Canadian Coast Guard | Garde côtière canadienne

Notices to Mariners
1 to 46

Safety First, Service Always

Annual Edition 2026

Canada

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Annual Edition 2026

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Amendment Register

Date	Section, Notice #	Description
March 27, 2026	A5, Notice 10	Page 1 Modify: **2.1 Compulsory Canadian Routeing Systems adopted IMO**
April 24, 2026	A2, Notice 5	Page 6 Modify: **Roseway Basin Critical Habitat and International Maritime Organization-Adopted Area to be Avoided**
April 24, 2026	A2, Notice 5E	Page 3 Modify: **Map of Scott Islands Marine National Wildlife Area Flight Restriction Zone**
May 29, 2026	A2, Notice 5	Starting at page 2 Modify: **General Guidelines for Aquatic Species at Risk and Important Marine Mammal Areas**
May 29, 2026	A2, Notice 5A	Starting at page 31 Modify: **Regulatory Protection Measures for Tarium Niryutait Marine Protected Areas**
June 26, 2026	A3, Notice 6	Starting at page 1 Modify: **Ice Navigation, Routeing and Requests for Icebreaker Assistance**
June 26, 2026	A3, Notice 7	Page 3 Modify: **7.4.1 Entering the Ice**
June 26, 2026	A3, Notice 7A	Page 2 Modify: **5 Ice Advisory Service, Northern VTS Reporting, and Sails Plans**
June 26, 2026	A8, Notice 20	Starting at page 1 Modify: **Safety of Offshore Exploration and Exploitation Vessels**
July 31st, 2026	A2, Notice 5A	Page 1 Modify: **5A General Requirements for *Oceans Act* Marine Protected Areas, *Fisheries Act* Marine Refuges and *Fisheries Act* Rockfish Conservation Areas** Page 109 Add: **General Information on Rockfish Conservation Areas**
July 31st, 2026	A3, Notice 7A	Starting at page 1 Modify: **7A Voyage Planning for Vessels Intending to Navigate in Canada's Northern Waters**

Table of Contents

A Aids to Navigation and Marine Safety 1

A1 Aids to Navigation 1
1 The Canadian Aids to Navigation System and Private Buoy Regulations 1
2 Cautions in the Use of Aids to Navigation 4
3 Requirements Related to the Protection of Aids to Navigation 9
4 Measured Distances 10
Note: This notice has been removed from the Annual Edition of Notices to Mariners. 10

A2 Marine Mammal Guidelines and Marine Protected Areas 11
5 General Guidelines for Aquatic Species at Risk and Important Marine Mammal Areas 11
5A General Requirements for Oceans Act Marine Protected Areas, *Fisheries Act* Marine Refuges and *Fisheries Act* Rockfish Conservation Areas 41
5B General Guidelines for National Parks 150
5C National Marine Conservation Areas 183
5D General Guidelines for National Wildlife Areas 192
5E Regulatory Requirements for Scott Islands Marine National Wildlife Area 200

A3 Ice Navigation 206
6 Ice Navigation, Routeing and Requests for Icebreaker Assistance 206
7 Information about Navigation in Ice 211
7A Voyage Planning for Vessels Intending to Navigate in Canada's Northern Waters 216
7B Joint Industry - Government Guidelines for the Control of Oil Tankers and Bulk Chemical Carriers in the Ice Control Zones of Eastern Canada (JIGs) TP15163 228
7C Vessels Intending to Navigate in Kitikmeot Region in Canada's Northern Waters 229
7D Vessels Intending to Navigate in the St. Lawrence Waterway, West of Les Escoumins Pilot Station Starting from December Each Year 231

A4 Fishing Activity 233
8 Information Concerning Fishing Vessels on the East and West Coasts of Canada 233
9 Marking of Fishing Gear 236
9A Closure to Crab Fishing: Deltaport and Tsawwassen Ferry Terminal 237

A5 Navigation Safety 239
10 Routeing of Ships 239
10A Mandatory Ship Reporting System 244
10B Danger Message Reporting 245
11 Collision Regulations 250
12 Damage Caused by Excessive Speed 253

A6 Charts and Publications 254
13 Navigation Safety Regulations, 2020 254
14 Canadian Nautical Charts and Publications and International Publications 255

A7 Obstructions 258
15 Aquaculture Facilities 258
16 Submarine and Overhead Cables 259
17 Reports of Shoal Soundings 261
A8 Oil and Gas – Exploration and Exploitation of Natural Resources 262
18 Lighting and Marking of Exploration and Exploitation Vessels and Platforms 262
19 Lighting and Markings of Structures or Works for the Exploration and Development of Natural Resources 263
20 Safety of Offshore Exploration and Exploitation Vessels 264
21 Caution when Anchoring in the Proximity of Underwater Exploitation Facilities in Lake Erie . 268
22 Seismic Surveys 269

B Pilotage Services in Canadian Waters 270
23 General Information on Pilotage Service 270
23A Guidelines for Navigation Under the Confederation Bridge 283
23B Suspension of Compulsory Pilotage Service for Miramichi, NB 286
24 Navigation Safety Regulations 287
25 Information Concerning Pilot Transfer Arrangements on the St. Lawrence River 291
26 Additional Guidance on Pilot Transfer Arrangements 293

C Marine Communications and Traffic Services 294
27A Guidelines for the Transit of Wide Beam Vessels and Long Vessels 294
27B General Information about Anchorage at Pointe Saint-Jean, Saint-Vallier, Saint-Nicolas and Pointe Deschambault 303
27C Under Keel Clearance Table 305

D Search and Rescue 308
28 Search and Rescue in Canadian and Adjacent Waters 308
28A Helicopter Evacuations Procedures by Canadian Forces Search and Rescue Helicopters ... 318
29 Communications from Aircraft: Distress, Urgency and Safety Signals 321
29A Early Notification of Search and Rescue Authorities of Developing Situations 323
30 Emergency Position Indicating Radiobeacons (EPIRBs) on Ships 324

E Marine Occurrences and Pollution 326
31 Reporting Marine Occurrences 326
32 Pollution – Compliance with Canadian Regulations 327

F National Defence – Military Notices 330
33 Caution when Approaching Canadian Ports 330
34 Information Concerning Submarines 332
35 Firing Practice and Exercise Areas 341

36 Vital Intelligence Sightings – MERINT Reporting Procedures 384
37 Handling of Unexploded Ordnance 386
38 Cautions with Regard to Ships Approaching Formations, Convoys, Aircraft Carriers and Other Warships at Sea and Aircraft Carriers at Anchor 394
39 Naval Messages to Canadian Merchant Ships Including Small Craft and Fishing Vessels 397
40 Contamination Prediction System for Merchant Ships at Sea and the MERWARN System .. 398
41 General Warning Regarding Steaming and Anchor Lights Exhibited by H.M.C. Ships 409
42 Agreement Between the Government of Canada and the Government of the Union of Soviet Socialist Republics Concerning the Prevention of Incidents at Sea 410
Note: This notice has been removed from the Annual Edition of Notices to Mariners. 410
43 Caution with Regard to Ships Approaching Controlled Access Zones Surrounding His Majesty's Canadian Naval Facilities, Warships and Allied Warships while Underway, at Anchor or Stationary 411

G General Information 418

44 The International Hydrographic Organization 418
Note: This notice has been removed from the Annual Edition of Notices to Mariners. 418
45 Horizontal Datum of Charts 419
46 Canadian Coast Guard Regional Offices 420

A Aids to Navigation and Marine Safety

A1 Aids to Navigation

1 The Canadian Aids to Navigation System and *Private Buoy Regulations*

THE CANADIAN AIDS TO NAVIGATION SYSTEM

The Canadian Aids to Navigation System is comprised of a mix of visual, audible and electronic aids to navigation, which are provided to assist mariners in determining position and course, to warn of dangers or obstructions or to advise of the location of the best or preferred route.

Visual Aids

Visual aids are short range aids to navigation including buoys, daybeacons, daymarks and lights. In Canada, a combined Lateral-Cardinal system of visual aids is used. Knowledge of the characteristics of each of these basic types of aids is a prerequisite to the safe use of the system.

Lateral Aids

The lateral system of buoyage in use in Canadian waters is taken from the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Region B. Lateral aids may be in the form of either buoys or fixed aids. These aids indicate the location of hazards and the safest or deepest water by indicating the side on which they are to be passed.

The correct interpretation of lateral aids requires knowledge of the direction of buoyage known as the “upstream direction.” In general, the upstream direction is the direction taken by a vessel when proceeding from seaward toward the headwaters of a river or into a harbour.

When a vessel is proceeding in the upstream direction, starboard hand aids must be kept to starboard (right) and port hand aids must be kept to port (left).

Cardinal Aids

Cardinal aids may be in the form of either buoys or fixed aids.

Cardinal aids indicate the location of hazards and the safest or deepest water by reference to the cardinal point of the compass. There are four cardinal marks: North, East, South and West, which are positioned so that the safest or deepest water is to be found to the named side of the mark (e.g. to the north of a north cardinal mark).

Audible Aids

Audible aids are sound producing devices, which serve to warn the mariner of a danger under low visibility conditions. Buoy-mounted bells and whistles require wave action in order to produce sound. Fog signals on shore are operated when visibility is reduced to less than 2 nautical miles.

Electronic Aids

The electronic aids used in the Canadian system include radar reflectors, radar beacons and Automatic Identification System Aids to Navigation (AIS AtoN).

Radar reflectors are passive devices which are used to enhance the radar image of aids to navigation whereas radar beacons (RACON) are active devices which, by returning an identifiable radar signal, provide precise identification of the location they are marking.

E-Navigation concepts are being implemented to meet the changing needs of navigation. Actions to date include the introduction of new types of electronic aids to navigation.

An Automatic Identification System aid to navigation (AIS AtoN) is a digital aid to navigation that is broadcast by an authorized service provider using the AIS Message 21 (Aids-to-navigation report) and may be displayed on properly configured shipborne and shore-based navigation equipment such as the Electronic Chart Display Information System (ECDIS), radar, or an Integrated Navigation System (INS). It is used to supplement existing aids to navigation and aid systems, in situations where physical aid placement is impractical, or in special circumstances, such as seasonal slowdown areas. AIS AtoN provide a positive and all-weather means of identification to mariners.

The following types of AIS AtoN may be used in Canada:

- Physical AIS AtoN is based on a signal transmitted from an aid to navigation that physically exists;
- Virtual AIS AtoN is based on a signal transmitted from a source other than a physical AtoN, indicating an aid that is only displayed on electronic navigation equipment and does not physically exist.
- Synthetic AIS AtoN are divided into two types and are transmitted from AIS stations located at a distance from an existing conventional aid to navigation. The Monitored variant includes a communications link between the aid and the station, thereby confirming its position, whereas the Predicted variant does not.

Every AIS AtoN is assigned a Maritime Mobile Service Identity (MMSI) number.

A diamond-shaped symbol is used to represent an AIS AtoN on chart and radar systems that interface with the AIS. Physical and Synthetic types are represented by solid lines, while Virtual aids are represented by dotted lines. Further information about each aid appears when interacting with them through electronic navigation equipment.

Other Publications

To facilitate the proper understanding and interpretation of their function, aids to navigation are to be used in conjunction with *The Canadian Aids to Navigation System* and other marine publications, in particular, nautical charts, *List of Lights, Buoys and Fog Signals*, *Radio Aids to Marine Navigation*, Navigational Warnings (NAVWARN), *Notices to Mariners* (NOTMAR), *Canadian Sailing Directions*, and *An Owner's Guide to Private Buoys*. Information concerning nautical charts and *Canadian Sailing Directions* may be obtained from the Canadian Hydrographic Service (see Notice No. 14 for further details).

Note:

A detailed listing of all lighted visual aids, fog signals and radar beacons is contained in the *List of Lights, Buoys and Fog Signals* publication.

A detailed listing of radio beacons is contained in the *Radio Aids to Marine Navigation* publication.

A detailed listing of AIS AtoN is contained in the interactive map at the Canadian e-Navigation portal.

PRIVATE BUOY REGULATIONS

What is a "private buoy"?

The term is defined as follows in section 1 of the *Private Buoy Regulations*, made under the authority of the *Canada Shipping Act, 2001*: *"*means a buoy that is not owned by the federal government, a provincial government or a government agency.*"*

The *Private Buoy Regulations* prescribes the size, colour, shape and markings required for each buoy, as well as the responsibilities of the person(s) placing them, and provides for prohibitions.

No person shall place in any Canadian waters a private buoy that interferes with or is likely to interfere with the navigation of any vessel, or that misleads or is likely to mislead the operator of any vessel (Sec. 3).

The *Private Buoy Regulations* are administered and enforced by the Minister of Transport, who has the authority to require changes to the private buoy and may remove from the waters a private buoy that does not comply with these Regulations (Sec. 7).

Authority: *Canada Shipping Act 2001, Private Buoy Regulations*
Transport Canada (Navigation Protection Program)

2 Cautions in the Use of Aids to Navigation

1. Mariners are cautioned not to rely solely on buoys for navigation purposes. Navigation should be by bearings or angles from fixed aids on shore or other charted landmarks and by sounding or through the use of satellite or radio-navigation systems, whenever possible.

2. Most aids to navigation are not under continuous observation and mariners should be aware that failures and displacements do occur. The Canadian Coast Guard does not guarantee that all aids to navigation will operate as advertised or in the positions advertised at all times. Mariners observing aids to navigation not operating, out of position, operating at reduced service, showing improper characteristics, damaged or missing are responsible for reporting such problems to the nearest Canadian Coast Guard Marine Communications and Traffic Services Centre immediately or to the closest Canadian Coast Guard office.

3. Aids to navigation are subject to damage, failure and moving off position, which may be caused by ice, storms, vessel strikes, and power failures. Ice and storm damage may be widespread and require considerable time to repair. Damage to an isolated aid may exist for a long time without being discovered and reported. Floating aids and pier lights in or near the water which are exposed to particularly rigorous strain during ice movement are at the greatest risk of damage.

4. Mariners are cautioned that aids to navigation may fail to exhibit their advertised characteristics. Lights may be extinguished or appear at a reduced intensity and audible signals may not function due to ice, collisions, mechanical failure, and, in the case of bell and whistle buoys, calm water. The shape of an aid to navigation may be altered by ice formation or damage. The colour of an aid to navigation may be altered by freezing spray, marine growth, or fouling by birds. AIS aids, transponders, or shore-based systems may fail, and errors may be introduced by some electronic navigation systems.

5. Buoy positions shown on nautical charts should be considered as approximate positions. There are a number of limiting factors in accurately positioning buoys and their anchors. These factors include prevailing atmospheric and sea conditions, tidal and current conditions, seabed conditions, and the fact that buoys are moored to anchors by varying lengths of chain and may drift about their charted positions within the scope of their moorings.

6. Since moving ice is liable to move buoys from their advertised positions, mariners should proceed with extreme caution under these circumstances.

7. Mariners are reminded that because of differences in horizontal datum (i.e. NAD 27, NAD 83, WGS84), grids on charts of an area may vary from one chart to another. When plotting the positions of aids to navigation by the latitude and longitude method, the results should be checked against other available information.

8. In some instances, it is necessary to establish a buoy in close proximity to or on a navigational hazard (e.g. shoal, reef or ledge). In these instances, the buoy symbol may be slightly offset on the chart in the direction of the preferred navigable water so that the existing hazard depicted on the chart will not be overprinted by the buoy symbol. Such offsets will be indicated on the chart by means of an arrow.

9. Mariners are cautioned not to navigate too closely to a buoy and risk a collision with it, its mooring, or with the underwater obstruction which it marks.

10. Many lights are equipped with sun switches. These lights, both on shore and on most buoys, may be unlit between sunrise and sunset. Mariners unable to see these lights during daylight hours should not assume that the equipment is malfunctioning.

11. Atmospheric conditions can have a considerable effect on light transmission and the visibility of lights. For example:

(a) The distance to a light cannot be reliably estimated from its apparent brightness.

(b) It is difficult to distinguish between a white light and a yellow or blue light seen alone at night, except at a short distance.

(c) Under some atmospheric conditions, white and yellow lights take on a reddish hue.

(d) Alternating lights with phases of different luminous intensity may change their apparent characteristics at different distances because some phases may not be visible.

(e) When observed from similar distances, lower intensity lights are more easily obscured by conditions of low visibility than more powerful lights. Coloured lights may appear to be a lower intensity than white lights and are more quickly lost under unfavourable circumstances.

(f) Ice, frost, moisture, or dirt may form on lantern windows during cold weather or over time and more particularly this may reduce their visibility and could cause coloured lights to appear white.

(g) A light exhibiting a very short flash may not be visible at as great a range as a light exhibiting a longer flash.

12. The mariner should not rely solely on colour when using a sector light, but should verify the vessel's line of position by taking a bearing on the light. On either side of the line of demarcation, between white and red, and also between white and green, there is always a small arc of uncertain colour.

13. When the arc of visibility of a light is cut off, for example by sloping land, the bearing at which it appears or disappears will vary with the observer's distance and height of eye.

14. The sighting of a light may be adversely affected by different situations, such as a strongly illuminated background, a colourful, or a changing background.

15. Audible aids to navigation. In view of the varying distances at which a fog signal can be heard at sea, and the frequent occurrence of fog near, but not observable from, a fog signal, mariners are cautioned that:

(a) When approaching land in fog, they should not rely implicitly upon these fog signals, but should always take soundings, which in nearly all cases will give sufficient warning of danger.

(b) Distance from a fog signal should not be judged by the power of the sound. Under certain atmospheric conditions, the sound may be lost at a very short distance from the signal. These conditions may vary within a very short period of time. Mariners should not assume that a fog signal is not in operation because they do not hear it, even when in close proximity.

16. Visual aids to navigation provided by the Canadian Coast Guard are for the purpose of assisting marine navigation. Hunters, snowmobilers and ice fishers are cautioned that aids to navigation installed for marine navigation purposes cannot be relied upon after the close of the marine navigation season. Such aids may stop operating without warning and will not be re-commissioned by the Canadian Coast Guard until the next opening of marine navigation season.

17. Mariners should be aware of the type of AIS aid to navigation they are using. Physical AIS aids are broadcast from a traditional aid, so their actual positions are reported, and they may be flagged as off position. Virtual AIS aids are broadcast from remote stations, and there are no associated traditional aids at their broadcast position. A Synthetic (Predicted) AIS aid is broadcast from a remote station as a signal placed over the position of a traditional fixed aid and its position will remain static if the associated aid is moved, damaged, or destroyed. AIS aid to navigation types may be differentiated by their information displays.

Continuous Improvement

The Canadian Coast Guard continuously strives to improve efficiencies in the provision of the Canadian aids to navigation system. In some instances, these efficiencies are achieved through the use and implementation of new products and technologies. These include but are not limited to changes in the use of plastic buoys rather than steel, the use of LED lanterns, and electronic aids. Mariners are advised that every effort has been made by the Canadian Coast Guard to ensure that new equipment provides safe and reliable aids to navigation systems. If there are any concerns, please contact the Superintendent, Aids to Navigation in your region.

Atlantic Region

The lights on the South Coast of Newfoundland from Cape St. Francis on the Avalon Peninsula to Cape Anguille on the shore of Cabot Strait and certain lights in Notre Dame Bay, Bonavista Bay, Trinity Bay, Conception Bay and Bay of Islands are exhibited all year. All other lights under the control of the Canadian Coast Guard are maintained in operation whenever navigation in the vicinity is open. Lights used solely as harbour lights are not exhibited when the harbour is closed, although general navigation may remain open. Lights which are primarily for the benefit of fishermen are maintained only during the fishing season. In any case where there is reasonable doubt whether the light is required, it is kept in operation. During the winter, some lighted buoys are replaced with winter spars so that it should not be assumed that there are no aids present even though the lights in a given area have been extinguished for the season. The details of all changes in aids to navigation will be described in Navigational Warnings.

Navigational buoys at St. John's are listed as being in operation year round. While every effort is made to adhere to this period, mariners are cautioned that ice movement may result in the buoys being lifted and in some cases replaced by winter spars between January and April.

Due to potential ice conditions on the East Coast, lights on year round floating aids to navigation in these waters may be temporarily removed until ice conditions subside. Mariners are advised to use extreme caution when navigating the East Coast waters during this season.

The lights in the Bay of Fundy and along the Southwestern and Eastern coasts of Nova Scotia, the coast of Cape Breton Island, including the Bras d'Or Lakes, the coast of Prince Edward Island, and along the Northumberland Strait, and Chaleur Bay to the Québec border, are exhibited year round.

Exceptions to the aforementioned lights are those lights listed as “seasonal” in the “Remarks” column of the *List of Lights, Buoys and Fog Signals*.

Due to difficulties in maintaining buoys through the winter months as a result of freezing spray and drift ice and the buoys being displaced or set adrift, the lifting of buoys in the upper part of the Bay of Fundy and along the Nova Scotia coast and Cape Breton Island including the Bras d'Or Lakes and in the Gulf of St. Lawrence and Northumberland Strait to the Québec border commence lifting November 15 and continue throughout the fall months depending on navigation activity in each area. Some of the buoys in Mahone Bay and the Bedford Basin are lifted beginning November 15 annually. A certain number of summer buoys are replaced by winter spar buoys. (Those buoys are indicated in the “Remarks” column of the *List of Lights, Buoys and Fog Signals*). Details on changes made to fixed and floating aids for the winter season are published every fall in a Navigational Warning by the Atlantic Region and disseminated by means of a radio broadcast when changes occur.

Buoys marking the deep water channel to the Strait of Canso will remain on position unless otherwise advised by Navigational Warnings.

Some summer buoys are replaced by winter spar buoys.

Central Region

Fixed lighted aids and fog signals are exhibited year round, except for lights with the annotation "seasonal" in the "Remarks" column of the *List of Lights, Buoys and Fog Signals*. Seasonal lights are maintained approximately from April 1st to December 20th.

All other lights under the control of the Canadian Coast Guard are maintained in operation whenever navigation in the vicinity is open.

The majority of ranges and some fixed aids have an emergency mode. To identify which lights are equipped with an emergency mode, please refer to the "Remarks" column of the *List of Lights, Buoys and Fog Signals*. Consequently, range lights showing a **F** fixed characteristic in the main mode will show an isophase light characteristic **ISO 1s (0.5 s flash; 0.5 s eclipse)**, with a reduced output in emergency mode.

Moreover, some range lights in restricted channels are equipped with a secondary light. This is a third light, which is neither the main light visible in line of range nor the emergency light. Most of these lights have different characteristics from those of the main or emergency light. This secondary light (for reference or positioning) is often visible over 360 degrees or for a given sector. Complete information concerning this light is available in the *List of Lights, Buoys and Fog Signals*.

Some floating aids are permanently replaced by new plastic or steel year-round lighted spar (YRLS) buoys moored for a two to four-year period, and left in the water year-round. Three models of four-season YRLS buoys are deployed in the St. Lawrence shipping channel. These models come in 3 sizes: 1.3 m, 1.0 m and 0.7 m, each designed for optimal use in different water conditions and depths.

These buoys can withstand very severe ice conditions. Although a lantern is present year-round on them, light service cannot be guaranteed in winter, particularly in the presence of ice. The YRLS buoys reported to be extinguished during this period will therefore not be prioritized and the light service may only be restored during the spring buoyage.

Details on changes made to aids to navigation are advertised via Navigational Warnings and available on the e-Navigation Portal (canada.ca).

For the winter season, many lighted buoys are replaced by winter spar buoys. Mariners are invited to contact the appropriate MCTS centre or to consult the e-Navigation Portal (canada.ca) to obtain updates on the seasonal buoy tending activities and operations status report in their area.

The commissioning of seasonal aids may be delayed if weather and/or ice conditions preclude buoy tender operations. Mariners are urged to take every precaution and not to rely solely on aids to navigation.

Western Region

The lights and buoys along the Pacific coast are maintained in operation throughout the year. Details on changes made to fixed and floating aids are published in a Navigational Warning by the Region and disseminated by means of radio broadcast when they occur.

In the spring, freshet conditions on the Fraser River cause the positions of floating aids to be unreliable. Displaced buoys on the Fraser River may be temporarily removed from service, in which case mariners will be advised by a Navigational Warning.

The commissioning of seasonal aids may be delayed if weather and/or ice conditions preclude buoy tender operations. Mariners are urged to take every precaution and not to rely solely on aids to navigation.

NOTE:
Most floating seasonal aids are removed at the end of the navigational season, but a small percentage are left in the water during the winter. Mariners, who use channels marked by such buoys before the official opening of the navigational season, are cautioned that these buoys may not be in their advertised positions due to storms and shifting ice caused by winter conditions. After the position and the condition of the aids have been verified, a Navigational Warning will be issued to advise mariners that the aids have been checked and that the channels in each local area are open for navigation. Such Notices may be promulgated over the Coast Guard VHF radio network, or may appear in the monthly edition of *Notices to Mariners*.

Arctic Region

All lit aids and RACONs are seasonal. Please refer to the *List of Lights, Buoys and Fog Signals* for details.

In general, buoys are commissioned in the summer as early as ice conditions will permit and are lifted during the fall prior to the winter season. However, buoys in the Simpson Strait and near Cambridge Bay are left in the water, unattended, towards the end of the navigation season, and are re-commissioned only the following summer.

The establishment and discontinuance of floating aids to navigation in the Mackenzie River system, in Kittigazuit Bay, Kugmallit Bay, near Tuktoyaktuk and in the Great Slave Lake, are determined by prevailing ice conditions. Mariners are cautioned that floating aids are subject to displacement by ice and will be decommissioned and/or abandoned at the closing of the season as sea and ice conditions dictate.

Authority: Canadian Coast Guard

3 Requirements Related to the Protection of Aids to Navigation

CANADA SHIPPING ACT, 2001

PART 5, Section 129

Obligation to report damage

129 (1) If a vessel, or anything towed by a vessel, runs down, moves, damages or destroys an aid to navigation in Canadian waters, the person in charge of the vessel shall, without delay, make a report to a marine communications and traffic services officer or, if that is not feasible, to an officer of the Canadian Coast Guard.

Obligation to report — navigation hazard

(2) A person in charge of a vessel in Canadian waters who discovers an uncharted hazard to navigation, or discovers that an aid to navigation is missing, out of position or malfunctioning, shall make a report without delay to a marine communications and traffic services officer or, if that is not feasible, to an officer of the Canadian Coast Guard.

Reference: Canada Shipping Act, 2001

CRIMINAL CODE

Section 439 of the *Criminal Code of Canada* provides:

Interfering with marine signal, etc.

439 (1) Everyone who makes fast a vessel or boat to a signal, buoy or other sea-mark that is used for purposes of navigation is guilty of an offence punishable on summary conviction.

Idem

(2) Every person who intentionally alters, removes or conceals a signal, buoy or other sea-mark that is used for purposes of navigation is guilty of

(a) an indictable offence and liable to imprisonment for a term of not more than 10 years; or

(b) an offence punishable on summary conviction.

Reference: Criminal Code (R.S.C., 1985, c. C-46)

Authority: Justice Laws Canada
Transport Canada
Canadian Coast Guard
Canada Shipping Act, 2001

4 Measured Distances

Note: This notice has been removed from the Annual Edition of Notices to Mariners.

A2 Marine Mammal Guidelines and Marine Protected Areas

5 General Guidelines for Aquatic Species at Risk and Important Marine Mammal Areas

Fisheries and Oceans Canada is responsible for ensuring the protection, conservation and recovery of aquatic species at risk listed under the *Species at Risk Act*, and the protection of a species' designated critical habitat. Critical habitat is defined in the *Species at Risk Act* section 2(1) as "…the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species." The *Species at Risk Act* defines habitat for aquatic species at risk as "… spawning grounds and nursery, rearing, food supply, migration and any other areas on which aquatic species depend directly or indirectly in order to carry out their life processes, or areas where aquatic species formerly occurred and have the potential to be reintroduced."

Under the *Species at Risk Act*, it is an offence to: kill, harm, harass, capture, or take an individual of a wildlife species listed as extirpated, endangered, or threatened; possess, collect, buy, sell or trade an individual (or any part or derivative of such an individual) of a wildlife species listed as extirpated, endangered, or threatened; and, damage or destroy the residence of one or more individuals of a wildlife species listed as extirpated, endangered, or threatened. It is also prohibited to destroy any part of the critical habitat of any listed endangered or threatened species. Individuals who contravene the *Species at Risk Act* prohibitions may be found guilty of an offence and liable for a fine or penalty pursuant to section 97 of the *Species at Risk Act*.

In cases where it is not possible to avoid causing prohibited effects, proponents of works, undertaking, or activities may apply to the Minister of Fisheries and Oceans for a permit under the *Species at Risk Act*, and/or an authorization under paragraphs 34.4(2)(b) and 35(2)(b) of the *Fisheries Act*. Under section 73 of the *Species at Risk Act*, the Minister may enter into an agreement with a person, or issue a permit to a person, authorizing the person to engage in an activity affecting a listed aquatic species, any part of its critical habitat, or the residences of its individuals, provided that the requirements of subsections 73(2) to 73 (6.1) of the *Species at Risk Act* are met. After it is entered into or issued, the Minister must also comply with the requirements of subsection 73(7). To view the list of extirpated, endangered, threatened, and special concern species currently listed under Schedule 1 of the *Species at Risk Act*, please visit the Species at Risk Public Registry.

Did you know?

WhaleALERT is a free app which displays up to date information and management areas for mariners to access the safest and most current information to reduce the risk of ship and whale collisions on the east coast.

The WhaleReport Alert System (WRAS), available for Pacific Canadian waters, is a mobile and desktop-based program which alerts commercial mariners to the presence of whales so that they may take mitigation measures. Whale sightings are obtained from real-time observations reported to the B.C. Cetacean Sightings Network by trusted observers using the WhaleReport app. WRAS will only transmit sightings to certain vessel classes (e.g. large, commercial transport), and is not available to the general public in order to reduce vessel disturbance to at-risk whale populations.

The *Marine Mammal Regulations* under the Fisheries Act prohibit disturbance to marine mammals (whales, porpoises, dolphins, seals, sea lions, walrus and sea otters) except in the following circumstances: when fishing for them under the authority of those Regulations; when carrying out a work, undertaking or activity that is authorized, otherwise permitted or required under the Act; or in a manner authorized under the *Species at Risk Act* or set out in a licence issued under the *Fishery (General) Regulations* to fish for marine mammals for experimental, scientific, educational or public display purposes. Under the *Marine Mammal Regulations*, disturbance to marine mammals includes: approaching, attempting to feed, swim or interact with, moving, enticing, or causing movement, separating from groups/mothers from calves, trapping between a vessel and shore or other vessels and tagging or marking. Disturbing marine mammals may cause injury or harm and interfere with natural behaviors, including feeding and socializing. Individuals who contravene the *Marine Mammal Regulations* may be found guilty of an offence and liable for penalty pursuant to section 78 of the *Fisheries Act.* The Minister of Fisheries and Oceans may issue an authorization to disturb a marine mammal in some circumstances under section 38 of the *Marine Mammal Regulations* for activities

that will disturb a marine mammal (whales, porpoises, dolphins, seals, sea lions, walrus and sea otters). Careful adherence to the general guidelines below will reduce the likelihood of disturbance.

Transport Canada is responsible for promoting safe, secure, efficient, and environmentally responsible transportation. The *Canada Shipping Act, 2001* gives the Minister of Transport the authority to make regulations respecting the protection of the marine environment from the impacts of navigation and shipping activities (s. 35.1(1)), as well as the authority to make an Interim Order if immediate action is required to deal with a direct or indirect risk to the marine environment (s.10.1(1)), including on a precautionary basis.

Laws, Regulations and General Guidelines when in the Vicinity of Marine Mammals

The following guidance, adapted from *Be Whale Wise Guidelines*, provides an overview of ways in which you can prevent disturbance to marine mammals as well as stay up to date on current legislation and regulations. In addition to these general guidelines, the *Marine Mammal Regulations include provisions that protect marine mammals from disturbance, while* the *Species at Risk Act* provides protection to species or populations listed under the Act. Be sure to stay informed about new regulations or forms of protection by carefully reviewing any information in this Notice to Mariners which applies to your location and activities, and abide by posted restrictions or contact a local authority for further information.

1. BE AWARE of critical habitat areas. To view the most current information on aquatic species at risk and their critical habitat, visit the Species at Risk Public Registry and the Aquatic species at risk map. For marine protected areas, visit: the Open Maps Data Viewer.
2. SLOW DOWN: Reduce speed to less than 7.0 knots when within 1000 metres (0.540 nautical miles) (unless otherwise specified) of the nearest marine mammal to reduce engine noise, and vessel wake and risk of collision. Avoid abrupt course changes.
3. DO NOT APPROACH or position your vessel closer than **100** metres (0.054 nautical miles) to any marine mammal and stay at least **200** metres (0.108 nautical miles) away from any whale, dolphin or porpoise in resting position or with its calf as per the *Marine Mammal Regulations*. Please note: some species and areas require greater minimum approach distances - please refer to individual species' needs in this Notice to Mariners and in other online sources referenced, including: *Marine Mammal Regulation*'s approach distances to marine mammals and the Department of Fisheries and Oceans' watching marine wildlife.

**Protecting the Southern Resident Killer Whales:
Approach Distances, Vessel Restricted Zones and
Speed-Restricted Zones in Southern British Columbia**

The Minister of Transport has issued the *Interim Order for the Protection of the Southern Resident Killer Whale (Orcinus orca) in the Waters of Southern British Columbia, 2026*, in effect from June 1, 2026, until May 31, 2027, to support recovery of Southern Resident Killer Whales recognizing the imminent threats to their survival and recovery. The Interim Order sets out three mandatory measures for vessels operating within certain areas of the waters of southern British Columbia to reduce underwater noise and physical disturbance to Southern Resident Killer Whales.

First, the Interim Order prohibits vessels and persons operating and navigating a vessel, subject to authorized exceptions, from approaching any Southern Resident killer whales at less than **1000** metres within Southern Resident Killer Whale critical habitat and British Columbia coastal waters between Campbell River (Cape Mudge) and Malaspina Peninsula (Sarah Point) including Howe Sound, to just north of Ucluelet, including Barkley Sound from June 1, 2026, until May 31, 2027.

Second, the Interim Order creates two Vessel Restricted Zones, where vessel traffic is prohibited, including fishing, whale watching and recreational boating, subject to exceptions, June 1, 2026, until November 30, 2026. These zones are located off the south-west coast of Pender Island and south-east end of Saturna Island.

Third, the Interim Order creates two Speed-Restricted Zones, located near Swiftsure Bank, in which all vessels, subject to exceptions, are restricted to a maximum speed of 10 knots over ground when safe to do so, in effect from June 1, 2026, until November 30, 2026.

The enforcement regime under the *Canada Shipping Act, 2001* applies to violations of the Interim Order. Every person or vessel subject to an Interim Order shall comply with it. Any person or vessel that does not comply with the Interim Order may be subject to:

- an administrative monetary penalty of up to $250,000, and/or
- is liable on summary conviction to a fine of not more than $1,000,000 or to imprisonment for a term of not more than 18 months, or to both.

Visit the Interim Order for the Protection of the Southern Resident Killer Whale (Orcinus orca) in the Waters of Southern British Columbia, for more information:

Visit the 2026 suite of management measures to support the recovery of Southern Resident Killer Whales, including fishing management measures, for more information.

**Protecting the North Atlantic right whale:
Speed restriction measures in the Gulf of St. Lawrence**

Due to changing migration of North Atlantic right whales and their increased presence in the Gulf of St. Lawrence, the Government of Canada has established seasonal vessel traffic management measures including speed restrictions of not more than **8.0 knots** or **10.0 knots** and a navigational restricted area in specific zones for all vessels above **13 metres** in length. Please refer to the Notice to Mariners monthly editions for additional details and consult Whale Insight for the latest right whale observations: Whale Insight – An interactive map of North Atlantic right whale detections in Canada (dfo-mpo.gc.ca).

4. BE CAUTIOUS, COURTEOUS and QUIET around areas of known or suspected marine wildlife activity, in the water or at haul-outs and bird colonies. When safe to do so, turn off fish finders and echo sounders. LOOK in all directions before planning your approach or departure from viewing wildlife.

5. ALWAYS approach and depart from the side, moving parallel to the marine mammal's direction of travel while maintaining a distance of at least **100** metres (0.054 nautical miles) to any marine mammal, and a distance of at least **200** metres (0.108 nautical miles) away from any whale, dolphin or porpoise in resting position or with its calf as per the *Marine Mammal Regulations* (Note: greater minimum approach distances are required for some species and areas - please refer to individual species' needs in this Notice to Mariners and in other online sources referenced). DO NOT APPROACH from the front or from behind.

6. PLACE ENGINE IN NEUTRAL OR SHUTDOWN and allow animals to pass if your vessel is not in compliance with regulations. Please note: greater minimum approach distances are required for some species - please refer to individual species' needs in this Notice to Mariners and in other online sources referenced.

Whale Warning Flag
(only used in some regions)



If a vessel is flying a Whale Warning flag (see above), the vessel is in the presence of whales. Please slow down and proceed with caution. Respect the general guidelines when in the vicinity of marine mammals.

7. PAY ATTENTION and move away, slowly, and cautiously, at the first sign of disturbance or agitation.

8. STAY on the OFFSHORE side of marine mammals when they are traveling close to shore.

9. ALWAYS AVOID going through groups of marine mammals. Hold course and reduce speed gradually to discourage bow or stern-riding.

10. LIMIT your on-water viewing time to 30 minutes or less. This will minimize the cumulative impact of many vessels and provide consideration to other viewers.

11. DO NOT feed, swim with, or interact with, tag or mark, move or entice, or cause to move marine wildlife from the immediate vicinity in which you find them.

12. DO NOT separate a marine mammal from members of its group or go between a mother and a calf.

13. DO NOT trap a marine mammal or its group between a vessel and the shore or between a vessel and one or more other vessels.

14. NEVER approach using aircraft or drones.

15. REPORT any collisions with marine mammals, or sightings of entangled, injured, stranded or dead marine mammals or sea turtles to Fisheries and Oceans Canada as well as to the to the appropriate marine animal response organization by referring to the information provided below.

    - Report a marine mammal or sea turtle incident or sighting.
    - Pursuant to section 39 of the *Marine Mammal Regulations* under the *Fisheries Act*, a reporting form must be completed immediately following any incidental contact between a marine mammal and a vehicle or fishing gear. Completed reporting forms should be sent to Fisheries and Oceans Canada.

If you see an injured, stranded, entangled or dead marine mammal or sea turtle, immediately contact the appropriate experts via the following emails or 24 hour toll-free numbers.

Region	Contact Information for Marine Mammal or Sea Turtle Incident Response
Newfoundland & Labrador	• **Whale Release and Strandings Newfoundland and Labrador (Tangly Whales Inc.)**: 1-888-895-3003 or 1-709-895-3003
New Brunswick, Nova Scotia & Prince Edward Island	• **Marine Animal Response Society**: 1-866-567-6277 mars@marineanimals.ca • VHF Channel 16 • **Canadian Sea Turtle Network:** 1-888-729-4667 info@seaturtle.ca Canadian Sea Turtle Network
Quebec	• **Quebec Marine Mammal Emergency Network (QMMEN)**: 1-877-722-5346 reseau@gremm.org
Arctic	**Fisheries and Oceans Canada**: • **Northwest Territories - Inuvik**: 1-867-777-7500 • **Northwest Territories - Yellowknife**: 1-867-669-4900 • **Nunavut - Iqaluit**: 1-867-979-8000
Pacific	• **Fisheries and Oceans Canada's BC Marine Mammal Response Network (Observe, Record, Report)**: 1-800-465-4336 DFO.ORR-MPO.ONS@dfo-mpo.gc.ca • VHF Channel 16

16. HELP track marine mammals and sea turtles to ensure their safety by reporting a sighting of live and healthy animals.

Region	Contact Information
Pacific	Report healthy and live marine mammal or sea turtle sightings for research purposes. Is the animal injured, stranded or dead? Report it here. • Phone: 1-866-I SAW ONE (472-9663) • Ocean Wise Sightings Network Download the WhaleReport app
Central & Arctic	• Northwest Territories – Inuvik: 1-867-777-7500 • Northwest Territories – Yellowknife: 1-867-669-4900 Nunavut – Iqaluit: 1-867-979-8000
Quebec, New Brunswick, Nova Scotia & Prince Edward Island	Maritimes Region Whale Sightings Database XMARWhaleSightings@dfo-mpo.gc.ca Maritimes Region Whale Sightings Database Canadian Sea Turtle Network 1-888-729-4667 (toll-free) info@seaturtle.ca Canadian Sea Turtle Network
Newfoundland & Labrador	Marine mammal: dfo.nlscmammalandturtlesightings-observmamifettortuessctnl.mpo@dfo-mpo.gc.ca

ATLANTIC REGION

North Atlantic Right Whale

Species Status: Endangered

Threats: Vessel strikes, entanglement in fishing gear, disturbance and habitat reduction or degradation (e.g., contaminants, acoustic disturbance, vessel presence disturbance) and changes in food supply.

Characteristics of the North Atlantic Right Whale: V-shaped blow, no dorsal fin, deeply notched flukes, callosities (white patches on the head and sometimes other parts of the body).

Minimum Approach Distance: **100** metres from a single free-swimming whale; 200 metres from resting whales or a mother with a calf in all Canadian fisheries waters, as per the Marine Mammal Regulations.

Immediately report any collisions with whales, or entangled or dead whales to Fisheries and Oceans Canada (Report a marine mammal or sea turtle incident or sighting) and the Marine Animal Response Society hotline (1-866-567-6277), VHF channel 16, or Fundy Traffic VHF channel 14.

Report sightings of live, free-swimming North Atlantic right whales, including number observed, location (lat/long), date and photos to DFO.GLFWhales-BaleinesGLF.MPO@dfo-mpo.gc.ca. Please consult Whale Insight for the latest Right Whale observations.

North Atlantic Right Whale Critical Habitats

Grand Manan Basin Critical Habitat

See also the mandatory Bay of Fundy Traffic Separation Scheme (TSS), which largely avoids the Grand Manan Basin Critical Habitat. This can be found in Section A5 - Navigation Safety.

Guidelines (April - December):

- Vessels should avoid passage through this area if possible. Avoidance is the most effective means to eliminate or reduce acoustic disturbances and vessel collisions.
- If passage through this area is required, decrease vessel speed to 10.0 knots or less and post a look-out to increase the likelihood of sighting and avoiding marine mammals. Increased caution must be exercised in conditions of reduced visibility, such as rain, fog, rough sea state, or at night. Be aware that marine mammals often travel in small groups dispersed over an area of several miles. Maneuver around marine mammals with caution (see general guidelines). Do not assume the marine mammals will move out of the way.

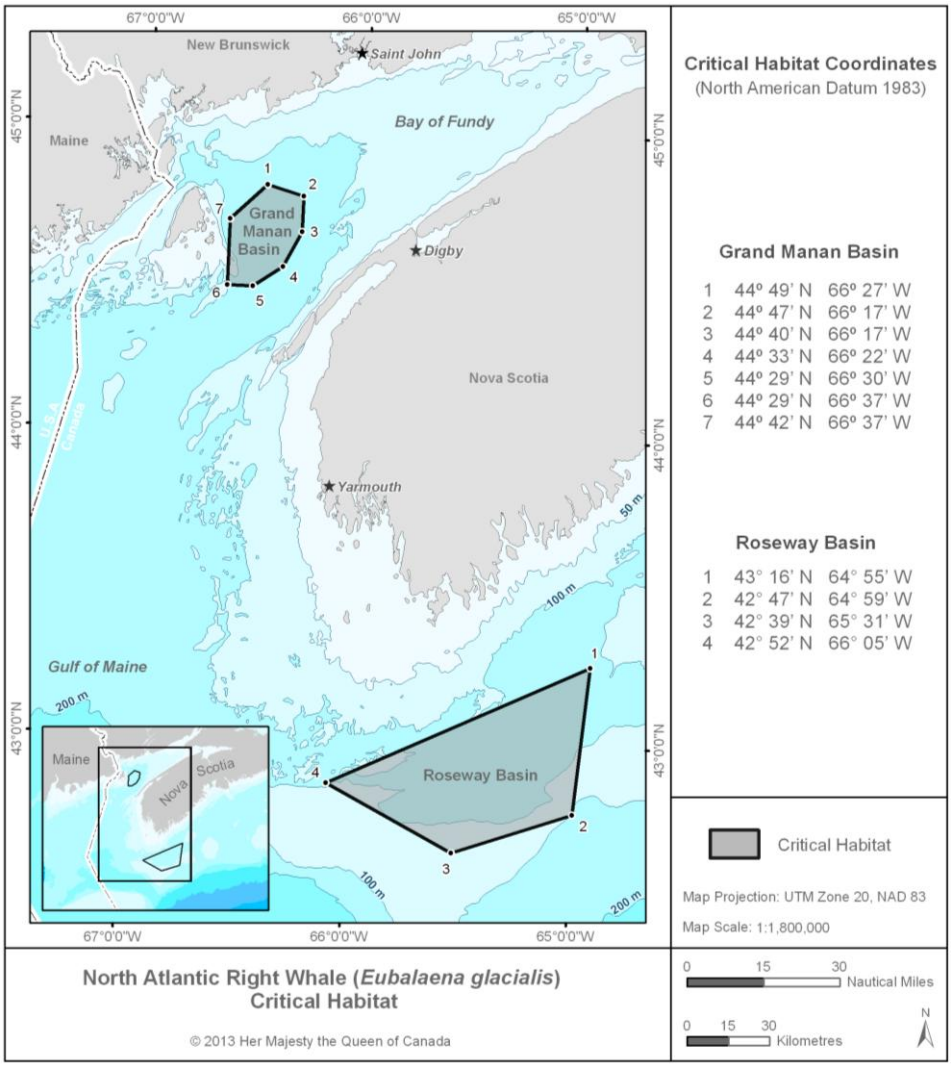
Roseway Basin Critical Habitat and International Maritime Organization-Adopted Area to Be Avoided

Guidelines (June - December):

- To significantly reduce the risk of vessel strikes on North Atlantic Right Whales, it is recommended that ships of 300 gross tonnages and greater, solely in transit during the period of June 1st through December 31st, avoid the area. This routeing measure has been adopted by the International Maritime Organization (IMO) as a seasonal Area to be Avoided described in IMO. SN.1/Circ.263. October 2007.
- Smaller vessels are also asked to avoid passage through the area.
- If passage through this area is required, decrease vessel speed to 10.0 knots or less and post a look-out to increase the likelihood of sighting and avoiding marine mammals. Increased caution must be exercised in conditions of reduced visibility, such as rain, fog, rough sea state, or at night. Be aware that marine mammals often travel in small groups dispersed over an area of several miles. Maneuver around marine mammals with caution (see general guidelines). Do not assume the marine mammals will move out of the way.

Learn more about the recovery process for the North Atlantic Right Whale at the Species at Risk Public Registry

Critical Habitat for the North Atlantic Right Whale is shown in the map below:



Northern Bottlenose Whale (Scotian Shelf population)

Species Status: Endangered

Threats: Acoustic disturbance, fisheries interactions, vessel strikes, pollution and chemical contaminants, and climate change.

Characteristics of the Northern Bottlenose Whale: Low bushy blow, bulbous forehead (mature males develop a flattened, often white, forehead), prominent mouth or beak, sickle-shaped dorsal fin located approximately two-thirds of the way down the body, light grey to brown in colour, maximum length approximately 9 metres.

Minimum Approach Distance: **100** metres from a single free-swimming whale; **200** metres from resting whales or a mother with a calf in all Canadian waters, as per the *Marine Mammal Regulations.*

Immediately report any collisions with whales, or entangled or dead whales to Fisheries and Oceans Canada (Report a marine mammal or sea turtle incident or sighting) and to the Marine Animal Response Society hotline at 1-866-567-6277, or via VHF channel 16.

Report any sightings of Northern Bottlenose Whales, including location, date, and photos to XMARwhalesightings@dfo-mpo.gc.ca.

Northern Bottlenose Whale (Scotian Shelf population) Critical Habitat

Zone 1 of the Gully Marine Protected Area

Guidelines (year-round):

- The Gully is a designated Marine Protected Area under the Oceans Act (see Notice 5A). Zone 1 of the Gully Marine Protected Area (i.e., the innermost of the three management zones) is also critical habitat for Northern Bottlenose Whales (critical habitat coordinates are provided in the map below).
- Vessels should avoid passage through this area if possible. Avoidance is the most effective means to eliminate or reduce acoustic disturbances, vessel strikes, and other threats.
- If passage through this area is required, decrease vessel speed to 10.0 knots or less and post a look-out to increase the likelihood of sighting and avoiding marine mammals. Increased caution must be exercised in conditions of reduced visibility, such as rain, fog, rough sea state, or at night. Be aware that marine mammals often travel in small groups dispersed over an area of several miles. Maneuver around marine mammals with caution (see general guidelines in this notice). Do not assume the marine mammals will move out of the way.

