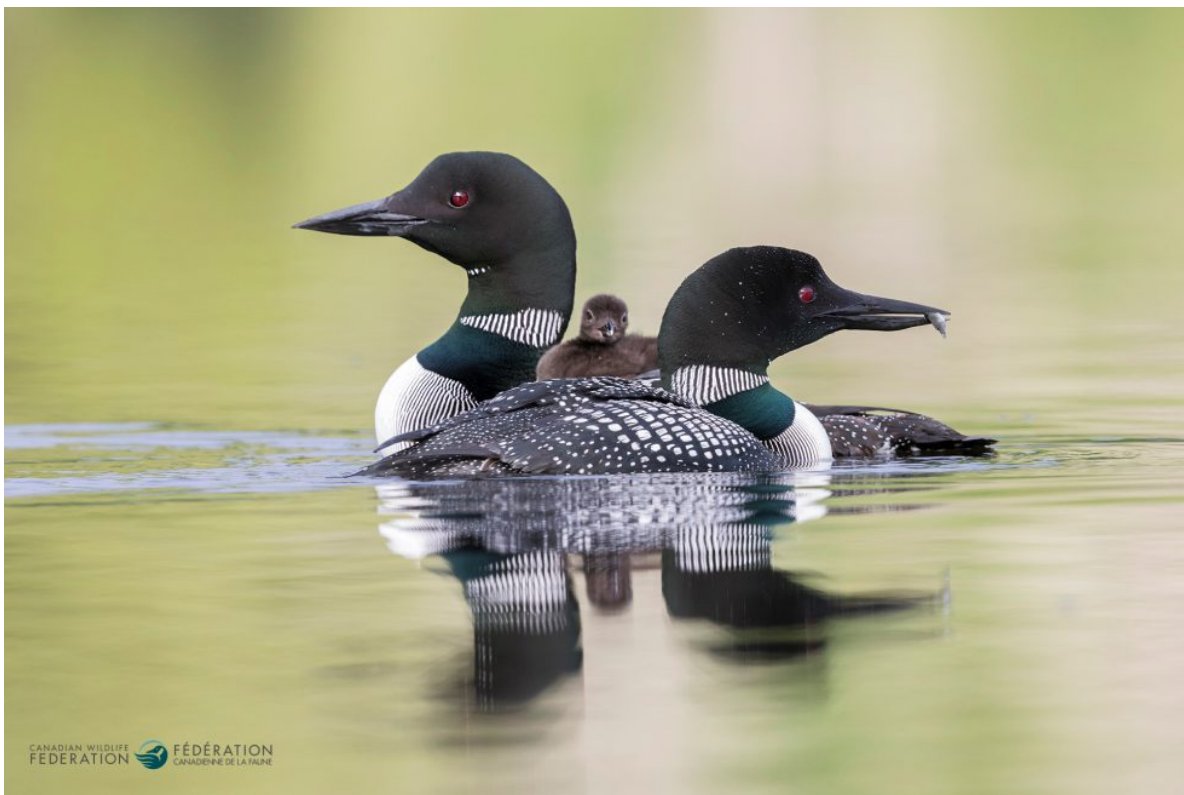




What's Happening to Canada's Common Loons?

by Terri-Lee Reid | Jul 13, 2022 | [Lake](#)



Mention Common Loons and images of pristine lakes echoing with the enchanting calls of these beloved water birds probably comes to mind.

However, recent data reveals a cry for help might be necessary to save this iconic Canadian species.

[Using four decades of data from the Canadian Lakes Loon Survey, Birds Canada](#) looked at the impacts of several perceived threats to loon productivity. To measure productivity, they looked at the number of six-week-old young per pair. To keep loon populations healthy, productivity must be greater than 0.48 six-week-old young per pair per year. If productivity falls below this threshold, loon populations could decline.

How are Canada's loons doing based on the data? In short, not that good! Over the past 30 years, their productivity has declined at a rate of -1.4% per pair per year. In the early '90s, loons were producing more than 0.7 young per pair per year on average. Compare that to recent years where loons are, on average, producing 0.55 young per pair per year and we're trending a little too close to that 0.48 number.

While declines have occurred throughout most of Canada, rates of decline are not uniform across the country. The greatest declines happened in the Atlantic provinces. Since the early 2000s, loon productivity has dropped below 0.48 young per pair per year. While declines occurred in British Columbia, Ontario and the Prairie provinces, they aren't as severe, with productivity remaining above the 0.48 young per pair per year threshold for most years. Things are a little better for loons living in Quebec lakes – their productivity seems to be holding steady.

Let's look at some of the apparent risks faced by [Common Loons](#) and see what the Canadian Lakes Loon Survey data had to say about each of them.

Shoreline Development and Boats



We know that shoreline development and [boats](#) pose significant risks to loons. While a natural shoreline provides nesting areas and helps to keep predators at bay, a developed shoreline can destroy nest sites and makes the area more attractive to predators. Boats can injure and kill both loon adults and chicks and boat wakes can wash out their nests. While high levels of shoreline development and boating can substantially reduce the number of loon pairs on a lake, turns out they're not the main threat.

Early Spring Temperatures



When we have a cooler April fewer young per pair are produced, while warmer April temperatures produce more young per pair. There is a species of black fly that has a strong affinity for feeding on Common Loons, so much so they are often nicknamed the “Loon Black Fly”. Cooler April temperatures results in more of these black flies, which harass loons so badly that some may abandon their first nests. While some loon pairs might re-nest, many don’t, and loon productivity suffers. Cooler spring temperatures also causes ice-off to occur later. Later ice-off delays the return of breeding loons, shortening their breeding season. Nevertheless, cooler April temperatures are not the main threat.

