WaMDaM Directions and Use Cases

By Adel M. Abdallah, Jan 2022

Step 2: Install WaMDaM Wizard and Connect to the database

i. Download the WaMDaM Wizard software

Download the latest release from https://github.com/WamdamProject/WaMDaM_Wizard/releases

ii. Launch WaMDaM Wizard

Once downloaded, double click at the executable "wamdam.exe" and this main window will appear. Click **More info** hyperlink if you encounter warning dialog box (Figure 1), then click **Run anyway** which will show the Wizard interface (Figure 2)

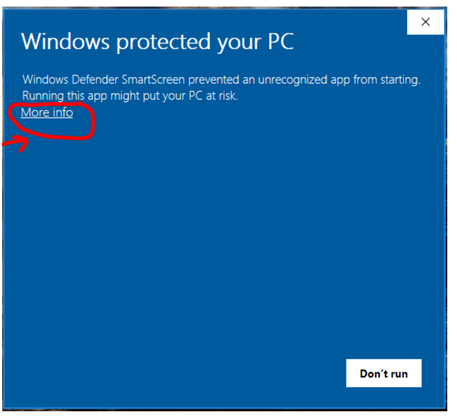

Figure 1: Installation (Windows 10)

Figure 2: WaMDaM Wizard landing interface

If you're interested, the source code of the Wizard is available on GitHub here https://github.com/WamdamProject/WaMDaM_Wizard

iii. Connect to the SQLite database file

Click the **Connect to SQLite** tab (Figure 1), then click the button **Connect to an Existing SQLite WaMDaM database**

From the previous step, it is expected that you already have clones the GitHub repo https://github.com/WamdamProject/WaMDaM_JupyterNotebooks

Navigate to the location on your desktop where you have the GitHub clones folder. For example:

```
C:\Users\Adel\Documents\GitHub\WamdamProject\WaMDaM_JupyteNotebooks\3_VisualizePublish\Files\Original
```

Connect to the SQLite file WEAP_WASH_BearRiver.sqlite

Congratualtions!

iv. View loaded data in WaMDaM tables (Optional) Not needed for this Ecosystem paper

This step here is not needed to replicate the work. If you want to view the WaMDaM table structure and populated data,

• Download and install the free and open source tool **DB Browser For SQLite** to query the database and view its tables. Download from https://sqlitebrowser.org/ • Download the already populated SQL **BearRiverDatasets_August_2018_Final.sqlite** file from GitHub at https://github.com/WamdamProject/WaMDaM_UseCases/tree/master/3_SQLite_database

• Launch **DB Browser For SQLite** and Connect to the SQLite file you downloaded (Figure 2). Click Open Database. You can see the structure of WaMDaM tables by clicking at **Database Structure**. Click **Browse Data** to see the populated tables. Click **Execute SQL**. Type this simple query below and click at the execute triangle button.

```
SELECT * FROM ObjectTypes
```

The query results in all the Object Type table columns with all its populated data in rows for all the Resource Types in the database.

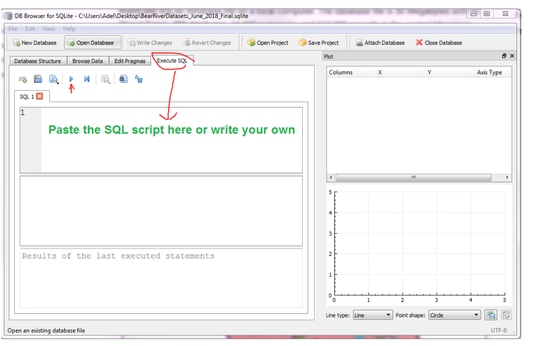

Figure 2: The interface for *DB Browser For SQLite* software which views SQLite tables and enables executing SQL queries against WaMDaM database

v. Learn about controlled vocabularies (Optional)

This step is just for your information and in case you want to use it or make changes to the existing workbooks

- This step is also optional and not needed to replicate the work. Read further if you want to see how WaMDaM controlled vocabularies work or to suggesting new terms to add.
- WaMDaM controlled vocabulary are hosted online and can be accessed at http://vocabulary.wamdam.org/
- Each time you use the WaMDaM Wizard to load water management data, it calls this repository to download and update the SQLite controlled vocabulary tables.
- Continue to use your model's native terms (e.g., how your model refers to object types, attributes, and instances). Add the controlled term next to each native term (i.e., register them against each other). Registering your model's native terms against these CVs will allow you to relate, query, and compare all your model's data to other registered data from other models and datasets within the database. Open one of the Excel workbook examples to see how the CVs work.

  In the HomePage spreadsheet, click at the button **Update Controlled Vocabularies** which will call the online WaMDaM controlled vocabulary registry and download or update the most recent vocabularies to your template.

  Open the far right spreadsheet **ControlledVocabularies** which lists all of the downloaded terms for use as a dropdown menu in the rest of the input data spreadsheets.
- The source code for the vocabulary app can be accessed at https://github.com/WamdamProject/WaMDaM_ControlledVocabularies

In [ ]: