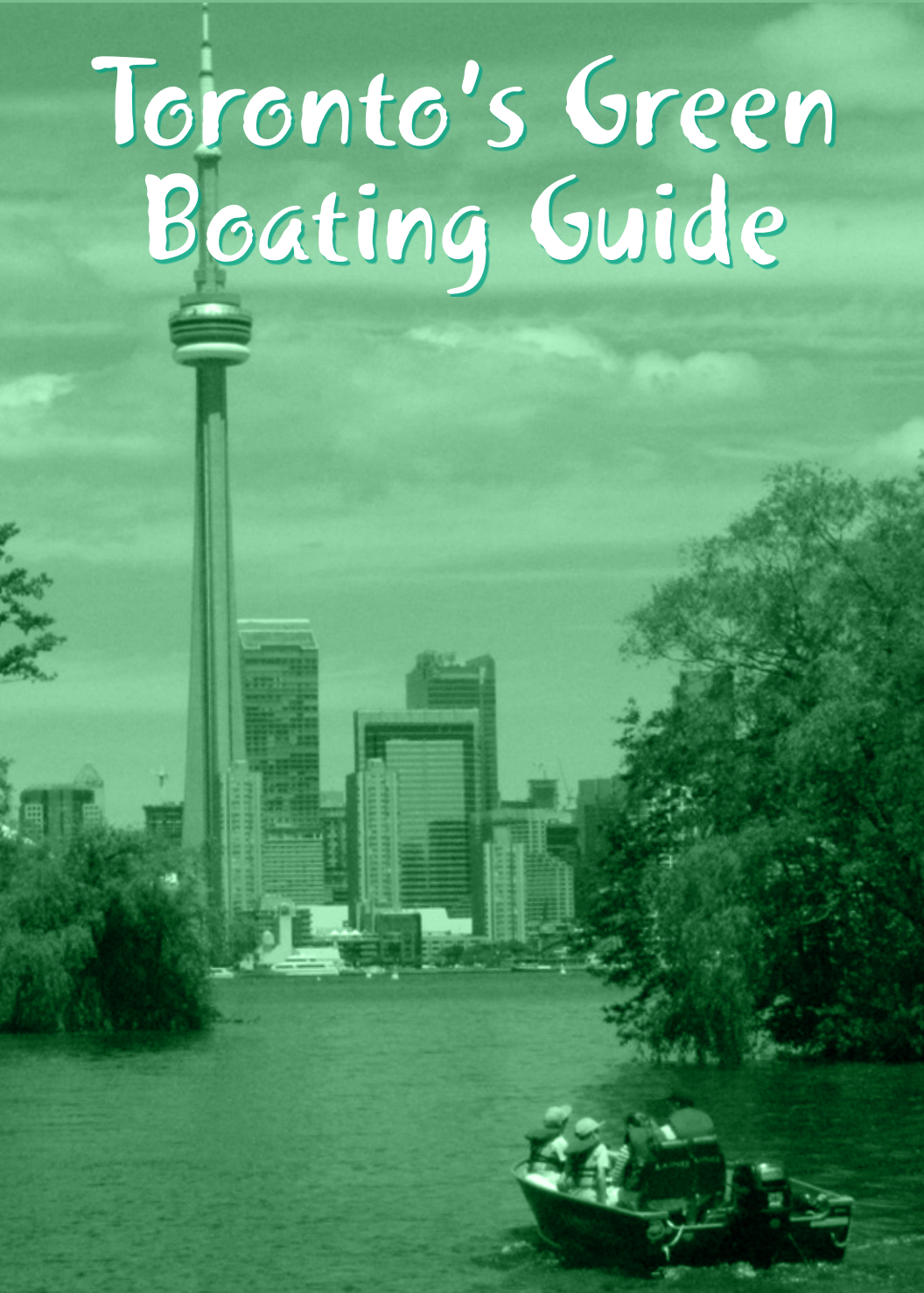


BEST MANAGEMENT PRACTICES TO
ENVIRONMENTALLY FRIENDLY BOATING!

Toronto's Green Boating Guide



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Introduction

Canada is fortunate to be wealthy in terms of lakes and rivers for boating, but aquatic ecosystems are especially vulnerable to damage by unconscientious or careless boaters. As the largest urban area in Canada the waters in and around Toronto can be particularly prone to damage through boating activities. This guide provides insights into some of the ways you can make sure that the time you spend with family and friends on the water is also safe for the environment. We hope that you can be a leader in the boating community to help protect our lakes and rivers.

LEAVE NO TRACE BOATING....

