

2023

# LOW IMPACT DEVELOPMENT GUIDELINE

D701



## **1 Introduction**

This document was prepared to provide interim design guidance and the requirements of the City of Barrie (City) regarding Low Impact Development (LID) practices within storm drainage and stormwater management systems. Over time it will be necessary to update this interim guidance document as the regulations, design practices and technologies continue to evolve and change. The guidance within this document is based on current industry standard practices (e.g. Lake Simcoe Region Conservation Authority Technical Guidelines for Stormwater Management Submissions, Ministry of Environment, Conservation and Parks and Credit Valley Conservation Authority Low Impact Development Design Guidance) and the specific needs and requirements of the City of Barrie.

### **1.1 Purpose and Application**

The information within this document is intended as a guide for LID implementation within storm drainage and stormwater management design, to establish a baseline for minimum standards, and to guide best practice engineering. Each proposed LID implementation will be reviewed on a case by case basis through established processes. Deviations which improve or provide equivalent results will be considered and must be approved by the City on a case by case basis.

In situations where this guidance does not align with current Stormwater Infrastructure Standards, this document will take precedence.

Changes and revisions to this document may be made from time to time and it is the responsibility of the designer to obtain and make use of the latest version available at the time of engineering design.

This document is not intended to provide guidance on the selection of LID technologies required to meet specific drainage or environmental objectives.

### **1.2 Application of Low Impact Development Facilities on Private Lands**

The City is not in the practice of prescribing specific solutions on private property, and does not intend to monitor, inspect, maintain or otherwise enforce implementation or operation of LID facilities on private property, except where may be required to ensure compliance with City by-laws, including but not limited to the Sewer Use By-Law and/or Site Alteration By-Law.

However, the implementation of lot level control within private property, both residential and industrial, commercial and institutional, has been generally recommended by the City. Designers should be critical of their selection of LID facilities used for lot level control, ensuring that they;

- Are difficult to remove or otherwise compromise;
- Provide pre-treatment to the greatest extent possible;
- Are designed to provide a maximum asset lifespan;
- Require minimal maintenance that does not require effort or resources outside of the scope of the anticipated owner;
- Provide for monitoring devices as required; and,
- Mitigate potential impacts/ nuisance issues (basement moisture / flooding etc.).

### **1.3 Source Water Protection**

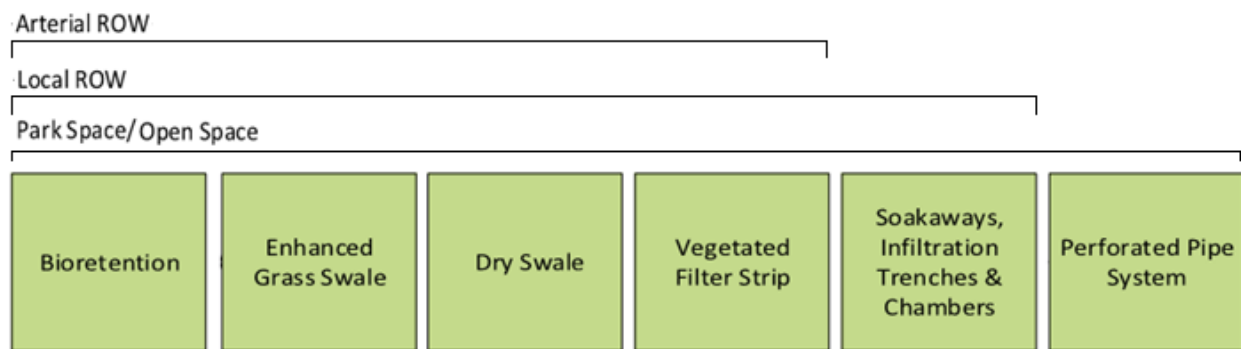
Source water protection focuses on actions taken to protect current and future municipal drinking water sources from overuse and contamination as a requirement of the Clean Water Act. The City screens proposed works to identify those that are located in proximity to, or whose activities may impact, municipal drinking water sources.

When necessary the City will contact the developer to discuss any requirements that pertain to the proposed works.

**1.4 Implementing Low Impact Development on Public Lands**

A LID Working Group, comprised of members from Operations and Engineering groups, assembled to examine the practicality of implementing specific types of LID facilities on public lands including road rights-of-way. The chart below outlines the types of LID facilities preferred for use within open space or park space, local rights-of-way and arterial/ collector rights-of-way. This chart is intended to provide a starting point for developers and it should be noted that stormwater management plans will continue to be reviewed on a case by case basis. Inclusion of any particular LID facility will not guarantee a plan’s approval or denial by the City.

**Figure 1 – Preferred LID Facilities on Public Lands**



The LID Working Group will continue to study the evolution of industry practices as well as monitor the progress of LID implementation within the municipality. Reassessment of the above figure will occur as necessary. Additional standards or guidelines will be made available through the City of Barrie website as they are developed.

Guidance material for design, construction and maintenance of LID facilities is available on the [Credit Valley Conservation website](#). Specific documents that should be consulted prior to development include:

- Low Impact Development Stormwater Management Planning and Design Guide;
- Low Impact Development Construction Guide;
- Low Impact Development Monitoring and Performance Assessment Guide;
- Low Impact Development Retrofit Guides (Road and Public Land); and,
- Draft Contractor’s and Inspector’s Guide for Low Impact Development.

Additionally, the [Sustainable Technologies Low Impact Development Stormwater Management Planning and Design Guide website](#) can be referenced for further information. This resource acts as a compilation of data and is continually updated with current and relevant information as it is made available.

Inquiries and feedback on the content of this interim document can be directed to the City’s LID Working Group at [LID@barrie.ca](mailto:LID@barrie.ca).