Southwestern Ontario LID Training
March 27, 28, 29, 2019
Gemini Sportsplex
Strathroy, Ontario

Presented in partnership with Upper Thames River Conservation Authority, St. Clair Region Conservation Authority, and Maitland Valley Conservation Authority

Day 1: Introduction to Low Impact Development (LID) Instructors: Kyle Vander Linden (CVC) and Jenn Hill (TRCA)	
Time	**Task**
8:30 – 9:00 am	Arrival & Registration
9:00 – 9:10 am	Introduction & Housekeeping SCRCA
9:10 – 9:20 am	Southwestern Ontario Context: Why LID (SCRCA, UTRCA, MVCA) ○ Characterization of Watershed(s) ○ Conditions & Pressures
9:20 – 9:30 am	Municipal Perspective ○ The Dirt on Green Infrastructure (Adrienne Sones, City of London)
9:30 – 10:15am	Stormwater Fundamentals: Introduction to Low Impact Development ○ Types ○ Functionality
10:15 - 10:30 am	**NETWORKING BREAK**
10:30 – 12:00 pm	LID / Green Infrastructure Myth busting ○ Dealing with site constraints ○ Tight soils ○ High bedrock/groundwater ○ Utilities ○ Performance / Winter Performance ○ Questions and Answers
12:00 – 1:00 pm	**LUNCH**
1:00 – 2:30 pm	LID Application at the Neighbourhood Scale (Residential development case studies): ○ Golf Estates, Ingersoll (Imtiaz Shah) ○ Vales of Glenway (High Density) ○ Wychwood (Medium Density) ○ Meadows In The Glenn (Low Density)
2:30 – 2:45 pm	**NETWORKING BREAK**
2:45 – 4:00 pm	Getting Started & Moving Towards Operational Processes in Getting LID into the Ground - Lessons learned in design, construction, inspection, operation and management Overview of STEP Tools Available ○ Wiki Design Guide ○ LID Treatment Train Tool ○ LID Life Cycle Costing Tool
4:00 – 4:30 pm	Question and Answer

Day 2: Bioretention Design Instructors: Graeme MacDonald (CVC) and Jenn Hill (TRCA)	
Time	**Task**
8:30 – 9:00 am	Arrival & Registration
9:00 – 9:15 am	Introduction, Housekeeping & Recap of Day 1
9:15 – 9:30 am	Bioretention Basics and Terminology
9:30 – 10:00 am	Review of Performance Case Studies
10:00 - 10:15 am	**NETWORKING BREAK**
10:15 – 12:00 pm	Pre-Design Activities ○ Site Evaluation and Reconnaissance ○ Hydrogeological Investigation ○ Screening the Design Options ○ Sizing for hydrologic and water quality objectives ○ Site planning and placement of bioretention areas ○ Site grading and drainage ○ Designing with maintenance in mind Activities integrated through presentation
12:00 – 12:30 pm	**LUNCH**
12:30 – 2:30 PM	Detailed Design ○ Sizing the bioretention practice ○ Detailed design options for inlets/pretreatment ○ Detailed design options for outlets/flow control ○ Planting design ○ Material specifications ○ Detailed design options for LID Monitoring Activities Integrated through presentation
2:30 – 2:45 PM	**NETWORKING BREAK**
2:45 – 3:15 PM	Translating Design to Construction ○ Key Guidance for LID Construction Notes
3:15 – 4:00 PM	Estimating Life Cycle Costs Based on the LID Design
4:00 – 4:30 PM	Question & Answer

Day 3: LID TTT and Infiltration Modelling Instructors: Steve Auger, Alana Vandersluis, Yuestas David, Jen Hill	
TIME	**TASK**
9:00 – 9:15 AM (15 minutes)	Registration Welcome, Introductions and Opening Remarks
9:15 – 9:45 AM (30 minutes)	Overview and Computational Results Recap ○ LID TTT tool overview and capabilities ○ Case Studies available and more development plans ○ Limitations of the model ○ Version 2.0 development status
9:45 – 10:30 PM (45 minutes)	Self-guided Walkthrough ○ Participants engage in a self-guided walkthrough example using a workflow worksheet ○ Intro to using the LID Planning and Design Guide Wiki to inform your modeling in the LID TTT
10:30 – 10:45 AM	Break
10:45 - 12:00 PM (75 minutes)	Application of LID TTT for Design Charrette ○ Group exercise to see how the LID TTT may be used to vet one or more SWM designs for an urban retrofit planning process
12:00 – 12:30 PM (30 minutes)	Q & A/ Discussion/ Feedback ○ Workshop Team fields questions from audience ○ Further experimentation time and individual questions and answers
12:30 – 1:30 PM	LUNCH
1:30 – 2:30 PM	Practice Drawdown Times ○ Fixed head and falling head drainage models ○ The implications of infiltration practice dimensions
2:30 – 3:30	Groundwater Interactions ○ Considerations for recommended water table separation ○ Calculating groundwater mounding using Hantush spreadsheet ○ Using drain spacing as a means to mitigate or maintain separation

This training event is produced through the Climate Change Adaptation Platform, with support from Natural Resources Canada.