- **If it goes on the boat, it comes back off the boat.**
- **Plan ahead**
- **Leave nature as you found it (or better off by picking up litter!)**
- **Dispose of waste properly**
- **Respect wildlife and wild spaces**

* The information contained in this booklet considers current technologies and best environmental practices. It is not intended to provide legal or technical advice to the boating community. TRCA accepts no responsibility for the information contained herein.



Fueling

Fuel and oil are toxic to people, wildlife and plants. Responsible fueling is one of the easiest ways you can protect the environment.

Did you know?

An estimated 30% of all fuel and oil used in 2-stroke engines ends up in the water. Manufacturers are responding by developing 4-stroke marine engines, lean-burn 2-stroke engines, and fuel injection systems that greatly reduce the amount of oil and fuel entering the water, as well as air emissions.

- Keep your motor well maintained to avoid leaks and spills... and save money!
- Regularly check fuel lines for blockages, cracks and worn areas and check fuel tanks and vents for signs of corrosion or damage.
- Fill portable fuel tanks on shore; never fill them on or near the water. Take them ashore or on a fuel dock where spills are less likely to occur, at least 100 meters (~325 ft) from water.
- If the motor has built-in fuel storage, take the entire engine on shore, away from the water, to refuel.
- Use a funnel to ensure all fuel goes into the tank. This is both good for the environment and will save money in the long run. Even better – place an absorbent bib or collar around the fuel intake to catch any potential drips or spills.
- Don't overfill fuel tanks – fuel expands as it warms, and excess fuel will escape through the vent line. Rough waters can also cause spillage from over full tanks. Fill to approximately 90% full.
- If you accidentally spill oil or fuel in the water, use an absorbent pad or spill kit to collect as much of the spill as possible and dispose the clean-up materials and engine oil container in a hazardous waste depot. These can usually be found at your local garage. Contact the Spills Action Centre- **416-325-3000** or **1-800-268-6060**.
- Use a bilge filter to help remove oils. Never pump bilge water back into a lake or river. Take it back to the marina for proper disposal.
- Use biodiesel when refueling your boat. It can be used in diesel engines with practically no changes. Power and fuel economy are virtually equal to petroleum diesel!
- Always recycle engine oil and other hazardous materials like antifreeze and batteries properly.
- Turn off your boat engine whenever you can – save money and the environment!

Did you know?

Two cups of oil spilled into a lake can spread to a 1 acre oil slick - larger than a football field. Never add dish soap to a spill. This causes more harm to the environment since the oily soap sinks below the surface harming aquatic species.

Waste Management

Boaters have a big role to play in protecting the environment from trash and human waste. Do your part and be an example for others!

Did you know?

Cigarettes butts are the #1 littered item found on beaches and waterways. Cigarette butts are toxic waste! They leach toxic chemicals and carcinogens into the environment and can poison fish and wildlife.

- Secure loose items so you don't lose them from a gust of wind or rough waters.
- Remember to sort your garbage and recyclables and bring to appropriate on-shore sites.
- Cigarette butts are toxic litter and should never be thrown into the water or on land. If you or your guests smoke get a 'butt out' jar for your watercraft. This can be an empty can or bottle – anything that is fire resistant and will not blow away works. Remember to empty the jar into the garbage and recycle the container when you are finished.
- If you see litter in the water or on the shoreline – pick it up! Trash affects everyone including wildlife that can ingest or become tangled in litter like plastic bags; the tourism industry that suffers from shoreline eyesores; and damage to boats from floating debris.
- Portable toilets are only legal on boats if they are securely fastened and are able to be emptied at a pumping station.
- All washroom use on a boat including brushing teeth, and bathing must have the greywater and blackwater stored until it can be removed on land or by a pumping station. This should never be dumped into a lake or a river. Pumping stations are facilities that remove waste from the boat to transfer to a waste water (sewage) processing site.

Did you know?

Blackwater pollution can trigger algal blooms reducing light levels and depleting oxygen which can result in the death of fish and other aquatic organisms, as well as aesthetic problems. Plus chemicals added to toilets and holding tanks are often toxic to aquatic life. Never dump sewage into any lake or river!

MAKE A DIFFERENCE

If you see a shoreline that needs a clean-up then organize one! See the Resources section for more information.

SPILLS REPORTING

Report all spills (fuels, sewage, chemicals, etc.) to the **Spills Action Centre.**
416-325-3000 or 1-800-268-6060

Cleaning

Any product that is hazardous to your health is hazardous to the environment. Biodegradable, phosphate-free cleaners are not only better for the environment, they are better for you too!

Did you know?

