



This month we released our FY19 waterRIDE™ group training course schedule. Whilst we are still more than happy to provide onsite training, there has been strong demand from users for these group sessions as an efficient means to get “users up to speed” or, via some of the more advanced sessions, significantly extend their use of waterRIDE™.

In this issue, we take a look at some approaches to “rates of rise” analysis.

Rate of Rise Analysis – What Rates Matter?

For many catchments, it is not necessarily the ultimate peak of floodwaters that pose the greatest safety risk to people.

Often, it is the early phases of the flood that determine just how unsafe a flood can be.

One aspect of this is how quickly water levels are rising.

There are a variety of metrics that may be important when considering how floodwaters rise, such as:

1. How quickly water in the channel is rising
2. Once an area is initially inundated, how quickly do levels rise
3. How much do levels rise during, say, the first 2 hours of inundation
4. How long after levels reach 5m at the bridge are evacuation routes cut
5. How long does it take to rise to 1 metre

Traditional approaches of extracting time series plots at discrete locations can rapidly paint a picture of general risk, and address question 1, but spatial plots can provide more detail across the floodplain (sometimes, too much).

Once an area becomes inundated, it can be useful to determine how quickly it rises as this may be the critical time for those trapped in rising waters.

This can be further refined by including a practical time limit on the investigation, such as “the first 2 hours of inundation”.

These approaches address questions 2 and 3 and are focussed on helping understand the risk to those “caught out” by floodwaters, and allow for the fact that different parts of the floodplain are impacted at different times.

The rates of rise tool (FPM Tools->Flood Surface Analysis->Rates of Rise) will provide a map displaying: average rates of rise, maximum rates of rise, total rise across the entire floodplain and time to rise XXm, including user defined constraints on depth thresholds and analysis periods.

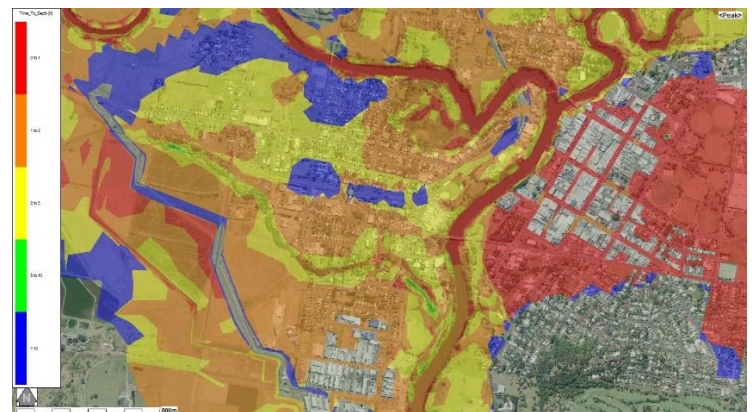
Questions 4 and 5 provide useful intelligence to help phase and categorise initial inundation across the floodplain.

Addressing question 4 will provide available response time once a particular “trigger level” has been reached (FPM Tools->Flood Surface Analysis->Time Based Queries).

This provides base information for emergency responders to phase their response efforts.

Question 5 then provides critical information as to how quickly an area becomes particularly “unsafe” (eg D > 1.0m) once inundation commences, with more specific detail than question 2.

Combining many of these questions can assist the community in understanding their flood exposure with statements such as “it takes a good 12 hours until your area is inundated, but once inundation commences, floodwaters rise very rapidly to a level that you couldn’t wade through”.



Time To Rise 1m After Inundation Commences

Addressing these types of questions using waterRIDE™ form part of the content of the advanced training sessions (below).

Latest Version Release (August 2018)

Those with valid Annual Maintenance Plans should have received their notification email for the release of waterRIDE™ FLOOD Manager, Viewer and Forecast Console v8.93.

Please contact us if you didn’t receive the notification and believe your maintenance plan is valid.

Full details of the release can be found [here](#).

waterRIDE™ Group Training (Aus/NZ)

Our group training schedule for FY19 across Australia and New Zealand is now available with sessions commencing September.

Please visit www.waterRIDE.net/training for more information and to book your place.