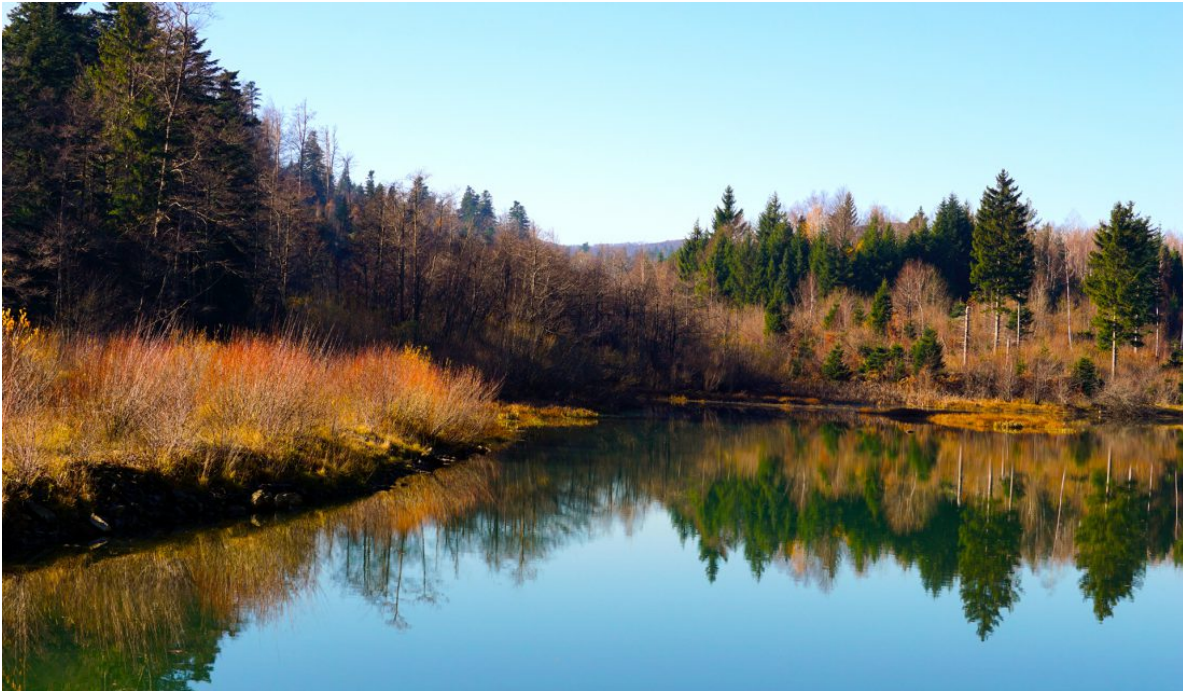
Eagles & Cormorants



According to the Canadian Lakes Loon Survey data, eagles and cormorants are not having a negative impact on loon productivity. It was thought that eagles, which prey on loon eggs and their young, and cormorants, which may compete with loons for fish, might be having an impact on loon productivity. Turns out this isn’t the case. In fact, lakes with Bald Eagles and Double-crested Cormorants actually have better loon breeding habitat. Perhaps it’s because eagles and cormorants are found on lakes with lots of fish which are a key part of a loon’s diet.

In truth, it may be a combination of the next three factors affecting loons the most:

Acid Rain



Acid rain impacts loons in a couple of ways. First, acid rain and the toxic metals associated with it limits fish growth, reproduction, and survivorship. This means there is less fish for young loons to feed on. Secondly, high acidity is linked to an increase in the amount of mercury in the food chain. Because loons are top predators, they are put at an even greater risk from mercury toxicity in acidic lakes. The Canadian Lakes Loon Survey data agrees. Their data shows that loon productivity was definitely lower over time in more acidic lakes. What's surprising is that Canada and the U.S. have seen significant decreases by as much as 90 per cent in the pollution that causes acid rain and many of Canada's lakes are not as acidic as they used to be. However, loons are raising fewer young on more acidic lakes. While it's not clear why, it may be connected to mercury and climate change.

Mercury



During the combustion of fossil fuels, mercury is released into the atmosphere, and it makes its way into lakes. High levels of mercury in loons may be lowering their productivity. Adult loons with high mercury levels are lethargic and spend less time incubating eggs and feeding chicks. High levels of mercury in chicks causes them to have weaker immune systems and they have difficulty escaping predators. Loons don't only suffer directly from high levels of mercury. When their preferred prey, Yellow Perch, have high mercury levels loon production suffers.

Climate Change



If predictions for changes in water levels and increased lake water temperatures are correct, then climate change could exacerbate the issues with acid rain and mercury. When water levels recede, lake sediments are exposed to oxygen and various chemical reactions take place. When water levels return to normal, the result is an increase in acidity. When lakes become more acidic, it causes an increase in the activity of methylating bacteria which results in more mercury in both fish and loons. Additionally, as water temperatures increase, the activity of methylating bacteria is further enhanced which further increases mercury levels in fish and loons. As climate change results in higher water temperatures and changes in water levels become more common, loons will be exposed to more mercury which will result in increased declines in their productivity.

Reverse the Trend



This doesn't have to spell the end though for this beloved bird. There is still time to turn things around. Canada has an estimated Common Loon breeding population of 240,000 pairs who, on average, are producing more than the 0.48 young per pair per year – and that's good news to hang on to. We just have to make sure they stay above that threshold – and we can all play a role! How? Check out the suggestions below and see how you can help:

- [Create or enhance your shoreline buffer](#) – A strip of vegetation that borders your shoreline is critically important to the health of your lake. A natural shoreline will not only create lots of safe nesting areas for loons but will help protect against erosion and reduce runoff.
- [Leave overhanging vegetation](#) – Overhanging vegetation shades and cools the water and provides important habitat for wildlife, including fish. Fish often feed and spawn below overhanging vegetation and the leaves, twigs, fruit, flowers and even insects found on overhanging vegetation provide an important food source for many species. Loons will be sure to benefit from the enhanced fish population!
- [Be a careful boater](#) – Not only can boat wakes destroy loon nests but boats themselves can injure or kill young chicks and cause the young to be separated from their parents. In Alberta, British Columbia, Manitoba, Ontario, Saskatchewan and Nova Scotia, boaters must observe the unposted speed limit of 10 kilometres per hour within 30 metres from shore, unless other limits are posted.

[Try to reduce your ecological footprint.](#) By doing so you can help reverse the impacts of acid rain, mercury, and climate change on loon productivity.

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Waterways Under A-Salt!

by [Terri-Lee Reid](#) | Dec 2, 2021 | [Lake](#)



If you thought the use of road salt only impacted our lakes and rivers in the winter, think again!

Road salt, usually sodium chloride, is applied to our roads, sidewalks and parking lots in the winter to help keep these areas safe and to reduce accidents. While it serves a valuable purpose in winter, however, the chloride doesn't just stay on these surfaces. Eventually, high volumes of salt find their way into nearby water bodies through runoff and leaching.



[A recent study](#) from the University of Toronto sampled water from the Humber River, Don River, Etobicoke Creek and Mimico Creek during July and August 2019. Their results showed that close to 90 per cent of their locations surpassed Canada's chronic exposure guidelines for chloride and 13 per cent had chloride concentrations above the acute exposure thresholds, even in summer. The highest concentrations were found in waters flowing within city limits.

Impacts on Wildlife



What impact do these high concentrations have on wildlife? For starters, it's enough chloride to negatively impact up to two-thirds of aquatic life at various sites. Increased chloride concentrations can result in physiological stress in freshwater organisms and can severely interfere with their osmoregulation — their bodies balancing water-salt ratios — which can result in death.