Boats and equipment should be washed at least 100 metres (~325 ft) away from the water's edge making sure that the land does not slope back towards the water.

Boat hull	The best choice for cleaning your hull is water and some elbow grease. A power washer can help too.
Fiberglass stain	Make a paste of baking soda and water. Use a sponge or soft cloth and gently rub the mix into the stain. This paste can also be used to clean onboard showers and heads. While baking soda is an excellent all-around cleaner, keep in mind that it is abrasive, so use with care. Use lemon or lime juice as a final wipe-down for a shiny, fresh-smelling finish.
Windows and mirrors	Mix together 2 tbsp of white vinegar with 1 gallon of water. Fill a spray bottle with the solution. Spray it on your windows and wipe with newspapers.
Chrome	Use apple cider vinegar on a soft cotton cloth to rub it clean. Then, use a fresh cloth with a dab of baby oil to restore it to a bright shine.
Brass	Combine equal parts salt, vinegar and white flour to form a paste. Apply to brass and let sit for an hour. Rinse with water and buff with a clean, dry cloth.
Copper fittings	Make a paste of either lemon or lime juice and salt. Rub gently to clean.
Stainless steel	Clean with a cloth dampened with undiluted white vinegar.
Aluminum	Using a soft cloth, clean with a solution of cream of tartar and water.
Plastic surface	Use a mixture of 1 part white vinegar and 2 parts warm water.
Decks	Use a mixture of 1 part white vinegar and 8 parts warm water.
Interior woods	Clean them with olive oil or almond oil. The oil will provide natural moisturizers for the wood and add shine at the same time. Don't use these oils on exterior surfaces, since they don't hold up in direct sun.

Did you know?

Look for phosphate-free products to help keep our lakes and rivers healthy.

Fish and Wildlife

One of the greatest pleasures of boating is nature-watching. Resist the urge to get too close or take part of nature home with you – put nature first.

Did you know?

You should avoid being between a bird or a swimming mammal and the shoreline. There is a chance their nest or lodge may be there.

- Respect wildlife and natural areas by minimizing your presence. Move slowly and quietly.
- Never remove natural materials from an area, including driftwood and rocks – this is habitat for fish and wildlife!
- Shallow water areas (<4 feet) are often habitat for nesting and spawning fish and wildlife. Avoid boating in shallow water and if you must use extreme caution – wildlife has less room to escape oncoming boats in shallow waters.
- Avoid landing or docking in natural areas where wildlife is obvious (i.e. colonial waterbird nesting areas) or on small islands where wildlife may not be as obvious. Small islands are important for many nesting birds and can be especially sensitive. Stay at least 100 metres away.
- Anchoring can damage fish and wildlife habitat. Choose other options such as mooring in a defined area or tying up to a robust shoreline surface.
- Never feed or touch wildlife, never attempt to swim with aquatic wildlife.
- Do not attempt to handle or rescue wildlife or birds. If you see one that is injured or hurt, call a local rescue group such as the Toronto Wildlife Centre (**416-631-0662**).
- Ensure your Ontario fishing licence is valid and that you follow all fishing regulations, including catch and possession limits. Always return undersized or undesirable fish (except species illegal to release) back to the water unharmed.
- Before launching your boat, review the locations of environmentally protected or sensitive areas that are best to avoid. If you are not sure of these, ask someone at the marina for more information.

Did you know?

Stray fishing line, hooks and nets can be deadly for wildlife. Never toss these overboard or leave them in the lake and if you find these please pick them up for proper disposal.

Invasive species

Exotic invasive species are plants and animals that were introduced to a location outside their native range and can easily spread resulting in damage to the environment, the economy, recreation or human health. Invasive species are often 'hitchhikers', hiding in or on boats and anchors.

Did you know?

There are at least 180 exotic invasive species in the Great Lakes.

- Zebra mussels, spiny water flea, ruffe, round goby, Asian carps and purple loosestrife are all well-known exotic invasive species that should not be here.
- Once established invasive species are very difficult and costly to control. Prevention is the most cost effective approach.

WHAT YOU CAN DO

- Wash down boats and trailers to minimize the risk of spreading exotic invasive species. Plus boat bottoms covered in algae can result in up to 15% higher fuel consumption!
- Drain water from your motor live well, bilge and transom well when you arrive back on land after being on water and before you trailer your boat to the next location.
- Inspect and remove vegetation and other organisms by hand after leaving a body of water and before entering a different body of water.
- Empty your bait bucket on land before leaving your fishing site if fishing with minnows or other 'live' bait.
- Always obey bait restrictions – if certain bait is prohibited there is a good reason why!
- Never release or flush pets, plants or water from aquaria, backyard ponds or water gardens. It is illegal and can harm the environment. If you have an unwanted aquarium pet, you can return it to a local pet store, donate it to a school or contact the **Fish Rescue Program** at **905-839-6764**.
- Report sightings of invasive species to the **Invading Species Hotline 1-800-563-7711** or at **www.invadingspecies.com**

Did you know?

