

Shifting the Stormwater Paradigm in the Lake Simcoe Watershed

Council Workshop

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Low Impact Development (LID)

Stormwater design approach that replicates natural rural features to infiltrate, filtrate, store, evaporate and detain runoff as close to the source as possible.



LID – Filtration & Infiltration



Permeable Pavers



Dry Swales



Bioretention Cells



Raingardens



LID - Stormwater Management Retrofit



Use of Wetlands for Quality and Quantity Control

LID – Water Storage & Re-use

Green Roofs



Rainwater Harvesting



Downspout Redirection

LID – Better Outcomes

- Reduced Phosphorus loading to Lake Simcoe
- Decrease in localized flooding
- Decrease in surcharge events





How do we get better site designs using LID instead of the traditional stormwater management design?



Quality – Better Site Design

- Capturing first flush (25 mm of rainfall) on site
- Allowing buffers & municipal park lands to be used for LID features



- Pre-application charrettes
- Lake Simcoe Phosphorus Offsetting Program (LSPOP)

Quality – Better Site Design

- SWM Policy/Technical Working Group
- Providing professional training
 - LID design, construction & maintenance
 - Erosion & sediment control
 - Pond inspection & maintenance
 - LID Contractor Certification



Quality – Better Site Design

- Providing learning & reference resources
- LID treatment train tool
- Wiki LID planning & design guideline
- Webinars
- Factsheets



wiki.sustainabletechnologies.ca

A screenshot of the Sustainable Technologies Wiki page titled "Low Impact Development Stormwater Management Planning and Design Guide". The page features a dark sidebar on the left with navigation links such as "CONTENTS BY THEME", "TOPIC CATEGORIES", and "TOOLS". The main content area includes a search bar, a "Selected articles" section with a grid of image thumbnails (e.g., "Better site design", "Bioretention", "Cost analysis resources", "Curb inlets", "Gravel Diaphragms", "Green roofs", "Infiltration Chambers", "Infiltration testing"), and a "Notices" section with a "Download pdf feedback form" button and a "Table of Contents" link.

Cost – Initial Infrastructure & Long Term Maintenance

- LID vs. traditional wet ponds

Traditional Wet Ponds



VS.



