Data Upload and Evaluation Tool (DUET) User Guide

Version 1.2

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1.0 Data Upload and Evaluation Tool (DUET) Background

DUET is the revised version of the Data Upload and Quality Assurance Tool (DUQAT). DUET will enable the submission, review, transformation and archival of water quality data and the related metadata for the Nontidal Water Quality Monitoring (NTWQM) Program and the Tidal Water Quality Monitoring (TWQM) Program.

DUET will initially upload nontidal water quality data and metadata form each of six Agencies (Data Providers) collected by fifteen Sources (Data Collectors).

The submitted water quality data then will be reviewed by DUET, and on the basis of that review generate routine reports with selected metadata on the following:

- Timeliness of the Source Submissions and the Agency Uploads
- Completeness of the submitted data, in relation to the data expected.
- Quality of the submitted data, in relation to possible clerical errors, extreme values, logical relational expressions, and data accuracy (bias and precision).

The resultant water quality data and related metadata then will be archived in Chesapeake Information Management System (CIMS) as a reviewed water quality database, and an associated metadata database, respectively, by water year.
2.0 User Login

Enter the following link into the internet browser of choice: http://duet.chesapeakebay.net/

To login to DUET, enter using the Username and Password provided by the Data Manager Mike Mallonee. The login screen is displayed below.

![Login Screen](image)

Helpful tip: Bookmark the link to DUET in your internet browser of choice.

2.1 Forgot Your Password? Having trouble logging in? Account Locked?

If at any point the username and/or password has been forgotten, there are problems logging into the DUET or an account has become locked please contact the EPA Chesapeake Bay Office Help Desk.

Phone number: 410-267-5769 Select option #2

Email: HelpDesk@chesapeakebay.net

Inform the Help Desk analyst of the name of the application (DUET) and the name of the network (CIMS).
3.0 User Interface Navigation

Figure 3-1 displays DUETS’s fully featured user interface (UI). The number of features available is determined by the role assigned to each user. These roles will be predetermined by the Data Manager.

![Figure 3-1 User Interface](image)

3.1 System Buttons

All system users have access to the Log Out button.

3.1.1 Log Out Button

To end a session in DUET, the user must click the Log Out button, highlighted in Figure 3-2.

![Figure 3-2 Log Out Button](image)

Once the Log Out button is selected, the user will be taken to the Log In page.

3.2 System Tabs

Below is the image is the fully featured navigation bar.

![Figure 3-3 DUET Navigation Bar](image)

The following is a list of tabs in the navigation bar.

3.2.1 Tabs

- Upload File tab – Provides access to upload files.
- Reload File tab – Provides access to reload a file that needs to be replaced.
- View Status tab – Provides the ability to see the status of every file submitted. Submitters will see all files submitted by their agency. The Data Manager and Quality Managers will see every file uploaded to the system.
- Admin tab – Provides access to administrative functions. This tab is only available to the DUET Data Manager and Quality Managers.
4.0 Upload File Page

The Upload File page, displayed below in Figure 4-1, is where all files are initially uploaded.

To upload a file - Open the Program dropdown, depicted in Figure 4-2, and select the desired Water Quality program.

Once the program has been selected the Project dropdown will become available. Open the dropdown and select the desired project, depicted in Figure 4-3.

After the Project has been selected, the Water Year can be chosen by opening its dropdown and clicking the year, depicted in Figure 4-4.
With the three parameters selected, click the Choose File button, highlighted in Figure 4-5.

![Choose File Button](image)

**Figure 4-5 Choose File Button**

Upon clicking the Choose File button, a file browser pop-up will open to assist with finding the desired file. Click the desired file and then the Open button at the bottom right of the pop-up, as portrayed in Figure 4-6. If necessary, click the Cancel button to close the pop-up.

![Select the File and Click Open](image)

**Figure 4-6 Select the File and Click Open**

Once the Open button has been clicked the selected file name will appear in the File To Upload field. Click the Upload button at the bottom of the screen to upload the file into DUET, depicted in Figure 4-7.

![File Upload](image)

**Figure 4-7 File Upload**

**Helpful tip:** The only file type allowed is a Microsoft Access file (accdb or mdb).

**Note:** At any point the Upload File form can be cleared out by clicking the Reset button. It is located to the right of the Upload button.
After the Upload button has been selected, a pop-up message will appear with an alert that the file has successfully been uploaded into DUET.

Figure 4-8 Upload Successful
5.0 Reload File

Figure 5-1 represents the Reload File page. This page is used in the event an uploaded file needs to be replaced. This could be due to a file failing checks, the wrong file was initially uploaded or a file needs replaced because of a data change.