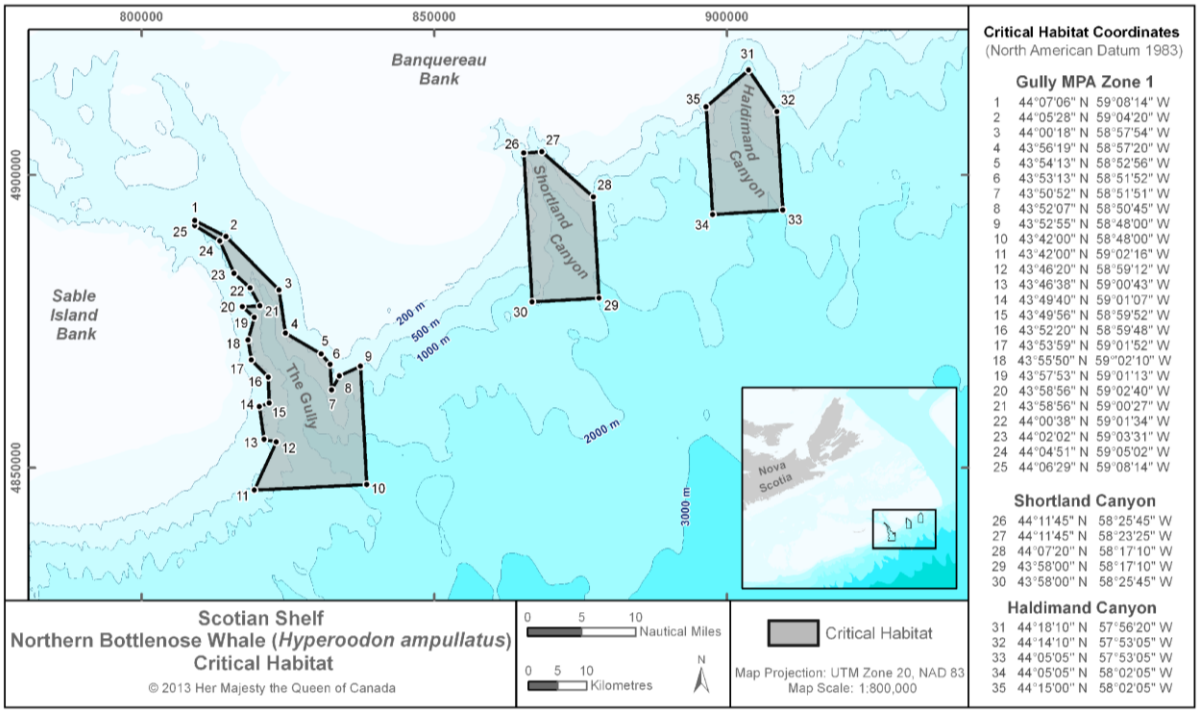
Shortland and Haldimand Canyons

Guidelines (year-round):

- Vessels should avoid passage through these areas if possible. Avoidance is the most effective means to eliminate or reduce acoustic disturbances and vessel collisions.
- If passage through these areas is required, decrease vessel speed to 10.0 knots or less and post a look-out to increase the likelihood of sighting and avoiding marine mammals. Increased caution must be exercised in conditions of reduced visibility, such as rain, fog, rough sea state, or at night. Be aware that marine mammals often travel in small groups dispersed over an area of several miles. Maneuver around marine mammals with caution (see general guidelines in this notice). Do not assume the marine mammals will move out of the way.

Learn more about the recovery process for the Northern Bottlenose Whale at the Species at Risk Public Registry.

Critical habitat for the Northern Bottlenose Whale (Scotian Shelf population) is shown in the map below:



QUEBEC REGION

Beluga (St. Lawrence Estuary population)

Species status: Endangered

Threats: Contaminants, noise, anthropogenic disturbance, reduction in prey abundance, quality and availability, habitat degradation, ship strikes, and entanglement in fishing gear.

Characteristics of the St. Lawrence Beluga: adults are white; young are grey; rounded bump on the head (melon), no dorsal fin, adults between 2.5 and 4.5 metres.

Minimum Approach Distance: **100** metres in all Canadian waters, **400** metres in the St. Lawrence Estuary (the Beluga critical habitat is within the range for the minimum approach distance of **400** metres), as per the *Marine Mammal Regulations.*

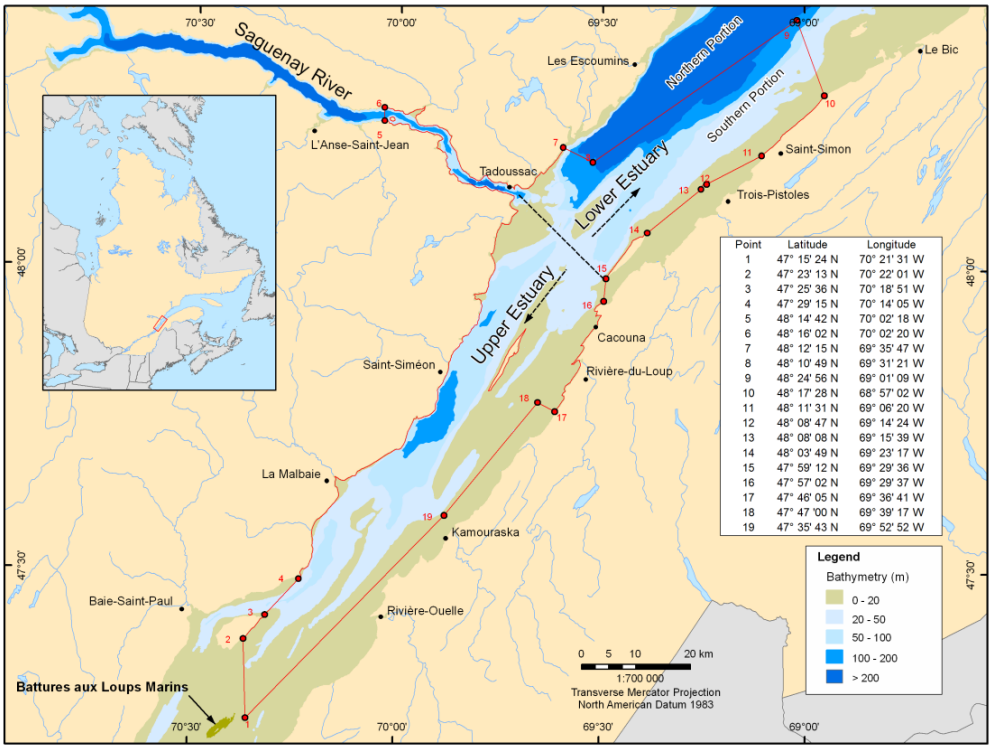
Immediately report any collisions or entanglements with a Beluga Whale, dead or alive, to Fisheries and Oceans Canada (Report a marine mammal or sea turtle incident or sighting) and by calling Quebec's Emergency Network for Marine Mammals at 1-877-722-5346.

Guidelines: Adhere to the *General Guidelines when in the Vicinity of Marine Mammals* as listed in Notice 5 of this Notice to Mariners and follow the specific protection measures for the Saguenay-St. Lawrence Marine Park and Surrounding waters, below.

Learn more about the Beluga Whale recovery process at the Species at Risk Public Registry.

St. Lawrence Beluga Whale Critical Habitat

Critical habitat of the St. Lawrence beluga extends from the Battures aux Loups Marins to the southern portion of the Estuary, off Saint-Simon. It includes the lower reaches of the Saguenay River. It is shown in the map below:



SAGUENAY–ST. LAWRENCE MARINE PARK AND SURROUNDING WATERS – WHALE PROTECTION

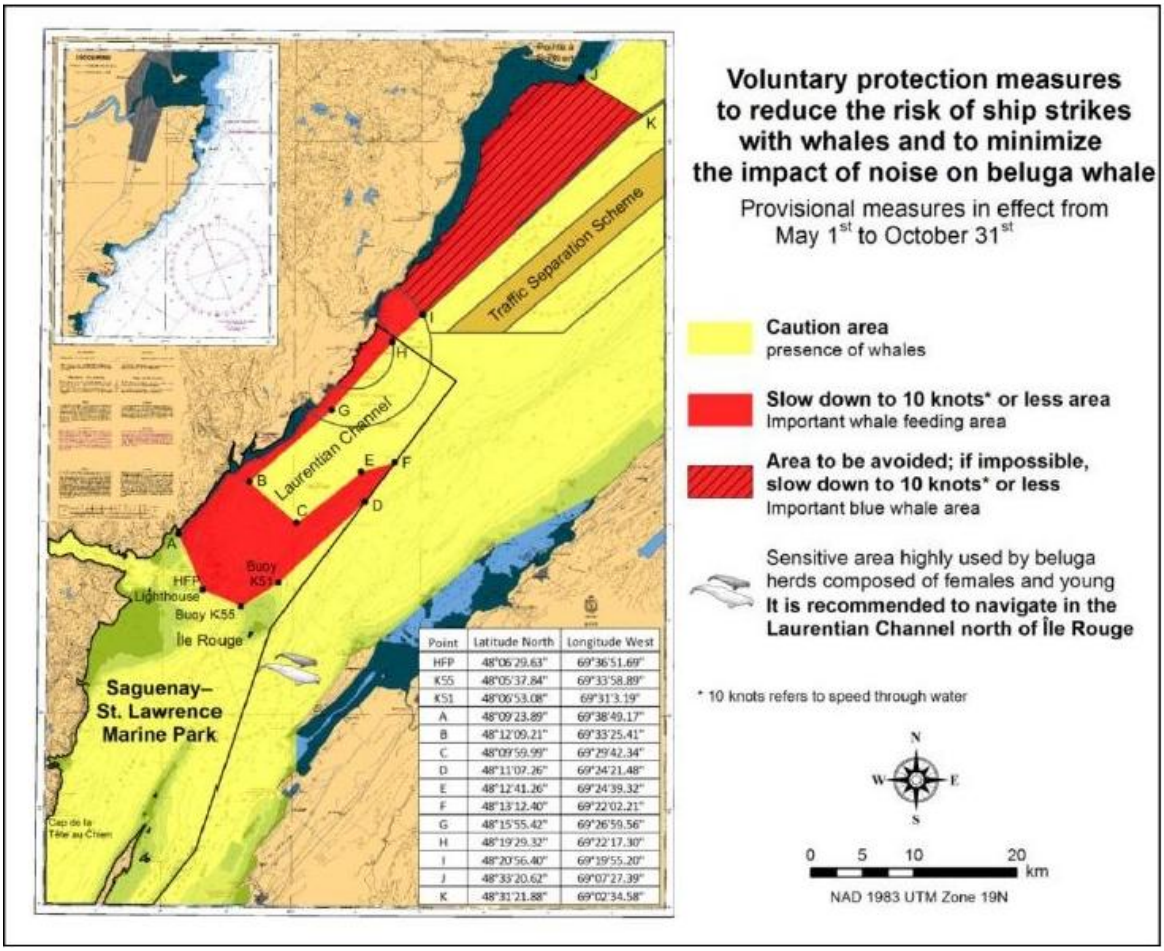
The waters in and around the Saguenay–St. Lawrence Marine Park are well known for the resident endangered beluga population and the wide diversity of whales that migrate there to feed, particularly between April and November.

Regulatory Protection Measures

All whale species that are found in the St. Lawrence are protected under the *Marine Mammal Regulations,* pursuant to the *Fisheries Act*. Within the boundaries of the Marine Park, specific measures are set out in the Marine Activities in the Saguenay–St. Lawrence Marine Park Regulations, pursuant to the Saguenay–St. Lawrence Marine Park Act. Any collision with a marine mammal within the Marine Park must immediately be reported to a park warden at 1-866-508-9888. For collisions that occur outside the Marine Park or for any situation involving a marine mammal that is dead or in trouble, contact the emergency network at 1-877-722-5346. For more information on the Saguenay–St. Lawrence Marine Park, see notice 5C of this Notice to Mariners.

Voluntary Protection Measures

Provisional measures in effect from May 1st to October 31st. See map below. These measures apply to merchant vessels and cruise ships between Pointe à Boisvert and Cap de la Tête au Chien to prevent collisions with whales. These measures should only be taken when they will not jeopardize navigational safety.



Caution area (yellow area): To reduce the risk of collisions with whales that can be present anywhere in this area, heightened vigilance of navigators is critical. Posting a lookout is recommended to increase the chances of seeing the whales and thus taking necessary measures to avoid them. If bypassing the whales is not possible, slow down and wait for the animals to move away to a distance greater than **400** metres (0.215 nautical miles) before resuming original speed. It is more difficult to see the animals at night, therefore increased caution is recommended.

Slow down to 10.0 knots or less area (red area): To reduce the risk of collisions with whales in this feeding area, it is recommended that vessels slow down to a maximum speed through the water of 10.0 knots and post a lookout. It is further recommended to remain in the Laurentian Channel to the north of Île Rouge to minimize the impact of noise in a sensitive area south of this island, which is highly frequented by herds of beluga whales composed of females and young.

Area to be avoided (hatched red area): To reduce noise and the risk of collisions with whales, vessels should avoid transiting through this area, which is highly frequented by blue whales, an endangered species. If the area cannot be avoided, slow down to a speed through the water of 10.0 knots or less.

WESTERN REGION

Southern and Northern Resident Killer Whales

Species Status: Endangered and Threatened, respectively, under the *Species at Risk Act*.

Threats: Principal threats are environmental contamination, reductions in the availability or quality of prey, and both physical and acoustic disturbance.

Characteristics: The killer whale is the largest member of the dolphin family. Its size, striking black and white colouring and tall dorsal fin are the main identifying characteristics. Killer whales are mainly black above and white below, with a white oval eye patch, and a grey saddle patch below the dorsal fin.

Minimum Approach Distance: **1000** metres for all Southern Resident killer whales within Southern Resident Killer Whale critical habitat and southern BC coastal waters between Campbell River (Cape Mudge) and Malaspina Peninsula (Sarah Point) including Howe Sound, to just north of Ucluelet, including Barkley Sound from June 1, 2026 until May 31, 2027, as per the Interim Order under the *Canada Shipping Act, 2001*. Vessels must remain 200 metres away from all killer whales elsewhere in BC coastal waters as per the *Marine Mammal Regulations*.

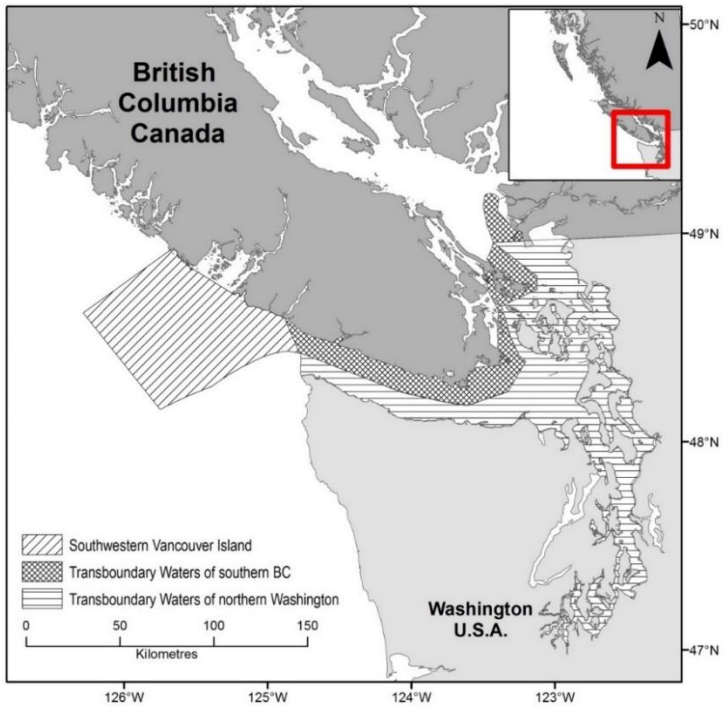
In case of any accidental contact between a vessel or gear and a killer whale (or other marine mammals or sea turtles), or if you observe an entangled, sick, injured, distressed, or dead killer whale (or other marine mammals or sea turtles) in B.C. waters, please contact the Observe, Record, Report line operated by Fisheries and Oceans Canada's British Columbia Marine Mammal Response Network (BCMMRN) immediately at 1-800-465-4336 or DFO.ORR-MPO.ONS@dfo-mpo.gc.ca, or to VHF channel 16. Sightings of whales, including location, date and photos, may be reported to BC Cetacean Sightings Network through the WhaleReport App, sightings@ocean.org, the online form at Sightings Network, or by calling 1-866-I SAW ONE.

The **1000** metre minimum approach distance zone is shown in the map below:



Southern Resident Killer Whale Critical Habitat

Critical Habitat for the Southern Resident Killer Whale is shown in the map below:



Critical habitat areas identified for Southern Resident Killer Whales

Critical habitat is identified as the areas within the identified geographic boundaries, given that they contain the described biophysical attributes and features and the functions they support, as described in Table 4 of the Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada (2018). The hatched areas in the transboundary waters of southern BC and off southwestern Vancouver Island are the critical habitat areas in Canadian waters for Southern Resident Killer Whales, as designated under the *Species at Risk Act*. The horizontal hatched area in the transboundary waters of northern Washington State is designated as Southern Resident Killer Whale critical habitat under the U.S. *Endangered Species Act* (ESA).

The movement patterns of Resident Killer Whales are largely influenced by the availability of their preferred prey (Chinook Salmon). The critical habitat for Southern Resident Killer Whales within Canadian Pacific waters has been partially identified, and includes:

1) transboundary areas of southern British Columbia, including the Southern Strait of Georgia, Haro Strait, and Juan de Fuca Strait; and

2) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (critical habitat for both Northern and Southern Resident Killer Whales). Human activities themselves are not automatically prohibited within an area identified as critical habitat; rather, it is the destruction of this critical habitat that is prohibited.

Learn more about the recovery process, including the recovery strategy and action plan for the Northern and Southern Resident Killer Whale, at the Species at Risk Public Registry.

Guidelines: Adhere to the *General Guidelines when in the Vicinity of Marine Mammals* as listed on Page 3 in Notice 5 of this Notice to Mariners.

Northern and Southern Resident Killer Whale critical habitat boundaries off Southwestern Vancouver Island.

(Described clockwise from the western boundary - all Latitudes are Degrees-Minutes North; all Longitudes are Degrees-Minutes West.)

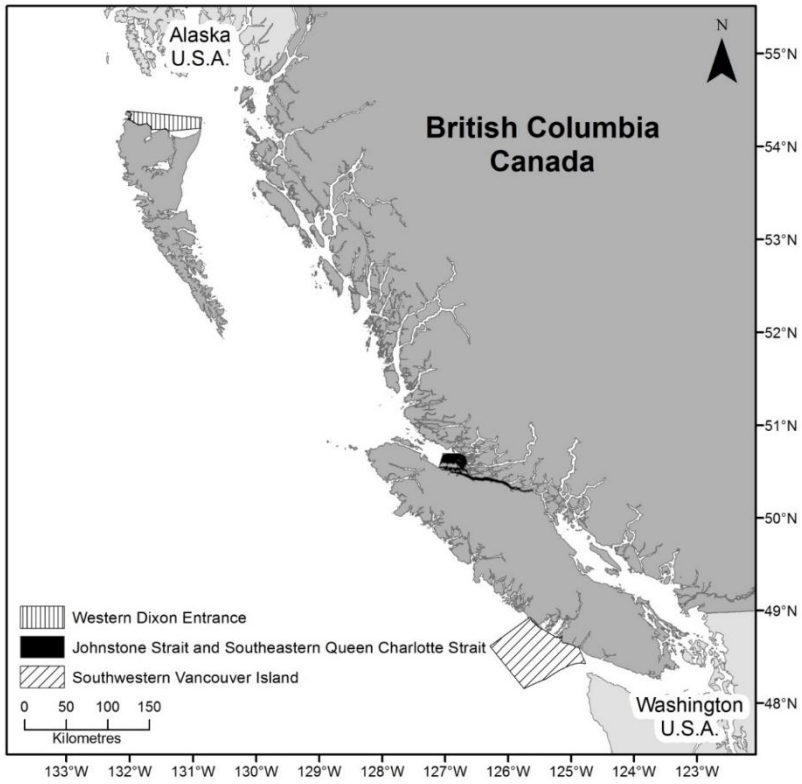
Point Description		Start and End Coordinates			
		Latitude Deg	Latitude Min	Longitude Deg	Longitude Min
1	Northern Boundary (Vancouver Island running southwest offshore)	48	59.7	125	40.15
2		48	41.72	126	17.88
3	Offshore Boundary	48	13.95	125	44.61
4	Waters adjacent the U.S.A. Border	48	29.72	124	44.32
5	Waters adjacent Southern Resident Killer Whale critical habitat in transboundary waters of southern Georgia, Haro, and Juan de Fuca Straits	48	40.04	124	50.66
6	And bounded by Vancouver Island to the Northwest boundary				
7	Excluding waters north of the line joining (Nitinat Inlet)	48	40.05	124	50.99
8		48	40.13	124	51.3
9	Excluding waters northeast of the line joining Cape Beale and Amphitrite Point (Barkley Sound)	48	55.22	125	32.391
10		48	47.174	125	13.039

Southern Resident Killer Whale critical habitat boundaries for transboundary waters of southern Georgia, Haro, and Juan de Fuca Straits.
(Described clockwise from the western boundary - all Latitudes are Degrees-Minutes North; all Longitudes are Degrees-Minutes West.)

Point Description		Start and End Coordinates			
		Latitude Deg	Latitude Min	Longitude Deg	Longitude Min
1	Western boundary	48	29.68	124	44.31
2		48	40.02	124	50.68
3	Excluding waters north of the line joining (Sooke Inlet)	48	21.30	123	44.32
4		48	20.33	123	42.90
5	Excluding waters north of the line joining (Royal Roads, Esquimalt Harbour, Victoria Harbour)	48	24.25	123	28.97
6		48	24.57	123	22.61
7	Excluding waters west of the line joining (Cordova Channel and Sidney Channel)	48	29.69	123	18.61
8		48	36.12	123	18.51
9	Excluding waters west of the line joining (western half of Miners Channel and the waters west of Gooch Island)	48	37.04	123	18.49
10		48	39.70	123	17.72
11	Excluding waters west of the line joining (western half of Prevost Channel and Moresby Passage)	48	39.88	123	17.68
12		48	42.96	123	19.63
13	Excluding waters west of the line joining (western portion of Swanson Channel between Moresby Island and Prevost Island)	48	43.34	123	19.88
14		48	48.86	123	22.70
15	Excluding waters west of the line joining (western portion of Trincomali Channel between Prevost Island and Parker Island)	48	50.66	123	23.33
16		48	52.61	123	23.92
17	Excluding waters west of the line joining (western portion of Trincomali Channel between Parker Island and Galiano Island)	48	52.85	123	23.92
18		48	53.08	123	23.76
19	Excluding waters west of the line joining (western portion of southern Strait of Georgia)	48	54.28	123	20.67
20		48	55.39	123	21.98
21		49	0.00	123	18.88
22		49	10.39	123	22.82
23		49	13.58	123	21.97
24	Excluding waters north of the line joining (portion of southern Strait of Georgia)	49	13.58	123	21.97
25		49	14.00	123	21.09
26		49	14.18	123	19.22
27		49	13.79	123	17.21
28	Excluding waters north and east of the line joining (portion of southern Strait of Georgia)	49	13.79	123	17.21
29		49	12.87	123	15.75
30		49	9.01	123	16.48
31		49	3.39	123	9.24
32		49	3.47	123	8.48
	And bounded on the east and south by Point Roberts and the United States Border				

Northern Resident Killer Whale Critical Habitat

Critical Habitat for the Northern Resident Killer Whale is shown in the map below:



Critical habitat areas identified for Northern Resident Killer Whales

Critical habitat is identified as the areas within the identified geographic boundaries, given that they contain the described biophysical attributes and features and the functions they support, as described in Table 4 of the Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada (2018). The lined areas in western Dixon Entrance, which includes most of the coastal waters off the north side of Graham Island and the hatched area in the waters off southwestern Vancouver Island are the critical habitat areas in Canadian waters for Northern Resident Killer Whales, as designated under the *Species at Risk Act*.

The movement patterns of Resident Killer Whales are largely influenced by the availability of their preferred prey (Chinook Salmon). The critical habitat for Northern Resident Killer Whales in Canadian Pacific waters as designated under the *Species at Risk Act*, and includes:

1) the waters of Johnstone Strait and southeastern Queen Charlotte Strait, and the channels connecting these straits;

2) waters on the continental shelf off southwestern Vancouver Island, including Swiftsure and La Pérouse Banks (critical habitat for both Northern and Southern Resident Killer Whales); and

3) waters of western Dixon Entrance, along the north coast of Graham Island from Langara to Rose Spit.

A Critical Habitat Order prohibits the destruction of critical habitat caused by human activities, but does not automatically prohibit the activities themselves.

Learn more about the recovery process, including the recovery strategy and action plan, for the Northern and Southern Resident Killer Whale at the Species at Risk Public Registry.

Guidelines: Adhere to the *General Guidelines when in the Vicinity of Marine Mammals* as listed in Notice 5 of this Notice to Mariners.

Robson Bight (Michael Bigg) Ecological Reserve

Ecological Reserves are areas in British Columbia selected to preserve representative and special natural ecosystems, plant and animal species, features, and phenomena. Ecological Reserves provide the highest level of protection for the maintenance of physical and biological diversity while allowing for research and educational activities. Robson Bight (Michael Bigg) Ecological Reserve was established to provide support for killer whale recovery by reducing physical and acoustic disturbance while they feed, socialize and use rubbing beaches. Beach rubbing appears to be an important activity for Northern Resident Killer Whales and during this time, they are very sensitive to disturbance.

Guidelines

Contained within the larger critical habitat area found in the waters of Johnstone Strait and southeastern Queen Charlotte Strait, Robson Bight Ecological Reserve provides an additional protected area for Northern Resident Killer Whales to rest, feed, socialize and engage in beach rubbing behaviour.

- Northern Resident Killer Whales are listed as Threatened under the *Species at Risk Act*, and areas identified as critical habitat are protected from destruction.
- Robson Bight (Michael Bigg) Ecological Reserve is a provincially designated Ecological Reserve that falls within the boundaries of the legally protected critical habitat for Northern Resident Killer Whales.
- All vessels should avoid passage through the Ecological Reserve. Avoidance is the most effective means to eliminate or reduce physical and acoustic disturbance and vessel collisions with whales.
- Fish harvesters are requested not to moor in the Robson Bight area.
- Should boaters accidentally stray into the Reserve, leave immediately while maintaining at least a **300** metres distance from any whale present.
- If passage through this area is required for navigational safety, decrease vessel speed to 7.0 knots or less and post a look-out to increase the likelihood of sighting and avoiding marine mammals by at least **300** metres. Increased caution must be exercised in conditions of reduced visibility, such as rain, fog, rough sea state, or at night. Be aware that marine mammals often travel in small groups dispersed over an area of several kilometres. Maneuver around marine mammals with caution (refer to the Laws, Regulations and General Guidelines when in the Vicinity of Marine Mammals in section 5 above). Do not assume the whales will move out of the way.

Northern Resident Killer Whale Critical Habitat – Boundaries for Johnstone and southeastern Queen Charlotte Straits.

(Described clockwise from the western boundary - all Latitudes are Degrees-Minutes North; all Longitudes are Degrees-Minutes West.)

Point Description		Start and End Coordinates			
		Latitude Deg	Latitude Min	Longitude Deg	Longitude Min
1	Western boundary (Vancouver Island to Numas Island)	50	36.98	127	11.00
2		50	46.24	127	6.76
3	Northern boundary (Numas Island to Broughton Island)	50	46.27	127	5.26
4		50	46.41	126	48.27
5	Northern boundary (Broughton Island to Screen Island / Eden Island)	50	46.13	126	47.30
6		50	44.95	126	43.55
7	boundary line running from Eden Island to Crib Island (including waters of Queen Charlotte Strait and excluding waters of Trainer Passage)	50	44.79	126	43.22
8		50	43.67	126	42.73
9		50	43.33	126	42.58

Point Description		Start and End Coordinates			
		Latitude Deg	Latitude Min	Longitude Deg	Longitude Min
10	boundary line running from Crib Island to House Ilet (including waters of Queen Charlotte Strait and excluding waters of Arrow and Spring Passages)	50	40.16	126	41.21
11	boundary line running from House Ilet to Swanson Island (including waters of Queen Charlotte Strait and excluding waters of Knight Inlet)	50	40.16	126	41.21
12		50	37.75	126	43.86
13	boundary line running from Swanson Island to Compton Island (including waters of Blackfish Sound excluding waters of West Passage)	50	36.06	126	41.77
14		50	35.84	126	41.42
15	boundary line running from Compton Island to Harbledown Island (including waters of Blackfish Sound excluding waters of Whitebeach Passage)	50	35.50	126	40.86
16		50	35.38	126	40.68
17	boundary line running from Harbledown Island to Parson Island (including waters of Blackfish Sound excluding waters of Parson Bay)	50	35.19	126	40.93
18		50	34.43	126	40.73
19	boundary line running from Parson Island to West Cracroft Island (including waters of Blackfish Sound excluding waters of Baronet Passage)	50	33.65	126	39.95
20		50	32.98	126	39.73
	Waters of western Johnstone Strait bounded on the north by West Cracroft Island, the mainland, Hardwicke Island and West Thurlow Island with no exclusions except:				
24	boundary line running from West Cracroft Island to the mainland (including waters of western Johnstone Strait excluding waters of Havannah Channel)	50	31.32	126	20.35
25		50	31.09	126	17.05
26	boundary line running from the mainland to Hardwicke Island (including waters of western Johnstone Strait excluding waters of Sunderland Channel)	50	28.46	126	2.54
27		50	26.57	125	57.94
28	boundary line running from Hardwicke Island to Eden Point on West Thurlow Island (including waters of western Johnstone Strait excluding waters of Chancellor Channel)	50	24.58	125	48.29
29		50	23.91	125	47.38
30	boundary line running from Eden Point to Tyee Point on West Thurlow Island (including waters of western Johnstone Strait excluding waters of Vere Cove)	50	23.91	125	47.38
31		50	23.26	125	47.06
32	Eastern boundary line running from West Thurlow Island (including waters of western Johnstone Strait excluding waters of eastern Johnstone Strait and Mayne Passage)	50	23.42	125	34.39
33		50	21.88	125	34.23
	Waters of western Johnstone Strait bounded on the south by Vancouver Island - no exclusions except:				
35	boundary line running from Graveyard Point to Kelsey Bay Harbour on Vancouver Island (including waters of western Johnstone Strait excluding waters of Salmon Bay)	50	23.45	125	56.71
36		50	23.80	125	57.62

Northern and Southern Resident Killer Whale critical habitat boundaries off Southwestern Vancouver Island.
(Described clockwise from the western boundary - all Latitudes are Degrees-Minutes North; all Longitudes are Degrees-Minutes West.)

Point Description		Start and End Coordinates			
		Latitude Deg	Latitude Min	Longitude Deg	Longitude Min
1	Northern Boundary (Vancouver Island running southwest offshore)	48	59.7	125	40.15
2		48	41.72	126	17.88
3	Offshore Boundary	48	13.95	125	44.61
4	Waters adjacent the U.S.A. Border	48	29.72	124	44.32
5	Waters adjacent Southern Resident Killer Whale critical habitat in transboundary waters of southern Georgia, Haro, and Juan de Fuca Straits	48	40.04	124	50.66
6	And bounded by Vancouver Island to the Northwest boundary				
7	Excluding waters north of the line joining (Nitinat Inlet)	48	40.05	124	50.99
8		48	40.13	124	51.3
9	Excluding waters northeast of the line joining Cape Beale and Amphitrite Point (Barkley Sound)	48	55.22	125	32.391
10		48	47.174	125	13.039

Northern Resident Killer Whale critical habitat boundaries in western Dixon Entrance.
(Described clockwise from the western boundary - all Latitudes are Degrees-Minutes North; all Longitudes are Degrees-Minutes West.)

Point Description		Start and End Coordinates			
		Latitude Deg	Latitude Min	Longitude Deg	Longitude Min
1	Western Boundary (Langara Island Northward)	54	15.38	133	3.5
2		54	15.99	133	3.5
3	Northern Boundary	54	16.05	131	40.45
4	Eastern Boundary	54	9.13	131	40.43
5	Excluding waters south of line (McIntyre Bay)	54	5.491	132	15.97
6	Bounded by Graham Island on the Southern Boundary	54	11.07	133	1.55
7	Northward to Langara Island, excluding waters west of the line	54	11.43	133	0.75
8	Bounded on the western Boundary by the eastern side of Langara Island up to Langara Light				
9	Excluding waters south of line (Virago Sound, Naden Harbour)	54	5.86	132	26.26
10		54	5.57	132	34.3

Southern Resident Killer Whale Interim Order

The Southern Resident Killer Whale is listed as Endangered under the *Species at Risk Act*. Due to the threat posed from vessel traffic in southern British Columbia, the Minister of Transport has issued an Interim Order under the *Canada Shipping Act, 2001*, in effect starting June 1, 2026, to support their protection and recovery.

The measures in the Interim Order are in addition to already existing requirements under the *Marine Mammal Regulations*. The measures are intended to reduce underwater noise and physical disturbance. These measures are in place on an interim basis pending further feasibility assessment work on longer term measures to reduce physical and acoustic disturbances.

The Interim Order applies to all vessels, which includes vessels that navigate in, on, through or immediately above water, regardless of the method of propulsion. This means large commercial vessels, cruise ships, submarines, sea planes, sailboats, motorboats, and any other mode of transportation for use in a marine environment. This also includes paddling and other non-motorized activities such as paddle boards, kayaks and canoes. Although non-motorized vessels pose little threat from an acoustic perspective, their physical presence can still disturb the foraging habits and movement of killer whales.

The Interim Order sets out three mandatory measures for vessels operating in certain areas of the waters of southern British Columbia to reduce underwater vessel noise and physical disturbance to killer whales, specifically:

1) Minimum approach distance of **1000** metres for all Southern Resident killer whales within Southern Resident Killer Whale critical habitat and southern BC coastal waters between Campbell River (Cape Mudge) and Malaspina Peninsula (Sarah Point), including Howe Sound, to just north of Ucluelet, including Barkley Sound.

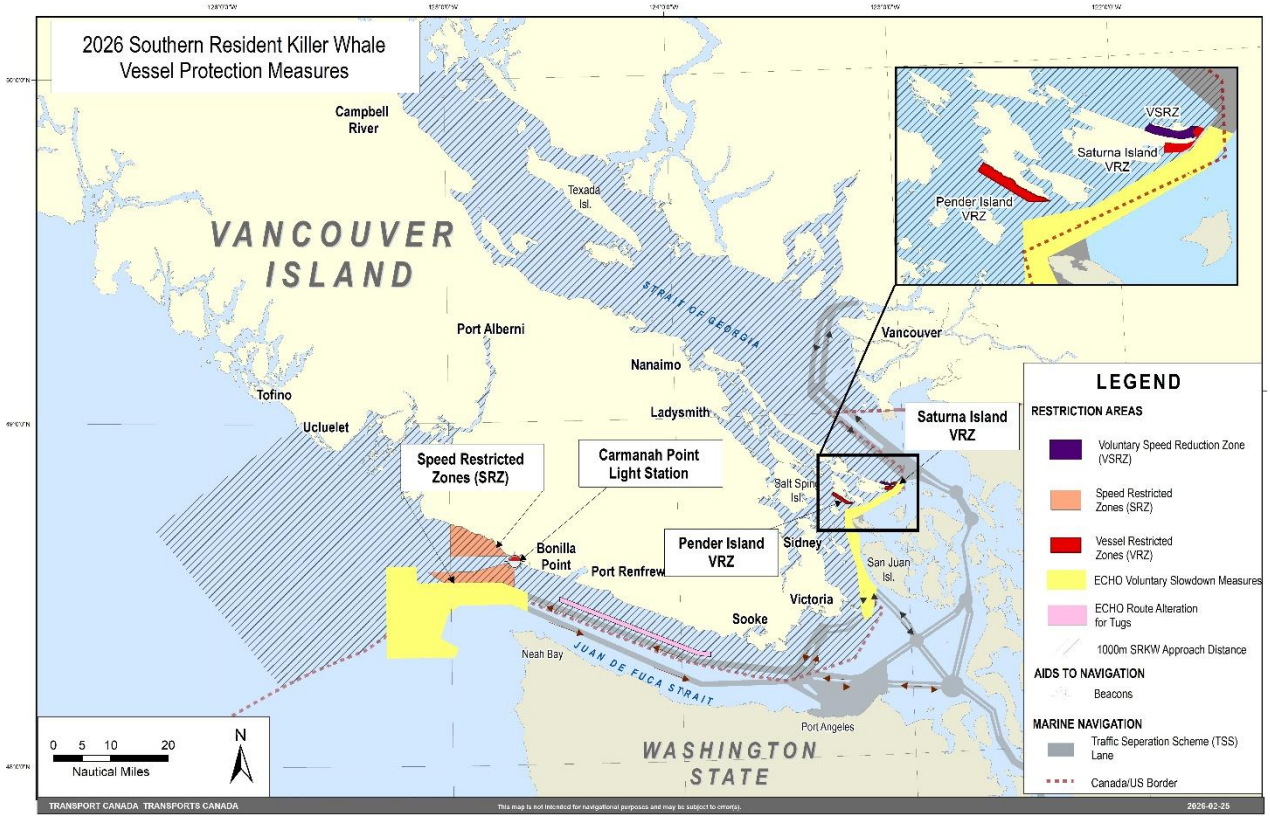
2) Two Vessel Restricted Zones where vessel traffic is prohibited, including fishing, whale watching and recreational boating, subject to exceptions. These zones are located off the south-west coast of Pender Island, another at the south-east end of Saturna Island.

3) Two Speed Restricted Zones located near Swiftsure Bank in which all vessels, subject to exceptions, are restricted to a maximum speed of 10 knots speed over ground when safe to do so.

Visit the Interim Order for the Protection of the Southern Resident Killer Whale (Orcinus orca) in Waters of Southern British Columbia, 2026, for more information.

Southern Resident Killer Whale 2026 General Vessel Measures

The General Vessel Measures (2026) for the Southern Resident Killer Whale is shown in the map below:



1000 metre Minimum Approach Distance for Southern Resident Killer Whales

Under the Interim Order, from June 1, 2026 until May 31, 2027 all vessels, subject to exceptions, must stay a minimum of **1000** metres away from all Southern Resident killer whales within Southern Resident Killer Whale critical habitat and southern BC coastal waters between Campbell River (Cape Mudge) and Malaspina Peninsula (Sarah Point) including Howe Sound, to just North of Ucluelet, including Barkley Sound. (see map illustrating measures above). This builds on existing prohibitions in place through the *Marine Mammal Regulations* under the *Fisheries Act*, and is being put in place to support the protection and recovery of the species, as acoustic and physical disturbance has been identified as a primary threat.

Exceptions

The following vessels and persons are excepted from the **1000** metre approach distance within the relevant range:

- vessels in transit;
- vessels in distress or providing assistance to a been vessel or person in distress;
- vessels involved in pollution response operations;
- vessels avoiding immediate or unforeseen danger1 2;

[1] An immediate or unforeseen danger includes any situation in which weather, mechanical issues or collision risks require the vessel to go through the Interim sanctuary zone because that is the safest route or the quickest path to safety

[2] The 400 m approach distance does not apply to vessels carrying any person referred to in (a) to (e) or to persons operating or navigating a vessel referred to in (a) to (e)

- vessel carrying an excepted person
- employees of the government of Canada and peace officers who are performing their duties or functions, or persons who are assisting them or who are otherwise present at the request of the government of Canada;
- a person acting in a manner authorized under the *Species at Risk Act*;
- a person authorized under the *Marine Mammal Regulations* to disturb a killer whale;
- persons fishing for marine mammals for experimental, scientific, educational or public display purposes in the manner set out in a licence issued under the Fishery (General) Regulations.
- a person operating an excepted vessel

Coordinates for 1000 metre Approach Distance:

Commencing at	50° 3.807 N	124° 50.61 W	[Sarah Point]
Then to	49° 52.486 N	124° 33.903 W	[north Powell River]
Then to	49° 52.426 N	124° 33.912 W	[south Powell River]
Then to	49° 46.436 N	124° 16.815 W	[north Jervis Inlet/Thunder Bay]
Then to	49° 44.262 N	124° 13.26 W	[south Jervis Inlet]
Then to	49° 43.838 N	124° 12.572 W	[north Blind Bay]
Then to	49° 43.018 N	124° 11.228 W	[south Ballet Bay]
Then to	49° 39.45 N	124° 5.148 W	[west Agamemnon Channel]
Then to	49° 39.313 N	124° 4.355 W	[east Agamemnon Channel]
Then to	49° 23.063 N	123° 31.823 W	[Gower Point]
Then to	49° 22.227 N	123° 25.63 W	[King Edward Bay]
Then to	49° 21.475 N	123° 20.083 W	[Apodaca Cove]
Then to	49° 20.933 N	123° 16.172 W	[south Eagle Harbour]
Then to	49° 18.82 N	123° 7.712 W	[north First Narrows]
Then to	49° 18.323 N	123°7.928 W	[south First Narrows]
Then to	49° 16.93 N	123° 8.525 W	[Sunset Beach]
Then to	49° 16.725 N	123° 8.61 W	[Kitsilano Beach]
Then to	49° 13.86 N	123° 12.583 W	[north North Arm]
Then to	49° 13.526 N	123° 13.303 W	[south North Arm]
Then to	49° 13.44 N	123° 13.468 W	[south Iona Island]
Then to	49° 5.06 N	123° 10.77 W	[west Westham Island]
Then to	49° 4.062 N	123° 9.41 W	[south Canoe Passage]
Then to	49° 3.487 N	123° 8. 493 W	[Roberts Bank]
Then to	49° 0.132 N	123° 5.46 W	[Boundary Bluff]
Then adjacent to the United States border until	48° 14.2 N	125° 44.5 W	[southern boundary of critical habitat]
Then to	48° 41.7 N	126° 17.783 W	[northwest boundary of critical habitat]
Then to	48° 59.685 N	125° 40.152 W	[Quisitis Point]
Then to	48° 55.253 N	125° 32.517 W	[Amphitrite Point]
Then to	48° 46.985 N	125° 12.587 W	[Cape Beale]
Then to	48° 45.433 N	125° 7.733 W	[Mabers Beach]

Then to	48° 40.605 N	124° 52.768 W	
Then to	48° 40.048 N	124° 50.997 W	
Then to	48° 39.645 N	124°49.205 W	[west Clo-oose Bay]
Then to	48°39.485 N	124° 48.648 W	[east Clo-oose Bay]
Then to	48° 33.703 N	124° 27.812 W	[west Port San Juan]
Then to	48° 33.11 N	124°25.742 W	[east Port San Juan]
Then to	49° 59.092 N	125° 13.39 W	[Campbell River]

Vessel Restricted Zones

To provide for greater refuge for Southern Resident Killer Whales in key areas within critical habitat, two Vessel Restricted Zones have been created within which all vessel traffic is prohibited, including fishing, whale watching and recreational boating, from June 1, 2026, until November 30, 2026. These zones are located: off the south-west coast of Pender Island and southeast end of Saturna Island.

Exceptions

The following vessels and persons are excepted from the prohibition on vessel traffic within the Vessel Restricted Zones:

- local traffic that needs to access a residence, commercial establishment or any other establishment providing a service on North Pender or southeast Saturna Islands, or a mooring buoy within the zone, if travel by water within a Vessel Restricted Zone is the only practical means of doing so. For example, if you need to access a residence, business or service that is not accessible by road, you would generally be permitted to travel through the area to reach it;
- vessels in distress or providing assistance to a vessel or person in distress;
- vessels involved in pollution response operations;
- vessels avoiding immediate or unforeseen danger[3];
- employees of the Government of Canada and peace officers performing their duties or functions, persons assisting them, or persons that are present at the request of the Government of Canada;
- persons undertaking certain activities, including scientific research, as authorized under either the *Species at Risk Act*, *Marine Mammal Regulations*, or Fishery (General) Regulations;
- persons fishing for food, social or ceremonial purposes or for domestic purposes pursuant to a treaty within the meaning of section 35 of the Constitution Act, 1982, in accordance with a licence issued under the Aboriginal Communal Fishing Licences Regulations; and
- Indigenous persons exercising an existing right for non-commercial purposes, other than fishing, under section 35 of the Constitution Act, 1982.

In recognition that the size of the Vessel Restricted Zones can result in unsafe conditions for human powered vessels, a 20-metre transit corridor along the shores of the Pender and Saturna Island Vessel Restricted Zones allows paddlers to bypass the prohibited zone. If a Southern Resident killer whale is in a zone while a paddler is transiting through, paddlers are required to remain **1000** metres away from the whale.

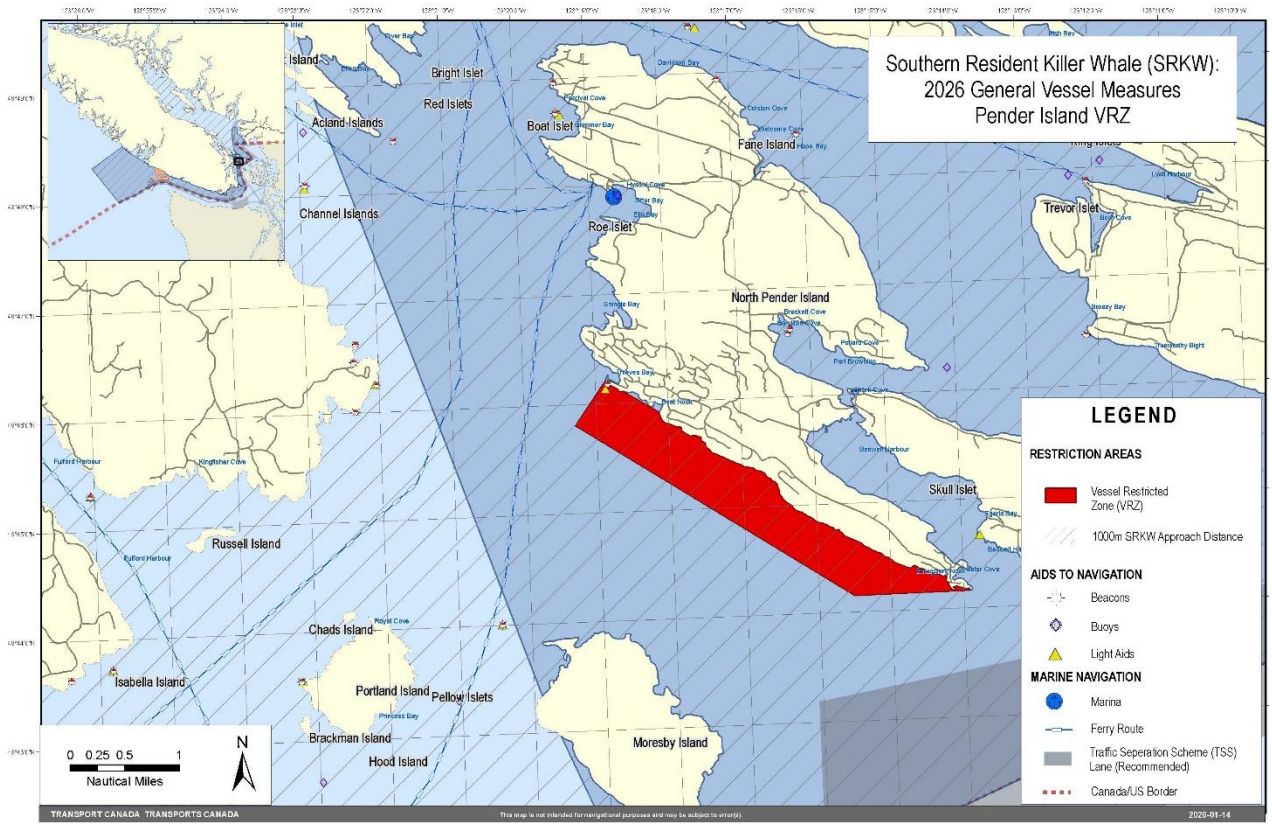
Coordinates for the Pender Island VRZ

The waters off Pender Island bounded by a line:

commencing at	48°46.217'N	123°18.867'W	[Northeast corner)];
then to	48°45.817'N	123°19.3'W	[Northwest corner];
then to	48°44.153'N	123°15.517'W	[Southwest corner];
then to	48°44.167'N	123°13.917'W	[Southeast Corner].

[3] An immediate or unforeseen danger includes any situation in which weather, mechanical issues or collision risks require the vessel to go through the Interim sanctuary zone because that is the safest route or the quickest path to safety

The Pender Island VRZ (2026) for the Southern Resident Killer Whale is shown in the map below:

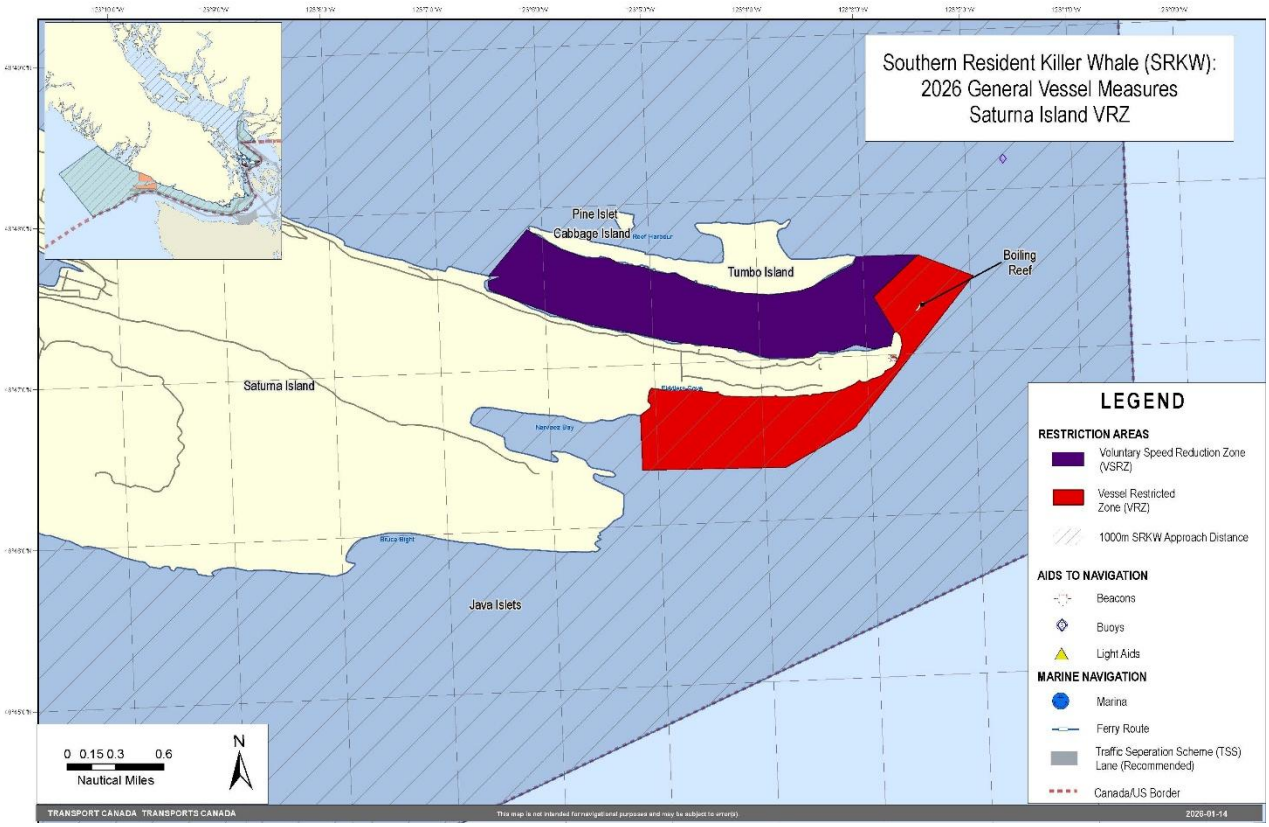


Coordinates for the Saturna Island VRZ

The waters off Saturna Island bounded by a line:

commencing at	48°47.15'N	123°02.733'W	[North Boundary of East Point (shoreline)];
then to	48°47.367'N	123°02.915'W	[Tumbo Channel];
then to	48°47.617'N	123°02.483'W	[Northwest Corner (East of Tumbo Point)];
then to	48°47.473'N	123°01.975'W	[Northeast Corner (Boiling Reef)];
then to	48°46.558'N	123°03.147'W	[Boundary Pass];
then to	48°46.333'N	123°03.805'W	[Southeast Corner]
then to	48°46.35'N	123°05.15'W	[Southwest Corner (Narvaez Bay)];
then to	48°46.683'N	123°05.15'W	[Fiddler's Cove].

