

What's happening...

waterRIDE™

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www.waterRIDE.net

Welcome to the first edition of the waterRIDE™ newsletter. The aim of the newsletter is to regularly update our users on new ways waterRIDE™ software is being used in the industry as well as introduce newly released and upcoming features. We hope that you find the newsletter interesting and informative. We appreciate your input on things you would like to see in future editions. Send suggestions via email (below).

Project Perspective: North Pine Flood Forecasting System

Depending on the nature of the event, Moreton Bay Regional Council in South East Queensland have a warning time of between 6 and 12 hours for flooding on the North and South Pine Rivers. However, the Bureau of Meteorology does not issue formal flood forecasts for the catchment.

Council commissioned WorleyParsons to develop a system to allow Council to forecast likely flood behaviour and provide flood intelligence to emergency managers during a flood event.

The system reads rainfall from a network of telemetered rain gauges and uses these to run a WBNM hydrologic model. The hydrologic model provides time varying estimates of water level at 6 river gauges in the catchment.

The system then uses the forecast gauge levels to derive a time varying surface across the entire floodplain through waterRIDE™'s surface interpolation algorithm (see FPM Tools-> Flood Forecasting: Multiple Gauges).

The forecast time varying surface can then be interrogated within waterRIDE™ FLOOD Manager to provide real-time flood intelligence to emergency managers such as: inundated areas, time of evacuation route closure, lists of inundated properties, impacts on critical infrastructure and the like.

The system shows flood behaviour for a range of scenarios:

- Current river levels,
- Rainfall to date, and
- Rainfall to date plus forecast rainfall (with sensitivity)

An automatic calibration routine tracks actual river levels against predicted levels and makes suitable adjustments to the hydrologic model.

The system runs continuously on Council's network, distributing information over the LAN and internet.

The system can also function on a laptop in the field, providing both flexibility and redundancy.

Upcoming Features

Despite the recent release of version 5.0 of waterRIDE™ FLOOD Manager, our developers are busy beta testing a number of new features including:

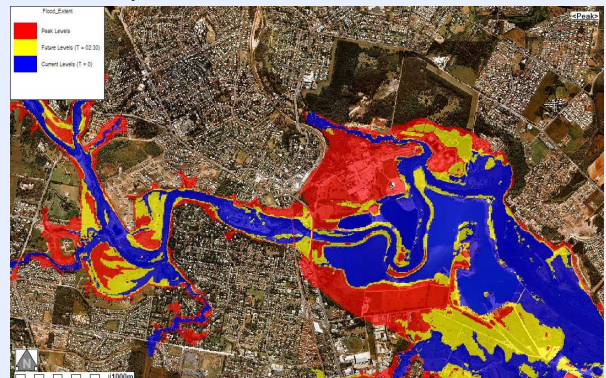
- Overhaul of the management of "Flood Hazards" including the ability to use different hazards within the same project.
- Increased support for GIS files including: TIFF/GeoTIFF, Google Earth KML, Microstation DGN, MapInfo TAB and ESRI Grid (*.adf).
- Expansion of waterRIDE™ Batch to facilitate the creation of seamless DEM's from separate DEM sources.

Feature Focus: Peak of Peaks

The "peak of peaks" tool on the Utilities->wR Peaks menu allows users to readily determine the maximum value of all hydraulic parameters across a number of different results files or model runs.

For example, it could be used to automatically find the maximum values of water level, velocity and VxD for a 1 in 100 year ARI at all nodes in the model. The user provides the results for a range of, say, rainfall intensities of 1 in 100 year ARI, and the tool will find the maximum value of the above parameters at each model node from each of the different model runs.

The resulting peak surface can then be interrogated and accessed in the normal way.



North Pine Flood Forecasting system: Forward Looking Flood Extent – Blue = Current Extent, Yellow = +2 hrs Extent, Red = Peak Flood Extent

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