

Day Two - Track One

Thursday, March 22nd, 2018

3:30 p.m. – 4:00 p.m.

A Low Maintenance Stormwater Pond Retrofit Design Using Validated Performance Metrics

Presenters: Jessica Kellerman, City of Waterloo and Andrew Palmer, Greenland International Consulting Engineers Ltd.

Biography



Jessica Kellerman, P.Eng. is the water resources project manager and engineer at the City of Waterloo. She is responsible for the implementation of the City's diverse and growing stormwater capital program, including stream restoration, erosion control, stormwater pond cleanouts and innovative stormwater retrofits.



Andrew Palmer, B.E.S. (Hons) is a Project Manager for the Greenland International – Consulting Engineers. He has been involved in a variety of municipal infrastructure and stormwater management projects. His current work involves the implementation of various stormwater management partnership initiatives and watershed protection projects involving Indigenous Peoples in Canada.

Abstract

The Laurelwood Basin B (Pond #53) is located in the City of Waterloo and has accumulated a great deal of sediment from general construction and upstream development activities. As a result, the City decided to explore innovative solutions to: 1) improve efficiencies associated with the facility's sediment clean out & disposal; 2) integrate cumulative effects watershed modeling (using CANWET™) with the retrofit design process to optimize sediment removal and improve downstream water quality; and, 3) provide better and more cost-effective sediment disposal options. The project was undertaken by the City in partnership with Greenland International - Consulting Engineers and the Clearflow Group Inc. CH2M Hill has also provided consulting services and third-party review services under separate contract to the municipality, which have focused on products and claims developed by Clearflow and incorporated by Greenland into the low maintenance retrofit design and construction phases. In the summer of 2017, a \$350,000 grant was approved by the Federation of Canadian Municipalities to help offset the total \$1,000,000+ project cost. Therefore, the anticipated (positive) post-construction monitoring results will then be shared to identify scalable and cost-effective approaches using proven life cycle friendly products for similar clean-out and retrofit design projects.

Learning Objectives

1. Innovation for stormwater management facility retrofit design;
2. Public private partnerships; and
3. Life cycle management and public awareness.