

THE

ENVIRO

Boater

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A Guide To Environment-friendly Boating

THE
ENVIRO
Boater
G U I D E



Published by Canadian Power & Sail Squadrons in cooperation with
the Ontario Ministry of Environment, and Environment Canada

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The information contained in this publication is offered for the benefit of those who have an interest in improving the purity of our waterways by using preventive methods. This information has been compiled from research, publications, interviews and observations of individuals familiar with boating, the environment and education. Because there are many differences in boating areas, ie: environmental conditions, controlling laws and regulations, there may be individuals and organizations who hold differing views.

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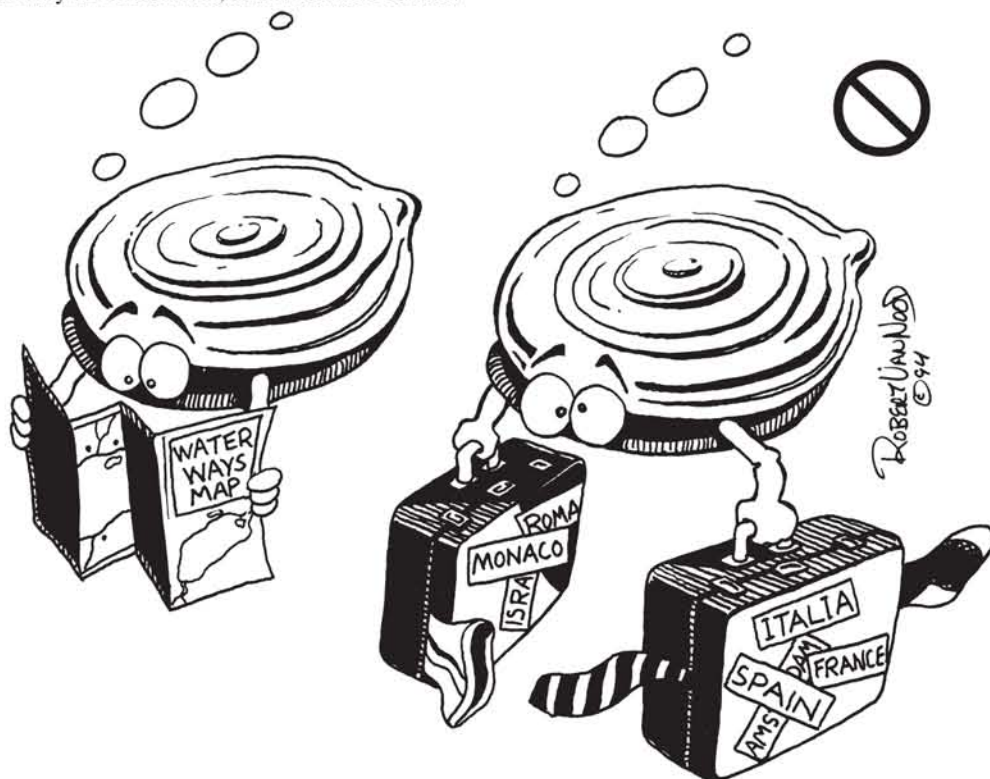
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THE ENVIRO[®] *Boater* G U I D E

PREFACE

Most boaters are already environmentally conscious, because every aspect of boating—fair winds, sunshine and sparkling, clean water—seems to go hand in hand. However, if you are a boater who hasn't given much thought to your effect on the environment, the *Enviro Boater Guide* should provide some interesting reading.

Some of the products used to operate and maintain a boat can be very harmful to the water, if not handled properly. If simple precautions are not taken, boaters that trailer their boats can unknowingly spread organisms and other aquatic species that threaten the health of our waterways. *Enviro Boater* has been designed to present tips and suggestions for environment-friendly boating, in an easy, humorous format, while recognizing that improving our waterways is the prime factor.



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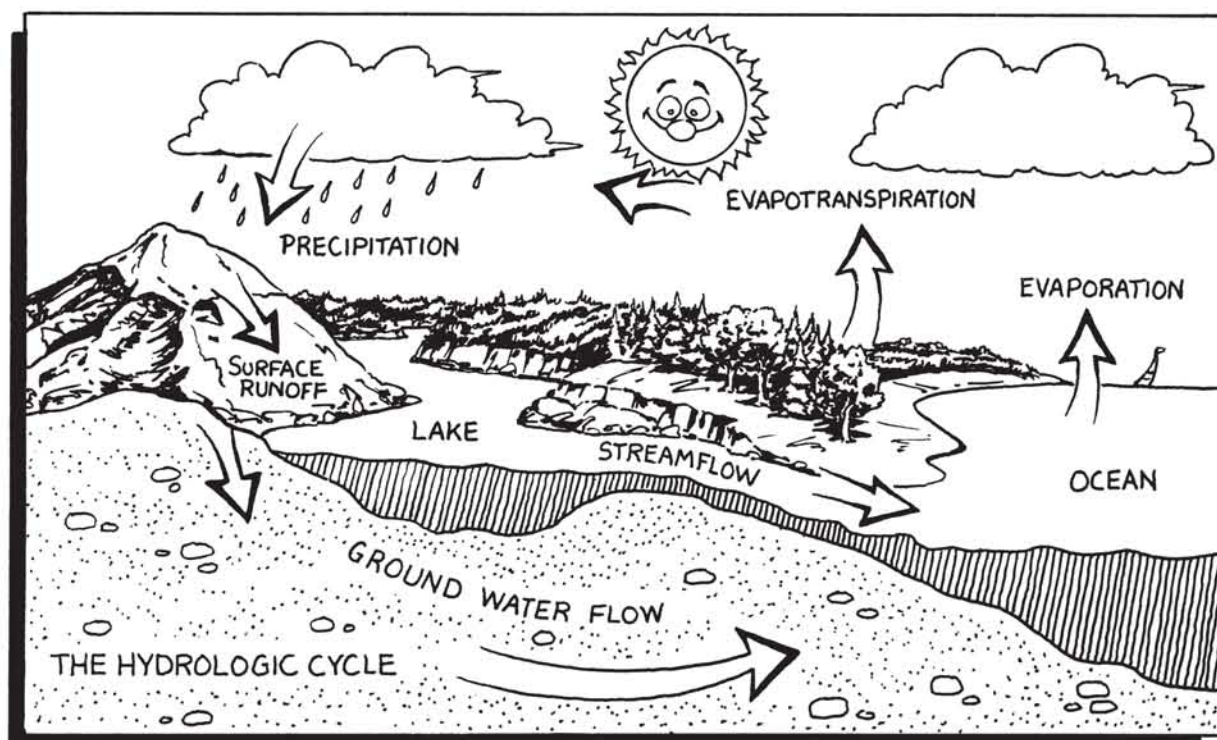
AN OVERVIEW

Water, the element boaters need most for enjoyment and survival, has been here since the beginning of time. We may be new to the Blue Box, but Mother Nature has been at this recycling business for a long, long time.

The Hydrologic Cycle:

The Earth's water moves continually through a natural cycle. Water falling to Earth percolates into the soil, while some runs over the surface. Eventually, all water flows into rivers or lakes and the oceans, only to evaporate back into the atmosphere and begin the hydrologic cycle all over again. Nature can cope with the natural substances, but may be unable to deal with pollutants man has added—fertilizers, pesticides, road salts, oils, manure, bacteria and detergents.

