

Barefoot Box Culvert™ “Thinking Inside the Box”

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Over the past three years RJ Burnside and Associates Limited has designed and built a unique pre-cast option for culverts that can improve existing conditions for aquatic life. Based on the need to replace an existing degraded cast in place culvert, Burnside was required to identify a suitable design option that addressed the safety and environmental concerns at the site and fit within a Township’s budgetary constraints. Due to the sensitivity of the site (headwater system that supports Brook Trout), it was important to replicate the form and function of the watercourse as well as existing conditions. Burnside proposed a precast concrete option called the Barefoot Box Culvert™ to the client, DFO and NVCA for approval. The Barefoot Box Culvert™ incorporated unique design characteristics such as preformed holes in the base slab to allow groundwater discharge and embedment to accommodate a meandering low flow channel within natural substrate. Burnside’s Barefoot Box Culvert™ is the first approved for construction in Ontario.

Biography

Mr. Pfohl has a broad range of experience in Canada and Internationally, with 20 years of professional experience in Environmental Assessment, habitat restoration, natural channel design, mitigation development, environmental monitoring and protection, fisheries and fish habitat assessment, Species at Risk, hydrology and hydrogeology. Christopher has extensive knowledge of the Fisheries Act, Endangered Species Act, and Species at Risk Act, as it pertains to the protection of aquatic and terrestrial Species at Risk (SAR) and critical habitat. Mr. Pfohl is the Aquatics Group Team Lead at RJ Burnside and Associates Limited and responsible for project management, report review, permitting for various government agencies (MNRF, DFO, Conservation Authorities), impact assessment, environmental and construction monitoring, developing and conducting aquatic life salvage, aquatic assessment, and the preparation of technical reports based on project requirements.