Environmental Considerations for McKellar Township Residents 2025

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Front Cover Photo – ‘Lake Manitouwabing Approaching Storm’ taken by Larry Killian, McKellar resident, 2024

Introduction

Protect the environment - protect your investment

Welcome to McKellar! You've made a wise choice, buying land in one of the most pristine environments anywhere, perched on the edge of a vast wilderness, yet still accessible to the conveniences of modern life. This booklet is designed to help you protect your property, safely enjoy the local lakes, and learn about the rich natural history of this area and how to preserve it for generations to come.

The health of our lakes is crucial for our residents, and our economy. Volunteers have annually tested lake water here for the past 25 years, to prevent the kinds of algae blooms that can affect waterfronts — and property values — further south. As you'll read in the following pages, you can also do your part, by reducing fertilizers and pesticides, wisely using and regularly inspecting your septic system, and by retaining the wild, natural shorelines and tree canopies sustaining the huge variety of plants and animals that also call this home.

This booklet was created by the Township of McKellar's Lake Stewardship and Environmental Committee, a team of citizens tasked with fostering environmental awareness and appreciation to protect and sustain our municipality's abundant natural resources. If you have any comments about this document, we would very much appreciate you contacting us by emailing lsec.mckellar@gmail.com

You can follow our postings on Facebook!
https://www.facebook.com/profile.php?id=61565497380905&mibextid=ZbWKwL

Diversity is Precious

The lakes and the surrounding forests of the Township of McKellar are home to many of the iconic species of Canada. Common loon, moose, red fox, blue jay, beaver, porcupine, black bear, coyote, raccoon, trillium, white pine, red maple — if you spend some time here, you'll see them. Their presence is part of the magic of this region.

With patience, you'll encounter other exotic creatures. Like the luna moth, a huge, feathered silk moth that lives for just one week in early summer (so it doesn't need a mouth or a digestive system) and fends off predators by clicking loudly. Or the cardinal flower, a brilliant native perennial that sprouts in wetlands and gets pollinated by ruby-throated hummingbirds. Or the Northern flying squirrel, which can glide up to 45 metres, make 90-degree turns in mid-air, and build a nest in your attic if you don't seal the eaves under your roof. All these, and many more, have been documented in our area by amateur biologists on iNaturalist.ca, where you can report your findings too.

Such creatures aren't just delightfully unusual, they're parts of complex ecosystems that generate the clean air and fresh water we come here to enjoy. But sadly, some native species are also at risk of disappearing. Some examples:

Monarch butterfly - This legendary insect breeds in our region before flying 5,000 kilometres south to Mexico for the winter. Grow milkweed on your property to help feed them, limit pesticide use, and don't disturb their vibrantly striped caterpillars!

Blanding's turtle - A charming, helmet-shelled reptile that too often gets killed trying to cross roadways. Watch out for them when driving, especially when the road passes near wetlands.

Eastern milksnake - A greyish snake with brown, black-outlined patches that eats mice and other small rodents. Watch out for them warming up on asphalt roads, where they can look like a branch or a piece of hose laying on the pavement.

Barn swallow - These sleek, cobalt blue-backed birds eat huge numbers of mosquitoes and deer flies, but their numbers have declined by two-thirds over the past 40 years. If they build a cup-shaped mud nest in your eaves or rafters, let it be.

Eastern (Algonquin) wolf - Sometimes you'll hear a pack of these, howling at night. They feed on white-tailed deer (abundant in our area) but need large areas of unbroken forest, so they're threatened by a loss of habitat from logging and development. For more information on biodiversity in Ontario, visit these sites:

https://ontariobiodiversitycouncil.ca/what-is-biodiversity/

https://georgianbaybiosphere.com/species-at-risk/

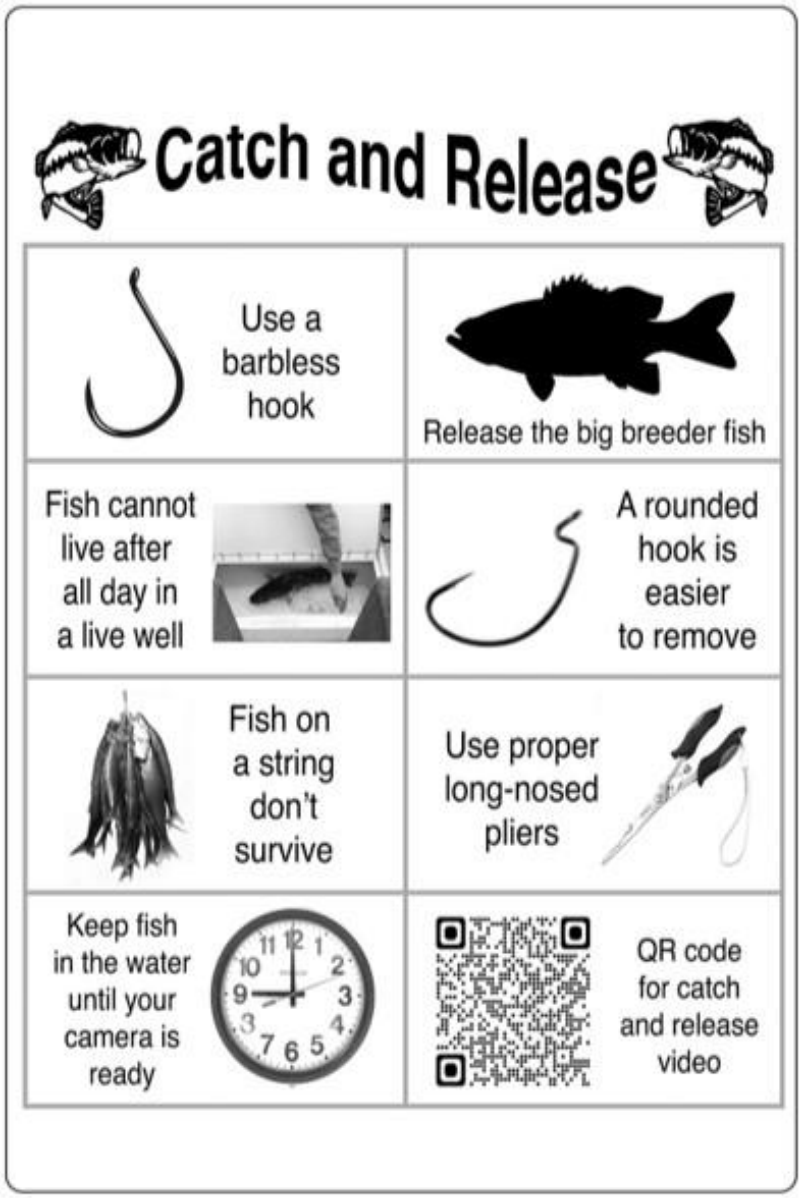
Fishing

McKellar Township is in Fish Management Zone (FMZ) 15. Find out more about the current fishing regulations here:

https://www.ontario.ca/page/fisheries-management-zone-15-fmz-15#

If you use your boat in different lakes and rivers, remember to clean, drain and dry your boat on land to prevent the spread of invasive species from lake to lake.

