

***NEW**
whale
watching
rules!*

CLEAN MARINE BC GUIDE to GREEN BOATING



Georgia Strait Alliance



Georgia Strait Alliance

The Strait of Georgia lies between Vancouver Island and the British Columbia mainland, with the Canada-US border running to its south. Along with Puget Sound and the Strait of Juan de Fuca, these waters are called the Salish Sea, in recognition of the Coast Salish peoples who historically inhabited its shores and still live here today. Please respect local First Nations' territories, and ensure you are welcome before visiting.

These waters provide some of the most fabulous cruising in the world for visitors and residents alike. Despite its outward beauty, all is not well with the Salish Sea. The Strait and its watersheds face serious environmental problems—the bulk of these caused by the region's rapid population growth and the urbanization and development that has come with it. Marine life in this region faces many threats including toxic chemicals from industry and municipalities, oil spills (small and large), climate change, destruction of critical habitat, mismanagement of fisheries and marine resources, and many others. As boaters, we only contribute a small portion of the overall pollution entering the Strait, but it often concentrates near sensitive foreshore areas and in confined bays.

There's a lot we can do to ensure the future health of Georgia Strait. This guide outlines some of the steps we can take to minimize our environmental impacts.

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by Dee Gale



Cover photo by Michelle Young

Much of the material in this booklet is adapted from Fisheries and Oceans Canada's *Protecting BC's Aquatic Environment A Boater's Guide* as well as information provided by Environment and Climate Change Canada. Other sources include *Canadian Power Squadron's Enviro Boater Guide* and *Sound Information: A Boater's Guide* by the Puget Soundkeeper Alliance. Our thanks to all.

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What You Will Find Inside

Boating is a popular pastime! With 700,000 boaters in BC, many in the Strait of Georgia, we need to minimize our impacts, especially in areas where boats congregate such as marinas, anchorages and marine parks.

You can make a big difference, by pledging to follow these guidelines:

AS A GREEN BOATER I WILL...

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Check out www.georgiastrait.org for more ways you can help protect these cruising waters.

Feeling Flush

In busy or poorly flushed anchorages, sewage from boats harms the environment. Each year, discharge of sewage results in shellfish closures, increases risks to human health, and is unpleasant to other boaters. Raw sewage discharge is legally prohibited and no longer acceptable.



KEEPING IT CLEAN:

- ☑ It is illegal to release sewage at the dock, in anchorages or near sensitive areas such as shellfish beds.
- ☑ Use pumpout services where available (see following pages), otherwise the law requires that where possible you are at least 3 nautical miles offshore before emptying your holding tank or portable toilet. If there is no open water nearby and no pumpouts available, you can dump as a last resort while underway in the fastest flowing ebbing waters as far from land as possible.
- ☑ Use shoreside facilities whenever possible.
- ☑ Avoid using chemical additives or bleach in your holding tank. Safer products include enzyme or bio-active treatments. Never use products containing formaldehyde, ammonia or chlorobenzene.
- ☑ Don't use your boat's head to dispose of anything it isn't intended for. Kitchen wastes, solvents, detergents, paints, and other foreign objects will cause problems for you and the environment.
- ☑ Consider using a composting toilet in your boat which means no pumpout, no smell, no holding tank or macerator, and no sewage discharge.
- ☑ Pick up after your pet, and store the waste for composting or disposal in shoreside receptacles.



The Canada Shipping Act 2001 prohibits the discharge of raw sewage within three nautical miles of shore.

Sewage Waste Disposal

PUMP OUT STATIONS AROUND THE STRAIT OF GEORGIA

Please check with the facility for current operations.

For an always up to date list & map please visit: www.georgiastrait.org/pumpouts

Lower Mainland

FACILITY	CONTACT
Bayshore West Marina Coal Harbour, Vancouver	(604) 689-5331
Burrard Civic Marina Vancouver	(604) 733-5833
Coal Harbour Marina Coal Harbour, Vancouver	(604) 681-2628
Crescent Beach Marina Surrey	(604) 538-9666
False Creek Harbour Authority Fishermen's Wharf, False Creek, Vancouver	(604) 733-3625 VHF 66A
False Creek Mobile Pumpout – City of Vancouver False Creek, Vancouver	(778) 683-7867 pumpout@skookumyacht services.com
False Creek Yacht Club 1661 Granville Street, Vancouver	(604) 648-2628 VHF 66A
Heather Civic Marina False Creek, Vancouver	(604) 874-2814
Lion's Gate Marina 1331 McKeen Avenue, North Vancouver	(604) 985-5468
Mosquito Creek Marina North Vancouver	(604) 987-4113
Point Roberts Marina Point Roberts, Washington	(360) 945-2255 VHF 66A
Quayside Marina Vancouver	(604) 681-9115 VHF 66A
Reed Point Marina Port Moody	(604) 937-1600
Shelter Island Marina Richmond	(604) 270-6272
Squamish Harbour Authority Squamish	(604) 892-3725
Vancouver Marina Richmond	(604) 278-9787