High chloride concentrations have been found to alter food webs and biotic communities. While some species could get used to the increased levels of chloride in their aquatic environment, there are others that won't, and this could include already at-risk species like the Endangered Redside Dace, a fish from the minnow family that lives in the study area.

The use of road salt is one of the biggest culprits in making our waterways saltier. Canada uses an estimated seven million tonnes of road salt each year on our highways and streets. While progress is being made to reduce our dependence on road salt – including the use of brine, beet juice and infrared pavement temperature sensors – there are other options for residents and private companies.

Saltless Alternatives



The last thing anyone wants is for someone to slip and fall on their driveway or deck. The alternatives below may just be what you need to not only keep you, you family, and visitors safe, but your lake too!

- If you can, clear the snow with a shovel, plow or snowblower. This will help prevent ice from forming.
- Instead of using salt, use:
 - Sand.
 - Non-clumping cat litter.
 - Coffee grinds.
 - Fireplace ashes.
- If you must use salt, remember there's a limit to its effectiveness. Using more doesn't produce more results, so use only recommended amounts. Remember, if it's below -10°C it's generally too cold for salt to work.

Be mindful that these alternatives can still runoff into nearby water bodies. Come springtime, you should clean up as much of these alternative materials as you can to keep them from entering your lake.

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11 Activities Lake Groups and Their Members Can Participate in for a Healthy Lake

by [Terri-Lee Reid](#) | Aug 20, 2021 | [General News](#)



One of the functions of lake groups is to implement programs that will rally shoreline property owners to help protect lake health and biodiversity.

If you are looking for ways to engage property owners on your lake, there are many programs and activities that you can choose from. Below is a list to get you started!

1. We know the importance of healthy [shoreline buffers](#). **Organize a day with local native plant suppliers** where shoreline property owners can purchase plants. Perhaps there could be an incentive, 10 per cent off for example.
2. **Connect with [NatureWatch](#)** – a host of citizen science programs that will be sure to inspire! Your shoreline property owners can participate in:
 - [FrogWatch](#) – track changes in frog and toad populations
 - [MilkweedWatch](#) – help researchers identify the location of milkweed plants to track the health of Monarch Butterflies

- [PlantWatch](#) – help determine ecological changes that may be occurring by recording the flowering times of certain plant species
 - [WormWatch](#) – help scientists study the species of earthworms that are in Canada
 - [IceWatch](#) – scientists need help in acquiring data on the freeze-thaw cycles of our lakes
 - [SnowTweets](#) – Help snow and ice researchers at the University of Waterloo by tweeting the depths of snow in your area
3. **Birds Canada offers many citizen science programs** that contributes to conservation action! Be sure to check out:
- [Breeding Bird Survey](#) – this provides long term bird population trends informing scientists and wildlife managers. This program involves a little bit of skill as you have to be able to identify birds by both sight and sound. Observers survey a pre-determined route one day per year between May 28 and July 7.
 - [Canadian Lakes Loon Survey](#) – this involves monitoring loon chick hatch and survival to track Common Loon breeding.
 - [Christmas Bird Count](#) – this is conducted on one day between December 14 and January 5. The results are used by biologists and naturalists to determine bird population trends.
 - [Christmas Bird Count for Kids](#) – inspired by the Christmas Bird Count but this one is geared towards kids!
 - [Great Backyard Bird Count](#) – regardless of whether you are an expert or just beginning to identify birds, this citizen science program is for you! It is a four-day event where people watch, count, learn and celebrate birds.
 - [Project NestWatch](#) – submit your nest observations to contribute to important research and conservation efforts.
4. [Help the Canadian Wildlife Federation monitor bat houses and roosting sites](#). By uploading your observations you'll help bat researchers gather important information to help track the state of Canada's bats and help determine the best bat house design.
5. Check out the [Government of Canada citizen science portal](#). Here you'll find information on programs like:
- [eButterfly](#) – contribute to science by tracking your butterfly sightings and locations.
 - [Mission Monarch](#) – help conserve Monarch Butterflies by sharing your observations of Monarchs and milkweeds.
 - [Water Rangers](#) – affordable test kits with an open-data platform that allow you to collect and share water quality data.
6. Check with your Ministry of Environment to see if they have **water quality and water clarity** sampling and monitoring programs.
7. It's important to properly **clean boats** to help prevent the spread of aquatic invasive species. Arrange a boat washing demonstration by your invasive species council or provincial government.
8. Organize spring and fall **shoreline clean-ups**.
9. If there are **invasive species in your area**, have someone come in from your invasive species council or provincial government to present on how to identify them, their impacts and how to properly dispose of them.
10. An improperly **functioning septic system** can lead to an overabundance of weeds and algal blooms. It can affect water quality and habitats for wildlife, not to mention health risks. Have someone come in and present on the importance of having a well-maintained septic system or holding tank.
11. Encourage property owners to **track the biodiversity found in the area** by utilizing the free iNaturalist app. Download it at [iNaturalist.ca](#) and create a [project](#). Host a day to encourage local owners to use the app and record all the plant and animal species they can find. It's a great way to take a living snapshot of the wildlife found along the shores and properties. You can host an annual day each year to see what new species are attracted to the area. It's always a great way to monitor the success of Love Your Lake initiatives implemented along your shoreline.

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Turn Off the Lights!

by [Terri-Lee Reid](#) | Jul 14, 2021 | [Property](#)



We keep learning how artificial light impacts wildlife.

While many species can be affected, migratory birds are particularly sensitive to lights left on at night.

Migratory Bird Calls



The light from ongoing construction can disrupt species' feeding or breeding behaviours.

[A recent study](#) looked at the impact of [light pollution](#) at night and how this affected the calls of migratory birds. The study took place in the U.K. and looked at thrushes. They found that in the brightest urban areas, call rates at night were up to five times higher in comparison to darker villages. The results show that even without high-rise buildings in modest urban areas, bird migration can be impacted, and nighttime lighting should be managed.

Wondering what an increase in call rates means? [A University of Michigan study](#) found birds that produce calls during overnight migration end up colliding with lit-up buildings much more frequently in comparison to closely related species that do not make calls. The study says birds that are disoriented by nighttime artificial light produce flight calls that may attract other nearby birds. This creates a cycle of increased death rates as disoriented birds guide other [migrating birds](#) to the artificial light.

Night Owls?



Gorgeous night sky from Armstrong Basecamp. Photo by Samuel Hoffe.

Many songbirds migrate at night. While it may not be known exactly why, there are some thoughts on the matter. Some think they migrate at night to avoid predators, to not interrupt their daytime feeding and to fly during calmer skies.

Not only are birds affected by artificial light but so are many other animals, even plants. The Earth's predictable day and night, light and dark, rhythms have governed critical behaviours such as sleep, reproduction, protection from predators and foraging for billions of years.

