



Water Quality

Clean Water...It Starts with You

Onsite Sewage Systems

We depend on clean water. Not only does it provide a home for plants and animals, and drinking water for people, but it provides recreation, tourism and job opportunities. Many of us don't realize how our daily activities affect the water quality in our local marine and fresh water bodies.



Did You Know?

- **If you live in an area with storm drains...** when you wash your car, the soapy water and debris can run off your driveway into a storm drain that empties directly into local water bodies.
- **If you have an onsite sewage system such as a septic system...** that is not properly sized, constructed or maintained, the drainfield can become plugged which can cause partially treated wastewater to surface on your lawn or in ditches which lead to local water bodies.
- **If you live on a farm or ranch...** livestock manure, sediments and improperly applied pesticides and fertilizers can contaminate local water bodies.
- **If you are a boater...** the dumping of sewage, leaking fuel and oil and using toxic cleaning products can threaten water quality, especially near the shoreline.

These are just a few examples of nonpoint source pollution. It is different from point source pollution

which comes from well defined sources, such as a sewage pipe or industry pipe. Nonpoint source pollution comes from many places. It's not easy to identify or control, and all of us, often without knowing, contribute to it. Although progress has been made in reducing nonpoint and point source pollution, *nonpoint* source pollution remains a leading threat to water quality in BC.

It All Adds Up

Small amounts of nonpoint source pollution from each one of us may not seem to be a problem. But the combined effects of pollutants from almost four million British Columbians is threatening our clean water resources. Closed beaches, contaminated shellfish beds, fish kills and unsafe drinking water are just some of the environmental impacts.

We can reduce nonpoint source pollution. You can make a difference as an individual or by joining or forming a community stewardship group which cares for a local waterbody. BC Environment (now called Ministry of Water, Land and Air Protection) has produced five **CLEAN WATER** brochures: nonpoint source pollution, urban runoff, onsite sewage systems, agriculture and pleasure boating. All provide tips that people can follow to reduce or prevent nonpoint source pollution. This brochure focuses on **onsite sewage systems** and water quality.

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How Do Onsite Sewage Systems Work?

Onsite sewage systems are effective at treating household sewage if designed properly and maintained regularly. In typical onsite sewage systems, the wastewater from toilets and other drains flows from your house into a tank that separates the solids and scum from the liquid. Bacteria help break down the solids into sludge. The liquid flows out of the tank into a network of pipes buried in a drainfield of gravel and soil. Holes in the pipes allow the water to be released into the drainfield. The soil, gravel and naturally occurring bacteria in the soil filter and cleanse the wastewater. So...

What Can Go Wrong?

- Onsite sewage systems can fail and untreated wastewater can be carried to nearby water bodies threatening human health, causing excessive algal growth and harming aquatic life.
- If your onsite sewage system is not properly located on your property or in an appropriate depth of suitable soil, the system may not fully treat the wastewater. The wastewater can seep down into the ground water polluting drinking water supplies or rise to the surface and flow over the land into nearby water bodies.
- If you don't have your septic tank pumped out regularly, the solids and scum can flow into the drainfield and plug it up. If the drainfield gets clogged, untreated wastewater can rise to the surface threatening your family's and neighbours' health, reducing the value of your property and creating odours and the need for costly repairs.

- If you use too much water in your home, wastewater can be flushed out too quickly and solids can flow into the drainfield, causing it to plug. The less you flush or pour down your drains, the better your onsite sewage system will work.

What Are the Warning Signs?

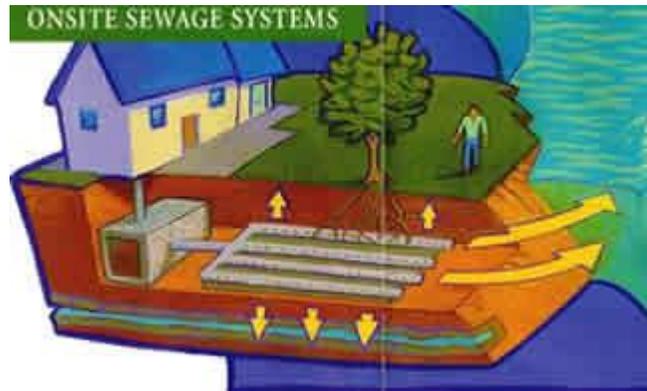
You may have a failing onsite sewage system if you notice one or more of the following signs:

- Unusually green or spongy grass over the system.
- Toilets, showers and sinks back up or take a long time to drain.
- Sewage surfacing on your lawn or in a nearby ditch.
- Sewage odours around your yard, especially after rain.

What Can You do About It?

The front cover shows a septic servicer pumping a tank. You too can do your part to prevent nonpoint source pollution. Follow these tips to protect water bodies near your onsite sewage system.

- You must obtain permission from an Environmental Health Officer or Public Health Inspector before installing, repairing or upgrading an onsite sewage system. This will ensure that your system meets local requirements for density, setbacks, size, location and construction.
- Take time to be aware of your system — owners have to play a role in the management and maintenance of their system. Create a map of your lot showing the location of the onsite sewage system and leave it for the next owners.
- Have your septic tank inspected yearly and pumped out every 2 to 5 years by a septic service company. Regular pumping is cheaper than having to rebuild a drainfield.
- Upgrade your onsite sewage system when you upgrade your home (i.e., when you add a bedroom or suite).
- Practice water conservation-use water wisely. For example, run the dishwasher only when full, and use low-flow showerheads and toilets.
- Don't use garburators — this will reduce the amount of solids and grease you put into the system.
- Don't put toxic chemicals down the drain because they can kill the bacteria at work in your onsite sewage system and can contaminate water bodies.
- Avoid pouring grease or fats down the drain.
- Use biodegradable household cleaners instead of bleach or other hazardous products.
- Avoid flushing pet wastes into the system — bury them instead.
- Don't drive, pave or put heavy objects or machinery over the septic field.
- Avoid planting trees or shrubs near the drainfield because their roots can damage or plug the pipes.
- Don't over water the drainfield or allow roof or perimeter drains to run onto the drainfield.
- Avoid using septic tank 'starters' or similar products. Allow the bacteria to act on their own.



Our individual actions add up!

You Can Make a Difference!

Protect clean water supplies by preventing nonpoint source pollution in the first place. It will take all of us working together cooperatively with neighbours, in our communities and with all levels of government to keep water clean.

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