

Municipal Snow-Melt Site Incorporates Stormceptor: Ontario Town Protects Major River, Historic Moraine

Project: Municipal Snow-Melt

Location: Richmond Hill, Ontario

Owner: Town of Richmond Hill, Ontario

Approving Agency: Environment Canada's
Water Research Institute

Product: Stormceptor®



Stormceptor is playing a key role in an innovative municipal snow melt program, capturing and containing pollutants in spring runoff to protect the fragile ecosystem of the Rouge River on Ontario's Oak Ridges Moraine.

The Town of Richmond Hill, Ontario, has constructed an innovative central facility that stores snow removed from streets and parking lots, for which it received the Ontario Public Works Association Technical Innovation Award in 2007. The 1.7 hectare site utilizes an impermeable asphalt storage area, catch basins, a large Stormceptor, and a water quality pond working together.

Melting snow is a major source of water pollution, because it is contaminated by salt, heavy metals, oil, grease, sand, and other toxins which bind themselves to fine particles. Pollution is a hot-button issue for Richmond Hill, since its snow melt site is located on the Oak Ridges Moraine, which is protected by the Oak Ridges Moraine Conservation Act of 2001. The Moraine, an extremely porous area, receives flows from the facility directly into the head waters of the Rouge River, a protected cold water fishery.



When the snow pile melts in the spring, the runoff flows down a specially-constructed asphalt pad to a series of catch basins and the Stormceptor. The Stormceptor slows the water and allows free oils to rise while sediment, with associated heavy metals and nutrients, settle and are held safely in the treatment chamber. The water then flows to a treatment pond for further treatment, and into a closed storm sewer system before discharging as clean water into a tributary of the Rouge River.

The Town partnered with Environment Canada's Water Research Institute on a two-year program to monitor the pollutants in the runoff. The results are expected to shed light on the level of pollutants in melting snow and the degree of treatment needed in regions with heavy snowfall. Richmond Hill's snow-melt site, located at Leslie and Elgin Mills Road, was built in 2003. It was recently featured on the Discovery Channel's Daily Planet show during Environment Week and is viewed as a model for other snow-melt sustainability initiatives across Canada.