## **Boat Blue**

## Marine Mammals and Boaters

## Safety and Stewardship





Version: April 26, 2023

## **Content Covered in Guide**

- 1. Introduction
- 2. Understanding **Disturbance**
- 3. Avoiding Collision
- 4. Entanglement
- 5. Ingestion of Marine Debris
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Pregnant whale washed up in Italian tourist spot had 22 kilograms of plastic in its stomach







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# Marine Mammals and Boaters 1. Introduction





\*When referencing "boater" this is inclusive of all watercraft users - motorized, sail, paddle boards, kayaks and canoes, etc. This guide is an initiative of the **Boat Blue** environmental campaign of the Canadian Power Squadron (CPS-ECP).

Recognizing the importance and potential gains of boaters\* being advocates for Canadian waters, the goals of **Boat Blue** are to:

- 1. Reduce risk to boaters and marine life.
- 2. **Increase awareness** of our relationship with and impacts to waterways.
- 3. Increase action that benefits conservation and research.
  - 4. Further enhance the potential of on-water enjoyment.
  - 5. **Empower boaters** to increase aquatic stewardship and responsibility.

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# This resource was developed by the Marine Education and Research Society (MERS)



MERS is based on northern Vancouver Island, British Columbia in the Territories of the Kwakwala-speaking People.

The team directly apply their knowledge as Humpback Whale researchers to their boater education efforts.

This Guide has been informally reviewed by Fisheries and Oceans Canada colleagues with education, enforcement and management expertise and by Canadian Power Squadron (CPS-ECP) Environmental Committee members.

The Marine Education and Research Society's efforts to provide this resource are motivated by the knowledge that:

- The fortunate increase in Humpback Whales is a game changer for boaters regarding the threat of collision and entanglement.
- Canada's Marine Mammal Regulations were significantly amended in 2018 but have not been included in many boater courses.
- It is difficult for boaters to access and understand additional complex regional management measures such as the "Management Measures to Protect Southern Resident Killer Whales" (Pacific Coast) which involve sanctuary zones, increased minimal approach distances, and fishery closures.



Photo: Anonymous

Orca here are members of the A35 matriline of threatened Northern Resident Orca.



<u>Click here</u> for a video giving an indication of the need for boater education regarding whales needing space. Humpback Whales, in particular, are: acrobatic, large, often oblivious of boats, can be nursing or resting just below the surface, can suddenly surface after long dives, and are often travelling in unpredictable patterns.

The Humpbacks in this video are Maude and her 2016 calf Linea. Maude is almost 15 metres long.

## What's There?!

Bishop Bay; BC's North Coast; June 18, 2017 Jackie Hildering; Marine Education and Research Society

<u>Click here</u> for video of a Humpback resting at the surface which can add to the threat of collision.



## Aims of the Guide

- To **reduce risk** to boaters and marine mammals (and sea turtles and sharks).
- To increase awareness and actions that serve conservation and research.
- To enhance the potential of on-the-water **enjoyment and aquatic stewardship.**

## Marine Mammals in Canada

- Marine mammals in Canada are: Sea Otters, Polar Bears and a multitude of species of seals, sea lions, dolphins, porpoises and whales.
- There are at least 50 species of marine mammal in Canada. 27 are at risk and are protected under Canada's Species at Risk Act (SARA).
- Additionally, there are 3 species of sea turtle and 4 species of shark that are at risk and protected under SARA.
- See Appendix 6 for a listing of at-risk large marine animals (marine megafauna) in Canada.
- Note that dolphins, porpoises and whales are collectively known as "cetaceans" and that seals and sea lions are the "pinnipeds".



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### **Boaters and Marine Mammals**

#### Potential gains include:

- Learning about marine life;
- Contributing **to boater education** e.g. Marine Mammal Regulations;
- Modelling best practices;
- Reporting violations and incidents of concern; and
- Contributing to research and conservation.





#### **Potential impacts include:**

- Acoustic and physical disturbance
- Collision
- Entanglement
- Ingestion of marine debris

- Water quality (e.g. spills and engine fumes)
- Contributing to climate change
- Human injury and material loss



Photo: Extreme violation of **Marine Mammal Regulations\*.** Vessel is under power in close proximity to threatened Northern Resident Orca.

\*It is the responsibility of all watercraft users to know the Regulations.