Every part of the ecosystem is interconnected. Disruption of any part of this living network will inevitably affect other areas. A healthy system is a balanced and diverse ecosystem. Areas that have been left alone tend to retain the healthiest ecosystems. When management is required to restore the balance, it is invariably to correct for human interference.



Work under way:

The United States and Canada share jurisdiction over the Great Lakes, having an International Joint Commission, the IJC. For many years, this group has studied water-quality problems. It is aware of the extent of the damage, the causes and many of the remedies required. It identified a number of "hot spots" that have been worked on for several years, where results of remedial action are available for measurement. Similar studies have been conducted in other areas. Many remedies talked about in this Guide, stem from the successful work undertaken and the results already achieved by dedicated workers at the various sites.

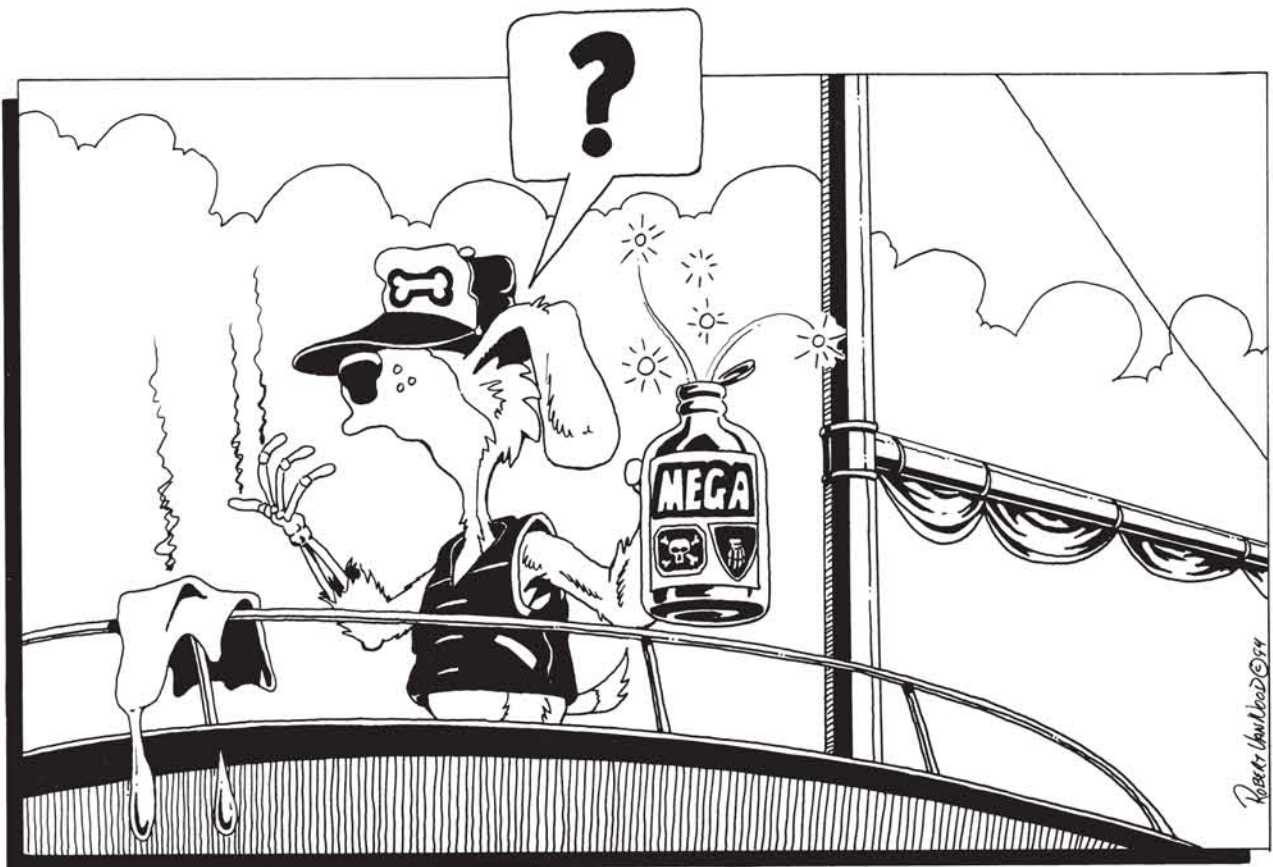
Pollution is a fact of life. Unfortunately it is now a visible fact in many waterways where people go boating. We know that phosphorus, a major ingredient in detergent and cleaners, is a major contributor to pollution. We hope *Enviro Boater* will provide some knowledge to start making a difference—out there, where it counts the most.

SCRUB A DUB, DUB...

Boat cleaning is a challenge, because cleaning any boat—even a small one—can dirty a lot of water. Whether or not pollutants are introduced, and to what extent, depends on the action taken. If polluted water is left behind, it will certainly offend other users of the waterways.

Most boaters recognize their environmental obligation because they have a vested interest in keeping waterways clean. The boating experience is more pleasurable in unpolluted waters. With clean water as the objective, here are a few tips to meet the “boat-cleaning challenge”.

- **Water and grime will cascade off a well-waxed car.** This know-how can be used in a clean boat/clean water plan. Before launch, give the boat a thorough cleaning on land, in an area where the run-off won't enter the waterway. A proper cleaning will remove the dirt and grime from months of winter storage, and set the foundation for future cleanings. Next, apply a good coat of boat wax, and polish the hull to capture that “just-right” look. During the season, the wax will prevent surface dirt from becoming engrained. When it becomes necessary to clean the boat, slosh it with lots of water, clean off with a soft mop, and repolish the wax to the old lustre.
- **Avoid harsh cleaners, soaps or detergents.** They can destroy protective wax coatings. More importantly, they will needlessly damage the environment, and reduce water quality. It is better to use water only. If a difficult area cannot be cleaned using this method, find a way to contain any polluting chemicals i.e: “spray ‘n wipes”. Use rags, sponges or paper towels to soak up the dirty water. Confine the water to a pail, and dispose of it in the marina sewage system. Use any cleaner sparingly, more is not necessarily better. Read the instructions, and follow them, especially when it comes to dilution procedures. Some cleaners take time to loosen dirt and stains, so allow them to sit for a few minutes before adding more.



SCRUB A DUB, DUB...cont'd

- **Consider a portable power sprayer** for the areas that seem to get the dirtiest. Nothing seems to work quite as well on non-skid surfaces as high-pressure water, and it is environment friendly.
- The **“plain-water” method** is fine at the home dock or marina. The use of cleaners could concentrate harmful chemicals in the sheltered, relatively static waters near shore. What should not be done at the dock, should not be done anywhere else.
- **Remember, “environment-friendly” or “green” detergent is still detergent**, and if it contains any level of phosphate, it will pollute. Look for the phosphate-free, biodegradable type to reduce the introduction of chemicals to the water. Some replacement chemicals can be worse than the phosphates, so it's necessary to become a “product detective”. Ask questions, do comparisons, and check with suppliers or the Ministry of Environment. In another section of the Guide, some alternative cleaners are suggested.



Keep the boat clean, by all means, but not at the expense of waterways. By adopting a Wax n' Wash Clean Boat Routine, all boaters will be on their way to becoming environment friendly, and this particular grey-water source can be totally eliminated.

SAFER SOLUTIONS TO AVOID POLLUTION

New products are constantly being introduced to the market. It is very important to study the label, and ask questions. In Canada, manufacturers are not required to list ingredients on soap or detergent packaging. However, there is a legal requirement to substantiate such product claims as “non-polluting”, “fully biodegradable” and “environment friendly”. Guidelines have been established for such claims, and are enforced by Industry Canada.

To help identify products and services that are more environmentally responsible, Canada has established the Environmental Choice Program. The EcoLogo symbol (three doves in a maple leaf) on a label means that the way the product or service is made, distributed, used or disposed of, is significantly less harmful to the environment. Boaters can help reduce stress on the environment by purchasing those products with the EcoLogo on them. Most marinas are trying to carry environment-friendly products, but manufacturers seem slow to react to the need.

“Elbow grease” may be the most important ingredient for environment-friendly boating. Scrub hard, clean often, and mop up spills right away—before they set. Try water first. If this doesn’t work, then a mild, “homemade” solution should do the job. If all metal surfaces are properly cleaned, waxed and polished at the beginning of the season, this will help reduce the use of chemical cleaners on, or near the water.

The do-it-yourself cleaners listed here are made from basic, readily available, and we believe harmless, household staples.

To bleach: Borax or hydrogen peroxide

To polish wood: Three parts olive oil and one part white vinegar

To polish chrome/metal: Apple cider vinegar to clean; baby oil to polish

To scour: Baking soda

To clean:

Fibreglass stains—A paste of baking soda and salt

Aluminum—Two tbsps Cream of tartar, in one quart of hot water

Brass—Worcestershire sauce, or paste made of equal parts vinegar, salt and water. Rinse

Chrome—Apple cider vinegar to clean; baby oil to polish

Copper—Lemon juice and salt. Spread; wait; then rinse.

Decks/Floors—Cup of vinegar, gallon of hot water. Scrub; swab; mop. Beware, it will remove any polish.

Lexan—Cup vinegar, pint water, soft cloth. Polish dry.

Mildew/Mold—Paste using equal parts of either lemon juice and salt, or vinegar and salt. Vary treatment per location.

Shower—Wet area; sprinkle on baking soda; rub with scouring cloth.

Refrigerator/cooler—Wipe with wet cloth dipped in baking soda.

Toilet—Add baking soda, and brush with great enthusiasm. A cup of vinegar left overnight in the head will reduce the build-up of salts.

Windows—One cup of vinegar in one quart warm water. Wash; rinse and squeegee.



It is remarkable that vinegar, a cheap and readily available product, can be substituted for expensive, abrasive cleaners. As one environmental writer stated—“*Perhaps we should install vinegar holding tanks*”.

Until EcoLogo products become readily available, ask questions, and avoid excessive use of any product. The easiest way for boaters to keep phosphates out of the water is to avoid taking them on board.

HATE THAT GREY...

It is important to understand that when phosphates (soaps), or other cleaners, are added to clean water—to wash people, dishes and a host of other things—“grey water” is produced. When this happens at home, there is generally a sewage treatment plant between the waste and the waterway. Phosphorous-loaded water can cause excessive algae growth. As the algae decompose, they rob the waters of oxygen, causing damage to fish and wildlife.

Avoid producing grey water onboard:

- Make sure any onboard detergents are the most environment friendly products you can buy. **Look for the three-doves logo.**
- **Skip the shower.** A swim is a lot more refreshing, requires no soap, and is a great way to exercise. With a daily swim, the shower can be avoided without bringing new meaning to the term “High Society”.
- **Washing** (face, teeth, shave, shampoo) while in the water is needless pollution. Face and hands just need water with minimal soap—rinse and rub dry. **Shave**—use electric, or lather using paper towel to gather soap. **Hair**—use baby shampoo, it is phosphate-free and ph-balanced. Shampoo/shower at the marina or somewhere on land, well away from the shore.
- **Dirty dishes are tough.** Never let them dry dirty. Scrape food waste into the garbage, and soak as soon as possible. If not using fat, soak dishes immediately, and clean with minimal, soapy water. If barbecuing or frying, consider using a thin paper plate over a regular plate. The paper is garbage-canned, and the soap is reduced. If paper plates are unacceptable, clean the low-soap items first. Use paper towel to remove as much of the grease as possible, then wash greasy items in minimal soapy water.
- A few boats have been retrofitted with **grey-water holding tanks**, and boaters have considered using portable tanks to be emptied at the marina. Some manufacturers are installing them as either standard equipment or optional accessories. If you must use your shower or sink in a marina or protected anchorage, consider retaining the unavoidable grey water onboard.
- Make sure to **clean the screen and shower pump** as often as possible. This will extend the life of the pump, and improve the quality of any grey water.



If boaters follow the suggestions offered above, and heed the theme: “If it goes out on the boat, it comes back on the boat”, they will be on the way to becoming environment-friendly boaters.

BASIC BLACK DOES NOT WORK HERE

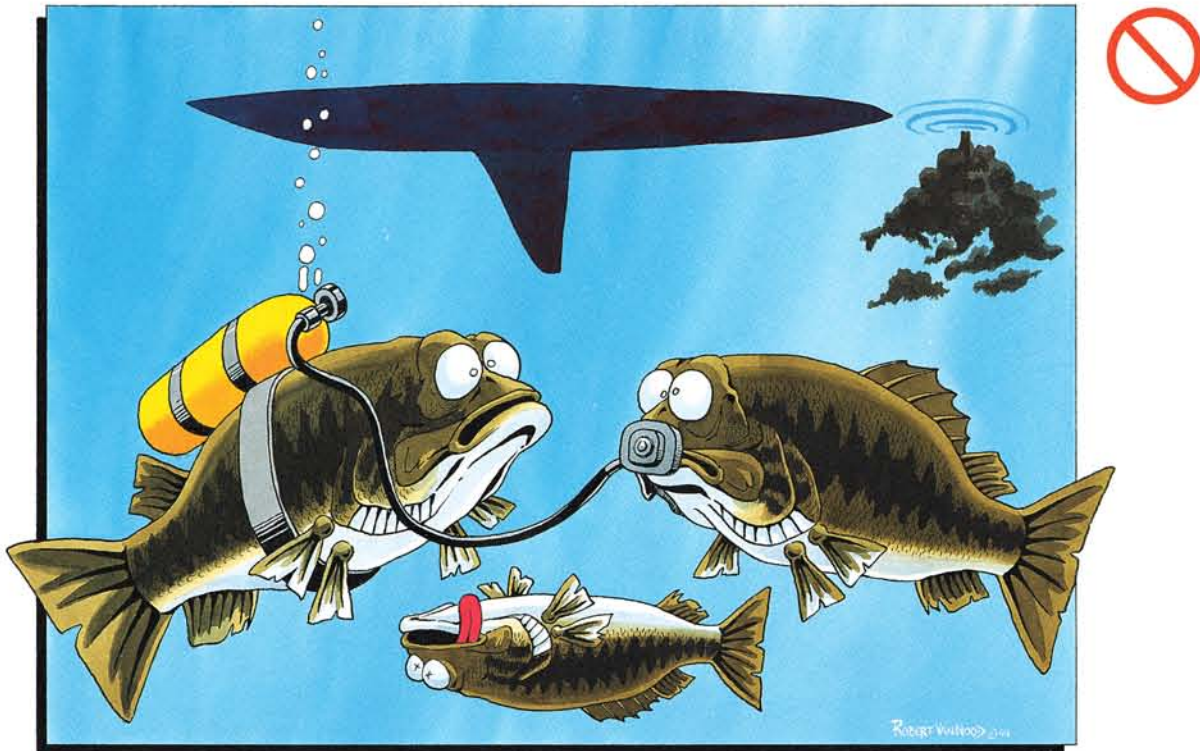
In Ontario and other areas of Canada, especially inland waterways, all boats fitted with a marine toilet must also be fitted with a holding tank. This is simply a tank in which raw, untreated sewage—known as “*black water*”—is stored until it can be properly disposed of at a pump-out station.

