Webinar: Just for fun- recreational hydraulics - *Wednesday 2nd February 2022*

#	Question	Answer (s)
1	John, I paddled at the Penrith course last weekend. The course is over 20 years old. Would you design this in a different way if you were building it for an olympics now?	Yes we would design differently as we use modelling much more these days. The Penrith course is the grand daddy but the limitations are because it looses a lot of energy throughout its length. so we could design it now with about 1m less head and therefore less $ per hour
2	How often do you get to ride a surf wave or kayak course that you designed?	Always first down
2	How often do you get to ride a surf wave or kayak course that you designed?	Haha, great answer! :-)
3	What instrument do you use to measure velocities?	Loger GMH 3350 and Probe STS 005
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4	For an Olympic course (or similar), what do you start with in terms of project specifications? How do you go about ensuring that what is ultimately built matches the design and the specification?	Loger GMH 3350 and Probe STS 005
4	For an Olympic course (or similar), what do you start with in terms of project specifications? How do you go about ensuring that what is ultimately built matches the design and the specification?	The International Federation has technical specifications that we use and we use the measures I showed to get sign off from Int Federation and then remeasure in reality after its built to get final signoff
5	Many low head wiers have dangerous hydraulic conditions immediately downstream. Could these weirs be redesigned to avoid these dangerous conditions.	You're absolutely right. Depending on site conditions & needs, low head dams can be modified. Especially where they may no longer serve their original purpose, low head dams can be redesigned to provide safe recreational passage and fun surfing features. Many new whitewater parks in the US were former low head dam sites.
6	how common are white water safety incidents? how often do these relate to design issues?	Safety incidents are still common on natural rivers but they are becoming quite rare on constructed features. If there are safety concerns for a constructed feature it most likely would be closed and modified.
7	For the white water drops, have y'all compared a CFD vs Physiscal model? If so, how accurate are the CFD model results?	CFD can compare well to a physical model, but wave shape is mesh depenent so a fine mesh is required for good correlation
8	Kurt: was that last boulder-constructed play wave in Salida? I didn't get a good look.	Not Salida, it's in Fort Collins CO
9	Are there any impacts to the hydraulic design if the salinity / viscosity of the water is changed?	Not a lot, saltwater around 2.5% more viscous.
10	How would you define a fine mesh? 6 in. or 3 in. or 1 in.?	It's hard to give a blanket statement on required mesh size so a mesh dependence study is always reccomended, but on the order of 1.5 inch should be close
11	Thanks, Kurt!	
12	How	
13	is it applicable on Australian Regional Water ponds (large one) in Farm lands? any model to consider for Future projects here in NSW Australia?	
14	Who's hiring? ... time to leave groundwater modelling behind ;-)	
15	Have you been able to get olympic course operators adjust their bollards and moveable beds to better calibrate your models, ie using the full size to better calibrate CFD's? (am a water engineer ww paddler).	
16	Natural rivers have large variations in flow, so estimating the hydraulic response of designed features under many scenarios is very time consuming, challenging, and uncertain. Even more challenging is communicating these issues to clients or governments. Can the panelists comment on their experience with managing client expectations on modelling natural rivers?	Short answer, look at very high and very low flows for problem
17	For wave pools, has the relationship between wave generation and circulation of the water been considered? Could wave generation assist in the ciruclation and hence treatment of the water?	