

Advanced LID Design: Bioretention Facilities Workshop

General Info	
Date:	April 5, 2019
Time:	8:30 – 9:00 am – Registration 9:00 – 4:30 pm - Course
Location:	TBD
Name(s) of Presenter(s):	Jen Hill, Toronto and Region Conservation Authority (TRCA)
Details	
Brief Bio of Presenter(s)	
<p>Jen is a Research Scientist and technical author to the revised online guide for the design of low impact development (LID) strategies. She is a member of the Sustainable Technologies Evaluation Program (STEP) training team at Toronto and Region Conservation Authority, an expert panelist for Sustainable Buildings Canada, and participates in policy review panels for non-governmental organizations and municipalities. Before joining STEP she completed her PhD in water resources engineering at the University of Toronto; focusing her research on green roofs as LID. Jen’s holistic understanding of LID is based on a broad foundation including graduate degrees in Landscape Architecture and Chemistry.</p>	
Brief Description of Session	
<p>Green infrastructure, including low impact development (LID) practices, is becoming an increasingly common approach to stormwater management control. Bioretention is one type of LID measure that is designed to treat runoff from paved areas by using the natural properties of soil and vegetation to remove contaminants. Water management practitioners need to be familiar with the ‘ins and outs’ of bioretention design including sizing and siting, inlet and outlet design, material specification, construction planning, as well as the associated lifecycle inspection and maintenance requirements that should be considered during the design process.</p> <p>Using an example project site, participants will be guided through a bioretention design problem including:</p> <ul style="list-style-type: none"> • Bioretention basics and terminology • Review of performance studies • Screening design options • Sizing for hydrologic and water quality objectives • Site planning and placement of bioretention areas • Site grading and drainage • Planting design • Material specifications • Detailed design options for inlets/pretreatment 	

The Sustainable Technologies Evaluation Program (STEP) is a conservation authority initiative. Current partners are:



- Detailed design options for outlets/flow control
- Construction planning and sequencing, with erosion and sediment control
- Maintenance planning
- Design documentation
- Certification/Assumption protocols

The day will be a series of short presentations interspersed with (primarily math-based) problem solving periods when the participants will work in small teams to develop their designs. Participants are requested to bring a device capable of accessing the internet and may wish to bring their own:

- Calculator
- 1:1000 scale

Learning Objectives

Participants will:

- Understand the key considerations surrounding the selection and sizing of bioretention systems
- Develop evidence-based decision making skills for detailed design, including inlets, overflows and drains
- Apply bioretention design principles to a case study site
- Learn where to access freely available resources to support design adaptation

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