepted or specifying corrections that are needed. You can also make only changes to other entries. At the bottom of the screen is a question "Save to Database"? If you select NO, and then select "Verify/Submit Data", you will get a message at the top of the screen that "Data has correct format. Click "verify/submit data// or add/change entries and click "Verify/submit data". Once all your data are correct, answer YES to the question "Save to Database" and then click "Verify /Submit Data". This produces a message at the bottom of the screen: "Successful insertion into database table temp_wr! Enter more data for the sample event occurring on DATE YOU ENTERED at SITE YOU ENTERED or log out. You can now use the link at the bottom right hand corner of the page to "View latest entries" to see your entered data.
17. "Log out" gets you back to the Log in page. If you need to add another date and/or site, you must log back in again.

Adding more data to a partially complete sampling event

Log in and specify the date, project and sampling site. Any previously entered data that have been saved to the database should automatically show up.

Keep adding. Use steps 9 through 17 above, to add more data and save it to the database.

**After all data are entered …..*

Email Ken to let him know that all the data have been entered for a particular sampling day. This should be done within 24 hours of sampling. If computer upload is not possible, email or call Ken. If any data, contravene water quality standards, these are reported immediately to the Waccamaw Riverkeeper.

Send all written records via mail to the volunteer monitoring coordinator. This includes field data sheets, turbidity and bacteria data sheets, and calibration log sheets.

What happens to the data?

The volunteer monitoring coordinator reviews your entries. These are compared against your field data sheets, so please do mail in all your data sheets ASAP. He then transfers it from the temporary to the permanent database.

The volunteer monitoring coordinator then uses a control charting program to verify that reproducibility of the meter triplicate measurements are in control using an automated control charting procedure. Bad data records are flagged at this point and not used for statistical analyses or graphing. A nonconformance report is generated as outlined in the QAPP.

The verified data are then transferred to a permanent database. These data are used to generate the online graphs and data summary tables at https://bcmw.coastal.edu/volunteermonitoring/wr/index.php by clicking the "View Data" tab. The corrected data set can be downloaded as .csv file suitable for generating additional graphs and statistics. To do this, click on the "View Data" tab, then select the sampling sites, date range and parameters. Then click on "Generate Statistical summary table and graphs". This brings you to a screen that provides the summary stat table, graph options, and a button for downloading the data as a .csv file. Click on the download button. A .csv file can be opened in Excel.

Tips

- Don't use your back browser button. Use the "Log out" or "Volunteer Monitoring Home Page" links.
- Do not give anyone your username or password. If you have forgotten yours, contact Quaye Trimble at qtrimble@coastal.edu .
- If you save data to the database and want to remove it, contact the volunteer monitoring coordinator, Ken Hayes, at khayes@coastal.edu .

[1] This takes you to a screen with all the data records in the temporary data base. You must type in the group ID of the records to transfer. You can find the group ID by checking the listings in the table on this screen. (The group ID is used only in the temporary database.) Click on "Transfer". At the bottom of the screen is a message noting whether your transfer for each specified group id was successful. Email Quaye asking that he remove any transferred Group IDs from the temporary database.

You can continue to transfer more records by entering more group ID's and clicking "Transfer" or you can elect to "Log out". This takes you back to the Remote Data Entry log in screen.