Encourage the survival of fish fry and the replenishment of the fish population by preserving fish habitat: leave the plants that grow in the water at the shore and leave the woody debris (branches and trees) that fall in the water at the shore wherever possible.



Toxins in your tackle box: Loons and Lead

Lead poisoning is the leading cause of death for adult Common Loons. These deaths are completely preventable by using non-lead fishing tackle. Keeping lead sinkers out of our waters will increase loon survival.

The acid and grinding action of the gizzard (stomach) erodes the lead, which then passes into the bloodstream and organs, and poisons the Loon. Even a single small lead split shot sinker is fatal; it will cause the death of the loon within 2-4 weeks of ingesting a piece of lead fishing tackle.

How Do Loons Ingest Lead Tackle?

- Eating a fish that has ingested a lead jig or sinker
- Striking at a line being trolled or retrieved through the water with lead tackle attached
- Picking small split-shot sinkers off the bottom of the lake, mistaking them for a pebble they ingest to aid in digestion

How Can You Help?

- Switch to lead-free tackle made from non-toxic materials such as bismuth, tin, tungsten, steel, and ceramics (please note that zinc-containing tackle is not recommended because it is also toxic to wildlife!)
- Go through your tackle box and dispose of old lead tackle at a hazardous waste site
- Ask your local sporting goods store to carry lead-free fishing tackle
- Reel in around loons
- Educate others about the dangers of lead fishing tackle and ask them to use non-lead alternatives

Lake associations in Ontario are encouraging the use of non-lead alternatives to improve the health of habitat. Scan the QR code here for more details.

https://wolfelake.org/toxins-in-your-tackle-box

Living with the Animals as Neighbours

Deer move into heavily forested areas in the winter to escape predators and access areas with naturally occurring food. Their metabolisms store fat to enable them to survive the winter when food is not as readily available. Deer that are dependent on artificial feeders may not survive if those feedings stop.

If deer are fed by people, it may mean that the deer stay in areas the natural habitat cannot support, resulting in decreased reproduction, weaker fawns and a general higher mortality rate.

Feeding deer near populated areas may increase the likelihood of collisions between deer and vehicles. A concentration of deer around feeders may make them an easier target for wolves and coyotes and draw these predators into populated areas.

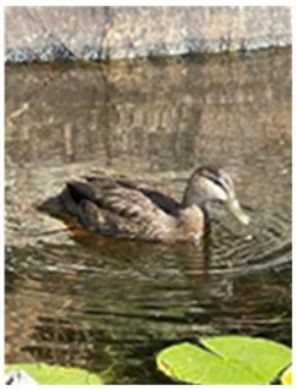
Deer that winter deep in the forest are more isolated from each other. When they congregate in large numbers around a feeder, transmission of disease is more likely.

Prevent Bear Encounters

Bears usually avoid people, but they are attracted to strong food aromas, such as those produced while barbequing, the scent of garbage, cooking smells, ripe fruits and pet food left outside.

To avoid attracting bears:

- Keep your garbage cans clean, empty them often and store food leftovers in the fridge until garbage day. Outdoor compost piles may also attract bears and other wildlife.
- Use bird feeders only in the winter months.
- Keep all pet food inside and monitor your yard before letting pets out.
- Clean your barbeque immediately after use to eliminate food smells. Plant bushes that do not bear fruit.
- Never deliberately feed bears.



Keep waterfowl Healthy:

Feeding waterfowl increases the chance of negative human/wildlife encounters and could make them dependent on people for food.

Also, the food that people typically feed waterfowl is not as nutritious as the food they would find for themselves.

Wildlife has existed in the area for millennia without assistance from humans, so please keep your distance and enjoy your wild neighbours without trying to help them.

DARK SKIES

Worldwide efforts are being made to combat light pollution. Excess lighting at night can disrupt sleep for people, but it has a greater impact on animals, insects and plants.

In the animal kingdom, light pollution disrupts predator and prey balance, night-time breeding rituals, migration patterns and feeding patterns. Light pollution has been found to affect the germination, leaf expansion and dormancy cycle of plants.

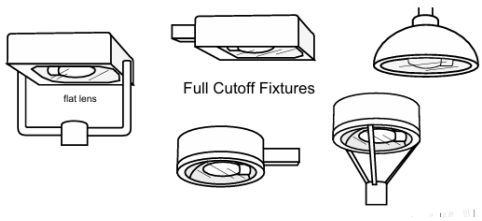
The decline of insect populations is partly caused by light pollution since it throws off their life cycle and confuses them when they are trying to find food sources and breeding grounds. There is a general decline in the population of insects to which light pollution contributes in addition to habitat destruction and pesticide use.

Night-time watercraft navigation on the waterways is made more difficult by excess lighting on shore, which reduces visibility, and negatively impacts star gazing and the visibility of northern lights. Light escaping from over-lighting, skyward-facing bulbs and unshielded sources pollutes our skies and prevents a clear view of the heavens. It is estimated that urban lighting allows people to see as few as 100 stars on a moonless night. Dark Sky initiatives will allow viewing over 3000 stars on a moonless night, including the Milky Way.

Adjusting outdoor lights will not only decrease electricity use but decrease light pollution. You can conduct your own home lighting assessment here: https://darksky.org/app/uploads/2020/01/Home-Lighting-Assessment-Print.pdf

Visit https://darkskysociety.org for more information and lighting ideas.

Acceptable fixtures shield the light source to minimize glare and light trespass and to facilitate better vision at night.



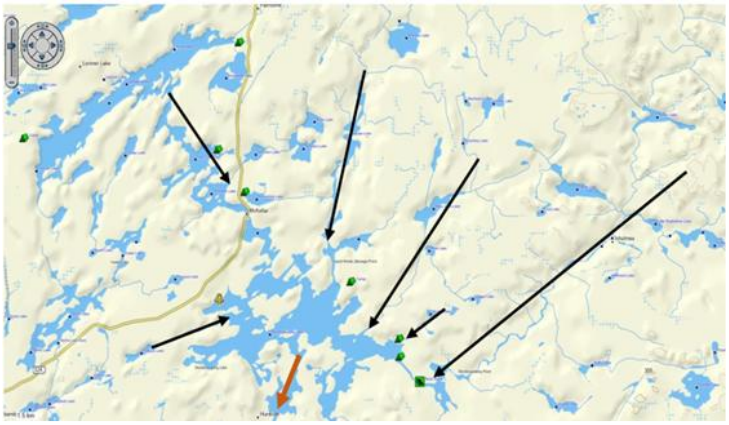
Monitoring Water Quality in McKellar Township

The quality of the water in local lakes and rivers is extremely important for residents, wildlife and the overall environmental sustainability of McKellar Township. In 2006, the Ontario government passed the Clean Water Act, which covers 90% of the population of the province across specific “drinking water protection zones” (for example, https://nbmca.ca/watershed-management/drinking-water-source-protection/). McKellar is not in a drinking water protection zone however, and therefore the assurance of good water quality falls to the responsibility of residents.

