Natural Channel with Flood Plain – with or without control devices

For generating an FTABLE for a "Natural Channel with Flood Plain." the user must obtain channel cross section data (x,y). Figure 1 illustrates schematic diagram of "Natural Channel with Flood Plain."

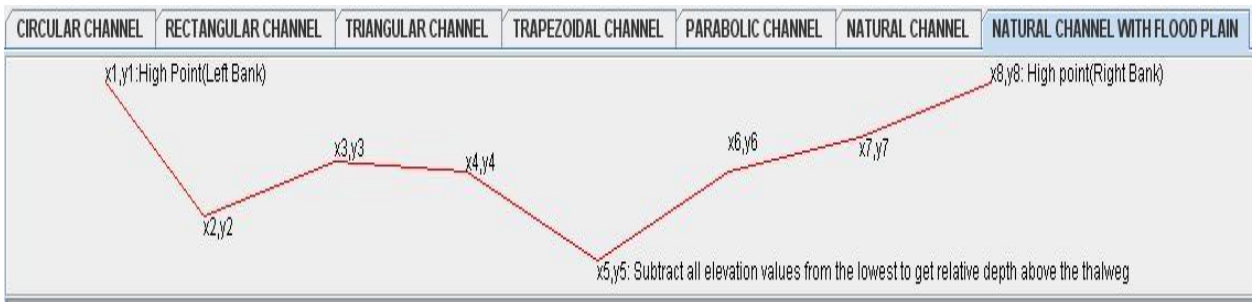


Figure 1: Schematic diagram of a natural channel cross section with flood plain

The following steps explain the process of generating an FTABLE for a Natural Channel with Flood Plain.

Step 1: Select the units to be used for various calculations from the Units combo box located on top of the page. For the current example US Units are used.

Step 2: Enter the information related to channel such as longitudinal slope, and elevations of left and right banks [Figure 2].

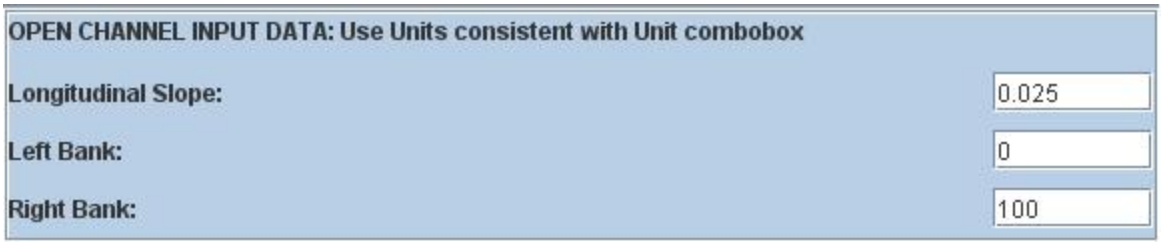
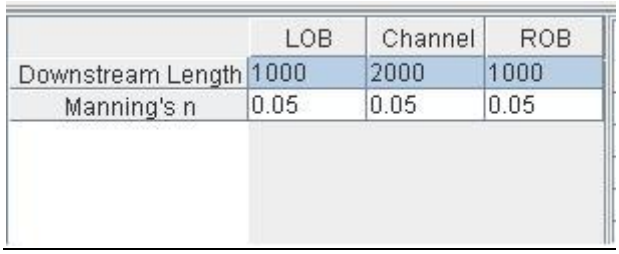


Figure 2: Channel Input Data

Step 3: Enter the lengths and manning's n values of channel, left over bank (LOB) and right over bank (ROB) [Figure 3].



	LOB	Channel	ROB
Downstream Length	1000	2000	1000
Manning's n	0.05	0.05	0.05

Figure 3: Channel and banks input data

Step 4: The channel profile data can be uploaded into the channel profile data table from a tab or comma delimited format. Right click on the table and choose either Import from spreadsheet (tab delimited) or Import from CSV file option (comma delimited) [Figure 4].

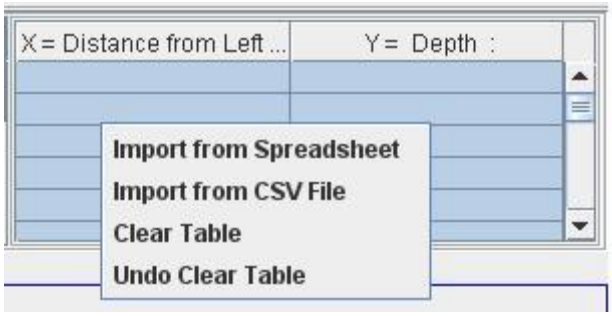


Figure 4: Data Import Options

Step 5: An Import Data window opens up after a selection is made [Figure 5]. The profile data to be imported can be of depth or elevations. Select the type of data from the **Type of data combo-box**. For the current example depth is selected. Select the units of the data from the **unit's combo box**. If the units don't match with the program units selected in Step 1, the data is converted to the match the program units before uploading into the table.