# Marine Mammals and Boaters 2. Understanding Disturbance



### **Disturbance - Acoustic**

**Sound is magnified in water** and travels approximately 5 times faster than in air (depending on temperature, pressure and salinity).

Marine mammals are **highly reliant on sound for many life processes** including navigation, communication, finding prey, mate selection and socializing.





<u>Click here</u> for an example of what it sounds like when boat engine noise masks the communication of Orca.

## **Disturbance - Acoustic**

#### Impacts of ocean noise:

## Reducing speed most often reduces noise and the risk / impact of collision.

- Impairment of communication and echolocation
- Impeding ability to hear prey / predators
- Increasing stress



Humpback Whale - "Guardian" Photo ©Grace Gladstone

### **Disturbance - Acoustic**

#### An example of the impacts of ocean noise:

 Endangered Southern Resident Killer Whales were found to increase their call amplitude by 1 decibel for every 1 decibel increase in background noise. Holt et al. 2009.

## Speaking up: Killer whales (Orcinus orca) increase their call amplitude in response to vessel noise The Journal of the Acoustical Society of America 125, EL27 (2009); https://doi.org/10.1121/1.3040028

Marla M. Holt and Dawn P. Noren



## **Disturbance - Physical**

In addition to acoustic impacts, the proximity of watercraft (motorized AND unmotorized) can impact marine mammals by:



- Increasing energy expenditure and disrupting life processes such as feeding, mating, birthing, nursing, socializing and resting.
- Increasing risk of collision.
- Increasing stress.



## **Disturbance - Physical**

#### Effects of Vessel Distance and Sex on the Behavior of Endangered Killer Whales Marla M. Holt<sup>1\*</sup>, Jennifer B. Tennessen<sup>1,2</sup>, Eric J. Ward<sup>1</sup>, M. Bradley Hanson<sup>1</sup>, Candice K. Emmons<sup>1</sup>, Deborah A. Giles<sup>3†</sup> and Jeffrey T. Hogan<sup>4</sup>

**Research published by Holt et al in January 2020** found that the proximity of boats had an impact on whether the endangered Southern Residents Killer Whales off Canada's Pacific Coast would hunt or not.

#### Includes:

"Whales made fewer dives involving prey capture and spent less time in these dives when vessels had an average distance less than 400 yd (366 m) . . . females were more likely to transition to a nonforaging state . . . A female's decision to forego foraging states due to the close proximity of vessels could have cascading effects on the ability to meet energetic requirements to support reproductive efforts." Click here for the research paper.

### **Disturbance - Cumulative Effects**



It is important for boaters to act with the knowledge that stresses are cumulative.

Individual boater's actions **contribute to the burden of other stresses** animals have been exposed to and therefore impact marine mammal survival.



More boats means there is the potential of greater overall impact from acoustic and physical disturbance. Each boat adds to the stresses resulting from other boats.

Further, **the impacts of physical and acoustic disturbance build on one another** leading to greater impacts e.g. increased stress; reduced hunting success / increased energy demands; insufficient rest; disrupted nursing; and/or impaired communication.

The impacts of physical and acoustic disturbance **also add to the effects of other stresses** such as contaminants and reduced prey availability (i.e. the impacts are synergistic).



## **Disturbance - Habituation**

Habituation of marine mammals can result from disturbances such as: feeding, swimming with; and/or enticing to move.

Note, these actions are in violation of the Marine Mammal Regulations.

Potential impacts of habituation:

- Animals lose wariness.
- Loss of natural behaviour e.g. feeding.
- Puts animals at increased risk.
- Also dangerous to humans.



Southern Resident Orca - "Luna" (L98) prior to death in 2006 resulting from habituation. Photo ©Maria Peronino



Habituated California Sea Lion grabs girl, May 2017. Photo ©Michael Fujiwara, CBC



**Click here** for video showing a habituated California Sea Lion grabbing a girl who had been hand-feeding him. May 2017, Steveston. ©Michael Fujiwara, CBC.

# Marine Mammals and Boaters 3. Avoiding Collision



## Collision - risk to marine mammals AND boaters

#### Examples:

Humpback Whale "Slash" (BCY0177) Propeller scarring is evidence of her having survived collision with a boat.