The Lake Stewardship and Environmental Committee of McKellar Township and the Manitouwabing Lake Community Association (MLCA) have shared the responsibility for monitoring the health of the lake for many years. It is the responsibility of each resident to do their own monitoring—of their septic system and of their water supply. Water testing of treated household water is available through the Public Health office in Parry Sound. All water for drinking purposes that is brought into a residence from a lake or river needs to be treated (https://www.youtube.com/watch?v=aQldfiF1dtc) to remove bacteria and other pathogens that can cause illness.

The MLCA, with support from the Township of McKellar, has been monitoring *E. coli* bacteria levels in untreated Lake Manitouwabing surface water since 2000. Water chemistry, such as phosphorus and calcium levels, are also monitored now. Water samples are collected by MLCA volunteers, and the Township supports lab analyses. Current results for the testing can be seen on the MLCA web site as well as the Township web page under “Environment” (https://www.mckellar.ca/en/living-in-our-community/environment.aspx). Researchers looking to use this data will find it on the DataStream web page “McKellar Lakes.” (https://datastream.org/en-ca/dataset/f30d4ac4-49f7-49e3-bc18-a3c8f4db76d5). Ice-in/ ice-out dates are recorded on Nature Watch for Manitouwabing Lake.

Volunteer water samplers and residents also monitor lakes for blue green algae blooms. We had one incident of a small bloom in August of 2020, but none have been observed since then. We have also participated in a Lake Capacity Study conducted by Dr. Carl Mitchell (U of T) in 2021, (https://www.youtube.com/watch?v=dj4bHsS1kuY), a Boat Wake study (https://www.youtube.com/watch?v=r-fNuN5TXIo&t=374s) conducted by Dr. Chris Houser (formerly at the University of Windsor, now Dean of Science at the University of Waterloo) in 2023, and sample campaigns for invasive species organized by the Federation of Ontario Cottagers’ Associations.



This figure is from Bev Clark’s 2018 State of the Basin report *(*on page 55) (https://www.mckellar.ca/en/living-in-our-community/resources/Manitouwabing-environment-report-2022.pdf) and illustrates the flows into Manitouwabing Lake and the outflow through the Seguin River towards Parry Sound. Water levels (https://www.mckellar.ca/en/living-in-our-community/resources/2025-01-17-Water-Levels-on-Manitouwabing-Lake-JGF.pdf) on the lake are controlled at the dam at Hurdville (map bottom) and are usually lowered in the fall to prevent flooding in the spring.

Glossary of Water Quality Terms

Alkalinity Indicator of how resistant water is to changes in pH. Low alkalinity levels lead to larger swings in pH whereas higher alkalinity helps to ensure more stable pH over time.

Bacteria Levels Indicators of water safety, especially for drinking water and recreational activities like swimming. Specific bacteria like *E. coli* and groups of bacteria such as “coliforms” are monitored because these best indicate potential harm to humans.

Chloride Important for tracking potential road salt-related impacts on freshwater life. Elevated chloride levels can be toxic to aquatic organisms.

Calcium is related to impacts of acid rain (now dramatically reduced), removal of vegetation and especially deforestation, and climate change. Calcium is declining in many lakes and is important as a building block for many aquatic organisms. Decreasing calcium harms certain species.

Dissolved Organic Carbon (DOC) is a measure of the “tea-stain” in lakes. DOC affects nutrient interactions and sunlight penetration into water.

Dissolved Oxygen (DO) Essential for fish and other aquatic creatures to survive. Dissolved oxygen is sensitive to water temperature and can drop dramatically following algae blooms. Dissolved oxygen levels impact the health of the lake’s ecosystem.

Electrical Conductivity is a simple and cost-effective indicator of water hardness and the levels of ions (salts) present.

Emerging Contaminants are newer, synthetic substances that are more recently considered concerning for aquatic health and for which there is less scientific understanding. Examples include microplastics, medications and “forever chemicals” such as perfluorinated organic compounds. Monitoring them helps track potential environmental risks in lakes.

Metals have varied roles in lakes - some can harm aquatic life (most heavy metals, such as lead and mercury), while others, such as calcium, are essential nutrients. Monitoring metals helps understand their impact on water health. Fireworks contribute to contamination by heavy metals.

pH A measure of how acidic or alkaline water is. Ranges from 0 to 14, with 0-6 being acidic, 8+ being alkaline and 7 being neutral. pH levels are an important water quality parameter than can affect lake issues ranging from shell development in invertebrates to heavy metal solubility.

Phosphorus A vital nutrient that, when concentrations are high, can trigger algae growth, leading to diminished water clarity and potentially harmful effects on aquatic life. Monitoring phosphorus levels is crucial to maintaining a healthy lake environment.

Phytoplankton are free-floating, microscopic algae that, like plants, grow via sunlight. They’re essential for a healthy ecosystem because they are a food source at the base of lake food webs.

Turbidity is an indicator of the cloudiness of water, which is usually related to suspended particles. Higher turbidity often indicates lower-quality water.

Water Clarity reflects how clear the water is. Monitoring lake clarity is an easy and inexpensive way to help indicate potential issues impacting a lake’s health. Water clarity is measured in meters, using Secchi disks, which are lowered into the water until no longer visible.

Water Temperature influences the amount of dissolved oxygen, which aquatic life breathe in lake water, with colder water able to retain more oxygen than warmer water. Changes in temperature due to climate shifts can affect the types of life in the lake.