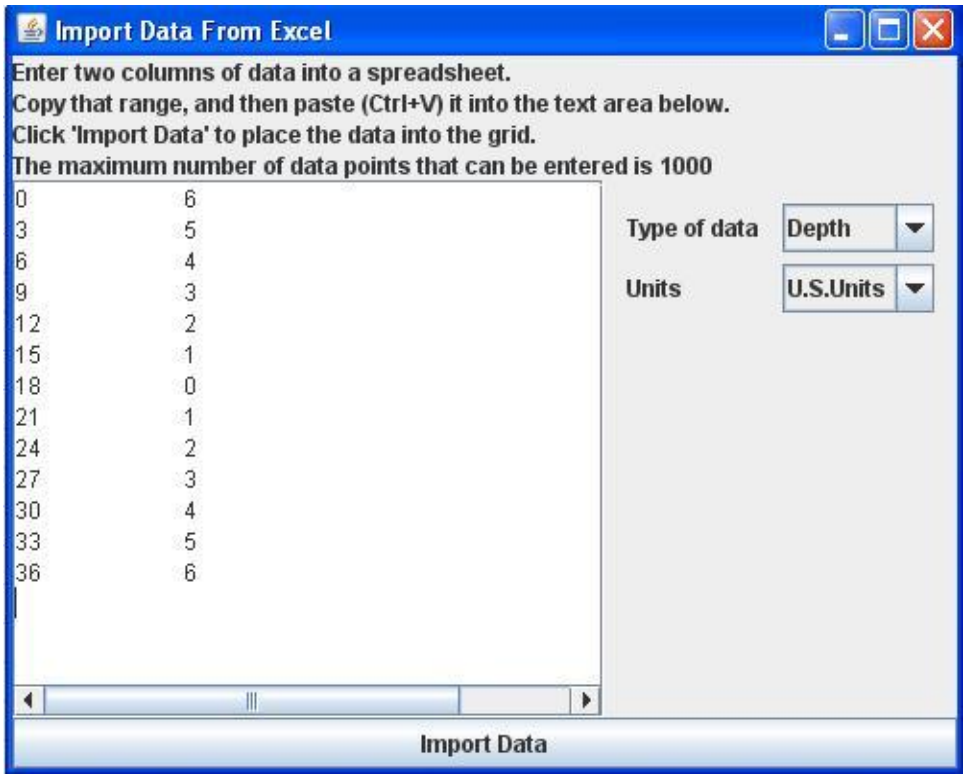


Figure 5: Data Import window

Paste the data and click **Import Data button** to import data into the data profile table [Figure 6].

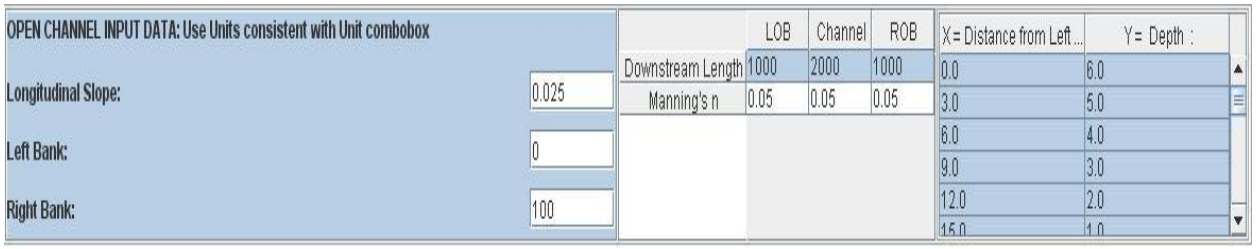


Figure 6: Channel profile data imported

Step 6: Generation of FTABLE

Without using control structure:

Click on the Calculate FTable button to generate an FTABLE which can be viewed in the Results tab of the Results Table [Figure 7].

