

Binary Backup Files

Version 2009.06 (Build No. 2010.05.01)

Background

In previous versions of the FLO-2D, the user had the option of selecting the generation of binary backup files at the end of flood simulation to continue the original simulation for a longer duration for the next model run. The generation of binary backup files now automatically occurs at the end of each output interval (TOUT parameter in the CONT.DAT file). The binary files are overwritten at the end of each output interval when the rest of the output data is written to file so that only one set of binary backup files exist in a project folder. No matter how the simulation is terminated (e.g. successful model completion, user interruption, or by computer or software malfunction), a set of binary backup files are generated to continue the model simulation from the last successful output interval time. The user is no longer queried with the option to save the binary backup files at the end of a simulation. A dialog box will appear at the start of each simulation if the binary backup files exist and the user has the option to continue the original simulation at that point. This model enhancement ensures that no flood simulation will ever be lost again unless the hard drive fails. In the past automatic computer program updates or security system checks that either rebooted the computer or otherwise interrupted the FLO-2D simulation caused the loss of all the output data.

Guidelines

Some simple guidelines include:

- The user has 60 seconds to decide whether to continue the previous simulation or start a new flood simulation from time 0.0.
- The first simulation of a new model will not have the option to continue a previous simulation because no binary backup files exist.
- A continued simulation must have a longer simulation time SIMUL than the last saved output interval in the binary backup files.
- Inflow hydrographs and rainfall must have longer durations than the last saved output interval in the binary backup files.

Limitations

The only limitation is that not all of the temporary files can be reconstructed from the start of the simulation at this time. This means that the HYCHAN.OUT, HYCROSS.OUT and possibly a few other output files will be incomplete and will be missing the initial simulation results. It is anticipated that this limitation can be addressed in the near future.