

# **Managing the Relationships between Watercourses and Riparian Wetlands**

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The connection between watercourses, wildlife and vegetation is often explored and assessed by various practitioners. However, the two-way connections between channels and riparian wetlands are discussed far less often. In many cases, the characteristics of watercourses are influenced by the character of riparian wetlands and vice-a-versa. Understanding this two-way relationship is critical to managing this interconnected system. For example, when designing channels, it is important to evaluate and incorporate the requirements of the riparian features, especially wetlands, but also meadows and forests. There are many factors that control the function of wetland and watercourses, and their interactions. Some examples of these factors include, annual and seasonal fluctuations in groundwater level, the frequency of flood events greater than bankfull, the discharge rate from stormwater ponds, the amount of infiltration, and more generally, the overall water balance of a site. This presentation will explore these and other factors through the use of case studies and examples, as well as ways that Fluvial Geomorphologists, Biologists, and Engineers can design these systems in harmony.

## **Biography**

Cara Hutton is a Senior Earth Science Technician with GEO Morphix Ltd focusing on geomorphological studies, erosion and hazard assessments. She obtained her Masters of Science in Physical Geography from the University of Guelph, which focused on physical habitat features at a variety of flow conditions within a portion of watercourse where natural channel design techniques were implemented.

Nyssa Hardie is a Stream Corridor and Environmental Analyst with Natural Resource Solutions Inc. She has a Masters of Science in Fluvial Geomorphology from the University of Toronto and has spent the majority of her career exploring the connections between watercourses, wildlife habitat and natural features. Nyssa specializes in stream corridor management and the integration of terrestrial and aquatic biology with geomorphologic principals.