- **Dual systems with “Y-valves”**, which allow toilet waste to go overboard, are illegal (in Ontario and some other areas). These valves must be either removed, or the overboard discharge pipe cut and capped so that the raw sewage can enter the holding tank only.
- **Portable toilets** are legal only if they are securely fastened to the boat, and have a permanent fixture enabling them to be emptied at a pump-out station.

Serious bacterial infection can occur if black water is released into recreational waterways used for swimming. Nobody should allow this to happen, and any violations should be reported to ensure clean waterways for all to enjoy.

Although toilet odours are often fought by using deodorizers or chemicals, the best method is to get regular pump outs. An annual “shock” treatment of the holding tank is recommended. Also investigate the new products being introduced such as the natural bacteria bio-formula and a plant-extract formula.

Boat “campers” need to plan trips carefully. Use onshore facilities, or at least bury any human waste well away from the shoreline, to avoid leeching back into the waterway.



FILL IT UP, WITH CARE

Fuel spilled while refuelling a boat can be very harmful to the marine environment. Be prepared to deal with any spill, quickly and effectively.

Have several cloths ready to catch spills, should they happen. Have one at the fill, one at the vent, one in the hand and a spare in the pocket. Don't distract the person pumping the gas. It's easy to catch a spill with the right preparation—so be prepared!

Engine-mounted tanks:

If the motor is a small outboard with an engine-mounted tank, and the boat is at or near a dock, take the whole thing ashore to refuel. Afloat, use a properly-sized funnel and a fuel container sized to deliver a pre-measured amount. When the tank runs dry, find a comfortable position; use one hand to steady the funnel and the other to pour the fuel.

Reuse plastic outboard-oil bottles to refuel a trolling motor. Because of the pouring top, a funnel will not be needed. Some of these bottles also have a useful built-in measuring feature.

Portable fuel tanks:

The best, simplest and safest way is to take them ashore for refuelling. Overfills and spills are less likely on a stable platform, can be dealt with quickly, and the waterway is not at risk.

Secondary fuel tanks:

Reserve fuel carried in a second tank (not a jerry can) will eliminate the need to transfer fuel on the water.

Built-in fuel tanks:

Safe and proper refuelling will prevent a possible fire hazard, as well as pollution. Determine the amount of fuel required. Whether filling a trailerable boat at the gas station or a cruiser at the dock, do not let the attendant fill the tank to the top. On a warm day, the fuel will expand, and some could go over the side unnoticed. The owner is responsible for the spill and the resulting damage to the waterway.



While the attendant is filling the tank, check the air escaping from the vent with a hand. When the tank is nearing full, a distinct increase in the air flow will be felt. This is the time to stop. A “feel” for a full tank can quickly be developed.

Follow the suggestions above, to become an environment-friendly boater. Also, follow the proper safety procedures for refuelling posted at most marinas, or taught in most boating courses, to become a safer boater. Remember, not spilling fuel; maintaining an efficient engine; running at an economical speed; not making waves, and adjusting the tilt of the outdrive to give best performance, are all ways of conserving fuel and the environment.

BATTLE OF THE BILGE

Bilge, a synonym for unspeakable, suggests this area is not always a showplace. The best way to deal with bilge problems is prevention. A properly-maintained engine should not leak. Any leaks or “bilge build-up” should be dealt with immediately. If pumped overboard, this gunk may damage the waterway.

Prior to becoming environment friendly, a boater might have added detergent to the bilge, let it slosh around for a while, then pumped the whole mess overboard. The belief was that bilge cleaner altered oil residue and rendered it safe. In fact, the detergent simply emulsified the oil, breaking it down into many more less-visible droplets—enabling it to spread over a much larger area, and affecting more of the marine life inhabiting surface water. With clean water in mind, let’s try some of the following ideas.

Small open boats:

These are “all bilge” and open to rain. Motors are usually outboard, so unless someone is sloppy with oil or gas, the bilge should be clean. “Bilge pillows” are designed to absorb petroleum products and to repel water. Use the pillow to absorb and retain bilge gunk, then the rainwater can be disposed of safely the next time the boat is used.

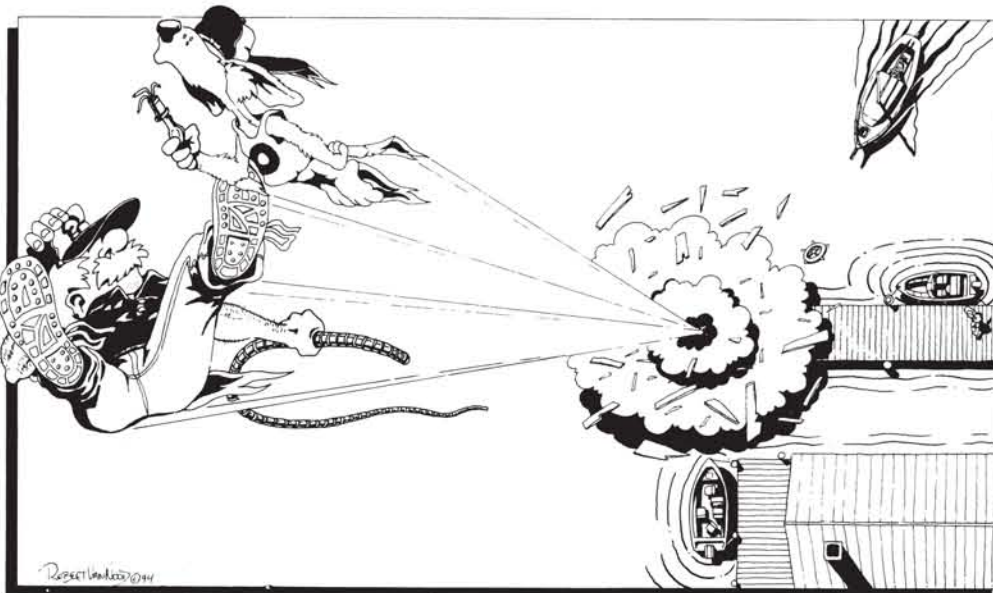
Large boats:

These have a greater risk of a fouled bilge. Transmission fluid, engine oil, drivebelt rubber, antifreeze; plus any leaks, rainwater or drips from the stuffing box, can all collect in the bilge. First, make sure the engine(s) and all other systems are in good working order, with no leaking seals or gaskets. Second, fit a drip tray(s) to catch stray leaks. Then add at least two bilge pillows, more if there are bulkheads extending into the bilge. The pillows will absorb any fluids that may escape the best efforts at prevention.

At times, it may be necessary to clean up the bilge using detergents, bio-bilge cleaners or enzyme cleaners. Let’s hope this is a last resort. Try to contain the gunk with cloths, rags, wipers, etc., and dispose in the proper container at the marina, along with the used bilge pillows. Some marinas can offer a bilge pumpout, **BUT FUEL CANNOT BE PRESENT** in the bilge.