Sunshine Coast

FACILITY	CONTACT
Gibsons Landing Harbour Authority Gibsons	(604) 886-8017 VHF 66A
Gibsons Marina Gibsons	(604) 886-8686 VHF 66
Harbour Authority of Pender Harbour Madeira Park	(604) 883-2234
Lund Harbour Authority Lund Public Dock	(604) 483-4711 VHF 73
Harbour Authority of Porpoise Bay DFO Government Dock, Porpoise Bay	(604) 740-7528
Powell River Harbour Authority Powell River	(604) 485-5244
Union SteamShip Company Marina Bowen Island	(604)-947-0707 Ext.1 VHF 66A

Vancouver Island & other islands

FACILITY	CONTACT
Alert Bay Harbour Authority Alert Bay, Cormorant Island	(250) 974-5727
Angler's Anchorage Marina Brentwood Bay, Victoria	(250) 652-3531
Campbell River Harbour Authority Campbell River	(250) 287-7931
Coast Harbourside Marina Victoria	(250) 360-1211
Comox Harbour Authority Comox	(250) 339-6041 info@comoxharbour.com
Cowichan Bay Fisherman's Wharf Cowichan Bay	(250) 746-5911 VHF 66A
Deep Bay Harbour Authority Bowser	(250) 757-9331
Dungeness Marina Cowichan Bay	(250) 748-6789 VHF 66A
Fairwinds Schooner Cove Marina Nanoose Bay	(250) 468-5364 VHF 66A
Ganges Coast Guard Dock Salt Spring Island	(360) 301-9999 flyingfedup@aol.com
Greater Victoria Harbour Authority Victoria	(250) 383-8326 VHF 66A
Ladysmith Maritime Society Marina Ladysmith	(250) 245-1146
Malcom Island Lions Harbour Authority Sointula	(250) 973-6544
Maple Bay Marina Maple Bay, Duncan	(250) 746-8482 info@maplebaymarina.com
Mill Bay Marina 740 Handy Road, Mill Bay	(250) 743-4303 VHF 66A
Port Alberni Fishermen's Harbour Port Alberni	(250) 723-2533 fishermensharbour@alberniport.ca
Port Hardy Harbour Authority Port Hardy	(250) 949-0336 VHF 66A
Port McNeill Harbour Authority Port McNeil	(250) 956-3881 VHF 66A
Port of Nanaimo Eco-barge Nanaimo	(250) 754-5053 VHF 67
Port Sidney Marina Sidney	(250) 655-3711 VHF 66A
Salt Spring Island Harbour Authority Breakwater Dock, Salt Spring Island	(250) 537-5711 harbour@hassi.ca
Sayward Harbour Authority Sayward	(250) 282-0178
Tofino Harbour Authority 4th St Harbour, Tofino	(250) 725-4441
Ucluelet Harbour Authority Ucluelet	(250) 726-4241
Van Isle Marina Tsehum Harbour, Sidney	(250) 656-1138

"Are we sure oil and water don't mix?"

Yeah, we're sure.
The only answer
for used motor oil
is recycling.

Keep your boat and the waterways clean.
Find the closest Public Recycling Centre
for your motor oil and oil filters.
Go to [**bcusedoil.com/recycling**](http://bcusedoil.com/recycling)



BC Used Oil
Management Association

Fill ‘Er Up

EVERY DROP COUNTS!

Even tiny amounts of gas, diesel and oil can kill or harm marine plants and animals, and repeated small fuel spills cause irreparable harm to the environment. Chemicals present in fuel react with sunlight to become up to 50,000 times more toxic. Rainbows on the water aren’t pretty and can be fatal to the many tiny creatures that live in the water’s surface layer. Juvenile fish and shellfish depend on this surface “microlayer.” Let’s keep it healthy for them!



Remember:
“Topping off the tank” means waiting for a spill to happen.

Spills during fueling are common—fuel vent overflow from a 100-litre tank can be as much as 1/2 litre and this increases for larger tanks. Most marina fuel pumps are able to supply fuel much faster than small and

medium sized boats are able to take it. The “kickback” effect or “burping” is a major source of fuel spills. The advice from marina operators is “don’t rush your fueling and don’t worry about keeping other boats waiting for an extra minute or two.”



Half a litre of oil will cover an acre of surface water. If every one of the 700,000 boats in BC spilled just ½ litre, the oil slick would cover over 2800 square kilometres. Every drop counts!

Report All Spills!

It’s the law to report all spills, regardless of how small

**1-800-OILS-911 (1-800-6457-911) &
Coast Guard VHF 16 or 1-800-889-8852**

Be prepared to answer the following:

- Where, when and how did the spill occur?
- What kind of pollution is it?
- How much was spilled?
- What’s the name of the person or vessel that caused the spill? Don’t worry, taking responsibility for your own spill is looked upon favourably rather than getting caught. Small spills are also tracked and help us address chronic causes and hotspots.

KEEPING IT CLEAN:

- ✓ Fill carefully! Plan to avoid spilling even one drop of fuel into the water.
- ✓ Have fuel absorbent materials ready, and use a spill pad or fuel collar to catch drips.
- ✓ Don't rely on any automatic shutoffs and don't try to top off your tank. That is when spills often occur.
- ✓ Know how much fuel you need, and feel for an increase in airflow from the vent — this means the tank is full. Remember: fuel expands on warm days!
- ✓ Put a “fuel saver” over your vent to catch spills and alert you that the tank is full.
- ✓ Don't transfer fuel between tanks when on the water. Carry reserve fuel in a container that connects to your engine.
- ✓ Check fuel lines and fittings to ensure there are no leaks—this may save your life as well as the fish!
- ✓ Reduce fuel consumption. Slow down and go with the tides, currents and weather where possible. Keep your bottom and propeller clean. Choose the right propeller for your use and replace when needed. Reduce excess weight onboard.
- ✓ When boating season is over, fill tanks and add fuel stabilizer to protect engines and avoid the need to dispose of “bad fuel” in the spring.



Never use soap to disperse fuel spills! It is toxic to marine life, doesn't eliminate the spill, makes it impossible to clean up—and it's illegal.

In Case of a Spill

- ➔ Stop the source of the spill and extinguish any igniters.
- ➔ If you are at a fuel dock, inform the fuel attendant and leave the area when gasoline is spilled.
- ➔ Use absorbent pads to clean up and help contain the spill. Dispose of used spill materials as hazardous waste (see Disposal section). It is illegal to use soap to disperse spills.
- ➔ Spills at risk of spreading must be contained with a spill kit - these should be available at all marinas. Do not contain a gasoline spill — it's flammable!

Battle of the Bilge

Oil, fuel, antifreeze and other fluids collect in the bilge and are then pumped overboard, often by automatic pumps. Bilge cleaners, degreasers and soaps—even biodegradable ones—increase harmful effects. These cleaners spread the pollution over a greater area, harming even more fish and other marine life.



KEEPING IT CLEAN:

- ☑ Don't pump oily bilge water overboard—if it discolours surface water, it is pollution. This is a criminal offence! Large amounts of fuel or oil in the bilge must be pumped into a closed container and properly disposed of—ask your marina or marine mechanic for advice.
- ☑ Secure an oil absorbent pad or pillow in your bilge and check it often.
- ☑ Turn off the bilge pump during fueling.
- ☑ Chronic fuel or oil in the bilge indicates a leak—check all fittings.
- ☑ To clean the bilge, pump out uncontaminated water and then wipe out the rest using an EcoLogo cleaner. Don't flush bilges with cleaners.
- ☑ Fit a drip tray under your engine to catch any leaks.
- ☑ Install a bilge filtration system.



Oil absorbing pads soak up the oil in your bilge, but not the water. These pads are very effective at keeping your bilge and the environment clean. When the pads are saturated, use gloves and wring out the oil into a container for recycling. Re-use the pad. To dispose of worn out pads, see page 17.

Engine Maintenance

KEEPING IT CLEAN:

- ☑ Keep your engine well tuned. Inspect and fix any leaks or drips.
- ☑ Use an oil change pump to transfer oil to a spill-proof container, then cap this tightly.
- ☑ Slip a plastic bag over the oil filter before removing to prevent oil spilling into the bilge.
- ☑ Keep oil-absorbent pads handy to wipe up spills.
- ☑ Dispose of oil, filters, contaminated absorbent pads and other materials correctly (see page 17).
- ☑ Use biodegradable oils whenever possible.
- ☑ Antifreeze is harmful to marine life—use only when necessary. Propylene Glycol is the less toxic alternative.
- ☑ Choose the least toxic sacrificial anodes for your needs, and avoid toxic zinc anodes whenever possible.

Completely Exhausted

Conventional 2-stroke outboards discharge up to 25% of their fuel straight into the water—if you used 20 gallons of fuel you might as well have poured a 5 gallon can of gas straight into the water!

KEEPING IT CLEAN:

- ☑ Always keep your engine well tuned.
- ☑ Choose 4-stroke or oil injected 2-stroke, electric or propane outboards. They are all less polluting than conventional 2-strokes, better for the environment, save fuel costs, and are quieter.
- ☑ Some new inboard diesel and gas engines produce less air pollution, or consider an electric engine if it could work in your boat.



