5 Most Commonly Asked Stormwater Modelling Questions, Answered! Webinar Q & A

Q: Is it best to represent open channels in 1D or 2D in a 1D/2D urban stormwater model?

A: It really comes down to the available data, timeframes and project outcomes. There are pros and cons for all purposes.

Q: How many of the new ICM features (import options, etc.) are also available in XPSTORM?

A: Importing pits/pipes and TINS from both 12d and Civil3D are available in XPSTORM. Refer https://www.youtube.com/watch?v=huVYCUJzFhU or 12d and https://www.youtube.com/watch?v=FVmCBFB1wyk for Civil3D.

Q: Manning's values for sheet flow and overland flow. Relationship to Hortons Roughness e.g. What Manning's values would you use for livestock pasture at different flow depths?

A: Some good resources we have found on Manning's values are: QUDM, https://www.agric.wa.gov.au/water-management/mannings-roughness-coefficient, Brisbane City Council Manning's Roughness guide.

Q: Which approach is more commonly used in stormwater modelling, direct rainfall or catchment hydrology?

A: Both are commonly used in stormwater modelling. Direct rainfall is particularly useful in areas where catchment delineation is difficult. Refer ARR19 Section 4.7.10 for details.

Q: Significant difference in stormwater modelling due to ARR2019

A: There has been a number of papers on this presented at conferences in the last few years. Outcomes are location specific. Check our the FMA or Stormwater Australia Conference papers from the past two years.

Q: Will XPRAFTS become an obsolete product in the future? Will consultants need to purchase ICM instead even if they just require the hydrology elements of XPRAFTS?

A: Yes, eventually XPRAFTS will be obsolete. Small 1D only options for ICM are available for those not needing all the 2D capabilities features.

Q: What is the software you are showing now?

A: InfoWorks ICM & ICMOne

Q: Is this webinar all based on InfoWorks ICM software?

A: InfoWorks ICM & ICMOne

Q: Is it possible to use XP models as an example next time?

A: There are a lot of similar examples already available on XP. Checkout our previous webinars on our YouTube channel - https://www.youtube.com/user/Innovyze/videos

Q: Any rule of thumb for loss model assumptions?

A: Refer to ARR19 Book 5, chapter 3 and the Datahub.

Q: Severe storm impact analysis (Generally we consider events greater than DFE)?

A: This is generally something set by Councils, this is discussed in detail in QUDM – Section 7.2.5 and the associated background notes.

Q: ARR2019 for hydrology includes statistical analysis of storm patterns for each rainfall event and from that we get a max, min and median peak flow. The median value is adopted as the design flow, can we use the other two for sensitivity analysis/severe storm impact analysis?

A: The purpose of the ensemble modelling is industry to better understand the range and likelihood of potential outcomes. It does however account for variability in rainfall and not on ground conditions such as blockages, roughness's and losses.