

August 8, 2010 update to the FLO-2D model.

The following revisions have been made to the FLO-2D Version 2009.06 model. Please refer to the documents described below for additional information.

Spatially Variable Limiting Froude Numbers

The user can now assign limiting Froude numbers to individual floodplain elements. Previously the limiting Froude number was a global value for all floodplain elements. The user can specify spatially variable limiting Froude numbers for n-value adjustment with shape files, polygons and by individual element assignment. See *FLO-2D Limiting Froude Number Guidelines. PDF*.

User Assigned Courant Number

The Courant number was hardwired ($C = 1.0$) in previous versions of the FLO-2D model as one of the numerical stability parameters. By allowing the user to assign the Courant number (in the TOLER.DAT file), it has been found that the model can run faster and still maintain stability even if the DEPTOL and WAVEMAX values are assigned to 0. A Courant number in the range from 0.3 to 0.8 can eliminate most numerical surging. Then Courant is optional and a default value of 0.6 is recommended. A higher value will result in a faster model and a lower value will result in more stable model. See *Courant Number Instructions.PDF*.

An example of the TOLER.DAT is:

```
0.1  0.2  1.0  
C  0.6   Optional line
```

Automatically Generate Binary Backup Output Files

In previous releases a binary backup file was written at the end of the simulation time allowing hot starts upon model execution. In this new update, the user may select an option to generate a binary hot start file at the end of each output interval. This enables the user to restart and recover the simulation for the last successfully written output interval in the event of model interruption or terminations such as a power outage. Set $IBACKUP = 1$ in line 1 of the CONT.DAT file to generate the binary backup files. See *Binary Backup Files.PDF*.