

Best Management Practices

helping aquatic species at risk

Well Repair and Decommissioning

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.

In May 2000, the need for safe water supplies was highlighted by the events in Walkerton, Ontario. The municipal well water was contaminated by *E. coli* from manure causing seven deaths and more than 2,000 illnesses.

Groundwater is a necessity for everyday living for both rural and urban people alike. Whether it be a private well or a well that serves a community, a clean groundwater source is critical. This fact sheet refers to the ways that contamination of groundwater can be avoided to help ensure our drinking water is safe.

A drilled well should be located 30 metres away and up-slope from potential sources of contamination (60 metres for a dug well). These sources of contamination include your septic system, fuel tank, pesticide storage, manure storage, silos and roads.

- 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 a Fill, Construction or Alteration to watercourse permit from the Conservation Authority.
- Call before you begin your project.



Abandoned wells allows for access of pollutants into the groundwater. These wells should be properly decommissioned by a licenced contractor.

“Working Towards Healthy Watersheds”

An existing well that is in use should be inspected to make sure that the well is safe and meets the provincial standards to ensure that the water is protected from contamination.

There are several features you can check to ensure the well meets provincial standards.

- Your well must have a watertight casing to a depth of 6 m.
- The joints must be sealed with materials suitable for drinking water supply (e.g., concrete or rubber seals).
- The top of the casing must extend at least 0.4 m (16 inches) above ground.
- The top of the casing should be covered by a proper lid.
- Check that the ground is sloping away from the well casing.
- Check that there are no holes or depressions around the well.

If you have any unused wells on your property, they should be properly plugged for safety reasons and to prevent contamination. By plugging the well, you can protect the groundwater source, also known as the aquifer, from surface contamination. When a well is plugged and sealed, the movement of water directly from the surface to the aquifer is stopped and therefore the source is protected from surface contamination. This is an important procedure for rural communities in which neighbours draw upon the same aquifer for their water source. Sealing an unused well prevents it from being a direct pathway for pollution into the water supply.

The first step in plugging a well is to determine how the well was originally constructed. This information is available on the Water Well Record which can be obtained from the Ministry of Environment. If there is no water well records, a licensed water well contractor

should make the necessary measurements and determine the soil and groundwater conditions that are present.

For the different types of wells that exist there are varying procedures for plugging and sealing the well. When decommissioning an unused well, a licensed contractor should be contacted to complete the task of plugging and sealing the well. A list of licenced well drillers is available from the Conservation Authority.



Before - an unused well that may contribute to direct groundwater contamination.



After - Repaired well with an extended casing 16" above finished level with a proper well head cap.



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