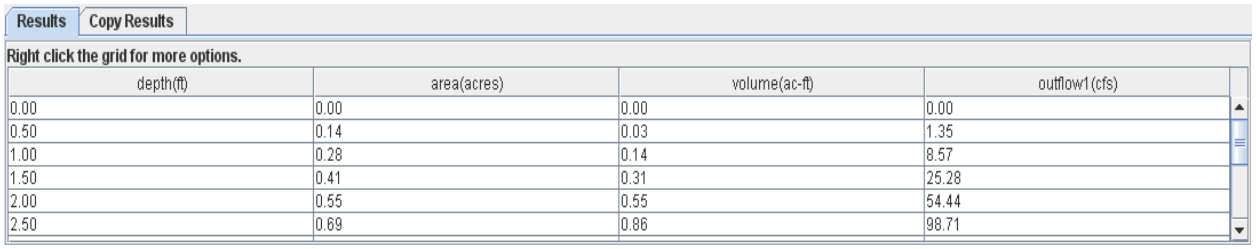


Figure 7: Generated FTABLE for Natural Channel with Flood Plain and without using control structure/s

Using a control structure:

To generate FTABLE for a channel with a control structure, select a control structure/s by checking the box next to the desired device. In the current example Triangular V-Notch weir is used. Enter or accept required information for the control structure such as discharge coefficient, etc [Figure 8].

Click on the Calculate FTable button to generate an FTABLE with the control structure, which can be viewed in the Results tab of the Results Table [Figure 9].

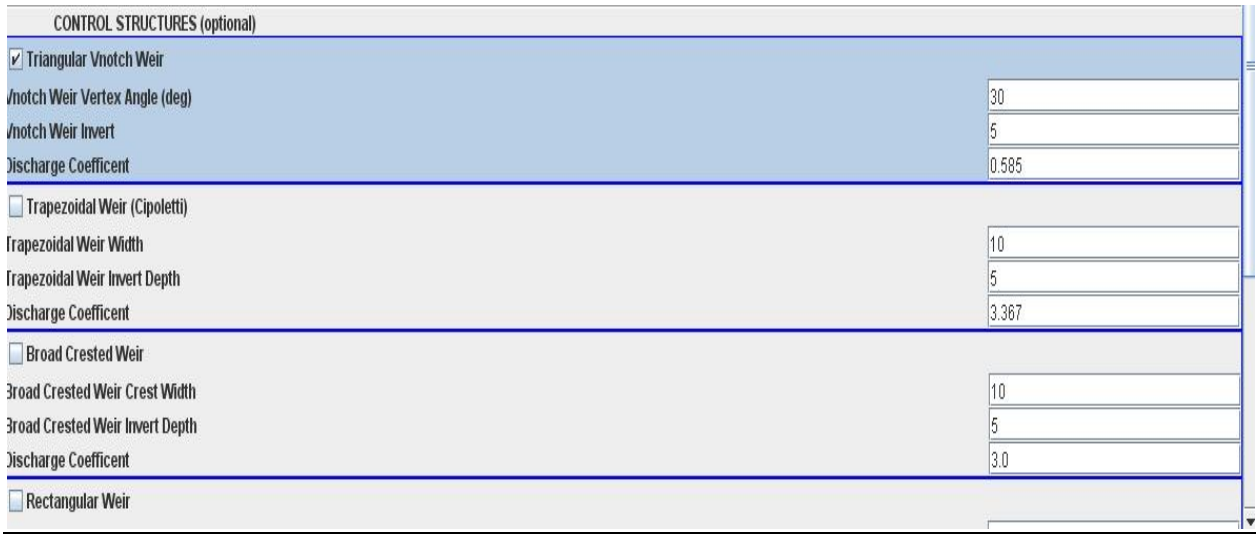


Figure 8: Selection of control Structures

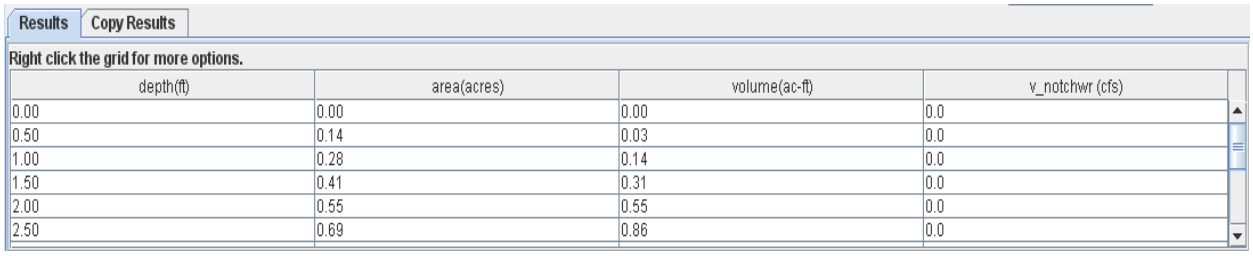


Figure 9: Generation of FTABLE for Natural channel with flood plain and a control structure

Step 7: The user can export the generated FTABLE by right clicking on the table and selecting the required option – **"Copy to spreadsheet or Copy to UCI File"** [Figure 10]**.**

If "**Copy to Spreadsheet**" option is selected, tab delimited FTABLE data is displayed in the **Copy Results tab** [Figure 11].