Motorized personal watercraft (jetskis) can be bad for wildlife, water and air quality. They can spill up to one-third of their fuel, discharge significant amounts of air emissions, churn up sensitive habitat, and can be noisy.

Swabbing The Decks

REDUCING GREYWATER DISCHARGES

Substances that are toxic to marine life are present in many products used to clean boats—even “biodegradable” products often contain harmful ingredients and biodegradable simply means it breaks down, not necessarily into elements that are safe. Chlorine bleach is dangerous to marine life and can be a health risk for people.

Choosing environmentally friendly cleaning products can be confusing. In Canada, manufacturers must substantiate claims such as “green” or “environmentally friendly”, however, unless their claims are independently verified, caution is still warranted. The best cleaning option is to use the alternatives on the following page. If you are buying cleaning products, here are some of the terms you may encounter.

TERM	EXPLANATION
EcoLogo	Eco-certifications such as EcoLogo can indicate a degree of acceptability, but do not mean the product is harmless.
Biodegradable	Product naturally breaks down, but often into harmful components.
Surfactants	Surface active agents are in all soaps and detergents to create suds—they attach to fish’s gills, destroying their ability to breathe.
Chlorine	Found in bleach and other cleaning products, chlorine forms the basis of dioxins and other deadly compounds that cause cancer, and damage growth, development and reproduction in humans, fish and other wildlife.
Phosphate-Free	In Canada, phosphates have been banned in cleaning products, however, these products can still contain up to 0.5% phosphates.

KEEPING IT CLEAN:

- ✓ Read labels and look for non-toxic, chlorine-free, phosphate-free products. Use the EcoLogo symbol as a guide to less harmful products.
- ✓ Minimize your use of soaps and detergents, and use alternative cleaners (see next page).
- ✓ Keep your boat waxed and wash with fresh water and a brush. Remember: use water carefully, as the Gulf Islands and other areas often have water shortages in the summer.

Alternative Cleaners

Many non-toxic cleaners for your boat can be made from ingredients found in your galley. Try these inexpensive alternatives!

TASK	ALTERNATIVE CLEANERS
Decks	1 part vinegar to 8 parts water
Fibreglass	Baking soda and salt (in wet paste)
Aluminum	1 tbsp. cream of tartar in 1/2 litre hot water
Brass	Worcestershire sauce, vinegar and salt solution
Chrome	Vinegar and salt solution
Chrome/metal	Polish with baby oil
Copper	Lemon juice and salt solution
Clear plastic/glass	1 part vinegar to 2 parts water
Mildew	Vinegar and salt solution or tea tree oil
Wood (interior)	Polish with olive oil
Bleaching	Hydrogen peroxide bleach (NOT chlorine bleach)
Scouring	Baking soda and water paste
Hair	Baby shampoo (phosphate-free & pH balanced)
Shower	Wet area & scour with baking soda
Toilet	Baking soda
Dishes	Use minimal amounts of dish soap. Choose non-petroleum based soaps (eg. Nature Clean)
Après cleaning 	Sit back and feel good about a task well done. Break out the ice cubes and enjoy your favorite drink.



Your Baby's Bottom

One of the greatest potential sources of pollution is the dryland area in marinas where boats are hauled out for cleaning. Most of us enjoy blasting away with the pressure washer to clean the bottom. Unfortunately, the paint residue that we remove is toxic and if we wash it down the storm drain it goes straight into the water.

Not all marinas have installed recirculating systems because of the cost and the difficulty of disposing of the toxic sludge that is collected. If these systems are not in place, boaters can minimize the problem by using a drop sheet to collect residue from cleaning, sanding or painting. Responsible marinas insist on this. Don't feel shy about suggesting this practice to other boaters.



Have your boat hauled out annually and plan to do any substantial work on dry land, where you can contain waste products and keep them out of the marine environment.

KEEPING IT CLEAN:

- ☒ Choose hard antifouling or non-fouling paints.
- ☒ Only use a soft brush or cloth to clean your hull in the water—this prevents the release of toxic paint into the environment. Paint is being released if cleaning causes the water to be discoloured.
- ☒ Don't buy more paint than you need. Reseal and keep for future use.
- ☒ Avoid tide grids for sanding, scraping or painting. If other options are not available, use a drop cloth to collect spills and residue from sanding or scraping, then dispose of this properly. Shrouding and tarps can also be used to contain dust. Avoid sanding during windy days.



Under the federal Fisheries Act, the water and residue from washing, scraping and sanding your bottom is considered a deleterious substance. It is a criminal offence to release deleterious substances into waters frequented by fish, with penalties up to \$1 million and 3 years in prison.