Injuries resulting from collision with an unknown Humpback Whale. Required extensive reconstructive facial surgery. While some collisions result from boater ignorance and poor vigilance, in this case, bad weather played a large role, making it very difficult to detect the whale.

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Northern Resident - "Fife" (A60) Photo ©Graeme Ellis

## Very often, dead marine mammals sink to the bottom of the ocean.

Therefore, it is very difficult to know how often collision happens and whether animals survive.

It is the law in Canada, under the Marine Mammal Regulations, that **collision with marine mammals must immediately be reported** to Fisheries and Oceans Canada (DFO).

This allows for better understanding of the risk, potential monitoring of the animal's survival, and better mitigation.



Grey Whale - "Admiral" (CRC 144) Photo ©Wendy Szaniszlo



Humpback Whale - "Prop Scar" (BCX0321) Photo ©Erin Rechsteiner

Baleen whales, such as Humpbacks, are at greater risk for collision (and entanglement). Because they:

- Do not have the biosonar that toothed whales have and can be oblivious of boats.
- Are larger than toothed whales like Orca.
- Can surface suddenly after long dives.
- Often travel in unpredictable patterns.
- Can suddenly become **acrobatic**.
- Can be **sleeping** at the surface.

HUMPBACK WHALE September 6, 2017 10:47 am

Updated: September 6, 2017 10:27 pm

#### 'A terrible nightmare': B.C. man left a paraplegic after boat collides with humpback in Haida Gwaii





To reduce risk of collision and disturbance:

- Marine Mammal Regulations
   These are federal law.
   Amendments in effect since July 2018.
- 2. See a Blow? Go Slow! <u>www.SeeABlowGoSlow.org</u>
- 3. Be Whale Wise <u>www.BeWhaleWise.org</u>



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### Marine Mammal Regulations Minimum approach distances for vessels:



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For other areas and species of whales, dolphins and porpoises, **keep a minimum of 100 metres away,** 200 metres if they are with calves or in resting position. Source: Fisheries and Oceans Canada.

## Marine Mammal Regulations

Summary of minimum approach distances for Canada's Pacific Coast

- 200 m for all Orca\*.
- 200 m for all whales, dolphins and porpoises with calves or in resting position.
- 100 m for all other whales, dolphins and porpoises.

\*On Canada's Pacific Coast, As part of the "Management Measures to Protect Southern Resident Killer Whales", there is a 400 m minimum approach distance for all Orca in southern BC coastal waters between Campbell River and just north of Ucluelet. See Appendix 2 for these Measures (last updated April 2023).



## Additional Marine Mammal Regulations:

#### No person shall approach a marine mammal to, or to attempt to,

(a) **feed it;** 

- (b) **swim** with it or interact with it;
- (c) **move it** or entice or cause it to move from the immediate vicinity in which it is found;
- (d) **separate it** from members of its group or go between it and a calf;



(e) **trap it** or its group between a vessel and the shore or between a vessel and one or more other vessels; or

(f) tag or mark it.

Mandatory reporting of any accidental contact between a marine mammal and a vehicle or fishing gear to 1-800-465-4336 for Canada's Pacific coast. See page 45 or Appendix 8 for regional numbers. See Appendix 7 for details of what must be reported.

### Additional Marine Mammal Regulations: Drones



## IT'S ILLEGAL

TO APPROACH MARINE MAMMALS WITH A DRONE



Fisheries and Oceans Canada Pêches et Océans Canada

D'APPROCHER UN MAMMIFÈRE

**C'EST ILLÉGAL** 

MARIN AVEC UN DRONE

#### **DFO Marine Mammal Regulations:**

Unless authorized under permit for scientific research and/or marine mammal rescue efforts it is illegal to approach marine mammals with a drone **at an altitude below 1,000 feet (about 304 metres)** within a half nautical mile (about 926 metres).

Flight maneuvers, including taking off, landing or altering course or altitude, are also not allowed near marine mammals.

#### **Transport Canada:**

It is illegal to fly a drone above 400 feet (about 122 metres).

Thereby, between the Transport Canada and DFO regulations, it is Illegal to fly a drone at any height near marine mammals.



\*Discussions are underway about having a nation-wide system regarding research flags.

### **Research Flag**

On Canada's Pacific coast\*, yellow flags with the letters MML (Marine Mammal License) are raised by researchers when conducting work for which they have approval under a research license.

This may include being closer to marine mammals than the minimum approach distances.