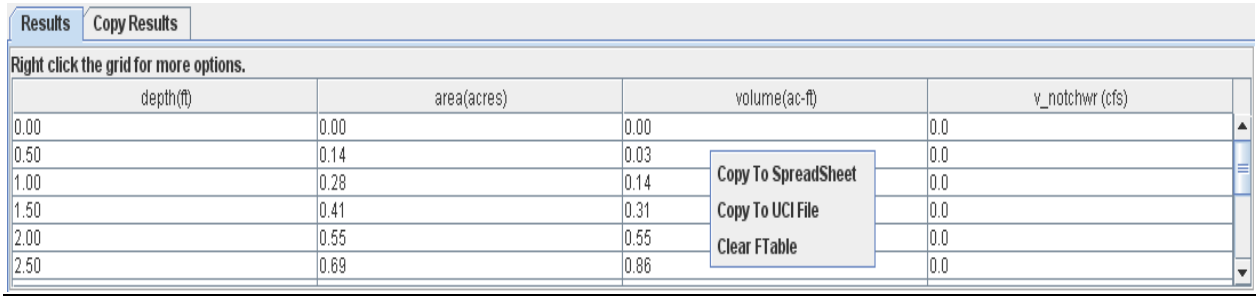


Figure 10: Exporting options for the generated FTABLE

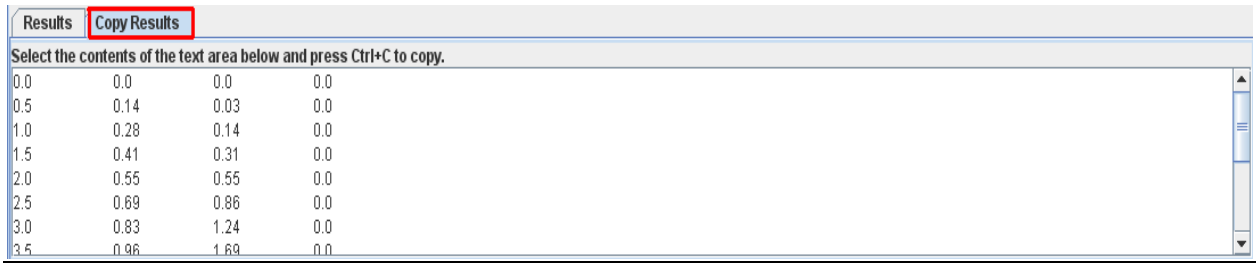


Figure 11: Exporting FTABLE to spreadsheet

If the data must be exported to a UCI File, select **Copy to UCI File** option. The data is formatted and displayed in the **Copy Results tab** [Figure 12].

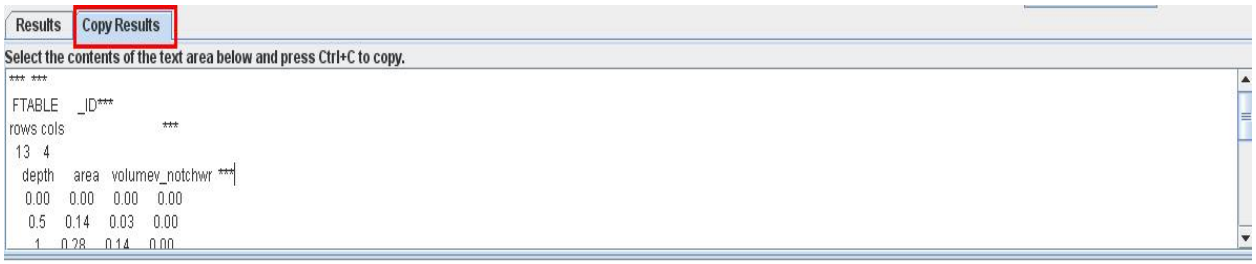


Figure 12: Exporting FTABLE to an UCI File

To export/copy the FTABLE from **Copy Results tab**, select the entire generated FTABLE and then press Ctrl+C.

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