

CottageLife E-BOOKS

# GREEN COTTAGING

How to preserve the cottage environment



Cottage Life

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**How to preserve the cottage environment**

*A Cottage Life Magazine E-Book*

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## Introduction

Why should we be green cottagers? If you think about it, a cottage without nature around it isn't a cottage at all. The why is the easy part; it doesn't take much to convince cottagers they have a stake in preserving the natural environment at the lake. It's the how that's more challenging. How can we safely use the lake water for drinking? Can we keep that lake clean by maintaining our septic system and preventing fertilizer from leaching into it, or do we have to do more? Can we make changes for our own convenience or comfort—clearing brush or installing outdoor lights, for example—without inadvertently harming the environment?

There's another question, rarely asked but often implied: Is green cottaging going to diminish the experience? The answer is no. Stewardship doesn't have to be a burden; cottagers don't have to be martyrs to be green. It's a matter of cottaging smarter. At *Cottage Life* magazine, we receive many questions from cottagers who, like all of us, just want to do what's best for the lake, the shore, the woods, and the wildlife around us. The answers are easier than you may expect.

## Drinking Water

**Do you have any recommendations for buying a UV water system for the cottage?  
I want to draw my drinking water from the lake instead of bringing it with me.**

—Tom Howell, Duck Lake, Ont.

First of all, let's go back to biology class. The UV light destroys microorganisms by gluing parts of their DNA together, which prevents the double-helix strand from “unzipping” for replication. No DNA replication means no reproduction.

Your UV system should have a flow rate of eight gallons per minute (this size will suit most cottages), a lamp strength of 40 millijoules/cm<sup>2</sup> or more, and a light output of 254 nanometres. Look for systems with an NSF 55A or a CSA B483 certification, says Jerry Capko, manager of the safe water program with the Simcoe Muskoka District Health Unit.

You'll need to pre-filter the water, though. “The UV is there for one thing only: to keep you safe from water-borne illness,” says Larry Miller of DSMI/Passport Water Purification Products in Thornton, Ont. If the water isn't clear enough, the light can't penetrate the viruses and bacteria.

At minimum, you'll need a five-micron sediment filter to reduce turbidity from dirt and algae, says Scott Macdonald, president of Envirogard, a company that manufactures water filters and purifiers in Richmond Hill. You may need other filters—for example, a carbon filter to remove tannins that darken water (colour blocks the light), or a greensand filter for iron and manganese, which can stain the quartz sleeve covering the unit's bulb and reduce the system's effectiveness.

A typical UV system costs between \$500 and \$1,500 (the more expensive ones include alarms that tell you when to replace the bulb). It's worth installing electrical protection (surge protector, voltage regulator, uninterruptible power source) to handle power fluctuations—that's about \$60 to \$100. Tack on \$20 to \$50 for a sediment filter, and up to \$2,000 for additional pre-treatment. You're probably saying, “Never mind, I'll just drink beer.” Don't worry: Many people who use UV need only the sediment filter, say our experts.

Capko has a tip: If lake neighbours use a UV system, find out how they pre-treat the water, and ask to see their sample results. “Everybody's straw is in the same trough. If they're not turning green and growing a second head, it's probably working

out for them.” —*June 2011*

**We have always drunk the water directly out of the lake in front of our cabin, which is 320 km northeast of Winnipeg. Last year, I installed a 500-gallon water tank outside the cabin. We filled the tank in the spring, and in August, when I was going to fill it again, I saw that great gobs of algae and other green slime had grown in it. Would the green stuff growing in the tank make the water poisonous to drink, or just unsavoury? The water is filtered through a small screen, does not smell, and does not taste any different. Is there something non-toxic that I could put in the water to keep the stuff from growing? This is not critical if the water is not unhealthy, but it would be nice to have the water *look* clean.**

—*James Thacker, Windsor, Ont.*

The short answer is, don't drink the water. "There are species of algae, especially blue-green algae, that release toxic chemicals when they break down," explains Jim Bishop, vice president of Environment Protection Laboratories and a former director of the Ontario Ministry of Environment and Energy (MOEE) Water Resources Branch. Bishop also recommends against drinking the water after it has been treated with a product that would be strong enough to keep the algae from growing.

