Aquatic Species at Risk in the Sydenham River

Mussels
northern riffleshell - Endangered
wavy-rayed lampmussel - Endangered
rayed bean - Endangered
snuffbox - Endangered
mudpuppy mussel - Endangered
kidneyshell - Endangered
round hickorynut - Endangered

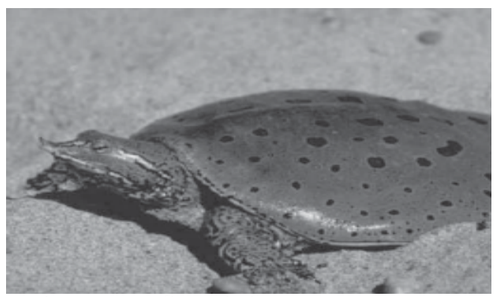
Fish
northern madtom - Endangered
eastern sand darter - Threatened
spotted gar - Threatened
blackstripe topminnow - Special Concern
pugnose minnow - Special Concern
bigmouth buffalo - Special Concern
spotted sucker - Special Concern
greenside darter - Special Concern

Reptiles
Eastern Spiny Softshell Turtle - Threatened

Endangered: A species facing immenent extirpation or extinction.

Threatened: A species that is likely to become endangered if limiting factors are not reversed

Special Concern: A species is of special concern because of characteristics that make it particularly sensitive to human activities or natural events.



eastern spiny softshell turtle

Best Management Practices Fact Sheets

helping species at risk series

- Restricted Livestock Access
- Manure Application
- Manure Storage
- Well Repair and Decommissioning
- Tree Planting
- Fuel & Pesticide Storage
- Wetlands
- Bioengineering for Streambank Stabilization
- Septic Systems
- Clean Water Diversion
- Milkhouse Waste Water
- Conservation Tillage
- Sediment Traps
- Exotic Species
- Riparian Buffers

Partners in Conservation

Environment Canada
Department of Fisheries and Oceans
Government of Canada's Species at Risk Program
Middlesex Stewardship Committee
Natural Heritage Information Centre
Ontario Great Lakes Renewal Foundation
Ontario Ministry of Natural Resources
Royal Ontario Museum
Rural Lambton Stewardship Network
St. Clair Region Conservation Authority
Stewardship Kent
University of Guelph
World Wildlife Fund

Best Management Practices

helping aquatic species at risk

Septic Systems

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.

Repair and Maintenance of Septic Systems

Septic tanks serve the purpose of disposing household wastewater that should not be directly released into the environment and common water sources. A septic system consists of a tank and leaching bed. The wastewater that is produced in your home is sent to the tank where the water is held for a length of time which allows the solids to settle. The liquid portion of the waste is sent into the leaching bed which is a series of lines that the water is evenly distributed into. The water then is treated naturally when it seeps into the surrounding materials and soils. From this stage, the water is in a favourable condition to be allowed to seep into the groundwater and returned into the water cycle. When septic systems are not working properly they pose a significant threat to surface and groundwater. It is important to maintain your septic system so that our waters can be kept free of bacterial contamination.

- 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.

Faulty septic systems are not only a problem for the landowner, they also can have a negative impact on rural

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

"Working Towards Healthy Watersheds"

Faulty septic systems can create extremely poor living conditions for the species in the river. The Sydenham River is home to many species that require well oxygenated water to survive. Untreated sewage that leaks into a water source may increase the concentration of phosphorous. This rise in phosphorus increases the growth of algae, which depletes the water of oxygen. With less oxygen available for fish and other aquatic organisms, fish population can suffer.

How to spot a Faulty Septic System

There are several signs that indicate a septic system is failing and could be contaminating the water. Around your house, warning signs include: toilets, showers, and sinks backing up or taking longer than usual to drain; unusual foul odours inside and outside of your house; the ground over the leaching bed may have very lush green grass when the rest of the lawn is dry and brown; if the ground around your septic tank and leaching bed is soggy or spongy your tank is likely overloaded and leaking.

Large amounts of algae growth in water sources near your home such as rivers and ponds may point to a failing septic system. This indicates that the contaminants have already reached the water and are increasing the growth of algae. Sometimes there are no obvious problems with the system, but odour and algae symptoms appear in an open watercourse up to 1 km away at a tile outlet indicating the untreated effluent is gaining access to a tile and, ultimately, the river.

What to do in the Case of a Faulty Septic System?

If you have noticed the warning signs of a faulty septic system, report this to the local health unit and Ministry of Environment office. The health unit needs to know of any possible contamination sources in order to instruct you and others of what to do in this situation.

How to Maintain a Septic System

Several actions are necessary to keep your septic system operating smoothly and leak-free. Preventative methods are the most important way to protect your system and health.

Avoid: Overflow and Backups

Action: One of the most important methods of maintaining your septic tank is to have it pumped once every 3-4 years by a licensed contractor. This simple task of regular clean out of the tank will prevent many of the problems that can occur with a septic system.

Avoid: Water Overuse

Action: If too much water is sent to the septic tank, the water can flush the solids into the leaching bed. If solids enter into the tiles of the leaching bed, they can clog the pipes and overflow the system. Within the home, use water efficiently. By washing only full loads in an automatic washing machine and dishwasher, and repairing leaky faucets or toilets, you can significantly decrease the amount of water that is used in your household. For the same reason, storm and drainage water should be kept out of the septic system. Eaves troughs and drains should be placed to direct the water away from the septic system.

Avoid: Erosion and Tile Damage

Action: The ground over the leaching bed should be planted with a grass cover. This will prevent erosion over the area. The area should not be planted with shrubs or trees too close to the system in order to avoid root growth into the tiles. Do not drive equipment over the leaching bed. Traffic from heavy loads may damage the system.

Avoid: Clogging and Overflowing

Action: Septic systems can only handle bio-degradeable items. Do not dispose of hazardous wastes, greases, chemicals and other non-biodegradeable items into the septic system. These items will damage the natural organic processes in the tank and will cause the system to fill more quickly.

Septic System Location

Another important step to avoid problems with your septic system is to locate it properly. If you are putting in a new septic system, follow the requirements of provincial regulation stated below to avoid the costs and health hazards of contamination. You must obtain a Certificate of Approval from the Ministry of Environment (MOE) before constructing or altering a septic system. Contact your municipality for more information.

The septic tank must be located at least 15 m away from a well, lake, stream, watercourse, tile drain inlet, pond, or spring.

The leaching bed must be located at least 30 m away from a dug or bored well, a drinking water spring, and any well with a watertight casing less than 6 m below the surface of the ground.

To allow for sun exposure to encourage evaporation and to prevent odours and seepage under a building, the septic system must be located at least 5 m away from your house or any other building structure.

It is also important to locate the system at a depth that will allow for the least chance of contamination. The treatment trench bottom must be located at least 0.9 m above saturated soil or bedrock, but the greater the distance between the two, the better the treatment potential.