To find out more about artificial lighting and how you can reduce the impact on your property, be sure to visit [Shoreline Lighting – Just How Important Is it?](#)

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Protecting Your Gardens, Lawn...and Your Lake

by [Terri-Lee Reid](#) | May 11, 2021 | [Property](#)



Many people work hard to have a lush, green lawn.

It's a labour of love for many – the mowing, raking, weeding, fertilizer and pesticide applications – it brings a definite sense of pride.

But did you know that what we do on our properties can impact the health of our lakes? Up to 35 per cent of precipitation can run off lawns and enter nearby water bodies – carrying with it the pesticides and fertilizers from our lawns.

In response to a 2017 survey, 95 per cent of Canadian households reported having a lawn or a garden. Of these households, 57 per cent reported using fertilizers or pesticides, as [listed by Statistics Canada](#).

Alarming, a U.S. Geological Survey (USGS) study found higher concentrations of some pesticides in urban waterways in comparison to agricultural settings. Some of these pesticides included:

- **Glyphosate** – the active ingredient in Roundup and the most widely used herbicide in Canada. It is used in many sectors including agriculture and forestry as well as residentially. Reports show that glyphosate kills beneficial insects which also impacts insect eating birds. It also impacts non-target plants and is toxic to fish.
- **2,4-D** – in urban areas it is used to limit broad leafed weeds such as dandelions, ragweed and poison ivy. It's reported to affect non-target plants and can end up in water, putting at risk the plants and animals that consume it.
- **Imidacloprid** – a popular garden insecticide. It is also used in agriculture and has been found in aquatic environments in Canada at concentrations of up to 290 times the acceptable level for aquatic invertebrates. [Imidacloprid](#) kills aquatic insects, many of which are an important food source for fish and birds. But there is a bit of good news – recently, Health Canada made the decision to phase out certain uses of imidacloprid.

Deadly When Combined

When pesticides are regulated, they are assessed on an individual basis. But in the real world, different contaminants intermix, not only with other pesticides but with other chemicals such as pharmaceuticals and flame retardants, and these combinations can be even more toxic.

There can be multiple impacts and their use can be linked to reproductive effects, endocrine disruption, birth defects, cancer, kidney and liver damage, and developmental changes in many species. It can affect some species' ability to care for their young. It can affect birds' ability to sing and attract a mate, while it can impair the mobility, feeding and navigation in bees.

While all pesticides are toxic at some level the actual risk of a pesticide depends on several conditions:

- How often it is used
- How much is used
- How it is used
- Where it is used
- How toxic the pesticide is
- How long it stays in the environment
- How it impacts the environment
- If it concentrates through the food chain

Many municipalities and provinces have bans or restrictions already in place on the cosmetic use of pesticides.

What Are the Alternatives?

There are effective alternatives to pesticides that you can use on your property. Check out these references to get started on a healthy property ... and lake ... the natural way:

- [Natural Insect Control](#)
- [Banish Unwanted Weeds and Bugs](#)
- [Beneficial Insects](#)
- [Earth-friendly Gardening](#)
- [Lawn Care](#)

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Natural is Beautiful

by [Emily Batten](#) | Apr 14, 2021 | [Property, Shoreline](#)



Your shoreline was meant to be naturally beautiful.

Naturalized shorelines are cost-effective, ecologically responsible, stunning and they add value to your property. They'll also provide welcome natural habitat for wildlife.

Below are a series of before and after photos that demonstrate the amazing transformation that occurs when shorelines are naturalized. Click each photo to see the results and read testimonials from property owners who are happy to have made the decision to naturalize.

A shoreline rich in vegetation has so many benefits, not the least of which are minimal maintenance, cost-effectiveness and the chance to design something unique. Also, a natural [shoreline](#) is the best defense against erosion, as the roots will help hold the soil in place and filter the runoff that flows into the lake.

If you have a grassy shoreline try not to mow it. Short grass acts as a hard surface that allows polluted rainwater to flow straight into the lake.



Why is a natural shoreline important?

Shoreline vegetation acts as a buffer to a host of natural and man-made pollutants. Losing this vegetation exposes shoreline property owners to:

- The overabundance of algae on surface water
- Loss of land due to erosion
- Mess created by unwanted geese

These can negatively impact the aesthetic appeal and limit recreational opportunities. The ideal natural buffer width is at least 30 metres, but any buffer is better than no buffer!

Natural is Beautiful

They're cost-effective, ecologically responsible and stunning. Your shoreline was meant to be naturally beautiful. Here are before-and-after photos and testimonials from actual shoreline property owners. They all naturalized their shorelines.

Here are before and after photos and testimonials from actual shoreline properties owners. They all naturalized their shorelines. Check out before and after photos:

Learn more about the benefits of [naturalizing your shoreline](#) >

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Has Your Lake Been Part of the Love Your Lake Program?

by [Terri-Lee Reid](#) | Mar 25, 2021 | [General News](#)



Have you downloaded your shoreline property report?

If you have, great! That's the first step in learning what actions you can take on your own property to improve your shoreline health and lake health. What's even better is that it doesn't have to take a lot of effort, time or money! By implementing some of the recommendations in your report, or perhaps some of the suggestions below, you'll be helping to maintain healthy water quality not only for yourself but for future generations and wildlife too!

If you haven't gotten around to ordering your shoreline property report, don't worry – there's still time! If you misplaced your survey code, that's no problem either! Just visit our [website](#) or e-mail us at info@loveyourlake.ca and you'll soon be on your way!

If your lake hasn't been part of Love Your Lake and you're wondering how your shoreline measures up, we have a [shoreline self-assessment](#) just for you! Just answer a few simple questions and you'll be provided with simple actions to improve your shoreline's health.

Get a Head Start! How about:

- Creating a [shoreline buffer](#) using native trees, shrubs, grasses and other plants? Did you know that up to 35 per cent of precipitation can run off lawns into a lake, instead of re-entering the water cycle by filtering through the soil? Compare that with native vegetation where generally less than five per cent becomes runoff and we have a clear winner! Plus many native shrubs and wildflowers are appealing and colourful, and attract songbirds, butterflies and other wildlife.
- Eliminating the use of [fertilizers and pesticides](#) that could wind up in your lake? Many shoreline property owners are becoming increasingly concerned about algal blooms. And for good reason. The number of lakes in North America that have algal blooms is increasing and so it seems is their intensity. The main culprit – phosphorus. While phosphorus occurs naturally and in the appropriate amounts isn't cause for concern – in fact it's even needed for plants and animals – it's when too much phosphorus gets into our lakes that we need to worry. The main sources of phosphorus and other nutrients includes fertilizers from lawns and agricultural areas, erosion and sewage effluent.
- Leaving natural features like [fallen trees and aquatic vegetation](#)? Fallen trees, logs and large branches that are partially or fully in the water reduce erosion, provide insects with resting sites and offer fish and amphibians protective cover and shade. Some fish species use these wood features for spawning and nest protection. Overhanging vegetation is also important. It shades and cools the water and provides important habitat for wildlife including fish, amphibians and reptiles. Fish and frogs often feed and spawn below overhanging vegetation and the leaves, twigs, fruit, flowers and even insects found on overhanging vegetation provide an important food source for many species. By allowing these features to remain in place, when safe to do so, you are contributing to the health of your lake. Plus remember, removing some of these features may require a permit!
- Ensuring your [septic tank](#) is properly sealed and pumped regularly? A poorly functioning septic system or holding tank can lead to excess nutrients in your lake and algal blooms. Be sure to know where your tank is, when it was installed, and when it was last pumped and inspected.
- Planting vegetation on the land-ward side of existing retaining walls to help filter runoff? Before the impacts on shoreline habitat and water quality were fully understood, it was common practice to install retaining walls because of their perceived maintenance-free longevity and ability to prevent shoreline erosion. We're now aware that retaining walls deflect wave energy instead of absorbing it. This causes excess water turbulence, scours sediments from the lake bottom and contributes to erosion in surrounding areas. Hardened retaining walls also restrict the movement of wildlife to and from land and water. You can reduce erosion by planting native vegetation on the landside of your wall.

If you'd like more information, be sure to visit LoveYourLake.ca. You'll be glad you did!

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You Can Assess the Health of Your Shoreline

by [Tobi McIntyre](#) | Jul 29, 2020 | [Shoreline](#)



We're proud to have assessed the shorelines of 163 lakes in Canada with Love Your Lake and we're still going!

If you're wondering if your lake is one of those 163, [check here to see if your lake is on the list!](#)

With an estimated 31,752 major lakes and another two million small lakes in Canada, there are a lot more lakes for Love Your Lake to assess. If you have a property on a lake that hasn't been assessed by the Love Your Lake program, we still love your lake and [hope to be able to assess it soon!](#)

Self-Assessment

In the meantime, for those wondering how healthy your shoreline is and how you're contributing to the health of your lake, you can do a [self-assessment](#). By **answering eight simple questions** about your shoreline property, you'll get instant information as to what you're doing well and what you can do better to improve your shoreline health. We'll even email you your results so you don't have to worry about taking notes. You'll be able to check your information as often as you like.

Why are healthy shorelines so important?

- Healthy shorelines have a buffer of vegetation. This vegetation helps filter polluted and contaminated runoff before it flows into a lake.
- Shorelines are known as the "ribbon of life." Native vegetation, terrestrial logs, aquatic logs, overhanging vegetation, cavity trees, and dead standing trees all provide essential wildlife habitat. Reptiles, amphibians, fish, birds, insects and mammals use shorelines for mating, rearing young, food, shelter and protection from predators.
- They reduce erosion. The vast network of roots associated with a natural shoreline holds soil in place and helps keep shorelines from slumping and washing away.
- They help maintain, and can even increase, property values. After all, who wants a shoreline property on a lake that is prone to algal blooms or a shoreline that is being eroded away?

Show that you're someone who loves their lake – [take the self-assessment!](#) It takes very little time and you'll get important information relevant to your property! Perhaps you're already doing everything you can or perhaps we have a few pointers for you. Either way, wouldn't you like to find out?

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3 Easy Things to Do For Your Shoreline Property in 3 Years

by [Tobi McIntyre](#) | Jun 18, 2020 | [General News](#), [Lake](#), [Property](#), [Shoreline](#)



Congratulations on owning a piece of paradise — a shoreline property.

Whether it's a place you bought to make lasting family memories, a place to retire or a place to escape the hustle and bustle of everyday life – there are actions you can take to make sure your piece of paradise continues to be just that! It can be easy to get overwhelmed by the projects that need to get done. But here are three actions you can take over three years that will not only improve the health of your shoreline but your lake too!

Year 1, Task 1: Create or Enhance Your Shoreline Buffer



This one is exciting for a couple of reasons. First, by doing this one action – creating or enhancing your [shoreline](#) buffer – you will provide so many benefits. You will help protect against erosion, reduce runoff into your lake and create important wildlife



habitat. Secondly, it can be accomplished with little effort! By simply leaving a section of your lawn near your shoreline unmowed, you can create a shoreline buffer. The seeds that have been carried in by wind and dropped by animals will have the chance to grow. The resulting plants can help to hold soils in place, catch rain and the nutrients and sediments that are carried with it, and provide pollinators and other wildlife with much-needed habitat. You can also help the process along by planting

your favourite native trees, shrubs, grasses and flowers that you would prefer to have in your shoreline buffer. There are a few things to keep in mind. While a buffer depth of 30 metres is ideal, this isn't always possible, but a buffer of any size is better than no buffer at all. Avoid the use of fertilizers and pesticides as these can runoff into your lake and impact your lake water quality. Lastly, if you have a retaining wall bordering your shoreline, no problem! Planting vegetation on the landward side of your wall will provide you with all the same great benefits!

Year 2, Task 2: Leaving Special Habitat Features Where They Are



Here's another simple yet important task! It's common for many of us to want to clean or tidy our surroundings. This happens on our shorelines too. If there's a fallen tree, a dead standing tree or "weeds" that are in our way – we want to remove them. However, these features are actually important to the lake and provide wildlife habitat. Plus, removing some of these features could require a permit. Aquatic vegetation, sometimes referred to as weeds, might be in your way when you're trying to swim, but it provides food and habitat for a variety of mammals, waterfowl, reptiles, fish, insects and more. It also helps maintain



water quality by stabilizing sediments, oxygenating the water and taking up nutrients. Fallen trees, logs and large branches that are fully or partially in the water help reduce erosion, provide insects with resting sites and offer fish and amphibians protective cover and shade. Some fish species use these wood features for spawning and nest protection. Logs and fallen branches on land provide great habitat for small mammals, toads, salamanders and some woodpeckers. Dead standing trees and cavity trees are

another vital source of food and shelter for many birds and mammals. They are used for cavity nests, raising young, feeding and escaping predators. You'll be providing so many benefits to your lake and will have more time to enjoy your shoreline property!