However, the solution to preventing algae growth may be as simple as keeping light out of the tank. "Algae is the most primitive form of vegetation and relies on photosynthesis to live," Bishop explains. Since algae is already growing in the tank, before you use it again you'll need to drain the tank and give it a good scrub with an algaecide. You will likely also have to replace the connecting waterlines, which will be contaminated and which, by the way, should be a black PVC or rubber hose (rather than clear tubing) so they too keep out the light.

Even once you've got rid of the algae, it's important to keep in mind that to avoid contamination by bacteria, the MOEE recommends that all surface water be disinfected before being used for drinking water. However, it would be an impossible job for you to disinfect your tank and the water in it. Your safest and easiest route is to disinfect the water by boiling, chlorinating, or using a water-treatment device *after* the water leaves the tank and before you drink it, says Judy Patrick, a drinking water specialist in the ministry's Program Development Branch. She also advises using a filter of 5 microns or less to guard against parasitic contamination by organisms such as *Giardia lamblia*, which is spread by animals and is most prevalent in northern lakes. —*August 1995*

**When I received the results of having my water tested, I read in the accompanying note that water tested by the local health unit “is checked bacteriologically only.” That suggests, to me, that there may be something else in the water. Should I be worried?**

—Allan Best, Markham, Ont.

There may be other things in the water but, according to the Ontario Ministry of Health, most cottagers needn't be worried about them. When you send a sample to your local health unit, a provincial lab tests it for two things: total coliform counts and *Escherichia coli* (*E. coli*), a type of fecal coliform. If elevated levels (above five counts per 100 ml) of coliforms, or any *E. coli*, are detected, your water will be deemed unsafe for consumption. “Of all the things that could actually be a problem for cottagers, the ones to worry about the most are the two that you get tested for free,” says Jim Bishop, a water chemist and president of the environmental consulting firm Beak International in Brampton, Ont. Other bad guys, such as water-borne pathogens like *Giardia* and *Cryptosporidium*, are more likely to be present in samples where elevated coliforms are detected.

Some cottage areas may have regional non-bacteriological pollutants that won't be detected by the coliform tests. “Other water-based contaminants include heavy metals, nutrients, herbicides, pesticides, and volatile organics,” says Russ Calow, manager of analytical services with Lakefield Research, an international testing and consulting firm based in Lakefield, Ont.

The likelihood of these things showing up in your water depends on variables such as geology, geography, and the major economic activities in your area. If your lake is in a heavily farmed area, for example, you might want to get your water tested privately for herbicides and pesticides. Cottagers downstream from manufacturing operations may be more concerned about industrial runoff. Some private labs offer tests for heavy metals, nutrients, and aesthetic qualities such as turbidity and hardness.

—June 2001

**We often have huge flocks of seagulls floating in the middle of our small lake. In addition, several hundred Canada geese frequent the lake from summer until freeze-up. We enjoy the waterfowl visits, but we're concerned about fecal contamination from the increasing numbers of birds. (We've heard of fecal contamination closing public beaches.) Since the public health department won't test our lake water, how can I find out if the lake is a safe place for my children to swim? How should we go about testing it? Who else does this kind of testing?**

## **How often should it be tested?**

—*T. Bergere, North York, Ont.*

“Nothing passed in waterfowl droppings is a pathogen specifically harmful to humans,” according to Philip Stuart, a physician and a partner in Stuart and Miller, a Markham, Ont.-based manufacturer and distributor of water purification devices. The main problem cottagers with lots of gulls face is a mild affliction called swimmer’s itch, which happens in calm water when a parasite called schistosome trematode, which is excreted in bird feces, penetrates the skin of humans and causes an allergic reaction.

