

DRINKING WATER SOURCE PROTECTION

Our Actions Matter



LAKEHEAD REGION

CONSERVATION AUTHORITY

LAKEHEAD SOURCE PROTECTION AREA

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BEST PRACTICES: CARING FOR WELLS & CONVENTIONAL SEPTIC SYSTEMS

CARING FOR YOUR WELL & PROTECTING YOUR GROUND WATER

Best practices for drinking water source protection have been created for landowners with private wells and drinking water systems. Private drinking water systems do not undergo the same treatment and testing practices that municipal systems do. It is the responsibility of the landowner to care for their private systems. Following best practices can protect human health and environment, extend the life of your drinking water system, avoid the costs of needing to treat contaminated drinking water sources or finding a new source of drinking water, and increase public awareness and accountability of drinking water stewardship.

- Test your well water for bacteria at least **3 times per year**, seasonally when snow is not present (spring, summer, fall), and look for changes in the water's characteristics (e.g. colour, taste, odour).
- **Keep a record** of well test results and any well maintenance performed.
- Know exactly where your well is located and **keep potential contamination sources and activities away** from your well.
- **Keep an inventory** of potential activities that could contaminate your drinking water. For example, the use of fertilizers, pesticides, or fuel spills nearby your well.
- Implement a **groundwater protection zone** around your well, with a **radius of 100 metres**, or to the **boundary of your property line**, whichever one you reach first.
- **Nothing but water should enter your well, and it should only enter from underground.**
 - Make sure the ground around your well slopes away from your well.
 - Make sure that your well's casing extends at least 40 cm (16 in.) above the mounded earth.
 - Watch for ground settling or water pooling around the outside of the well casing. (This could indicate that surface water could be accessing your well.)
 - Consider replacing your concrete dug well lid with a new lid that has a sealed access hatch.
 - Keep surface water (e.g. rainfall runoff) and contaminants or foreign materials (e.g. insects and mice) from entering your well by securing the well cap in place.
 - Keep vehicles, pet waste, salt and fertilizer away from the well.
- **Keep sources of *E. coli* bacteria away from your well.**
 - Keep animal and kitchen waste away from your well, and do not allow liquids from contaminant sources to drain towards your well, especially during spring thaw.
 - Do not tie your pet up near the well and clean up pet waste.
- **Keep other sources of bacteria away from your well.**
 - Do not bury brush piles, stumps, or use bark mulch or wood chips near or uphill from your well.
- **Proper fuel and chemical storage.**
 - Place drip trays underneath storage containers to prevent spills and use double-walled tanks.
 - Ensure that lawn mowers and snow blowers are not leaking fuels near your well.
- **If a spill occurs, clean it up with an absorbent material** such as cat litter or sawdust and scoop the contaminant into a container and dispose of it properly.
- **Fertilize lightly or not at all.** This is especially true if you live close to the water. Nitrates, which are found in fertilizer, can run off or leach into drinking water sources.
- **Use eco-friendly alternatives for road salts** such as sand, beet juice, alfalfa meal, cat litter, coffee grinds, or products such as EcoTraction (available at standard retailers) using all-natural volcanic minerals.
- **Having vegetation on your property** (native trees, shrubs, and herbaceous species) contributes to improved water quality and quantity by decreasing the speed of overland water flow and erosion, increasing evapotranspiration and intercepting rainfall, and increasing infiltration to shallow groundwater areas.
- **Inspect your wellhead area (e.g. 100 meters around the well) and water supply system at least annually** to ensure everything is functioning properly. Early spring after snow melt is a good time.
- **Ensure your well is always accessible** for testing, inspection, maintenance, cleaning, treatment and repairs.
- **Have the well and plumbing disinfected** with a chlorine solution by a licensed well technician after any work is done inside the well, or on pumping equipment.



CARING FOR YOUR CONVENTIONAL SEPTIC SYSTEM

These actions protect the safety of your drinking water source and help to extend the life of your septic system.

- **Pump out your septic system every 3-5 years** to prevent contamination of ground water.
- **Know the type of septic system that you have. Know the location, size, and shape of its parts** (e.g. septic tank, leaching bed, electrical control panel) and protect it from damage.
 - Do not dig before knowing the location of your septic system. Do not drive over your septic system. Excessive weight can damage the pipes and tank, and your system may not drain properly under compacted soil.
 - Do not place concrete or plastic groundcover above the leaching bed as this can reduce evaporation and the supply of air to the soil, which will hinder proper effluent treatment.
 - Don't construct anything (e.g. pools, driveways and sheds) on or near any part of the system
 - Do not apply manure or fertilizers over the leaching bed
- **Remember that what you use in your house goes back down your drain and into your septic system**
 - Use non-toxic and biodegradable cleaning products, soaps, shampoos and personal care products.
 - Avoid using disinfectants like anti-bacterial soaps, bleach, caustic toilet bowl cleaners, and drain cleaners, which kill beneficial bacteria in your septic system tank and may cause sewage to pass through system without treatment.
 - Look for liquid detergents or concentrated detergents that don't contain phosphates. Phosphates can harm local water quality.
- Keep **household items**, such as dental floss, feminine hygiene products, paper towels, condoms, diapers, food solids including compost and coffee grounds, cooking oils, grease, hair, cigarettes, washing machine lint and cat litter out of your system. **These can clog your septic system leaching bed and pipes.**
- **Garburators should not be used with most conventional septic systems.** They will fill the tank much more rapidly and you'll need more frequent pump-outs.
- **Take household hazardous wastes to your municipal hazardous waste or recycling collection facility.**
 - Do not flush paint, cleaners, pesticides, medications, solvents, thinners, nail polish remover, kerosene, antifreeze, gas, diesel or engine oil down drains or into toilets. They can seep into and contaminate groundwater. They may also prevent your septic system from working properly.
 - Do not dump RV waste into your septic tank.
- **Use drop cloths or tarps when working with hazardous materials** such as paints, driveway sealers or wood stain to prevent spills from leaking into the ground.
- **Keep all runoff away from your system.**
 - Water from roofs, driveways or patios should be diverted away from your septic tank and leaching bed area.
 - Consider using interlocking paving stone for walkways and patios to minimize runoff and maximize water retention in the soil.
- **Check with the TBDHU before using septic tank additives.** Commercial septic tank additives do not eliminate the need for periodic pumping and can be harmful to your system. These additives can send more solid waste into your leaching bed where they could cause clogging and premature failure of the leaching bed. Some additives may also contain chemicals that can pollute groundwater.
- **Keep an "as-built" system diagram** in a safe place for reference and to provide potential future owners with a copy.
- **Keep a record of system pumping, maintenance, and repair.**
- Ensure renters or guests are aware of your septic system and its proper use.



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(SOURCE: Conservation Ontario)