With proper care, the bilge will not need cleaning at all, or no more than once a year. This can be done when the boat is on land and well away from the water. All trailerable boats can certainly be cleaned out of the water.

Just a few more ways to become an environment-friendly boater.



UNWANTED BOARDERS

Package waste is a nuisance that can lead to an environment problem. It's bulky, and boat space is limited. The best plan is not to take it on board in the first place. If it is necessary, remember the theme: *"Everything taken out on the boat, must come back on the boat"*.

"Reduce, reuse, recycle", and now another "R"—Repack:

Remove and recycle all the original packaging! It's amazing how compact provisions can be when repacked in plastic food containers. Containers come in all shapes and sizes, generally stack well together, and can be used to store almost everything. They are great for prepared veggies; washed potatoes ready to boil or bake; topped and scrubbed carrots readied at home to avoid garbage aboard.

The familiar "R"—Reuse:

Some containers can be left on board for the season. Others can be taken home, washed, refilled and returned to service. The size that's right for sugar, cookies and pasta will hold the first-aid kit and the hand-held VHF.

Other ideas:

Try to purchase drinks in plastic bottles, and store with pop cans in bilge-baskets. Crush empties and store them there too. Get rid of glass to reduce weight and avoid breakage.

Accidental pollution:

Styrofoam cups and other items can blow into the water, or those plastic rings from pop cans can go overboard when the cooler is drained. If garbage is seen in or near the water—pick it up! Also, keep on the lookout for monofilament fishing line or parts of old fishing nets—these can be deadly to various kinds of marine life. And please, keep food scraps and cigarette butts on board!

By using these suggestions, there should be very little bulk waste: some paper plates, paper towels and a few recyclable tin cans. For these items, always make sure there is some sort of waste storage container on board—no matter what size of boat. A visit to the marina refuse containers will take care of the recyclables. Most well-populated areas provide separated garbage collection.

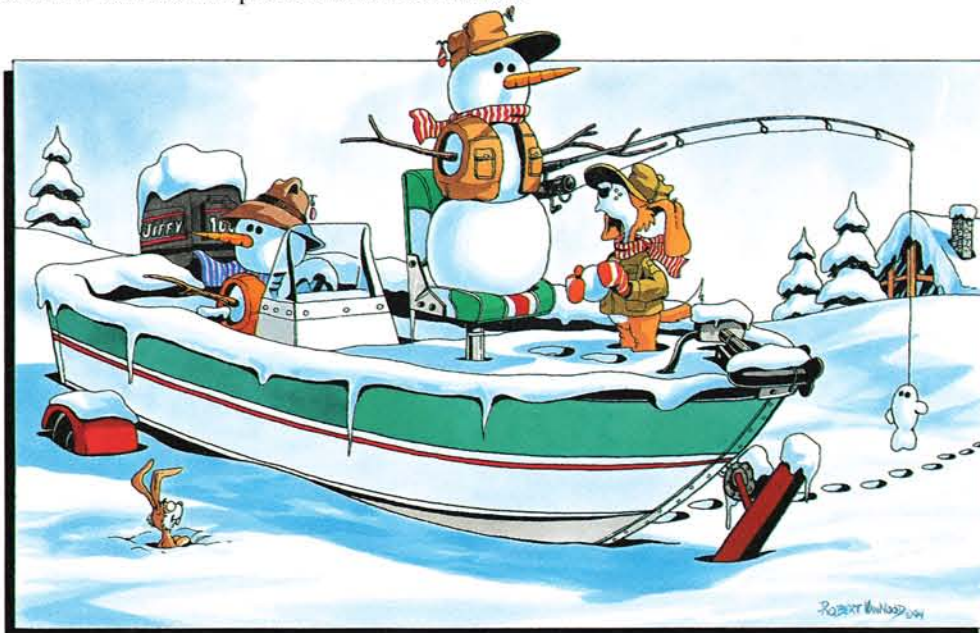
Identifying things that stress the environment, and keeping them off the boat, is a giant step toward environment-friendly boating.



ENVIRONMENT-FRIENDLY BOAT MAINTENANCE

HAULING OUT

Boaters should adopt environmentally sound maintenance procedures around the marina, or anywhere else. Most marina operators and yacht clubs already have environmental programs under way. Check with your marina or club for more information, and consider some of the precautions listed below.



Oil:

Change the oil before winter storage to eliminate residual acids and moisture in the crankcase. A marina has the staff, the tools, and the know-how to do this job properly. For do-it-yourself types, take the old oil to the marina or a service station to be recycled. Keep it well away from the waterways.

Fuel:

Add a fuel stabilizer to fuel tanks before winter arrives, to avoid deterioration of fuel quality and needless dumping of stale fuel in the spring. Leave tanks close to full. This will reduce condensation and corrosion, but leave room for expansion when things warm up, thus avoiding a possible fuel spill.

Antifreeze:

Avoid ethylene glycol antifreeze. It has a toxicity level that could be harmful to the water. A low-toxic propylene glycol-type antifreeze is widely available and designed for marine engines. It can also be used safely in hoses and holding tanks. Ask the marina if it has a system to remove old antifreeze, and recycle it for reuse the following season.

Batteries:

Prevent battery cells from freezing and creating a possible hazard. Make sure the cells are filled with distilled water, and that the battery is fully charged. Clean the terminals with baking soda, rinse with cold water, wipe dry, then coat the terminals and cable ends with petroleum jelly to prevent corrosion. Batteries are best stored on a wooden board in a cool garage. When new batteries are needed, be sure to recycle the old ones. Many service stations will accept old batteries, and a number of retailers offer a credit for the old when purchasing a new one.

Boat covers:

While shrink-wrap may work well, tarps are a better alternative. They last longer and are safer enviro-wise. The best choice for an environment-friendly boater.

ENVIRONMENT-FRIENDLY BOAT MAINTENANCE cont'd

HEADING IN

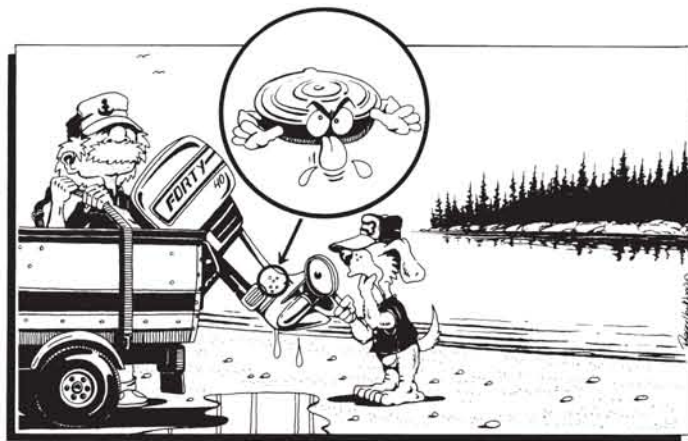
How the bottom of a boat can be treated to prevent marine growth, and yet remain friendly to the environment, is a very difficult question. Check with a marine supplier for up-to-date information on new products, and methods that are being developed.

Antifouling bottom paint:

Of the three main types in use, ablative, non-ablative (sloughing) and hard antifouling, the hard is most enviro-friendly. A new copper-in-epoxy product is being studied, which may provide a lifespan of up to 15 years and turn out to be very enviro-friendly.