If the gulls on your lake hang around municipal sewage treatment plants and landfill sites, it is possible they could pick up organisms harmful to humans. (This is one reason that under some conditions large numbers of geese and seagulls are a health threat at public beaches in the city.) One such organism is *Pseudomonas aeruginosa*, a bacterium linked to ear and eye infections, which was found in water samples taken from Georgian Bay and lakes in Muskoka and the Kawarthas during a 1995 water-quality study by Patricia Seyfried, a professor emeritus at the University of Toronto who specializes in swimming-related illnesses. Gulls aren’t the only source of *P. aeruginosa*, however.

But even when disease-carrying pathogens are present in the water, swimming isn’t usually a problem, according to Stuart (who cottages on Lake Simcoe), because the pathogens aren’t necessarily harmful unless you have an open wound or your immune system is already weakened by an infection.

Testing your water may give you peace of mind. Water test kits designed especially for swimming water are available, as are drinking-water test kits.

Another option is to ship some of your surface water to a commercial lab, which will not only provide you with test results, but also help you interpret them. MDS Laboratories’ Joe Korpan, of London, Ont., and Mike Puccini, of Near North Laboratories in North Bay, both recommend cottagers phone ahead to discuss their concerns before sending a sample.

Since one water sample only tells you about one bit of water in one location at one particular time, however, it makes sense to share the cost with other cottagers on your lake and set up a number of tests at various locations for a snapshot of the lake’s water quality. —*October 1996*

**Is the water I get from municipal taps free of the parasites/cysts *Giardia* and *Cryptosporidium*? I live in Hamilton and cottage near Huntsville. If the local**

**municipal water is safe then I would just truck my water in to the cottage from Huntsville.**

—Warren Barton, Hamilton, Ont., via e-mail

*Giardia* and *Cryptosporidium* are water-borne pathogenic parasites originating from animal and human feces. Because they take the form of hard-shelled cysts in water, they are extremely resistant to many water-treatment processes, including chlorination. The most effective way to prevent cysts from contaminating municipal drinking water is to filter the raw water through a “conventional” water-treatment system, which has a number of processing stages, or barriers. These include: coagulation and flocculation, a chemical process that causes tiny, suspended particles in the water to clump and get heavier, encouraging them to settle; sedimentation, which further settles the particles; and filtration through anthracite (a type of coal) and sand, to screen any remaining particles. “The object of a conventional water-treatment system is to get the turbidity, or particle count, of the water down to the lowest possible reading,” explains John McGrachan, an environmental officer in the Ministry of Environment and Energy’s (MOEE) Drinking Water Section. “There’s always going to be a slight amount of turbidity, which means we can never be 100% sure that every cyst is removed, but we’re fairly confident that a well-equipped and well-operated plant will pose no health threat.”

Given that there’s no guarantee of absolute removal, it’s impossible to assure you that municipal tap water anywhere is “free” of the parasites. However, you can rest easy that in both Hamilton and Huntsville the municipal water-treatment facilities are equipped to filter out cysts.

Cottagers concerned about their municipal drinking water should contact the local water-treatment plant to find out the source of its raw water. If it comes from wells—used by about 400 of the 600 municipal water-treatment systems in Ontario—the cyst question is moot. “It’s very unlikely cysts would infiltrate ground water, especially municipal well systems,” says Will Robertson, microbiology adviser for Health Canada’s Environmental Health Directorate. The parasites are commonly found in surface water; therefore, if your cottage municipality is drawing its drinking water from lakes and rivers, ask if it’s being treated with a conventional system, which includes filtration, *not* just disinfectants. —October 1997

**How do I treat a dug well contaminated with coliform?**

—Jake Svanda, via e-mail

Unfortunately, coliform contamination can indicate an ongoing problem with your well. Treating it will disinfect your water for now, but it will probably get contaminated again. Even a little bacteria (a “safe” level of five total coliform per 100 ml) could mean that your system isn’t entirely secure, warns Andrew Barton, the manager of the Safe Water Program for the Grey Bruce Health Unit. “It’s like the Check Engine light in your car. Something’s not quite right.”