Topside Work

Any foreign substance entering the water can hurt marine life. To minimize the risk, you should do most of your work on land. Follow these steps when minor dockside work can't be avoided—check with your marina for its policy on topside work.



Never pour paint or other liquid wastes down storm drains or any other drain.

KEEPING IT CLEAN:

- ☒ Don't let anything fall in the water, including sanding dust, solvents, strippers etc. Choose water-soluble solvents.
- ☒ Ensure that sanders, grinders and other tools have dust collection fittings in place.
- ☒ Be prepared! Always have absorbent pads or rags on hand to contain spills.
- ☒ Contain the mess! Use tarps on the dock and between the dock and the boat to catch spills and other materials.
- ☒ Mix paints and other liquids on shore and have only small amounts open on the dock or boat at any time.

Before doing any work on your boat, become familiar with where to dispose of paints, solvents and other wastes (see page 17).





Garbage In — Garbage Out

Trash is ugly and kills fish and wildlife. Plastics can foul props or engine intakes and cause expensive repairs. Organic food waste, whether it sinks or floats, is classified as garbage under the Canada Shipping Act, 2001, and should not be thrown overboard.

83,815 volunteers cleaned up 3,937 km of shoreline in the 2019 Great Canadian Shoreline Cleanup, collecting 18,823 bags (163,505 kg) of garbage. Tiny plastic or foam, and cigarette butts were the two most collected items of litter.



KEEPING IT CLEAN:

- ☒ Don't let trash get thrown, blown or washed overboard.
- ☒ Many remote areas do not have garbage facilities, so plan to bring back everything you take with you.
- ☒ Eliminate as much waste as possible before you embark, such as removing excess packaging.
- ☒ Refuse, reduce, reuse, repurpose, recycle—and compost! Bring a sealed container to store your compostables.
- ☒ Don't be a butthead! Always properly and safely dispose of cigarette butts.



The Vancouver Aquarium estimates that at any given moment, there are 400 sea lions entangled in marine debris.

Disposal Information

The following substances are listed as special household wastes and should only be disposed of at the appropriate facilities. Never mix hazardous substances!



SUBSTANCE	DISPOSAL INFORMATION	NOTES
Used oil	www.bcusedoil.com Some public docks and marinas	Confirm disposal location before changing oil. Do not mix fuel and oil!
Oil filters	www.bcusedoil.com Canadian Tire Automotive centres Some service stations	Drain first and dispose of oil as above.
Oil absorbents	www.bcusedoil.com Many places that collect oil filters.	Wring out and reuse, disposing of the liquid with used oil. Dispose of when no longer useable.
Antifreeze	www.bcusedoil.com Some service stations	All antifreeze is harmful to marine life and should be recovered and recycled.
Stale or contaminated gas	www.productcare.org Some service stations	Store and transport only in "ULC" approved containers. Keep fuel out of oil collection facilities!
Solvents and thinners	www.productcare.org	Allow sediments to settle and then re-use.
Paints and vanishes etc.	Some retailers www.productcare.org	Share product if still useable. (Some recycling depots have a paint sharing service.)
Antifouling paint	www.productcare.org	Store carefully and save for future use rather than disposing.
Batteries	Battery retailers Local recycling depot	



B.C. RECYCLING HOTLINE:

1-800-667-4321

hotline@rcbc.ca

www.rcbc.ca

Contact the B.C. Recycling Hotline for disposal information or download the BC Recycling mobile app.

Boat Disposal

Abandoned, derelict and wrecked vessels are a serious problem on our coast. They pose environmental contamination and safety risks, and are also eyesores and a burden to coastal communities. Untended vessels end up adrift, washed ashore or sunk, releasing fuel and other toxins into the marine environment. This puts marine life and habitat at risk, endangers mariners and beachgoers, and can cause damage to shoreline facilities.



Do you have a retirement plan for your boat?

Have the maintenance costs of your vessel become more of a burden than the boat is worth? Is your vessel unsafe to operate, or is it no longer seaworthy? If so, then it is time to responsibly retire your boat. If your boat is still in reasonable condition, consider donating it to a worthy organization, such as S.A.L.T.S. Sail and Life Training Society, before it becomes a serious problem.

KEEPING IT CLEAN:

- ☑ If you decide to dismantle a boat on your own, ideally at a Clean Marine BC certified boatyard, be sure to contain all waste and prevent the release of pollutants.
- ☑ Remove and dispose of all hazardous materials in a safe and appropriate manner.
- ☑ Recycle, repurpose or sell as many components as possible.
- ☑ Once the vessel is stripped of hazardous materials and anything that can be recycled, reused or repurposed, remaining materials should be sent to a landfill.
- ☑ If you hire someone to dispose of your boat, be sure to use a reputable company that will complete the job in the most environmentally responsible manner possible.
- ☑ Visit boatingbc.ca/boatdisposal for more resources to help you retire your boat at the end of its useful life, including a list of BC businesses that offer boat disposal and transport services.