Protect and Promote the Health of Waterways by

Maintaining Healthy Vegetation Along the Shore

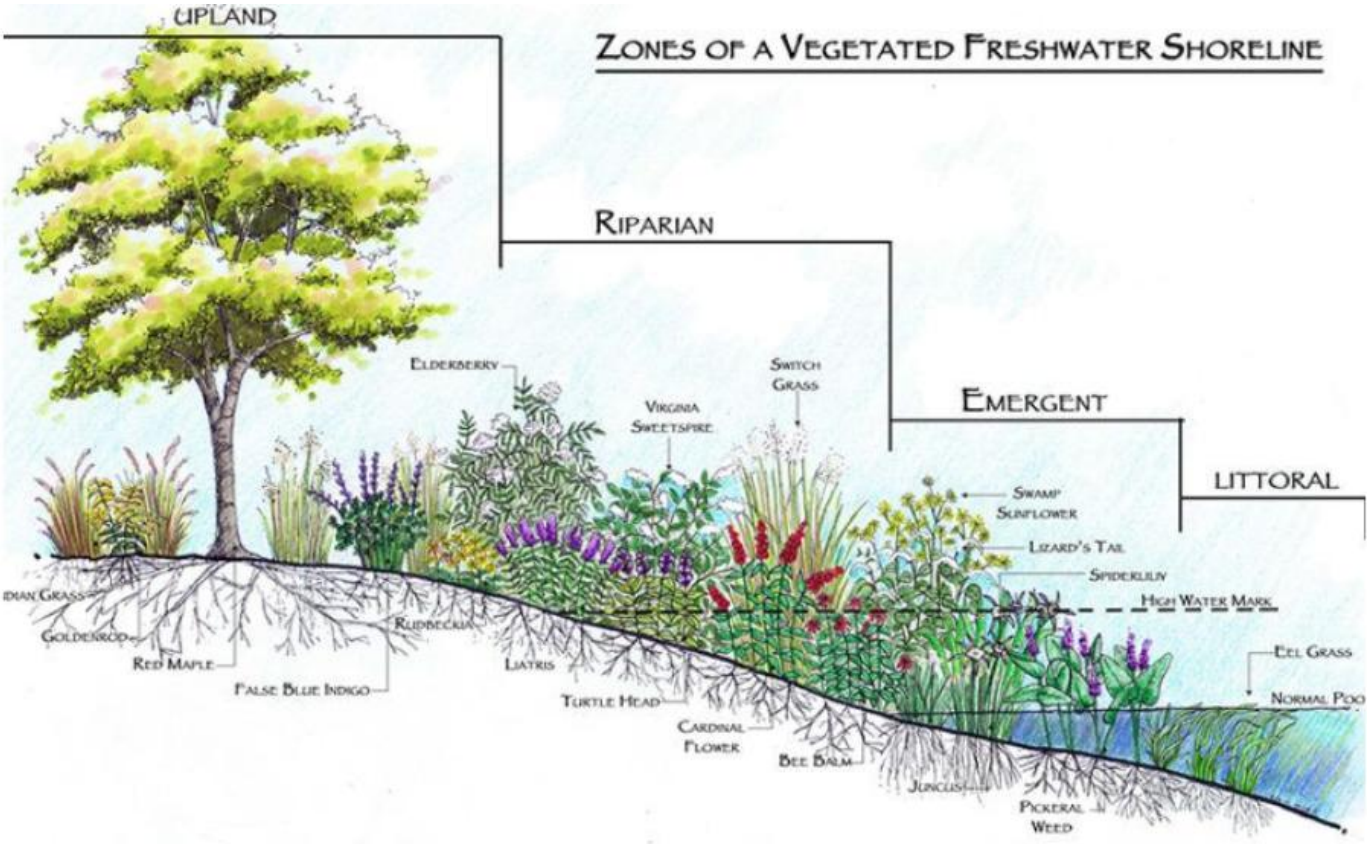
Human habitation along a shoreline often contributes to the input of substances that foul the water. Often, settlement also leads to the removal of trees and other native vegetation at the shore that would otherwise absorb or slow the movement of harmful substances. To keep our lake and river water clean and healthy, we need to maintain and replace the shoreline tree canopy and the natural meadows of long-rooted plants.

The concentration of nutrients, such as phosphorus and nitrogen, in the water need to be just right – not too low and not too high. Levels can become elevated, for example, due to seepage from older or poorly maintained septic systems, animal waste and fertilizer runoff. Large rainstorms and snowmelt can dissolve nutrients and carry them into shoreline water as runoff, possibly leading to the excessive richness of nutrients or eutrophication and the overgrowth of aquatic life such as blue-green algae. Algal blooms can lead to low oxygen episodes in water and some specific type of blue-green algae can produce toxins, making the water unsafe for household use, ingestion by animals and swimming until the bloom clears and the toxins dissipate.

The tree canopy and natural vegetation along the shorelands and in the water at the shore is known as the “ribbon of life” because of:

- its role in maintaining the environmental quality of surface water by absorbing nutrients before they get into the water, thus providing a buffer between the lake and the nutrient-containing seepage and other pollutants (including pathogens, pesticides and heavy metals)
- its role in moderating stormwater runoff since the roots of the plants make the soil permeable to rain, the leaves of the plants and trees slow the rain as it falls onto the ground, and plants use the water in photosynthesis and return it to the air as vapour, thus reducing the moisture in the ground
- its role in allowing water to penetrate deep into the soil along roots to replace groundwater
- its role in slowing down rain runoff also results in less sediment flowing from the soil to the water, thus slowing land erosion
- its importance in protecting animal, insect and aquatic wildlife habitat
- the role of trees and plants in reducing air pollution by absorbing carbon dioxide from the atmosphere and sequestering the carbon in the plant
- its role in moderating water temperature in an era of climate warming by cooling the ground and the water at the shore with shade, and cooling the air by evaporating moisture from leaves
- its role in improving the aesthetics and value of property
- its role in emitting oxygen into the atmosphere

We advocate for the maintenance of trees whenever possible on a piece of property. In the case of trees which are limiting a view, removal of lower branches to enable that view is preferable to removing the tree.



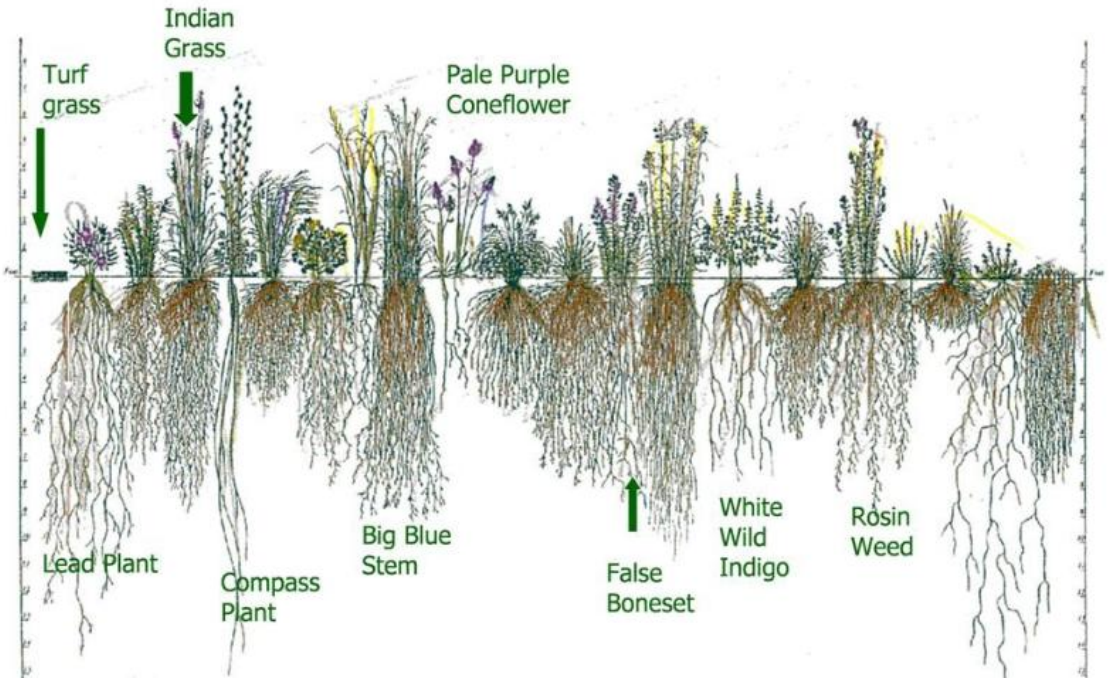
Native plants and design strategies can stabilize and enhance shorelines (hgic.clemson.edu)

