

What's happening...

waterRIDE™

Issue 4 – February 2010

www.waterRIDE.net

Welcome to first edition of the waterRIDE™ “What’s Happening” newsletter for 2010! We trust that everyone had a safe and relaxing Christmas break. In light of recent project work, we thought it worthwhile to remind our users that the waterRIDE™ development environment can be readily customised to suit project specific requirements. Should you require such customisations (or think you might), please feel free to contact us and we can discuss your requirements.

Hydraulic Modelling Data Management and Sharing

waterRIDE™ FLOOD Manager has been used internally by WorleyParsons to make a range of hydraulic datasets available for use by non-modellers.

This particular project was concerned with assessing the hydraulic impact of a range of proposed works in the floodplain. Some of these works were then to be designed by structural and geotechnical specialists, for which the model results were required.

A range of hydraulic modelling was carried out including 10yr, 20yr, 50yr, 100yr, 500yr and PMF design flood modelling of both existing and developed conditions.

A single waterRIDE™ project was developed providing access to the full time series (and peak) results set for each model run including: flood extent, water level, depth, velocity surface + vectors, velocity times depth, bed shear, and hazard.

Difference maps were also prepared using the “differences” tool on the Utilities menu showing the change in peak water level, velocity, and VxD as a result of the proposed developments.

Detailed survey and contour-based terrain information were combined into a single, seamless DEM and included as views in the project. Site photos were also linked to a GIS table of GPS points recorded in the field for further reference.

The project was used by the flood modelling team to assess the impacts of the proposed development. Figures were prepared for direct insertion into the report using the “Export View -> Custom” tool to ensure high quality printing at 300 DPI.

With the datasets stored on the network, the structural/geotechnical specialists could easily access the information they required using waterRIDE™ FLOOD Manager or Viewer with minimal assistance from the hydraulic modellers.

When it came time to meet with the client, the “pack ‘n’ go” feature automatically copied the project and data files from the server to a laptop and no further data preparation was required. The files were readily burnt to disk and delivered to the client, without any ‘hunting around’ for the right files!

This project highlighted the powerful ability of waterRIDE™ FLOOD Manager to not only provide detailed access to any aspect of your model results, but also in its ability to manage a range of datasets, facilitating excellent data sharing as well as saving significant time and eliminating confusion.

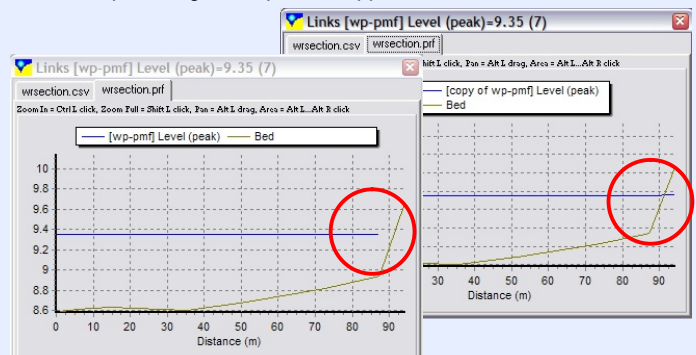
What is “Stretching”?

Popular grid based hydraulic models generally provide water levels only for cells that are wet. For cells that are dry, water level values are often set to “delete value” or are meaningless.

Whilst this is fine at the resolution of the model (say, 5m), issues arise when these results are mapped to a finer scale DEM (say, a 2m gridded DEM or TIN built from Aerial Laser Survey or LiDAR).

At the finer scale (higher resolution), there may be cells that should be ‘wet’, but are underneath a dry cell from the model results. Hence, mapping the 5m results to the 2m terrain does not give the actual flood extent as these cells remain dry.

On the “utilities” menu, the “stretch water surface” tool allows you to automatically stretch the water surface from your model results. Stretching by 1 cell will overcome the “wet/dry” issue in grid based models, providing a complete, mapped flood extent.



News

2010 NSW Floodplain Management Authorities Conference

We will be manning a waterRIDE™ booth at the upcoming NSW FMA conference in Gosford from Tuesday 23rd February to Friday 26th February, 2010.

Experts will be on hand to provide interactive demonstrations, answer questions, discuss upcoming features and provide training on specific features as required.

Feel free to drop in with a tough question or new feature idea, or simply just to say G'Day.

We look forward to seeing you at the conference!

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