

Kitchener, Ontario, Tackles Water Quality Issues with Urban Retrofit using Stormceptor MAX

Project: Madison Avenue Redevelopment

Location: Kitchener, Ontario, Canada

Owner: City of Kitchener

Engineer: J. Vleeming

Approving Agency: City of Kitchener

Product: Stormceptor® MAX



The City of Kitchener has been actively working to improve the quality of its streams and rivers through a city-wide Stormwater Management Strategy. The strategy is focused on improving water quality and the aquatic ecosystem to enhance the environment and health of its residents. From 2006 to 2010, the City collected over \$1.7 million dollars in an effort to improve stormwater quality. Some of that money was invested into retrofitting stormwater ponds and installing oil and grit separator (OGS) units as retrofit projects in urban areas to provide treatment to impervious drainage areas, which previously had no stormwater treatment.

Stormwater ponds and OGSs treat water quality and prevent pollutants from water entering receiving streams. In the past five years, the city has made significant efforts to upgrade a number of its older ponds, and install multiple OGSs to meet current quality control targets.



A specific OGS retrofit project on Madison Avenue was part of the City of Kitchener's overall Stormwater Management Retrofit Plan. This was an urban site which had limited options to implement stormwater quality treatment for this large watershed; 28 impervious hectares (69 acres) within the City. A Stormceptor MAX was selected for this site based on its flexible and customizable design for providing superior pollutant removal performance in this retrofit application; including spill capture, fine particulate capture and scour prevention of previously captured pollutants. The customized design allowed the MAX treatment system to fit within the site's very tight urban space, and be implemented into the retrofitted drainage network. The Stormceptor MAX was designed and constructed by Hanson Pipe and Precast (the Ontario Licensee of the Stormceptor technology). The MAX unit was a special design with a 3,000 mm (10 ft) diameter lower chamber, stretching 11 meters (36 ft) in length. This provided the desired water quality treatment and met the site's constraints.

Stormceptor® MAX

CASE STUDY

Over the next five years, the city will continue its proactive approach to stormwater management and environmental protection. To help fund the advancement and protection of water quality, Kitchener's stormwater utility will transfer stormwater management funding from property taxes to a user-fee program where properties will be charged based on the amount of stormwater runoff they contribute rather than on property value.

Some of the items the city is implementing are:

- Rehabilitation of older stormwater ponds
- Construction of new ponds
- Installation of additional oil and grit separators (OGS)
- Conducting appropriate maintenance of stormwater facilities
- Rehabilitation of impacted streams
- Continued monitoring and reporting of stream health