If such a flag is not raised, activities may be in violation of Marine Mammal Regulations.

## Best practices from www.SeeABlowGoSlow.org

- Be vigilant for signs of presence including the blows (exhalations) of whales and aggregations of birds which can be an indication of feed, and therefore increased likelihood of marine mammal presence.
- On the west coast of Canada and Washington, watch for vessels flying the Whale Warning Flag\*, warning whales are near. It is raised in the presence of whales and lowered when whales are not present. When raised, vessels should slow down and increase vigilance.







#### \*To obtain a Whale Warning Flag, see Appendix 10.

- **Give whales space**, in accordance with regulated minimum approach distances but consider whale size and behaviour for safe distance.
- Know areas of whale density and increase vigilance / reduce speed. For Humpbacks off Canada's Pacific coast, see www.SeeABlowGoSlow.org.
- Stop fishing within 1,000 m of Orca to aid recovery of their prey and to discourage depredation that the whales learn to take fish from fishing gear.



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Marine Education and Research Society. 2017.

When you suspect you are in the vicinity of whales:

 Slow down. Speed should be less than 7 knots when within 400 m from a whale. This reduces acoustic disturbance in addition to reducing chance of collision. Avoid sudden course changes.

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- **Do not position beside "bait balls"** of small schooling fish (as indicated by aggregations of birds).
- Stay clear of the animals' path.
- If whales unexpectedly surface within the minimum approach distance, place engine in neutral (ideally shut off the engine) until the whales are beyond the required distance. Proceed with caution in a direction away from or perpendicular to the travel direction of the whales until at least 400 m away.
- If kayaking, adhere to the minimum approach distances and stay out of the path of the whales.
   **Raft up.** This reduces the number of obstacles for the whales.




### Additional Guidelines / Best Practices From www.BeWhaleWise.org

- **Be cautious, courteous and quiet** when around areas of known or suspected marine wildlife activity (including birds, seals and sea lions).
- Look in all directions before planning your approach or departure.
- If animal(s) are heading in your direction, cautiously move out of the way and avoid abrupt course changes. If your vessel is not in compliance with the minimum approach distance, place engine in neutral and allow animals to pass.

[To reduce acoustic disturbance, whenever possible shut off engine, sonar, depth sounders, fish finders and other underwater transducers.]

• Stay on the offshore side of whales when they are traveling close to shore.



- Do not drive through groups of porpoises or dolphins.
  Should dolphins or porpoises choose to approach your vessel, hold course and reduce speed gradually to discourage bow or stern-riding.
- Limit your viewing time to 30 minutes or less. This will reduce the cumulative impact of vessels and gives consideration to other viewers. Also consider the number of vessels present around the animals. More vessels means more potential disturbance.
- Pay attention and move away, slowly and cautiously at the first sign of disturbance or agitation from any animal e.g. that seals or sea lions begin to move from their resting position.



Pacific Harbour Seal nursing her newborn.

<sup>38</sup> Photo taken with telephoto lens and cropped ©Jackie Hildering



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Last updated: 2023-04-26

### Guidelines / Best Practices Seals, sea lions and birds on land



- Be cautious and quiet when around seal and sea lion haul-outs and bird colonies, especially during breeding, nesting, and pupping seasons (generally May to September).
- 2. Reduce speed around seal and sea lion haul-outs and bird colonies to **minimize wake, wash and noise**, and then slowly pass without stopping.
- 3. Avoid approaching seal and sea lion haul-outs and bird colonies closer than 100 m.
- 4. **Do not disturb, move, feed or touch any marine wildlife**, including seal pups. If you are concerned about a potentially sick or stranded animal, contact your local stranding network where available.



Photo taken with telephoto lens and cropped ©Jackie Hildering

# Marine Mammals and Boaters

### 4. Entanglement



Humpback Whale - "Cutter" Photo ©Christie McMillan, MERS

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Humpback Whale entanglement Photos ©Philip Charles

## If you seen an entangled marine mammal **REPORT IMMEDIATELY.**

(See page 45 or Appendix 8 for regional numbers)

#### Standby if possible.

Do not attempt to intervene.

### Entanglement - a very real risk

Preliminary results from a collaborative study by the Marine Education and Research Society and DFO are that ~50% of Humpback Whales off British Columbia's coast have scarring resulting from entanglement.