Year 3, Task 3: Take Care of Your Septic



This is a bit of a tricky one to schedule as it depends on when your septic was last inspected and pumped. If you have a septic tank, it should be pumped every three to five years, although this depends on the size of the tank and how frequently it is used. If you have a holding tank, check it regularly to make sure it is not full or close to capacity. When your septic or holding tank is being pumped, it's also a good time to have it inspected by a licensed and trained professional. It's been said that sewage has



one of the largest negative impacts on the cottaging environment. How so? If your septic isn't functioning properly, it can lead to too many nutrients (such as nitrogen and phosphorous) in lakes and other water bodies, resulting in a process known as eutrophication. Basically, these nutrients act as a fertilizer and can cause algal blooms, which can reduce water quality, harm aquatic animals and plants and even cause fish kills. This can contaminate not only your drinking water but your neighbour's too, and it can reduce property values. Follow these [easy do's and don't's to keep your septic](#)

[system functioning properly](#). Some of you are on a municipal sewer system and therefore don't have to worry about this. If that's the case or if you've had your septic inspected and pumped recently, your year three task can be swapped for:

- [Limiting foot traffic to your shoreline](#)
- [Things to keep in mind when considering a development project](#)

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Shoreline Assessment Made Easy

by [Rob Bell](#) | Jun 20, 2019 | [General News](#), [Lake](#), [Shoreline](#) | [0 comments](#)



Mississippi Lake Association member Rob Bell writes about his experience with Love Your Lake program.

Preparation



Shoreline of Mississippi Lake

The Love Your Lake program was executed on [Mississippi Lake](#) in the Summer of 2016. Initial planning began in 2014 when the target date for our lake was selected.

With such a large lake (1,200 residences) there was work to do to collect the addresses for all of our residents from the four different municipality offices which have shoreline. This was completed in the fall and winter of 2015.

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One lesson learned: you can't do this too early since property is constantly changing hands and the later the work is completed the more accurate the information.

Fieldwork



Property on Mississippi Lake

Early in 2016 meetings began with Watersheds Canada regarding program execution. Heather was ready for us! There was a plan to hire and train staff as well as run a safe 'on water' operation complete with boating checklists.

Our [lake association](#) arranged for the boat (the pontoon boat used for installing and removing warning markers) as well as a roster of volunteer drivers. We also had to plan bad weather contingencies and re-fuelling.

There is a 50 kilometre shoreline around Mississippi Lake. This means anything getting in the way of survey progress could have jeopardized the project.

Fortunately, the weather was close to perfect and the project completed ahead of schedule. Everyone had fun... the boat drivers had rave reviews for Jillian. She even provided an excellent project overview to the lake association.

Success

All in all this was a great project for our association. The benefits of the education and follow on shoreline improvements (also in involving another Watersheds program – the Natural Edge) help our lake and its residents every day!



So, We Received Our Love Your Lake Report...What Now?

by [Anne Gourlay-Langlois](#) | Mar 29, 2019 | [General News](#), [Property](#), [Shoreline](#)



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Guest blogger Anne Gourlay-Langlois is a participant in Love Your Lake, a joint program from the Canadian Wildlife Federation and Watersheds Canada.

As promised, we received our personal survey code and instructions for accessing our individual shoreline property report by mail. This gave us plenty of time to make plans for any improvement that we wished to undertake that spring and summer.

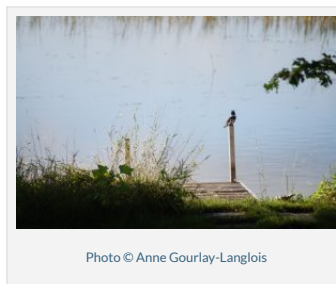


Photo © Anne Gourlay-Langlois

[Downloading the free PDF copy](#) of our report was easy and the report was very comprehensive, providing both specific and general advice.

While we had thought we were fairly well informed on the topic, we were pleased with the results of the survey of our waterfront. It confirmed that we were on the right track. We were happy to see that our dock provided the minimum disruption to the aquatic environment and our “rip rap” shoreline protection was a good option for erosion protection.

Suggested Improvements

However, there was room for improvement. Based on an offered suggestion, we have let bushes, weeds and small trees take root in the bank to further protect us from erosion, anchor the wall and to provide a home for natural wildlife.

Our property is not large enough to create the suggested 10-meter natural buffer between water and lawn, but we were encouraged to do what we could to avoid having lawn down to the water's edge and to increase the percentage of waterfront that is kept natural.

Working with the folks from the [Natural Edge program](#) they recommended planting small native bushes and leaving a natural "wild" buffer against the waterfront.

Unforeseen Benefits

A welcome surprise and true bonus from this initiative was that it has helped keep geese off our property. Apparently, Canada geese avoid coming ashore in locations where they cannot see what lies beyond the water's edge.



Photo © Anne Gourlay-Langlois

We were further comforted by the report, finding that we were effectively managing storm water runoff from the house and that our landscaping options were well designed to allow for water to be absorbed into the soil thus avoiding adding possible pollutants to the lake. Further hints were further provided to help us improve our use of rain water. The addition of rain barrels and french-drains help water our gardens, save well-water and avoid erosion.

All in all, our "Love Your Lake" shoreline property report has provided us with much useful information and continues to be a reference that guides us as we develop and "un-develop" our property.



Photo © Anne Gourlay-Langlois

I highly recommend accessing your report if your [lake has been surveyed](#) or if not, getting your local lake association to [engage in a Love Your Lake survey](#).

Learn more about [getting your lake surveyed](#).



The Good, the Bad and the Invasive

by Terri-Lee Reid | Aug 29, 2018 | [Lake](#), [Property](#), [Shoreline](#)



Did you know that the second largest threat to biodiversity is invasive species?

That's right after habitat loss.

Non-native species can come from other countries or from right here in Canada. And while some of these [non-native species](#) can actually be beneficial, some can be invasive — becoming predators, competitors, parasites, even diseases to our native wildlife. With few predators they can spread rapidly and can:

- Reduce biodiversity
- Disrupt food webs
- Degrade habitat
- Impact species health
- Interfere with our recreational activities
- Cause major economic damage

Once established, they are difficult to control or eradicate and their impacts are often irreversible.



How do they get here?

Sometimes species are brought to new areas on purpose but many times they arrive unintentionally. The main methods for the introduction of [aquatic invasive species](#) are:

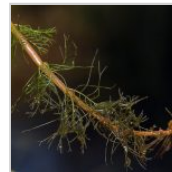
- Recreational and commercial boating
- Shipping
- Aquarium and water garden trade
- Live fish food
- Use of live bait
- Float planes
- Scuba diving gear
- Canal and water diversions
- Unauthorized introductions

Is this invasive or a native look-alike?

Eurasian Water-milfoil



Eurasian Water-milfoil by daniellestlouis



Native Water-milfoil 2015 Steve Matson

Native to Europe, Asia and northern Africa, Eurasian Water-milfoil is thought to have arrived in North America either through the aquarium trade or the ballast water of ships. It is a perennial that forms dense underwater mats and prefers shallow water. When the plants decompose in the fall, it can greatly reduce water oxygen levels harming fish, it can interfere with recreational activities and can compete with native plants.