![Reload File Screen](image)

5.1 Reloading a File

Access the Reload File page by clicking on the Reload File tab, highlighted in Figure 5-2.

![Reload File Tab](image)

In order to reload a file, click the Select button that corresponds with the file that will be reloaded, depicted in Figure 5-3.

![Select File](image)

After selecting the desired file, click the Choose File button, illustrated in Figure 5-4.

Note: The file being reloaded should be of the same name as the originally uploaded.
Upon clicking the Choose File button, a pop-up assisting to find the desired file will appear. Click on the desired file and then the Open button at the bottom right of the pop-up, as depicted in Figure 5-5.

Once the Open button has been clicked, the selected file name will appear in the SELECT A FILE TO UPLOAD field, portrayed in Figure 5-6.

Finally, click the Reload button, illustrated in Figure 5-7.
After the Upload button has been clicked, a pop-up message will appear alerting that the file has been successfully uploaded into DUET, Figure 5-8.
6.0 View Status

Figure 6-1 depicts the View Status page. This page provides the ability to monitor the statuses of all the files uploaded into DUET. The Data Manager can view every file while Submitters can only view files submitted by their agency.

![Figure 6-1 View Status](image)

6.1 View Status Table

Access the View Status page by clicking on the View Status tab, highlighted in Figure 6-2.

![Figure 6-2 View Status Tab](image)

Upon clicking the View Status tab, the View Status table will become available. The table will display the following headers: File Name, Agency, Status, Water Year and Original Upload Date. It can be sorted by the following parameters: Water Year and Status.

6.1.1 Statuses

Files listed on the View Status table will have one of the following statuses:

<table>
<thead>
<tr>
<th>Status</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uploaded</td>
<td>A file that has been uploaded for the first time.</td>
</tr>
<tr>
<td>Begin Checks</td>
<td>A start of timeliness, completeness or QA/QC checks.</td>
</tr>
<tr>
<td>Failed Checks</td>
<td>The failure of timeliness, completeness or QA/QC checks.</td>
</tr>
<tr>
<td>Passed Checks</td>
<td>The passing of timeliness, completeness or QA/QC checks.</td>
</tr>
<tr>
<td>Accepted</td>
<td>Occurs when the Data Manager accepts a file that passed checks</td>
</tr>
<tr>
<td>Imported to CIMS WQ</td>
<td>File transferred to the Water Quality database.</td>
</tr>
<tr>
<td>Reloaded</td>
<td>A previously uploaded file that is uploaded again.</td>
</tr>
<tr>
<td>Begin Import</td>
<td>The start of data transferring to the Water Quality Database.</td>
</tr>
<tr>
<td>Processing Error</td>
<td>The file fails integrity checks or system down while processing a file for checks.</td>
</tr>
</tbody>
</table>
### Status Definition

<table>
<thead>
<tr>
<th>Status</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failed Import to CIMS WQ DB</td>
<td>System failure or shutdown occurs while transferring data to Water Quality database.</td>
</tr>
</tbody>
</table>

### 6.1.2 Filter By Water Year

To filter by Water Year, open the Water Year dropdown and click the desired year, depicted in Figure 6-3.

![Figure 6-3 Water Year Dropdown](image)

Once the Water Year has been selected, only files with matching Water Years will be visible, illustrated in Figure 6-4.

![Figure 6-4 Filtered By Water Year](image)

### 6.1.3 Filter By Status

To filter by Status, open the Status dropdown and click the desired state, depicted in Figure 6-5.

![Figure 6-5 Status Dropdown](image)
Once the Status has been selected, only files with matching statuses will be visible, illustrated in Figure 6-6.

**6.1.4 Combined Filtering**

Both of the filtering options can be used together to further refine the View Status table.

Select both a Water Year and a Status from their dropdowns, depicted in Figure 6-7.

**6.1.5 Sorting**

To sort the View Status table, click on the header of the column to be sorted. For example, click the Water Year header to sort the table by water years, portrayed in Figures 6-8 and 6-9.

**6.2 Process History of a File**

Once the desired file has been located click its file name and the system will display its Process History, Figure 6-10.
6.2.1 Data File Details

The left hand column of the Process History contains the Data File Details of the selected file, highlighted in Figure 6-11.

![Figure 6-10 Process History Screen](image)

This section provides the ability to download the file by clicking the File Name hyperlink. It also provides the file’s size and the agency that submitted it.

