Project Overview
The City of Mississauga’s O’Connor Park features many innovative green features including a parking lot with permeable pavement and bioswale (rain garden). CVC, in partnership with the City of Mississauga, is evaluating the performance of the bioswale.

Bioswale
The bioswale collects stormwater run-off from the parking lot and cleans the water through an engineered soil mixture and selected vegetation. In the bioswale, the interaction of plants, soil and natural microbes remove pollutants to improve the quality of water flowing back into Sawmill Creek.

Sheet Flow
The parking lot runoff enters the permeable pavers and bioswale as sheet flow.
Successes

CVC, in partnership with the City of Mississauga, is conducting regular maintenance inspection and evaluating the performance of the bioswale. The successes achieved with this project include:

Innovative project – O’Connor Park includes a number of innovative low impact development practices. The project demonstrates the City’s commitment to leading by example.

Protecting the environment – This project embraces the spirit of the environment by showcasing how to manage and clean stormwater before it enters Sawmill Creek.

Demonstration showcase – O’Connor Park has been showcased in presentations and events. These efforts have helped educate numerous stakeholders on the benefits of LID.

Public Acceptance – The bioswale landscape design has received a lot of positive feedback from the public. The flowers add a bright pop of colour and the grasses provide an interesting borderer. This has helped to increase public recognition and acceptance of LID.

Infrastructure Assessment

As part of CVC’s Infrastructure Performance and Risk Assessment Project, the performance of the O’Connor Park bioswale is being evaluated. This assessment will help to provide municipalities and property managers with the information and tools they need to ensure that LID practices on their property are working properly.

Landscaping – the bioswale landscaping consists of straight lines and groupings. The plants have had four years to establish and have been found to thrive.

Maintenance – the City of Mississauga has been performing maintenance including litter pickup and weeding. The bioswale has received the same level of maintenance as other City properties.

Performance – analysis indicates that the bioswale is performing well and functions within the design parameters. The figure below shows a precipitation event in September 2014 where 14 mm of rain fell. This was all infiltrated into the bioswale and slowly released to a wetland feature on site that provides habitat for the Midland Painted Turtle.

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