This data provides an indication of how prevalent entanglements are, but remains an underestimate, as **it does not reveal how many whales have died as a result of entanglement.** 



Humpback Whale "Argonaut" with scarring resulting from entanglement Photo ©Christie McMillan, MERS

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#### Seafarer Joe Howlett risked his life to save whales



Joe Howlett - extremely experienced and highly trained responder. Died as result of disentangling a North Atlantic Right Whale, July 10, 2017, New Brunswick.

### THE GLOBE AND MAIL\*

Jow Howlett, seen off the coast of Campobello Island in 2015

### Disentanglement requires training in order to give the animals the best chances of survival and to reduce risk to humans.

Know that most often the animals are not in immediate risk of death. It is the longterm impacts of infection and not being able to feed and move properly that could lead to death.

### Thereby, reporting is essential, allowing the animal to be found and for the appropriate expertise and equipment to be used.

### The net or rope trailing behind the whale at the surface is very important in being able to disentangle the whale.



If someone were to remove this trailing rope or net, they **not only put themselves at great risk, they often make things much worse for the whale because . . .** 



- The whale could still be severely entangled below the surface but it would be much more difficult to recognize that the whale is in trouble.
- The gear trailing behind the whale is needed if responders need to attach a tracking tag which allows for the whale to be relocated.
- 3) When striving to rescue the whale, trained responders **use the trailing gear to attach buoys that slow down the whale**. This increases their chances of approaching the whale, assessing the entanglement, and then removing ALL the gear.

#### See www.HowToSaveAWhale.org

### Best chance of a happy ending

- Immediately report entanglement with location. See reporting numbers on next page. It's the law that entanglements must be reported (in accordance with the Marine Mammal Regulations).
- If possible, **remain with the whale at a distance** and document with photos until professional help arrives or another boat.

• Do not attempt to disentangle.

Removing gear trailing at the surface makes the whale more difficult to relocate and reduces the chance of successful disentanglement.

Photos: Top - tracking tag. Middle - buoys attached to the gear trailing behind the whale to slow it down. Bottom - specialized gear; no one gets in the water

Bottom - specialized gear; no one gets in the water during disentanglement.

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Photo of tracking tag Center for Coastal Studies, NOAA Permit #18786



Photos of Humpback disentanglement Center for Coastal Studies, NOAA Permit #18786



### Reporting violations and incidents of concern

British Columbia: DFO's Observe, Record, and Report Hotline **1-800-465-4336;** DFO.ORR-ONS.MPO@dfo-mpo.gc.ca

Northwest Territories: Inuvik **1-867-777-7500** Yellowknife **1-867-669-4900** 

Nunavut: 1-867-979-8000

Ontario: 1-877-847-7667

Boaters should have numbers programmed into their phones.

If unable to use phone, call Coast Guard / VHF 16.

Quebec: Baleines en Direct (a GREMM initiative) 1-877-722-5346

New Brunswick, Nova Scotia & Prince Edward Island: Marine Animal Response Society **1-866-567-6277** 

Newfoundland & Labrador - Whale Release & Strandings Newfoundland: 1-888-895-3003 or 1-709-895-3003

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## Entanglement of other marine megafauna

Entanglement is also a risk for other marine species such as seals, sea lions, sea turtles and sharks.



Disentanglement of a Leatherback Turtle, 1982. CCGS Arrow Post. Photo Laurie Gordon, DFO





Steller Sea Lion with ingested fishing hook. Photo ©Jared Towers

Fishing line, netting, ropes or anything with a loop provides risk of entanglement.



See photo above. This juvenile Steller Sea Lion has plastic strapping around his neck. This **will become embedded as he grows likely causing infection, inability to feed effectively and, possibly, death**.

There are initiatives to rescue sea lions by anesthetizing the entangled animals, removing the entanglement and then reversing the anesthetic.

**But this will never solve the problem of entanglement.** The incidence of entanglement is too high, our coasts are too vast to detect all the entanglements, and too many resources are required.

### The threat has to be managed at the source.

Neck entanglements in sea lions most often result from the **rubber bands** used on crab pots and **hard plastic packing bands** used around cardboard shipping boxes e.g. bait boxes.

The threat is reduced by reduced use of these materials, and by **cutting the loop** in elastics, strapping, rope, etc., and then disposing of them properly.