Unless you have the resources to repair, maintain and operate a vessel, never take a “free” boat. It will likely turn out to be more headache than it is worth!



DO YOU HAVE A RETIREMENT PLAN FOR YOUR BOAT? WE CAN HELP.

Too many boats in British Columbia are left to grow old on moorages, in marinas and along our beaches and coastlines. In time, these abandoned boats contaminate our marine environment, pose hazards to navigation and detract from the beauty of our waterfront communities.

Good captains don't abandon their ship. So when your boat comes to the end of its useful life, make sure you do the responsible thing and retire it properly.

Learn how and where to dispose of your old boat at boatingbc.ca/boatdisposal.



@BoatingBC

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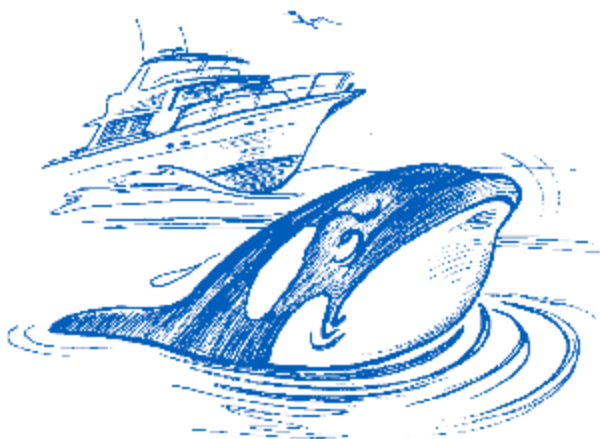
BOATINGBC
ASSOCIATION™

Wildlife Interactions

All wildlife are sensitive to disturbance from people, boats and pets. Approaching whales and other marine life too fast, getting too close, and producing noise can cause stress, inhibit communication and interrupt essential behaviours like feeding, mating, socializing, resting and nurturing young. Once disturbed, birds often abandon their nests and young. Wildlife are also impacted by aquatic invasive species, which can damage habitat and kill native species.



There has been a resurgence in the number of humpback whales in the coastal waters around British Columbia and Washington – and these whales are very large. Their size and unpredictability increase the risk of collision and injury to whales and to boaters. If you see this flag (in yellow, red and black), whales are in the area. Reduce your speed and proceed with caution. Get your Whale Warning Flag from the Marine Education & Research Society at mersociety.org



MARINE MAMMALS

- ☑ The Marine Mammal Regulations of the Fisheries Act make it illegal to disturb marine mammals. Do not interact with, touch, feed, swim or dive with marine mammals.
- ☑ Always maintain a distance of at least 400 metres from killer whales in Southern BC coastal waters from Campbell River to Ucluelet.
- ☑ Keep 200 metres from killer whales in the rest of BC coastal waters, and all whales, porpoises or dolphins at rest or with calf. A distance of at least 200 metres is recommended for large whales due to the increased risk of collision and injury.
- ☑ Stay at least 100 metres from all other marine mammals.
- ☑ If whales approach you, turn your engine off or to idle neutral until they pass, then move away as soon as it is safe to do so and keep your distance.
- ☑ No fishing or boating is allowed (with some exceptions) within the killer whale interim sanctuary zones of Swiftsure Bank, Saturna Island and Pender Island (June 1st to November 30th).
- ☑ Stop fishing within 1000 metres of killer whales (do not haul gear), and always check fishing regulations before harvesting seafood.
- ☑ Turn off echosounders and fish finders when not in use.
- ☑ Slow down and minimize your wake, wash and engine noise. When within 1000 metres of marine mammals, it is encouraged to slow down to 7 knots or less.
- ☑ Avoid erratic manoeuvres. Do not chase, cut across, stop in front of, or approach whales or other marine mammals head-on.
- ☑ Avoid splitting up groups of marine mammals or trapping them between your vessel and shore or other vessels.
- ☑ Put your dog below decks if they become agitated when you encounter marine mammals.
- ☑ It is illegal to approach or disturb marine mammals with a drone. Drones must stay above an altitude of 1000 feet within a radius of one-half nautical mile (approx. 3000 feet).
- ☑ It is mandatory to report contact between your vessel or fishing gear and a marine mammal. See page 27 for reporting contact with marine mammals.

As of March 2021, only 75 endangered Southern Resident Killer Whales remain from a historic population of 200.



Oystercatchers build inconspicuous nests near the shoreline, small islets and spits between April and August. Watch where you step, as it is easy to accidentally disturb or crush their nests.