The Saturna Island VRZ (2026) for the Southern Resident Killer Whale is shown in the map below:



Speed Restricted Zones

Two Speed-Restricted Zones are in place near Swiftsure Bank from June 1, 2026, until November 30, 2026. All vessels are restricted to a maximum speed of 10 knots speed over ground while in the areas with limited exceptions. The first area is in the Protected Fisheries Management Area 121-1 and the second Speed-Restricted Zone is located near the mouth of the Nitinat River from Carmanah Point to Longitude 125 degrees west. This measure is separate from the voluntary slowdowns coordinated by the ECHO Program. This measure was co-developed with Pacheedaht First Nation and incorporates new scientific information about habitat use.

Exceptions

The following vessels and persons are excepted from the Speed Restricted Zones speed limit :

- vessels in distress or providing assistance to a vessel or person in distress;
- vessels involved in pollution response operations;
- vessels avoiding immediate or unforeseen danger[4];
- employees of the Government of Canada and peace officers performing their duties or functions, persons assisting them, or persons that are present at the request of the Government of Canada;
- vessels not utilizing a motor.

[4] An immediate or unforeseen danger includes any situation in which weather, mechanical issues or collision risks require the vessel to go through the Interim sanctuary zone because that is the safest route or the quickest path to safety

Coordinates for the Swiftsure Bank Speed Restricted Zones

1. Mouth of the Nitinat River

The waters subject to the speed restriction zones are bounded by a line

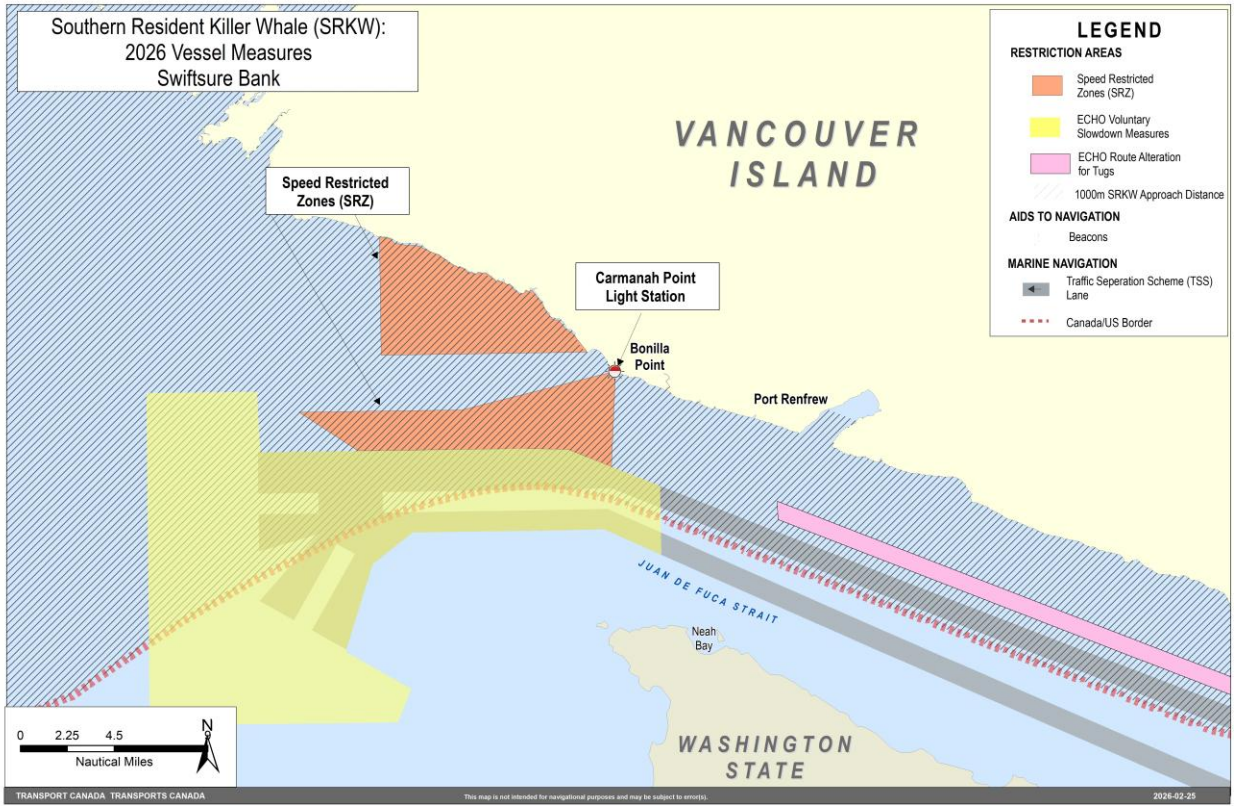
beginning at	48°42.377'N	125°00.000'W	[northwest boundary];
then to	48°36.683'N	125°00.000'W	[northwest boundary – Swiftsure Bank];
then to	48°36.683'N	124°45.083'W	[southeast boundary – Carmanah Point];
Then along the coastline to	48°42.377'N	125°00.000'W	[northwest boundary];

2. Swiftsure Bank

The waters subject to the speed restriction zones are bounded by a line

beginning at	48°34.000'N	125°06.000'W	[northwest boundary];
then to	48°32.100'N	125°01.760'W	[southwest boundary];
then to	48°32.100'N	124°49.545'W	[southern border to Traffic Separation Scheme]
then to	48°32.017'N	124°46.593'W	[southern border to Traffic Separation Scheme]
then to	48°31.150'N	124°43.483'W	[southeastern boundary]
then to	48°35.717'N	124°43.067'W	[northeastern boundary]
then to	48°34.000'N	124°54.190'W	[northern border]
then to	48°34.000'N	125°06.000'W	[northwest boundary];

The Speed-Restricted Zones (2026) for the Southern Resident Killer Whale are shown in the map below:

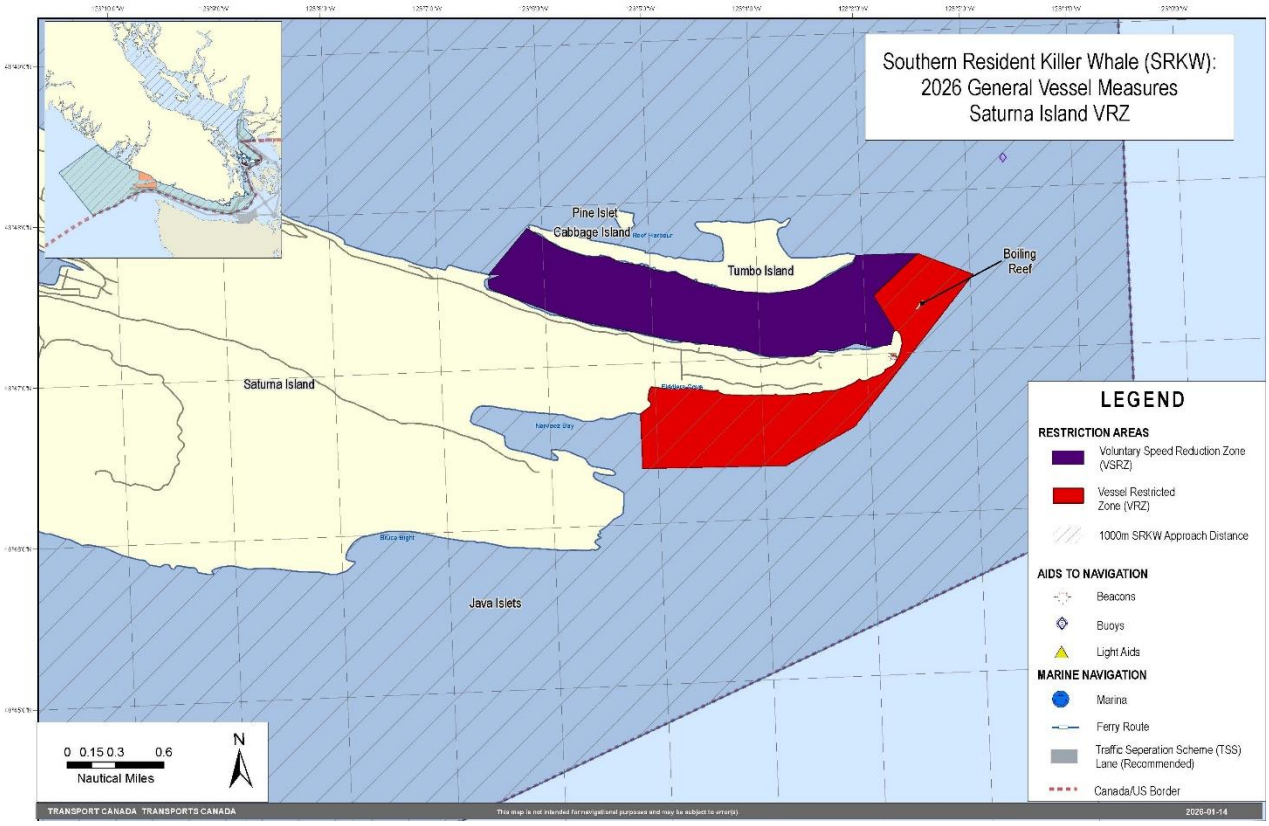


Voluntary Measures

Voluntary speed reduction zone

In addition to the above Interim Order measures, Transport Canada is implementing a voluntary speed reduction zone in Tumbo Channel, in effect from June 1 to November 30, 2026. When traveling through this area, it is recommended that vessels reduce their speed to 10 knots, when safe to do so.

The voluntary speed reduction zone in Tumbo Channel (2026) for the Southern Resident Killer Whale is shown in the map below:



Transport Canada also recommends boaters

- Reduce speed to less than 7 knots when within **1000** metres of a killer whale;
- Turn off echo sounders and fish finders, when safe to do so; and
- Place their engine in neutral idle, when safe to do so, if inadvertently within the approach distance to a killer whale.

Transport Canada also encourages large commercial vessels to participate in the Vancouver Fraser Port Authority led Enhanced Cetacean Habitat and Observation (ECHO) Program 2026 voluntary slowdown measures:

1. Haro Strait and Boundary Pass Voluntary Ship Slowdown

- The Haro Strait and Boundary Pass voluntary slowdown is in effect 24 hours per day as of June 1, 2026 until 2359 PDT on November 30, 2026, for all commercial and government vessels.
- If it is safe and operationally feasible to do so, commercial and government vessels are requested to not exceed the following speeds through the water:
    - 11 knots – Bulkers, tankers, general cargo vessels and government vessels;
    - 14.5 knots – Vehicle carriers, cruise ships, and container vessels.

- This voluntary slowdown takes place between the vessel traffic separation scheme at the south end of Haro Strait at 48° 24' 22.78" N ,123° 12' 15.26" W, and the vessel traffic separation scheme at the north end of Boundary Pass at 48° 46' 39.28" N, 123° 01' 36.84" W. There are also two optional slowdown areas, one rounding turn point and the other between Turn point, Saturna Island and Alden Point, Patos Island.

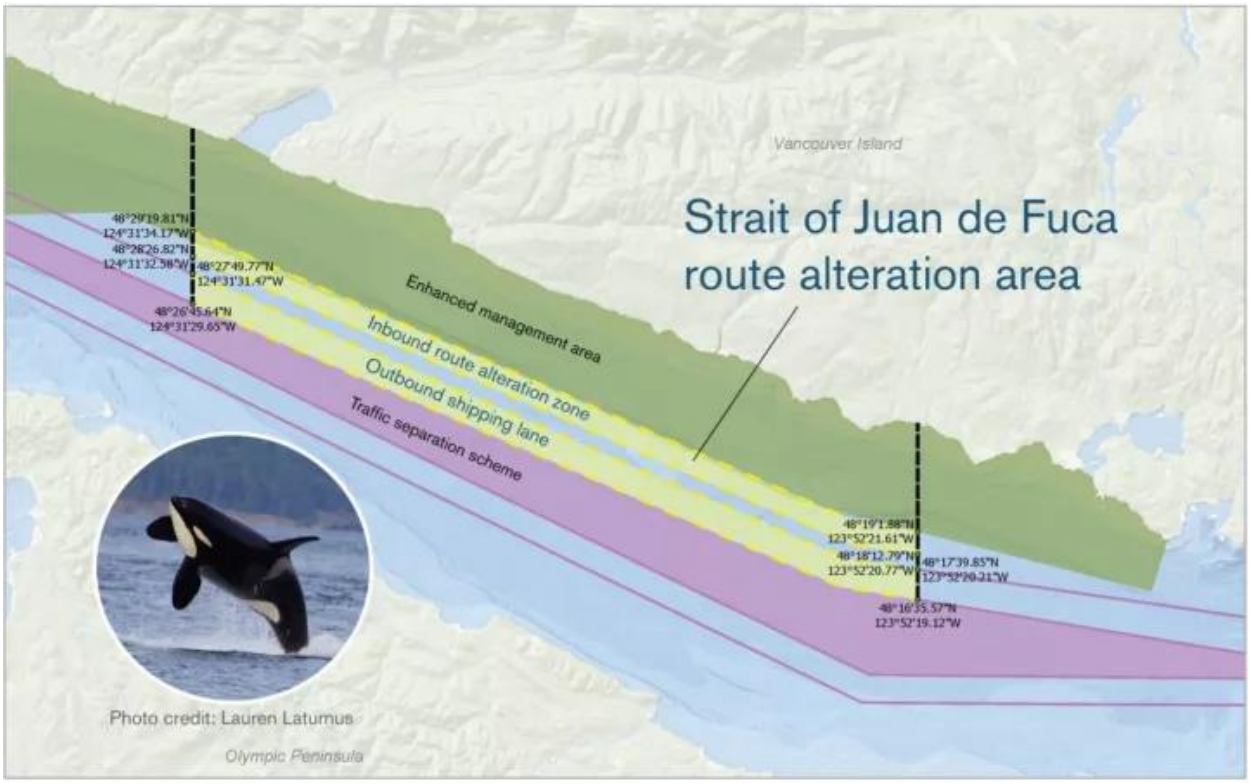
The Haro Strait and Boundary Pass voluntary ship slowdown zone is shown in the map below:



2. Strait of Juan de Fuca voluntary route alteration for tugs

- The Strait of Juan de Fuca voluntary route alteration for tugs is in effect 24 hours per day as of June 1, 2026 until 2359 PDT on October 31, 2026 for all tug and barge vessels transiting the Canadian inshore area.
- If it is safe and operationally feasible to do so, tugs are requested to move south of the known killer whale feeding area and navigate either through the outbound shipping lane or the inshore lateral displacement zone, while maintaining a buffer distance of 1,000 metres from the traffic separation scheme (TSS).
- The inshore lateral displacement zone is 1,500 m wide and occurs in the area between longitudes 123° 52.3532' W 48° 18.6222' N and 124° 31.5563' W 48° 28.8886' N, covering a distance of approximately 28 nm.

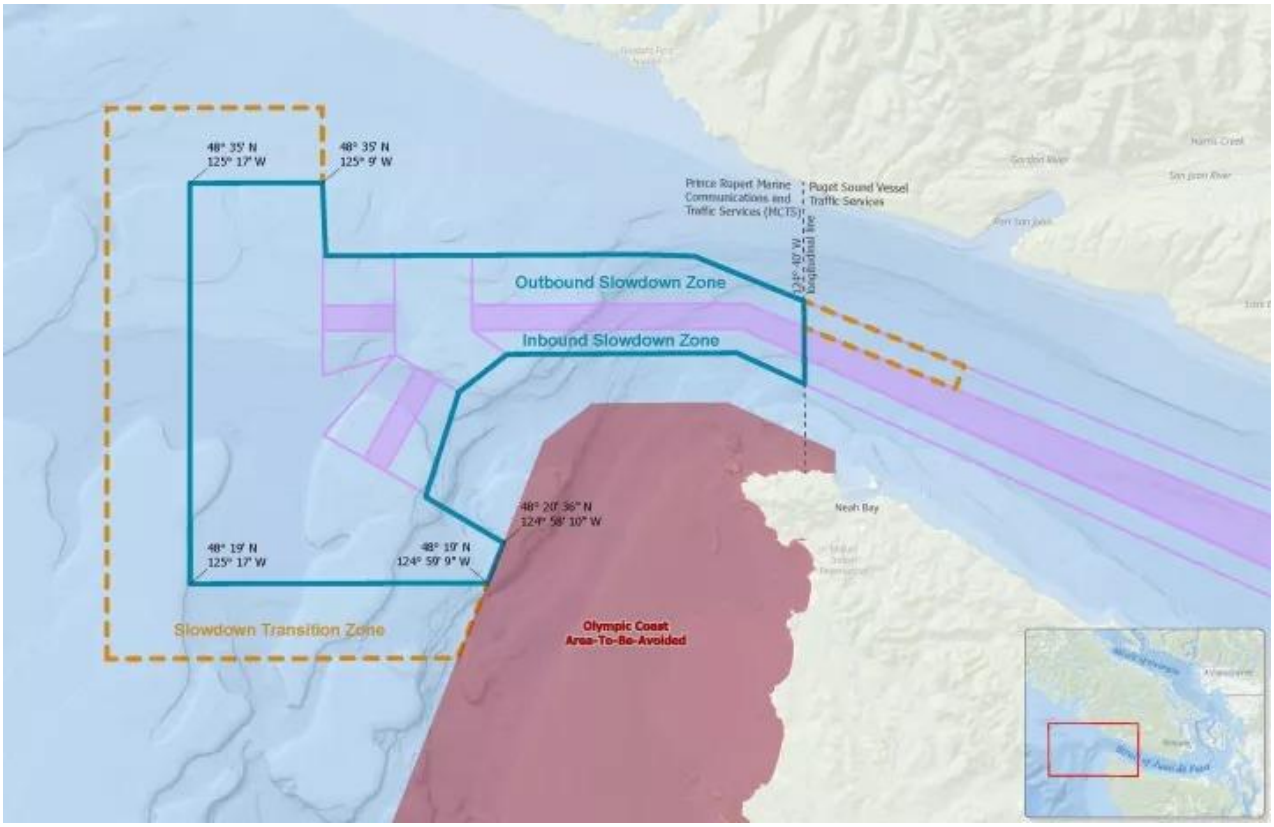
The Strait of Juan de Fuca voluntary route alteration for tugs is shown in the map below:



3. Swiftsure Bank Voluntary Ship Slowdown

- The voluntary slowdown trial in Swiftsure Bank is in effect 24 hours per day as of June 1, 2026, until 2359 PDT on October 31, 2026, for all inbound and outbound commercial and government vessels.
- If it is safe and operationally feasible to do so, commercial and government vessels are requested to not exceed the following speeds through the water:
    - 11 knots – Bulkers, tankers, general cargo vessels, and government vessels;
    - 14.5 knots – Vehicle carriers, cruise ships, and container vessels.
- The voluntary vessel slowdown takes place in the inbound and outbound lanes of the vessel traffic separation scheme between the start or end of the traffic separation scheme on the western or southern side, and the 124° 40’ W longitudinal line (radio call in point 1) on the eastern side. Speed transition zones are in place about 5 nautical miles prior to entering the slowdown area. The voluntary ship slowdown takes place at Swiftsure Bank between 125° 17' W or 48° 19' N on the western or southern sides, and 124° 40’ W on the eastern side. All vessels transiting inbound or outbound are asked to slowdown when it is safe and operationally feasible to do so. Speed transition zones are in place about 2 nautical miles prior to entering the slowdown area.

The Swiftsure Bank voluntary slowdown trial zone is shown in the map below:



The ECHO Program voluntary slowdown and lateral displacement initiatives aim to reduce underwater noise in known Southern Resident Killer Whale feeding areas and is led by the Vancouver Fraser Port Authority's ECHO Program, in cooperation with government agencies, Indigenous communities, industry partners, and environmental groups. Refer to the Port of Vancouver website for more detailed information related to this and other slowdowns and the ECHO program.

Authority: Fisheries and Oceans Canada (DFO)

5A General Requirements for *Oceans Act* Marine Protected Areas, *Fisheries Act* Marine Refuges and *Fisheries Act* Rockfish Conservation Areas

Requirements for *Oceans Act* Marine Protected Areas

Under the *Oceans Act*, regulations designating a Marine Protected Area may be made, by either the Governor in Council (per ss. 35(3)) or a Minister of Fisheries and Oceans Ministerial Order (per s. 35.1), for one or more of the following reasons[1]:

(a) commercial and non-commercial fishery resources and their habitats;

(b) the conservation and protection of endangered or threatened species and their habitats;

(c) the conservation and protection of unique habitats;

(d) the conservation and protection of marine areas of high biodiversity or biological productivity;

(e) the conservation and protection of any other marine resource or habitat as is necessary to fulfill the mandate of the Minister of Fisheries and Oceans; and

(f) the conservation and protection of marine areas for the purpose of maintaining ecological integrity.

In addition under ss.52.1 the Governor in Council may, on the recommendation of the Minister, make regulations for carrying out the purposes and provisions of the Oceans Act and, in particular, but without restricting the generality of the foregoing, may make regulations:

(a) prescribing marine environmental quality requirements and standards;

(b) respecting the powers and duties of persons designated by the Minister as enforcement officers; and

(c) respecting the implementation of provisions of agreements made under this Act.

General Prohibitions (Prohibited Activities)[2]

Oceans Act Marine Protected Area regulations contain a prohibition that generally prohibits the disturbance, damage, destruction or removal of any living marine organism or any part of its habitat within the Marine Protected Areas. Recent amendments to the *Oceans Act*[3] now also provide for the protection of unique geological or archeological features that lie within an area designated by Ministerial Order.

Exceptions (Permitted Activities)

Governor in Council Marine Protected Area regulations include various exceptions, allowing for the continuation of activities that do not jeopardize the area's conservation objectives. A Ministerial Order Marine Protected Area is a measure that effectively "freezes the footprint" of the area, allowing most "ongoing" activities to continue while prohibiting those that are not "ongoing".

Marine Protected Area designated by either Governor in Council regulations or Ministerial Orders recognize and accommodate the exercise of international navigational rights Marine Protected Area regulations generally provide for vessel operation in compliance with relevant navigational requirements (ex. provisions of the *Canada Shipping Act, 2001* and relevant requirements of the International Maritime Organization).

[1] A Governor in Council Interim Order made pursuant to s. 36 of the *Oceans Act* may also temporarily designate an area for conservation and protection on an emergency basis. Marine Protected Areas of this kind are only made in instances where the Minister is of the opinion that a marine resource or habitat is or is likely to be at risk to the extent that such orders are not inconsistent with a land claims agreement that has been given effect and has been ratified or approved by an Act of Parliament.

[2] Prohibitions and exceptions are tailored to the conservation objectives for the particular area of interest. Persons are encouraged to review the respective regulation (or Ministerial Order) to better understand the particular regulatory measures that apply to the designated area.

[3] Amendments were made pursuant to Bill C-55, *An Act to amend the Oceans Act and the Canada Petroleum Resources Act* (2019).

Activities carried out for the purpose of public safety, law enforcement or national security or for the exercise of Canadian sovereignty are covered by separate exceptions and are therefore not subject to the general prohibitions evidenced in Marine Protected Areas made by the Governor in Council and Ministerial.

Report of Incident

Specific reporting requirements for certain Marine Protected Areas can be found in the respective regulation.

Penalties

Individuals, corporations and ships that contravene *Oceans Act* Marine Protected Areas regulations are guilty of an offence and liable to a fine as specified in section 39.6 of the *Act*. Individuals, corporations and ships that contravene these regulations may also be subject to requirements specified under other applicable Federal legislation.

1. Marine Protected Areas in Eastern Canada

The following section provides information on Marine Protected Areas that have been designated under the *Oceans Act* in Eastern Canada.

1.1 The Gully Marine Protected Area

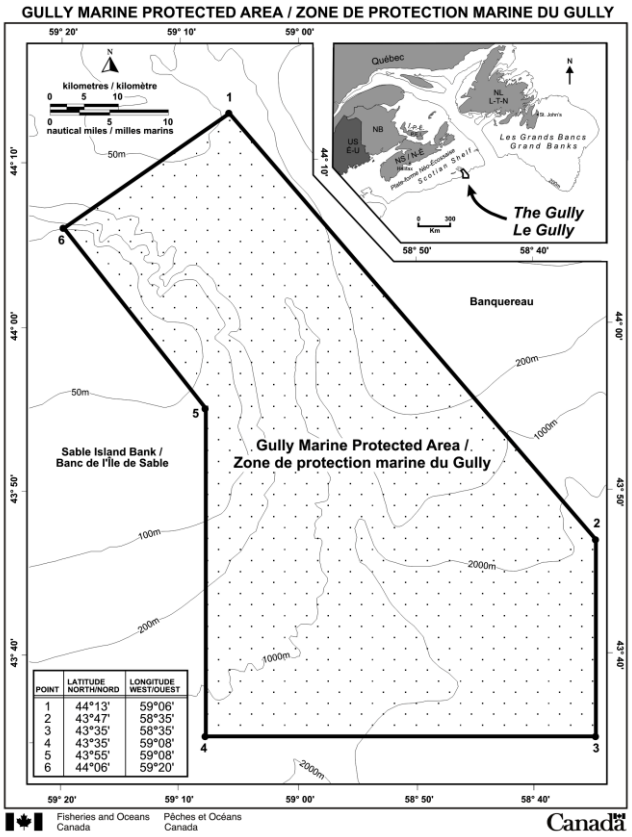
The Gully Marine Protected Area was designated pursuant to the *Oceans Act* on May 7th, 2004. The full text of the regulations may be accessed in the Gully Marine Protected Area Regulations.

Coordinates

The Gully is a deep canyon ecosystem on the edge of the Scotian Shelf near Sable Island. The Gully Marine Protected Area is bounded by rhumb lines connecting the following geographical coordinates [North America Datum 1983 (NAD 83)/World Geodetic System (WGS 84)].

Point	Latitude (North)	Longitude (West)
1	44° 13'	59° 06'
2	43° 47'	58° 35'
3	43° 35'	58° 35'
4	43° 35'	59° 08'
5	43° 55'	59° 08'
6	44° 06'	59° 20'

The Gully Marine Protected Area is shown in the map below:



Regulatory Requirements for Vessels Operating in the Gully Marine Protected Area

- See ***Section 5A - General Regulatory Requirements for all Oceans Act Marine Protected Areas.***
- **Specific requirements for the Gully Marine Protected Area**
  - Be aware that for the Gully Marine Protected Area, the **prohibitions extend to the vicinity** of the Marine Protected Area. It is prohibited to carry out any activity in the vicinity of the Gully Marine Protected Area that is likely to result in the disturbance, damage, destruction or removal of any living marine organism or any part of its habitat within the Marine Protected Area.
  - Vessels must avoid discharge of ballast water in the Marine Protected Area. Please see the *Ballast Water Regulations* for additional guidance (including exceptions) on ballast water management in and around the Marine Protected Area.
  - Any person involved in an incident that is likely to result in any prohibited activity must, within two hours after its occurrence, report the incident to the Canadian Coast Guard.

Guidelines for Vessels Operating in the Area (Year Round)

The following procedures are recommended in order to safeguard the Marine Protected Area and its resources.

Marine Mammal Protection

All marine mammal species are protected in the Marine Protected Area. The main species of concern are northern bottlenose, blue, fin, and Sowerby's beaked whales. The key threats associated with shipping are acoustic disturbances and vessel collisions. Vessels should adhere to the following measures to ensure marine mammal protection:

1. Vessels should avoid passage through this area if possible. Avoidance is the most effective means to eliminate or reduce acoustic disturbances and vessel collisions.
2. If passage through this area is required, decrease vessel speed to 10 knots or less and post a look-out to increase the likelihood of sighting and avoiding marine mammals. Increased caution must be exercised in conditions of reduced visibility, such as rain, fog, rough sea state, or at night. Be aware that marine mammals often travel in small groups dispersed over an area of several miles.
3. Vessels should adhere to the following operating measures while maneuvering around marine mammals:
   a. Avoid any sudden changes in speed or direction.
   b. Avoid heading directly toward marine mammals.
   c. Travel parallel to marine mammals.
   d. If it is not possible to maneuver around a marine mammal or group of marine mammals, slow down immediately, maintain a minimum distance of 100 metres and wait until animals are more than 400 metres away before slowly resuming speed.
   e. **Note**: some marine mammal species require different minimum distances – please refer to individual species' needs in Section 5 of this Notices to Mariners.
   f. If operating a sailing vessel with an auxiliary motor, leave it in idle or use the echo sounder to signal presence.
4. Vessels must comply with all relevant provisions of the Marine Mammal Regulations pursuant to the *Fisheries Act*. Further guidance is found in ***Section 5 - General Guidelines for Aquatic Species at Risk and Important Marine Mammal Areas*.**
5. Marine mammal collisions, entanglements, distressed or dead animals should be reported to the Marine Animal Response Society's emergency hotline (1-866-567-6277), or via VHF channel 16. Sightings of healthy marine mammals should be reported to XMARwhalesightings@dfo-mpo.gc.ca. The following information about the sighting should be included: date, time, location, and species. Photos and videos should be submitted if available.
6. Report sightings of North Atlantic Right Whales in near real-time (i.e., the same day as sighted or as soon as possible) to DFO.GLFWhales-BaleinesGLF.MPO@dfo-mpo.gc.ca. Detections validated with imagery will be used to inform management measures and will appear on the online platform Whales Insight (canada.ca/whale-insight-map).
   a. If you already have a Data Sharing Agreement with the Government of Canada to report sightings directly to Whale Insight in near real-time, please follow those reporting protocols rather than reporting your sightings to the above email, unless it is not possible (such as due to technological issues), in which case sightings must be reported as soon as possible by email to: DFO.GLFWhales-BaleinesGLF.MPO@dfo-mpo.gc.ca.
   b. When reporting near real-time sightings of NARW please include: GPS location (latitude and longitude), date and time of sighting, species sighted, number of animals, behavior of animals observed (ex., feeding, travelling, diving), and what photographs/videos were collected.

Pollution Prevention

The Marine Protected Area regulations apply to activities that may cause harm to the marine environment. Vessels must adhere to the following measures to ensure the protection of marine environmental quality:

1. Vessels must avoid discharges, including ballast water, in the Marine Protected Area. Vessels should also avoid such discharges within a minimum distance of 50 kilometers (27 nautical miles) from the Marine Protected Area.
2. Vessels must report any pollution sightings or incidents to the Canadian Coast Guard (1-800-565-1633 or VHF channel 16).

1.2 The Musquash Estuary Marine Protected Area

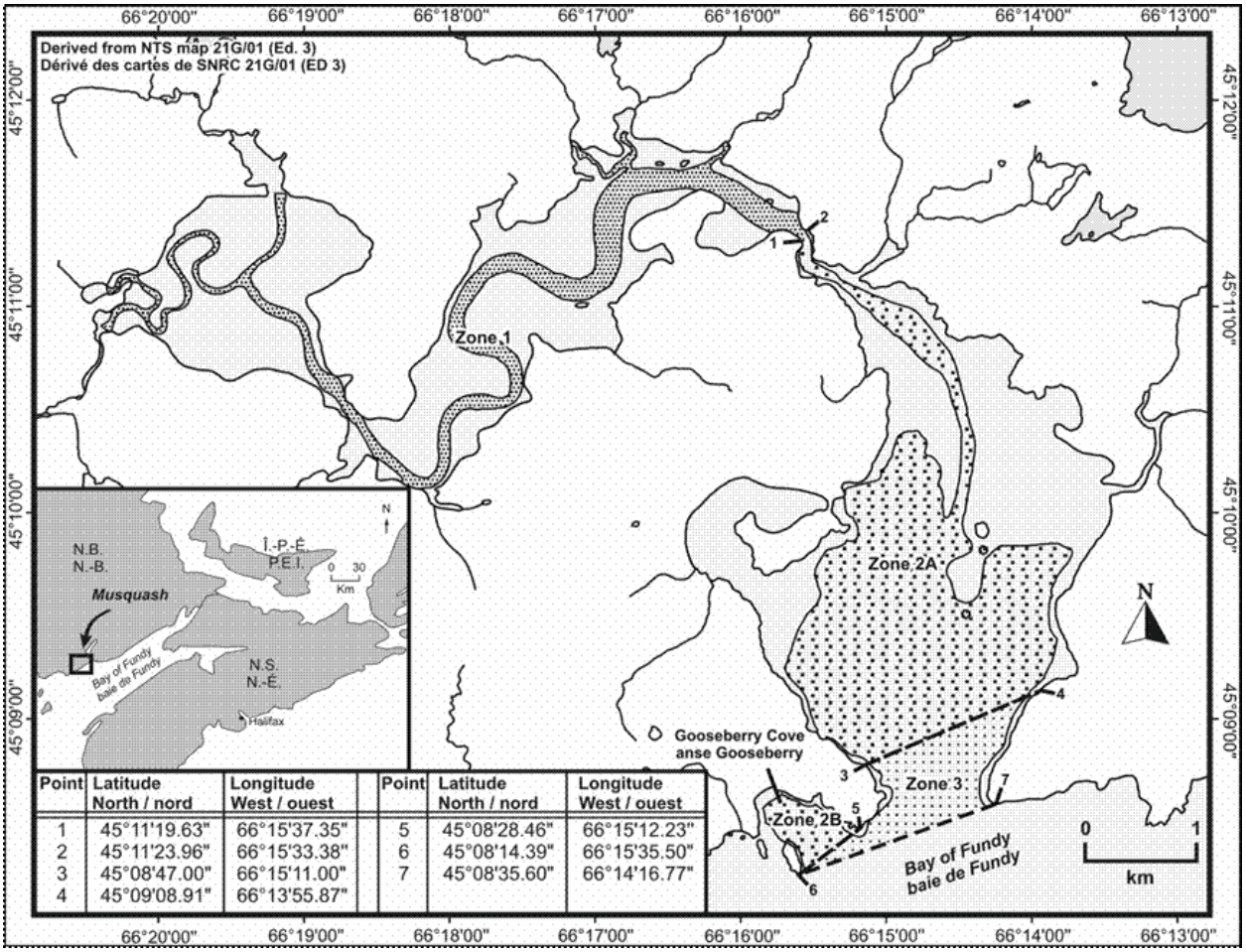
The Musquash Estuary Marine Protected Area was designated pursuant to the *Oceans Act* on December 14th, 2006. The full text of the regulations may be accessed in the Musquash Estuary Marine Protected Area Regulations.

Coordinates

The Musquash Marine Protected Area consists of the waters that are within an area bounded by the low-water line of the estuary and by the following rhumb lines to their respective points of intersection with the low-water line. All geographical coordinates (latitude and longitude) are expressed in the North America Datum 1983 (NAD 83) geodetic reference system.

Point	Latitude (North)	Longitude (West)
1	45° 11' 19.63”	66° 15' 37.35”
2	45° 11' 23.96”	66° 15' 33.38”
3	45° 08' 47.00”	66° 15' 11.00”
4	45° 09' 08.91”	66° 13' 55.87”
5	45° 08' 28.46”	66° 15' 12.23”
6	45° 08' 14.39”	66° 15' 35.50”
7	45° 08' 35.60”	66° 14' 16.77”

The Musquash Estuary Marine Protected Area is shown in the map below:



Point	Latitude North / nord	Longitude West / ouest	Point	Latitude North / nord	Longitude West / ouest
1	45°11'19.63"	66°15'37.35"	5	45°08'28.46"	66°15'12.23"
2	45°11'23.96"	66°15'33.38"	6	45°08'14.39"	66°15'35.50"
3	45°08'47.00"	66°15'11.00"	7	45°08'35.60"	66°14'16.77"
4	45°09'08.91"	66°13'55.87"			

Regulatory Requirements for Vessels Operating in the Musquash Estuary Marine Protected Area

- See ***Section 5A - General Regulatory Requirements for all Oceans Act Marine Protected Areas***.
- **Specific requirements for the Musquash Estuary Marine Protected Area**

  The Musquash Estuary Marine Protected Area is composed of three internal management zones (Zone 1, Zones 2A and 2B, and Zone 3) in which different activities may be permitted, provided that they do not compromise the overall conservation objectives of the Marine Protected Area.

  - The operation of a motorized vessel is not permitted in Zone 1.
  - The operation of a vessel **in Zones 2A and 2B** is permitted at a speed no greater than **5 knots**.
  - The operation of a vessel in **Zone 3** is permitted at a speed no greater than **8 knots**.
  - Any person involved in an incident that is likely to result in any prohibited activity shall, within two hours after its occurrence, report the incident to the Canadian Coast Guard.

1.3 The St. Anns Bank Marine Protected Area

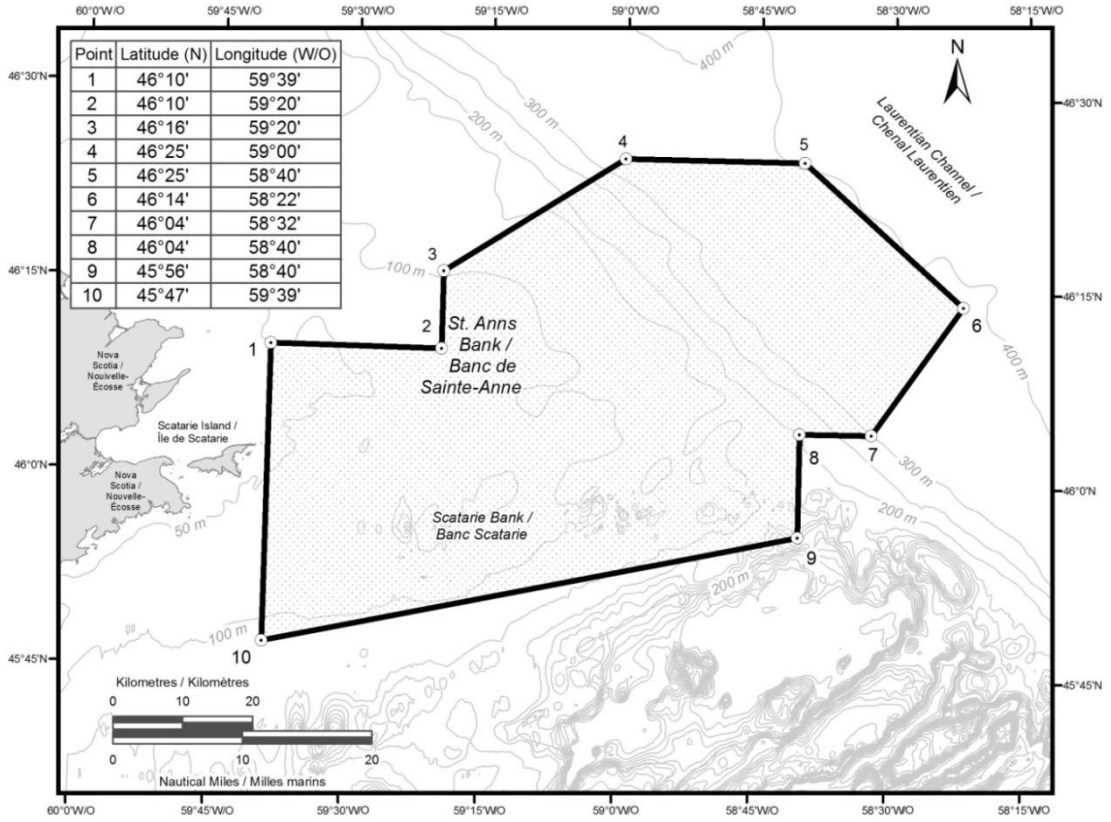
The St. Anns Bank Marine Protected Area was designated pursuant to the *Oceans Act* on June 2, 2017. The full text of the regulations may be accessed in the St. Anns Bank Marine Protected Area Regulations.

Coordinates

The St. Anns Bank Marine Protected Area is bounded by a series of rhumb lines drawn from points 1 to 10, and then back to point 1. All geographical coordinates (latitude and longitude) are expressed in the North America Datum 1983 (NAD83) reference system.

Point	Latitude (North)	Longitude (West)
1	46° 10'	59° 39'
2	46° 10'	59° 20'
3	46° 16'	59° 20'
4	46° 25'	59° 00'
5	46° 25'	58° 40'
6	46° 14'	58° 22'
7	46° 04'	58° 32'
8	46° 04'	58° 40'
9	45° 56'	58° 40'
10	45° 47'	59° 39'

The St. Anns Bank Marine Protected Area is shown in the map below:



Regulatory Requirements for Vessels Operating in the St. Anns Bank Marine Protected Area

- See ***Section 5A - General Regulatory Requirements for all Oceans Act Marine Protected Areas*.**

Specific requirements for the St. Anns Bank Marine Protected Area

- Vessels must avoid discharge of ballast water in the Marine Protected Area. However, under certain circumstances, vessels when navigating on transoceanic voyages may conduct ballast water exchanges in the portion of the Marine Protected Area that overlaps with the Laurentian Channel, where the water depth is at least 300 m, and only from December 1 to May 1. Please see the *Ballast Water Regulations* for additional guidance (including exceptions) on ballast water management in and around the Marine Protected Area.

Guidelines for Vessels Operating in the Area (Year Round)

The following procedures are recommended in order to safeguard the Marine Protected Area and its resources:

1. Vessels must comply with all relevant provisions of the Marine Mammal Regulations pursuant to the *Fisheries Act*. Further guidance is found in ***Section 5 - General Guidelines for Aquatic Species at Risk and Important Marine Mammal Areas*.**

2. Marine mammal collisions, entanglements, distressed or dead animals should be reported to the Marine Animal Response Society's emergency hotline (1-866-567-6277), or via VHF channel 16. Sightings of healthy marine mammals should be reported to XMARwhalesightings@dfo-mpo.gc.ca. The following information about the sighting should be included: date, time, location, and species. Photos and videos should be submitted if available.

3. Report sightings of North Atlantic Right Whales in near real-time (i.e., the same day as sighted or as soon as possible) to DFO.GLFWhales-BaleinesGLF.MPO@dfo-mpo.gc.ca. Detections validated with imagery will be used to inform management measures and will appear on the online platform Whales Insight.

    a. If you already have a Data Sharing Agreement with the Government of Canada to report sightings directly to Whale Insight in near real-time, please follow those reporting protocols rather than reporting your sightings to the above email, unless it is not possible (such as due to technological issues), in which case sightings must be reported as soon as possible by email to: DFO.GLFWhales-BaleinesGLF.MPO@dfo-mpo.gc.ca.

    b. When reporting near real-time sightings of NARW please include: GPS location (latitude and longitude), date and time of sighting, species sighted, number of animals, behavior of animals observed (ex., feeding, travelling, diving), and what photographs/videos were collected.

4. All live and dead sea turtle sightings and incidents (e.g. entanglements, collisions) should be reported to the Canadian Sea Turtle Network's hotline (1-888-729-4667) or online at Turtle Sighting. The following information about the sighting or incident should be included: date, time, location, species, and condition of the animal. Photos and videos should be submitted if available.

1.4 Eastport Marine Protected Areas

The Eastport Marine Protected Areas were designated pursuant to the *Oceans Act* on September 26th, 2005. The full text of the regulations may be accessed in the Eastport Marine Protected Areas Regulations.

Coordinates

The Eastport Marine Protected Areas in Bonavista Bay consist of two closed areas: the waters surrounding Duck Islands and the waters surrounding Round Island, encompassing a total area of 2.1 km². The inner limit of both areas is the low-water line of the islands within the outer limit, as defined below.

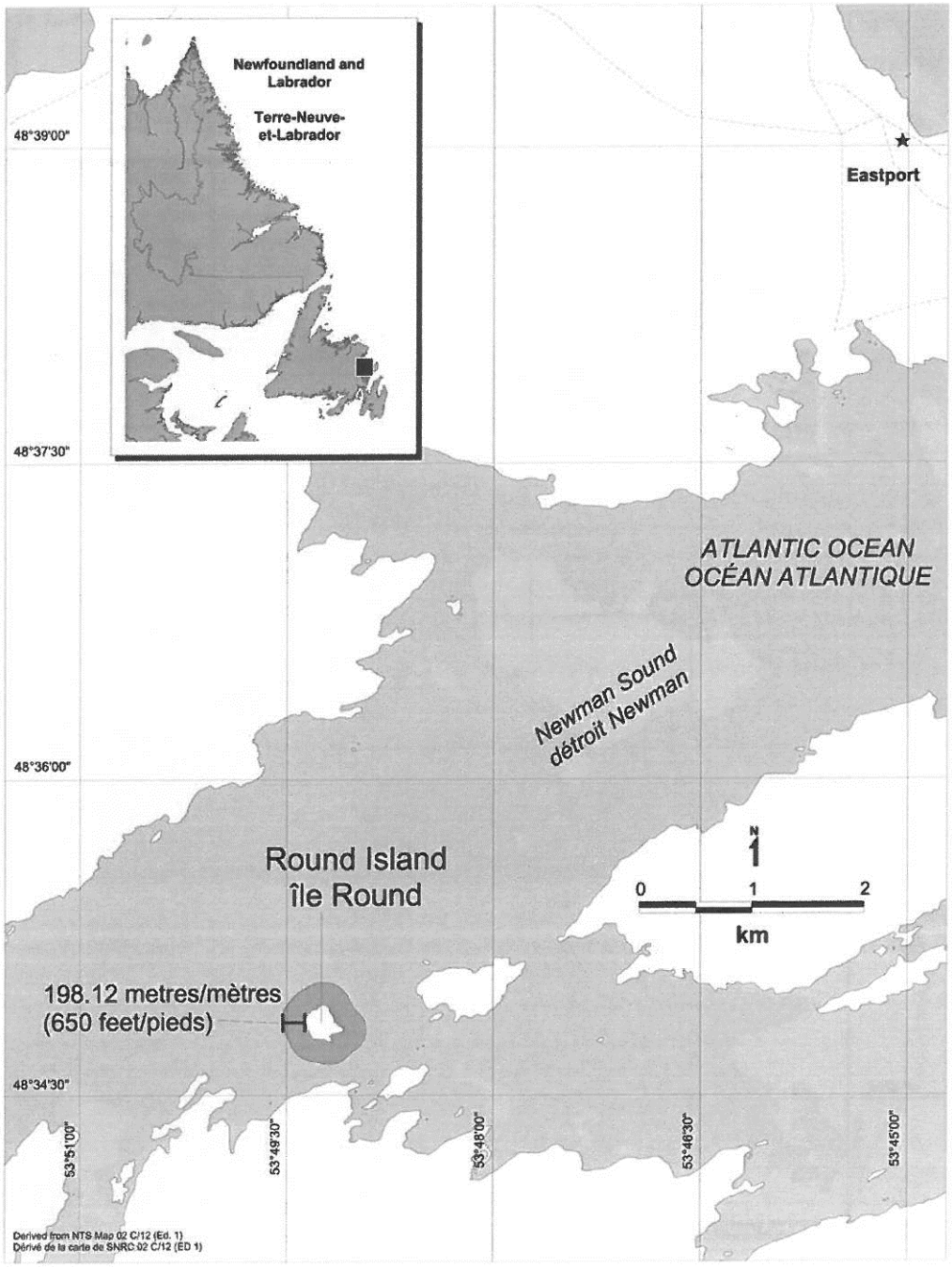
All geographical coordinates (latitude and longitude) are expressed in the North America Datum 1983 (NAD 83) geodetic reference system.

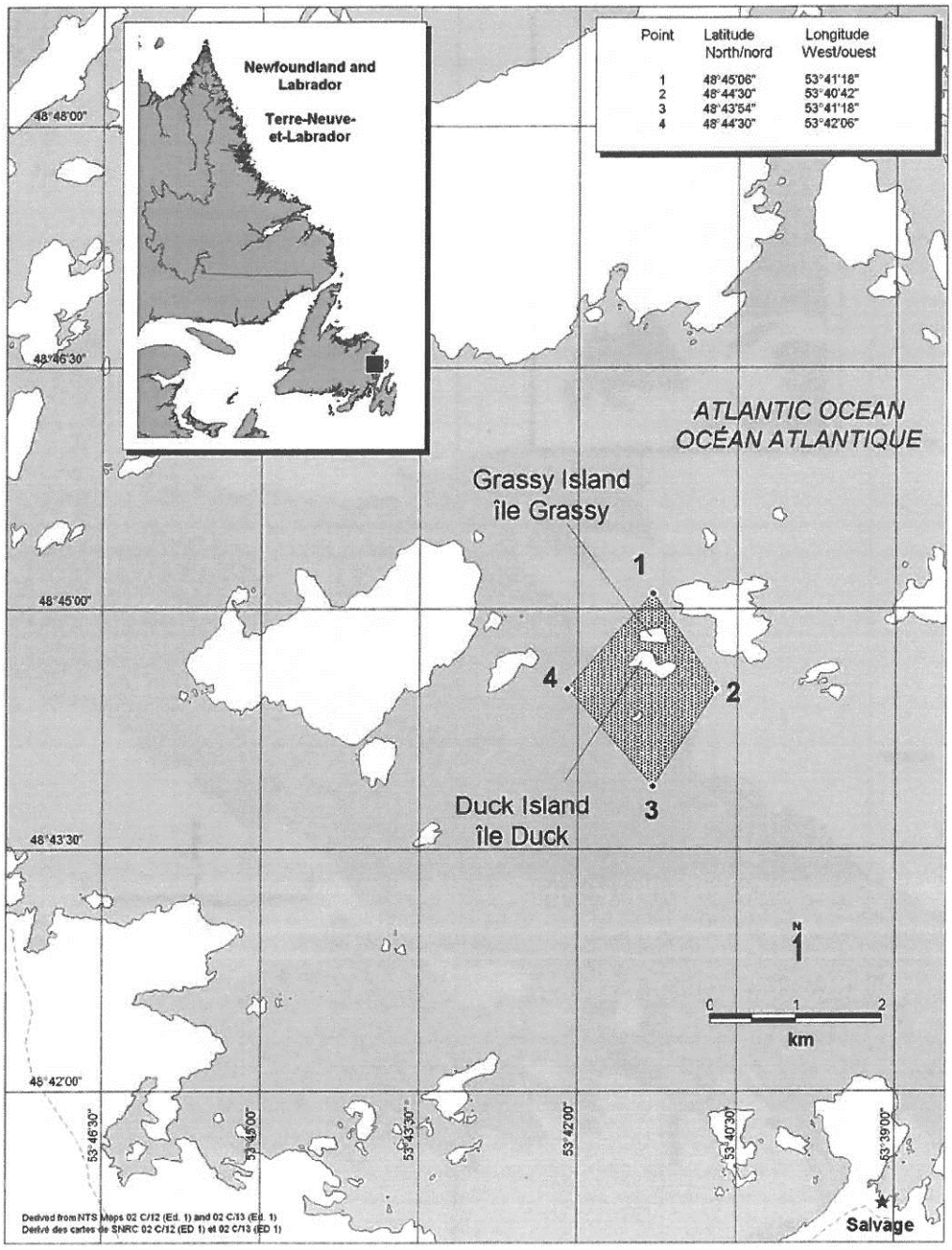
Round Island Marine Protected Area consists of waters whose outer limit is a line every point of which is at a distance of 198.12 m from the nearest point of the low-water line of Round Island.