Vegetation in the riparian zone serves as a buffer between the upland area (your yard and home) and the surface water (lakes and rivers). The littoral zone extends from the shoreline into the water where light still penetrates to the lake or riverbed. The littoral zone, and its plant life, are vital to preserve since 90% of the species in lakes and rivers spend part of their life cycle there. Aquatic plants in this zone emit oxygen into the water which is needed for fish and other aquatic creatures. Sand should not be placed at the shore or in the water as it smothers the benthic life (organisms on the lake bottom) in the littoral zone. Fallen trees and woody debris should be maintained in the littoral zone to provide habitat and promote the moderation of water temperature.

A buffer differs from a setback, which is the minimum distance required between a structure or infrastructure and a natural feature, such as a shoreline. Vegetative buffers almost always make up at least a portion of the setback. Intuitively, the greater the setback, the greater the potential for a naturalized vegetative buffer. The maintenance of a vegetative buffer of any size maintained in an existing setback should be encouraged to provide greater protection of water quality and to decrease erosion at the shoreline. Mandatory setbacks differ; however, many municipal areas require a setback of 20 - 30 meters from the high-water mark to a structure and/or a septic bed.

Several qualities affect the effectiveness of vegetative buffers in the role of protecting the littoral zone from upland human activity. Buffer size, condition of the buffer (i.e. density of vegetation, suitability of vegetation, soil status (disturbed / undisturbed) and intensity of upland use are key factors that determine the effectiveness of a vegetative buffer.

Mowed grass turf is ineffective as a vegetative buffer. Current development standards in the Lake Protection Workbook (Watersheds Canada) suggest the ideal is to develop no more than 25% of a property's shoreline, with the rest being maintained as a vegetative buffer. In addition to providing inadequate filtration of rainwater runoff into lakes and rivers, a mowed grass turf is also favoured by waterfowl, and their excrement may add to the excess nutrients flowing into lake water. Note that plants with short roots, including grass, should be planted over a septic bed, however, to avoid compromising its function.



Plants with long roots capture nutrients before they get into the surface water of a lake or river, help prevent erosion and do not need fertilization or tending. (naturenearby.org)

Pathways should be curved and made of pervious material such as gravel, which inhibits the surface flow of runoff into the lake and increases the percentage of rainwater that is absorbed into the soil. Water movement in the ground below the surface is slower than surface flow, thus creating more time for plants to take up the nutrients.

The Ontario government also encourages farmers in the "creation or widening of buffers (trees or shrubs) in agricultural fields adjacent to surface water sources, as well as other actions to protect existing riparian areas, such as reshaping of edges and fields." (Request for Proposal (RFP) guidance, Resilient Agricultural Landscape Program (RALP) – Marginal Lands, January 2025, Conservation Ontario, p. 3)

Tips for McKellar Property Owners on the FOCA*

Aquatic Invasive Species Prevention and Monitoring Program

1 Learn about the aquatic invasive species (AIS) and their locations on your lake. Use EDDMapS Ontario (https://www.eddmaps.org/) to view maps of your area showing reports of invasive species. Steer clear of aquatic invasive plant patches with your boat or personal watercraft. Boat motors, paddles and other activity may cut up the plants and cause them to spread further.

Follow this QR code to EDD Maps

2 Make it a habit to inspect your boat, motor, and boating equipment regularly and remove any visible AIS. Always make it a habit to rinse your boat, motor and trailer with hot or pressurized water, before launching into another body of water. This will minimize the spread of aquatic invasive species by reducing the introduction of new populations to different areas of your lake or other lake systems. Dispose of plant material well away from the water.

3 Never release live bait into Ontario waters or move aquatic species from one waterbody into another. It is illegal to use gobies, Eurasian ruffe or rudd for bait. Never introduce any fish or plants into any body of water (e.g. Aquarium plants and animals or live fish purchased from a store).

4 If you are removing aquatic vegetation from around your dock or waterfront, do so responsibly as aquatic vegetation is important for lake/river habitat. When removing vegetation proper disposal is important. Removed plant parts, animals or mud can be disposed of in a garbage can. If no garbage can is available, dispose of the material on any land at least 30 metres from any waterbody.

5 Always plant native or non-invasive plants when gardening and resist planting ornamental plants that are aggressive or invasive on your property. Find more information about what to grow from the "Grow me instead" guide. (https://www.ontarioinvasiveplants.ca/resources/grow-me-instead/)

6 Maintain a natural shoreline on your property to encourage habitat and reduce shoreline erosion. View the FOCA guide "A Shoreline Owners Guide to Healthy Waterfronts" for more information.

7 If you identify AIS on your property, lake or waterbody, report them using the Early Detection and Distribution Mapping System (EDDMapS) Ontario. You can also call the Invading Species hotline at 1-800-563-7711 or visit https://www.invadingspecies.com/invasive-species-act/.

Follow this QR code to visit Ontario's Invading Species Awareness Program (https://www.invadingspecies.com/). The OFAH/OMNRF Invading Species Awareness Program delivers a number of initiatives that promote public engagement in invasive species awareness and prevention across the province. The active participation of boaters, anglers, property owners, gardeners, recreationalists, and all Ontarians is vital to prevent the spread of invasive species.