So inspect the well for defects—damage to the well cap, a crack in the casing — then call your local health unit for advice. Some problems you can fix yourself; others require an expert.

But let’s assume the contamination is a one-time thing (maybe some decayed vegetation got into the water). To disinfect the water, Theresa Warren, a public health inspector with the County of Lambton Community Health Services Department, recommends the shock chlorination method. This sounds complicated and a little violent, but it simply involves putting a lot of chlorine directly into your well water. (Unscented household bleach works fine. The amount depends on the well’s dimensions, regardless of the type of well—ask your public health inspector.) Once you’ve added the bleach, run the taps inside until you smell chlorine. The well is shocked! Turn off the taps and leave the system alone for 12 hours so the chlorine has enough time to kill the bacteria.

To remove the bleach, pump the well water out through a hose attached to a tap (inside or out, but away from the septic system) until you can’t smell the chlorine anymore. Wait three or four days, and test your water. To be safe, Warren recommends you then test it twice more. If you get three clean samples over three weeks, you and your well can go back to your previous healthy relationship. —*May 2012*

**Neighbours near our waterfront dug well use a company to fertilize their lawn. Our water turned yellow recently after a spraying. Are they allowed to spray fertilizer? Can we stop them?**

—*The Corys, MacLean Lake, Ont.*

Fertilizer? Thumbs down! We’re sorry to say that your neighbours are allowed to spray. However, Keith Reid, a soil fertility specialist with the Ontario Ministry of Agriculture, Food and Rural Affairs, says they’re not allowed to contaminate your water—that violates the Environmental Protection Act and the Ontario Water Resources Act. Call your local health unit, which will advise you about what to do with your water immediately, as well as the Ministry of the Environment’s Spills Action Centre, at (800) 268-6060, which is where you should report any kind of

contamination. The MNR will investigate and determine the source. If the lawn company is responsible, it could be ordered to do a cleanup. If it applied the fertilizer improperly, it could be charged. However, Reid says that barring some direct connection between the neighbours' property and your well, the fertilizer probably couldn't get into your water unless a heavy rainfall washed it there after it was grossly over-applied. So your water may have turned yellow for an unrelated reason, such as decomposing vegetation runoff or precipitated iron in the groundwater.

Sadly, all this information can't stop your neighbours from fertilizing the lawn. Maybe a copy of *Cottage Life* in the mailbox would give them the hint? —June 2010

## Septics and Outhouses

**We're wondering which is better for the environment: to drain dirty water from the kitchen sink into the septic system, or to throw it onto the ground. We have a regular septic system at our cottage, which handles one bathroom and a kitchen sink. We're concerned that the detergent in the dirty dishwater is harmful to the septic system. We therefore wash dishes in a bowl and throw the dirty water onto the ground behind our cottage, about 100 feet from the shoreline. The ground slopes towards the lake.**

—*Rudolf Czernecki, Toronto, Ont.*

It's a moot point, according to the Ministry of the Environment. To stay within the letter of the law (Ontario Regulation 374/81 of the *Environmental Protection Act*), you must direct water into a septic system or leaching pit; otherwise you're guilty of discharging sewage onto the surface of the ground. (The legislation doesn't distinguish between actual sewage and grey water.)