Something to think about:

- Ablative coatings dissolve at a controlled rate, exposing fresh biocide (chemical), and shedding off adhering growth. Frequent hull scrubbing can release excessive amounts of the chemicals, and should be avoided.
- Non-ablatives are inexpensive, but release their biocide content quickly.
- In hard or racing types, the biocide gradually leeches out of a tough binder—so slowly that routine bottom scrubbing is still required.
- Consider foregoing antifoulant in favour of regular hull paint and a coat of slick bottom wax. Two Canadian companies claim their bottom waxes also repel zebra mussel boarders.
- When sanding, scraping or removing any antifoulant from the hull, capture and correctly dispose of the residue. Do not do this work near the water. A sander with a dust-bag attachment is a good way to collect this hazardous waste. It is also wise to consider wearing personal protection, especially a mask.
- Use up remaining bits of paint or solvent by spreading them on an old board. Leave the empty paint or solvent container open to dry out, and dispose of as household hazardous waste.



Volatile organic compounds are being phased out as newer products take over. Clear, water-based, polymer coatings outperform conventional varnishes. Two-part water-based polyurethanes are replacing the toxic isocyanate-based paints. An increasing number of coatings and paints now meet Canada's new enviro-friendly standards.

Remember the tip in an earlier section for a clean boat/clean water plan? Before launch, apply a good coat of boat wax and polish to a nice shine. During the season, the wax will prevent surface dirt from becoming engrained. When the boat needs cleaning, slosh it with lots of water, clean it off with a soft mop, and repolish the wax to the old lustre.

These are all good ways to be an Enviro Boater.

NEIGHBOURHOOD WATCH

There are various initiatives to improve the “environment”, in the broad sense of the word. If boaters use the information provided in this *Enviro Boater Guide*, they can take some very simple steps to improve and protect the waterways. But they also assume many other responsibilities that are related to the environment, in a completely different context. Their “home away from home” comes complete with new neighbours and neighbourhoods.

Healthy habitats:

If the ecosystem is to have naturally reproducing species, their nesting areas, spawning grounds and habitat must be protected. Anglers, hunters, personal watercraft and dinghy operators need to exercise special care in shallow water and close to wetlands. Running fast in the shallows or over reeds may be fun for the rider, but it’s fatal to the habitat. Youngsters are often allowed to play with a motorized dinghy, usually in shallow and sensitive waters. The unattended child and the environment are both at risk. Have them slow down, or better still, encourage them to stay clear of these areas.



Annoying sound:

Many boaters think of their boat as a refuge, a place to get away from life’s aggravations. They are in search of solitude, peace and quiet. No one has the right to subject others to unwanted noise. If you like loud music, use earphones. In general, loud and boisterous neighbours are no more popular on water than on land, and no more popular during the daytime than at night!



NEIGHBOURHOOD WATCH cont'd

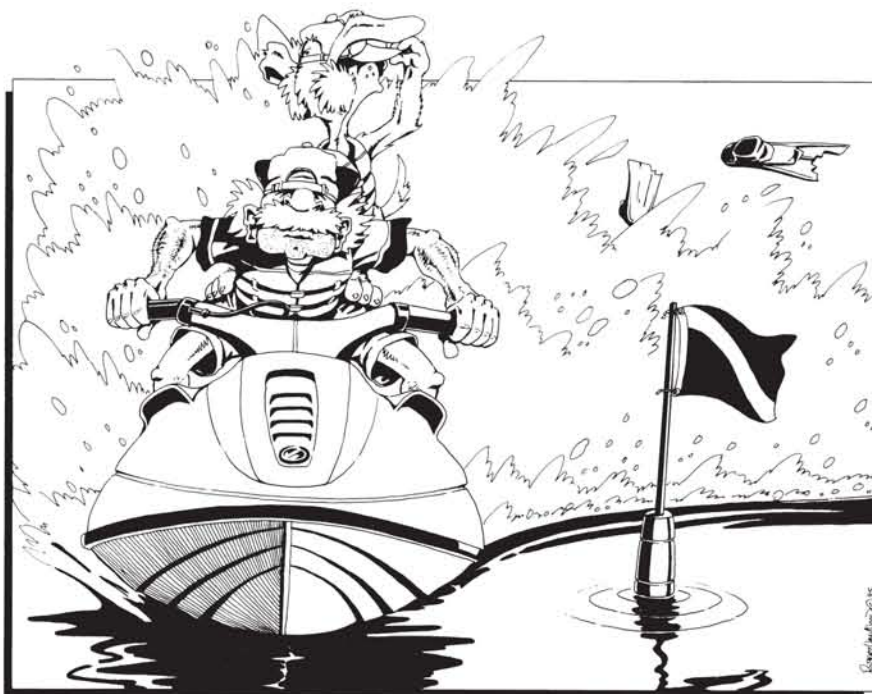
Shoreline dwellers:

Residents along the shore deserve special consideration. If one boater behaves badly, other boaters can move elsewhere, but residents are stuck. Learn how to lower and set anchor without ploughing the bay or interfering with water-intake systems. Carry enough anchor line to anchor at a reasonable distance, and try not to intrude. Control noise, language, children and any pets. If passing a residence, respect property, boats and docks. Avoid making harmful waves. Remember, there is liability for damage resulting from a boat's wave action.



Diver down—stay clear:

If a boat is displaying a blue and white (half blue, half white) flag, stay at least 35 metres (100 feet) away. This flag represents a boat with divers below. The exact location of the diver is marked by a buoy that displays the diver's flag, which is red with a white diagonal stripe—Stay Clear. Although the boat may be empty and appear abandoned or adrift, approaching or moving it could prove fatal. Using the buoys for a slalom course could end up killing someone.



WATCHING OUT FOR EACH OTHER

Rules of the road:

It is the responsibility of every boat operator to know the rules, practise them, and avoid a collision, regardless of the situation.

Power boats:

Give sailboats lots of room, as they cannot alter course quickly. Slow down in narrow channels, and don't disturb or swamp other boats with wave action.

Sailboats:

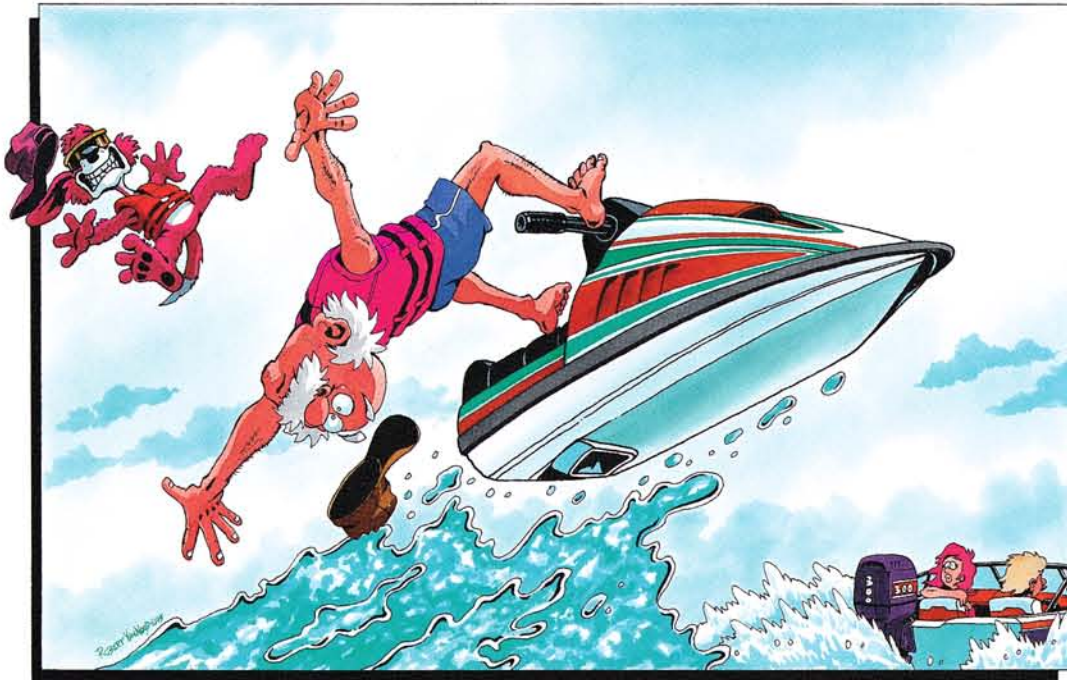
Show the same courtesy expected. Remember, if operating under power, even if the sails are up, a sailboat is bound by the same rules as a power boat.