6.2.2 Processing History

The center column, highlighted in Figure 6-12, contains the file’s processing history by displaying the files status changes and provides a link to view the history in a report.
Figure 6-12 Processing History
The Processing History table can be sorted by the Status and Date by clicking the Status and/or Date link, highlighted in 6-13.

Figure 6-13 Table Sorting

6.2.2.1 Processing History Report
To view the Processing History report, click the hyperlink highlighted in Figure 6-14.

Figure 6-14 Processing History Report Link
Upon clicking the hyperlink, a text file containing the report is downloaded. An example is displayed in Figure 6-15.
6.2.3 Reports

The right hand column, highlighted in Figure 6-16, contains a Quality Assurance (QA) report on the file that can be viewed or downloaded.

![Figure 6-16 Report]

**Helpful tip:** Reports cannot be viewed or downloaded when a file has Processing Error.

To view the QA Report within DUET, click the VIEW REPORT button highlighted in Figure 6-17.

![Figure 6-17 View Report Button]
To download the report, click the DOWNLOAD REPORT FILE button highlighted in Figure 6-18.

![Download Report File Button](image)

**Figure 6-18 Download Report File Button**

### 6.2.4 Accepting a File

Once a file has passed checks, it is available to the Data Manager to accept the file. To accept the file, click the green Accept button, displayed in Figure 6-19. The Accept button will be grayed out and disabled when files that have not yet passed checks.

![Accept Button Enabled](image)

**Figure 6-19 Accept Button Enabled**

After the Accept button has been clicked, the new status will appear in the Processing History module, highlighted in Figure 6-20.

![Updated Processing History](image)

**Figure 6-20 Updated Processing History**
7.0 Admin

Figure 7-1 depicts the Admin page. This page provides the Data Manager and the Quality Manager with the ability to manage user accounts, view files uploaded into DUET and generate reports.

7.1 Manage User Accounts

To access the Admin page, click on the Admin tab.

7.1.1 Register User

To register a user, click the Register User button within the User Accounts section, depicted in Figure 7-3.
Upon clicking the Register User link a User Registration Form will pop-up, displayed in Figure 7-4.

Enter the desired information into all of the fields and click the Register button, depicted in Figure 7-5.

Note: At any point the User Registration form can be cleared out by clicking the Reset button. It is located to the right of the Register button.
7.1.2 Edit a User Account

To edit a user’s account, click the Edit User link within the User Accounts section, depicted in Figure 7-6.

Upon clicking the Edit User link, the system will display the Edit User page. It includes a table listing all of the users registered into DUET. The far right hand column of the table contains blue Edit buttons which provides access to editing a user profile, highlighted in Figure 7-7.

Click the blue Edit link that corresponds to the user to be edited. It is located on the far right hand corner of the Edit User table, demonstrated in Figure 7-8.

Clicking the Edit link will open a pop-up that contains the user’s profile, displayed in Figure 7-9. All fields are editable except for the User Name.
Once all of the necessary changes have been made, click the Update button to save the changes. The updated information will appear in the user table.

7.1.3 Delete a User

User profiles can be deleted by clicking the Delete button, highlighted in Figure 7-10.

Upon clicking the Delete Button, a pop-up will appear asking for a confirmation of the user deletion.

7.2 Data Visualization

The Visualization module of the Admin Dashboard provides the ability to create a variety of charts, column, pie, bar and line, based on the current status of the files. The statuses are: Uploaded, Begin Checks, Failed Checks, Passed Checks, Accepted, Imported to CIMS WQ DB, Rejected, Failed Import to CIMS WQ, Reloaded, Begin Import and Processing Error.

To access the charts, click the File Status By Agency link, illustrated in Figure 7-11.
Upon clicking the File Status By Agency link, a pop-up will appear. Open the first drop down titled Select File Status and choose the file status type. Then open the second dropdown titled Select Chart Type and choose the desired format for the chart.

Immediately upon selecting the options, the desired chart will appear within the pop-up, displayed in Figure 7-12.

**Figure 7-12 File Status Upload Chart Pop-Up**

### 7.3 DUET Reports

The Admin Dashboard provides the Data Manager the ability to generate and download reports. To generate a report, open the water year dropdown in the DUET Reports module, depicted in Figure 7-13.
Upon selecting a water year, the data types become available. Select either Precision or Bias and click the Download Report button, portrayed in Figure 7-14.

After the Download Report button has been clicked, an Excel spreadsheet containing the report will automatically be downloaded.

### 7.4 Chart Report

The Admin Dashboard provides a bar chart that displays the durations of first and final due dates per agency, displayed in Figure 7-15. This chart is in real-time.