Steller Sea Lion with neck entanglement. Photo ©Bruce Paterson



California Sea Lion with neck entanglement Photo ©Shellie Smyrichinsky

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**Click here** for video showing Marine Mammal Rescue (OceanWise) cutting away a neck entanglement from a California Sea Lion. Provides insight into how many resources are needed for disentanglement and how the problem must be managed at the source i.e. finding out what is causing entanglements and reducing that.

### Marine Mammals and Boaters 5. Ingestion of Marine Debris

Pregnant whale washed up in Italian tourist spot had 22 kilograms of plastic in its stomach





#### Plastics in the ocean pose a risk at any size

**Microplastics** end up in the ocean through drainage as a result of our having used them in things like cosmetics and cleaning products. Because they are not biodegradable, they are not broken down at sewage treatment plants. They are also the result of the breakdown of larger pieces of plastic through sunlight and further weathering.

Ocean Wise's Ocean Pollution Research Program, or provided the first evidence of microplastic ingestion by marine zooplankton as a result of plastic being mistaken for food.

Thereby microplastics are in the marine food web.



Source: Desforges, JP.W., Galbraith, M. & Ross, P.S. Ingestion of Microplastics by Zooplankton in the Northeast Pacific Ocean, Arch Environ Contam Toxicol (2015) 69: 320. <u>https://doi.org/10.1007/s00244-015-0172-5</u>

## Larger marine debris and the risk of ingestion

Example - Grey Whale stranded in West Seattle in April 2010 had the following in his stomach:

- 20 plastic bags
- 2 small towels
- Surgical gloves
- Sweat pants
- A sock
- Duct tape

- Electrical tape
- Golf ball
- Fishing line
- Nylon braided rope
- Juice pack
- Red plastic cylinder
- Several unidentified plastic pieces

Note that it could not be concluded that the ingested debris was the cause of death.



Photos Cascadia Research

Plastic bags and balloons are also a signifiant threat to the Endangered Leatherback Turtles who feed off our coasts

Endangered Leatherback Turtles belong off both the west and east coasts of Canada. In a global study of 408 dead Leatherback Turtles, more than 30% had plastics in their intestines (Mrosovsky *et al.* 2009).

Sea turtles accidentally eat plastics because they cannot discern them from their jellyfish prey. The ingested plastics can cause death due to internal injury and/or by blocking the intestines which can cause malnutrition or starvation.

Ingested plastics also **increase buoyancy** which further decreases chances of reproduction and survival.



Graphic: Marine Education and Research Society See <u>www.leatherbacksinbc.org</u>



**Click here** for video showing a Leatherback Turtle feeding on jellies which provides insight into how they can not discern plastics and balloons from their prey.

Source: Canadian Sea Turtle Network.

### For many solutions and resources to reduce marine debris of all sizes, see <a href="https://www.AnOceanOfGood.org">www.AnOceanOfGood.org</a>



Ingestion >

AnOceanofGood.org





Every Day Choices, Every Day Solutions Help Create an Ocean of Good

### Marine Mammals and Boaters 6. Value of Reporting



### Violations and incidents of concern

Reporting violations of the Marine Mammal Regulations and incidents of concern can reduce risks to marine mammals (and boaters) by:

- Offenders receiving education, warnings or charges being laid.
- Aiding better understanding of how often, and under what conditions, violations and incidents occur.
- Supporting the need for Regulations and for resources to be invested for increased education and enforcement.
- Shaping best practices and potential for conservation.



Boaters having positioned to be in close proximity of threatened Northern Resident Orca. In photo "Fife" (A60). Photo ©lan Ireland.

## Information needed when reporting violations and incidents of concern

### Call regional number as listed in Appendix 8.

Provide:

- Date and time.
- Location (ideally GPS coordinates).
- Species description and number of animals involved.
- Boat name / description.



Boaters in close proximity to Steller Sea Lions Photo: Anonymous

- Further description of the violation / incident including, if applicable, type of fishing gear, observed state of the marine mammal after the incident, and/or direction of travel.
- The ideal is to also provide documentation of the violation / incident including evidence of who was driving the vessel (video provides stronger evidence than photos).

