

Getting Started using SAMwin

Sample Input Files

After installing SAMwin, we suggest you become familiar with the user interface by running some existing input files.

- Copy the folder “InputFiles” from the SAMwin distribution CD to your computer and REMOVE THE READ-ONLY ATTRIBUTE of all folders and files.
- Launch SAMwin, select “Open Existing Project” and browse to the location of one of the sample input files (the folder “NormalDepth”, for example). Note that PATH NAMES FOR SAMwin INPUT FILES CANNOT CONTAIN SPACES.
- To run a sample Normal Depth calculation, either click the button labeled ND or use the menu item Edit/Hydraulic Function Input/Normal Depth Calculations and Variations.
- When the form labeled “Normal Depth and Variations” appears, use the menu item File/Open Existing Input File to make normal_depth.hi the active hydraulic input file. At this point several input fields on the Normal Depth form should be filled with input data.
- Click the button “Enter Geometry Data” and make sure that each data input field has a value. Then click “OK” to return to the Normal Depth form. Now, on the Normal Depth click “Solve” to perform a normal depth calculation on this set of input data.
- Follow a similar procedure to open and run the other eight sample input files. Note that the normal depth calculation output is used as input to the Sediment Transport example (which is in the folder Sed). Similarly, the output from the Sed example is used as input to the Sediment Yield example (the folder Yld).

Some Operational Issues

You will need to spend some time experimenting with the SAMwin interface to become familiar with its look and feel. The following pointers may help you during this “get-acquainted” activity.

- When performing various Normal Depth and Variations calculations, always make sure that the appropriate “Variable to Calculate” is selected. For example, if data for a normal depth calculation is present (with no value for water surface elevation) and the “Variable to Calculate” is shown as “Bottom Width”, then the calculation will fail. A bottom width calculation requires the user specify all input values except bottom width.
- The above remark also applies to the Geometry field. Do not try to make a calculation for a Simple Channel if the Geometry field reads Station Elevation.
- It is not necessary to clear the entry for the variable you wish to calculate. For example if you are performing a normal depth calculation and there is an entry for “W. S. Elevation”, then the program will simply ignore the entered value and calculate a normal depth.

- If you want to calculate Hydraulic Roughness, you must enter a negative value for roughness in the “Roughness Value” field on the Geometry form to trigger the program to perform a Hydraulic Roughness calculation.
- If your input data is called “my_data.hi”, then your output will appear in “my_data.ho”. If you change some data on the SAMwin interface and press the solve button, the file “my_data.ho” will be overwritten. The *.ho files are very volatile. If you perform a normal depth calculation followed by a discharge calculation using the same “.hi” (hydraulic input) file, the results of the discharge calculation will be written over the results of the normal depth calculation.
- The user must rename and archive critical output files. One way to do this is to check the box “Display Entire Output File”. This causes the output file to appear in Notepad, from which the user can use Notepad’s “Save As...” feature to archive the output in a user selected folder and file name.
- The menu item “Save Current Data As ... “ Allows the user to save the currently displayed SAMwin data to a user selected input file. If the user saves the current data to the active project folder, then the current data input file becomes the active input file. If the current data is saved to a file in a folder other than the current project folder, then the active input data file is not changed. In other words, the active input filename can be changed through this menu item, but not the active project folder
- If a user wants to run SAM on an existing input (.hi, .si or .yi) file, it is not necessary to display any of the SAMwin data entry forms. To run an input file “stand-alone” first either open an existing project or create a new project. Next, from the startup form, “SAM Hydraulic Design Package”, use the menu item “Project” to add the desired input file (if it’s not already included in the project). Then use the menu item Project/Select Input File to indicate the active input file. Finally use the “Run” menu item to perform the appropriate calculation. If the input file is valid, the results will be displayed in Notepad.
- SAMwin contains several spreadsheet like interfaces for entering tabular data. All of these recognize the arrow keys, the Enter key and the Home and End keys. Some of the larger tabular data entry interfaces have additional features such as Copy/Paste and Insert/Delete Row. The Ctrl-V key has been activated as a shortcut for Paste. These features support interaction with Excel for ease of data management.
- Most of the spreadsheet interfaces use a “repeat-last-input” convention. For example, if you want to run a normal depth calculation for several discharges, but the same slope, then you must enter discharge values in several columns. However, the common value of slope need only be entered in column one. Similarly, for Cross Section Geometry input, if you want all panels to use the same roughness equation and roughness value, then you only need to enter these in the first row.
- If you use Windows Explorer to inspect the contents of your project folder, you are likely to find several temporary (*.tmp) files. Most of these files contain a single input record, as given in Appendices C through E. Under normal operation, most users will have no reason to deal with these .tmp files. If SAMwin fails to execute, a user can often diagnose the problem by

inspecting these .tmp files and comparing their contents to the specifications in the Appendices C through E.

- When a user opens an existing project, each SAMwin form looks in the project folder for data in .tmp files that can be used to fill input fields on that form. An experienced SAMwin user can create a new input file from parts of several old input files by locating the appropriate .tmp files and placing them in a project folder.