However, there's nothing in the dirty water produced in the normal course of hand washing dishes that would be harmful to your septic system or affect the bacteria working in the tank, according to Dave Packer of the MOE's Parry Sound district office. (You should use phosphate-free soap, but not because phosphates are harmful to the septic system; the phosphates simply pass through the septic system, into the ground, and from there—unless they are bound up in the soil or used up by vegetation—into the lake.)—*June 1992*

**With our increasing paranoia over unseen little buggies, more and more antibacterial soaps are coming onto the market. Can these be used safely in conjunction with our cottage septic system, or will they kill the good little septic buggies too?**

—*Joel Rotstein, Nine Mile Lake, Torrance, Ont.*

In large concentrations, antibacterial soaps—and, in fact, any other cleansers or disinfectants, such as bleach and drain decloggers—can kill the bacteria and microbiological life in the tank and halt the breakdown of sewage, according to Alex Campbell of Ontario's Ministry of Environment and Energy. Furthermore, dead

bacteria can clog the septic bed when they are discharged.

Small amounts of antibacterial soap, however, such as you'd use for normal day-to-day washing, shouldn't be a problem, he says. How much is too much? There's no way to tell, Campbell acknowledges, but two or three loads of dishes a day washed with antibacterial soap shouldn't harm the septic tank or tile bed. By the way, if your tank is inadvertently subjected to an overdose of cleansers, the disruption to the normal workings of the tank will be temporary; the tank's normal bacterial balance will re-establish itself as soon as you stop using the products. —*August 1997*

**The water from our drilled well is hard. If I install a water softener, can I run the softener “effluent” into the septic tank with no ill effects?**

—*Eric Dahlin, via e-mail*

With *no* ill effects? You may be taking your chances. Generally speaking, a water softener shouldn't hinder the operation of the sewage system if the system has been properly designed under the *Ontario Building Code*, says Sandy Bos, the on-site sewage system inspector for the Township of Muskoka Lakes and a member of the board of directors of the Ontario Onsite Wastewater Association. “But every time I see a problem with a backed-up septic, there's a water softener connected to the system. I think it's more than a coincidence.”

The case of *Water Softener v. Septic System* is ongoing. Many studies show that water softeners have no significant impact, but other research is less conclusive. Some of the chief arguments against softeners are that the salt in the backwash (which flushes out accumulated dirt particles) can corrode the tank, interrupt the bacterial action in the septic, and negatively affect the soil in the septic field, and that the volume of water from the backwash is too much for the septic system to handle. So far, science hasn't quite given us a straight-up “guilty” or “not guilty.”

If you must soften, there are ways to lessen the impact, according to the Ontario Rural Wastewater Centre: Treat only the water you need to soften; use a newer, more efficient softening device; and have the unit recharge based on water flow, not at regular time intervals, to avoid sending backwash into the system more often than necessary.

Or, avoid the septic system entirely. “Ideally, you *wouldn't* direct the water softener backwash into the septic system,” says Bill Goodale, a consulting engineer with C.C. Tatham & Associates who does septic inspections for the Township of Tiny, Ont. Instead, have the softening system waste water go into a separate, small leaching pit. —*Summer 2012*

**An old septic tank installed on our property about 50 years ago hasn't been used in the last 10 years. Are there regulations concerning its disposal?**

—Richard A. Beattie, Ottawa, Ont.

Not under the Ontario Building Code. But according to James Ross of the Ministry of Municipal Affairs and Housing, it's possible that a local authority, such as your municipality, the health unit, or a conservation authority, may enforce its own rules. So check with them to be sure.

Regardless of what they say, you shouldn't leave the tank as is. "It's a buried cavern, so it's a health and safety hazard," says Doug Joy, manager of the University of Guelph's Ontario Rural Wastewater Centre. If your tank is steel, eventually it will corrode and possibly cave in.

First, get the tank pumped out, if necessary. Then, you have a few choices. You can hire an excavator to remove it and take it to a landfill, or break it up, leave the pieces in situ, and then backfill. But "a lot of cottage owners have more time than money," says Joy, so a DIY option is to leave the tank intact and fill it with granular material, such as gravel. Then, if the tank gives way, the space isn't empty.