MARINE BIRDS

- ✓ Always maintain a distance of at least 100 metres of bird colonies.
- ✓ If boating near bird colonies, slow down to minimize your wake and engine noise.
- ✓ Pets can easily kill young birds. Do not allow pets to access bird colonies and nesting habitat.
- ✓ Marine birds often nest on the ground or in burrows on small islets, cliffs and shorelines. Be careful — these nests are difficult to see. For more information contact the Canadian Wildlife Service: 1-800-668-6767.
- ✓ Respect ecological reserves (identified on charts) and Important Bird Areas: ibacanada.com



Sensitive Areas

ESTUARIES: WHERE RIVERS AND STREAMS MEET THE SEA

Up to 80% of BC's wildlife relies on estuaries. This sensitive habitat is especially important to juvenile and spawning salmon and marine birds. Keep all pollution out of the water. Reduce your wake in all estuaries and avoid running motors in shallow waters.

EELGRASS & KELP BEDS:

Eelgrass and kelp beds are key habitats for crabs, shorebirds, and juvenile fish including salmon. Anchors, props and paddles can damage these sensitive areas. When in or near eelgrass and kelp beds: use fixed moorings instead of anchors where possible; avoid running your engine; and avoid disturbing the bottom while paddling, swimming and beach walking.

SHELLFISH AREAS:

Clams and oysters are an important ecological and economic resource. These and other filter feeders are very sensitive to pollution. Never discharge sewage or other pollution in these areas. Take care not to damage shellfish beds with anchors, dinghies or other activities.

ENCLOSED BAYS & NARROW CHANNELS:

These areas experience very little exchange of water and can easily accumulate pollution. Never discharge sewage or other pollution in these areas.

Protecting Marine Habitat

Creating protected areas within the marine environment can be an effective way to protect habitat and marine resources, while protecting vulnerable species like rockfish.

In BC waters, there are 36 species of rockfish. They can live for over two centuries and do not start reproducing until their teens. Catching young fish before they have a chance to breed threatens the viability of populations. Marine protected areas help prevent these and other species from collapsing.

In British Columbia, more than 15% of the land has protected status, but only 3% of coastal waters are protected.

Protecting marine habitat works. A survey of approximately 100 marine reserves around the world showed that after just two years of protection, the number of fish present increased on average by 91%, and the average size and number of species increased as well. These changes were seen in surrounding areas as well, benefiting fishers.

Protection of marine habitat can come in many different forms and no two will be exactly alike.

- **Marine Protected Areas:** There are currently 5 federal MPAs in BC: Endeavour Hydrothermal Vents (Canada's first MPA, designated in 2003), Bowie Seamount (2008), and 3 MPAs protecting the Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs (2017). Race Rocks Ecological Reserve is being considered for designation and would be the first federal MPA in the Strait of Georgia.
- **Rockfish Conservation Areas:** 164 small areas in BC have interim closures on some types of fishing in order to conserve rockfish. Be sure to familiarize yourself with RCA locations and regulations before you go fishing. Descender devices are now mandatory when releasing rockfish anywhere.
- **Glass Sponge Reef Marine Refuges:** BC's ancient glass sponge reefs are a globally unique ecosystem that provide important habitat for many marine animals including spot prawns, rockfish, herring, halibut and sharks. The Strait of Georgia and Howe Sound Conservation Initiative implements measures to protect and conserve glass sponge reefs on BC's south coast. Familiarize yourself with restrictions in various areas of the Refuges, which can include no bottom contact fishing, and no downrigger gear use.



Prevent the Spread of Aquatic Invasive Species (AIS)

Transport of invasive species is illegal. AIS are non-native plants, animals and parasites that can cause economic or environmental harm and spread quickly to new areas. They can be introduced by hitching a ride on boat hulls, buoys, ropes, anchors, trailers, and fishing gear. Some AIS are microscopic and can be transported in water (i.e. ballasts, bilges and wells). They are also introduced by anglers stocking non-native game fish, and pet owners who dump unwanted aquariums.



**CLEAN
DRAIN
DRY**

Prevent the Spread of Aquatic Invasive Species

KEEPING IT CLEAN:

- ✓ Clean all plant parts, animals, debris and mud from your boat, trailer and equipment (fishing gear, ropes, anchors, buoys) before moving to a new waterbody.
- ✓ Dispose of removed material on land in an appropriate compost or garbage bin.
- ✓ Drain all items that can hold water (e.g. buckets, wells, bilge and ballast) on land, before moving to a new location.
- ✓ Dry all parts of your boat and gear completely and pull the plug when storing or transporting your watercraft.
- ✓ Play, Clean, Go! Give invasive species the brush off after an adventure on land. Make sure to check for invasive plants or animals trying to hitch a ride on you, your pets, or your gear.
- ✓ Don't Let it Loose! Never release your pets into the wild or dump aquariums into waterbodies or storm sewers.
- ✓ Stop for inspection. It's the law! All watercraft must report to designated watercraft inspection stations in BC.
- ✓ Report invasive species by visiting www.gov.bc.ca/invasive-species to download the Report Invasives BC app, or see page 27 to report invasives sightings.
- ✓ Learn more from the Invasive Species Council of BC (bcinvasives.ca).

