

Kitchener-Waterloo Collegiate

Grand River Watershed, Ontario

Urban Stormwater Management

Grade nine students from Kitchener Waterloo Collegiate and Vocational School's Green Industries class learned how water can be diverted from entering the storm sewers and undertook a water conservation project on their school ground to reduce runoff and harvest rainwater. This included the construction of a rainwater harvesting system consisting of a 10,000 litre underground cistern, permeable paving stones and rain garden. Students gained hands-on experience while assisting with the installation of the cistern, permeable pavers and rain garden.

The new rainwater harvesting system allows the school to collect water that falls on their school grounds and use it to water their gardens. In heavy rainfall, any overflow not captured by the rainwater harvesting system will spill into a rain garden where it can be absorbed slowly rather than be lost as run-off. The system will also help to prevent erosion and limit pollutants to the local water supply. This school has set a great example of how storm water can be managed in an urban landscape.

Class: Green Industries

Teacher: Patrick Rittinger

Dive A Little Deeper

Click the links below for more information about:

[Rain: What's the Problem? Information About Runoff](#)

[Rain Gardens](#)



Right: A video demonstrating the rain water harvesting system. Left: A student uses water from the system to water plants.

More About Storm Water Runoff

Impermeable surfaces such as pavement and concrete prevent rainwater and snowmelt from soaking into the ground, causing runoff which flows over the ground instead. Storm water runoff can collect pollutants and debris carrying them directly into the water system as it flows untreated into storm sewers, rivers and lakes. During heavy rainfalls, storm water runoff can also contribute to flooding.