Duck Islands Marine Protected Area consists of waters whose outer limit is a series of rhumb lines joining Points 1 to 4.

Point	Latitude (North)	Longitude (West)
1	48° 45′ 06"	53° 41′ 18"
2	48° 44′ 30"	53° 40′ 42"
3	48° 43′ 54"	53° 41′ 18"
4	48° 44′ 30"	53° 42′ 06"

The Duck Island and Round Island Marine Protected Areas are shown on the maps below:





Regulatory Requirements for Vessels Operating in the Eastport Marine Protected Areas

- See ***Section 5A - General Regulatory Requirements for all Oceans Act Marine Protected Areas.***

Guidelines for Vessels Operating in the Area (Year Round)

- Boaters are permitted to sail through the Marine Protected Areas, but are asked to take every precaution and exercise due diligence while operating a vessel near these waters.
- Any person involved in an incident within the Eastport MPAs that is likely to result in any prohibited activity shall, within two hours after its occurrence, report the incident to the Canadian Coast Guard.

1.5 Gilbert Bay Marine Protected Area

The Gilbert Bay Marine Protected Area was designated pursuant to the *Oceans Act* on September 26th, 2005. The full text of the regulations may be accessed in the Gilbert Bay Marine Protected Area Regulations.

The Regulations establish three management zones within the MPA:

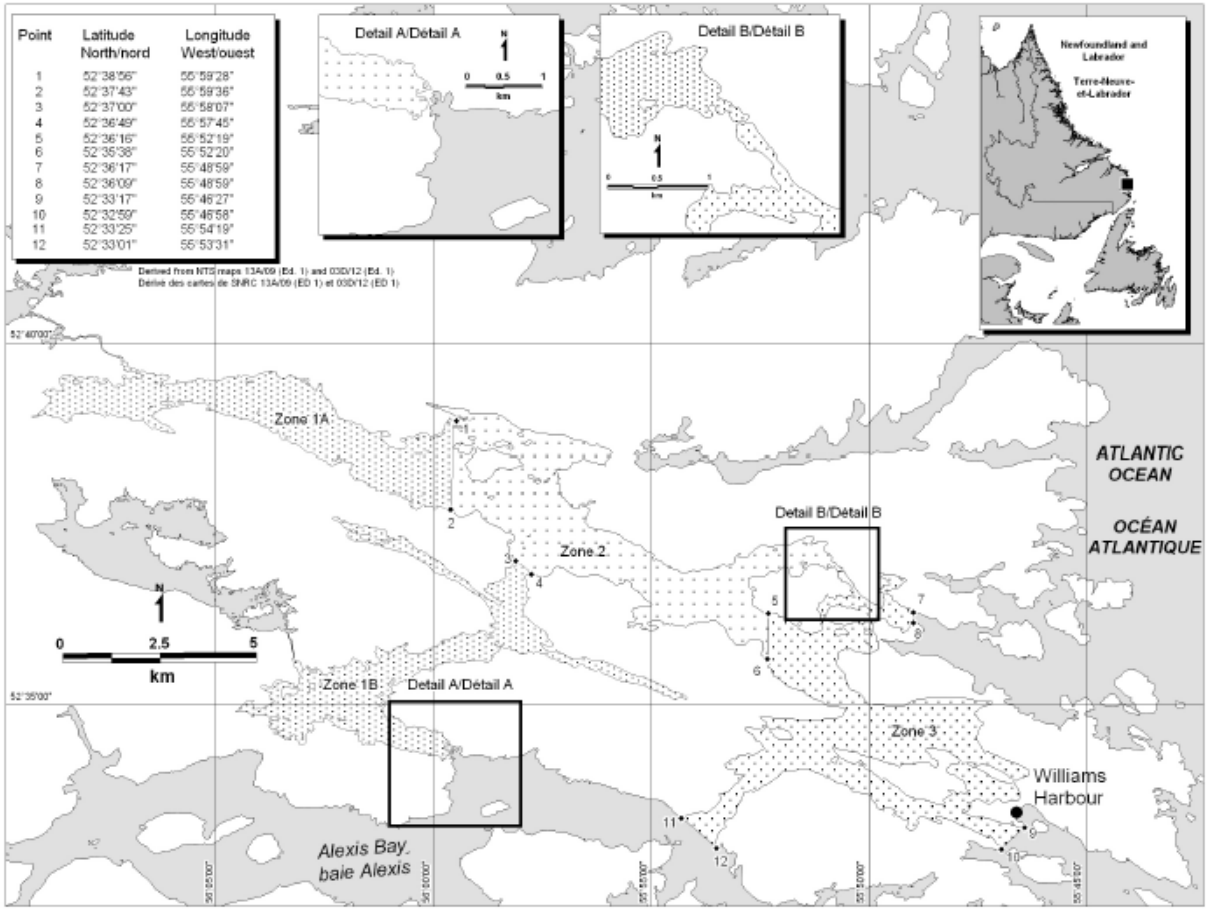
- Zone 1a and 1b (core protection zone): Zones 1a and 1b cover a combined area of 24.9 km^2. These are critical areas for cod and for migrating salmon, char and trout, and they house pristine maerl beds.
- Zone 2 and 3 (adaptive management zones): Zone 2 and 3 covers a combined area of 37.5 km^2. They encompass important areas that cod use for spawning, feeding and migrating between the outer part of the bay in the summer and the inner part in the fall.

Coordinates

The Gilbert Bay Marine Protected Area is 62.4 km^2, comprises the waters of Gilbert Bay that are within an area of the sea bounded by the low-water line of the bay and by the rhumb lines below, to their points of intersection with the low-water line. All geographic coordinates (latitude and longitude) are expressed in the North America Datum 1983 (NAD 83) geodetic reference system.

Point	Latitude (North)	Longitude (West)
1	52° 38′ 56"	55° 59′ 28"
2	52° 37′ 43"	55° 59′ 36"
3	52° 37′ 00"	55° 58′ 07"
4	52° 36′ 49"	55° 57′ 45"
5	52° 36′ 16"	55° 52′ 19"
6	52° 35′ 38"	55° 52′ 20"
7	52° 36′ 17"	55° 48′ 59"
8	52° 36′ 09"	55° 48′ 59"
9	52° 33′ 17"	55° 46′ 27"
10	52° 32′ 59"	55° 46′ 58"
11	52° 33′ 25"	55° 54′ 19"
12	52° 33′ 01"	55° 53′ 31"

The Gilbert Bay Marine Protected Area is shown on the following map:



Regulatory Requirements for Vessels Operating in the Gilbert Bay Marine Protected Area

- See ***Section 5A - General Regulatory Requirements for all Oceans Act Marine Protected Areas.***
- Specific requirements for the Gilbert Bay Marine Protected Area
  - **Zone 1** (core protection zone) – Recreational or commercial fishing for Atlantic cod is prohibited. Angling for Arctic char, salmon or trout, sealing and the Aboriginal food fishery are permitted. The maintenance, repair or removal of a wharf is permitted.
  - **Zone 2** – Recreational or commercial fishing for Atlantic cod is prohibited. Recreational fishing for any species other than Atlantic cod, sealing and the Aboriginal food fishery are permitted. The construction, maintenance, repair or removal of a wharf is permitted.
  - **Zone 3** – Commercial fishing for Atlantic cod is prohibited. Recreational fishing for any species, sealing and the Aboriginal food fishery are permitted. The construction, maintenance, repair or removal of a wharf, causeway or bridge is permitted.

Guidelines for Vessels Operating in the Area (Year Round)

- Boaters are permitted to sail through the Marine Protected Areas, but are asked to take every precaution and exercise due diligence while operating a vessel near these waters.
- Any person involved in an incident in the Gilbert Bay MPA that is likely to result in any prohibited activity shall, within two hours after its occurrence, report the incident to the Canadian Coast Guard.

1.6 Basin Head Marine Protected Area

The Basin Head Marine Protected Area was designated pursuant the *Oceans Act* on September 26th, 2005. The full text of the regulations may be accessed in the Basin Head Marine Protected Area Regulations.

The Basin Head MPA covers an area of 9 km^2, which includes 3 distinctive areas: the outer coast (zone 3), the main basin (zone 2) and the inner channel (zone 1).The Basin Head ecosystem is shallow, with an overall average depth of less than 1 m above chart datum (Sharp et al. 2003). The deeper basin is about 500 m in diameter and is attached to a shallower channel (Northeast Arm) that is about 3 km long and up to 200 m wide. The distinct strain of Irish moss is found only on relatively firm, sandy substrates within this channel. Sandy substrates are primarily found on shallow banks in the center of the channel whereas muddy sediments often cover the intertidal fringes and deeper channels. The mouth of the lagoon and the first 100 m of the entrance channel are highly energetic, with average tidal current speeds reaching 50 cm/s, while in Northeast Arm, average current speeds rarely exceed 16 cm/s.

Coordinates

The Basin Head Marine Protected Area and the management zones coordinates are shown in the following map (geographic coordinates are expressed in the North America Datum 1983 (NAD 83) geodetic reference system). The management zones are as follows:

a. Zone 1, consisting of waters lying generally northeast of a rhumb line connecting points at 46°23′20″ N, 62°06′10″ W and 46°23′18″ N, 62°06′08″ W, that are within an area of the sea bounded by the low-water line of the harbour and by the rhumb line to its points of intersection with the low-water line;

b. Zone 2, consisting of waters that are within an area of the sea bounded by the low-water line of the harbour and by the following rhumb lines to their respective points of intersection with the low-water line, namely,

   i. a line connecting points at 46°23′20″ N, 62°06′10″ W and 46°23′18″ N, 62°06′08″ W, and

   ii. a line connecting points at 46°22′39″ N, 62°06′29″ W and 46°22′40″ N, 62°06′29″ W; and

c. Zone 3, consisting of waters that are within an area of the sea bounded by the low-water line of the Northumberland Straight and by the following rhumb lines, namely,

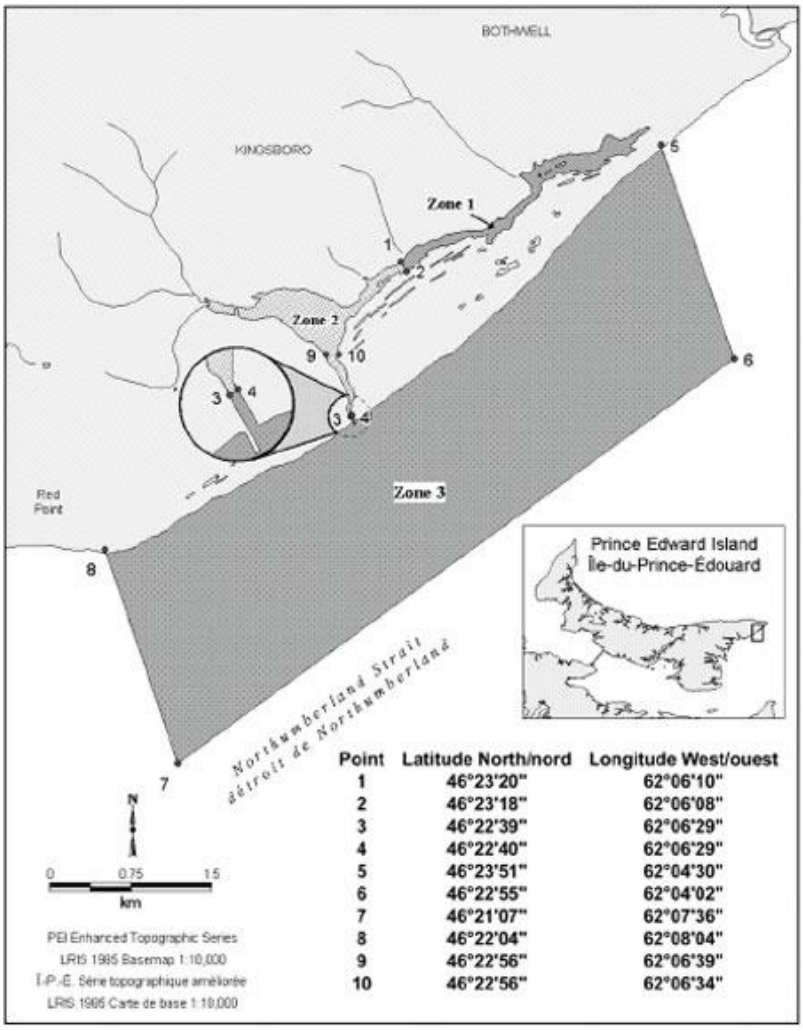
   i. to its points of intersection with the low-water line, a line connecting points at 46°22′39″ N, 62°06′29″ W and 46°22′40″ N, 62°06′29″ W;

   ii. to its point of intersection with the low-water line, a line connecting points at 46°23′51″ N, 62°04′30″ W and 46°22′55″ N, 62°04′02″ W;

   iii. a line connecting points at 46°22′55″ N, 62°04′02″ W and 46°21′07″ N, 62°07′36″ W, and

   iv. to its point of intersection with the low-water line, a line connecting points at 46°21′07″ N, 62°07′36″ W and 46°22′04″ N, 62°08′04″ W.

Point	Latitude (North)	Longitude (West)
1	46°23’20” N	62°06’10” W
2	46°23’18” N	62°06’08” W
3	46°22’39” N	62°06’29” W
4	46°22’40” N	62°06’29” W
5	46°23’51” N	62°04’30” W
6	46°22’55” N	62°04’02” W
7	46°21’07” N	62°07’36” W
8	46°22’04” N	62°08’04” W
9	46°22’56” N	62°06’39” W
10	46°22’56” N	62°06’34” W



Point	Latitude North/nord	Longitude West/ouest
1	46°23'20"	62°06'10"
2	46°23'18"	62°06'08"
3	46°22'39"	62°06'29"
4	46°22'40"	62°06'29"
5	46°23'51"	62°04'30"
6	46°22'55"	62°04'02"
7	46°21'07"	62°07'36"
8	46°22'04"	62°08'04"
9	46°22'56"	62°06'39"
10	46°22'56"	62°06'34"

Regulatory Requirements for Vessels Operating in the Basin Head Marine Protected Area

- See ***Section 5A - General Regulatory Requirements for all Oceans Act Marine Protected Areas.***
- **Specific requirements for the Basin Head Marine Protected Areas**
  - **Zone 1** (The inner channel) – This zone has the highest level of protection. Swimming, diving, use of motorized vessels, and fishing are not permitted.
  - **Zone 2** (The lagoon) – This zone acts as a buffer zone for the more sensitive Zone 1 area. Swimming and diving, and fishing (with licence) is allowed but the use of a motorized vessel is only permitted south of the rhumb line connecting points 9 and 10 (see map above) solely for the purpose of transiting Zone 2 in order to launch a vessel from, or land it at, a boat launch.
  - **Zone 3** (The outer coast) - Swimming, diving, fishing (with licence), and the use of motorized vessels are permitted in this zone.
  - Any person involved in an incident in the Basin Head Marine Protected Area that is likely to result in any prohibited activity shall, within two hours after its occurrence, report the incident to the Canadian Coast Guard.

1.7 The Banc-des-Américains Marine Protected Area

The Banc-des-Américains Marine Protected Area Regulations, under the Oceans Act, were published on March 6, 2019. The full text of the regulations designating this area can be found in the Banc-des-Américains Marine Protected Area Regulations.

These Regulations constitute the federal portion of the joint Banc-des-Américains Marine Protected Area project, created under the Canada-Quebec collaborative agreement for establishing a marine protected areas network in Quebec and the specific Agreement for this project, signed on March 4, 2019.

Coordinates

The Regulations establish two management zones within the MPA:

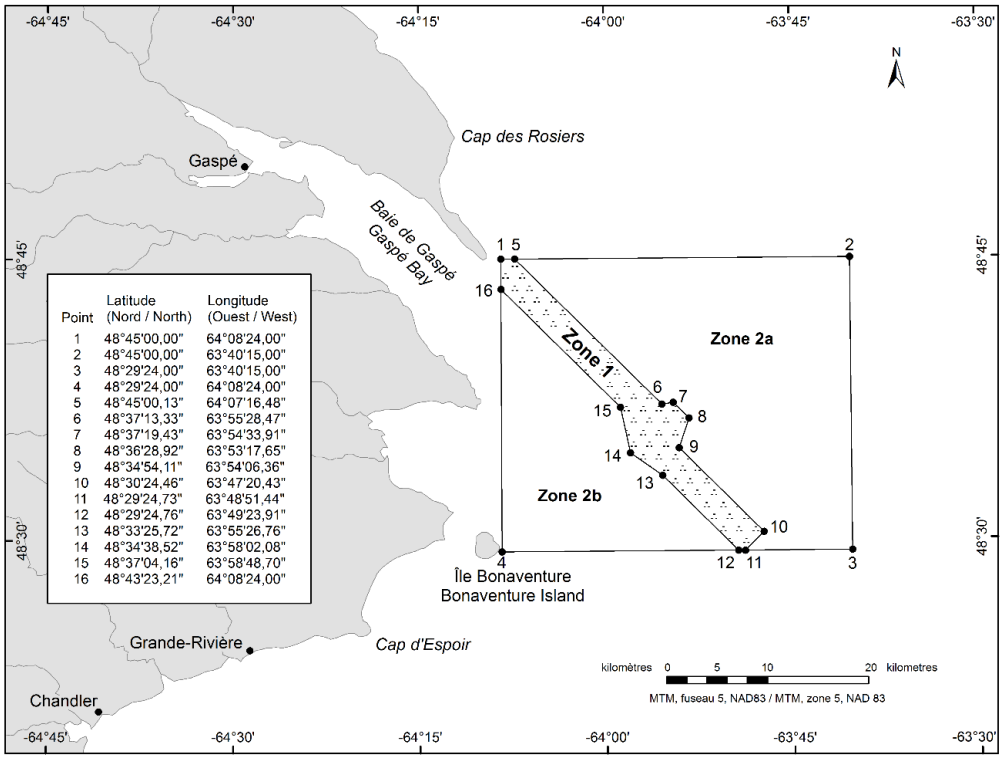
Zone 1 (core protection zone): This zone covers an area of 127 km^2. It covers all of the rocky ridges associated with the American Bank, as well as their escarpments and the surrounding sea floor.

Zones 2a and 2b (adaptive management zone): These zones cover an area of 873 km^2 and include almost 90% of the MPA. They include the deep plains on either side of the American Bank.

The Banc-des-Américains Marine Protected Area (1,000 km^2) is bounded by rhumb lines connecting the following geographical coordinates (points 1 to 16) [North American Datum 1983 (NAD 83)]. Zone 1 is bounded by a series of rhumb lines drawn from point 1 to point 5, then to points 6 to 16 and then back to point 1. Zone 2a is bounded by a series of rhumb lines drawn from point 5 to point 2, then to point 3, then to point 11, then to point 10, then to point 9, then to point 8, then to point 7, then to point 6 and then back to point 5. Zone 2b is bounded by a series of rhumb lines drawn from point 16 to point 15, then to point 14, then to point 13, then to point 12, then to point 4 and then back to point 16.

Point	Latitude (North)	Longitude (West)
1	48° 45' 00.00"	64° 08' 24.00"
2	48° 45' 00.00"	63° 40' 15.00"
3	48° 29' 24.00"	63° 40' 15.00"
4	48° 29' 24.00"	64° 08' 24.00"
5	48° 45' 00.13"	64° 07' 16.48"
6	48° 37' 13.33"	63° 55' 28.47"
7	48° 37' 19.43"	63° 54' 33.91"
8	48° 36' 28.92"	63° 53' 17.65"
9	48° 34' 54.11"	63° 54' 06.36"
10	48° 30' 24.46"	63° 47' 20.43"
11	48° 29' 24.73"	63° 48' 51.44"
12	48° 29' 24.76"	63° 49' 23.91"
13	48° 33' 25.72"	63° 55' 26.76"
14	48° 34' 38.52"	63° 58' 02.08"
15	48° 37' 04.16"	63° 58' 48.70"
16	48° 43' 23.21"	64° 08' 24.00"

The Banc-des-Américains Marine Protected Area is shown in the map below:



Point	Latitude (Nord / North)	Longitude (Ouest / West)
1	48°45'00,00"	64°08'24,00"
2	48°45'00,00"	63°40'15,00"
3	48°29'24,00"	63°40'15,00"
4	48°29'24,00"	64°08'24,00"
5	48°45'00,13"	64°07'16,48"
6	48°37'13,33"	63°55'28,47"
7	48°37'19,43"	63°54'33,91"
8	48°36'28,92"	63°53'17,65"
9	48°34'54,11"	63°54'06,36"
10	48°30'24,46"	63°47'20,43"
11	48°29'24,73"	63°48'51,44"
12	48°29'24,76"	63°49'23,91"
13	48°33'25,72"	63°55'26,76"
14	48°34'38,52"	63°58'02,08"
15	48°37'04,16"	63°58'48,70"
16	48°43'23,21"	64°08'24,00"

Regulatory Requirements for Vessels Operating in the Banc-des-Américains Marine Protected Area

- See ***Section 5A – General Regulatory Requirements for all Oceans Act Marine Protected Areas.***
- **Specific requirements for the Banc-des-Américains Marine Protected Area**
  - All activities related to shipping and transportation continue to be allowed within the MPA. However, anchoring of vessels is not permitted in Zone 1. In addition, discharge of sewage and release of grey water (as defined in the *Vessel Pollution and Dangerous Chemicals Regulations*) from vessels with a gross tonnage of 400 tonnes or more, or certified to carry 15 or more passengers, are prohibited in the MPA.

Guidelines for Vessels Operating in the Area (Year Round)

It is recommended that the following guidelines be followed to safeguard the Marine Protected Area and its resources.

Marine Mammal Protection

1. Vessels must comply with all relevant provisions of the *Marine Mammal Regulations* under the *Fisheries Act*. Further details can be found in **Section 5 – *General Guidelines for Aquatic Species at Risk and Important Marine Mammal Areas.***

2. Report all collisions with marine mammals or turtles, entanglements of marine mammals or turtles and animals in distress or those found dead by calling the toll-free number of the *Réseau québécois d'urgences pour les mammifères marins* (1-877-722-5346). Before releasing a whale carcass caught in fishing gear, it is important to contact the emergency service.

3 Report sightings of North Atlantic right whales (NARW) in near real-time (i.e., on the day of the sighting or as soon as possible) to DFO.GLFWhales-BaleinesGLF.MPO@dfo-mpo.gc.ca. Image-confirmed sightings will be used to inform management actions and will appear on the online Whale Watch platform.

4 If you already have a data-sharing agreement with the Government of Canada to report sightings directly to Whale Watch in near real-time, please follow those reporting protocols rather than sending your sightings to the email address above, unless this is not possible (due to technical issues, for example). In that case, sightings should be reported as soon as possible by email to DFO.GLFWhales-BaleinesGLF.MPO@dfo-mpo.gc.ca.

5 When reporting near real-time NARW sightings, please provide the GPS position (latitude and longitude), date and time of sighting, species observed, number of animals, behavior of animals observed (e.g., feeding, moving, diving), and any photographs/videos that were taken.

N.B. In this document, the term “Banc-des-Américains” is used to refer to the marine area that is designated as a Marine Protected Area, while the term “American Bank” is used to refer to the underwater bank (i.e. the physical structure) in the Gulf of St. Lawrence.

1.8 Laurentian Channel Marine Protected Area

The *Laurentian Channel Marine Protected Area Regulations*, under the *Oceans Act*, were published on May 1, 2019. The full text of the regulations designating this area can be found in the Laurentian Channel Marine Protected Area Regulations.

The Regulations establish two management zones within the MPA:

- Zone 1a and 1b (core protection zones): Zone 1a covers an area of 1,495 km^2 and zone 1b covers an area of 612 km^2. These zones consist of sensitive benthic areas with the highest level of protection with the MPA.
- Zones 2a and 2b (adaptive management zones): These zones cover a combined area of 9,473 km^2 and include almost 82% of the MPA. They are the adaptive management zones which accommodate activities compatible with the conservation objectives.

Coordinates

The Laurentian Channel Marine Protected Area (11,580 km^2) includes the seabed, the subsoil to a depth of five metres, and the water column above the seabed. It is bounded by rhumb lines connecting the following geographical coordinates (perimeter node points 1 to 18) and contains two core protection zones (zone 1a and 1b):

a. Zone 1a, which is bounded by a series of rhumb lines drawn from point 6 to point 7, then to points 19 to 23 and then back to point 6;
b. Zone 1b, which is bounded by a series of rhumb lines drawn from points 24 to 27 and then back to point 24;
c. Zone 2a, which is bounded by a series of rhumb lines drawn from points 1 to 6, then to point 23, then to point 22, then to points 14 to 18 and then back to point 1; and
d. Zone 2b, which is bounded by
    i. a series of rhumb lines drawn from point 7 to point 24, then to point 27, then to point 26, then to point 25 and then to point 8,
    ii. a geodesic line drawn from point 8 to point 9, and
    iii. a series of rhumb lines drawn from points 9 to 13, then to point 21, then to point 20, then to point 19 and then back to point 7.

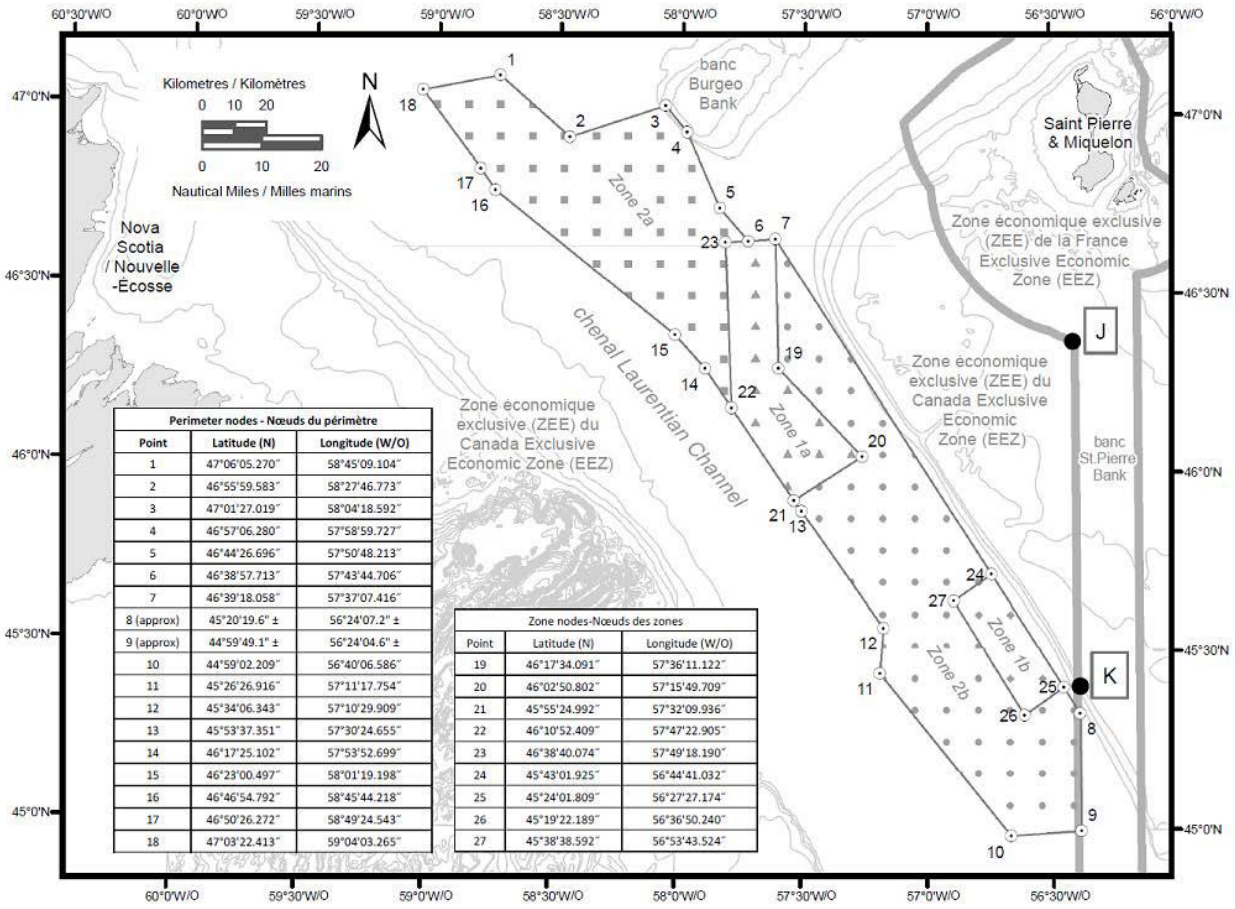
The Laurentian Channel Marine Protected Areas and the management zones coordinates are shown in the following map (geographic coordinates are expressed in the North America Datum 1983 (NAD 83) geodetic reference system).

Perimeter nodes

Point	Latitude (North)	Longitude (West)
1	47°06'05.270"	58°45'09.104"
2	46°55'59.583"	58°27'46.773"
3	47°01'27.019"	58°04'18.592"
4	46°57'06.280"	57°58'59.727"
5	46°44'26.696"	57°50'48.213"
6	46°38'57.713"	57°43'44.706"
7	46°39'18.058"	57°37'07.416"
8 (approx)	45°20'19.6" ±	56°24'07.2" ±
9 (approx)	44°59'49.1" ±	56°24'04.6" ±
10	44°59'02.209"	56°40'06.586"
11	45°26'26.916"	57°11'17.754"
12	45°34'06.343"	57°10'29.909"
13	45°53'37.351"	57°30'24.655"
14	46°17'25.102"	57°53'52.699"
15	46°23'00.497"	58°01'19.198"
16	46°46'54.792"	58°45'44.218"
17	46°50'26.272"	58°49'24.543"
18	47°03'22.413"	59°04'03.265"

Zone nodes

Point	Latitude (North)	Longitude (West)
19	46°17'34.091"	57°36'11.122"
20	46°02'50.802"	57°15'49.709"
21	45°55'24.992"	57°32'09.936"
22	46°10'52.409"	57°47'22.905"
23	46°38'40.074"	57°49'18.190"
24	45°43'01.925"	56°44'41.032"
25	45°24'01.809"	56°27'27.174"
26	45°19'22.189"	56°36'50.240"
27	45°38'38.592"	56°53'43.524"



Perimeter nodes - Nœuds du périmètre		
Point	Latitude (N)	Longitude (W/O)
1	47°06'05.270"	58°45'09.104"
2	46°55'59.583"	58°27'46.773"
3	47°01'27.019"	58°04'18.592"
4	46°57'06.280"	57°58'59.727"
5	46°44'26.696"	57°50'48.213"
6	46°38'57.713"	57°43'44.706"
7	46°39'18.058"	57°37'07.416"
8 (approx)	45°20'19.6" ±	56°24'07.2" ±
9 (approx)	44°59'49.1" ±	56°24'04.6" ±
10	44°59'02.209"	56°40'06.586"
11	45°26'26.916"	57°11'17.754"
12	45°34'06.343"	57°10'29.909"
13	45°53'37.351"	57°30'24.655"
14	46°17'25.102"	57°53'52.699"
15	46°23'00.497"	58°01'19.198"
16	46°46'54.792"	58°45'44.218"
17	46°50'26.272"	58°49'24.543"
18	47°03'22.413"	59°04'03.265"

Zone nodes-Nœuds des zones		
Point	Latitude (N)	Longitude (W/O)
19	46°17'34.091"	57°36'11.122"
20	46°02'50.802"	57°15'49.709"
21	45°55'24.992"	57°32'09.936"
22	46°10'52.409"	57°47'22.905"
23	46°38'40.074"	57°49'18.190"
24	45°43'01.925"	56°44'41.032"
25	45°24'01.809"	56°27'27.174"
26	45°19'22.189"	56°36'50.240"
27	45°38'38.592"	56°53'43.524"

Regulatory Requirements for Vessels Operating in the Laurentian Channel Marine Protected Area

- See ***Section 5A – General Regulatory Requirements for all Oceans Act Marine Protected Areas*****.**
- **Specific Requirements for Laurentian Channel Marine Protected Area**
  - Navigation of vessels may be carried out provided that there is no anchoring in Zone 1a or 1b.
  - Vessels must avoid discharge of ballast water in the Marine Protected Area. However, under certain circumstances (*Ballast Water Regulations*, and *List of Canada's Designated Alternate Ballast Water Exchange Areas and Fresh Waters (TP 13617E)*), vessels when navigating on transoceanic voyages may conduct ballast water exchanges in the portion of the Marine Protected Area that overlaps with the Laurentian Channel, where the water depth is at least 300 m, and only from December 1 to May 1. Please see the *Ballast Water Regulations* for additional guidance (including exceptions) on ballast water management in and around the Marine Protected Area.
  - the laying, maintenance and repair of cables in Zones 2a and 2b may be carried out, provided that it is not likely to destroy the habitat of any living marine organism in the Marine Protected Area

Environmental Emergencies

- In case of environmental emergencies (such as collisions with marine mammals and turtle entanglements, or oil/chemical spills) please contact: Canadian Coast Guard at Environmental Emergencies 1 709 772 2083 or Canadian Coast Guard Radio (VHF 16)

2. Marine Protected Areas in the Pacific Region of Canada

The following section provides information on Marine Protected Areas that have been designated under the *Oceans Act* in Canada's Pacific Region.

2.1 SGáan Kínghlas-Bowie Seamount Marine Protected Area

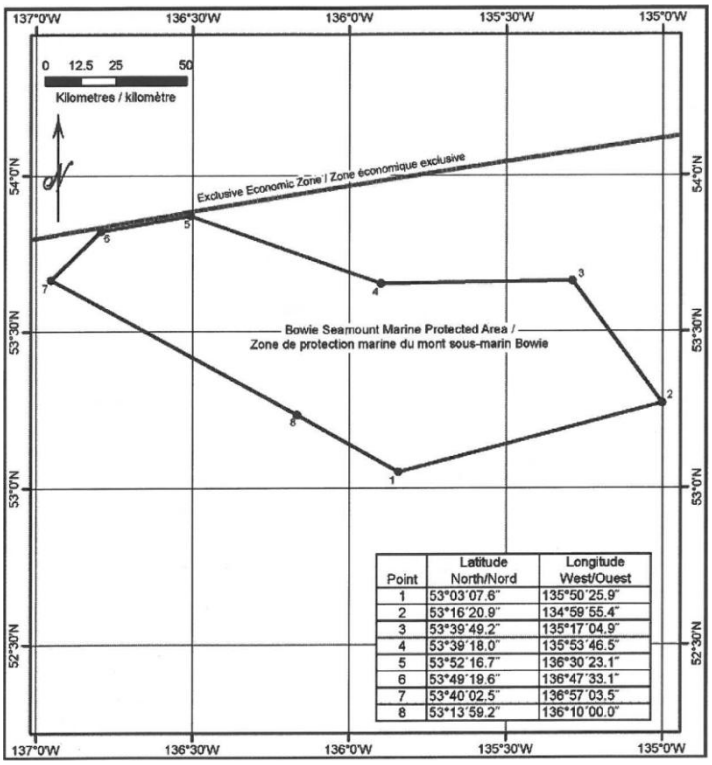
The SGáan Kínghlas-Bowie Seamount Marine Protected Area was designated pursuant to the *Oceans Act* on April 17th, 2008. The full text of the regulations may be accessed in the SGáan Kínghlas-Bowie Seamount Marine Protected Area Regulations.

Coordinates

The SGáan Kínghlas-Bowie Seamount is located 180 km west of Haida Gwaii on Canada's Pacific Coast, and is comprised of Bowie, Hodgkins and Davidson Seamounts of the Kodiak-Bowie Seamount chain. The SGáan Kínghlas-Bowie Seamount Marine Protected Area is bounded by rhumb lines connecting the following geographical coordinates. All geographic coordinates (latitude and longitude) are expressed in the North America Datum 1983 (NAD 83) geodetic reference system.

Point	Latitude (North)	Longitude (West)
1	53º 03' 07.6"	135º 50' 25.9"
2	53º 16' 20.9"	134º 59' 55.4"
3	53º 39' 49.2"	135º 17' 04.9"
4	53º 39' 18.0"	135º 53' 46.5"
5	53º 52' 16.7"	136º 30' 23.1"
6	53º 49' 19.6"	136º 47' 33.1"
7	53º 40' 02.5"	136º 57' 03.5"
8	53º 13' 59.2"	136º 10' 00.0"

The SGáan Kínghlas-Bowie Seamount Marine Protected Area is shown in the map below:



Regulatory Requirements for Vessels Operating in the SG̲áan K̲ínghlas-Bowie Seamount Marine Protected Area

- See ***Section 5A - General Regulatory Requirements for all Oceans Act Marine Protected Areas.***
- **Specific Requirements for the SG̲áan K̲ínghlas - Bowie Seamount Marine Protected Area**
  - Vessels must avoid discharge of ballast water in the Marine Protected Area or within 50 nautical miles of the SG̲áan K̲ínghlas-Bowie Seamount pinnacle (*Ballast Water Regulations*). Please see the *Ballast Water Regulations* for additional guidance (including exceptions) on ballast water management in and around the Marine Protected Area.
  - Any person involved in an incident that is likely to result in any prohibited activity shall, within two hours after its occurrence, report the incident to the Canadian Coast Guard.
  - Every person involved in an accident that is likely to result in any disturbance, damage, destruction or removal prohibited under section 3 shall, within two hours after its occurrence, report the accident to the Canadian Coast Guard.

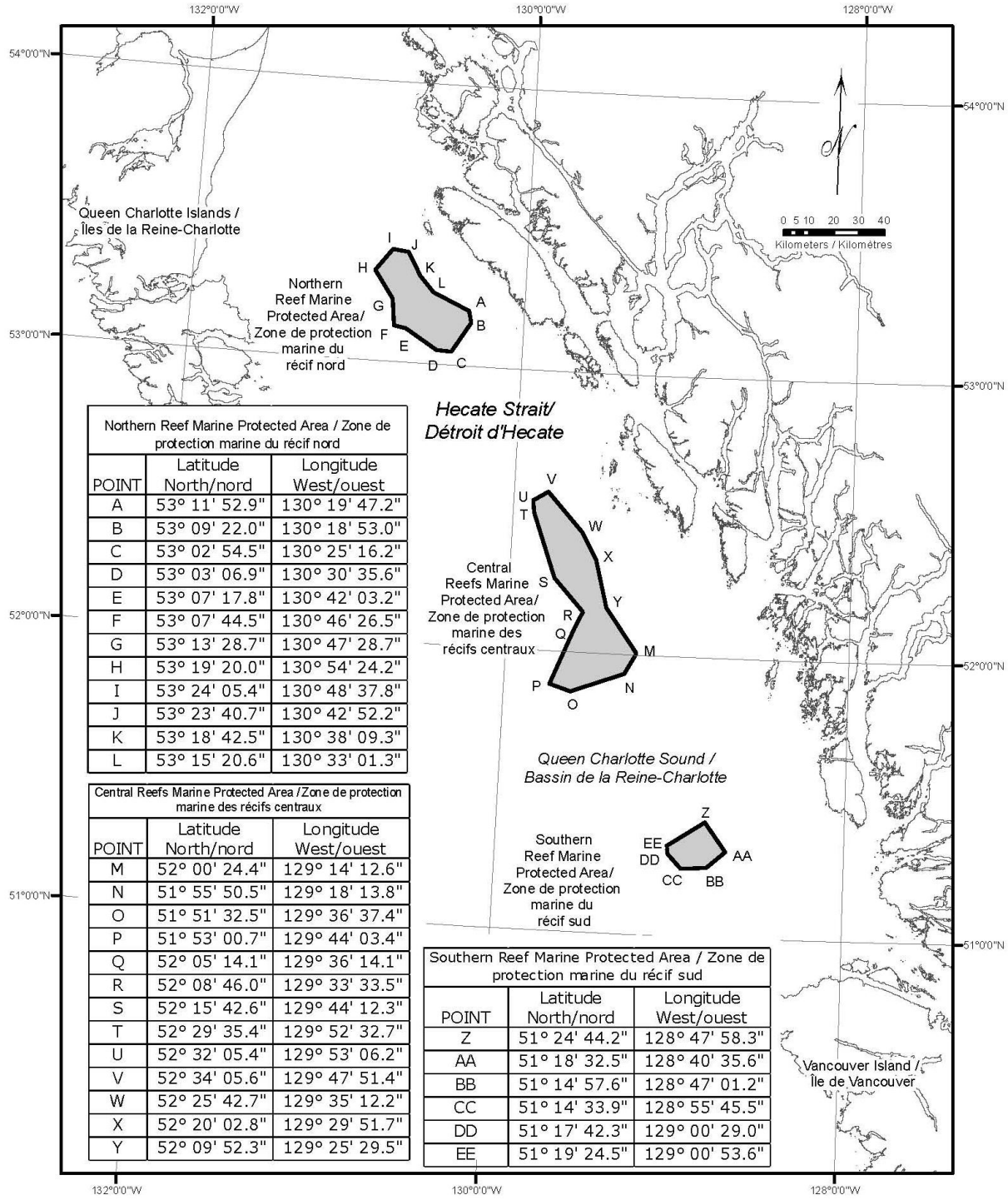
2.2 Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs Marine Protected Areas

The Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs Marine Protected Areas were designated pursuant to the *Oceans Act* on February 13, 2017. The full text of the regulations may be accessed in the Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs Marine Protected Areas Regulations.

Coordinates

The Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs Marine Protected Areas consist of four individual sponge reefs located between Haida Gwaii and the mainland of British Columbia. The Northern Reef, the Central Reefs (Zone A and B), and the Southern Reef areas all have a core protection zone (CPZ) (two in the Central Reefs), a vertical adaptive management zone, and an adaptive management zone. The CPZ consists of the seabed, the subsoil to a depth of 20m and the water column above the seabed to a depth of 100 m below the sea surface for the Northern Reef, 120 m for the Central Reefs, and 146 m for the Southern Reef. The vertical adaptive management zones consist of the water column that extends above the CPZ to the sea surface. The adaptive management zones consist of the seabed, subsoil and waters of the MPA that are not part of the CPZ or the vertical adaptive management zones.

The three areas are bounded by rhumb lines connecting the geographical coordinates presented in the following map, expressed in the North America Datum 1983 (NAD 83) geodetic reference system.



