



Stormwater and outflow planning controls for waterway health: Applying the Urban Streamflow Impact Assessment (USIA)

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Biography:

Dr Geoff Vietz straddles the divide between research and consulting. He is a Senior Research Fellow at the University of Melbourne in the Waterway Ecosystem Research Group. His research is focused on improving our understanding of urban development relative to the physical form and processes in waterways, and opportunities for improving these conditions. Geoff is also the Director and Principal Scientist for Streamology, an environmental consulting company focused on ensuring science and research is integrated into the management of waterways and wetlands. Geoff has authored more than 40 journal publications and book chapters and is the chief editor of the proceedings of the Australian Stream Management conference. He is based in the rapidly urbanising township of Bright, northeast Victoria.

Urbanisation of catchments has significant physical and ecological impacts on receiving waterways, and this reduces the future liveability of our ever-expanding cities. Excess stormwater runoff combined with outflows from wastewater treatment plants (WWTP) can provide up to 13 times more streamflow in receiving waterways with flashier hydrology and altered chemistry. With the development of the Urban Streamflow Impact Assessment (USIA) method the controls on stormwater and outflows can now be explicitly linked to waterway values: social, ecological and geomorphic. We describe the application of the USIA method a year on from its development. USIA has now been applied to a range of sites in Western Sydney where suburban, industrial, wastewater and airport development requires informed controls on streamflow if waterway values are to be retained. We discuss how USIA demonstrates the risks associated with various approaches to urban development (e.g. WSUD, WWTPs, BAU) and how outputs can be operationalised for developers and policy makers. The USIA method is ensuring the latest science on urban catchments and waterways can be used to inform development and promote, protect and (with ambitious streamflow controls) preserve waterways in cities and suburbs. The presentation will provide particular reference to the potential idiosyncrasies of applying USIA to the Melbourne Water region.