In Ontario it is illegal to possess live invasive fish, including Round Goby, Tubenose Goby, Grass Carp, Bighead Carp, Black Carp, Silver Carp, Rudd, Ruffe and any species of snakehead. If any of these species are caught, they should be destroyed and not released back into any waters.

Winter Storage

Preparing your boat for winter is a must. Here are a few tips to minimize your ecological impact.

- Plastic shrink wrap or boat wrap use petroleum based products transported over long distances. The manufacturing process for this plastic wrap involves the consumption of large amounts energy. Plus the application process typically uses propane heat that releases large volumes of combustion by-products, as well as plastic by-products into the atmosphere. This results in a high carbon footprint.
- Recycling plastic wrap wrap is the best method of disposal – unrecycled plastic wrap typically ends up in a landfill where it could remain for centuries. The City of Toronto blue box program does not accept plastic wrap, so arrange for recycling with the marina.
- Instead of plastic wrap use a tarp to cover your boat for the winter. They are inexpensive and reusable.
- Most marinas use antifreeze to winterize boat engines, but most antifreeze products, including “non-toxic” varieties, are poisonous to humans and can remain in the water table for extended periods of time. Avoid using ethylene glycol antifreeze or even better – use dry engine storage techniques and avoid using antifreeze and plastic wrap.

Did you know?

It takes 24 gallons of water to make 1lb of plastic. This means it will take up to 300 gallons of water to shrink wrap the average boat every winter.

Glossary

2-stroke engine	An engine where the crank shaft of the engine moves in two directions (up and down), this engine is less fuel efficient and worse for the environment than a four stroke or electric motor.
4-stroke engine	An engine where the crank shaft moves in four directions (up, down, left and right). These engines are more fuel efficient and better for the environment.
Bilge	The area in your boat that is the deepest. This is where water and other substances will collect. Some boats have certain areas designed to collect this water and other substance making it easier to remove.
Blackwater	Waste water/sewage from toilets.
Electric motor	Also called a 'trolling motor'. These motors are quiet, better for the environment and run on batteries and not on fossil fuels.
Greywater	Waste water from baths, sinks and other appliances not including toilets. As soon as water leaves the tap it is considered 'grey water' regardless of if the water was used.
Invasive species	Any living organism that is not native and has been introduced to an area that has a tendency to spread causing damage to the environment, economy or human health. Examples of invasive species are round goby, zebra mussels, purple loosestrife, and spiny water flea.
No wake	Areas such as marinas and wildlife protection areas will have signs that say 'No wake'. These signs are telling you that your boat is not allowed to make waves while it is moving. If you are not able to use your motor without making a wake, you must find another way to move your boat through this area (paddle, tow from another boat, sail, drift). All waters in Ontario have speed limited of 10km/h within 30 metres of the shore (with few exceptions).
Pumping (or Pump Out) station	A facility that removes sewage from boats to be taken to processing sites. Most, if not all marinas should have some method of pumping out sewage from boats for a small fee.
Wake	Waves that are created by a boat when it is moving. All waters in Ontario have speed limits of 10 km/h within 30 metres of the shore (with few exceptions).

Resources

Boater’s Chat Blog:

<https://tomdwelsh.com/>

Boating Ontario:

<http://www.boatingontario.ca/cpages/home>

Canadian Power and Sail Squadrons:

<https://www.cps-ecp.ca/>

Discover Boating:

<http://www.discoverboating.ca/resources/greenboating.aspx>

Environmental News Network:

<http://www.enn.com/wildlife/article/45874>

Great Canadian Shoreline Cleanup:

<http://www.shorelinecleanup.ca/>

Ontario Fishing:

<https://www.ontario.ca/page/fishing>

Sailors for the Sea:

<http://www.sailorsforthesea.org/programs/green-boating-guide>

Spills Action Centre:

<https://www.ontario.ca/page/report-spill>

Toronto Wildlife Centre:

<https://www.torontowildlifecentre.com/wildlife-emergency-rescue-hotline/>

Transport Canada – Pleasure Craft:

<http://www.tc.gc.ca/eng/marinesafety/vessels-pleasure-1279.htm>

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