*FOCA – **F**ederation of **O**ntario **C**ottage **A**ssociations

Help stop the spread of Invasive Phragmites in McKellar Township

Invasive Phragmites (ontarioinvasiveplants.ca)

- Phragmites is a very successful grass/plant (common reed from Europe) that spreads easily and out-competes native plants
- This plant thrives in many conditions (even harsh) and has no natural controls
- A nutrient bully, it disperses a chemical from its roots that harms other plants
- Frequently grows densely and develops into large mono-dominant stands where it is an impossible habitat for the survival of many animal and amphibian species – a 'dead zone'
- Can grow to more than 15 feet (5 meters) high, forming floating mats that block views, remove access to waterfronts, and creating visual hazards
- Seeds are easily distributed by wind over a 10 km radius, via waterways and in tire treads
- In Ontario, it is illegal to import, deposit, release, breed, grow, buy, sell, lease or trade invasive Phragmites (https://www.phragcontrol.com/)
- Phragmites is difficult, but not impossible to stop. The longer it is left uncontrolled, the more difficult it is to eradicate from an area
- Native phragmites are not illegal, and can be left to grow
- Native phragmites are shorter, frequently mixed with other plant species, have reddish stems, green-yellow leaves and smaller seed heads

(Native vs. Invasive Phragmites Plants sleloinvasives.org)

Protecting the Waters of McKellar Township from Herbicides, Pesticides and Fertilizers

We all know the township is growing in population and with it, the pressure on damaging our watershed is increasing. The use of chemical-based pesticides, herbicides and fertilizers contributes to those pressures.

As the residents of McKellar, we all share a responsibility to protect our natural resources for generations to come. We need to consider more natural alternatives.

Chemicals and fast release fertilizers are easily washed into our lakes and down into the aquifer during periods of heavy rainfall. That can have an adverse effect on the aquatic environment and in the case of phosphorus fertilizers entering lakes, it will contribute to the development of blue green algae blooms. Consider the following to achieve a green healthy lawn without chemicals: 1. Use organic fertilizer. 2. Deep watering once a week develops healthy roots. 3. Create your own compost to spread on the lawn. 4. Allow grass clippings to sit on the lawn and decompose to natural fertilizer.

What About Those Pesky Bugs? Whether it's the dreaded black fly or the legendary Canadian mosquito, biting bugs are not a welcome sight for residents and cottagers. Over the years, that has led to many people turning to chemical-based solutions to reduce bugs on their property, including fogging the surrounding forest.

The problem with many chemical-based solutions is that other bugs, such as our vital pollinators and dragonflies, can be affected, and apiaries can be devastated. In addition, birds like chickadees depend on bugs and need to bring their chicks 5,000 to 9,000 bugs as they raise them. Bats also consume copious quantities of bugs. Instead of chemicals, consider encouraging bats to roost near your residence by installing a bat house.

A single dragonfly can eat hundreds of mosquitos and blackflies a day. Encouraging dragonflies to visit your yard by planting native plants that attract them such as Black-Eyed Susans. Dragonflies also love to bask on rocks to stay warm so having some spots available for them to perch will help attract them. Eliminating the use of pesticides will also help the dragonflies to flourish.

Plant Native Perennials and Shrubs

One of the best ways to help protect the environment and our bodies of water is to plant native plants in our gardens and along shorelines. Native perennial plants will attract pollinators like butterflies and bees as well as attract dragonflies. Also, plants that are native to the area require little maintenance and thrive without pesticides, fertilizers and herbicides. Such plants will develop deep root systems that slow the run-off of rainwater, trapping sediment on land and preventing erosion. Long-rooted native plants also give rainwater a pathway deep into the ground to contribute to the gradual process of replacing ground water.

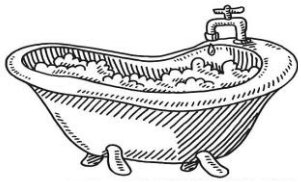
Are Fowls Fouling Your Shoreline?

Geese are reluctant to come ashore if they can't see behind the plants to scout for potential predators. Tall native plants and bushes will help prevent unwanted grazing on your lawn. There are lots of plans available for naturalized shorelines. If you are building, be sure to set your home back 20—30 meters to allow for sufficient vegetation to cleanse the water before it goes into the lake.

Help your Septic System - and our lakes!

Contaminants in the wastewater entering your septic system include nitrate, phosphorus, disease-causing bacteria, viruses and parasites. Careful use of your septic will prevent these contaminants from entering the ground water, your well water and local surface water (creeks, rivers and lakes).

Waste water enters the septic tank from the house. Solids settle to the bottom of the tank (where they stay until they are pumped out every few years), and the liquid exits the tank near its top and flows into the drainfield. The sewage trickles through soil for 2 or 3 feet, where aerobic bacteria and minerals in the soil break down the remaining organic material and kill most of the remaining germs. The soil also locks up chemicals such as phosphates.



Don’t block your septic system!

Only human waste and toilet paper should be flushed into your septic. Anything else may plug the exit pipes or the holes in the drainage pipes. Do not flush or put down a sink or bathtub: ⦸ food scraps ⦸ grease and fats (wipe cooking pans before washing) ⦸ baking supplies, coffee grounds, tea leaves (flour etc). ⦸ Do not use a garburator in your kitchen sink ⦸ excessive amounts of hair conditioner and fabric softener that form a hard gum and plug the pipes ⦸ paper towels ⦸ menstrual pads or tampons ⦸ condoms ⦸ disposable diapers ⦸ baby or hygienic disposable wipes, even if they say they are safe for septic systems ⦸ medications ⦸ any other objects ⦸ Don’t use septic tank additives because they may cause harm by adding extra solids to the system that can clog your drainage field and the chemicals they contain can also pollute groundwater and surface water. ⦸ Avoid liquids that will kill bacteria in the drain field, such as excessive amounts of bleach, heavy cleaners, antibacterial soap, salts, paint and thinner, fluid from washing brushes ⦸ Do not connect sump pumps, pools, eavestrough run-off or water softener drainage to the septic system ▶ use a filter on your washing machine and a metal mesh hair net on your sink, tub or shower drain.

Don’t flood your septic system!

Reduce your water usage. A septic system has a lower capacity to receive water than a city sewage system. Excessive water can flood the drainage field until it is saturated, potentially causing the septic system to **back up into the house** or causing a sewage smell or forcing the contaminants in the wastewater to leave the drainage field **unprocessed by the bacteria** in the soil.

Be aware of your water usage:

Don’t run the water until it’s cold or hot – ▶ keep a pitcher of cold water in the fridge & use the kettle or microwave to heat it ▶ A **dishwasher** uses 13 liters of water – wait until it’s full. Hand-washing dishes uses at least twice as much water. ▶ Turn off the tap when brushing your **teeth**. ▶ A full bathtub uses up to 80 liters of water, whereas a 5-minute shower uses about 75 liters. A water-efficient **showerhead** uses approximately 9 liters per minute, whereas an older style showerhead uses about 19 liters per minute. ▶ On average, a load of **laundry** uses 70 liters of water, so wait until you have a full load to do a wash ▶ A full flush toilet uses 11 liters of water, whereas a **dual flush** uses 4.5 liters for a full flush and 3 liters per half flush

Space out the use of your water. ▶ Schedule your laundry throughout the week rather than doing it all on one day ⦸ Don’t run the dishwasher and the washing-machine simultaneously. ▶ Rent a port-a-potty if you have a big crowd. ▶ In order to avoid saturation of the drainage bed, divert the rainwater from your eavestroughs.