Northern Reef Marine Protected Area / Zone de protection marine du récif nord		
POINT	Latitude North/nord	Longitude West/ouest
A	53° 11' 52.9"	130° 19' 47.2"
B	53° 09' 22.0"	130° 18' 53.0"
C	53° 02' 54.5"	130° 25' 16.2"
D	53° 03' 06.9"	130° 30' 35.6"
E	53° 07' 17.8"	130° 42' 03.2"
F	53° 07' 44.5"	130° 46' 26.5"
G	53° 13' 28.7"	130° 47' 28.7"
H	53° 19' 20.0"	130° 54' 24.2"
I	53° 24' 05.4"	130° 48' 37.8"
J	53° 23' 40.7"	130° 42' 52.2"
K	53° 18' 42.5"	130° 38' 09.3"
L	53° 15' 20.6"	130° 33' 01.3"

Central Reefs Marine Protected Area / Zone de protection marine des récifs centraux		
POINT	Latitude North/nord	Longitude West/ouest
M	52° 00' 24.4"	129° 14' 12.6"
N	51° 55' 50.5"	129° 18' 13.8"
O	51° 51' 32.5"	129° 36' 37.4"
P	51° 53' 00.7"	129° 44' 03.4"
Q	52° 05' 14.1"	129° 36' 14.1"
R	52° 08' 46.0"	129° 33' 33.5"
S	52° 15' 42.6"	129° 44' 12.3"
T	52° 29' 35.4"	129° 52' 32.7"
U	52° 32' 05.4"	129° 53' 06.2"
V	52° 34' 05.6"	129° 47' 51.4"
W	52° 25' 42.7"	129° 35' 12.2"
X	52° 20' 02.8"	129° 29' 51.7"
Y	52° 09' 52.3"	129° 25' 29.5"

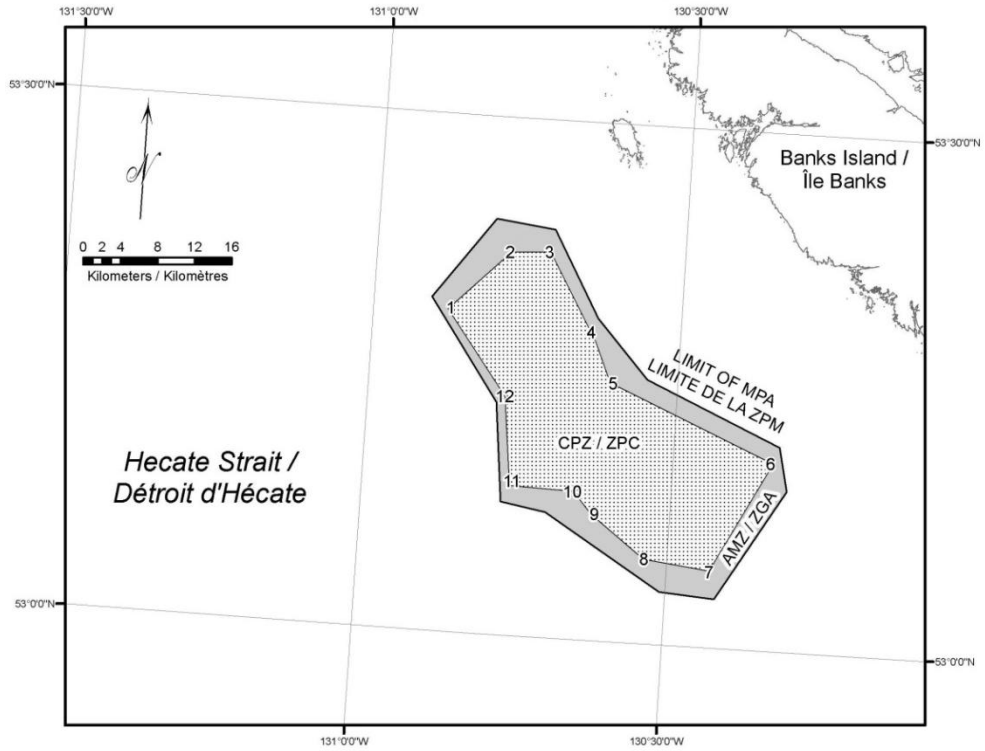
Southern Reef Marine Protected Area / Zone de protection marine du récif sud		
POINT	Latitude North/nord	Longitude West/ouest
Z	51° 24' 44.2"	128° 47' 58.3"
AA	51° 18' 32.5"	128° 40' 35.6"
BB	51° 14' 57.6"	128° 47' 01.2"
CC	51° 14' 33.9"	128° 55' 45.5"
DD	51° 17' 42.3"	129° 00' 29.0"
EE	51° 19' 24.5"	129° 00' 53.6"

Regulatory Requirements for Vessels Operating in the Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs Marine Protected Areas:

- See **Section 5A, General Regulatory Requirements for all *Oceans Act* Marine Protected Areas.**
- **Specific Requirements for the Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs Marine Protected Areas:**
  - No anchor is permitted to enter a core protection zone
  - Vessels must avoid exchanging ballast within the MPA

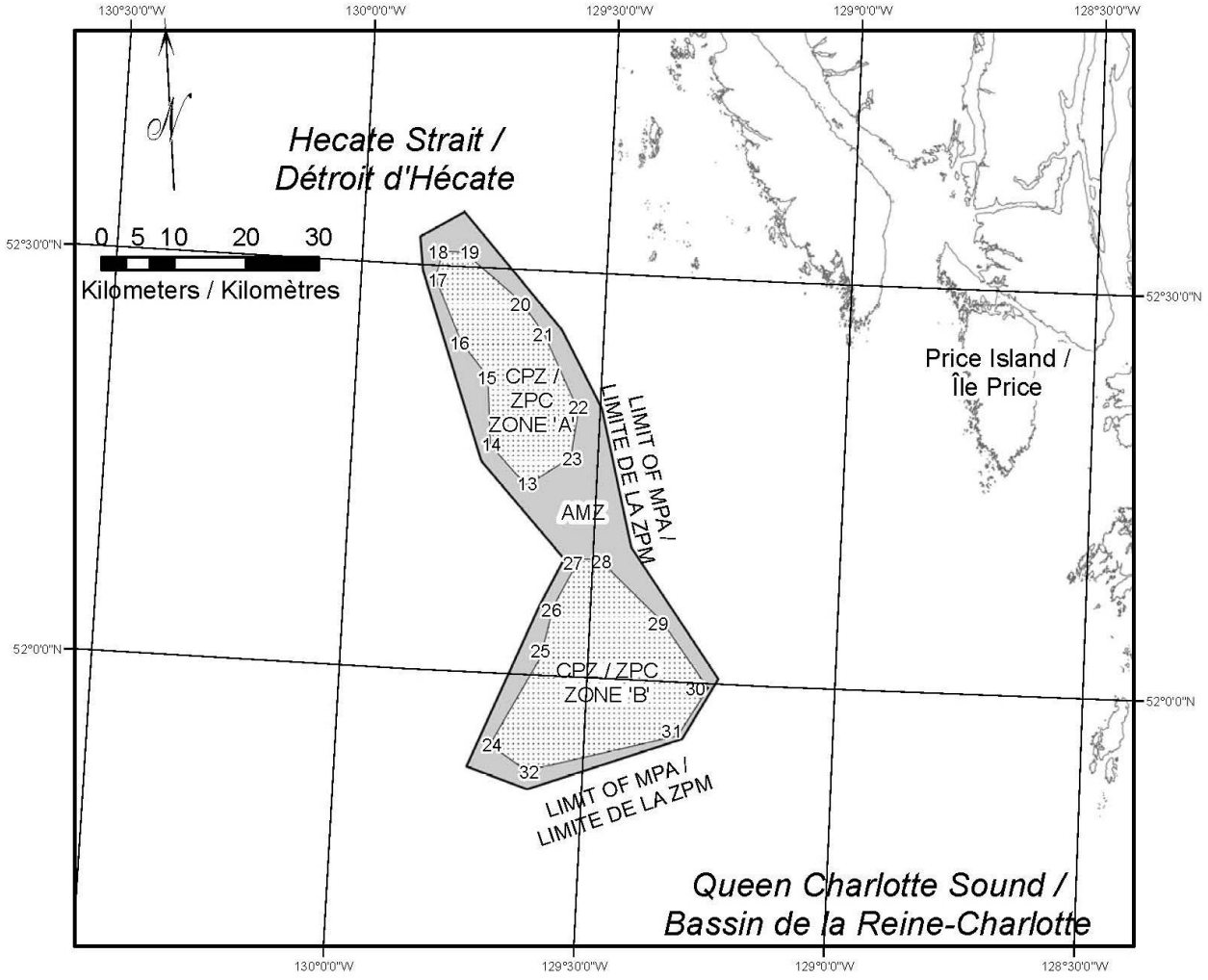
Coordinates for the Marine Protected Areas and their core protection zone (CPZ) are found in the maps below:

Northern Reef Marine Protected Area



Northern CPZ / ZPC nord		
POINT	Latitude North/nord	Longitude West/ouest
1	53° 18' 40.4"	130° 52' 46.5"
2	53° 22' 12.1"	130° 47' 01.7"
3	53° 22' 20.2"	130° 43' 12.5"
4	53° 17' 22.8"	130° 38' 18.2"
5	53° 15' 01.7"	130° 36' 35.5"
6	53° 10' 55.2"	130° 20' 19.3"
7	53° 04' 30.2"	130° 25' 53.6"
8	53° 04' 58.0"	130° 32' 16.9"
9	53° 07' 22.2"	130° 37' 37.6"
10	53° 08' 36.6"	130° 39' 29.5"
11	53° 08' 41.8"	130° 45' 40.0"
12	53° 13' 51.2"	130° 46' 41.2"

Central Reefs Marine Protected Area

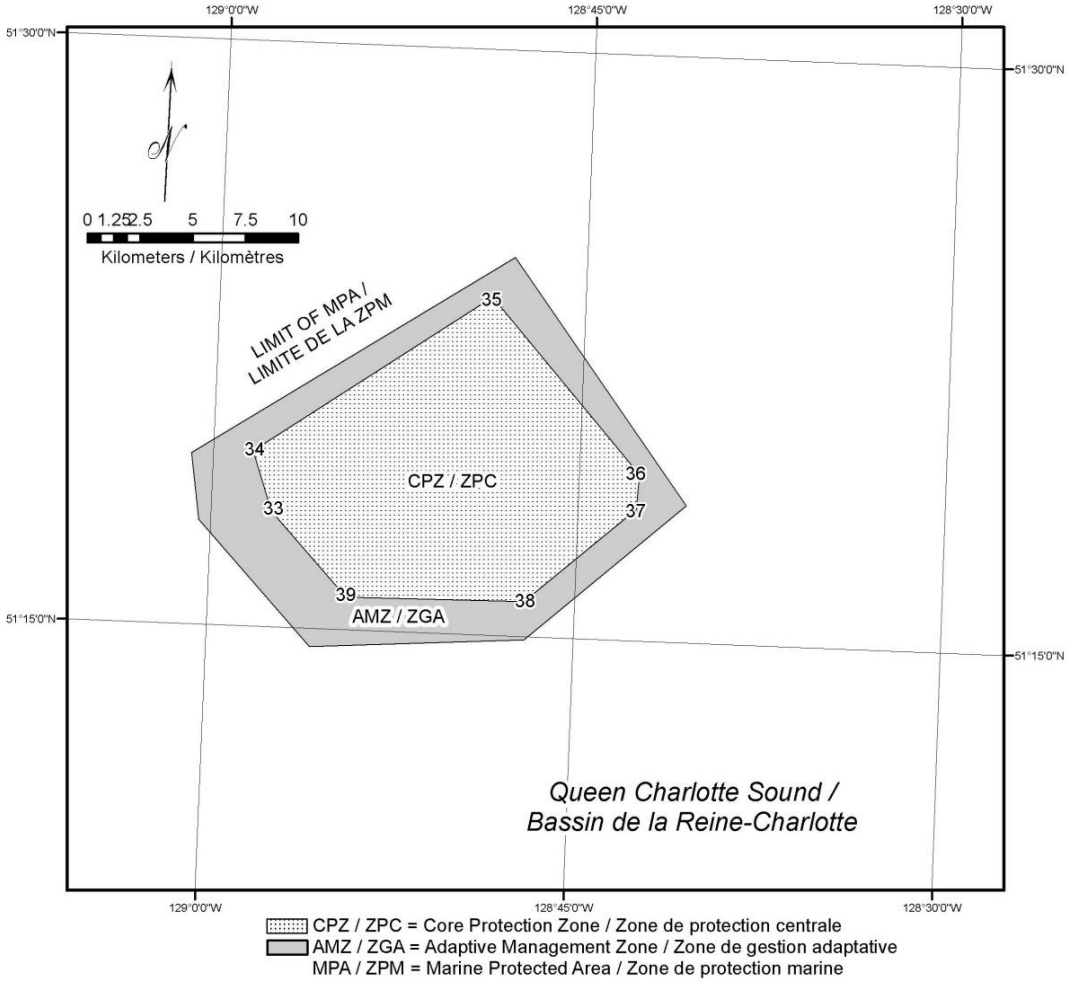


CPZ / ZPC = Core Protection Zone / Zone de protection centrale
AMZ / ZGA = Adaptive Management Zone / Zone de gestion adaptative
MPA / ZPM = Marine Protected Area / Zone de protection marine

Central CPZ / ZPC centrale - Zone 'A'		
POINT	Latitude North/nord	Longitude West/ouest
13	52° 14' 03.4"	129° 38' 33.2"
14	52° 16' 54.8"	129° 43' 13.4"
15	52° 21' 57.1"	129° 43' 56.5"
16	52° 24' 24.5"	129° 47' 22.8"
17	52° 29' 05.9"	129° 50' 59.4"
18	52° 31' 05.2"	129° 50' 13.9"
19	52° 31' 06.7"	129° 47' 40.9"
20	52° 27' 42.0"	129° 40' 25.1"
21	52° 25' 22.9"	129° 37' 24.0"
22	52° 19' 47.0"	129° 32' 43.2"
23	52° 16' 18.2"	129° 33' 22.8"

Central CPZ / ZPC centrale - Zone 'B'		
POINT	Latitude North/nord	Longitude West/ouest
24	51° 54' 43.1"	129° 41' 22.2"
25	52° 01' 22.5"	129° 35' 48.4"
26	52° 05' 13.5"	129° 34' 32.5"
27	52° 08' 48.5"	129° 31' 44.1"
28	52° 08' 51.3"	129° 29' 18.0"
29	52° 04' 27.1"	129° 21' 17.3"
30	51° 59' 40.8"	129° 15' 23.9"
31	51° 56' 04.5"	129° 18' 46.2"
32	51° 52' 55.7"	129° 36' 49.8"

Southern Reef Marine Protected Area



Southern CPZ / ZPC sud		
POINT	Latitude North/nord	Longitude West/ouest
33	51° 17' 59.2"	128° 57' 31.9"
34	51° 19' 30.8"	128° 58' 22.7"
35	51° 23' 41.9"	128° 48' 50.9"
36	51° 19' 17.5"	128° 42' 33.6"
37	51° 18' 24.5"	128° 42' 37.7"
38	51° 15' 56.0"	128° 47' 04.2"
39	51° 15' 52.2"	128° 54' 20.4"

2.3 Tang.ɢwan — ḥačxʷiqak — Tsi̱gis Marine Protected Area

The Tang.ɢwan — ḥačxʷiqak — Tsigis Marine Protected Area was designated pursuant to the Oceans Act on June 19th, 2024. The full text of the regulations may be accessed in the Tang.ɢwan — ḥačxʷiqak — Tsigis Marine Protected Area Regulations.

Coordinates

The Tang.ɢwan — ḥačxʷiqak — Tsigis Marine Protected Area is located approximately 150 km from the coast of Vancouver Island. The Marine Protected Area is approximately 133, 017km2 and includes the water, subsoil, and seafloor. The Marine Protected Area is bounded by the following lines:

a. a rhumb line drawn from point 1 to point 2, with point 2 being located on the western boundary of the Scott Islands Protected Marine Area, as described in Schedule 1 to the Scott Islands Protected Marine Area Establishment Order;

b. a rhumb line drawn southerly following the western boundary of the Scott Islands Protected Marine Area, as described in Schedule 1 to the Scott Islands Protected Marine Area Establishment Order, to point 3;

c. a rhumb line southeasterly following the boundary of the Scott Islands Protected Marine Area, as described in Schedule 1 to the Scott Islands Protected Marine Area Establishment Order, to point 4;

d. a series of rhumb lines drawn from point 4 to point 5 and then to point 6;

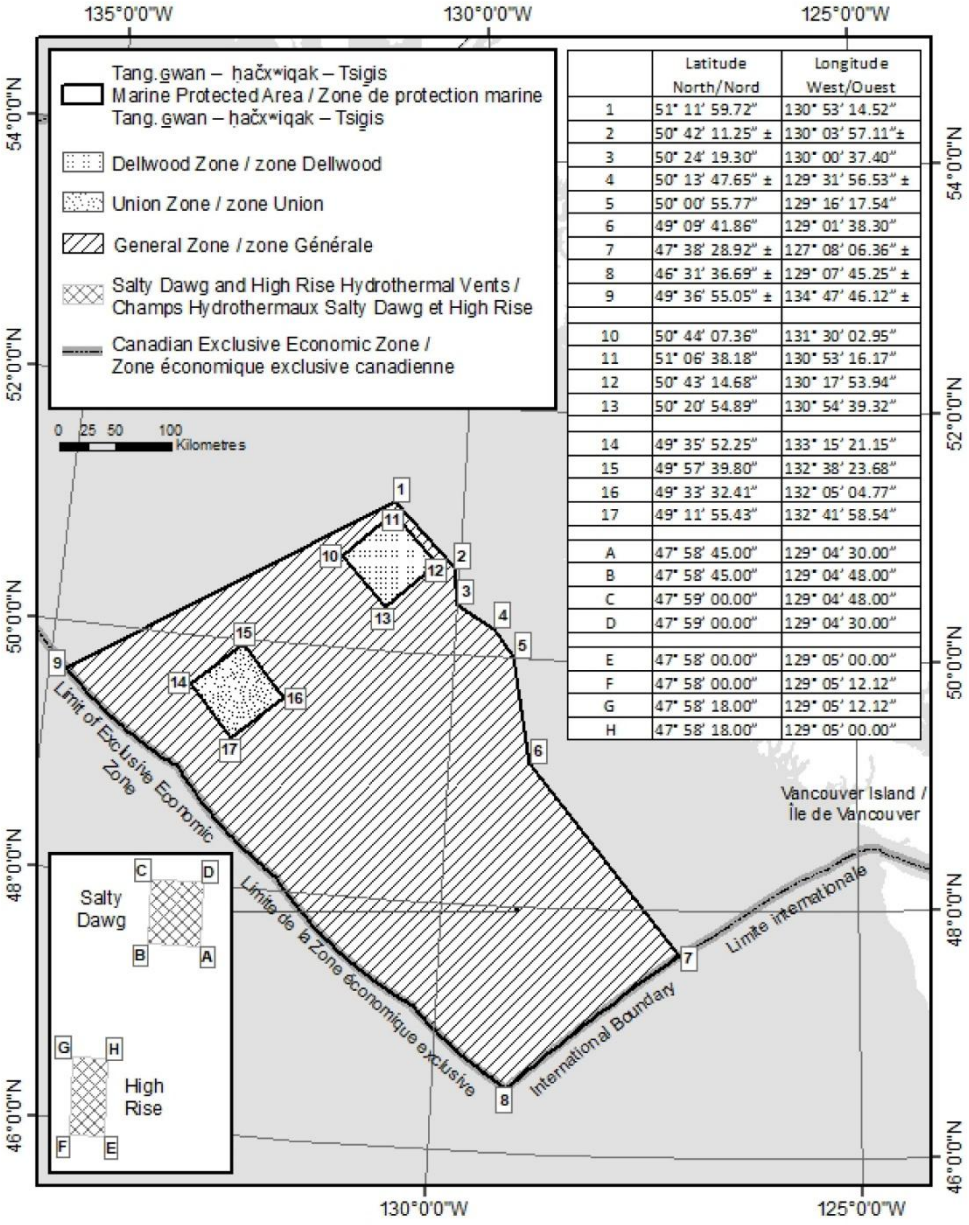
e. a rhumb line to a point on the international boundary between Canada and the United States intersecting a rhumb line drawn from point 6 to point 7;

f. a line southwesterly following the international boundary between Canada and the United States to point 8, on the seaward limit of the exclusive economic zone of Canada; and

g. a line northwesterly following the seaward limit of the exclusive economic zone of Canada to a point intersecting a rhumb line drawn from point 1 to point 9, and then a rhumb line back to point 1.

Point	Latitude (North)	Longitude (West)
1	51° 11′ 59.72"	130° 53′ 14.52"
2	+/- 50° 42′ 11.25"	+/- 130° 03′ 57.11"
3	50° 24′ 19.30"	130° 00′ 37.40"
4	+/- 50° 13′ 47.65"	+/- 129° 31′ 56.53"
5	50° 00′ 55.77"	129° 16′ 17.54"
6	49° 09′ 41.86"	129° 01′ 38.30"
7	+/- 47° 38′ 28.92"	+/- 127° 08′ 06.36"
8	+/- 46° 31′ 36.69"	+/- 129° 07′ 45.25"
9	+/- 49° 36′ 55.05"	+/- 134° 47′ 46.12"
10	50° 44′ 07.36"	131° 30′ 02.95"
11	51° 06′ 38.18"	130° 53′ 16.17"
12	50° 43′ 14.68"	130° 17′ 53.94"
13	50° 20′ 54.89"	130° 54′ 39.32"
14	49° 35′ 52.25"	133° 15′ 21.15"
15	49° 57′ 39.80"	132° 38′ 23.68"
16	49° 33′ 32.41"	132° 05′ 04.77"
17	49° 11′ 55.43"	132° 41′ 58.54"
A	47° 58′ 45.00"	129° 04′ 30.00"
B	47° 58′ 45.00"	129° 04′ 48.00"
C	47° 59′ 00.00"	129° 04′ 48.00"
D	47° 59′ 00.00"	129° 04′ 30.00"

E	47° 58′ 00.00"	129° 05′ 00.00"
F	47° 58′ 00.00"	129° 05′ 12.12"
G	47° 58′ 18.00"	129° 05′ 12.12"
H	47° 58′ 18.00"	129° 05′ 00.00"



	Latitude North/Nord	Longitude West/Ouest
1	51° 11′ 59.72"	130° 53′ 14.52"
2	50° 42′ 11.25" ±	130° 03′ 57.11"±
3	50° 24′ 19.30"	130° 00′ 37.40"
4	50° 13′ 47.65" ±	129° 31′ 56.53" ±
5	50° 00′ 55.77"	129° 16′ 17.54"
6	49° 09′ 41.86"	129° 01′ 38.30"
7	47° 38′ 28.92" ±	127° 08′ 06.36" ±
8	46° 31′ 36.69" ±	129° 07′ 45.25" ±
9	49° 36′ 55.05" ±	134° 47′ 46.12" ±
10	50° 44′ 07.36"	131° 30′ 02.95"
11	51° 06′ 38.18"	130° 53′ 16.17"
12	50° 43′ 14.68"	130° 17′ 53.94"
13	50° 20′ 54.89"	130° 54′ 39.32"
14	49° 35′ 52.25"	133° 15′ 21.15"
15	49° 57′ 39.80"	132° 38′ 23.68"
16	49° 33′ 32.41"	132° 05′ 04.77"
17	49° 11′ 55.43"	132° 41′ 58.54"
A	47° 58′ 45.00"	129° 04′ 30.00"
B	47° 58′ 45.00"	129° 04′ 48.00"
C	47° 59′ 00.00"	129° 04′ 48.00"
D	47° 59′ 00.00"	129° 04′ 30.00"
E	47° 58′ 00.00"	129° 05′ 00.00"
F	47° 58′ 00.00"	129° 05′ 12.12"
G	47° 58′ 18.00"	129° 05′ 12.12"
H	47° 58′ 18.00"	129° 05′ 00.00"

Regulatory Requirements for Vessels Operating in the **Tang.ɢwan — ḥačx̌ʷiqak — Tsi̱gis** Marine Protected Area

- **See *Section 5A - General Regulatory Requirements for all Oceans Act Marine Protected Areas***

3. Marine Protected Areas in the Canadian Arctic

The following section provides information on Marine Protected Areas that have been designated under the *Oceans Act* in the Canadian Arctic.

3.1 The Tarium Niryutait Marine Protected Areas

The Tarium Niryutait Marine Protected Areas were designated pursuant to the *Oceans Act* on August 25th, 2010. The full text of the regulations may be accessed in the Tarium Niryutait Marine Protected Areas Regulations.

Coordinates

The Tarium Niryutait Marine Protected Areas consist of three areas of the Mackenzie Bay: Okeevik, Kittigaryuit and Niaqunnaq. The three areas are bounded by straight lines and lines following the Low Water Line which connect the following geographical coordinates [Universal Transverse Mercator (UTM) North America Datum 1983 (NAD 83)]. Reference is FB #36305 metes and bounds description in English and French for Tarium Niryutait Marine Protected Area Beaufort Sea Niaqunnaq Okeevik, Kittigaryuit Project 2006-18-091 Surveyor Terry Hauff.

Okeevik Sub Area

Point	Latitude (North)	Longitude (West)
1	69° 38′ 19"	135° 25′ 09"
2	69° 38′ 03"	135° 25′ 11"
3	69° 37′ 46"	135° 24′ 52"
4	69° 29′ 49"	135° 12′ 49"
5	69° 30′ 45"	135° 16′ 56"
6	69° 29′ 26"	135° 18′ 53"
7	69° 29′ 23"	135° 19′ 06"
8	69° 28′ 07"	135° 20′ 25"
9	69° 27′ 36"	135° 24′ 25"
10	69° 25′ 51"	135° 32′ 27"
11	69° 26′ 32"	135° 34′ 54"
12	69° 28′ 21"	135° 35′ 24"
13	69° 28′ 35"	135° 36′ 40"
14	69° 28′ 39"	135° 37′ 58"
15	69° 30′ 34"	135° 45′ 54"
16	69° 35′ 18"	135° 35′ 42"
17	69° 36′ 00"	135° 22′ 10"
18	69° 34′ 40"	135° 20′ 09"
19	69° 34′ 00"	135° 20′ 09"
20	69° 34′ 00"	135° 27′ 39"
21	69° 36′ 00"	135° 27′ 39"
22	69° 27′ 00"	135° 31′ 11"
23	69° 27′ 00"	135° 34′ 45"

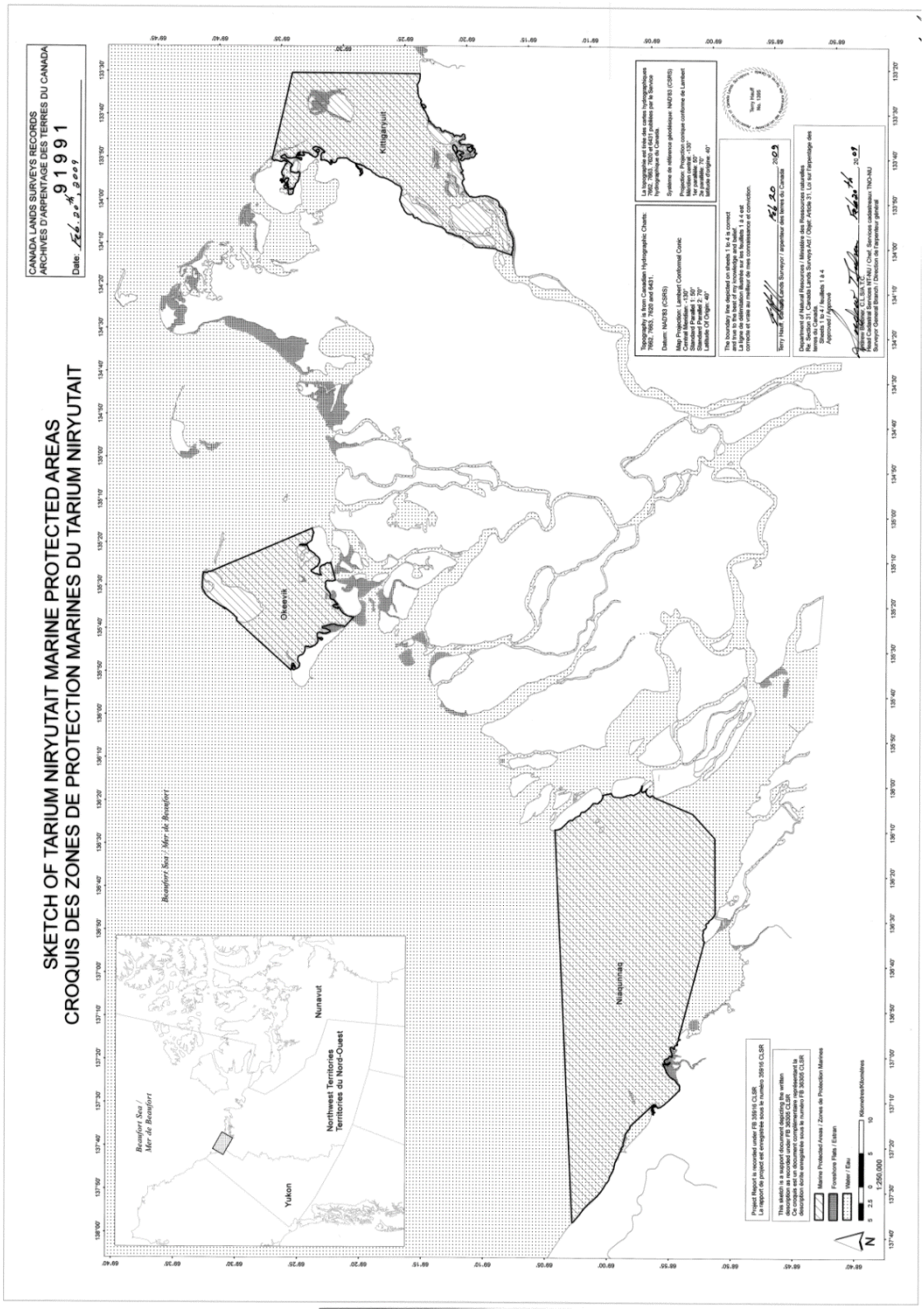
Kittigaruit Sub Area

Point	Latitude (North)	Longitude (West)
1	69° 35′ 10"	133° 48′ 26"
2	69° 34′ 00"	133° 28′ 00"
3	69° 23′ 37"	133° 26′ 40"
4	69° 20′ 34"	133° 40′ 37"
5	69° 19′ 05"	133° 42′ 21"
6	69° 19′ 01"	133° 42′ 31"
7	69° 20′ 39"	133° 43′ 20"
8	69° 16′ 42"	133° 54′ 54"
9	69° 15′ 20"	134° 06′ 53"
10	69° 16′ 33"	134° 05′ 56"
11	69° 20′ 42"	134° 02′ 44"
12	69° 24′ 00"	133° 59′ 10"
13	69° 24′ 34"	133° 53′ 49"
14	69° 28′ 21"	133° 48′ 15"
15	69° 28′ 02"	133° 50′ 59"
16	69° 33′ 20"	133° 47′ 29"
17	69° 34′ 33"	133° 47′ 42"
18	69° 32′ 55"	133° 51′ 09"
19	69° 32′ 56"	133° 51′ 54"
20	69° 33′ 46"	133° 55′ 48"
21	69° 33′ 46"	133° 55′ 31"

Niaqunnaq Sub Area

Point	Latitude (North)	Longitude (West)
1	69° 08′ 00"	136° 16′ 44"
2	69° 04′ 25"	136° 07′ 45"
3	69° 03′ 43"	136° 07′ 08"
4	69° 01′ 19"	136° 04′ 45"
5	69° 01′ 14"	136° 04′ 45"
6	69° 00′ 57"	136° 05′ 42"
7	69° 00′ 12"	136° 07′ 08"
8	68° 57′ 00"	136° 10′ 00"
9	68° 55′ 00"	136° 15′ 00"
10	68° 54′ 22"	136° 31′ 50"
11	68° 55′ 00"	136° 38′ 33"
12	68° 56′ 15"	137° 00′ 41"
13	68° 56′ 29"	137° 03′ 03"
14	68° 55′ 48"	137° 11′ 00"
15	68° 57′ 50"	137° 16′ 40"
16	68° 59′ 20"	137° 21′ 30"
17	69° 03′ 09"	137° 44′ 54"

The Tarium Niryutait Marine Protected Areas are shown in the map below:



Regulatory Requirements for Vessels Operating in the Tarium Niryutait Marine Protected Areas

- See ***Section 5A - General Regulatory Requirements for all Oceans Act Marine Protected Areas.***

Regulatory Protection Measures for Tarium Niryutait Marine Protected Areas

- Pursuant to the *Oceans Act*, the Regulations set out a general prohibition within the boundaries of the Marine Protected Areas, prohibiting any activities that will or are likely to disturb, damage, destroy or remove any living marine organism or any part of its habitat from the areas. Any accident within the Tarium Niryutait Marine Protected Areas must be reported within two hours after its occurrence, to the Canadian Coast Guard.

Other Requirements Applying in the Area

- In the spirit of the Inuvialuit Final Agreement, it is forbidden for ships to approach the traditional marine mammal harvest grounds, or to approach marine mammals unless they are directly associated with the traditional harvest of these animals. Information regarding the traditional harvest can be gained from the community Hunters and Trappers Committees: Aklavik HTC aklavikahtc@gmail.com, hunteraklavik@gmail.com, (867) 978-2723; Inuvik HTC, inuvikhtc@hotmail.com, (867) 777-2478; Tuktoyaktuk HTC, tuk.htc@outlook.com, (867) 340-0057 or the Fisheries Joint Management Committee (fjmc-rp@jointsec.nt.ca).
- For marine wildlife sightings and incidents such as collisions that occur outside the Marine Protected Areas or for any situation involving a marine mammal that is dead or in trouble, contact Fisheries and Oceans Canada, Inuvik office at (867) 777-7500.
- As per the Marine Mammal Regulations (2018), pursuant to the *Fisheries Act*, reporting of accidental contact with marine mammals is required.

Voluntary Guidelines for Ships Operating in the Areas

The following procedures are recommended year round in order to safeguard the Marine Protected Areas and its resources.

Vessels should adhere to the following measures for safety reasons and to ensure marine mammal protection:

- It is strongly advised that commercial vessels remain in the community supply routes. These routes are generally marked by Canadian Coast Guard buoys and they should be followed whenever possible.

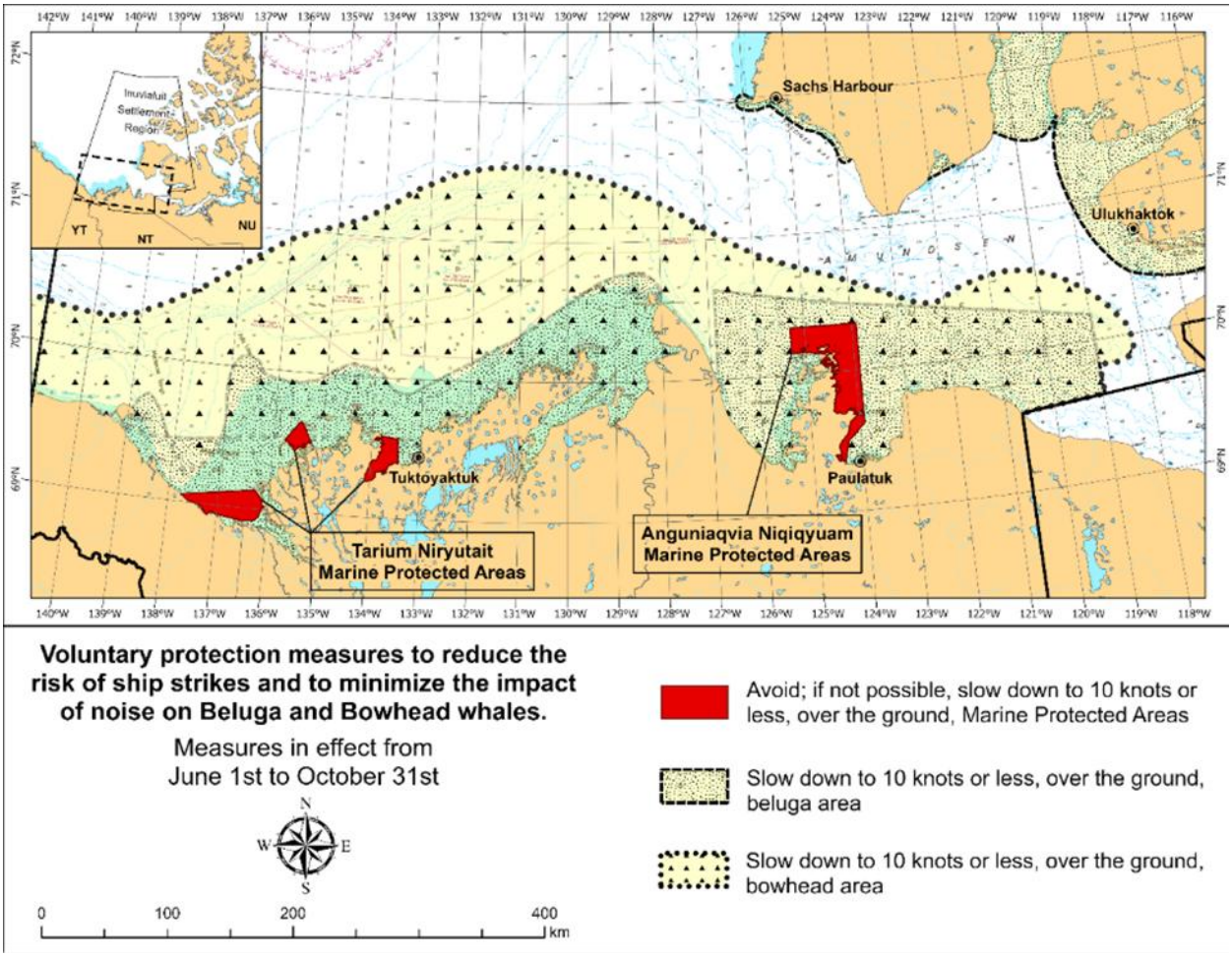
The following measures are in effect from June 1st to October 31st. See map below.

These measures apply to merchant vessels, cruise ships, small vessels and adventure craft within the boundaries of the Marine Protected Areas and the additional identified areas to prevent collisions with whales and to mitigate the underwater noise generated by the vessels. These measures should only be taken when they will not jeopardize navigational safety.

Avoid (red area): To reduce the risk of underwater noise disturbance and collisions with whales within the Marine Protected Areas, vessels should avoid transiting through the Marine Protected Areas if possible. If passage through this area is necessary, vessels should slow down to a speed not exceeding 10 knots over the ground and post additional lookouts such as a marine mammal observer in order to increase the chances of seeing the whales and thus taking necessary measures to avoid them. If bypassing the whales is not possible, slow down and wait for the animals to move away to a distance greater than 400 metres (0.215 nautical miles) before resuming original speed not exceeding 10 knots over the ground. It is more difficult to see the animals in rain, fog, or in rough sea states, therefore increased caution is recommended.

Slow down to 10 knots over the ground or less (yellow area): To reduce the risk of underwater noise disturbance and collisions with whales within these areas, it is recommended that vessels should slow down to a speed not exceeding 10 knots over the ground, navigate within the marked community supply channels and post additional lookouts.

These voluntary measures are secondary to rights under the Inuvialuit Final Agreement.



3.2 The Anguniaqvia Niqiqyuam Marine Protected Areas

The Anguniaqvia Niqiqyuam Marine Protected Areas were designated pursuant to the *Oceans Act* on November 16th, 2016. The full text of the regulations may be accessed in the Anguniaqvia Niqiqyuam Marine Protected Areas Regulations.

Coordinates

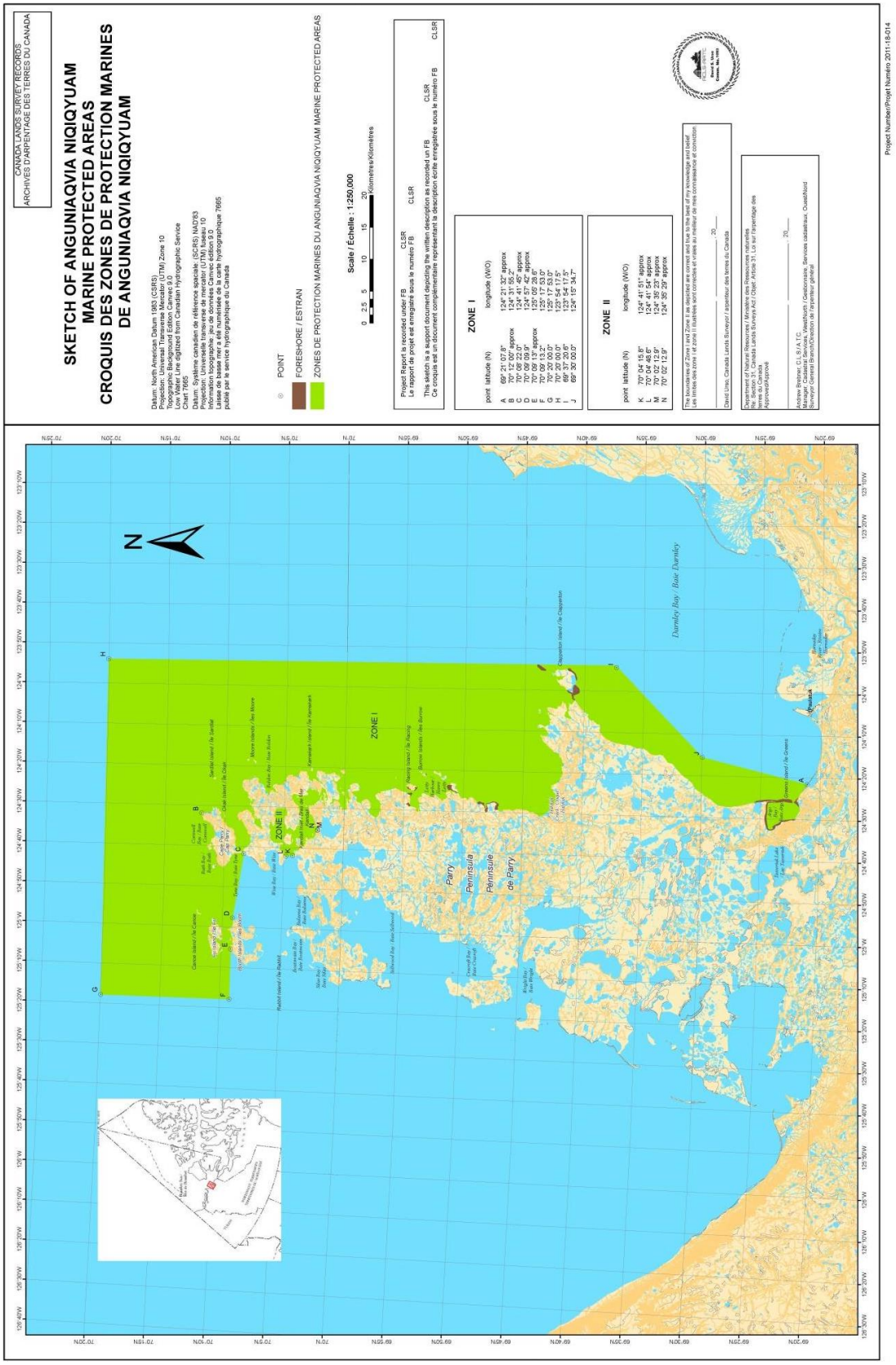
The Anguniaqvia Niqiqyuam Marine Protected Areas consist of two areas in Darnley Bay and Amundsen Gulf in the Beaufort Sea: Zone 1 and Zone 2. The areas consist of the seabed, the subsoil to a depth of five metres and the water column, including the sea ice. The two areas are bounded by straight lines and lines following the Low Water Line which connect the following geographical coordinates [Universal Transverse Mercator (UTM) North America Datum 1983 (NAD 83)]. Reference is Canada Lands Surveys record F.B. 40812 CLSR NT.

Zone 1

Point	Latitude (North)	Longitude (West)
A	69° 21’ 07.8”	124° 21’ 32” approx
B	70° 12’ 00” approx	124° 31’ 55.2”
C	70° 08’ 22.0”	124° 41’ 45” approx
D	70° 09’ 09.9”	124° 57’ 42” approx
E	70° 09’ 13” approx	125° 05’ 28.6”
F	70° 09’ 13.2”	125° 17’ 53.0”
G	70° 20’ 00.0”	125° 17’ 53.0”
H	70° 20’ 00.0”	123° 54’ 17.5”
I	69° 37’ 20.6”	123° 54’ 17.5”
J	69° 30’ 00.0”	124° 15’ 34.7”

Zone 2

Point	Latitude (North)	Longitude (West)
K	70° 04’ 15.8”	124° 41’ 51” approx
L	70° 04’ 48.6”	124° 41’ 54” approx
M	70° 02’ 12.9”	124° 35’ 23” approx
N	70° 02’ 12.9”	124° 35’ 29” approx


CANADA LANDS SURVEY RECORDS
ARCHIVES D'ARPENTAGE DES TERRES DU CANADA
SKETCH OF ANGUNIAQVIA NIQIQYUAM
MARINE PROTECTED AREAS
CROQUIS DES ZONES DE PROTECTION MARINES
DE ANGUNIAQVIA NIQIQYUAM
Datum: North American Datum 1983 (CSRS)
Projection: Universal Transverse Mercator (UTM) Zone 10
Topographic Background Edition Canvas 9.0
Land and Water digitized from Canadian Hydrographic Service
Chart 7665
Datum: Système canadien de référence spaciale (SCRS) NAD83
Projection: Universale transverse de Mercator (UTM) zone 10
Information topographic: Jeu de données Canvas édition 9.0
Laisse de basse mer a été numérisée de la carte hydrographique 7665
publié par le service hydrographique du Canada
POINT
FORESHORE / ESTRAN
ZONES DE PROTECTION MARINES DU ANGUNIAQVIA NIQIQYUAM MARINE PROTECTED AREAS
Scale / Échelle : 1:250,000
0 2.5 5 10 15 20
Kilometres/Kilomètres
Project Report is recorded under FB CLSR
Le rapport de projet est enregistré sous le numéro FB CLSR
This sketch is a support document depicting the written description as recorded un FB CLSR
Ce croquis est un document complémentaire représentant la description écrite enregistrée sous le numéro FB CLSR
ZONE I
point latitude (N) longitude (W/O)
A 69° 21' 07.8" 124° 21' 32" approx
B 70° 08' 55.9" 124° 35' 55" approx
C 70° 08' 22.0" 124° 41' 45" approx
D 70° 09' 09.9" 124° 57' 42" approx
E 70° 09' 09.9" 125° 08' 26" approx
F 70° 09' 13.2" 125° 17' 53.0"
G 70° 20' 00.0" 125° 17' 53.0"
H 70° 37' 30.0" 124° 54' 17.5"
I 69° 30' 00.0" 123° 54' 17.5"
J 69° 30' 00.0" 124° 15' 34.7"
ZONE II
point latitude (N) longitude (W/O)
K 70° 04' 18.8" 124° 41' 51" approx
L 70° 04' 46.8" 124° 41' 51" approx
M 70° 02' 12.9" 124° 35' 23" approx
N 70° 02' 12.9" 124° 35' 29" approx
The boundaries of Zone I and Zone II as depicted are correct and true to the best of my knowledge and belief
Les limites des zone I et zone II illustrées sont correctes et vraies au mieilleur de mes connaissance et conviction
David Lines, Canada Lands Surveyor / arpenteur des terres du Canada
Department of Natural Resources / Ministère des Ressources naturelles
Re: Section 31, Canada Lands Surveys Act / Objet: Article 31, Loi sur l'arpentage des
terres du Canada
Approved/Apprové
Manager / Gestionnaire, Canada Lands Surveyor / Arpenteur des terres du Canada
Surveyor General Branch/Direction de l'arpenteur général
Project Number/Projet Numéro 2011-18-014
ZONE I
ZONE II
Parry Peninsula
Péninsule de Parry
Darnley Bay / Baie Darnley
Cape Parry
Pearce Point
Paulatuk
N

Regulatory Requirements for Vessels Operating in the Anguniaqvia Niqiqyuam Marine Protected Areas

- See ***Section 5A - General Regulatory Requirements for all Oceans Act Marine Protected Areas.***

Regulatory Protection Measures for Anguniaqvia Niqiqyuam Marine Protected Areas

- Pursuant to the *Oceans Act,* the Regulations set out a general prohibition within the boundaries of the Marine Protected Areas prohibiting any activities that will or are likely to disturb, damage, destroy or remove any living marine organism or any part of its habitat from the areas. Any accident within the Anguniaqvia Niqiqyuam Marine Protected Areas should be reported within two hours after its occurrence, to the Canadian Coast Guard.

Other Requirement for the Marine Protected Areas

- **In the spirit of the Inuvialuit Final Agreement,** it is forbidden for ships to approach the traditional marine mammal harvest grounds, or to approach marine mammals unless they are directly associated with the traditional harvest of these animals. Information regarding the traditional harvest can be gained from Paulatuk Hunters and Trappers Committee: paulatukhtc@gmail.com, (867) 580-3004, or the Fisheries Joint Management Committee (fjmc-rp@jointsec.nt.ca).
- For marine wildlife sightings and incidents such as collisions that occur outside the MPAs or for any situation involving a marine mammal that is dead or in trouble, contact Fisheries and Oceans Canada, Inuvik office at (867) 777-7500.
- As per the Marine Mammal Regulations (2018), pursuant to the *Fisheries Act*, reporting of accidental contact with marine mammals is required.

Voluntary Guidelines for Ships Operating in the Areas

Vessels should adhere to the following measures year round for safety reasons and to ensure marine mammal protection:

- It is strongly advised that commercial vessels remain in the community supply routes. These routes are generally marked by Canadian Coast Guard buoys and they should be followed whenever possible.
- Ice breaking activities should be avoided in the Cape Parry polynya whenever possible due to the high level of marine mammal aggregations.

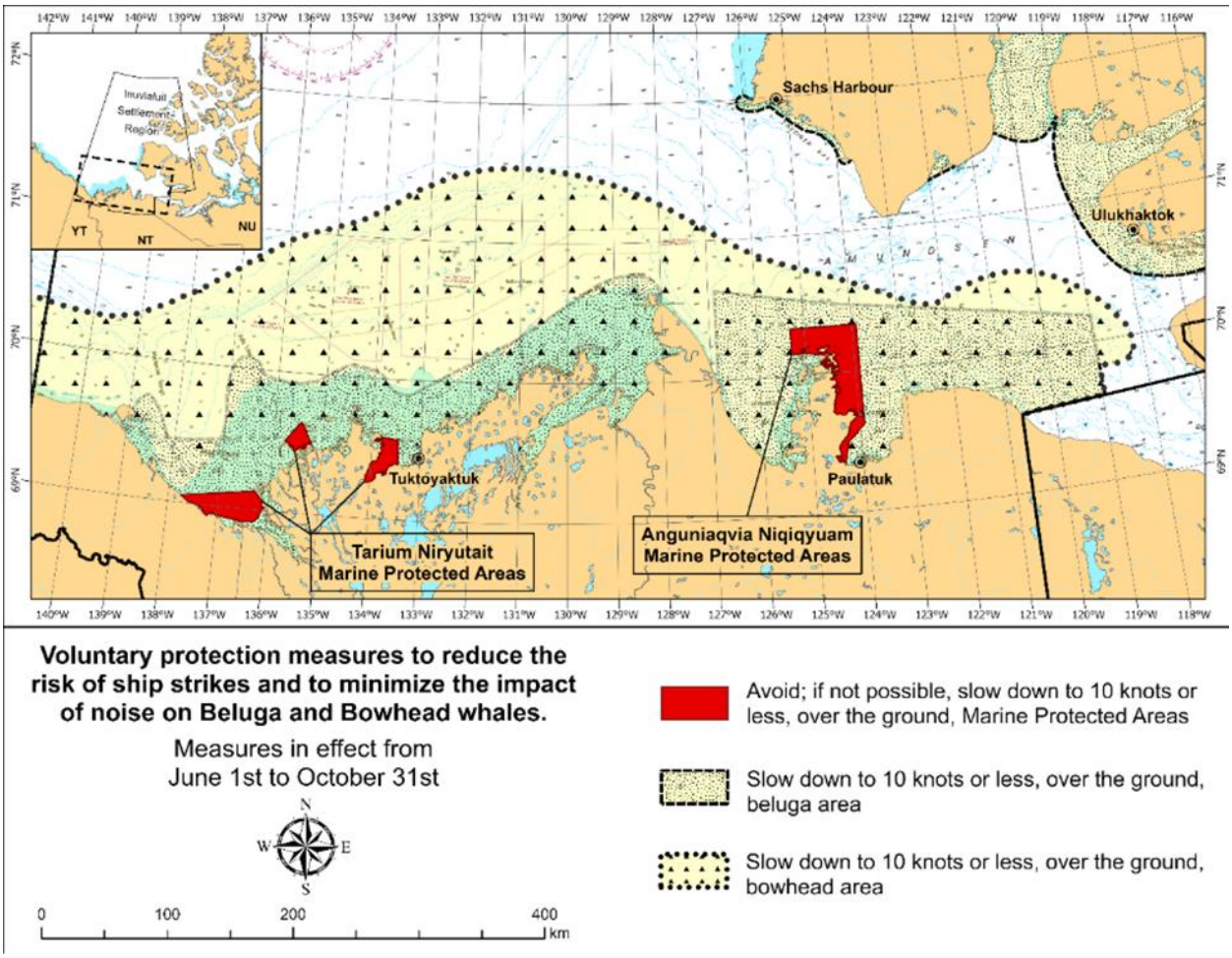
The following measures are in effect from June 1st to October 31st. See map below.

These measures apply to merchant vessels, cruise ships, small vessels and adventure craft within the boundaries of the Marine Protected Areas and the additional identified areas to prevent collisions with whales and to mitigate the underwater noise generated by the vessels. These measures should only be taken when they will not jeopardize navigational safety.

Avoid (red area): To reduce the risk of underwater noise disturbance and collisions with whales within the Marine Protected Areas, vessels should avoid transiting through the Marine Protected Areas if possible. If passage through this area is necessary, vessels should slow down to a speed not exceeding 10 knots over the ground and post additional lookouts such as a marine mammal observer in order to increase the chances of seeing the whales and thus taking necessary measures to avoid them. If bypassing the whales is not possible, slow down and wait for the animals to move away to a distance greater than 400 metres (0.215 nautical miles) before resuming original speed not exceeding 10 knots over the ground. It is more difficult to see the animals in rain, fog, or in rough sea states, therefore increased caution is recommended.

Slow down to 10 knots over the ground or less (yellow area): To reduce the risk of underwater noise disturbance and collisions with whales within these areas, it is recommended that vessels should slow down to a speed not exceeding 10 knots over the ground, navigate within the marked community supply channels and post additional lookouts.

These voluntary measures are secondary to rights under the Inuvialuit Final Agreement.