Large boats:

Stay clear of canoes and kayaks, unless they appear to need assistance. Don't assume that they are skilled enough to deal with any wave action. Slow down!

All boats:

Stay clear of swimming areas and youngsters in small boats!



Personal Watercraft (PWC):

Jumping the wave action immediately behind any other boat is extremely dangerous and disturbing to its operator. Remember, a PWC is classified as a boat and the operator is expected to abide by all the rules that govern boat operation.

Don't continue to operate a PWC in one area for a prolonged period of time. Move about often, especially when trying manoeuvres that cause loud and annoying sounds, or when other watercraft are operating at the same time. Common sense and courtesy will help prevent conflict on the waterways.

AN ANGLER BY ANY OTHER NAME IS A BOATER

A large number of people using the waterways are there for the sport of fishing or, to be more correct, angling. Even though some anglers do not consider themselves boaters, the only way to reach that favourite fishing spot is with a boat. Most of the items mentioned in this Guide apply equally well to people who consider themselves “non-boaters”. Some ideas that will help the sport of angling, and influence the environment, are listed below.

Nothing over the side:

When going out for the day, make sure to bring back any food wrappers and empty pop cans. Consider the repacking ideas presented elsewhere in the Guide, and take any waste to the marina disposal upon return to shore.

Tangle traps:

If disposed of carelessly, monofilament fishing line is a major problem to wildlife. Some marinas and bait-and-tackle shops have recycling bins for monofilament disposal. If they don't, ask them to consider the idea. Use them, and promote them to other anglers. Even the smallest amount should be disposed of properly.

Live release:

Although this may not be considered an environmental matter, learning and practising the proper techniques of live release can allow others to enjoy the fishing sport for years to come. Our environment will continue to flourish. There are many species of fish, and each requires a different manner of release to ensure their safety. Make sure to get the right information. Anglers might also consider “replica” trophies instead of mounting a prize catch. Replicas are superior in detail, last forever, and are competitively priced. Make sure to have a camera and a measuring tape for an accurate description. This can be a lot easier than transporting and refrigerating large fish.



HITCH-HIKERS CAN RUIN OUR WATERWAYS

Organisms from other continents can be brought into our environment in a number of ways, generally involving human activity. Often these organisms threaten our native species through competition for food and space, or by carrying diseases and parasites.

Organisms that are known to negatively impact our native species and their habitat are called *aquatic nuisance species* or *exotics*. The zebra mussel, spiny water flea, ruffe, round goby and purple loosestrife are some well-known exotics that have come to North America. Boating is one of the major ways that exotics are spread.

Boaters can **unknowingly** spread exotics when they trailer their craft from one body of water to another. By taking some simple precautions, boaters can help slow the spread of these *hitch-hikers*.

1. Inspect your boat, motor, trailer and boating equipment such as anchor, centreboards, rollers and axles. Remove any organisms, animals and plants that are visible before leaving the area.
2. Drain water from motor, live well, bilge and transom wells, while on land and before leaving the area.
3. Wash or dry your boat, tackle, downriggers, trailer and other boating equipment, to kill harmful organisms that were not visible. Some aquatic species can survive more than two weeks out of the water. It is important to thoroughly wash your boat well away from the water—
 - Rinse your boat, and any equipment that normally gets wet, with hot tap water (more than 40°C), or
 - Spray your boat and trailer with high pressure water (250 psi), or
 - Dry your boat and equipment for at least 5 days before transporting them to another body of water.
4. Empty your bait bucket on land before leaving any body of water. Never release live bait into water, or release aquatic animals from one body of water into another.
5. Learn how to identify exotic species.

If you suspect that some exotic species have spread to a new location, report it to your local Ministry of Natural Resources Office or to the Invading Species Hotline (1-800-563-7711).

WORKING TOGETHER

In the coming years, working responsibly together to protect and preserve the water and waterways, will help us to better understand the needs of all users. What is needed is a better understanding of the Earth, a truer appreciation of our good fortune, and the determination to preserve and perpetuate both. As thoughtful boaters, we can.

A new partnership has been created to promote environmental responsibility in all boating-related activities in Ontario. The Clean Marine Partnership is the result of the joint efforts of the Ontario Ministry of Environment; Environment Canada; Terra Choice Environmental Service Inc.'s Environmental Choice Program; Georgian College, and several National and Provincial boating associations, including Canadian Marine Manufacturers Association; CPS; Ontario Boating Forum; Ontario Marina Operators Association; Ontario Sailing Association, as well as Canadian Marine industry representatives. Using education as a tool to change attitudes, they hope to gain the support of all boaters, marinas, marine manufacturers, cottagers, yacht clubs, hunters, anglers—all waterway users.



Environment Canada:

Environment Canada is committed to reducing or eliminating the use, generation or release of toxic substances into Canadian waterways.

Environment Canada is proud to be a sponsor of this Guide To Environment-friendly Boating.

Enviro Boating is a state of mind that everyone can acquire, and continue to practise for future generations.

REFERENCES

Canadian Hydrographic Service (CHS)

prepares and distributes nautical charts which accurately show dangerous shoals and other hazards. This information can help prevent grounding, causing potential fuel spills from damage to fuel tanks and lower units.

Some CHS charts are especially designed for recreational boaters. They depict the location of most marinas (pump-out facilities), weed beds (spawning grounds); fish havens; underwater pipelines, etc., and may also indicate the location of garbage disposal sites.

The CHS publications "Sailing Directions", and "Small Craft Guides" show marina facilities in detail, and are intended to be a companion to the nautical charts.

For a chart dealer near you, or further information, contact:

Hydrographic Chart Distribution Office
Department of Fisheries and Oceans
P.O. Box 8080, 830 Industrial Ave., Ottawa, ON K1G 3H6
(613) 998-4931, 998-4932, 998-4933
Fax (613) 998-1217

Canadian Marine Manufacturers Association (CMMA)

Marine manufacturers in Canada recognize the importance of their role in creating and preserving a safer environment on, in, or near the water. Environment-friendly products used for cleaning purposes are available to boaters. In conjunction with the Canadian Power & Sail Squadrons, Ministry of Environment, Ontario Boating Forum, Ontario Marina Operators Association, and Ontario Sailing Association, the Canadian Marine Manufacturers Association and its members are actively promoting environmentally safe practices to the boating community.