Only grass or clover should be planted on top of the drainage field or septic tank to keep long roots from clogging the pipes. The bacteria in your drainage area requires oxygen to process wastewater contaminants and heavy weight can pack down the soil and break the pipes

⦸ Do not park cars, trucks, snowmobiles, boats or trailers etc. on your drainage field, or ever drive any vehicle over your drainage field, to prevent cracking the pipes

⦸ Do not put patios, decks, carports, storage sheds, sports courts, landscaping plastic or allow grazing animals on the drainage area, the drainage reserve area or the septic tank. Remove any trees or bushes that start to grow on the drainage field.

It’s not about how many people your cottage can sleep,
it’s about how many people your septic can sleep!

Here is the link to a booklet on the proper installation of a septic system – “Septic Smart” (Ontario.ca)

https://www.ontario.ca/page/septic-systems#:~:text=The%20SepticSmart!%20booklet

Decrease the risk of fire on your property and in McKellar Township.

There are a number of steps you can take.

https://firesmartcanada.ca/wp-content/uploads/2023/07/HIZ-Self-Assessment-8.5x11-WEB.pdf

There is excellent information available on decreasing your risk to fire losses. Designing your home and property to align with Home Ignition Zones reduces your risk.

Three steps to a cost-effective Firesmart Home from the Intact Centre on Climate Adaptation at the University of Waterloo is a one-page guide that details steps for home maintenance, simple and complex upgrades to help you protect your home against fire damage.

https://www.intactcentreclimateadaptation.ca/wp-content/uploads/2025/01/IntactCentre_3-steps-to-a-cost-effective-FireSmart-Home.pdf

Another resource from the Intact Centre is Wildfire-Ready: Practical Guidance to Strengthen the Resilience of Canadian Homes and Communities. This report presents a user-friendly synthesis of best practice guidance developed primarily by the National Research

Council of Canada and Firesmart™ Canada, a national program that has been helping communities improve their wildfire resistance for 30 years.
https://www.intactcentreclimateadaptation.ca/wp-content/uploads/2023/05/IntactCentre_3-steps-to-a-cost-effective-FireSmart-Home-QR.pdf

If you are interested in adopting FireSmart principles on your property, a detailed list of specifications is available in the FireSmart Home Development Guide. Mitigation measures include design and upgrades which help protect your home from wildfire such as using fire-resistant materials for roofs, siding and decks: placement of outdoor furniture, fencing and stored firewood. You may also want to consider fire-resistant plants, replacing highly flammable conifers within 10 meters of buildings with fire-resistant deciduous trees, thinning and pruning conifer trees within 10-30 metres of your buildings, and ensuring power lines are clear of tree limbs.

https://firesmartcanada.ca/programs/advanced-home-assessment-program/

Prevent your home from burning in a wildfire by making the yard fire resistant

Wildfire-resistant deciduous trees and include poplar, birch, aspen, cottonwood, maple, alder, ash, and cherry.

In the first few feet closest to your foundation, remove all or most of the plant material and any combustibles like firewood. Place hard landscaping like gravel or rock.

Deciduous trees are wildfire resistant. They can burn but do not significantly contribute to the fuel feeding the fire.

If you have the opportunity have deciduous trees only in the zone up to 30 feet from your home.

Fire resistant trees:

- Have high water content in the bark and leaves
- Have thin, watery sap
- Have thick bark that protects the inner layer of the tree
- Contain little accumulated dead material
- Produce little wax, resin or oil
- Lack branches low to the ground
- Have green growth and open structure
- Annually shed their leaves

Conifers or evergreens are more flammable and burn easily in a wildfire. The sap of evergreens burns very quickly and promotes the fast spread of wildfire. The bark of conifers is often rough and acts as a ladder for the fire to climb the tree. Trees that are more flammable should be further from your home, trimmed and thinned.

Plants and trees that catch fire easily include:

- Annual plants including long grasses
- Evergreen shrubs or trees with narrow, thin leaves
- Trees that retain dead leaves
- Trees that drop large amounts of needles

Conifers or evergreens grow closer together making it easier for fire to jump from tree to tree. Dead branches on the lower part of the tree and the fallen needles on the ground underneath makes it easier for a wildfire to burn. If you have evergreens in your yard, they should be thinned so their crowns are about 9 metres apart. Their lower branches should be trimmed and small trees that are underneath them should be removed.

Lawns can dry out during a drought, when wildfire is more likely. Evaluate your lawn to see if it is larger than required for your use. Consider replacing some of the grass with fire resistant plants and trees that have deeper roots and more moisture content.

Wooden decks, fences and cedar hedges all catch fire easily. Consider replacing these over time with those that have non-combustible material. You may find ideas in the Landscaping Best Practices Guide from FireSmart Canada. https://firesmartcanada.ca/wp-content/uploads/2022/01/328254-PIP-Landscape-low-res.pdf

THREE STEPS TO COST-EFFECTIVE HOME FLOOD PROTECTION

Step 1: Maintain what you've got at least twice per year

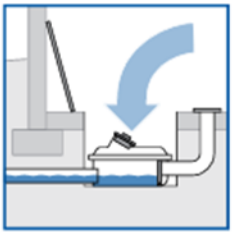
Do-it-yourself, $0

1. Remove debris from nearest storm drain or ditch and culvert.

2. Clean out eaves troughs.

3. Check for leaks in plumbing, fixtures and appliances.

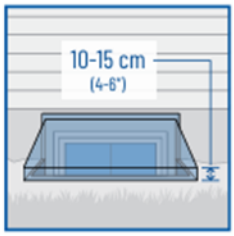
4. Test your sump pump.



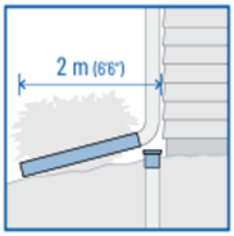
5. Clean out your backwater valve.

Step 2: Complete simple upgrades

Do-it-yourself, for under $250

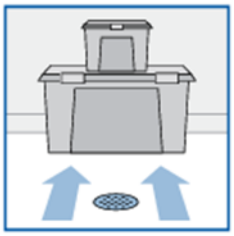


1. Install window wells that sit 10-15 cm above ground, and window well covers (where fire escape requirements permit).

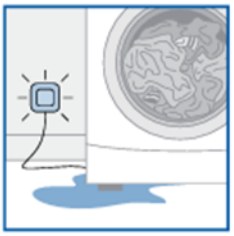


2. Disconnect downspouts, cap foundation drains and extend downspouts and sump discharge pipes to direct water at least 2 m from foundation.

