

Grey vs. Green

Green infrastructure and low impact development are cost-effective, environmentally sound and resilient approaches to managing stormwater. Traditionally, stormwater management has been done primarily through "grey infrastructure": man-made, engineering works such as ditches, culverts, storm sewers, swales, catch basins, inlets, outfalls, ponds and other water quality treatment devices. While grey infrastructure is designed to move water away from developed areas, green infrastructure and low impact development practices aim to keep and treat stormwater at its source as a valuable resource. Examples of green infrastructure include urban forests and wetlands. Low impact development practices include rain gardens, rain barrels and permeable pavement.

More recently, green infrastructure and low impact development have been recognized as powerful tools to manage stormwater with reduced costs, increased climate resilience, greater biodiversity and other benefits, including:

- Reducing combined sewer overflows;
- Lowering pollutant loads;
- Mitigating flood risk;
- Recharging groundwater;
- Providing adequate water for local trees and other vegetation;
- Reducing water consumption (e.g., rainwater harvesting);
- Reducing the heat island effect;
- Reducing ozone and particulate pollution levels;
- Improving aquatic and terrestrial habitat;
- Improving habitat connectivity;
- Restoring and enhancing public recreational spaces (e.g., parks); and
- Increasing property values.

Who is Responsible for Stormwater Management in Ontario?

In Ontario there are a number of agencies with jurisdiction over stormwater management, including municipalities, conservation authorities, and provincial ministries. The overlapping roles and responsibilities can be bewildering, even for experts.

Phosphorus Reduction in Lake Erie

In response to large-scale algal blooms that have begun to reappear in Lake Erie, Canada and the U.S. adopted a target of 40 per cent phosphorus load reductions in the western and central basins by 2025 from 2008 levels. In June 2015, Ontario signed the *Western Basin of Lake Erie Collaborative Agreement* with the States of Michigan and Ohio, collectively committing to this target. To achieve this target, Ontario (Ministries of the Environment and Climate Change, Agriculture, Food and Rural Affairs, and Natural Resources and Forestry) is working with Canada and members of the Great Lakes community to develop a plan: *The Canada-Ontario Action Plan for Lake Erie*. One of the proposed actions in this plan is for Ontario to work with developers and others to promote and support the use of green infrastructure and low impact development, including clarifying and enhancing policies, and developing green standards. For more information on this plan, refer to the Environmental Registry notice, *Reducing Phosphorus to Minimize Algal Blooms in Lake Erie* (#012-8760).

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