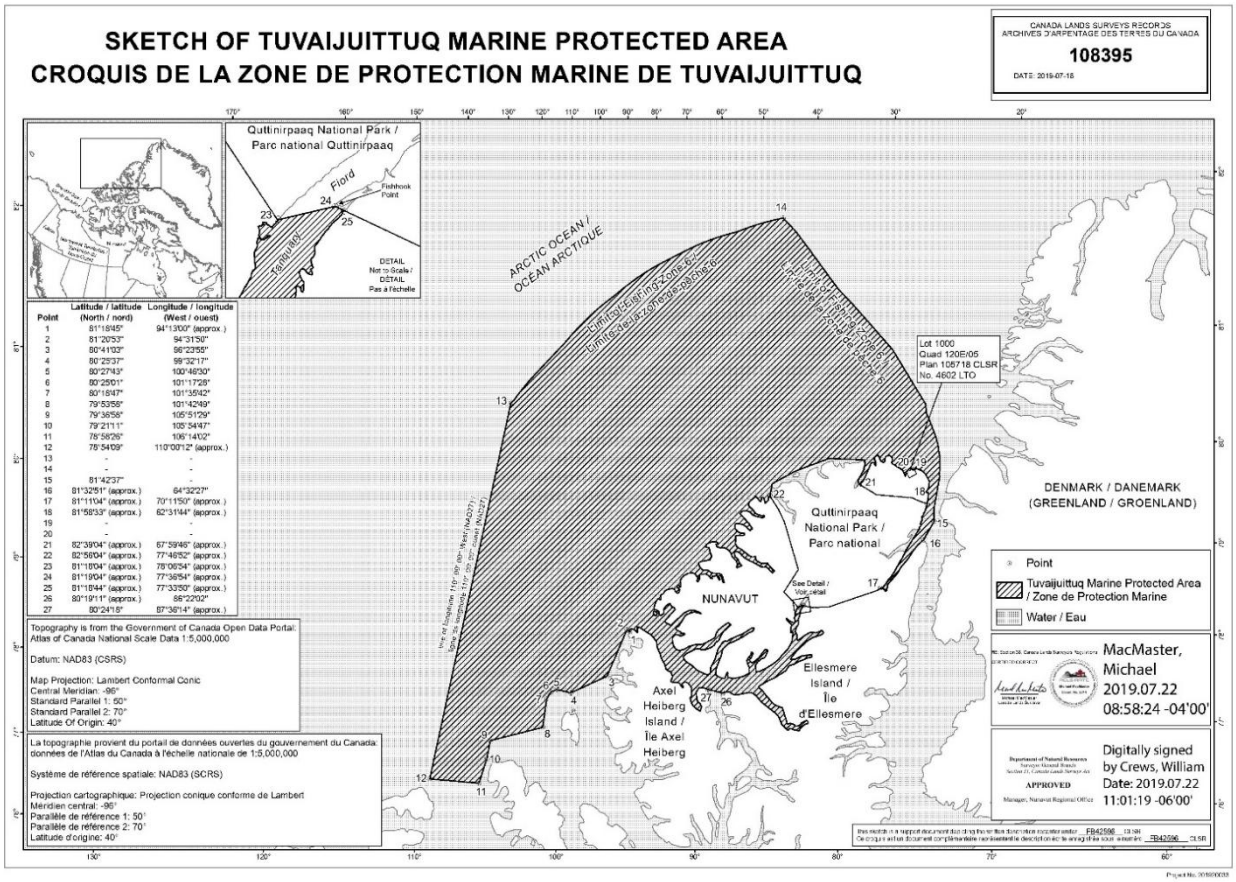
3.3 The Tuvaijuittuq Marine Protected Area

The Tuvaijuittuq Marine Protected Area was designated pursuant to the *Oceans Act* on July 29, 2019. The full text of the regulations may be accessed in the Order No. 2 Designating the Tuvaijuittuq Marine Protected Area.

Coordinates

The Tuvaijuittuq Marine Protected Area encompasses an area of the sea in the Arctic Ocean consisting of the waters off northern Ellesmere Island, as described in plan number FB42596, certified on July 16, 2019 and depicted in plan number CLSR 108395 plans are deposited in the Canada Lands Surveys Records.

The Marine Protected Area consists of the seabed, the subsoil to a depth of five metres and the water column, including the sea ice, each of which is below the low-water line.



Regulatory Requirements for Vessel Operating in the Tuvaijuittuq Marine Protected Area

- See ***Section 5A - General Regulatory Requirements for all Oceans Act Marine Protected Areas.***

Other Requirement for the Tuvaijuittuq Marine Protected Area

- It is prohibited in the Marine Protected Area to carry out any activity — other than the purposes of (a) national defence activities carried out by the Department of National Defence; and (b) marine scientific research activities — that disturbs, damages, destroys or removes from the Marine Protected Area any unique geological or archeological features or any living marine organism or any part of its habitat, or is likely to do so. Despite the prohibition listed above, the following activities may be carried out in the Marine Protected Area: (a) marine navigation by a foreign national, a foreign ship or a foreign state, or an entity incorporated or formed by or under the laws of a country other than Canada; and (b) the laying, maintenance and repair of cables and pipelines by a foreign state. This Order does not apply with respect to the wildlife harvesting rights of the Inuit in the Nunavut Settlement Area, as provided for in the Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada, as approved, given effect and declared valid by the Nunavut Land Claims Agreement Act.

Requirements for Marine Refuges

General Information on Marine Refuges

Marine refuges are area-based measures that meet the Government of Canada's criteria of an other effective area-based conservation measure. These measures help protect important species and their habitats, including unique corals and sponges, from the impacts of fishing. These measures are intended to be in place for the long-term, so they will make a lasting contribution to biodiversity. As of 2023, all marine refuges are fisheries area closures established through variation orders (6(1)) and/or licence conditions (22(1)) under the *Fishery (General) Regulations* under the *Fisheries Act (1985).*

1 - Marine Refuges in Eastern Canada

The following section provides information on area-based measures that have been recognized as marine refuges in Eastern Canada.

1.1 - Beaugé Bank Sponge Conservation Area

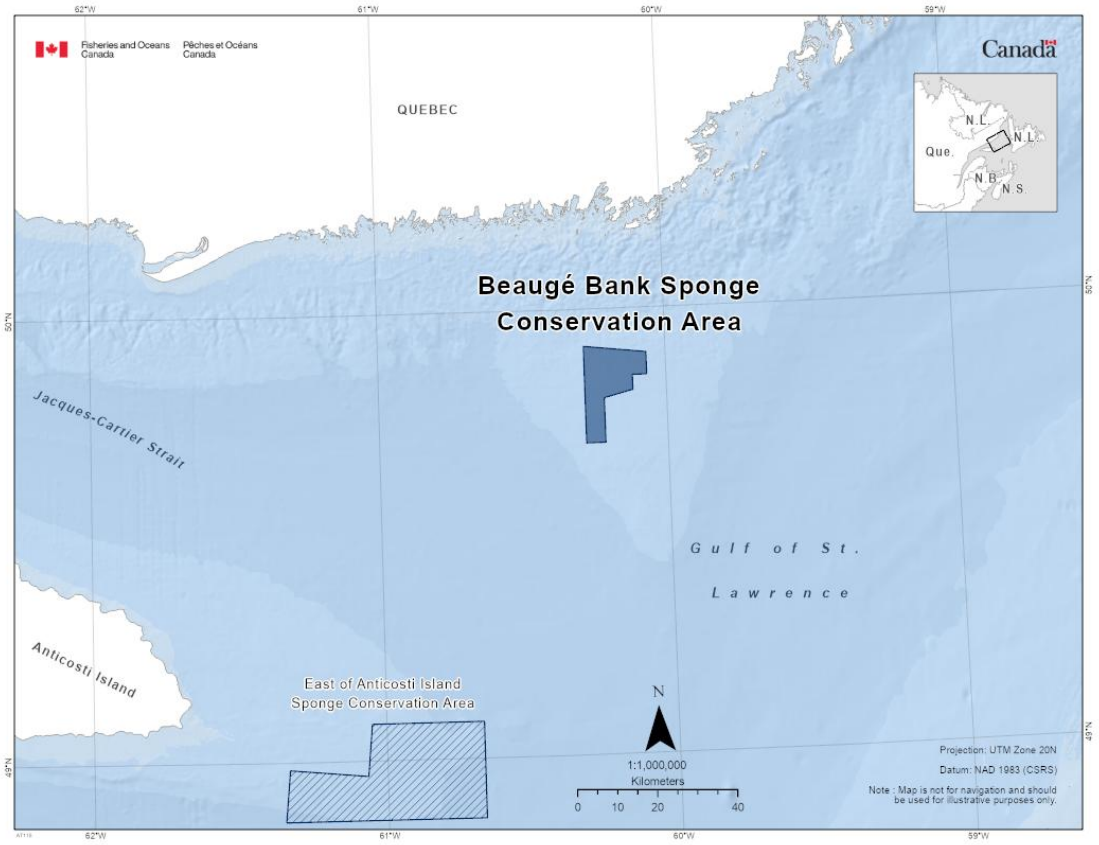
The Beaugé Bank Sponge Conservation Area is found within the Estuary and Gulf of St. Lawrence Bioregion. The fishery area closure was established in 2017 as a variation order. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold-water sponges. The fishery area closure prohibits all fishing that uses bottom-contact gear, such as bottom trawls, dredges, bottom seining, traps, gillnets, and bottom longlines.

Coordinates

The Beaugé Bank Sponge Conservation Area is approximately 215 km2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Beaugé Bank Sponge Conservation Area is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	49° 55' 00"	60° 17' 00"
2	49° 54' 00"	60° 04' 00"
3	49° 51' 00"	60° 04' 00"
4	49° 51' 00"	60° 07' 00"
5	49° 49' 00"	60° 07' 00"
6	49° 48' 00"	60° 13' 00"
7	49° 42' 00"	60° 13' 00"
8	49° 42' 00"	60° 17' 00"
9	49° 55' 00"	60° 17' 00"

The Beaugé Bank Sponge Conservation Area is shown in the map below:



1.2 - Central Gulf of St. Lawrence Coral Conservation Area

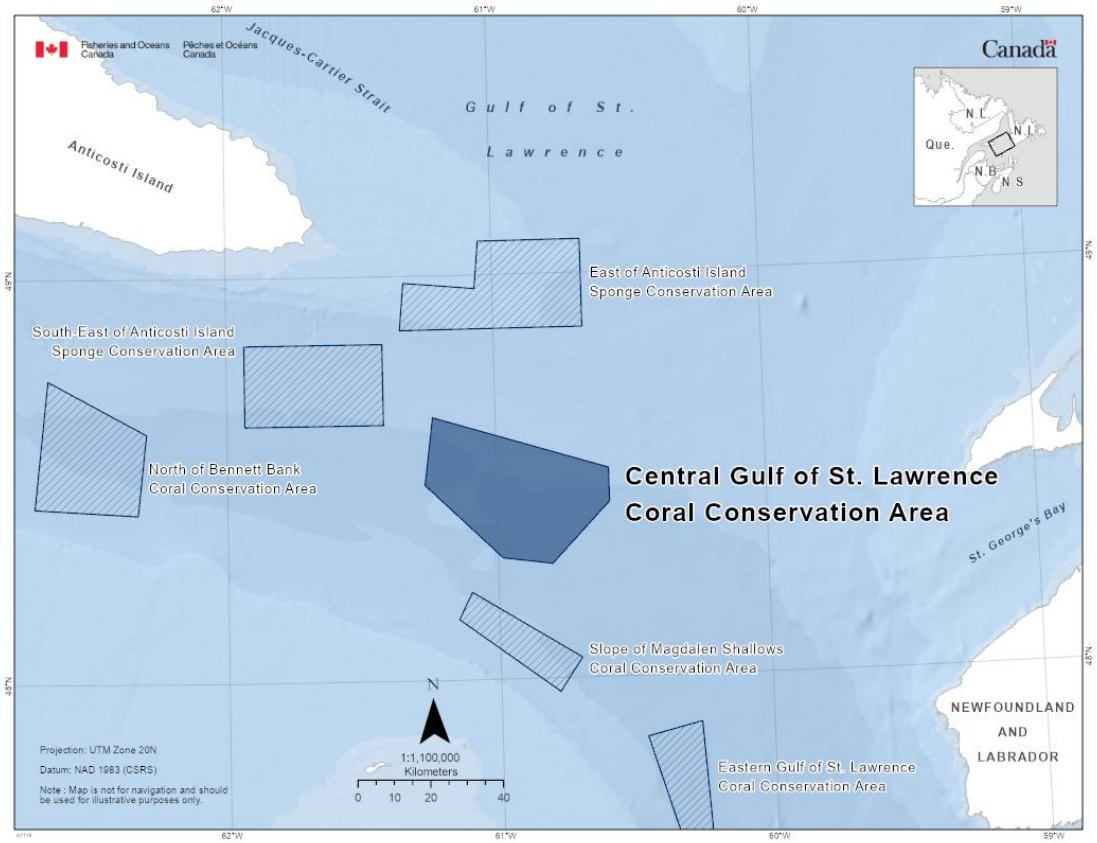
The Central Gulf of St. Lawrence Coral Conservation Area is found within the Estuary and Gulf of St. Lawrence Bioregion. The fishery area closure was established in 2017 as a variation order. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold-water corals. The fishery area closure prohibits all fishing that uses bottom-contact gear, such as bottom trawls, dredges, bottom seining, traps, gillnets, and bottom longlines.

Coordinates

The Central Gulf of St. Lawrence Coral Conservation Area is approximately 1,284 km2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Central Gulf of St. Lawrence Coral Conservation Area is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	48° 39' 00"	61° 14' 00"
2	48° 31' 00"	60° 35' 00"
3	48° 26' 00"	60° 35' 00"
4	48° 17' 00"	60° 48' 00"
5	48° 18' 00"	60° 59' 00"
6	48° 29' 00"	61° 16' 00"
7	48° 39' 00"	61° 14' 00"

The Central Gulf of St. Lawrence Coral Conservation Area is shown in the map below:



Additional Measures

Due to the presence of the endangered North Atlantic Right Whale (*Eubalaena glacialis*), vessels travelling through the Estuary and Gulf of St. Lawrence should familiarize themselves with the set speed restrictions in specific zones. For more information on the speed restrictions view the Ship Safety Bulletin.

1.3 - East of Anticosti Island Sponge Conservation Area

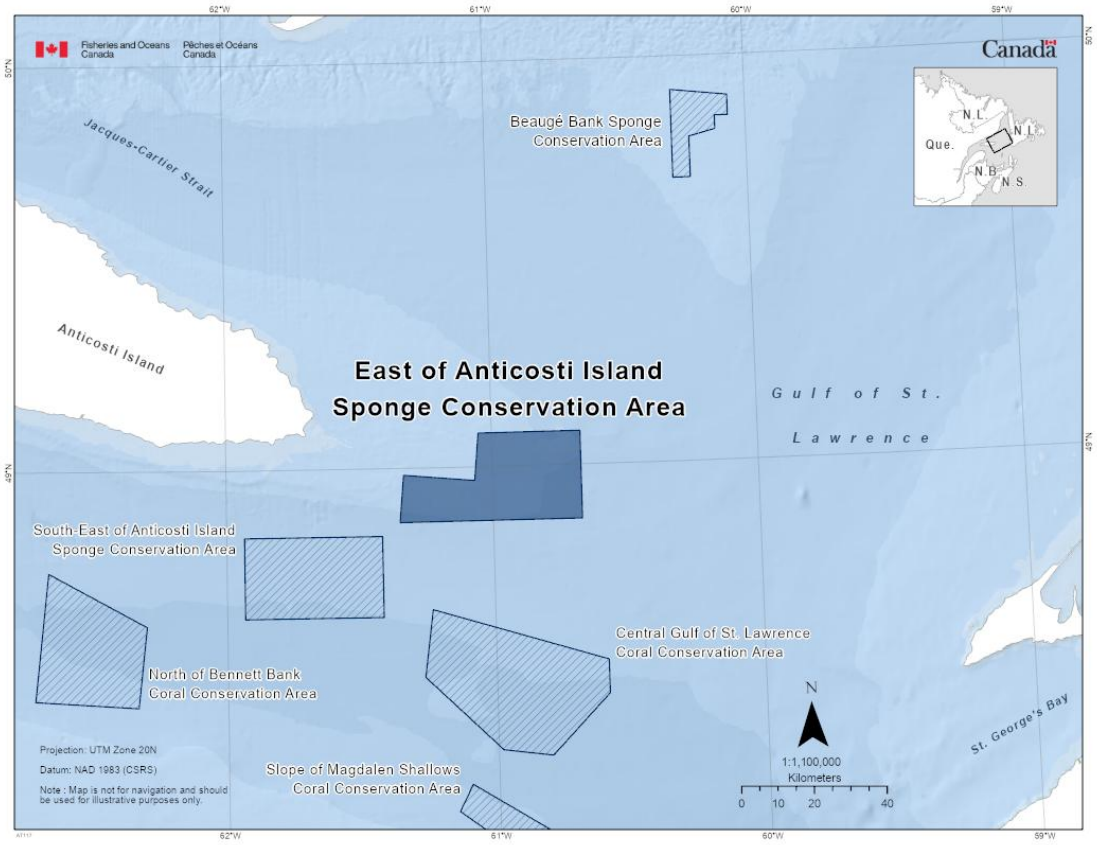
The East of Anticosti Island Sponge Conservation Area can be found within the Estuary and Gulf of St. Lawrence Bioregion. The fishery area closure was established in 2017 as a variation order. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold-water sponges. The fishery area closure prohibits all bottom fishing activities.

Coordinates

The East of Anticosti Island Sponge Conservation Area is approximately 939 km2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The East of Anticosti Island Sponge Conservation Area is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	49° 05' 00"	61° 03' 00"
2	49° 05' 00"	60° 40' 00"
3	48° 52' 00"	60° 40' 00"
4	48° 52' 00"	61° 21' 00"
5	48° 59' 00"	61° 20' 00"
6	48° 58' 00"	61° 04' 00"
7	49° 05' 00"	61° 03' 00"

The East of Anticosti Island Sponge Conservation Area in the map below:



Additional Measures

Due to the presence of the endangered North Atlantic Right Whale (*Eubalaena glacialis*), vessels travelling through the Estuary and Gulf of St. Lawrence should familiarize themselves with the set speed restrictions in specific zones. For more information on the speed restrictions view the Ship Safety Bulletin.

1.4 - Eastern Gulf of St. Lawrence Coral Conservation Area

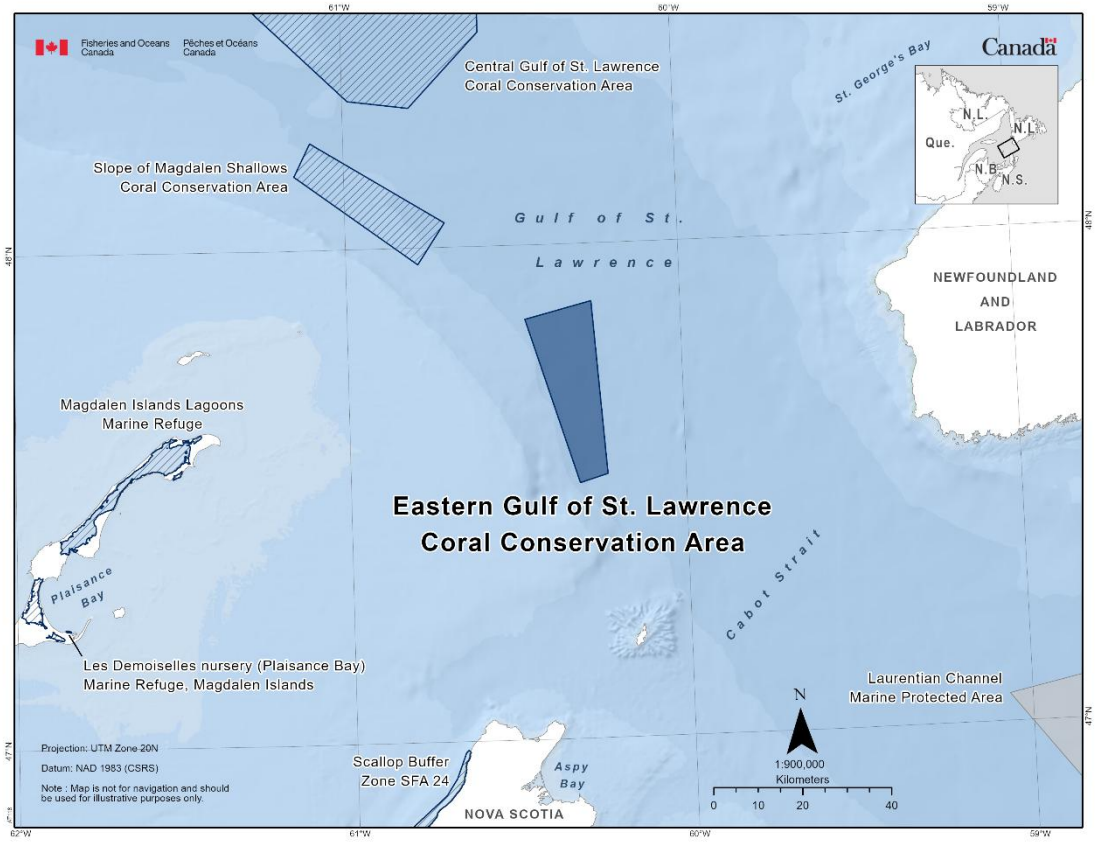
The Eastern Gulf of St. Lawrence Coral Conservation Area can be found within the Estuary and Gulf of St. Lawrence Bioregion. The fishery area closure was established in 2017 as a variation order. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold-water corals. The fishery area closure prohibits all fishing that uses bottom-contact gear, such as bottom trawls, dredges, bottom seining, traps, gillnets, and bottom longlines.

Coordinates

The Eastern Gulf of St. Lawrence Coral Conservation Area is approximately 423 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Eastern Gulf of St. Lawrence Coral Conservation Area is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	47° 51' 00"	60° 28' 00"
2	47° 53' 00"	60° 16' 00"
3	47° 32' 00"	60° 14' 00"
4	47° 31' 00"	60° 19' 00"
5	47° 51' 00"	60° 28' 00"

The Eastern Gulf of St. Lawrence Coral Conservation Area in the map below:



Additional Measures

Due to the presence of the endangered North Atlantic Right Whale (*Eubalaena glacialis*), vessels travelling through the Estuary and Gulf of St. Lawrence should familiarize themselves with the set speed restrictions in specific zones. For more information on the speed restrictions view the Ship Safety Bulletin.

1.5 - Eastern Honguedo Strait Coral and Sponge Conservation Area

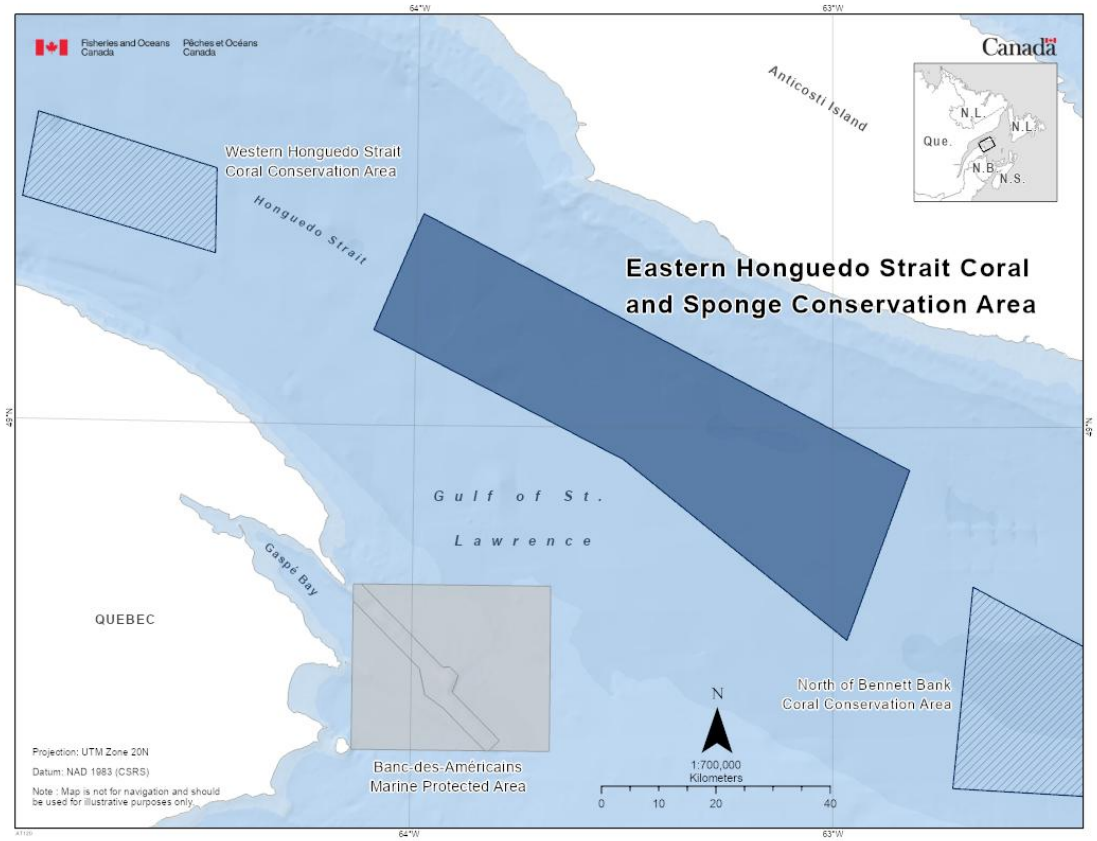
The Eastern Honguedo Strait Coral and Sponge Conservation Area can be found within the Estuary and Gulf of St. Lawrence Bioregion. The fishery area closure was established in 2017 as a variation order. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold-water corals and sponges. This fishery area closure prohibits all fishing that uses bottom-contact gear, such as bottom trawls, dredges, bottom seining, traps, gillnets, and bottom longlines.

Coordinates

The Eastern Honguedo Strait Coral and Sponge Conservation Area is approximately 2,338 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Eastern Honguedo Strait Coral and Sponge Conservation Area is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	49° 20' 00"	63° 59' 00"
2	48° 56' 00"	62° 49' 00"
3	48° 40' 00"	62° 58' 00"
4	48° 57' 00"	63° 30' 00"
5	49° 09' 00"	64° 06' 00"
6	49° 20' 00"	63° 59' 00"

The Eastern Honguedo Strait Coral and Sponge Conservation Area in the map below:



Additional Measures

Due to the presence of the endangered North Atlantic Right Whale (*Eubalaena glacialis*), vessels travelling through the Estuary and Gulf of St. Lawrence should familiarize themselves with the set speed restrictions in specific zones. For more information on the speed restrictions view the Ship Safety Bulletin.

1.6 - Jacques-Cartier Strait Sponge Conservation Area

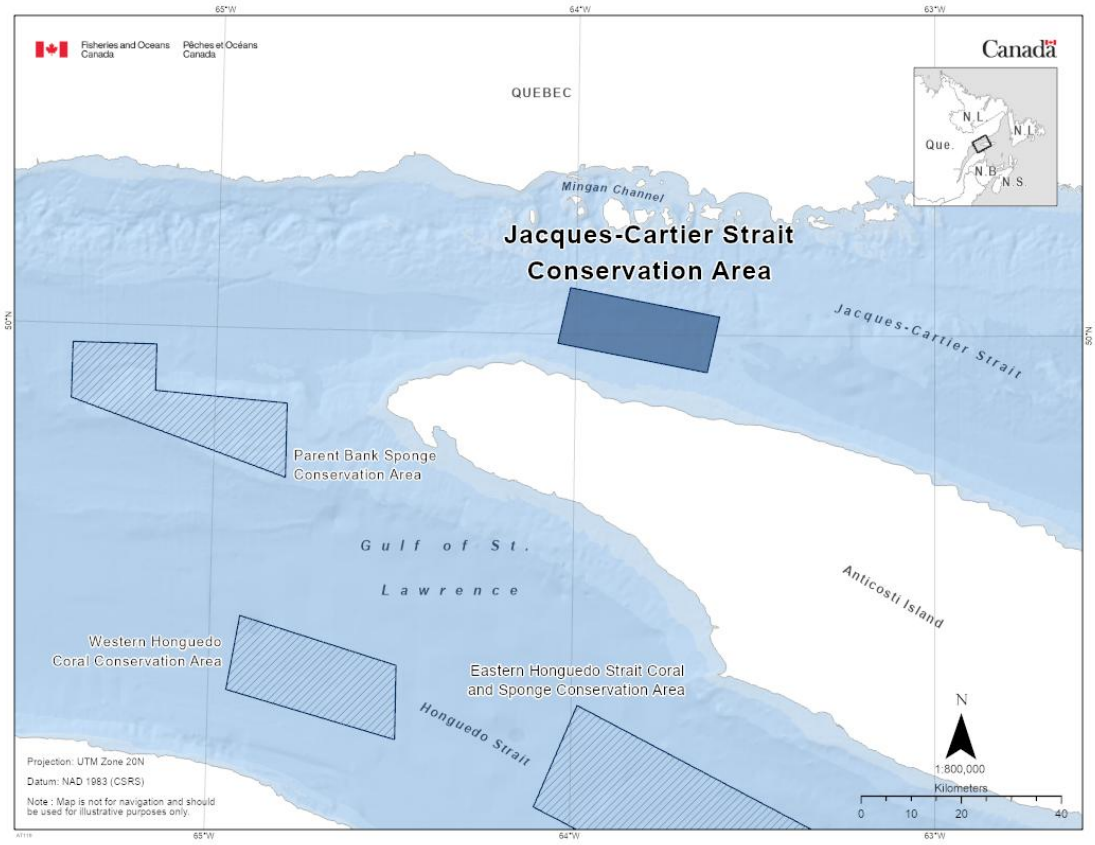
The Jacques-Cartier Strait Sponge Conservation Area can be found within the Estuary and Gulf of St. Lawrence Bioregion. The fishery area closure was established in 2017 as a variation order. The fishery area closure was granted marine refuge status due to the additional benefits it provides in to protect cold-water sponges. The fishery area closure prohibits all fishing that uses bottom contact gear, such as bottom trawls, dredges, bottom seining, traps, gillnets, and bottom longlines. The area is also home to marine mammals.

Coordinates

The Jacques-Cartier Strait Sponge Conservation Area is approximately 346 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Jacques-Cartier Strait Sponge Conservation Area is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	50° 05' 00"	64° 01' 00"
2	50° 02' 00"	63° 36' 00"
3	49° 56' 00"	63° 38' 00"
4	49° 59' 00"	64° 03' 00"
5	50° 05' 00"	64° 01' 00"

The Jacques-Cartier Strait Sponge Conservation Area in the map below:



Additional Measures

Due to the presence of the endangered North Atlantic Right Whale (*Eubalaena glacialis*), vessels travelling through the Estuary and Gulf of St. Lawrence should familiarize themselves with the set speed restrictions in specific zones. For more information on the speed restrictions view the Ship Safety Bulletin.

1.7 Les Demoiselles Nursery (Plaisance Bay) Marine Refuge, Magdalen Islands

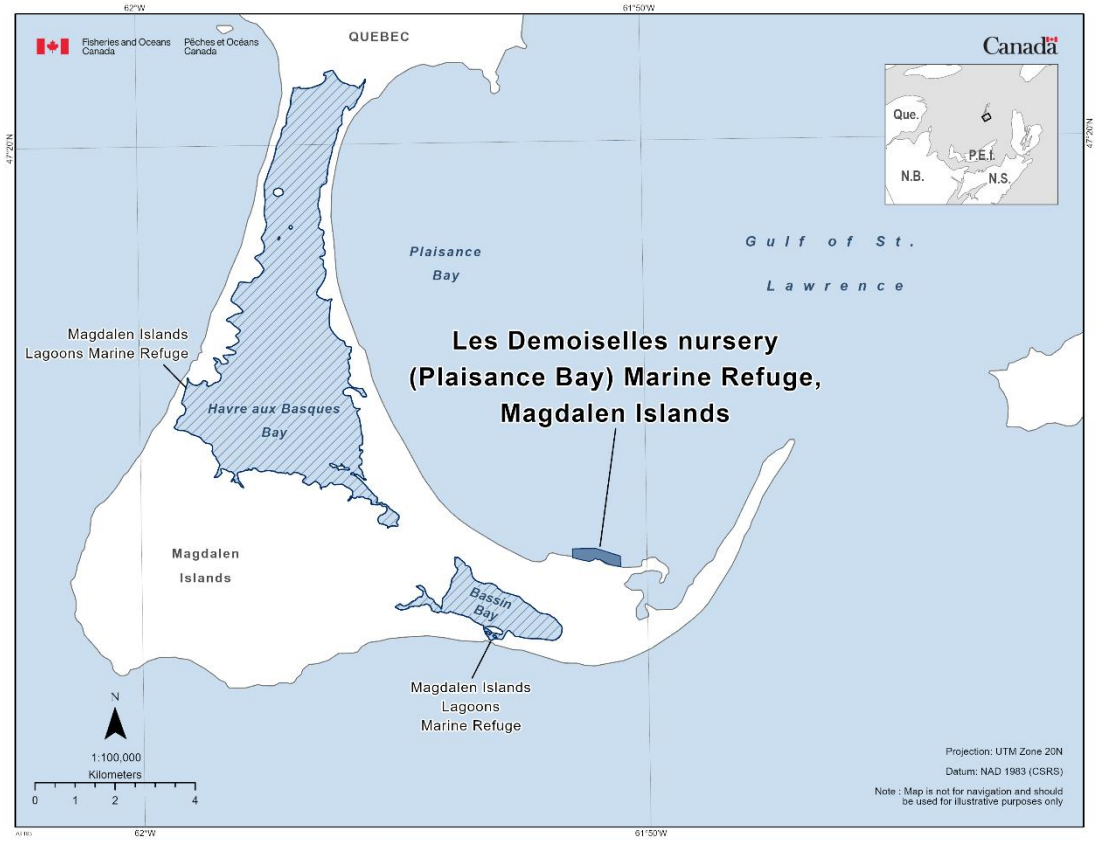
The Les Demoiselles Nursery (Plaisance Bay) Marine Refuge, Magdalen Islands can be found within the Estuary and Gulf of St. Lawrence Bioregion. The marine refuge includes a fishery area closure implemented by condition of licence. This closure was granted marine refuge status in 2016 because of the additional benefits they offer in protecting juvenile American lobster nursery grounds. This fishery area closure prohibits hydraulic dredge for the Atlantic surf clam and Atlantic razor clam, otter trawl, Danish and Scottish seine for the winter flounder, witch flounder, yellowtail flounder, and American plaice.

Coordinates

The Les Demoiselles (Plaisance Bay) Marine Refuge, Magdalen Islands is approximately 0.3 km^2.

Point	Latitude (North)	Longitude (West)
1	47° 14' 13.80"	61° 50' 31.60"
2	47° 14' 24.00"	61° 50' 31.60"
3	47° 14' 30.50"	61° 51' 00.70"
4	47° 14' 30.50"	61° 51' 28.30"
5	47° 14' 22.30"	61° 51' 28.30"

The Les Demoiselles (Plaisance Bay) Magdalen Islands Closure in the map below:



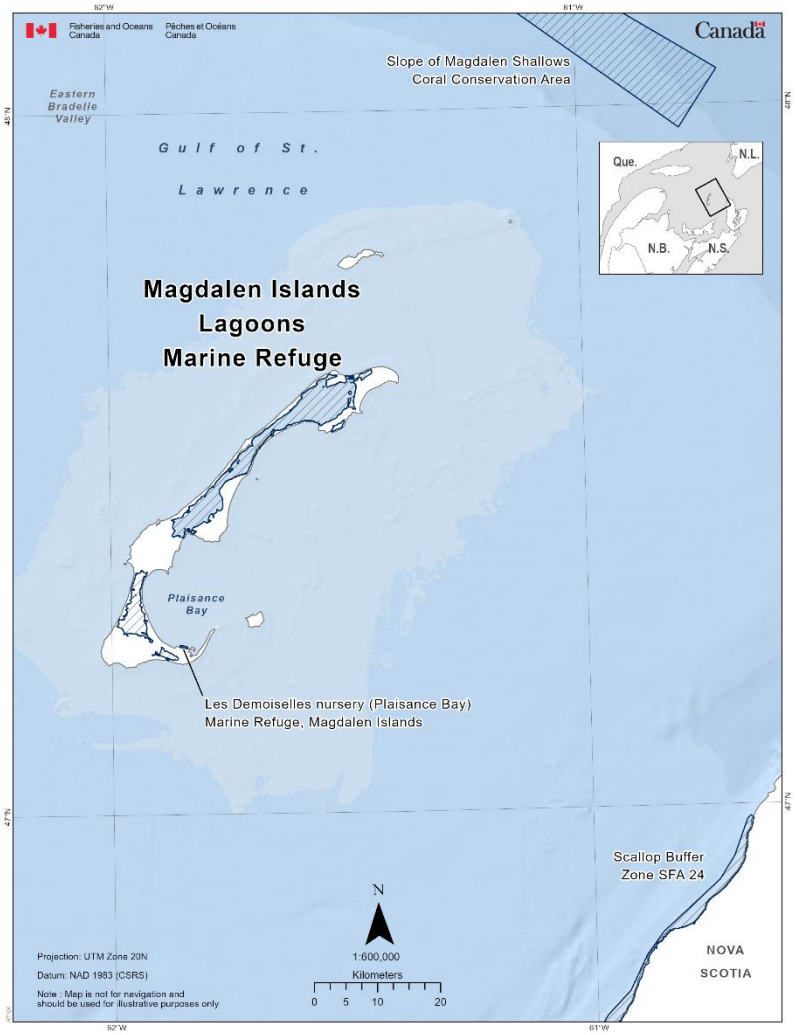
1.8 - Magdalen Islands Lagoons Marine Refuge

The Magdalen Islands Lagoons Marine Refuge can be found within the Estuary and Gulf of St. Lawrence Bioregion. The Magdalen Islands Lagoons Marine Refuge includes six fishery area closures implemented by licence conditions or legislation. These closures were granted marine refuge status in 2017 because of the additional benefits they offer in protecting lobster habitat and preserving herring spawning grounds. These fishery closures prohibit hydraulic dredging for razor clams and Atlantic surf clams, gillnetting and tile fishing for winter flounder, gillnetting for Atlantic herring, pelagic trawling and Danish and Scottish seines for yellowtail flounder and winter flounder, and trap fishing for American lobster.

Coordinates

The Magdalen Islands Lagoons Marine Refuge is approximately 136 km^2 in size. The boundary of the closure is defined as the lagoons of the Magdalen Islands in Lobster Fishing Area 22 or the interior bodies of water of the Magdalen Islands.

The Magdalen Islands Lagoons Marine Refuge in the map below:



1.9 - Miramichi Bay Closure

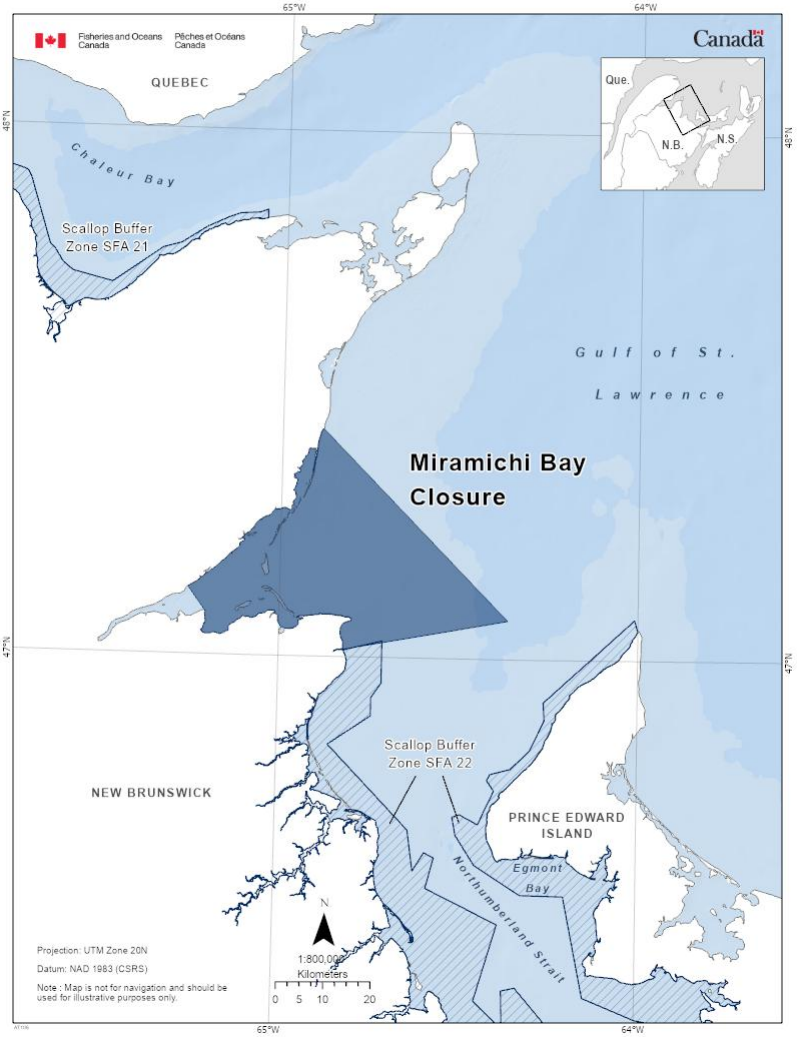
The Miramichi Bay Closure can be found within the Estuary and Gulf of St. Lawrence Bioregion. The fishery area closure was established in 1985 under the *Fisheries Act*. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect adult Atlantic salmon and an important migration corridor. The fishery area closure prohibits the use of gillnets for all commercial groundfish fisheries.

Coordinates

The Miramichi Bay Closure is approximately 1,468 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The waters adjacent to the coast of New Brunswick enclosed by the coastline, excluding rivers and brooks (ex.: Miramichi River, Napan River, Black River, Eel River, Tabusintac River etc.), and straight lines joining the following points in the order in which they are listed:

Point	Latitude (North)	Longitude (West)
1	47° 26′ 00.0”	64° 53′ 12.0″
2	47° 04′ 24.0″	64° 21′ 45.0″
3	47° 00′ 48.0″	64° 49′ 40.0″

The Miramichi Bay Closure in the map below:



Additional Measures

Due to the presence of the endangered North Atlantic Right Whale (*Eubalaena glacialis*), vessels travelling through the Estuary and Gulf of St. Lawrence should familiarize themselves with the set speed restrictions in specific zones. For more information on the speed restrictions view the Ship Safety Bulletin.

1.10 - North of Bennett Bank Coral Conservation Area

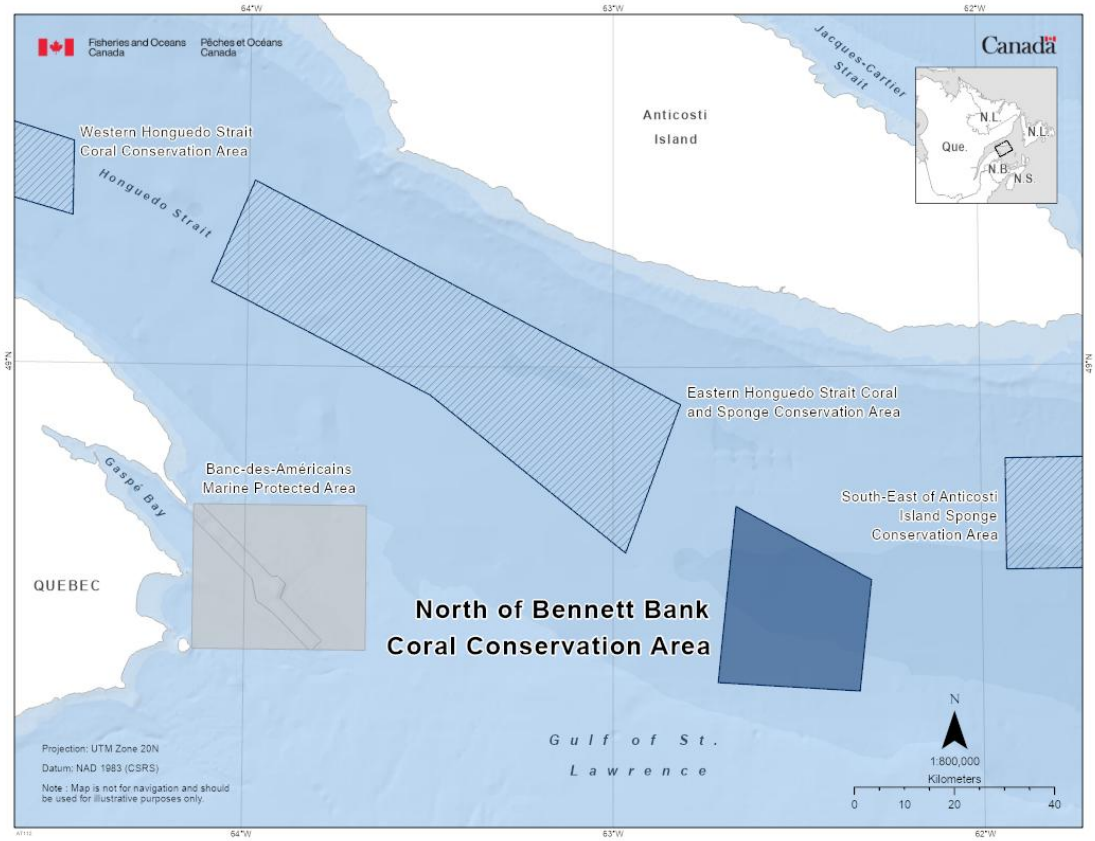
The North of Bennett Bank Coral Conservation Area can be found within the Estuary and Gulf of St. Lawrence Bioregion. The fishery area closure was established in 2017 as a variation order. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold-water corals. The fishery area closure prohibits all fishing that uses bottom-contact gear, such as bottom trawls, dredges, bottom seining, traps, gillnets, and bottom longlines.

Coordinates

The North of Bennett Bank Coral Conservation Area is approximately 821 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The North of Bennett Bank Coral Conservation Area is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	48° 45' 00"	62° 40' 00"
2	48° 37' 00"	62° 18' 00"
3	48° 25' 00"	62° 20' 00"
4	48° 26' 00"	62° 43' 00"
5	48° 45' 00"	62° 40' 00"

The North of Bennett Bank Coral Conservation Area in the map below:



Additional Measures

Due to the presence of the endangered North Atlantic Right Whale (*Eubalaena glacialis*), vessels travelling through the Estuary and Gulf of St. Lawrence should familiarize themselves with the set speed restrictions in specific zones. For more information on the speed restrictions view the Ship Safety Bulletin.

1.11 - Parent Bank Sponge Conservation Area

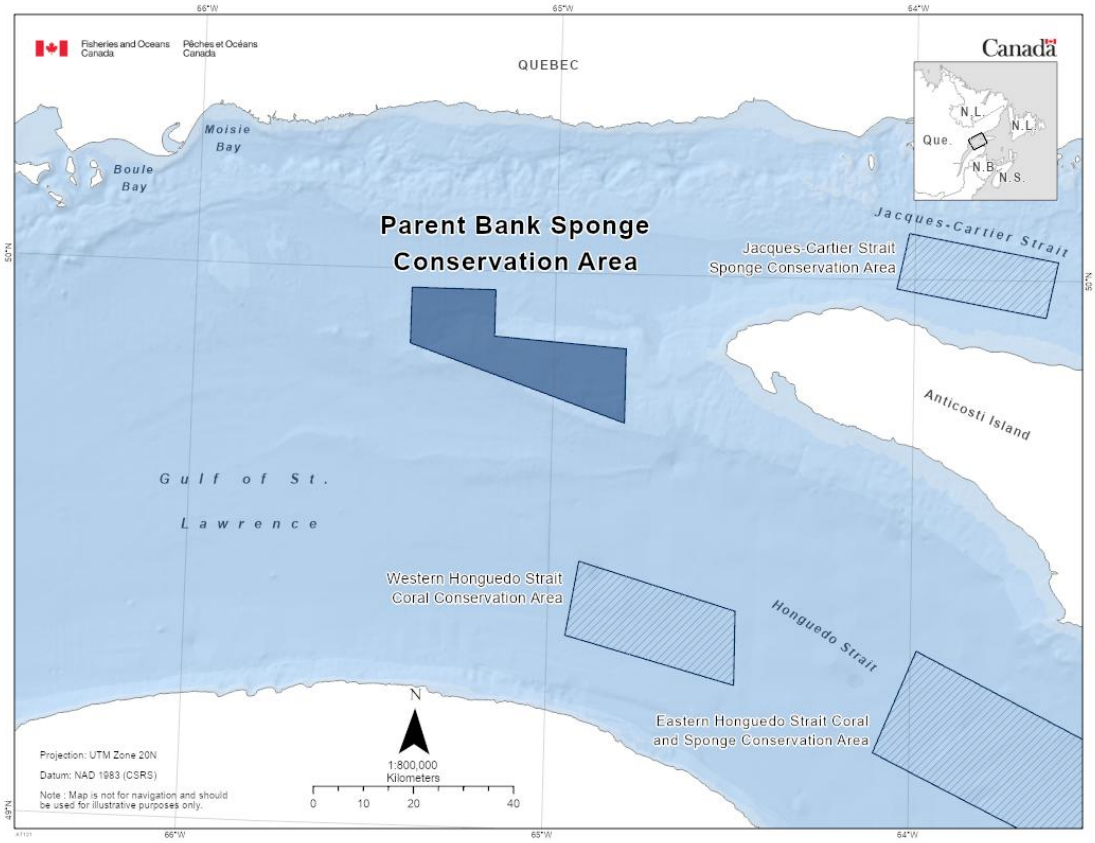
The Parent Bank Sponge Conservation Area can be found within the Estuary and Gulf of St. Lawrence Bioregion. The fishery area closure was established in 2017 as a variation order. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold-water sponges. The fishery area closure prohibits all fishing that uses bottom-contact gear, such as bottom trawls, dredges, bottom seining, traps, gillnets, and bottom longlines.

Coordinates

The Parent Bank Sponge Conservation Area is approximately 530 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Parent Bank Sponge Conservation Area is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	49° 58' 00"	65° 24' 00"
2	49° 58' 00"	65° 10' 00"
3	49° 53' 00"	65° 10' 00"
4	49° 52' 00"	64° 48' 00"
5	49° 44' 00"	64° 48' 00"
6	49° 52' 00"	65° 24' 00"
7	49° 58' 00"	65° 24' 00"

The Parent Bank Sponge Conservation Area in the map below:



Additional Measures

Due to the presence of the endangered North Atlantic Right Whale (*Eubalaena glacialis*), vessels travelling through the Estuary and Gulf of St. Lawrence should familiarize themselves with the set speed restrictions in specific zones. For more information on the speed restrictions view the Ship Safety Bulletin.

1.12 - Scallop Buffer Zones (SFA 21, 22, 24)

The Scallop Buffer Zones are located within the Estuary and Gulf of St. Lawrence Bioregion and is within three Scallop Fishing Areas (SFA): SFA 21, SFA 22, and SFA 24. These fishing area closures are currently established via conditions of licence. The fishery area closure within SFA 21 was initially established in 1999 as a variation order, and has since increased in 2013 and again in 2015. The fishery area closure for SFA 22 was established in 2005 as a variation order and the closure for SFA 24 was initially established in 1996 also as a variation order. In 1999 and 2006 additional buffers were added and the zone increased. These portions of the scallop fishing area were granted marine refuge status due to the additional benefits it provides to protect juvenile lobster and its habitat. The fishery area closure prohibits scallop dragging.

Coordinates

In total, the Scallop Buffer Zones are approximately 5,425 km^2 in size and are composed of three separate zones with the coordinates outlined for each below. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. All Scallop Buffer Zones are bounded by a line connecting the points in the order they are listed.