Eurasian Water-milfoil grows under water, has leaves that are arranged in whorls around the stem in groups of four or five, has leaves of 12 or more segments and it has tiny reddish flowers that bloom in late July/early August.

In comparison, our native Northern Water-milfoil has leaves with no more than 11 leaf segments.

Invasive Phragmites



Invasive Phragmites (Phragmites australis australis) by birds_bugs_botany



Native Phragmites by samuelbrinker

Native to Eurasia, it isn't known how Invasive Phragmites came to North America. It is a quickly spreading plant that releases toxins from its roots. It can reduce our native plant biodiversity, can lower water levels due to its fast growth and rapid rate of transpiration, can impact recreational activities, can be a fire hazard because of its dead stalks and provides inadequate habitat for wildlife.

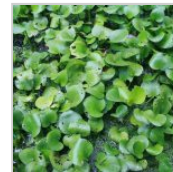
Invasive Phragmites is tall – measuring up to 5 metres in height, grows in dense stands – up to 200 stems per square metre, has tan or beige stems at the base, bluish-green leaves and dense seed heads.

In comparison, Native Phragmites typically measures around 2 metres in height, has reddish-brown stems at the base, yellowish-green leaves and smaller seed heads.

European Frog-bit



European Frog-bit by brentturcotte



North American Frog-bit

Native to Europe and parts of Asia and Africa, European Frog-bit was intentionally brought to Ottawa for potential commercial use as an ornamental plant. It has since spread forming its characteristic dense, floating mats. This invasive plant can reduce oxygen levels when it decomposes in the fall, crowd out native plants reducing biodiversity and interfere with recreational activities.

European Frog-bit produces a single white flower with a yellow centre, has three rounded petals and round or heart shaped leaves that are between 2.5-5 centimetres wide. The leaves can float on water thanks to a spongy coating found only along the middle vein of the leaf.

In comparison, North American Frog-bit has a spongy coating along the complete bottom of the leaf.

Other invasive species to watch out for!

Unfortunately, there are too many to list, but here are just a few more aquatic invasive species to watch out for:

- [Flowering Rush](#)
- [Zebra Mussels](#)
- [Fanwort](#)
- [Water Soldier](#)
- [Purple Loosestrife](#)
- [Rusty Crayfish](#)

You can help prevent the spread!



Clean, Drain and Dry

Your boat, trailer and gear — even waders! Remove any mud, sand, plants, mussels and anything else suspicious before leaving the water body. Also, before you leave, drain all water on land from all your equipment and gear including the watercraft itself, the motor, bilge and wells, bait buckets, tackle and trailer. Use hot water to rinse, scrub or pressure wash your boat — including canoes and kayaks — staying away from waterbodies, ditches and storm drains. Completely dry your boat and gear and allow compartments to air dry before entering another water body.

Inspect scuba gear equipment, removing any visible mud, plants and animals before leaving shore. All equipment and suits should be completely dry before going to another waterbody.

Float planes should be inspected and aquatic plants removed from the floats, water rudders as well as wires and cables. If in waters with zebra mussels, spray with a high pressure washer and dry all parts in the sun for a minimum of five days.

- Bait buckets should be emptied on land
- Do not release live fish, plants, live bait and aquarium pets into waterbodies
- To report an invasive species sighting, please visit the Canadian Council on Invasive Species website

Let's all do our part to help prevent the spread of aquatic invasive species and protect our lakes!

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Saved by the Boat! Learn How to Avoid Damaging Boating Practices

by [Emily Batten](#) | Aug 14, 2018 | [Lake](#)



Sunny skies, subtle waves and fresh air — all the components of a great day on your boat.

Boating is a favourite past time of many, but some people don't know that **improper boating practices can have damaging effects on their lake**. But it doesn't have to be! Learn what you can do to avoid these environmental losses.

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Water

Lakes are sensitive ecosystems. Everything works together to create balance. Much like soil for plants and micro-organisms, the chemical makeup in freshwater creates an ideal environment for a variety of aquatic wildlife.

Chemicals

This chemical balance is very delicate and can be easily influenced. Without proper care, boat maintenance fluids can make their way into the water. They can change water alkalinity and pollute waterways, making it dangerous for wildlife and human use.

Sediments

Excessive boating stirs up sediments in the water, reducing visibility and obstructing sunlight.

Temperature

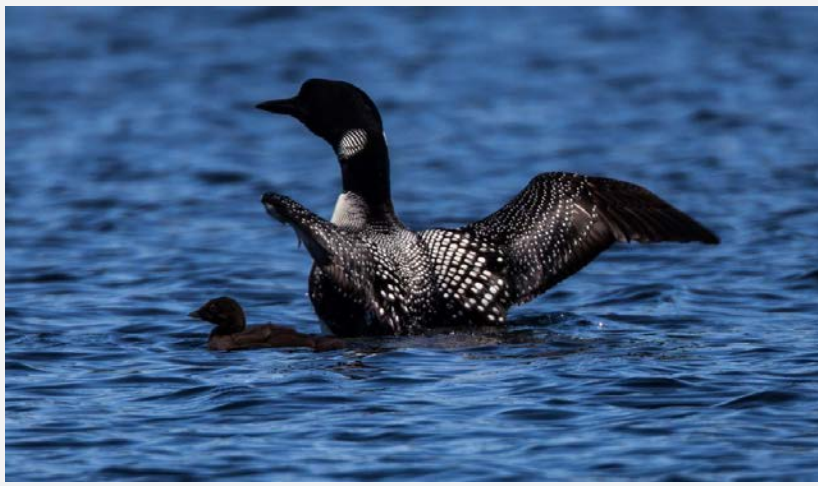
Along with sediments, motors push warm surface waters deeper, changing overall temperatures. With increased water temperatures, algal blooms can be more prevalent, starving waterways of oxygen and creating uninhabitable areas in the lake.

Land

Speed boats and sea-doo's: sounds like a fun time to most. Unfortunately, improper use of these watercrafts can have damaging effects on lake [shorelines](#) and habitat.

When cruising along the water, you create a wake. The faster you go, the stronger the wake. The wake you create builds at the shore, impacting the land and weakening the soil and undercutting banks.

Along with habitat loss and shoreline sediment buildup, the accelerated erosion causes property owners to lose their land, devaluing their property.



The loon, in particular, is one species that is quite susceptible to boating disturbance in our Canadian lakes and rivers.

Wildlife

Boats are large and fast — a very daunting contraption to a wild animal. Boats can hit swimming wildlife, causing major injury to the animal, or even death.

The loon, in particular, is one species that is quite susceptible to boating disturbances in our Canadian lakes and rivers. Loon populations have been declining over the last 20 years. The loon's nesting season is between May and June, a critical time of partner shared incubation.