### Contributing to Research and Conservation

Examples of how information you share with research organizations can be of help:

- Sightings (date, time, location, species) help increase understanding of abundance, distribution and habitat use.
- Sightings with photos (taken outside minimum approach distances) can help document:
  - Identities of individual whales
  - Survival and if there are new calves
  - Which animals are associating
  - Range and distance travelled
  - Potential injuries
  - When and where the animals are feeding, etc!



Example of where sightings could be contributed:

In British Columbia, Ocean Wise's **BC Cetacean Sightings Network** 

Includes the WhaleReportApp

See Appendix 5.

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### Dead, stranded or injured marine mammals

**Report to appropriate regional phone number provided in Appendix 8.** 



See videos explaining the value of reporting at <u>www.mersociety.org/WhoYouGonnaCall</u>

### Marine Mammals and Boaters 7. Summary of How to Help



### How to Help

- Know (and model) Regulations and best practices
- Educate others
- **Report** violations and incidents of concern
- Contribute to citizen science
- Reduce marine debris and fossil fuel use
- Support education initiatives e.g. "See a Blow? Go Slow!" and "Be Whale Wise"



- Whale sightings are frequent in this area.
- Collisions happen causing injury to boaters and whales.
- Whales, especially Humpbacks, can **surface suddenly** and be very **unaware of boats**.



- · Be on the lookout for blows at all times.
- Go slow if you see a blow.
- The Whale Watch Flag, when raised on boats, warns whales are near.
- Give whales space, at least 200m but consider whale size, species and behaviour for safe distance. Know the Marine Mammal Regulations.\*
- Be alert for aggregations of birds. This often means there is a lot of feed and thereby an enhanced chance of whale presence.
- Report incidents e.g. disturbance, collision and entanglement to DFO's Reporting Line 1-800-465-4336 or Coast Guard VHF 16.
- \* It is boaters' responsibility to know the **Marine Mammal Regulations**, **Be Whale Wise** guidelines, regional & species-specific regulations, areas of known whale density, and what to do in case of whale entanglement. For this information, go to **www.SeeABlowGoSlow.org.**



This sign sponsored by: Sunshine Coast Power and Sail Squadron



### Marine Mammals and Boaters 8. Appendices



## **Appendix 1:** Summary of Canada's Marine Mammal Regulations minimum approach distances for vessels

#### Pacific Coast:

• 200 m for all Orca

\*See next page for additional Management Measures for the endangered Southern Resident Killer Whales

- 200 m for all whales, dolphins and porpoises with calves or in resting position.
- 100 m for all other whales, dolphins and porpoises.

#### **Central and Eastern Canada**

- 200 m for whales, dolphins and porpoises in parts of the St. Lawrence Estuary.
- 400 m for threatened and endangered whales, dolphins and porpoises in the St. Lawrence Estuary & Saguenay River.
- 50 m in parts of the Churchill Estuary.
- 200 m for all whales, dolphins and porpoises with calves or in resting position.
- 100 m for all other whales, dolphins and porpoises.

### 2023 Management Measures to Protect Southern Resident Killer Whales - For details <u>click here</u>.



Overview of 2023 management measures to protect Southern Resident Killer Whales



#### **Appendix 2:** 2023 Management Measures to Protect Southern Resident Killer Whales - Juan de Fuca



#### **Appendix 2:** 2023 Management Measures to Protect Southern Resident Killer Whales - Gulf Islands



#### **Appendix 2:** 2023 Management Measures to Protect Southern Resident Killer Whales - Mouth of the Fraser River



#### **Appendix 2:** 2023 Management Measures to Protect Southern Resident Killer Whales - Swiftsure Bank







and 200 metres if they are resting or with calf/pup in Canada.
## Appendix 4: DFO infographic to estimate distance

Source: www.dfo-mpo.gc.ca/protectingwhales



## **Appendix 5:** The WhaleReport Alert System WRAS (Pacific Coast)

See wildwhales.org/wras

When you use the BC Cetacean Sightings Network WhaleReport app, your alert informs shipmasters and pilots of the presence of whales.

"This awareness better enables vessels to undertake adaptive mitigation measures, such as slowing down or altering course in the presence of cetaceans, to reduce the risk of collision and disturbance."