Ted Thompson, a building inspector with the Township of the Archipelago, recommends you consider the size of your tank before opting to fill it up yourself. "If you have a thousand-gallon tank . . . that could take some work." —May 2011

**I've heard that full septic fields are not beneficial to the surrounding water quality, whereas outhouses have some redeeming attributes in this regard. Is this true?**

—Grant Bailey, Ottawa, Ont.

When it comes to handling black water, both forms of waste disposal are equally effective *if* they're properly constructed, according to Ray Banach, president of On Site Assessments, a waste-water system design company in North Bay, Ont.

Septic systems use a multi-stage process to handle waste. When you flush your toilet the plumbing delivers the black water to the septic tank, where bacteria start to consume the sewage. At the same time, the liquids and solids begin to separate. The solids settle to the bottom and are periodically pumped out. The liquid is filtered through a septic field, eventually percolating into the watershed.

Outhouses use a low-tech approach. The solids break down through composting, and the relatively small amount of liquid that leaches out is filtered by the soil around the pit. When the pit is full, you just fill it in, and move the structure to a new hole.

Both methods have minimum setback restrictions to prevent waste from contaminating nearby water systems. The bottom of an outhouse pit, for example, must be at least 90 cm above the high groundwater table.

Unlike outhouses, however, septic systems are also designed and sized to accept and treat grey water—the waste water from sinks, showers, and other fixtures. “People don’t go to the cottage and just use the privy,” says Banach. “The other wastes are just as important.” If you throw your wash water off the back porch (which is technically illegal under provincial law), you’re also tossing the phosphorus and bacteria in the water. As a result, a cottage that uses an outhouse for black water must also have a grey water leaching pit, which comes with its own set of guidelines.

The notion of outhouses being better than septic systems may stem from the fact that they generally impose a lower-impact lifestyle. “We won’t attach a dishwasher to an outhouse or dump a hot tub into it,” says Max Burns, author of *Country & Cottage Water Systems*, published by Cottage Life Books. “The problem with septic systems is that we treat them like a city sewage system that we can use at our leisure.”

But these days, the reality is that cottaging often includes showers, the odd party’s worth of dishwashing, and maybe even a washing machine. For this reason, and the potential health risks from animals getting into a poorly constructed outhouse and spreading fecal matter, the provincial government encourages septic systems over outhouses. —*June 1992*

**Is there a product that makes the waste in the outhouse break down faster? Ours has no odour, but it is filling up, and we don’t want to move it.**

—*Paula Purvis, Ella Lake, Ont.*

Sometimes the truth is messy: Outhouses fill up, and “the idea is that you move them,” says Mike Gooch, chief building official for Huntsville, Ont. There are products out there that may help, but our experts say, why tinker with nature?

“As long as you have lots of oxygen and bacteria—which, in an outhouse, you do—it’s best not to add anything,” advises Ted Thompson, a building inspector for the Township of the Archipelago. “We have a ton of outhouses in our township. I don’t know of anyone who adds anything to theirs.”

Doug Schultz, aseptic inspector for the Township of McNab Braeside, agrees. If you can’t relocate the outhouse, he suggests having it pumped out.

A lot of the bulk that builds up in outhouses comes from toilet paper. If you must add something, choose a product containing bacteria that can break down cellulose, such as EcoEthic’s BioSurge. Say no to anything with lye, formaldehyde, quaternary

ammonium, colour, fragrance, or a hazard symbol.

Ultimately, how fast the biffy fills up depends on how often it's used and the size of the hole, says Sandy Bos, member of the Ontario Onsite Wastewater Association, on-site sewage-system inspector for the Township of Muskoka Lakes, and the happy owner of an outhouse that hasn't moved in 20 years. A product may "extend the outhouse's life a little bit," but it won't prevent the inevitable.