For more information, contact:

Canadian Marine Manufacturers Association
243 North Service Road W., Suite 106
Oakville, ON L6M 3E5
(905) 845-4999
(905) 845-1701 FAX
Website: www.cmma.com

Canadian Power & Sail Squadrons (CPS)

is a national, charitable organization of recreational boating enthusiasts eager to increase their knowledge and skill in the care and handling of boats. As a public service, CPS makes newcomers aware of the hazards and joys of boating, and offers comprehensive courses across Canada.

Membership in CPS confers no rights or special status. You will meet others who enjoy the boating lifestyle and cherish the camaraderie. These are concerned people willing to promote the skills needed to enjoy the sport with proper respect for the environment, and the property, comfort and safety of others.

For more information contact a local Squadron or:

Canadian Power & Sail Squadrons
26 Golden Gate Court, Scarborough, ON M1P 3A5
(416) 293-2438 (Toronto area)
1-888-CPS-BOAT (outside Toronto)
(416) 293-2445 FAX
Website: www.cps-ecp.ca

Ontario Boating Forum (OBF)

is an organization with members from throughout Ontario who are involved in boating. The organization is dedicated to three objectives:

1. To protect the environment which will ensure the continued use of the waterways by everyone. This is critical when the waterways have been neglected and abused by many individuals and industry for decades.
2. To actively promote boating safety which will save lives. OBF has launched an initiative to have voluntary safety and environmental inspections of boats. OBF has invited local cottage associations to join them in promoting safety and environmental protection.
3. To represent the concerns and point of view of their members to the various levels of government and regulatory bodies that influence the province's waterways. Regulations are becoming complex and in some cases serving narrowly defined interest groups. The Ontario Boating Forum will attempt to balance the agenda.

For more information, contact:

Ontario Boating Forum
1-888-471-1101
(905) 572-6056 FAX
Website: www.obf.on.ca

Ontario Marine Operators Association (OMOA)

is the association of marine dealers working together since 1967 with a common goal of improving their ability to provide quality service to boaters in Ontario. Its members across Ontario are engaged in boat sales, service and storage. Support for the association's activities is provided by sponsoring and associate members who are mostly suppliers and manufacturers.

An OMOA Member Marina is always a welcome port of call. Look to helpful marina staff and a wide range of boating services to make your boating a safe, enjoyable experience.

For more information, please call:

Ontario Marine Operators Association
Suite 49, 2 Poyntz Street, Village Square Mall
Penetanguishene, ON L9M 1M2
(705) 549-1667
(705) 549-1670 FAX
E-mail: omoa@omoa.com

Ontario Sailing Association (OSA)

is a non-profit, volunteer organization committed to the promotion and development of all aspects of boating and sailing. OSA, celebrating 25 years, is an association of Yacht Clubs, Schools, Class Associations and camps. OSA is the Provincial Sport Governing Body in Ontario and offers more than 200 programs.

Funding sources include support from the Ministry of Culture, Tourism and Recreation, Participant and Membership fees and Corporate Sponsors. OSA is the Provincial Association of the Canadian Yachting Association (CYA). OSA publishes SAILONTARIO magazine.

For more information, please contact:

Ontario Sailing Association
65 Guise Street E., Hamilton, ON L8L 8B4
(905) 572-7245, 1-888-OSA-SAIL (672-7245)
(905) 572-6056 FAX
Website: www.ontariosailing.ca

ENVIRO BOATER CHECK LIST

Try this Check List at the beginning of the season. Then review it at the end of the season to see the progress you have made in becoming an ENVIRO BOATER!

THE BOAT: Hull and Topsides

- ☐ Wash only with water.
- ☐ Apply a good coat of hull wax.
- ☐ Avoid harsh cleaners/chemicals.
- ☐ Use or consider alternative cleaners.
- ☐ Use or consider alternative antifouling methods.

THE BOAT: Inside

- ☐ Black-water holding tank: Maintain properly, pump regularly and fit legally.
- ☐ Maintain engine(s) and check for leaks.
- ☐ Use Bilge Pillows.
- ☐ Perform any bilge cleaning carefully (preferably away from the water). Do not pump contents into the water unless free from contaminants.
- ☐ Use boat maintenance tips suggested in *Enviro Boater Guide*.

YOU AND THE CREW

- ☐ Follow the check list for the boat.
- ☐ Always consider the environment, especially when boating.
- ☐ Become a "product detective". Read labels, ask questions, and look for the EcoLogo.
- ☐ Avoid phosphates near the water.
- ☐ Always take precautions to prevent the spread of aquatic nuisance species.
- ☐ Use grey-water tips as suggested in the *Enviro Boater Guide*.
- ☐ Practise proper refuelling procedures.
- ☐ Practise the new "R" (repackage).
- ☐ Remember: "*Everything taken out on the boat, must come back on the boat*".
- ☐ Practise courtesy on the water.
- ☐ Leave no waste in the water, especially human.
- ☐ Complete a safe boating course.
- ☐ Show guests where the safety equipment is located, **AND** how to use it.

LOCATION OF SAFETY EQUIPMENT

Lifejackets/PFDs _____	Flares _____
Life ring _____	Fire extinguishers _____
First-aid Kit _____	Other equipment _____

ADDITIONAL INFORMATION

Competition Bureau, Industry Canada

The Competition Bureau is an independent law enforcement agency which ensures that all Canadians enjoy the benefits of a competitive economy. It oversees the application of the Competition Act, the Consumer Packaging and Labelling Act, the Textile Labelling Act, and the Precious Metals Marking Act, and includes the provisions dealing with misleading claims on labelling and in advertising.

If you have any concerns about environmental claims, or the guidelines that apply to them, contact the Competition Bureau's Information Centre at:

E-mail: compbureau@cb-bc.gc.ca
Toll free: 1-800-348-5358
Phone: (819) 997-4282
TDD (hearing impaired): 1-800-642-3844
FAX: (819) 997-0324

Ontario Ministry of Environment

The Province of Ontario was one of the first jurisdictions in North America to prohibit the discharge of black water from pleasure boats into its lakes and rivers. The Ministry of Environment and various boating associations are continuing Ontario's leadership role by encouraging boaters, marinas and yacht clubs to adopt more environment-friendly practices. This is being done through boater education programs, promotion of environment-friendly marine products and voluntary marina pollution prevention programs. For more information please call or write to:

Ministry of Environment, Public Information Centre
135 St. Clair Avenue West, Toronto, ON M4V 1P5
(416) 325-4000

Invading Species Hotline 1-800-563-7711

If you suspect that some exotic species have spread to a new location, report it to your local Ministry of Natural Resources Office or to the Invading Species Hotline. This hotline is a partnership between the Ontario Ministry of Natural Resources, the Ontario Federation of Anglers and Hunters, and the Canadian Coast Guard.



**Canadian Power & Sail Squadrons
Escadrilles canadiennes de plaisance**

26 Golden Gate Court
Scarborough, Ontario M1P 3A5
(416) 293-2438 • 1-888-277-2628
Fax (416) 293-2445 • www.cps-ecp.ca



Canadian Marine Manufacturers Association

243 North Service Road West, Suite 106
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www.cmma.ca



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