



Mean, median or the central vibe. Some true urban examples of applying ARR2016.

Mr Peter Woodman¹, Mr Greg Eaton¹, Mr Rushiru Kanakarathne¹, Mr Gavin Hay¹

¹GHD

Biography:

Peter Woodman is an Environmental Engineer at GHD with over 10 years' experience completing drainage investigation and design projects of various sizes for both government and private clients around Australia.

Peter has largely worked in the hydrologic and hydraulic modelling space, gaining experience using a wide range of GIS and modelling software to deliver high quality targeted outcomes in both urban flood studies and large infrastructure projects. He has recently been on secondment at Melbourne Water reviewing hydraulic models and developing a QA framework for the development and review of all models needing Melbourne Water review going forward.

Peter has a passion for innovation and continuous improvement of processes to ensure they reflect current information and technology availability, especially where it can deliver better outcomes for his clients and the industry as a whole.

The application of the 2016 edition of Australian Rainfall and Runoff (ARR2016) to large urban catchments is a real challenge facing the industry as the critical storm (combination of duration and temporal pattern) in terms of flood level for a given Annual Exceedance Probability (AEP) can vary substantially over a catchment for a number of reasons. This fact is a significant drawback of hydrologic methods for critical storm selection, which rely on the behaviour in one area of the catchment representing that of similar areas - which may or may not be true. The importance of this is greater where you are interested in flooding right up to the catchment boundary - and this is an increasing requirement with more and more local council's undertaking flood modelling of their municipalities. This paper looks at the implications of simplifying catchment modelling using some new tools to effectively, efficiently and defendably select critical storms hydraulically across a catchment for urban flood studies.