High speed boats can disturb the parents, and if it happens frequently enough the parents will abandon the nest altogether. If the eggs do hatch and the chick survives, they are still susceptible to strong wakes or fast moving watercrafts driving too close.

Do's and Don'ts of Safe Boating

There are changes you can make to reduce your impact on the environment while using your watercraft:

- **Don't** speed while close to the shore — the closer you are, the stronger the wake.
- **Do** be conscious of your surroundings: small animals easily go unseen.
- **Do** dispose of used oils and filters properly.
- **Do** be careful of portable gas or fuel tanks.
- **Don't** get too close! Enjoy wildlife from afar, especially during nesting seasons.
- **Do** regularly maintain your watercraft or upgrade when needed. Degraded boats are more likely to leak into waterways.
- **Do** properly wash and dry your watercraft when switching between waterways to reduce the chance of transporting invasive species.
- **Don't** speed! Reduce your speed or use your electric motor to troll.
- **Do** interchange between a motorized and non-motorized watercraft to reduce the chances of motor pollution and excessive wave action.

By taking these necessary steps to use your watercraft consciously, you can do your part to ensure the health of our lakes for future generations.



5 Ways to a Healthy Shoreline

by [Terri-Lee Reid](#) | Jul 18, 2018 | [Property](#), [Shoreline](#)



A healthy shoreline property is a place where we can rest, relax and play!

But if it's not taken care of, our actions can also result in erosion, loss of wildlife habitat and reduced water quality. Keeping shorelines natural is the easiest way to protect water quality and the value of shoreline properties. Check out these five tips that will help you keep your shoreline healthy!

1. Give yourself a buffer zone.

Leave as much native vegetation along your shoreline as possible. This helps filter sediment and pollutants before they reach the lake. The area also provides valuable habitat to a myriad of species!



2. Rethink your retaining walls.

Hardened shorelines deflect wave energy instead of absorbing it, causing erosion problems further along the shoreline. If your shoreline has a retaining wall, plant vegetation along the landward side of the wall to help filter runoff and reduce the risk of erosion.

3. Take another look at your lawn.

With a shorter root system, [lawns](#) aren't able to stabilize the soil and filter sediments and pesticides as well as native vegetation which has a longer root system. Did you know that up to 35 per cent of precipitation runs off lawns which can go directly into a lake? Keep lawn areas set back from your shoreline and maintain it with minimal or no water or harmful pesticides.

4. Maintain your septic bed.

Faulty [septic systems](#) and improperly treated sewage can harm both your health and the health of your lake. Make sure to get regular pump outs and inspections and be careful of what you put into the system.

5. Fix your paths and stairs.

If you have a cottage on a slope, reduce your impact on sensitive soils and fragile banks that lead down to the water by creating a path that meanders rather than one that goes in a straight line. If you prefer stairs, make sure they are raised off of the ground with open backs so that rainwater and sunlight can reach the ground encouraging vegetation to grow.

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Oh Crap! Take Care of That Septic System

by [Terri-Lee Reid](#) | Jun 26, 2018 | [Property](#)



What is...

...out of sight

...constantly working

...something that can impact water quality, pose health risks to people and can contaminate drinking water, if it isn't maintained?

If you guessed septic systems — you're right!

Even though they're out of sight, it is important not to forget about them. Whether you have a septic tank or a holding tank, there's information here for you.

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@LoveYourLake.ca

Why it's important to maintain your septic system

If you love your lake you will want to make sure your [septic system](#) is functioning properly. Improperly treated wastewater contain bacteria, viruses, phosphorus and nitrogen. Inadequate treatment can result in an overabundance of weeds and algal blooms that can make a lake unpleasant for swimming and boating. Inadequate treatment also affects water quality and habitats for wildlife, not to mention health risks like hepatitis and dysentery.

How to maintain your septic system

Maintaining your septic system is your responsibility! Follow these helpful tips to make sure your septic system keeps functioning properly.

Septic System Do's:

- **Do know where** your tank and drain field are.
- **Do reduce your water use** to keep solid sludge settled on the bottom of the tank.
 - Use dishwashers and washing machines for full loads.
 - Take shorter showers instead of baths.
 - Install water saving devices.
- **Do have your septic system inspected** and pumped regularly and keep a record of all maintenance work.
 - Have this done by a licensed professional.
 - How often you do this depends on the size of your tank, how many people are in your household and how much it is being used. A general rule of thumb is to have a septic tank inspected and pumped every three to five years.
 - Holding tanks may have to be pumped as often as every week, depending on its size and usage. Check your tank regularly to ensure it is not overfull and have it pumped out before it reaches its capacity.
 - When your tank is being pumped, have the contractor check the scum and sledge depth, inspect for any large cracks or deterioration and check the fit of access lids.
 - The best time to pump out your septic tank is summer and early fall. This ensures the tank will have time to refill and re-establish bacterial activity before winter.
 - For holding tanks that receive little to no use over winter, leave about one foot of liquid in the tank to maintain bacterial action and reduce the risk of damage from freezing.
- **Do keep your septic system accessible** so it can be properly maintained – you won't want to keep it somewhere that's hard to get, like under a deck.
- **Do have an effluent filter.** They are inexpensive and can be added to new systems or retrofitted to older systems. They put less stress on the drain field and must be cleaned every six months and when your septic tank is pumped.



Septic System Don'ts:

- **Don't drive or park vehicles on top of your drain field;** this can compact the soil and damage pipes.
- Don't use cleaners, soaps and detergents with **phosphates**.
- **Don't plant trees or shrubs too close** to your septic system. Keep a five metre perimeter around the edge of the drain field clear of trees and shrubs. Make it 10 metres for poplars and willows as they have creeping roots.
- **Don't use septic additives.** They are not necessary or effective and some may harm your system.
- **Don't flush anything that you didn't produce,** except for toilet paper! That means no fats, grease, paints, cat litter, sanitary products, diapers, wipes, cigarette butts or kitchen waste.
- **Don't water your lawn over the drain field.**

What to do if your septic system isn't working properly

It's time to call for help if:

- Your toilets or drains are backed up
- You have foul smells in the house
- You find soft or spongy ground over the drain field,
- Your drain field has patches of abnormally healthy-looking grass on it
- There's surface water leaking into the holding tank
- You are requesting fewer than normal pump outs on your holding tank

Who you call may vary depending on where you live but it will likely be one of these agencies:

- A licensed firm that pumps out septic/holding tanks or that installs and repairs septic systems
- Board of Health
- Municipal Building Department
- Conservation Authority

Keep in mind that you may need to get a permit, depending on the type of repairs.

Get more great [shoreline property resources!](#)