SFA 21

Point	Latitude (North)	Longitude (West)
1	48° 03' 23.66"	66° 21' 28.30"
2	48° 01' 59.47"	66° 15' 21.45"
3	48° 02' 23.08"	66° 11' 35.94"
4	48° 01' 47.66"	66° 07' 55.34"
5	48° 00' 37.47"	66° 04' 50.03"
6	47° 58' 50.55"	66° 02' 46.49"
7	47° 58' 04.63"	66° 01' 11.38"
8	47° 57' 15.43"	65° 57' 06.26"
9	47° 54' 41.27"	65° 44' 42.08"
10	47° 54' 26.81"	65° 44' 18.05"
11	47° 53' 52.87"	65° 43' 50.28"
12	47° 46' 14.86"	65° 40' 14.42"
13	47° 45' 43.37"	65° 39' 23.43"
14	47° 45' 03.35"	65° 38' 45.20"
15	47° 44' 14.81"	65° 38' 00.09"
16	47° 43' 18.76"	65° 36' 15.89"
17	47° 42' 11.50"	65° 29' 29.89"
18	47° 46' 15.64"	65° 21' 05.27"
19	47° 46' 51.71"	65° 17' 59.21"
20	47° 48' 45.05"	65° 13' 41.81"
21	47° 49' 53.71"	65° 10' 02.63"
22	47° 50' 22.88"	65° 08' 07.94"

23	47° 50' 31.46"	65° 04' 51.70"
24	47° 50' 52.05"	65° 03' 30.14"
25	47° 50' 52.00"	65° 03' 27.70"
26	47° 49' 54.16"	65° 03' 27.61"

The SFA 22 is divided into two zones, one along the coast of New Brunswick and the other along the coast of Prince Edward Island.

New Brunswick Coastal Buffer Zone

Point	Latitude (North)	Longitude (West)
1	47° 00' 48.2"	64° 49' 37.7"
2	47° 01' 54.7"	64° 42' 42.7"
3	46° 57' 05.2"	64° 42' 42.7"
4	46° 55' 26.2"	64° 44' 21.7"
5	46° 53' 20.2"	64° 44' 21.7"
6	46° 50' 00.2"	64° 51' 27.7"
7	46° 40' 23.2"	64° 37' 52.7"
8	46° 35' 43.3"	64° 36' 54.7"
9	46° 37' 50.3"	64° 35' 02.7"
10	46° 37' 15.3"	64° 33' 25.7"
11	46° 33' 46.3"	64° 34' 43.7"
12	46° 29' 45.3"	64° 22' 48.7"
13	46° 20' 59.3"	64° 26' 29.7"
14	46° 17' 51.3"	64° 21' 43.7"
15	46° 22' 12.3"	64° 21' 55.7"
16	46° 22' 34.3"	64° 19' 42.7"
17	46° 14' 50.2"	64° 10' 07.7"
18	46° 12' 27.2"	63° 49' 09.7"
19	46° 03' 33.2"	63° 36' 55.7"
20	45° 54' 47.5"	63° 40' 19.2"
21	45° 51' 45.3"	63° 42' 39.7"

Prince Edward Island Coastal Buffer Zone

Point	Latitude (North)	Longitude (West)
1	47° 03' 15.2"	64° 59' 57.7"
2	47° 04' 41.2"	64° 00' 33.7"
3	46° 55' 09.3"	64° 15' 37.7"
4	46° 53' 06.3"	64° 15' 26.7"
5	46° 49' 34.3"	64° 17' 53.7"
6	46° 47' 30.3"	64° 20' 59.7"
7	46° 46' 53.3"	64° 24' 19.7"
8	46° 46' 11.3"	64° 24' 49.7"
9	46° 45' 00.3"	64° 23' 39.7"
10	46° 41' 08.3"	64° 26' 13.8"
11	46° 42' 14.3"	64° 29' 15.7"
12	46° 41' 57.3"	64° 30' 29.7"
13	46° 39' 52.3"	64° 29' 53.8"
14	46° 36' 29.3"	64° 26' 42.7"
15	46° 33' 08.3"	64° 19' 04.7"
16	46° 33' 03.3"	64° 11' 56.7"
17	46° 21' 30.3"	64° 08' 32.7"
18	46° 19' 02.2"	63° 59' 50.7"
19	46° 17' 35.2"	63° 48' 08.7"
20	46° 07' 54.0"	63° 30' 12.8"
21	46° 10' 35.2"	63° 28' 00.7"
22	46° 12' 58.2"	63° 29' 23.7"

SFA 24

Those waters adjacent to the Province of Nova Scotia within one (1) nautical mile from the nearest point of land in the counties of Cumberland, Colchester, Pictou, including Pictou Island in the Northumberland Strait and Antigonish. Those waters adjacent to the western coast of Cape Breton, Nova Scotia, within one (1) nautical mile from the nearest point of land, from the Canso Causeway, northward including Henry Island and Port Hood Island, to the Mabou Harbour entrance range lights. Those waters adjacent to the Province of Prince Edward Island inside rhumb lines (similar to straight lines plotted on a nautical chart) joining the following points in the order they are listed:

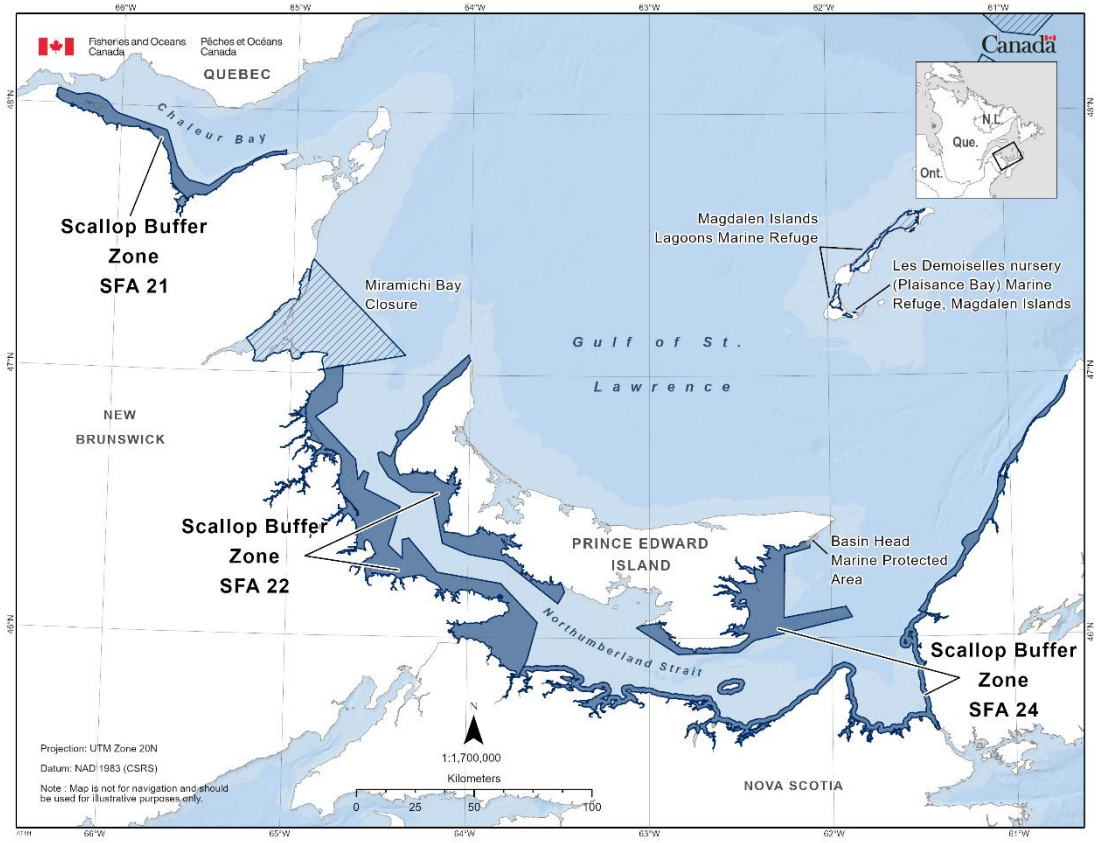
Point	Latitude (North)	Longitude (West)
1	46° 22' 17.0"	62° 06' 55.0"
2	46° 20' 39.0"	62° 06' 54.0"
3	46° 19' 03.0"	62° 15' 18.0"
4	46° 04' 39.0"	62° 15' 38.0"
5	46° 07' 06.0"	61° 55' 09.0"
6	46° 04' 42.0"	61° 53' 06.0"
7	45° 59' 28.0"	62° 25' 31.0"
8	45° 56' 47.0"	62° 30' 38.0"
9	45° 56' 20.0"	62° 50' 36.0"
10	46° 02' 25.0"	63° 04' 17.0"
11	46° 03' 00.0"	63° 02' 25.0"

Those waters adjacent to the western coast of Cape Breton, Nova Scotia, inside rhumb lines (similar to straight lines plotted on a nautical chart) joining the following points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	46° 05' 09.2"	61° 27' 55.2"
2	46° 05' 54.0"	61° 31' 24.0"
3	46° 07' 42.0"	61° 29' 15.0"
4	46° 08' 34.0"	61° 28' 29.0"
5	46° 09' 44.0"	61° 28' 02.0"
6	46° 10' 56.0"	61° 26' 18.0"
7	46° 11' 57.0"	61° 25' 24.0"
8	46° 15' 42.0"	61° 19' 03.0"
9	46° 18' 37.0"	61° 16' 35.0"
10	46° 19' 43.0"	61° 15' 44.0"
11	46° 20' 17.0"	61° 15' 49.0"
12	46° 20' 55.0"	61° 16' 33.0"
13	46° 21' 43.0"	61° 16' 25.0"
14	46° 22' 59.0"	61° 14' 41.0"
15	46° 24' 03.0"	61° 11' 10.0"
16	46° 28' 44.0"	61° 07' 23.0"
17	46° 30' 44.0"	61° 05' 47.0"
18	46° 31' 55.0"	61° 05' 06.0"
19	46° 33' 35.0"	61° 04' 22.0"
20	46° 35' 45.0"	61° 04' 06.0"
21	46° 36' 38.0"	61° 03' 41.0"
22	46° 36' 59.0"	61° 03' 52.0"
23	46° 37' 46.0"	61° 03' 03.0"
24	46° 39' 05.0"	61° 02' 10.0"
25	46° 40' 19.0"	61° 00' 30.0"
26	46° 42' 11.0"	60° 58' 50.0"

27	46° 44' 14.0"	60° 55' 57.0"
28	46° 47' 15.0"	60° 53' 46.0"
29	46° 49' 12.0"	60° 51' 38.0"
30	46° 53' 33.0"	60° 44' 27.0"
31	46° 55' 34.0"	60° 42' 32.0"
32	46° 58' 42.0"	60° 40' 47.0"
33	46° 58' 59.2"	60° 40' 20.8"
34	46° 58' 42.2"	60° 39' 57.2"

The Scallop Buffer Zones in the maps below:



Additional Measures

Due to the presence of the endangered North Atlantic Right Whale (*Eubalaena glacialis*), vessels travelling through the Estuary and Gulf of St. Lawrence should familiarize themselves with the set speed restrictions in specific zones. For more information on the speed restrictions view the Ship Safety Bulletin.

1.13 - Slope of Magdalen Shallows Coral Conservation Area

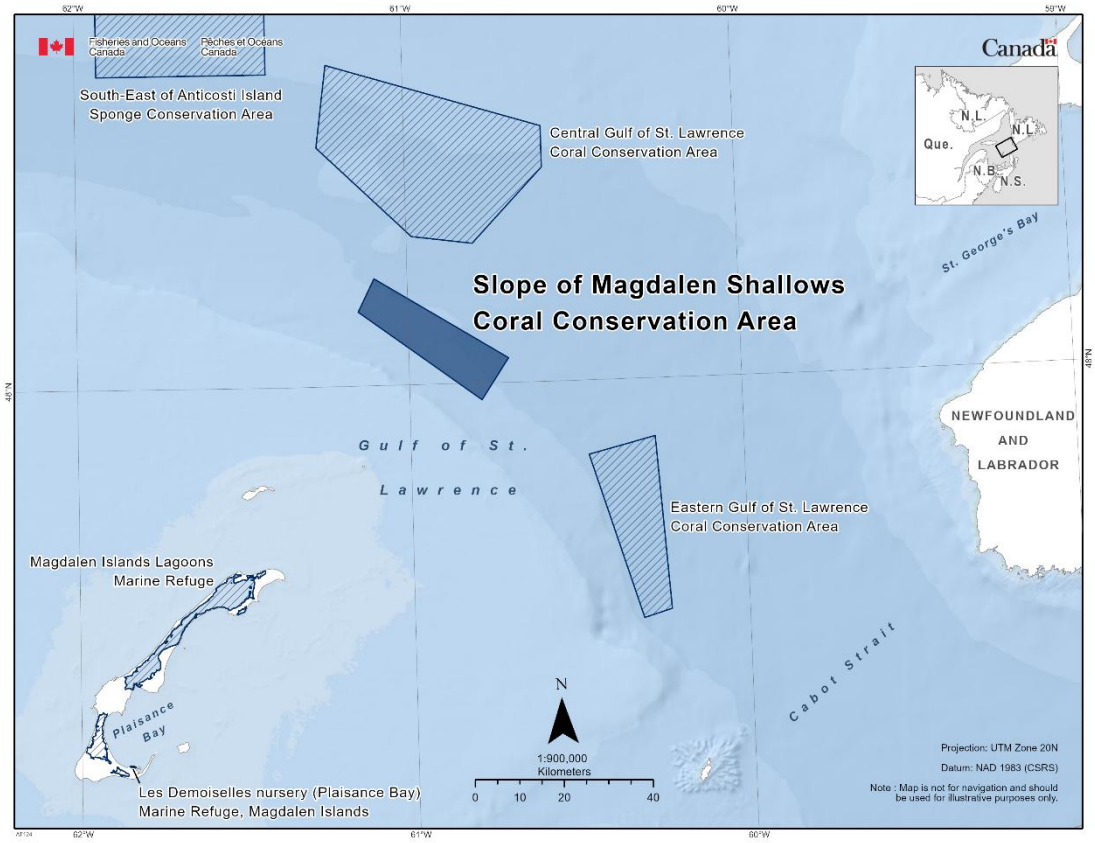
The Slope of Magdalen Shallows Coral Conservation Area can be found within the Estuary and Gulf of St. Lawrence Bioregion. The fishery area closure was established in 2017 as a variation order. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold-water corals. The fishery area closure prohibits all fishing that uses bottom-contact gear, such as bottom trawls, dredges, bottom seining, traps, gillnets, and bottom longlines.

Coordinates

The Slope of Magdalen Shallows Coral Conservation Area is approximately 335 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Slope of Magdalen Shallows Coral Conservation Area is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	48° 13' 00"	61° 06' 00"
2	48° 03' 00"	60° 42' 00"
3	47° 58' 00"	60° 47' 00"
4	48° 09' 00"	61° 09' 00"
5	48° 13' 00"	61° 06' 00"

The Slope of Magdalen Shallows Coral Conservation Area in the map below:



Additional Measures

Due to the presence of the endangered North Atlantic Right Whale (*Eubalaena glacialis*), vessels travelling through the Estuary and Gulf of St. Lawrence should familiarize themselves with the set speed restrictions in specific zones. For more information on the speed restrictions view the Ship Safety Bulletin.

1.14 - South-East of Anticosti Island Sponge Conservation Area

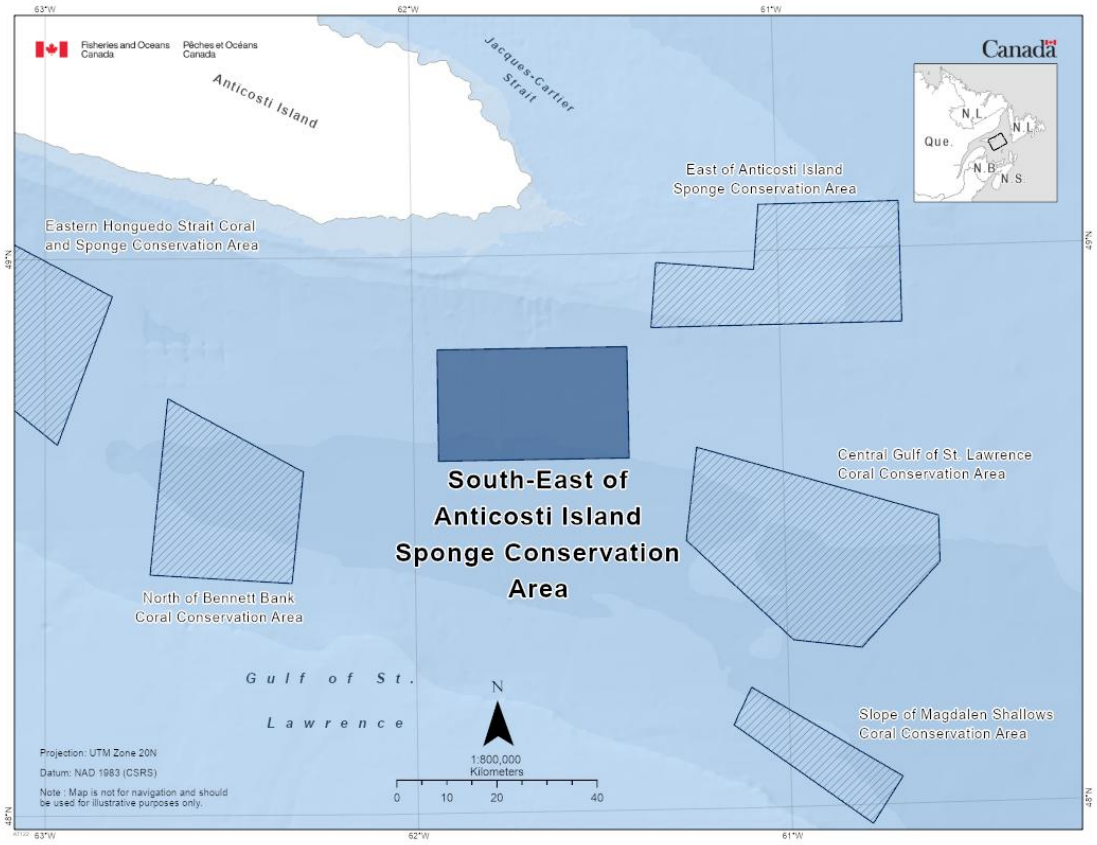
The South-East of Anticosti Island Sponge Conservation Area can be found within the Estuary and Gulf of St. Lawrence Bioregion. The fishery area closure was established in 2017 as a variation order. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold-water sponges. The fishery area closure prohibits all fishing that uses bottom-contact gear, such as bottom trawls, dredges, bottom seining, traps, gillnets, and bottom longlines.

Coordinates

The South-East of Anticosti Island Sponge Conservation Area is approximately 845 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The South-East of Anticosti Island Sponge Conservation Area is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	48° 50' 00"	61° 56' 00"
2	48° 50' 00"	61° 25' 00"
3	48° 38' 00"	61° 25' 00"
4	48° 38' 00"	61° 56' 00"
5	48° 50' 00"	61° 56' 00"

The South-East of Anticosti Island Sponge Conservation Area in the map below:



Additional Measures

Due to the presence of the endangered North Atlantic Right Whale (*Eubalaena glacialis*), vessels travelling through the Estuary and Gulf of St. Lawrence should familiarize themselves with the set speed restrictions in specific zones. For more information on the speed restrictions view the Ship Safety Bulletin.

1.15 - Western Honguedo Strait Coral Conservation Area

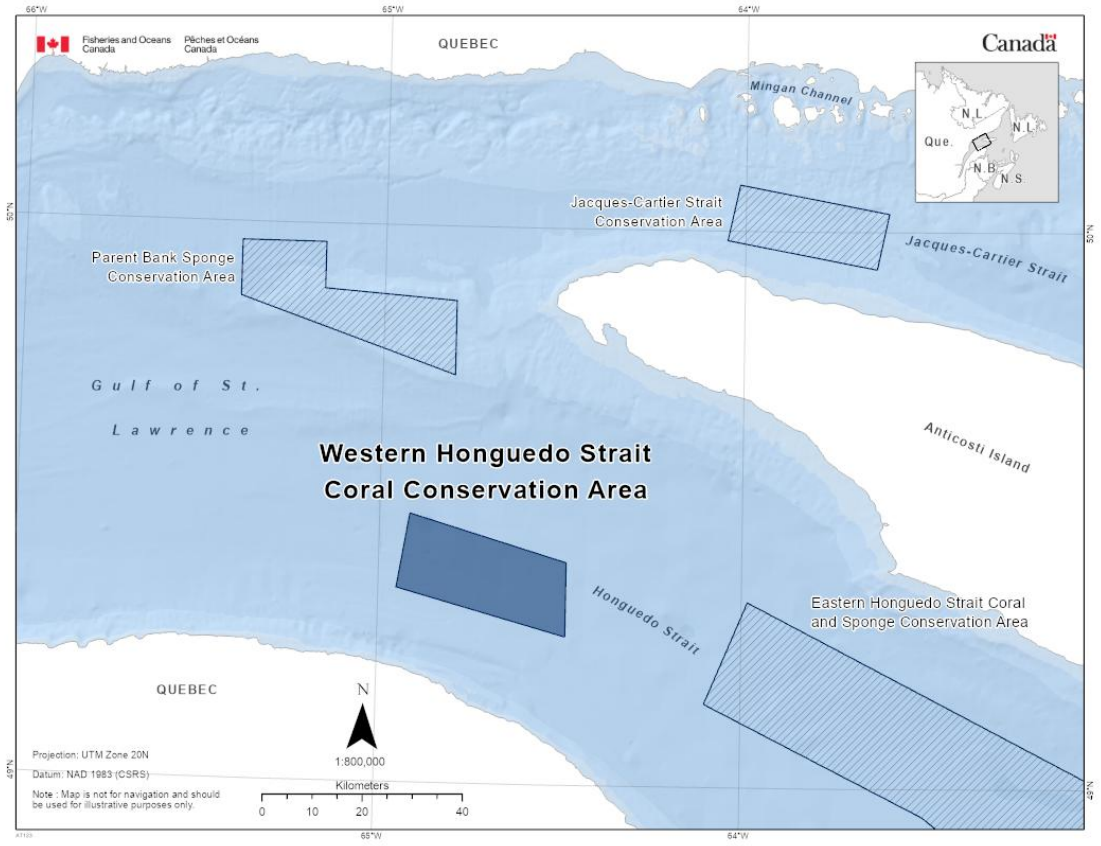
The Western Honguedo Strait Coral Conservation Area can be found within the Estuary and Gulf of St. Lawrence Bioregion. The fishery area closure was established in 2017 as a variation order. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold-water corals. The fishery area closure prohibits all fishing that uses bottom-contact gear, such as bottom trawls, dredges, bottom seining, traps, gillnets, and bottom longlines.

Coordinates

The Western Honguedo Strait Coral Conservation Area is approximately 496 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Western Honguedo Strait Coral Conservation Area is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	49° 29' 00"	64° 55' 00"
2	49° 24' 00"	64° 29' 00"
3	49° 16' 00"	64° 29' 00"
4	49° 21' 00"	64° 57' 00"
5	49° 29' 00"	64° 55' 00"

The Western Honguedo Strait Coral Conservation Area in the map below:



Additional Measures

Due to the presence of the endangered North Atlantic Right Whale (*Eubalaena glacialis*), vessels travelling through the Estuary and Gulf of St. Lawrence should familiarize themselves with the set speed restrictions in specific zones. For more information on the speed restrictions view the Ship Safety Bulletin.

1.16 - Corsair and Georges Canyons Marine Refuge

The Corsair and Georges Canyons Marine Refuge is found within the Scotian Shelf Bioregion. The fishery area closure was established in 2016 as a condition of licence. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold-water corals. The fishery area closure prohibits all commercial bottom-contact fishing gear.

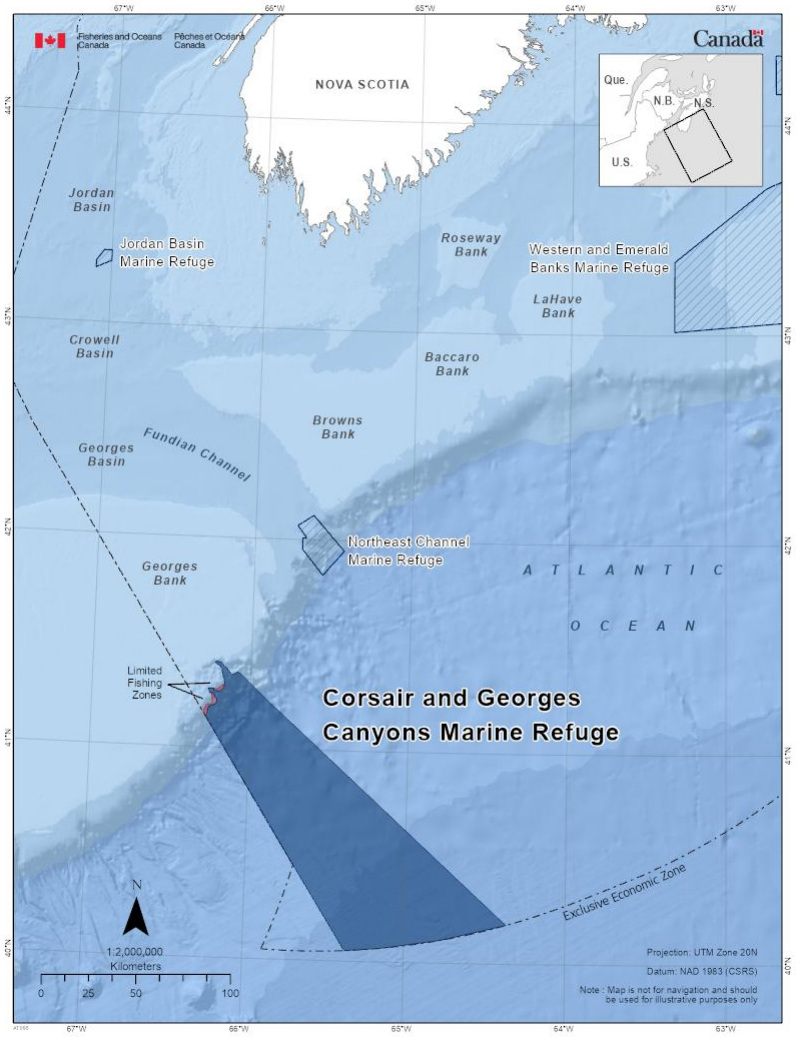
Coordinates

The Corsair and Georges Canyons Marine Refuge is approximately 8, 797 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. This site is located adjacent to the United States border on the outer edge of Georges Bank (of southern Nova Scotia) and extends to the outer limit of the Canadian Exclusive Economic Zone. The Corsair and Georges Canyons Marine Refuge is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	41° 09' 59.366"	66° 17' 41.547"
2	41° 11' 45.000"	66° 16' 45.000"
3	41° 12' 15.000"	66° 16' 15.000"
4	41° 12' 15.000"	66° 15' 00.000"
5	41° 12' 45.000"	66° 14' 15.000"
6	41° 14' 00.000"	66° 14' 30.000"
7	41° 15' 00.000"	66° 14' 30.000"
8	41° 15' 30.000"	66° 15' 00.000"
9	41° 15' 30.000"	66° 15' 30.000"
10	41° 16' 00.000"	66° 15' 30.000"
11	41° 16' 45.000"	66° 16' 00.000"
12	41° 16' 45.000"	66° 14' 00.000"
13	41° 16' 45.000"	66° 13' 30.000"
14	41° 16' 30.000"	66° 12' 30.000"
15	41° 17' 30.000"	66° 11' 15.000"
16	41° 17' 45.000"	66° 10' 15.000"
17	41° 18' 07.500"	66° 10' 00.000"
18	41° 18' 30.000"	66° 09' 45.000"
19	41° 18' 45.000"	66° 10' 00.000"
20	41° 19' 15.000"	66° 10' 00.000"
21	41° 19' 45.000"	66° 10' 15.000"
22	41° 20' 00.000"	66° 10' 15.000"
23	41° 20' 30.000"	66° 10' 45.000"
24	41° 20' 45.000"	66° 10' 30.000"

25	41° 21' 15.000"	66° 10' 45.000"
26	41° 21' 30.000"	66° 10' 45.000"
27	41° 21' 45.000"	66° 11' 00.000"
28	41° 22' 30.000"	66° 11' 00.000"
29	41° 23' 15.000"	66° 11' 45.000"
30	41° 23' 30.000"	66° 12' 30.000"
31	41° 24' 00.000"	66° 13' 30.000"
32	41° 24' 30.000"	66° 13' 30.000"
33	41° 24' 30.000"	66° 12' 30.000"
34	41° 24' 15.000"	66° 12' 00.000"
35	41° 24' 15.000"	66° 11' 30.000"
36	41° 24' 00.000"	66° 11' 00.000"
37	41° 23' 15.000"	66° 10' 15.000"
38	41° 22' 30.000"	66° 09' 00.000"
39	41° 22' 00.000"	66° 08' 45.000"
40	41° 22' 00.000"	66° 08' 15.000"
41	41° 21' 30.000"	66° 08' 15.000"
42	41° 21' 30.000"	66° 07' 45.000"
43	41° 21' 00.000"	66° 07' 45.000"
44	41° 20' 45.000"	66° 07' 15.000"
45	41° 21' 00.000"	66° 06' 15.000"
46	41° 21' 37.500"	66° 05' 15.000"
47	41° 21' 15.000"	66° 04' 00.000"
48	40° 11' 09.213"	64° 22' 02.502"
49	40° 03' 01.741"	65° 22' 00.138"

The Corsair and Georges Canyons Marine Refuge is shown in the map below:



1.17 - Eastern Canyons Marine Refuge

The Eastern Canyons Marine Refuge can be found within the Scotian Shelf Bioregion. The fishery area closure was established in 2022 through variation orders. The final marine refuge was established in licence conditions in June 2022 and encompassed the pre-existing Lophelia Coral Conservation Area, which had been in place since 2004. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold-water corals and the *Lophelia pertusa* (now known as *Desmophyllum pertusum*) coral reef. The fishery area closure prohibits all commercial bottom-contact fishing gear.

Coordinates

The Eastern Canyons Marine Refuge is approximately 43, 976 km^2 in size with a limited fisheries zone of 76.4 km^2 which permits groundfish longline fishing with an at-sea observer while remaining closed to all other bottom-contact fisheries. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Eastern Canyons Marine Refuge is bounded by a line connecting the points in the order they are listed:

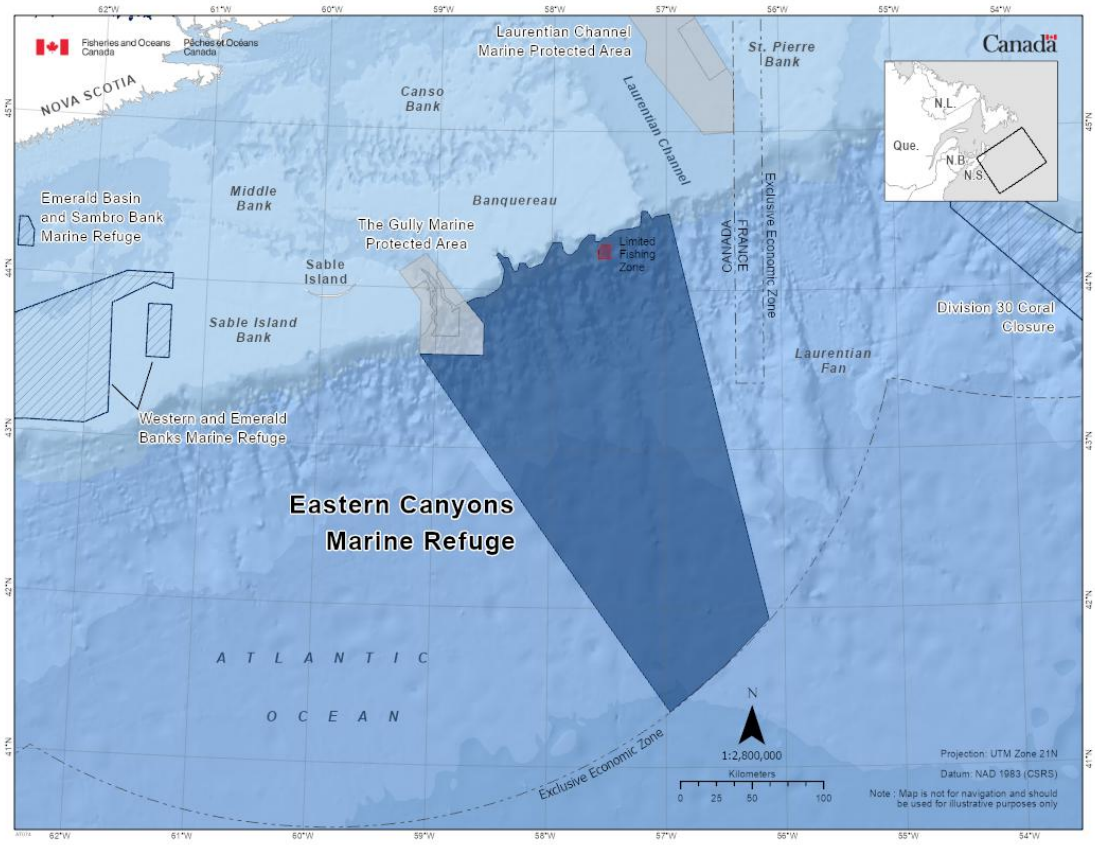
Point	Latitude (North)	Longitude (West)
1	43° 54' 51.339"	58° 44' 20.541"
2	43° 56' 30.000"	58° 40' 00.000"
3	43° 57' 00.000"	58° 34' 30.000"
4	44° 00' 00.000"	58° 28' 00.000"
5	44° 02' 00.000"	58° 26' 00.000"
6	44° 06' 00.000"	58° 25' 00.000"
7	44° 08' 00.000"	58° 25' 00.000"
8	44° 13' 00.000"	58° 29' 00.000"
9	44° 14' 00.000"	58° 28' 00.000"
10	44° 12' 00.000"	58° 25' 00.000"
11	44° 12' 00.000"	58° 23' 00.000"
12	44° 07' 00.000"	58° 20' 00.000"
13	44° 07' 00.000"	58° 18' 00.000"
14	44° 10' 00.000"	58° 17' 00.000"
15	44° 10' 00.000"	58° 14' 00.000"
16	44° 08' 00.000"	58° 12' 00.000"
17	44° 10' 00.000"	58° 05' 00.000"
18	44° 18' 00.000"	57° 59' 30.000"
19	44° 18' 00.000"	57° 55' 00.000"
20	44° 15' 00.000"	57° 54' 00.000"
21	44° 13' 30.000"	57° 52' 00.000"
22	44° 13' 30.000"	57° 49' 30.000"
23	44° 16' 00.000"	57° 46' 00.000"
24	44° 18' 00.000"	57° 45' 00.000"
25	44° 21' 00.000"	57° 41' 00.000"
26	44° 21' 00.000"	57° 37' 30.000"
27	44° 18' 30.000"	57° 37' 30.000"
28	44° 18' 30.000"	57° 35' 00.000"
29	44° 20' 00.000"	57° 33' 00.000"
30	44° 20' 00.000"	57° 31' 00.000"
31	44° 22' 30.000"	57° 26' 30.000"
32	44° 23' 00.000"	57° 24' 00.000"
33	44° 23' 30.000"	57° 18' 00.000"
34	44° 24' 00.000"	57° 16' 00.000"
35	44° 24' 00.000"	57° 14' 30.000"

36	44° 25' 00.000"	57° 13' 30.000"
37	44° 30' 00.000"	57° 13' 00.000"
38	44° 30' 00.000"	57° 10' 00.000"
39	44° 27' 30.000"	57° 08' 00.000"
40	44° 27' 00.000"	57° 07' 00.000"
41	44° 28' 00.000"	57° 06' 00.000"
42	44° 29' 00.000"	56° 58' 30.000"
43	41° 56' 00.000"	56° 08' 00.000"
44	41° 38' 00.000"	56° 31' 00.000"
45	41° 21' 00.000"	56° 58' 00.000"
46	43° 35' 00.000"	59° 08' 00.000"
47	43° 35' 00.000"	58° 35' 00.000"
48	43° 47' 00.000"	58° 35' 00.000"
49	43° 54' 51.339"	58° 44' 20.541"

The Limited Fisheries Zone is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	44° 17' 30.000"	57° 33' 30.000"
2	44° 17' 30.000"	57° 29' 30.000"
3	44° 12' 00.000"	57° 29' 30.000"
4	44° 12' 00.000"	57° 35' 30.000"
5	44° 15' 30.000"	57° 35' 30.000"
6	44° 17' 30.000"	57° 33' 30.000"

The Eastern Canyons Marine Refuge in the map below:



Additional Measures

Under the *Species at Risk Act*, critical habitat has been designated and protected for the Scotian Shelf population of northern bottlenose whale, portions of which overlap with the Eastern Canyons Marine Refuge (See Notice A2).

1.18 - Emerald Basin and Sambro Bank Marine Refuge

The Emerald Basin and Sambro Bank Marine Refuge can be found within the Scotian Shelf Bioregion. The fishery area closure was established in 2013 in a condition of licence. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect a globally unique concentration of *Vazella pourtalesi,* a structure forming species of glass sponge. The fishery area closure prohibits all commercial bottom-contact fishing gear.

Coordinates

The Emerald Basin and Sambro Bank Marine Refuge is approximately 260 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Emerald Basin and Sambro Bank Marine Refuge is bounded by a line connecting the points in the order they are listed:

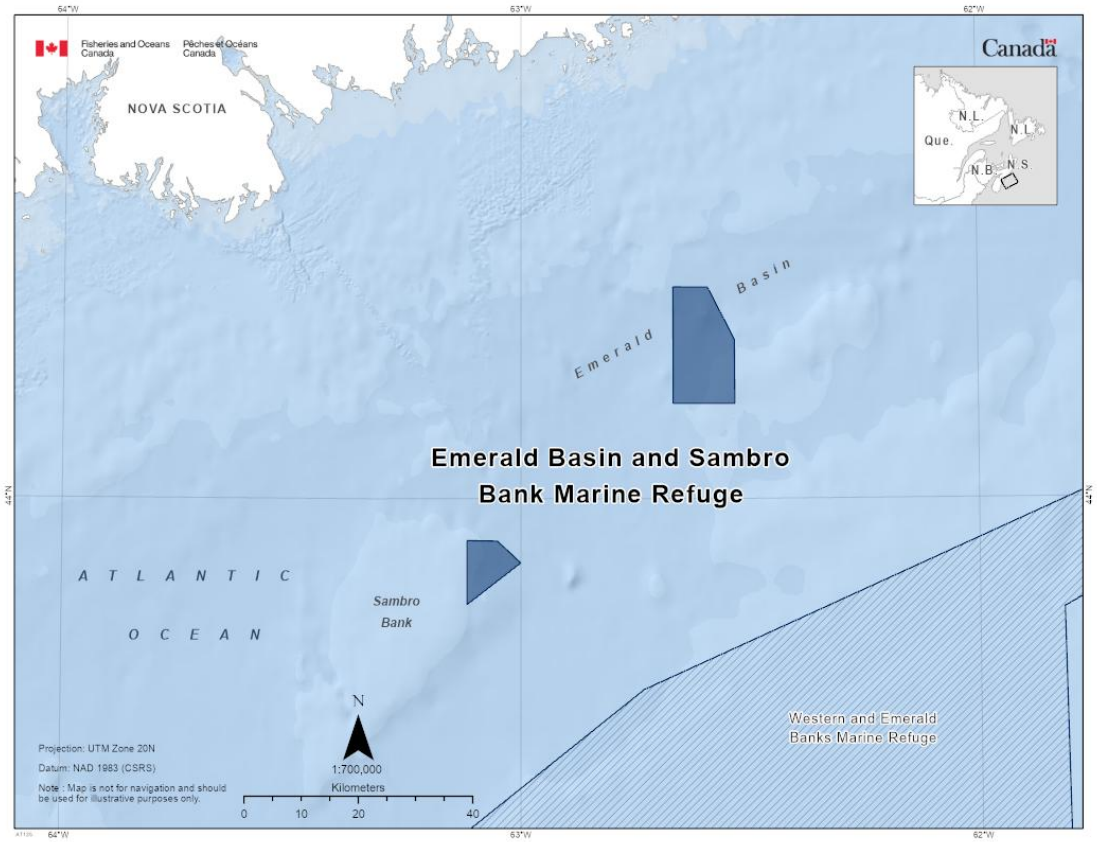
Emerald Basin

Point	Latitude (North)	Longitude (West)
1	44° 20′ 00″	62° 40′ 00″
2	44° 20′ 00″	62° 35′ 30″
3	44° 15′ 00″	62° 32′ 00″
4	44° 09′ 00″	62° 32′ 00″
5	44° 09′ 00″	62° 40′ 00″

Sambro Bank

Point	Latitude (North)	Longitude (West)
1	43° 56′ 00″	63° 07′ 00″
2	43° 56′ 00″	63° 03′ 00″
3	43° 54′ 00″	63° 00′ 00″
4	43° 50′ 00″	63° 07′ 00″

The Emerald Basin and the Sambro Bank Marine Refuge in the map below:



1.19 - Jordan Basin Marine Refuge

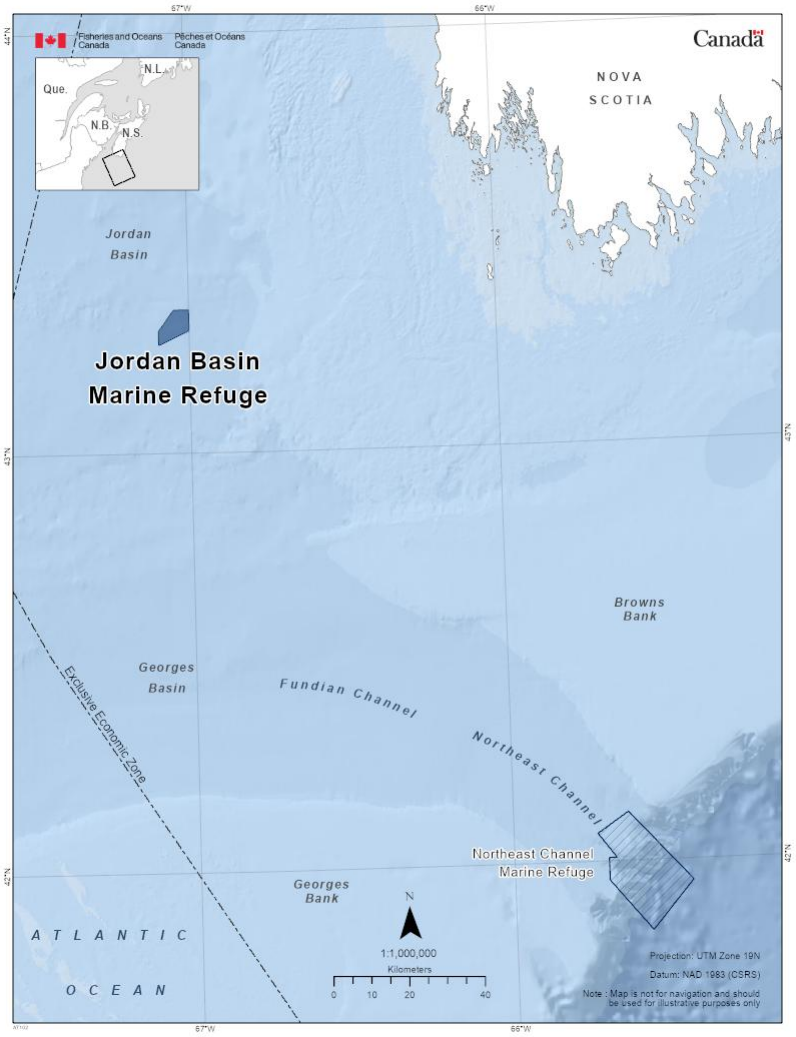
The Jordan Basin Marine Refuge can be found within the Scotian Shelf Bioregion. The fishery area closure was established in 2016 in licence conditions. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold water corals. The fishery area closure prohibits all commercial bottom-contact fishing gear.

Coordinates

The Jordan Basin Marine Refuge is approximately 49 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Jordan Basin Marine Refuge is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	43° 20’ 30”	67° 00’ 00”
2	43° 17’ 30”	67° 00’ 00”
3	43° 15’ 30”	67° 06’ 00”
4	43° 17’ 30”	67° 06’ 00”
5	43° 20’ 30”	67° 03’ 00”

The Jordan Basin Marine Refuge in the map below:



1.20 - Northeast Channel Marine Refuge

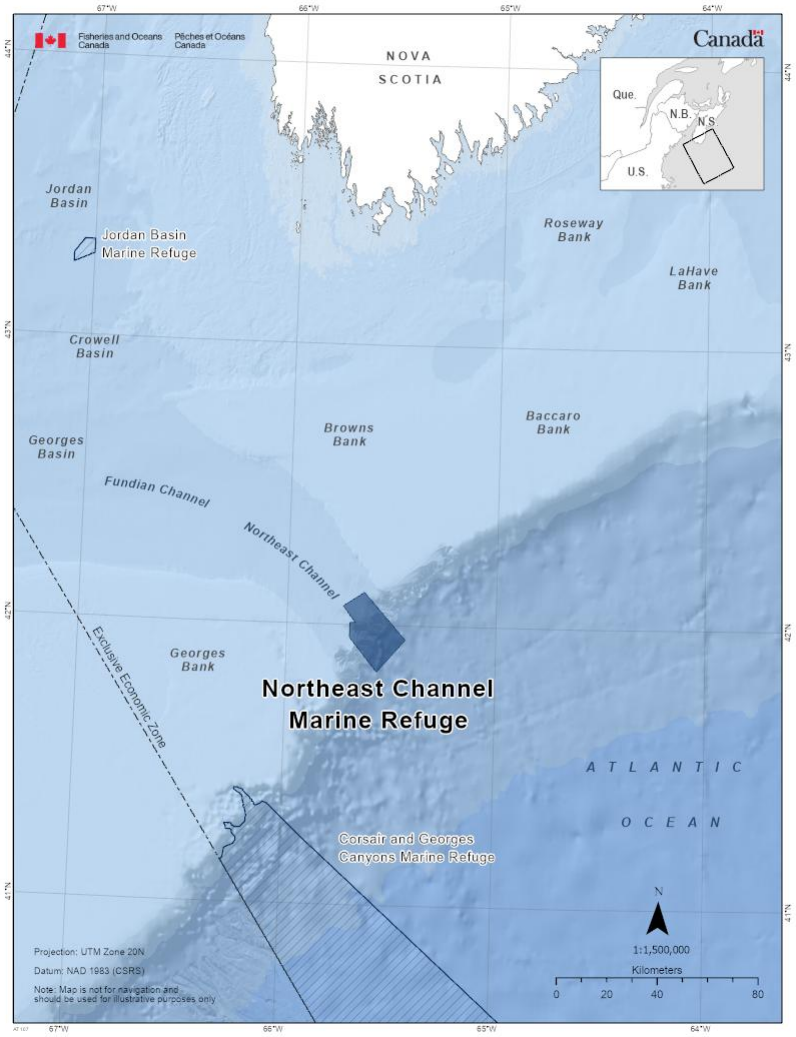
The Northeast Channel Marine Refuge can be found within the Scotian Shelf Bioregion. The fishery area closure was established in 2002 in licence conditions. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect cold water corals. The fishery area closure prohibits all commercial bottom-contact fishing gear.

Coordinates

The Northeast Channel Marine Refuge is approximately 391 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Northeast Channel Marine Refuge is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	42° 04′ 00″	65° 44′ 00″
2	42° 07′ 00″	65° 38′ 00″
3	41° 57′ 00″	65° 26′ 00″
4	41° 50′ 00″	65° 34′ 00″
5	41° 57′ 18″	65° 42′ 00″
6	42° 00′ 30″	65° 42′ 00″
7	42° 00′ 30″	65° 40′ 30″

The Northeast Channel Marine Refuge in the map below:



1.21 – Western and Emerald Banks Marine Refuge

The Western and Emerald Banks Marine Refuge can be found within the Scotian Shelf Bioregion. The fishery area closure was originally established in 1987 as a condition of licence and later revised in 2017. This fishery area closure was granted marine refuge status due to the additional benefits it provides to support productivity objectives for groundfish species of Aboriginal, commercial, and/or recreational importance, particularly NAFO Division 4VW haddock and manage the disturbance of benthic habitat that supports juvenile and adult haddock and other groundfish species. The fishery area closure prohibits all commercial and recreational fisheries using bottom-contact gear and/or gear known to interact with groundfish.

Coordinates

The Western and Emerald Banks Marine Refuge is approximately 10,234 km^2 in size and is separated into two zones. Zone 1 of the Western and Emerald Banks Marine Refuge is bounded by a line connecting the points in the order they are listed. Zone 2 of the Western and Emerald Banks Marine Refuge is bounded by a line connecting the points in the order they are listed. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds.

