

WHY STORMWATER MATTERS

Stormwater Source Protection Tools for Municipalities in Ontario



In Ontario cities, towns and urbanizing rural areas, stormwater runoff ranks as one of the largest threats to watershed health, the security of drinking water supplies, and public infrastructure. Most municipalities still manage rain using traditional drainage methods: collect, concentrate and dispose – despite significant advances in methods and policies that achieve greater protection of watershed health.

Why Integrated Stormwater Management is Now an Ontario Municipal/Regional Priority

Stormwater management is one of the largest unfunded liabilities facing Ontario municipalities. In addition to new provincial legislation requiring Ontario municipalities to make up for years of neglect (the Ontario Clean Water Act, Greenbelt Act, and the Places to Grow Act),- there are new federal risk management requirements associated with road salts, municipal wastewater effluent and other CEPA substances. Together all of these new requirements will hold municipalities to much higher standards of source water protection.

New Pressures & New Costs Meet Old Infrastructure & Old Funding Mechanisms

Besides legislative requirements, decades of degraded and out-dated infrastructure create a large unfunded liability that few municipalities have been able to address. Both municipalities and regions now face a significant price tag for improving their stormwater pollution prevention, as well as the infrastructure associated with it.

Addressing stormwater pollution and watershed degradation with Integrated Stormwater Management is one way that municipalities can also meet their new Clean Water Act and drinking water source protection requirements.

Turn Stormwater into a Resource!

Innovative stormwater management uses a variety of techniques to manage stormwater through maintaining or mimicking natural systems. Practicing innovative stormwater management takes careful planning and creative thinking, but in the long run provides great benefits to your local economy, environment, and quality of life. Additional benefits can be realized by integrating stormwater management with smart growth initiatives and watershed planning to promote regional planning and coordination.

◆ Financial Savings

- Reduce or avoid the costs of mitigation, repair, and/or reconstruction required by damages from flooding, erosion, and combined sewer overflows.
- Reduce or avoid the costs associated with expanding wastewater infrastructures.
- Reduce or avoid the costs of construction site preparation and infrastructures for new developments.

◆ Comply with Provincial and Federal Laws

- ◆ Improved Quality of Life: Clean, restored waters improve and expand recreational opportunities, contribute to healthier citizens and community, and help build local tourism.



Turn Stormwater into a Resource for the Community

Establishing a municipal green development standard is one way to control costs. This will meet Provincial requirements for drinking water source protection, address impacts from climate change, and address increasing energy costs for municipal treatment facilities (potable and sewage). By facilitating adaptation such as rainwater harvesting and reuse, infiltration and pollution prevention integrated with a stormwater utility structure fund, additional stormwater costs can be met without adding unnecessary charges to residents' water bills.

Integrate Sound Stormwater Management Practices

Implement a system of stormwater best management practices (BMPs) in your community such as:

- Oil and grit separators
- Sand filters
- Street sweeping
- Chemical-free landscaping and lawn maintenance
- Proper vehicle and equipment
- Catch basin inserts
- Infiltration basins
- Salt alternative deicers
- LID techniques
- Proper disposal of pollutants such as maintenance paints, oils, fuels, and cleaners



What is Low Impact Development (LID)?

LID maintains and/or restores natural hydrological flows and water quality for developed watersheds.

Basic Principles of LID:

1. Conservation - maintain urban forestry and infiltration
2. Minimization - reduce hard surfacing wherever possible (front yard parking bylaws)
3. Strategic Timing - create standards that ensure rain flows and drainage are held back from the drainage system
4. Integrated Management Practices - utilize a wide variety of actions for infiltration, bioremediation, and storage of runoff flows
5. Pollution Prevention - limit known non-point source pollutants arising from private property and municipal maintenance activities -e.g. road salts, pesticides, car washing, etc.



Resources

There are a number of excellent resources out there; please visit www.glhabitat.org for a list of Integrated Stormwater Management resources, including a Stormwater Source Protection Checklist for municipal leaders in Ontario (created by RiverSides Foundation).

This is one of several tools developed by the Great Lakes Aquatic Habitat Network and Fund, Inc. with the help of the RiverSides Foundation in Toronto. Designed to help grassroots advocates and municipal leaders creatively address stormwater in their communities, we encourage you to pursue this conversation with others. For more information, please contact either GLAHNF or the organization from which you received this publication. Published March 2007.



Cover Photos: Bear Creek Riparian Buffers. Courtesy of Patricia Pennell. • Since Chicago's City Hall rooftop garden project, over two million square feet of green roofs have been installed in the city. Chicago, Illinois now leads the nation in green roof acreage. The City Hall green roof was designed by Conservation Design Forum, in Elmhurst, Illinois. Image courtesy of CDF.

Above Photos: Another view of the City Hall in Chicago, Illinois. Image courtesy of CDF. • Three young friends play in Bear Creek, Kent county, MI, once unsafe for bodily contact, healthy now thanks to sound stormwater management. Image courtesy of Rain Gardens of West Michigan, a project of the West Michigan Environmental Action Council.