# **Appendix 6:** Marine megafauna protected under Canada's Species at Risk Act (2019)

#### Endangered

- Basking Shark (Pacific)
- Beluga Whale (3 populations: Eastern Hudson Bay, St. Lawrence Estuary, and Ungava Bay)
- Blue whale (2 populations: Atlantic and Pacific)
- Harbour Seal (Lac des Loups Marins subspecies)
- Killer Whale (NE Pacific Southern Resident population)
- Leatherback Turtle (2 populations: Pacific and Atlantic)
- Loggerhead Turtle
- Northern Bottlenose Whale (Scotian Shelf)
- Right Whale (2 populations: North Pacific and North Atlantic)
- Sei Whale (Pacific)
- White Shark (Atlantic)

#### **Of Special Concern**

#### Threatened

• Beluga Whale (Cumberland Sound, Nunavut)

34 at risk

populations

- Fin Whale (Pacific)
- Killer Whale 3 populations:
  - NE Pacific Northern Resident
  - NE Pacific Offshore, and
  - NE Pacific Bigg's aka Transients
- Beluga Whale (2 populations: Eastern High Arctic Baffin Bay, and Western Hudson Bay)
- Bluntnose Six Gill Shark
- Bowhead Whale (2 populations: Bering-Chukchi-Beufort and Eastern Canada West Greenland)
- Fin Whale (Atlantic)
- Grey Whale (Eastern North Pacific population. Note COSEWIC has recommend 3 populations be recognized in Canadian Pacific waters, of which 2 are endangered)
- Harbour Porpoise (2 populations: Pacific and Northwest Atlantic)
- Humpback Whale (Pacific)
- Northern Bottlenose Whale (Davis Strait-Baffin Bay-Labrador Sea)
- Sowerby's Beaked Whale
- Steller Sea Lion

#### Extinct

Steller Sea Cow

75

**Appendix 7:** Marine Mammal Regulations specifics on what must be reported when there has been a collision or entanglement

"Immediately after any accidental contact between a vehicle or fishing gear and a marine mammal, the operator of the vehicle or the fishing gear" is to report:

"(a) the date, time and location of the incident;

(b) the species of marine mammal involved in the incident;

(c) the circumstances of the incident;

(d) the size and type of vehicle and, if applicable, the type of fishing gear involved in the incident;

(e) the weather and sea conditions at the time of the incident;

(f) the observed state of the marine mammal after the incident; and

(g) the direction of travel of the marine mammal after the incident, to the extent that it can be determined."

**Appendix 8:** Regional numbers for reporting violations and incidents of concern

British Columbia: DFO's Observe, Record, and Report Hotline **1-800-465-4336;** DFO.ORR-ONS.MPO@dfo-mpo.gc.ca

Northwest Territories: Inuvik **1-867-777-7500** Yellowknife **1-867-669-4900** 

Nunavut: 1-867-979-8000

Ontario: 1-877-847-7667

Boaters should have numbers programmed into their phones. If unable to use phone, call Coast Guard / VHF 16.

Quebec: Baleines en Direct (a GREMM initiative) 1-877-722-5346

New Brunswick, Nova Scotia & Prince Edward Island: Marine Animal Response Society **1-866-567-6277** 

Newfoundland & Labrador - Whale Release & Strandings: 1-888-895-3003 or 1-709-895-3003

## Appendix 9: Using #BoatBlue

For those active on social media, flagging relevant posts with **#BoatBlue** will promote and amplify the aims of the CPS-ECP campaign and the actions that aid aquatic stewardship.

The hashtag symbol (#) used before words, **indexes and brands** those words allowing related content to be more easily found and contributed to.

"Sailing up the coast today. Hoping for whales. Checking the Marine Mammal Regulations before we go. #BoatBlue"

"Yeah! New four stroke engine. Less fuel and noise! #BoatBlue"

"Loading up on groceries for the big adventure, no plastic bags thank you. #BoatBlue"

"Humpback Whales! Relayed the sightings to research. #BoatBlue"

"Fished out the plastic we found in the tideline today. #BoatBlue"

## Appendix 10: Links

For further resources from CPS-EPC's Boat Blue Program

www.BoatBlue.ca

Marine Mammal Regulations and best practices

- www.SeeABlowGoSlow.org
- www.BeWhaleWise.org

MERS Resource "How to Save a Whale"

www.HowToSaveAWhale.org

To sponsor and/or help position "See a Blow? GoSlow!" signage and/or to obtain a Whale Warning Flag

www.mersociety.org/howtohelp

