

Best Management Practices

helping aquatic species at risk

Clean Water Diversion

The Sydenham River in southwestern Ontario is the only major watershed which lies completely within the Carolinian Life Zone and is relatively undisturbed by industrial development. This has made the river a biological treasure. The Sydenham River supports an incredible variety of aquatic life, or what we call biodiversity. At least 82 species of fish and 34 species of freshwater mussels have been found here, making it one of the most species rich watersheds in all of Canada. Several species in the Sydenham River are found nowhere else in Canada, and some remain at only a few locations globally. Many of these species at risk have been nationally listed as endangered, threatened, or of special concern by the Committee on the Status of Endangered Wildlife in Canada. You can help too. By adopting Best Management Practices (BMPs), you can help protect the Sydenham River and its tributaries. This series of fact sheets will assist you in deciding which BMPs are right for your property.

Precipitation that travels directly through the farmyard can be contaminated from running through the areas affected by manure, chemicals or animal/machine travel. When water travels through these contaminated areas, it picks up bacteria and other nutrients found in the manure and waste created around the farmyard. After the water has travelled through these affected areas, some of it will seep into the soil and travel by way of groundwater to wells, springs, rivers, lakes, and wetlands. Another portion of the contaminated water will run directly into surface water, such as rivers and lakes. The polluted runoff may eventually reach the source of your water supply and could end up in your home.

Contaminated surface water can impact the species living in the river. In the Sydenham River, there are several species of fish

- Technical advice and grants may be available to assist in implementing Best Management Practices on your property.
- If your project involves work in or near a watercourse, you may require permits including a Fill, Construction or Alteration to watercourse permit from the Conservation Authority.
- Call before you begin your project.



Eaves troughs, diverting water from the roof away from a feedlot, helps to reduce polluted runoff into nearby watercourses.

“Working Towards Healthy Watersheds”

that are rare and particularly at risk from chemicals such as ammonia which can enter the water from farmyard runoff sources. All species of fish, including those at risk, such as the eastern sand darter and the bigmouth buffalo, can be affected by the toxic effects of ammonia. Contaminated water eventually ends up in the Great Lakes and can affect our use of the lakes for drinking, swimming, and fishing.

There are ways in which the precipitation that falls on your farm location can be directed around your farmyard before reaching the contaminants. These measures will help protect your river and water supply. Diverting clean water also reduces the volume of water that needs to be treated. Structures known as Clean Water Diversions can be added to your farmyard to let the clean water bypass the contaminants. Clean Water Diversions can consist of eaves troughs, berms, and grassed waterways to effectively divert and direct the clean water along a safe path.

Eaves troughs should be placed on buildings such as your barn or manure storage on the sides facing your barnyard or feedlot. The down spout of the eaves should be connected to a tile drain or catch basin to safely carry off the water away from the area of potential contamination.

Berms may be placed in a position across a slope to intercept runoff water that would otherwise travel through an area of waste and fecal matter. The berm is designed to direct the water to an outlet that will hold the water and release it slowly into the ground, or into a tile drain.

A grassed waterway is a permanently vegetated channel which can act as an outlet for the water diverted from the barnyard. A



An earthen berm may be an effective method to divert water away from a potential source of contamination.

grassed waterway can also divert surface flow away from the barnyard. Grass waterways are broad and shallow. They collect and transport runoff that flows within the area. They are constructed in a parabolic or saucer-like shape to spread out and decrease the velocity of the running water and therefore, decrease the erosive power of the water. The best time to put in a grassed waterway is late August or early September. This will allow the seed to establish and grow before fall rains washes the seed away. In order to further protect the seed, you can spread a straw mulch. It will also help the grass seed germinate.

A grassed waterway also reduces the amount of sediment and silt that is transferred to the river. This kind of diversion helps keep the soil on the land and out of the river where high turbidity and sedimentation is a problem.



St. Clair Region Conservation Authority
205 Mill Pond Cr., Strathroy, ON, N7G 3P9
(519) 245-3710 E-Mail stclair@scrca.on.ca

www.scrca.on.ca

This brochure funded with support
of the Government of Canada's
Habitat Stewardship Program for
Species at Risk

Canada