Invasive freshwater zebra and quagga mussels are an alert species — we do not want them in BC! They attach to any hard surface, and their larvae can live in standing water for up to 30 days. They pose a serious threat to BC's aquatic ecosystems, salmon populations, hydro power stations and other infrastructure facilities.



Protecting Georgia Strait

Georgia Strait Alliance created the Guide to Green Boating to help boaters like you minimize your impacts where you cruise. As a charitable organization, GSA relies on your support as you appreciate the beauty and rich marine life of the Strait of Georgia, and you want to do your part to protect the natural environment of this boaters' paradise.

Your tax deductible donation will help ensure that future generations get a chance to enjoy these magnificent waters too, truly one of the world's finest cruising grounds. Please donate today!

Online: www.georgiastrait.org/donate

By mail: Georgia Strait Alliance

208 – 477 Wallace Street, Nanaimo BC V9R 5B7

Or call: 250-753-3459

Charitable registration #13994-2254-RR0001

All donations are tax deductible.



Solutions for a healthy Strait of Georgia depend on you. We welcome your comments and feedback. Please contact Georgia Strait Alliance at 250-753-3459 or gsa@georgiastrait.org



CLEAN MARINE BC

Clean Marine BC is Georgia Strait Alliance's innovative, award winning, voluntary eco-certification program that recognizes marinas, boatyards, yacht clubs and other boating facilities for environmental best practices.

Together we have celebrated many success stories with our Clean Marine BC certified facilities—with innovative improvements in day to day marina operations as well as exciting projects including improving hatch rate of herring eggs, restoring eelgrass beds, and helping bring Purple Martins back from near extinction!

Is your marina Clean Marine BC certified? Enrollment in the award winning program starts with a simple commitment to the Clean Marine BC policy and provides immediate benefits as we guide the participants towards certification in environmental best practices.

HOP ON BOARD!

You can reach our program coordinator at cmhc@georgiastrait.org and 250-753-3459, or visit our website for more details at www.georgiastrait.org

Spills Aren't Slick

Georgia Strait Alliance is a member of the Pacific Oil Spill Prevention and Education Team (POSPET, a working group of the Pacific States — British Columbia Oil Spill Task Force). POSPET members include representatives from state and federal agencies, industry associations, and nonprofit groups from Alaska, British Columbia, Washington, Oregon, and California. Together we spread the Spills Aren't Slick message to reduce chronic small spills from recreational boating, and to promote the oil spill reporting hotline 1-800-OILS-911. POSPET members also eco-certify marinas and boat yards under our Clean Marine and Clean Marina programs. GSA also collaborates with Clean Marine programs in Ontario and Quebec.



Who To Call

REASON	NUMBER
In an emergency	VHS Channel 16 or call 911
Marine spills (24 hours)	Oil Spill Reporting Hotline 1-800-OILS-911 (1-800-6457-911)
Marine spills and pollution (24 hours)	Coast Guard VHF 16 or 1-800-889-8852
Report a disaster or emergency including spills of dangerous materials (24 hours)	Provincial Emergency Program 1-800-663-3456
Office of Boating Safety	1-800-267-6687
Violations of fishing & shellfish regulations, and harassment of marine mammals	Fisheries and Oceans Canada, BC number 1-800-465-4336
Report All Poachers and Polluters (RAPP), as well as invasive Zebra or Quagga mussel sightings	1-877-952-7277
Canadian Wildlife Service	1-800-668-6767
Marine mammals in distress, and mandatory reporting of collisions or entanglement	BC Marine Mammal Response Network (observe, record, report) 1-800-465-4336 DFO.ORR-ONS.MPO@dfo-mpo-gc.ca
Whale, dolphin, porpoise or sea turtle sightings	BC Cetacean Sightings Network 1-866 I SAW ONE (1-866-472-9663)
Recycling Hotline and Household Special Wastes	1-800-667-4321
Report marine invasive species	Fisheries and Oceans Canada 1-888-356-7525
Report all invasive species	Invasive Species Council of BC 1-888-933-3722
Report lost and abandoned fishing gear	Use the Ghost Gear Reporter app by Global Ghost Gear Initiative
Vessels of concern	1-800-889-8852



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Georgia Strait Alliance
www.GeorgiaStrait.org