

ARCSWAT FREQUENTLY ASKED QUESTIONS

INSTALLATION:

1. Problem: During installation an error message containing “ ... unable to get installer types ...” appears, preventing successful installation.
Solution: Make that the following is loaded on your system:
 - a. .Net Framework 2.0
 - b. ArcGIS DotNet Support (C:\Program Files\ArcGIS\DotNet). In order for ArcGIS DOTNet support to be installed, the .Net Framework 2.0 must be present on the target computer prior to installing ArcGIS.
2. Problem: The font in ArcSWAT message boxes is unclear / jumbled.
Solution: Under programs, right click on ArcMap and go to properties. Click on the “Compatibility” tab at the top. Check the box labeled “Disable display scaling on high DPI settings”.

SOLUTIONS TO INTERFACE PROBLEMS AND HOW-TO:

1. Problem: Permission errors with projects.
Solution: Make sure all users of your computer have full control on your project directory.
2. Problem: Error during Landuse/Soils/Slope overlay of “Item not found in this collection”.
Cause: The SWAT2005.mdb crop or urban tables do not have a properly formatted OBJECTID field.
Solution: Create a crop table with a sequential OBJECTID field by exporting the crop table back into the SWAT2005 database using ArcCatalog. Delete the old table and rename the new one to “crop” or “urban”
3. Problem: Error at beginning of Landuse/Soils/Slope overlay operation.
Possible Cause: Land use lookup codes begin with a number and not a letter. All land use lookup codes in a user-defined landuse lookup table and also found in the crop and urban tables MUST begin with a letter.
4. Problem: Error during watershed delineation of, “You attempted to open a database already opened...”.
Cause: There is a renegade lock on a table or feature class in your SWAT project database. Solution: Close the SWAT ArcMap project. Reopen the SWAT project a try the operation again. It is a good idea to save your SWAT project during the watershed delineation task after each step is completed.
5. Problem: Error during the writing of SWAT input files, such as “Missing CN2 for hydrologic group...” .
Cause: Soil lookup table of database user soil table has problems.
Solution: Soil names in the soil lookup and user soil table CANNOT have “_” characters. These characters must be replaced by something else, such as “-” or “#”.
6. Problem: Errors while reading in observed weather files
Cause: Make that there are no extra empty rows at the end of the tables. Also, check observed data files to make sure that there are no dates that are skipped in the middle of the file.
7. Question: Observed weather data was loaded. However, during model setup, I can only select a simulation period that falls within the dates of my observed data. How setup a model “warm-up” period using simulated weather?
Answer: You must add missing data values to the beginning of at least 1 of your observed weather files. This will allow the model setup dates to span a wider range, allowing several years of “warm up” prior to the observed data.

8. Question: How to copy a SWAT project manually:
 - a. Copy the entire project folder to a new location.
 - b. Open up the SWAT project .mdb database (in new folder) using MS Access.
 - c. Open "MasterProgress" table. Update the "WorkDir" field to reflect the new project folder path.
 - d. Open the SWAT .mxd document in new project folder. It should be all set, and point to new folder
9. Problem: Some interface forms crash when exiting OR the help system does not work.
Cause: Adobe Acrobat Reader version 8.0 or higher must be installed.
10. Problem: I get an error loading my weather station dBase files.
Cause: On some operating systems, the length of the dBase file name must be 8 characters or less (plus the extension). By making your station list table and the individual station table files with names of less than 8 characters, this error should be resolved.
11. Problem: When using user-defined watersheds option, ArcSWAT fails when writing the MGT files using the Heat Units calculator option.
Cause: A likely cause is that the user watershed and/or stream dataset did not their projection defined. This will cause the heat unit calculator program to crash. Define the projection for the user watersheds/streams datasets, then re-import through the watershed delineation interface.

ARCSWAT DATABASES:

1. Question: The ArcSWAT project databases contain an "ArcHydro" feature dataset where the final watershed delineation datasets are stored. This structure does not match the standard ArcHydro geodatabase model. Why not?
Answer: The ArcSWAT "ArcHydro" feature dataset contains feature classes that follow closely the standard ArcHydro model, but not completely. These feature classes can be readily imported into a standard ArcHydro geodatabase.
2. Question: In my SWAT project database, there are more records in the "hru" table than are found in the spatial HRU layer, "Full_hru". Why is this?
Answer: In there are split HRUs into sub-hrus, then there will always be more records in the "hru" table than in the spatial layer. This is because we have made multiple tabular hrus out of a single spatial hru.
3. Question: In my SWAT project database, there are fewer records in the "hru" table than are found in the spatial HRU layer, "Full_hru". Why is this?
Answer: In some cases, a land use or soils lookup table may have more than 1 value representing the same land use or soils class. In these cases, the spatial hru layer generated will have a single polygon for each unique combination of the raw dataset values, not the lookup values. However, in the hru table, unique combinations that have the same lookup values will be combined into a single hru.

GOOD PRACTICES TO PREVENT CRASHES:

1. Unexplained crashing: Periodically, use the "Compact Database" function in ArcCatalog to compact the SWAT Project geodatabase. This database can approach the 2 GB limit when working with very large datasets. Unexplainable crashes will occur when using the interface is this 2 GB limit is reached.
2. Crashing during LU/Soils definition: Some ArcInfo coverage format soils or land use datasets may result in errors in the HRU analysis functions. It is best to use shapefile or ESRI grid format datasets.

3. Crashing when using user-defined watersheds/streams: When using user-defined watersheds and streams, the input watersheds and streams datasets must have exactly the same fields as defined in the user documentation (Section 3 page 14). Otherwise, errors may result.

LAND USE/SOIL/SLOPE OVERLAY PROBLEMS:

1. If you manually re-assign a land use in the "SWAT Land Use Classification Table", and you choose a land use class that is already assigned in the table, then you will experience a crash during the overlay operation. The land use classes listed in the "SWAT Land Use Classification Table" must be unique prior to performing the overlay. The solution to this issue is to modify your land use lookup table so that multiple grid codes get assigned to the same SWAT land use class. In this case, the interface will automatically reclassify the land use dataset based on the lookup table, resulting in unique lands use values in the "SWAT Land Use Classification Table". NOTE: This same concept applied to the soils data as well.