As Thompson says, "There's nothing magical out there." So if a product claims otherwise, that might just be a load of . . . well, you know. —*Summer 2011*

## Antifreeze Issues

**We completely empty our water-supply lines in the winter, but we add antifreeze to the various drain traps in the cottage, including the toilet. My concern is the effect the antifreeze might have on the septic tank when we come to use the system again in the spring or occasionally in the winter. Is antifreeze harmful to the septic system? Does it kill the bacteria and disable the breakdown process? Which antifreeze would you suggest with specific regard to septic systems?**

—Terry Samuel, Etobicoke, Ont.

Everybody we talked to—from experts at the Ministry of the Environment (MOE) to antifreeze manufacturers—agrees that if you’re going to use antifreeze in *any* part of your plumbing system, the best choice is propylene glycol, also known as plumbing or RV antifreeze. Propylene glycol is widely available at hardware stores like Canadian Tire, is non-toxic (it’s an approved food additive), and can also be used in intake lines if necessary. It will have no negative affect on the bacteria in your septic system, or on the surrounding environment when it leaves your septic system. —May 1993

**I use RV antifreeze to winterize my inboard/outboard. I’ve heard that in the spring, some people discharge the antifreeze directly into the lake. Is this harmful?**

—Norma Goodger, via e-mail

Well, it’s certainly not helpful. “The quantity of antifreeze being talked about here would probably be insignificant, but it’s unnatural in a very localized way,” says John Casselman, an adjunct professor in the biology department at Queen’s University. It’s like we all learned as toddlers: Don’t stick stuff where it doesn’t belong. “If it didn’t come from the water, you shouldn’t put it *into* the water,” says Casselman. “That’s a heckuva good rule.”

Monica Nowierski, an aquatic risk assessment scientist with the Ontario Ministry of the Environment, says that, along with immediate, local effects to the lake—some dyes in the antifreeze may cause the water to change colour, for example—there are secondary effects. “Anything that gets into water undergoes a degradation process,” she explains. This degradation depletes oxygen levels in the lake, leaving less for the

aquatic life. “It would be frightening if everyone on the lake started doing this,” she says.

Bob Eaton, the director of environmental services for Boating Ontario, suspects that boaters may feel that propylene glycol (RV antifreeze) is okay for the water because it’s less toxic than ethylene glycol (common in internal combustion engines). “It still shouldn’t go in the lake,” he says. “People say, ‘But it’s non-toxic!’ and I say, ‘Well, drink a glass of it, then.’” Good point. —*April 2012*

**I am curious and concerned about the use of methyl hydrate as a winterizing fluid. Our plumber has started to use straight methyl hydrate instead of the usual plumbing antifreeze to winterize the entire plumbing system at our cottage in the Fenelon Falls area.**

**My layman’s knowledge of methyl hydrate is minimal, but I do know that it can be highly dangerous to human health and, possibly, to the health of my cottage’s plumbing system. I thought that alcohol-based fluids evaporate at certain temperatures when left uncovered. If that is so, then wouldn’t this last fact alone make methyl hydrate troublesome as an effective substitute for a propylene glycol type of plumbing antifreeze? In addition, is there not a danger of ingesting some of it when we reopen the system in the spring? Just how extensive is the use of methyl hydrate and how risky is it?**

—*Leon B. James, Fenelon Falls, Ont.*

Methyl hydrate, also known as methanol, is widely used in windshield-washer fluid and gas-line antifreeze, for thinning shellac, and as cooking fuel on boats. Because it is highly toxic, it is *not* recommended for use as a plumbing antifreeze. Any traces remaining in the drinking-water system will become poisonous, cautions Marina Kovrig of Recochem, a manufacturer of a variety of antifreezes for automotive and plumbing applications.

However, methanol will not harm your plumbing system, and some cottagers use it to winterize just the toilet system. Low winter temperatures prevent evaporation, according to Guy Titley, a technical representative for Dow Chemical Canada. —*September 1992*

## Lake Health

**We sometimes hear people say they love their cottages so much they want their cremated remains to be scattered over their property or the lake. We too have considered doing this—is it legal?**

—*Pamela Carlaw, Toronto, Ont.*

The scattering of cremated remains is not uncommon, and is an important part of the grieving process for some people, says John Wesley Oldham, a United Church minister who has participated in such memorials near his Muskoka cottage.