3. Store valuables and hazardous materials in watertight containers and secure fuel tanks.



4. Remove obstructions to floor drain.



5. Install and maintain flood alarm.

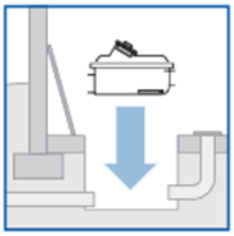
Step 3: Complete more complex upgrades

Work with a contractor, for over $250

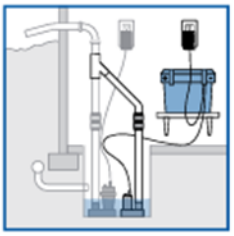
1. Install a rain garden to collect stormwater (at least 5 m from the foundation).

2. Convert paved areas to vegetation which absorbs more water and less heat.

3. Correct grading to direct water at least 2 m away from foundation.



4. Install backwater valve.



5. Install backup sump pump and battery.

INTACT CENTRE ON CLIMATE ADAPTATION

Scan the code or click the link for additional resources at www.intactcentre.ca

intact

UNIVERSITY OF WATERLOO

How to Recycle in McKellar Township

McKellar transfer station plastic/metal compactor guide

The accepted items ***must be clean*** and emptied loose into the compactor. ***Please do not put items inside plastic bags when depositing into the compactor, doing so causes contamination.*** Look for the recycling symbol to help identify whether the item is accepted ♺. Items that are not accepted ⊘ should be re-used or put in the garbage.

Accepted Plastics Glass

Polyethylene Terephthalate – PET
Plastic bottles, clear fruit containers.

High Density Polyethylene – HDPE
Detergents, cleaning and hair care bottles.

Polypropylene – PP
Tubs and containers.

Bottles and jars. Labels can be left on.

Not accepted glass items
Drinking glasses, dishes and cookware, mirrors, ceramic and light bulbs.

Not accepted – Plastics

Polyvinyl Chloride - PVC
Pipes and toys.

Low Density Polyethylene - LDPE
Plastic bags. Grocery and garbage bags and any plastic film.

Polystyrene – PS or Styrofoam
Cups, food and yogurt containers or anything Styrofoam.

Other Plastics
Water fountain bottles, sunglasses, baby bottles, DVDs.

Adding items to the recycling bins at the McKellar Township Transfer Station that are not accepted will cause the recycling company to deem the bin contaminated and reject it. Rejected bins go to a landfill and the Township is assessed a financial penalty which is a waste of your taxpayer dollars. Other municipalities might accept a greater variety of items, but some of those items are not acceptable for recycling in McKellar, for example styrofoam cannot be recycled in McKellar. We must only deposit items our recycler will accept. accept.

What you can recycle in McKellar may be different than what you are used to. Take a moment to familiarize yourself with items that are accepted and not accepted. If we do our part, containers and other materials can be recycled and used as raw materials to manufacture new items. Please ensure that any container being deposited for recycling is cleaned. For convenience, Transfer Station hours, and any updates, please visit https:www.mckellar.ca/en/living-in-our-community/transfer-station.aspx.

Paper/Fibres

✓ Newspapers Magazines

✓ Catalogues Cardboard

✓ Household and other printed paper

Paper must be clean and dry

No food residue

⊘ No containers that contain layers of foil or plastic

⊘ No waxed or plasticized paper containers

Accepted Metals

Aluminum cans, pans, plates and foil.

✓

Steel/tin cans. Labels can be left on.

✓

Not accepted metals

Aerosol cans.

⊘

Paint cans.

⊘

Use Road Salt Thoughtfully

Excessive chloride (calcium chloride, sodium chloride, magnesium chloride) stunts plant growth, kills grass and is detrimental to the health of lake organisms. Chloride is also very mobile with water, and so it flows with runoff into creeks, rivers, lakes and groundwater.

Many people use far more road salt than is required to melt ice on pavement or walkways in the winter. If the temperature is colder than - 12° C, salt will not melt the ice.

In many other parts of Ontario, salinity is increasingly in lakes, largely due to its accumulation from road salt. Values for electrical conductivity, which is a measure of salinity in the lakes of McKellar Township, are in the expected range for lakes in our region (see the lake parameter measurements in the report on Extended Water Measurements under Environment on the McKellar Township web page). “Normal” conductivity is usually up to approximately 200 µS/cm. We do not have a salinizing lake issue in McKellar at present (2024); monitoring by local volunteers is helping to ensure we know if that trend changes.

A 12 ounce / 350 ml cup holds enough salt for an area of 45.5 sq m/ 500 sq ft /10 sidewalk squares

You can find out more about the threat road salt presents to the environment here. (https://enviroliteracy.org/how-does-road-salt-affect-the-environment/)

Using Wood Ash to Strengthen Forests

Decades of acid rain decreased the calcium in the forest trees. Since 2019, the Friends of the Muskoka Watershed have been replenishing the calcium on the ground by carefully spreading **COLD** calcium-rich wood ash on the forest floor. In only two years, the foliage showed an increase in calcium of up to 20 %. Healthy trees hold more water and have fewer dead branches, thus increasing their resistance to fire damage. Preliminary indicators are showing increased sap production from maple trees, thus helping the syrup industry.

Read more about the wood ash program led by Friends of the Muskoka Watershed here.

https://fotmw.org/get-involved/#ash

Safe Boating

Safe and enjoyable water activities require a balance between recreation, safety, consideration of other boaters and swimmers, and environmental stewardship.

Put Safety First Wear a life preserver at all times – being a good swimmer will not help. Research has revealed that people involuntarily take a deep breath when they are thrown into the water unexpectedly – it is called "the shock factor." From 2014 to 2023, there were 201 fatalities on Ontario lakes. 87% of those people were not wearing personal flotation devices. There is no time to put it on during an incident.

Avoid Excess Speed where you do not have full visibility. Sometimes people boating on McKellar Township lakes do not slow down even though they cannot see around an adjacent piece of land. This greatly increases the risk of a collision with another vessel.

Large Boat Wakes Cause Damage (https://www.youtube.com/watch?v=r-fNuN5TXIo)

Slow down in narrow channels (10 km/h within 30 m from the shoreline), so your boat has no wake near other craft, or docks, or swimmers and in environmentally fragile areas. Boat wakes cause erosion of the shoreline, resulting in loss of trees and other vegetation and may swamp swimmers and bird nests.

Respect your neighbour's peace and quiet: have quiet waters after sunset and before sunrise.

Do not chase animals or waterfowl in your boat.

When towing, use a spotter and have a seat for each person.

Follow this QR Code to visit safequiet.ca and view the video,

Be Wake Aware

https://www.youtube.com/watch?v=X3bYBPbP0qk

Ensure you have a boater's license and proper safety equipment – personal flotation devices, flashlight (not your cell phone), a rope with a float, a whistle and a bailer. Scan this

BOATERexam.com®
Educating Boaters Online