



WATER RESOURCES

Research & Development

Floating Islands Research Update (July 2013)

Client: Credit Valley Conservation Authority

Location: Brampton, Ontario

GREENLAND has worked in partnership with the Credit Valley Conservation (CVC) on this unique project.

“Floating Islands” - not an all-inclusive resort, but these islands could play a critical role to reduce water temperature and help improve water quality in stormwater ponds and receiving streams. In recent years, thermal mitigation has become a critical component to stormwater management design.

With 8,000 ft² of floating islands, this pilot project is being monitored for reducing-stormwater pond temperatures while improving pond water quality.

This pilot project is also being used to learn how to promote and educate the local community on innovative technologies, involve community groups, monitor thermal performance, and overcome challenges of floating island design, construction and maintenance.

Stormwater ponds have been constructed to receive rainwater runoff from streets, parking lots and driveways to reduce flooding risks and water quality impacts on creeks, streams and rivers. A subsequent impact from stormwater ponds however is thermal pollution. Warm water flowing from ponds flows to creeks and streams and impacts fish and insects that live in the creek. A study by the Ontario Ministry of the Environment and CVC found a 5° C difference between the pond inlet and the outlet.

The Islands could play a critical role to reducing water temperature and improving water quality in stormwater ponds and connecting waterways. By blocking sunlight islands create shadier conditions for stormwater ponds resulting in cooler conditions. Water continues to flow underneath the islands and plant roots act as a filter removing pollutants as water flows along.

Overall, this unique project will help educate municipalities on how to manage stormwater ponds and the environment in light of climate change.