Under Ontario's *Cemeteries Act*, it is legal to scatter cremated remains over public or private land or water, though the remains may only be legally *buried* in a cemetery.

“We tell people they may scatter cremated remains anywhere on their own property. If they scatter on other private property, we suggest they seek permission first,” says Dan Atkinson, manager of The Simple Alternative, a Toronto service that offers an alternative to conventional funeral homes.

Scattering cremated remains is actually friendlier to the environment than burying a human body, notes Atkinson. He offers some practical advice for people involved in this emotional procedure. First, don't be surprised by the weight of the remains—anywhere from 6 to 12 lbs—which consist of bone fragments reduced to a fine powder. (They will be returned to the family by the crematorium in a heavy vinyl container; there's no need to purchase an additional container unless you particularly want to.) Remember to stand upwind as the remains are being dispersed, to avoid the trauma of having them blow back on you. And because cremated remains float, if you are scattering over water be sure to start far enough offshore that they won't drift back in. —*October 1993*

**A neighbour on our lake is blasting the shoreline in order to build a boathouse. The resulting scar is heartbreaking. I do know that this property owner has a building permit but, to my knowledge, did not receive any further approvals.**

**Is there anything we can do? How should we proceed?**

—*Kelly Pannell, Gull Lake, Ont.*

Here's the thing: No matter what crimes against Nature you think this neighbour is

committing, it's possible that a building permit from your municipality is all that's required. Then again, it's also possible that your neighbour needs multiple permits or approvals from environmental agencies and didn't get them. It depends on a number of factors. For example: The size of the boathouse (the Ministry of Natural Resources says a permit may be required if the boathouse covers more than 15 m<sup>2</sup>); if any work would harm fish or fish habitat, under the federal *Fisheries Act*; if blasting would affect adjacent Crown lands; or if there's a chance that contaminants are getting into the water (the Ministry of the Environment has regulations about this).

Blasting or no blasting, some cottagers—the ones who don't read *Cottage Life*, we assume—may not realize that they should check with multiple agencies (the MNR, Fisheries and Oceans Canada, the local conservation authority, Transport Canada and, in some cases, Parks Canada) before they do any work on or near the water.

As well, Natural Resources Canada has laws about purchasing, storing, and transporting explosives for personal use, and some municipalities do prohibit blasting. But the Township of Minden Hills, where you and Captain Dynamite are cottagers, does not. "If we don't have municipal bylaws to enforce, there's nothing we can do about it," says Paula Stamp, a bylaw enforcement officer with the township.

Your first step is to call your local MNR office—for Gull Lake, that's the Minden area office or the Bancroft district office. (A cottager on a lake governed by a conservation authority, on the other hand, would treat that agency as the first point of contact.) Since you don't know for sure that your neighbour is missing permits, you'll probably want to proceed discreetly . . . or this whole situation could blow up in your face. —*May 2012*

**Our cottage is on a bay with only four other cottages. When there is a stiff northwest wind, we see what looks like soap suds or foam at the water's edge at the end of the bay. Is this stuff actual soap suds blowing in from somewhere else on the lake? Or is it some other form of pollution? Do we have to worry about the water?**

—*Barbara McCowan, Pointe au Baril, Ont.*

The foam you're describing is probably not soap suds; according to Jan Beaver, chief of the environmental assessment unit for the Ministry of the Environment, it's most likely a result of decomposing organic matter in the lake. All lakes contain organic matter such as algae, aquatic plants, leaves, stumps, branches, and other natural underwater debris. As it decomposes, this matter releases fatty acids, similar to the fatty acids found in soap. These act as surfactants, which means they lessen the surface