LID = More Development Lands

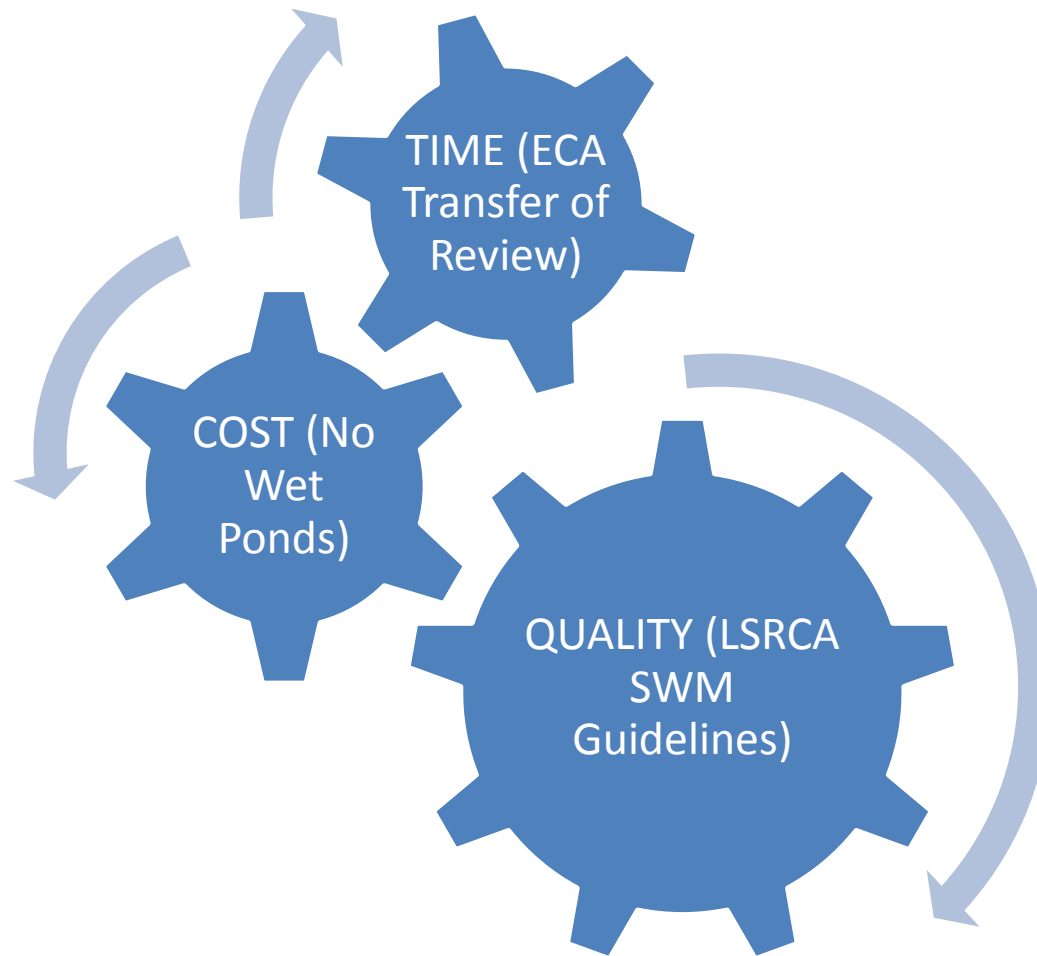


Time – All Stakeholders

- Pre-application Charrettes
- Environmental Compliance Approval (ECA)

Transfer of Review







“Fight for Minimums or Partner for Maximums”



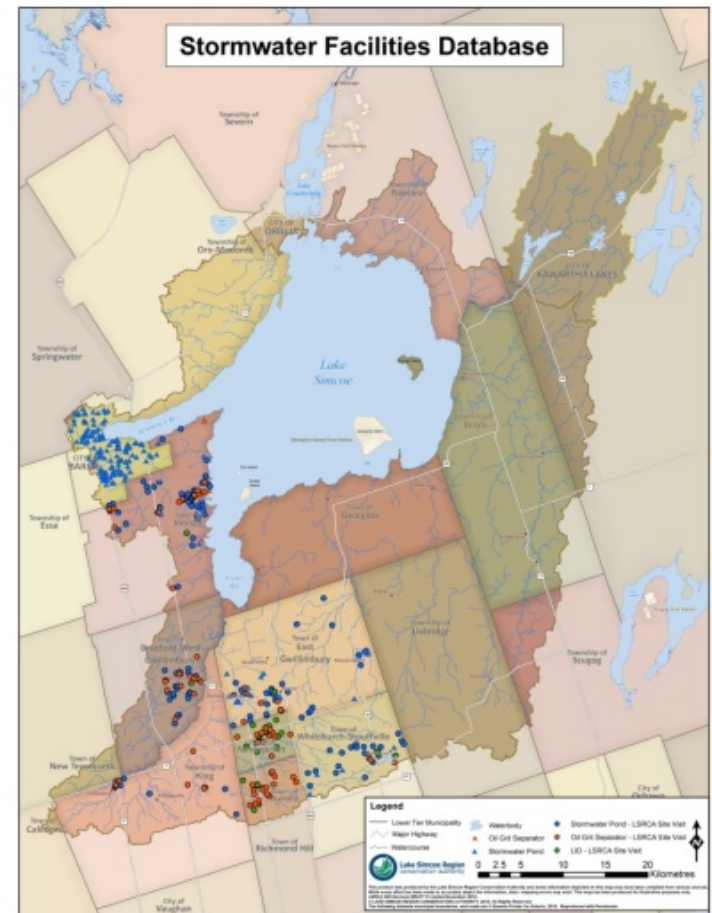
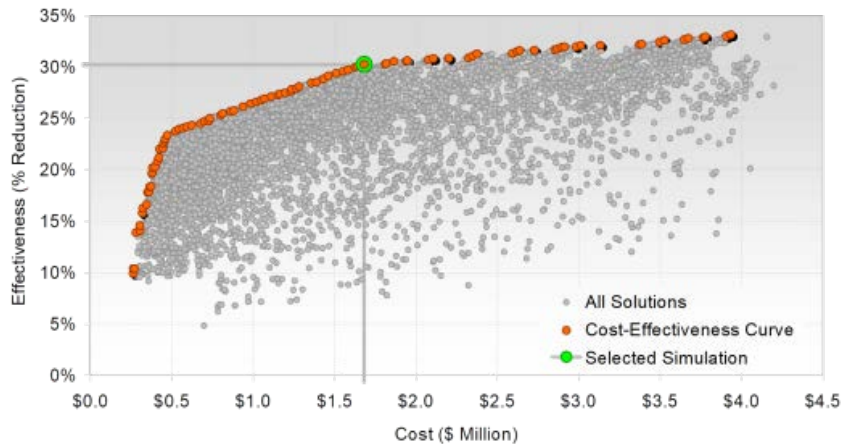
Additional LSRCA Offsetting Programs

- Ecological Offsetting Plan
 - “non-significant” loss of woodlots or wetland
- Water Balance Offsetting Program
 - Post to pre water budget must be maintained



What's Next

- SWM optimization modeling
- Performance monitoring
- Research and pilot projects
- Stormwater facility database



We Are Open For Business



- Funding for offsetting projects
 - Phosphorus
 - Ecological
 - Water Balance
- In Kind Support