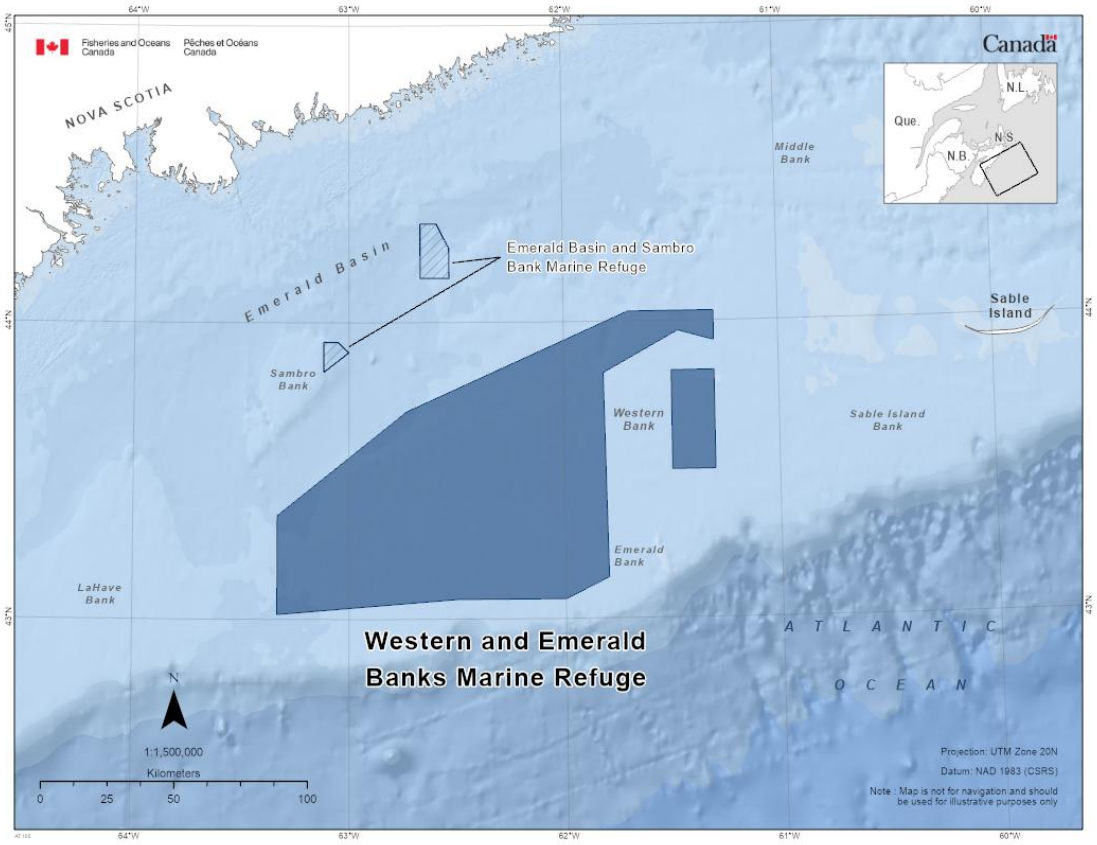
Zone 1

Point	Latitude (North)	Longitude (West)
1	43° 21’ 00”	63° 20’ 00”
2	43° 01’ 00”	63° 20’ 00”
3	43° 04’ 00”	62° 30’ 00”
4	43° 04’ 00”	62° 00’ 00”
5	43° 08’ 18”	61° 48’ 00”
6	43° 49’ 37”	61° 49’ 00”
7	43° 58’ 01”	61° 28’ 00”
8	43° 55’ 59”	61° 18’ 00”
9	44° 02’ 00”	61° 18’ 00”
10	44° 02’ 00”	61° 42’ 00”
11	43° 42’ 00”	62° 44’ 00”
12	43° 21’ 00”	63° 20’ 00”

Zone 2

Point	Latitude (North)	Longitude (West)
1	43° 50' 00"	61° 18' 00"
2	43° 50' 00"	61° 30' 00"
3	43° 30' 00"	61° 30' 00"
4	43° 30' 00"	61° 18' 00"

The Western and Emerald Banks Marine Refuge in the map below:



1.22 - Division 3O Coral Closure

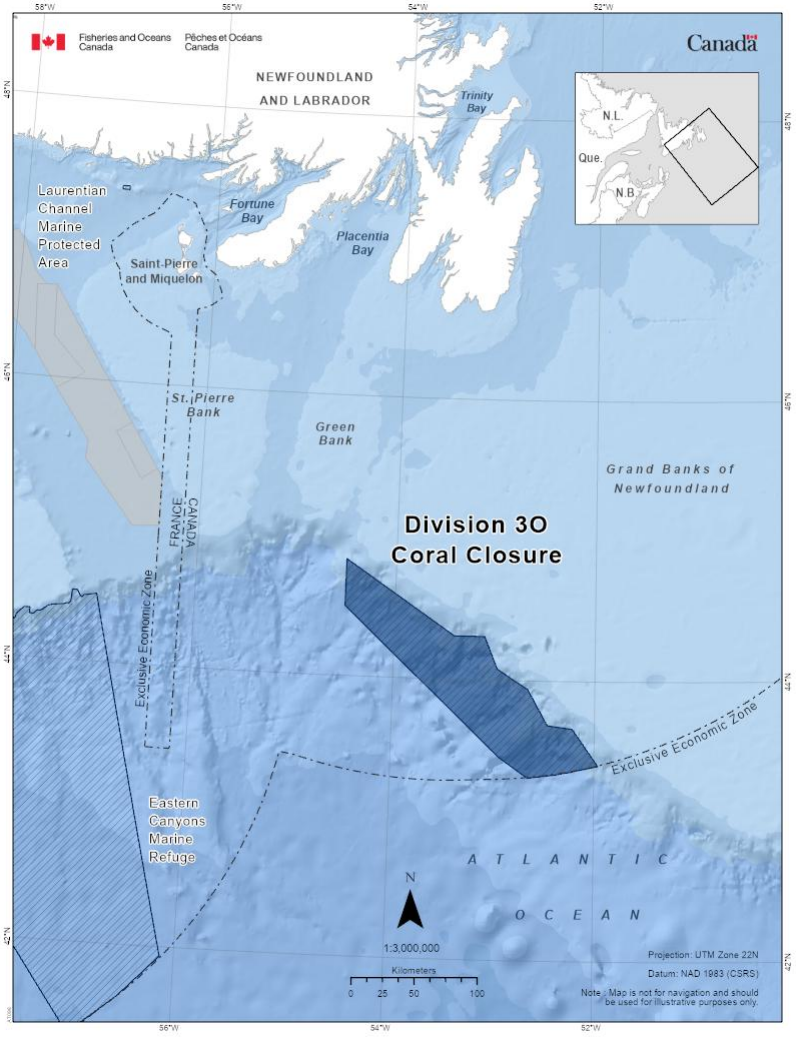
The Division 3O Coral Closure can be found within the Newfoundland-Labrador Shelves Bioregion. The fishery area closure was established in 2008 as a licence condition. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect corals and sponges. The fishery area closure prohibits all bottom-contact fishing activities.

Coordinates

The Division 3O Coral Closure is approximately 10, 422 km^2 in size. This site is located on the Grand Banks Slope in NAFO Subdivision 3O. Note that this is a portion of a larger closure extending beyond the exclusive economic zone. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Division 3O Coral Closure is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	44° 49' 59.002"	54° 30' 00.000"
2	44° 18' 36.000"	53° 24' 06.998"
3	44° 18' 38.002"	53° 06' 00.000"
4	44° 04' 53.000"	52° 58' 12.000"
5	43° 56' 19.000"	52° 39' 47.999"
6	43° 40' 59.002"	52° 27' 51.998"
7	43° 39' 38.002"	52° 13' 09.998"
8	43° 24' 20.002"	51° 58' 18.001"
9	43° 24' 13.000"	51° 58' 12.000"
10	42° 52' 04.001"	51° 31' 44.000"
11	42° 52' 59.988"	51° 00' 00.000"
12	42° 33' 02.002"	51° 00' 00.000"
13	42° 48' 00.000"	51° 41' 06.000"
14	43° 26' 58.999"	52° 55' 59.002"
15	44° 29' 55.000"	54° 30' 00.000"
16	44° 49' 59.002"	54° 30' 00.000"

The Division 3O Coral Closure is shown in the map below:



1.23 - Funk Island Deep Closure

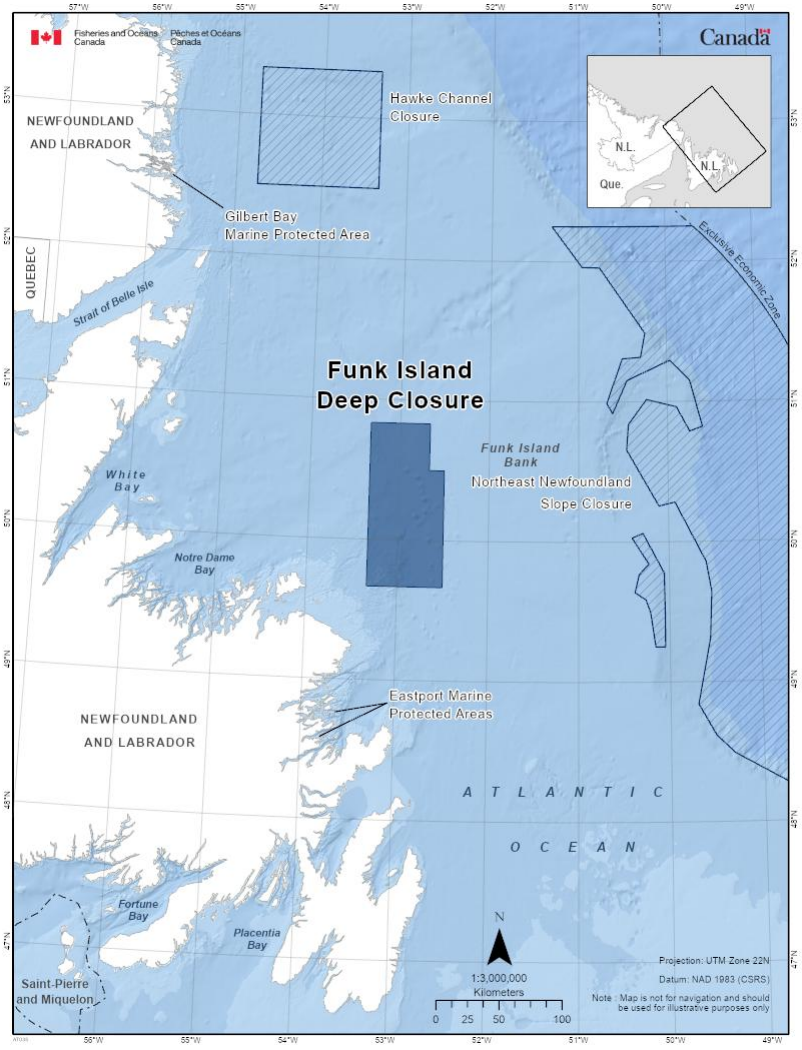
The Funk Island Deep Closure can be found within the Newfoundland-Labrador Shelves Bioregion. The fishery area closure was established in 2002/2003 as a variation order and/or condition of licence. There is a significant overlap with this closure and the Notre Dame Channel Ecologically and Biologically Significant Area and some overlap with the Fogo Shelf Ecologically and Biologically Significant Area in the southern part of the closure. This fishery area closure was granted marine refuge status due to the additional benefits it provides to conserve benthic habitat and Atlantic cod. The fishery area closure prohibits bottom trawls, gillnets, cod pots, handlines, and longlines. However, crab pots are permitted.

Coordinates

The Funk Island Deep Closure is approximately 7, 274 km^2 in size. Funk Island Deep Closure is located in NAFO Subdivision 3K. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Funk Island Deep Closure is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	50° 49' 59.962"	53° 20' 00.019"
2	50° 49' 59.962"	52° 40' 00.022"
3	50° 29' 59.963"	52° 40' 00.022"
4	50° 29' 59.963"	52° 30' 00.021"
5	49° 39' 59.965"	52° 30' 00.021"
6	49° 39' 59.965"	53° 20' 00.019"
7	50° 49' 59.962"	53° 20' 00.019"

The Funk Island Deep Closure in the map below:



1.24 - Hawke Channel Closure

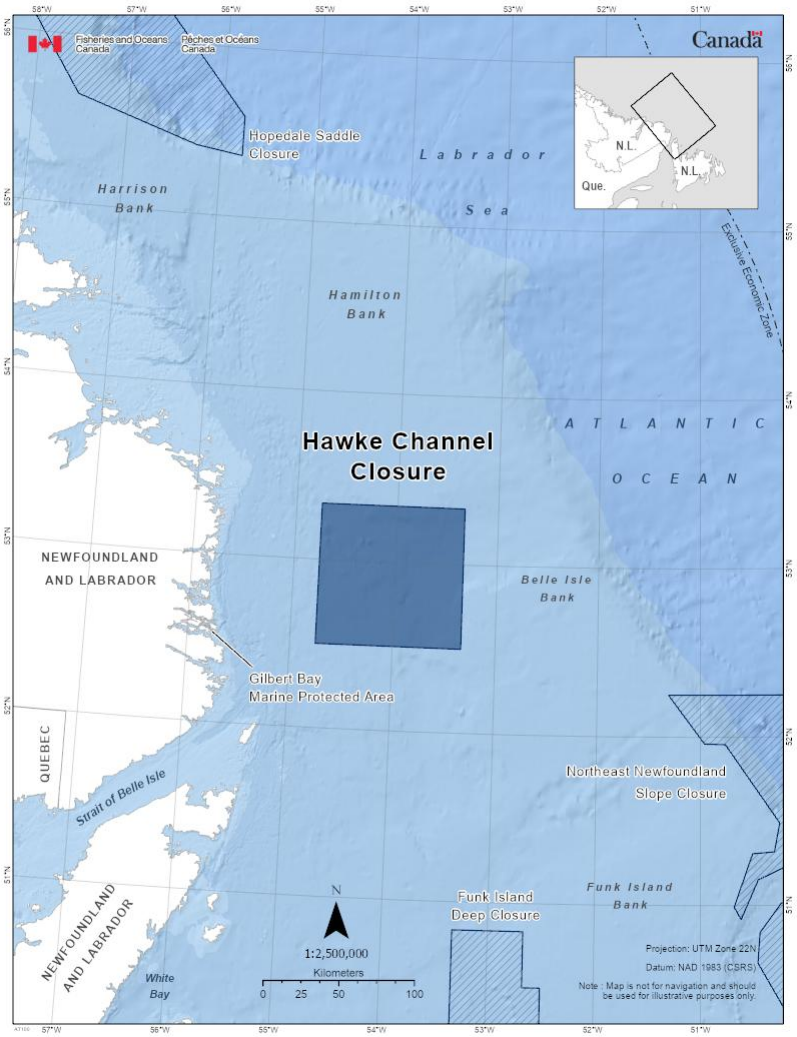
The Hawke Channel Closure can be found within the Newfoundland-Labrador Shelves Bioregion. The fishery area closure was established in 2002 as a variation order and/or condition of licence. The closure overlaps a significant portion of the Labrador Margin Trough Ecologically and Biologically Significant Area. This fishery area closure was granted marine refuge status due to the additional benefits it provides to conserve benthic habitat and Atlantic cod. The fishery area closure prohibits bottom trawl, gillnet, cod pots, handline, and longline fishing. However, crab pots are permitted.

Coordinates

The Hawke Channel Closure is approximately 8,837 km^2 in size. The Hawke Channel Closure is located in NAFO Subdivision 2J. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Hawke Channel Closure is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	53° 19' 59.960"	54° 45' 00.018"
2	53° 19' 59.960"	53° 20' 00.019"
3	52° 29' 59.962"	53° 20' 00.019"
4	52° 29' 59.962"	54° 45' 00.018"
5	53° 19' 59.960"	54° 45' 00.018"

The Hawke Channel Closure in the map below:



1.25 - Hopedale Saddle Closure

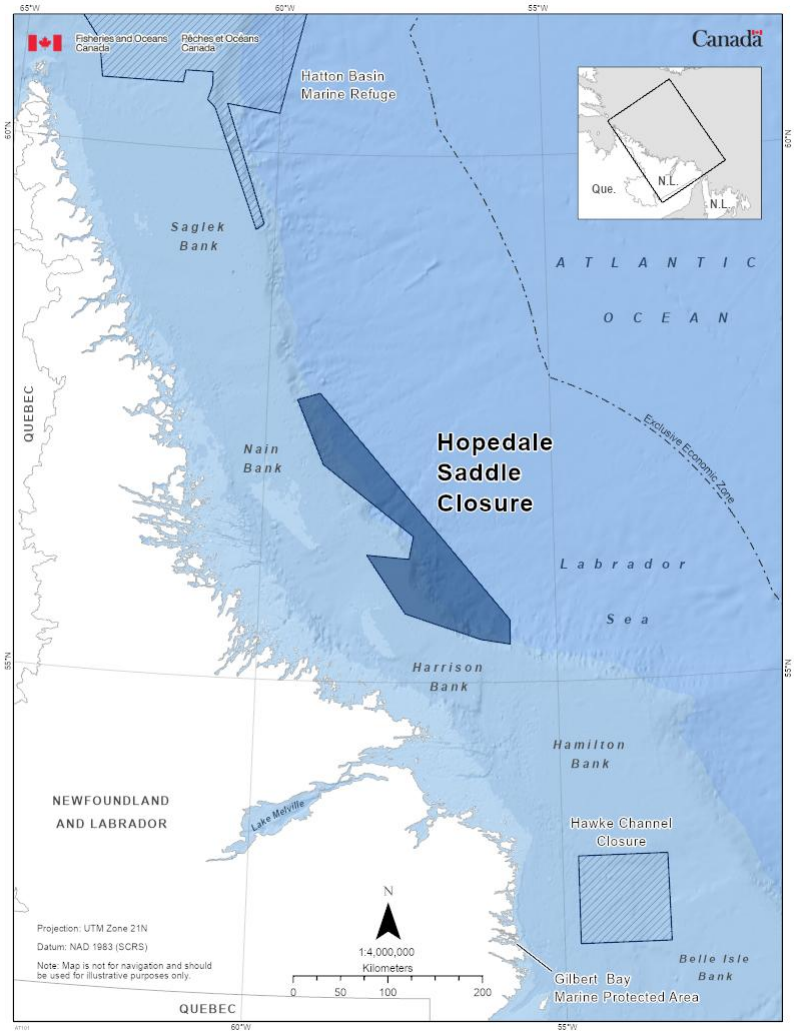
The Hopedale Saddle Closure can be found within the Newfoundland-Labrador Shelves Bioregion. The fishery area closure was established in 2017 as a variation order and/or condition of licence. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect corals and sponges and contribute to the long-term conservation of biodiversity. The fishery area closure prohibits all bottom-contact fishing activities.

Coordinates

The Hopedale Saddle Closure is approximately 15,410 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Hopedale Saddle Closure is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	57° 43' 57.680"	59° 04' 04.812"
2	55° 35' 42.680"	55° 46' 30.017"
3	55° 21' 44.960"	55° 46' 30.017"
4	55° 24' 29.120"	56° 15' 14.776"
5	55° 39' 07.160"	57° 31' 53.414"
6	56° 12' 21.560"	58° 11' 43.453"
7	56° 10' 17.720"	57° 28' 23.534"
8	56° 23' 15.320"	57° 24' 00.014"
9	57° 03' 26.960"	58° 58' 30.372"
10	57° 40' 00.080"	59° 28' 00.131"
11	57° 43' 57.680"	59° 04' 04.812"

The Hopedale Saddle Closure in the map below:



1.26 - Northeast Newfoundland Slope Closure

The Northeast Newfoundland Slope Closure can be found within the Newfoundland-Labrador Shelves Bioregion. The fishery area closure was established in 2017 as a variation order and/or condition of licence. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect corals and sponges and contribute to the long-term conservation of biodiversity. The fishery area closure prohibits all bottom-contact fishing activities.

Coordinates

The Northeast Newfoundland Slope Closure is approximately 55,353 km^2 in size and is divided into two parts. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. Part 1 of the Northeast Newfoundland Slope Closure is bounded by a line connecting the points in the order they are listed and subsequently follow the 200-mile limit boundary (EEZ) north returning to Point 30 to enclose the area. Part 2 of the Northeast Newfoundland Slope Closure is defined by straight lines joining the following points in the order in which they are listed.

Part 1

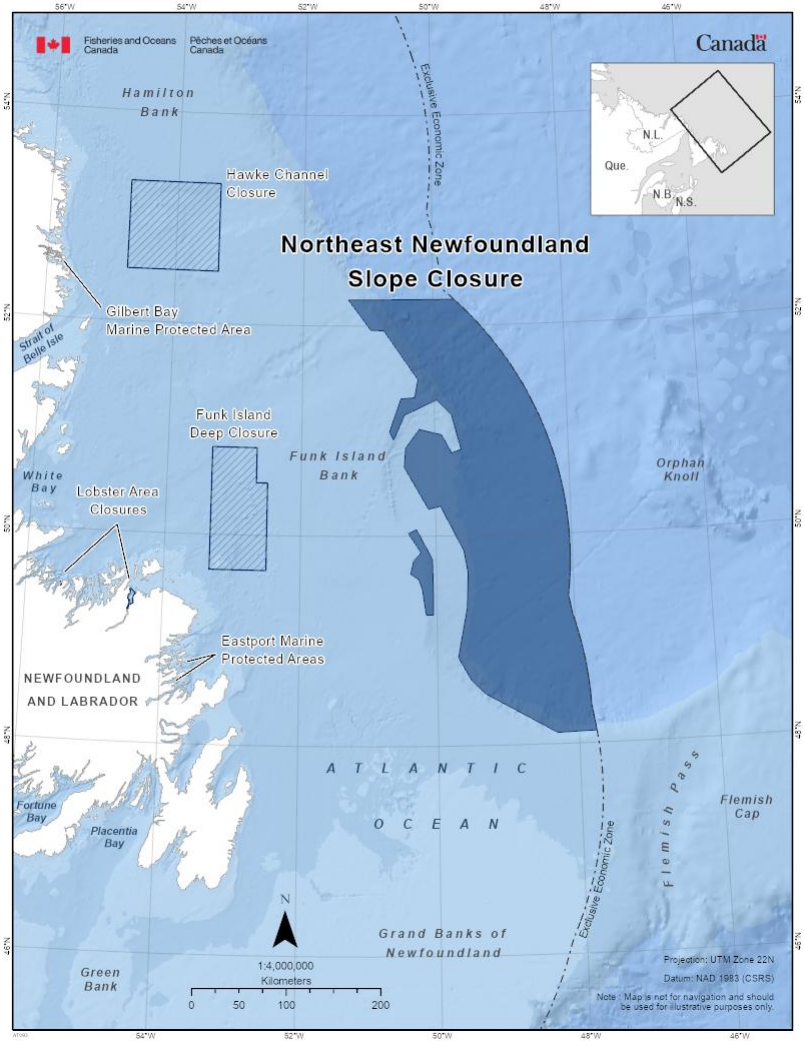
Point	Latitude (North)	Longitude (West)
1	52° 15' 00.000"	49° 40' 36.935"
2	52° 15' 00.000"	51° 18' 30.764"
3	51° 57' 36.998"	50° 57' 35.520"
4	51° 57' 22.244"	50° 45' 35.053"
5	51° 29' 22.704"	50° 14' 41.345"
6	51° 19' 03.367"	50° 17' 49.458"
7	51° 18' 27.775"	50° 30' 14.721"
8	50° 59' 26.585"	50° 40' 54.641"
9	50° 55' 00.083"	50° 37' 00.144"
10	51° 09' 09.816"	50° 27' 09.835"
11	51° 17' 39.534"	49° 57' 59.242"
12	51° 09' 08.453"	49° 44' 37.919"
13	50° 49' 16.121"	49° 36' 25.173"
14	50° 47' 19.186"	49° 45' 02.435"
15	50° 57' 46.870"	49° 53' 50.875"
16	51° 00' 59.057"	50° 14' 01.101"
17	50° 50' 19.539"	50° 26' 24.330"
18	50° 39' 26.300"	50° 27' 41.424"
19	50° 24' 08.250"	50° 14' 06.804"
20	50° 15' 21.894"	50° 06' 20.913"
21	50° 16' 59.588"	49° 55' 42.260"
22	49° 51' 25.666"	49° 35' 35.972"
23	49° 38' 37.707"	49° 32' 14.824"
24	49° 18' 37.187"	49° 33' 37.468"
25	48° 50' 28.462"	49° 41' 58.979"
26	48° 37' 13.864"	49° 30' 50.602"
27	48° 29' 30.522"	49° 19' 06.206"

28	48° 06' 23.596"	48° 18' 28.022"
29	48° 06' 58.943"	47° 45' 03.294"
Follows the boundary of the Exclusive Economic Zone northerly to:		
30	52° 15' 00.000"	49° 40' 36.935"

Part 2

Point	Latitude (North)	Longitude (West)
1	50° 03' 45.402"	50° 17' 16.808"
2	49° 46' 43.015"	50° 03' 23.651"
3	49° 27' 20.052"	50° 03' 00.041"
4	49° 15' 00.732"	50° 03' 06.914"
5	49° 15' 05.512"	50° 09' 25.704"
6	49° 29' 52.511"	50° 12' 40.079"
7	49° 35' 16.663"	50° 15' 39.672"
8	49° 38' 21.874"	50° 22' 45.902"
9	49° 46' 00.083"	50° 19' 59.904"
10	49° 50' 33.897"	50° 13' 26.392"
11	50° 01' 40.097"	50° 24' 27.854"
12	50° 03' 45.402"	50° 17' 16.808"

The Northeast Newfoundland Slope Closure in the map below:



2 - Marine Refuges in the Pacific Region of Canada

The following section provides information on area-based measures that have been recognized as marine refuges in Pacific Canada.

2.1 - Banks Marine Refuge

The Banks Marine Refuge can be found within the Northern Shelf Bioregion in British Columbia. The fishery area closure was established in 2025 as a variation order under the Fisheries Act. This fishery area closure was granted marine refuge status due to the additional benefits it provides to rockfish and their habitat as well as corals and sponges to contribute to long-term conservation and species biodiversity. All Rockfish Conservation Areas closures remain in effect with commercial fishery prohibitions to fishing for salmon by troll, groundfish by means of bottom trawl, hook and line, mid-water trawl, or trap, tuna by hook and line, and shrimp by trawl. Recreational fishers are prohibited from fishing any species by spearfishing, groundfish by angling, salmon by trolling, jigging or mooching, octopus by angling, and squid by jigging. Additional fishery closures further prohibit commercial and recreational prawn and crab by trap fishing to protect rockfish and their habitat, corals, and sponges.

Coordinates

The Banks Marine Refuge is approximately 435.83 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude, and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes, and seconds. The Banks marine refuge comprises three zones – Zone 305, 306, and 307.

Specifically, those waters of Area 105 and Subareas 5-20 and 5-22 that lie inside a line that:

Point	Latitude (North)	Longitude (West)	Description
Begins at	53°27.900’	130°39.800’	In water
Then to	53°27.985’	130°35.246’	Bonilla Island
Then to	53°23.700’	130°22.700’	In water
Then to	53°18.700’	130°21.500’	In water
Then to	53°24.300’	130°38.000’	In water

then to the beginning point.

Those waters of Subarea 105-2 that lie inside a line that:

Point	Latitude (North)	Longitude (West)	Description
Begins at	53°15.900’	130°22.200’	In water
Then to	53°16.100’	130°16.700’	In water
Then to	53°10.000’	130°06.200’	In water
Then to	53°10.000’	130°19.110’	In water
Then to	53°11.881’	130°19.785’	In water
Then to	53°12.373’	130°21.662’	In water

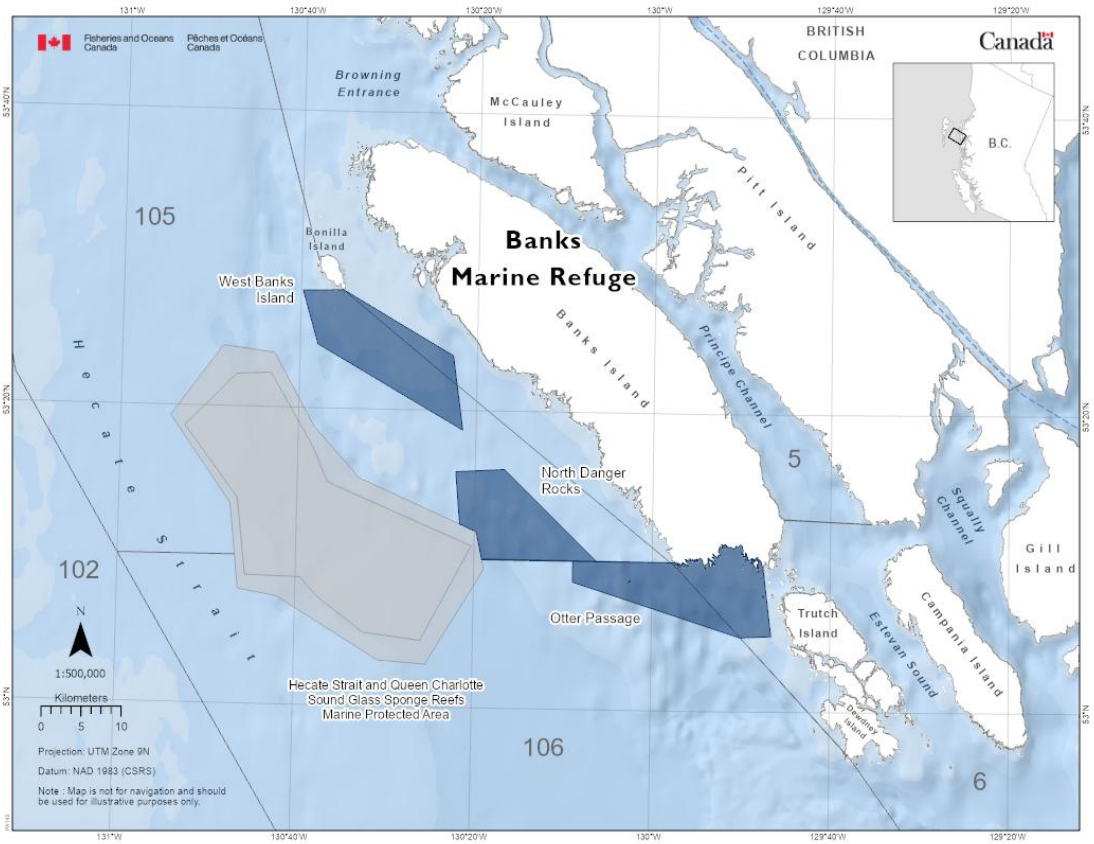
then to the beginning point.

Those waters of Subareas 6-9 and 106-1 that lie inside a line that:

Point	Latitude (North)	Longitude (West)	Description
Begins at	53°09.835’	129°47.579’	South tip of Banks Island
Then to	53°05.100’	129°46.600’	In water
Then to	53°05.000’	129°50.100’	In water
Then to	53°08.600’	130°08.900’	In water
Then to	53°10.000’	130°08.900’	In water
Then to	53°10.000’	129°57.127’	Terror Point

then following the southerly shoreline of Banks Island to the beginning point.

The Banks Marine Refuge in the map below:



2.2 - Ḡaw Ḵáahlii Marine Refuge

The Ḡaw Ḵáahlii Marine Refuge can be found within the Northern Shelf Bioregion in Haida Gwaii, British Columbia. The fishery area closure was established in 2025 as a variation order under the Fisheries Act. This fishery area closure was granted marine refuge status due to the additional benefits it provides to ecologically and culturally important species and habitats, including multiple species of salmon, seabirds and their habitat, to contribute to long-term conservation and species biodiversity. The fishery area closures prohibit commercial and recreational fishing activities within the areas indicated on the map below (with the exception of recreational shore-based angling, which is permitted).

Coordinates

The Gaw Káahlii Marine Refuge is approximately 22.42 km2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes, and seconds. The Gaw Káahlii Marine Refuge is comprised of six zones within the inlet – zones 411-416. Each zone is bounded by a line connecting the points in the order they are listed below in the tables. Those portions of Subarea 1-6 that lie inside lines:

Maaman Gándlee (Mammin River) (Zone 411):

Point	Description	Latitude (North)	Longitude (West)
1	Commencing at a point in water at	53° 37.804’	132° 18.775'
2	then easterly to a point in water at	53° 37.873'	132° 18.071'
3	then southerly to a point on land at	53° 37.848'	132° 18.067'
4	then southerly following the shoreline to	53° 36.881'	132° 19.331'
5	then northerly to a point in water at	53° 37.323'	132° 19.221'
6	then northeasterly to the beginning point	53° 37.804’	132° 18.775'

Yahguu Kadlee (Dawson Islands) (Zone 412):

Point	Description	Latitude (North)	Longitude (West)
1	Commencing at a point in water at	53° 43.462'	132° 21.075'
2	then southeasterly to a point in water at	53° 42.965'	132° 20.001'
3	then southwesterly to a point in water at	53° 42.844'	132° 20.274'
4	then westerly to a point in water at	53° 42.819'	132° 21.257'
5	then northwesterly to a point in water at	53° 43.086'	132° 21.732'
6	then northeasterly to the beginning point	53° 43.462'	132° 21.075'

Aayan G̲ándlee (Ain River) (Zone 413):

Point	Description	Latitude (North)	Longitude (West)
1	Commencing at a point on land at	53° 44.573'	132° 24.659'
2	then southeasterly to a point in water at	53° 44.328'	132° 23.916'
3	then southerly to a point on Kwaikans Island at	53° 43.294'	132° 24.927'
4	then southwesterly to a point on McCreight Island at	53° 42.260'	132° 27.365'
5	then westerly to a point on land at	53° 42.414'	132° 28.393'
6	then following the shoreline to the beginning point	53° 44.573'	132° 24.659'

Juus Káahlii South, Datl'aaman G̲andlee (Datlamen Creek) 1 (Zone 414):

Point	Description	Latitude (North)	Longitude (West)
1	Commencing at a point on land at	53° 36.742'	132° 27.661'
2	then northeasterly to a point on land at	53° 37.393'	132° 23.520'
3	then southerly following the shoreline to	53° 34.255'	132° 28.526'
4	then easterly to a point on land at	53° 34.253'	132° 28.993'
5	then northerly following the shoreline to the beginning point	53° 36.742'	132° 27.661'

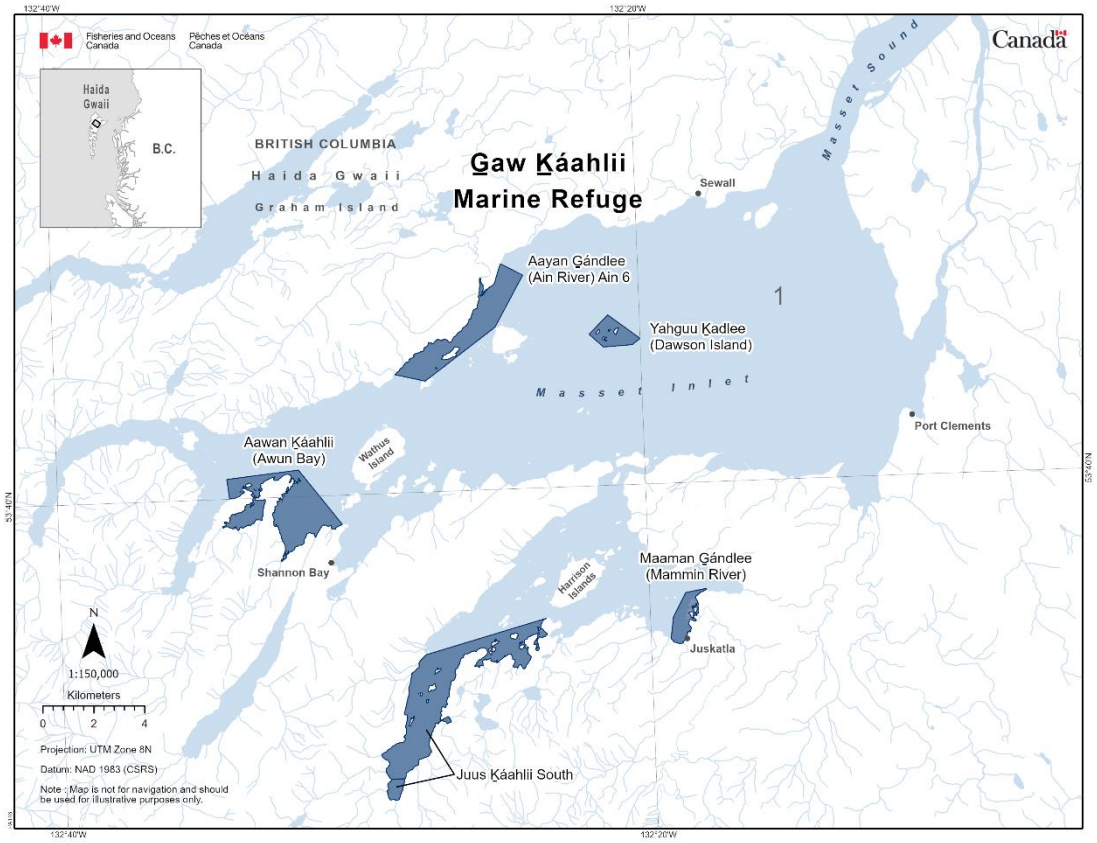
Juus Káahlii South, Datl'aaman G̲andlee (Datlamen Creek) 2 (Zone 415):

Point	Description	Latitude (North)	Longitude (West)
1	Commencing at a point on land at	53° 34.253’	132° 28.993'
2	then easterly to a point on land at	53° 34.255'	132° 28.526'
3	then following the shoreline southerly then northerly to the beginning point	53° 34.253’	132° 28.993'

Aawan K̲áahlii (Awun Bay) (Zone 416):

Point	Description	Latitude (North)	Longitude (West)
1	Commencing at a point in water at	53° 40.417'	132° 34.226'
2	then easterly to a point in water at	53° 40.557'	132° 31.780'
3	then southerly to a point in water at	53° 39.431'	132° 30.352'
4	then following the shoreline to a point on land at	53° 40.014'	132° 34.154'
5	then northerly to the beginning point	53° 40.417'	132° 34.226'

The G̲aw K̲áahlii Marine Refuge in the map below:



2.3 - Gwaxdlala/Nalaxdlala (Lull/Hoeya) Marine Refuge

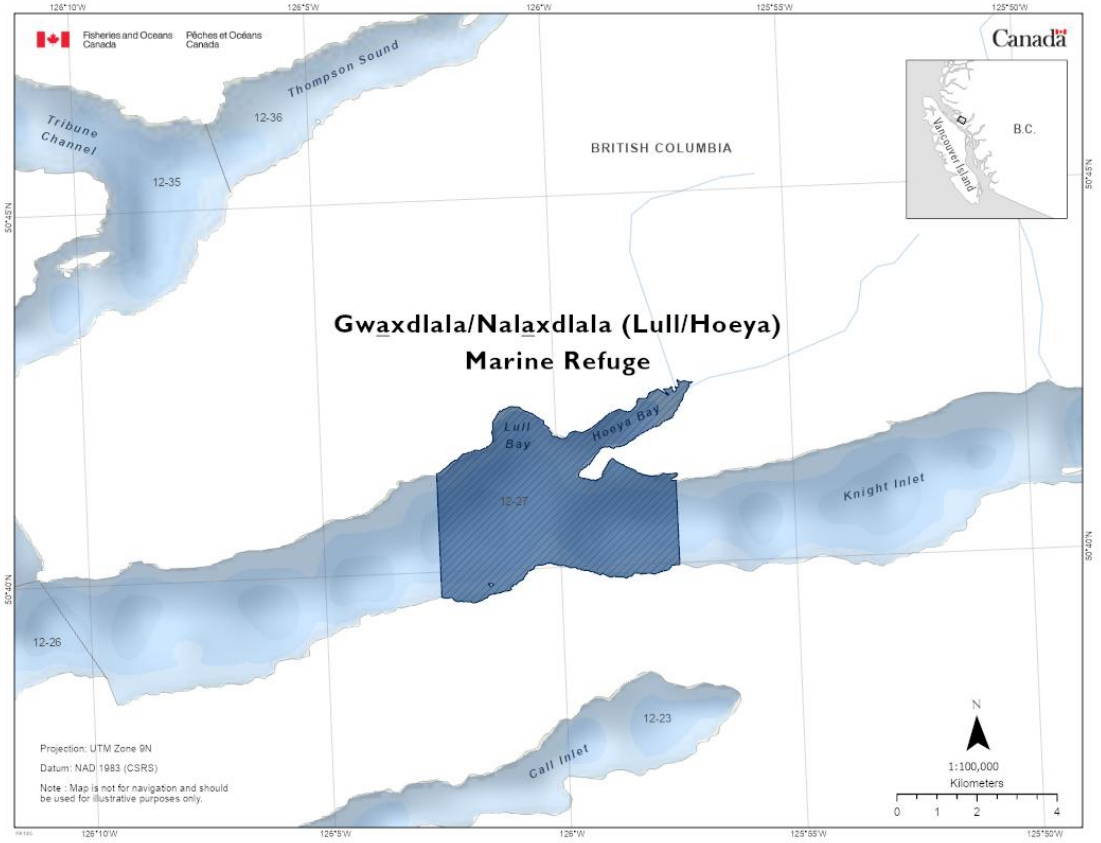
The Gwaxdlala/Nalaxdlala (Lull/Hoeya) Marine Refuge is found within the Northern Shelf Bioregion. The fishery area closure was established in 2023 through a variation order. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect corals and sponges and contribute to long-term conservation and species biodiversity. The fishery area closure prohibits all commercial, recreational, or Food, Social, and Ceremonial fishing activities within the areas indicated on the map.

Coordinates

The Gwaxdlala/Nalaxdlala (Lull/Hoeya) Marine Refuge is approximately 21.38 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degree decimal minutes and all lines joining the geographical co-ordinates of points re interpreted as rhumb lines. That portion of Subarea 12-27 that lies inside a line that begins at:

Point	Description	Latitude (North)	Longitude (West)
1	Commencing at a point on land at	50° 41.336'	126° 02.560'
2	then easterly following the shoreline into Lull Bay, then following the shoreline to	50° 41.119'	125° 57.484'
3	then southerly to	50° 39.979'	125° 57.488'
4	then westerly following the shoreline to	50° 39.667'	126° 02.558'
5	then northerly to the beginning point	50° 41.336'	126° 02.560'

The Gwaxdlala/Nalaxdlala (Lull/Hoeya) Marine Refuge is shown in the map below:



Additional Measures

The coral and sponge gardens are very fragile, in order to protect and conserve these gardens, other sensitive benthic habitat and the species that rely on them, in addition to the full fisheries closures noted above, avoid anchoring wherever possible. Furthermore, if you observe a fisheries violation, please reach out to the 24-hour hotline (1-800-465-4336) or email DFO.ORR-ONS.MPO@dfo-mpo.gc.ca

2.4 - Strait of Georgia & Howe Sound Glass Sponge Reefs Marine Refuges

The Strait of Georgia and Howe Sound Glass Sponge Reef are a combination of 17 fisheries area closures within the Strait of Georgia Bioregion. The Strait of Georgia Glass Sponge Reef closures were first established in 2015 for commercial and recreational bottom contact fishing activities and later updated in 2016 to include Indigenous fishing for Food, Social, and Ceremonial Purposes using bottom contact gear. This fishery area closure was granted marine refuge status due to the additional benefits it provides to protect glass sponge reefs. The fishery area closure prohibits all bottom-contact fishing in all reefs, and additionally, fishing using a downrigger in recreational salmon trolling in select reefs. This includes fishing for prawn, shrimp, crab, and groundfish (including halibut).

Coordinates

The Strait of Georgia and Howe Sound glass sponge reefs are part of the inland sea, the Salish Sea. Together, the Strait of Georgia (29.04 km^2) and Howe Sound Glass Sponge Reefs (3.27 km^2) are 32.6 km^2 in size. Each closure encompasses one or more glass sponge reef footprint(s) and buffer zones extending at least 150 m beyond reef footprint(s).The Strait of Georgia & Howe Sound Glass Sponge Reef coordinates are as follows divided into 17 fisheries closure areas bounded by a rhumb line connecting the points in the order they are listed. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, decimal minutes.

Parksville (Portions of Subareas 14-2 and 14-3)

Point	Latitude (North)	Longitude (West)
1	49° 21.680'	124° 19.762'
2	49° 21.514'	124° 18.893'
3	49° 21.191'	124° 17.723'
4	49° 21.064'	124° 17.724'
5	49° 20.725'	124° 18.380'
6	49° 21.432'	124° 19.811'
7	49° 21.680'	124° 19.762'

East of Hornby Island (Achilles Bank, Portion of Subarea 14-6)

Point	Latitude (North)	Longitude (West)
1	49° 33.490'	124° 29.230'
2	49° 32.701'	124° 28.760'
3	49° 31.657'	124° 29.434'
4	49° 31.663'	124° 29.896'
5	49° 32.651'	124° 29.752'
6	49° 33.340'	124° 29.935'
7	49° 33.498'	124° 29.773'
8	49° 33.490'	124° 29.230'

Gabriola Island (Portion of Subarea 17-11)

Point	Latitude (North)	Longitude (West)
1	49° 13.672'	123° 47.577'
2	49° 13.235'	123° 47.429'
3	49° 13.185'	123° 47.882'
4	49° 13.391'	123° 48.119'
5	49° 13.623'	123° 48.166'
6	49° 13.672'	123° 47.577'

Outer Gulf Islands #1 (Portion of Subarea 29-4)

Point	Latitude (North)	Longitude (West)
1	48° 54.936'	123° 19.589'
2	48° 54.283'	123° 18.529'
3	48° 54.114'	123° 18.619'
4	48° 54.065'	123° 18.771'
5	48° 54.787'	123° 19.929'
6	48° 54.902'	123° 19.793'
7	48° 54.936'	123° 19.589'

Outer Gulf Islands #2(Portion of Subarea 18-1)

Point	Latitude (North)	Longitude (West)
1	48° 52.588'	123° 15.261'
2	48° 52.520'	123° 14.537'
3	48° 51.971'	123° 13.768'
4	48° 51.795'	123° 13.947'
5	48° 52.150'	123° 14.444'
6	48° 52.038'	123° 14.678'
7	48° 52.479'	123° 15.521'
8	48° 52.588'	123° 15.261'

Outer Gulf Islands #3 (Portion of Subarea 18-1)

Point	Latitude (North)	Longitude (West)
1	48° 51.602'	123° 13.233'
2	48° 51.309'	123° 12.751'
3	48° 50.913'	123° 12.938'
4	48° 50.844'	123° 13.059'
5	48° 51.163'	123° 13.662'
6	48° 51.579’	123° 13.378'
7	48° 51.602'	123° 13.233'

Outer Gulf Islands #4 (Portion of Subarea 18-1)

Point	Latitude (North)	Longitude (West)
1	48° 50.999'	123° 12.391'
2	48° 50.608'	123° 11.603'
3	48° 50.097'	123° 10.956'
4	48° 49.959'	123° 11.182'
5	48° 50.857'	123° 12.654'
6	48° 50.959'	123° 12.566'
7	48° 50.999'	123° 12.391'

Sechelt Closure (Portion of Subarea 29-2)

Point	Latitude (North)	Longitude (West)
1	49° 25.948'	123° 48.889'
2	49° 25.899'	123° 47.266'
3	49° 25.373'	123° 46.494'
4	49° 24.734'	123° 47.083'
5	49° 24.910'	123° 47.951'
6	49° 24.253'	123° 48.283'
7	49° 24.845'	123° 49.914'
8	49° 25.948'	123° 48.889'

Howe Sound-Defence Islands (Portion of Subarea 28-4)

Point	Latitude (North)	Longitude (West)
1	49° 34.102'	123° 17.070'
2	49° 33.730'	123° 16.562'
3	49° 33.553'	123° 16.462'
4	49° 33.438'	123° 16.750'
5	49° 33.707'	123° 17.201'
6	49° 33.993'	123° 17.391'
7	49° 34.102'	123° 17.070'

Queen Charlotte Channel #1 – Howe Sound (Portion of Subarea 28-2)

Point	Latitude (North)	Longitude (West)
1	49° 21.486'	123° 17.254'
2	49° 20.528'	123° 17.690'
3	49° 20.401'	123° 17.956'
4	49° 20.765'	123° 18.794'
5	49° 20.982'	123° 18.584'
6	49° 21.098'	123° 18.037'
7	49° 21.501'	123° 17.737'
8	49° 21.486'	123° 17.254'

Queen Charlotte Channel #2 – Howe Sound (Portions of Subareas 28-2 and 29-3)

Point	Latitude (North)	Longitude (West)
1	49° 20.288'	123° 17.693'
2	49° 20.224'	123° 17.501'
3	49° 19.993'	123° 17.377'
4	49° 19.802'	123° 17.444'
5	49° 19.720'	123° 17.840'
6	49° 19.937'	123° 18.107'

7	49° 20.288'	123° 17.693'

Queen Charlotte Channel #3 – Howe Sound (Portion of Subarea 29-3)

Point	Latitude (North)	Longitude (West)
1	49° 19.918'	123° 19.847'
2	49° 19.296'	123° 19.905'
3	49° 19.307'	123° 20.344'
4	49° 19.643'	123° 20.421'
5	49° 19.819'	123° 20.361'
6	49° 19.947'	123° 20.097'
7	49° 19.918'	123° 19.847'

Queen Charlotte Channel #4 – Howe Sound (Portions of Subareas 28-2 and 29-3)

Point	Latitude (North)	Longitude (West)
1	49° 20.637'	123° 19.162'
2	49° 20.577'	123° 18.720'
3	49° 20.441'	123° 18.637'
4	49° 20.068'	123° 18.818'
5	49° 20.076'	123° 19.135'
6	49° 19.718'	123° 19.187'
7	49° 19.726'	123° 19.514'
8	49° 20.259'	123° 19.828'
9	49° 20.637'	123° 19.162'

Halibut Bank (Portion of Subarea 29-2)

Point	Latitude (North)	Longitude (West)
1	49° 21.768'	123° 41.501'
2	49° 21.174'	123° 40.045'
3	49° 20.961'	123° 40.139'
4	49° 20.803'	123° 39.860'
5	49° 20.565'	123° 40.182'
6	49° 21.610'	123° 41.843'
7	49° 21.673'	123° 42.643'
8	49° 21.895'	123° 43.908'
9	49° 22.174'	123° 44.748'
10	49° 22.555'	123° 44.456'
11	49° 22.188	123° 42.167'
12	49° 21.768'	123° 41.501'

Foreslope Hills (Portion of Subarea 29-3)

Point	Latitude (North)	Longitude (West)
1	49° 09.634'	123° 23.048'
2	49° 09.389'	123° 22.622'
3	49° 09.187'	123° 22.587'
4	49° 09.211'	123° 23.567'
5	49° 09.646'	123° 23.543'
6	49° 09.634'	123° 23.048'

East Defence Islands (Portion of Subarea 28-4)

Point	Latitude (North)	Longitude (West)
1	49° 34.731’	123° 16.555’
2	49° 34.848’	123° 16.357’
3	49° 34.854’	123° 16.120’
4	49° 34.580’	123° 16.084’
5	49° 34.535’	123° 16.539’
6	49° 34.731’	123° 16.555’

Anvil Island (Portion of Subarea 28-4)

Point	Latitude (North)	Longitude (West)
1	49° 32.874’	123° 17.425’
2	49° 32.865’	123° 16.815’
3	49° 32.533’	123° 16.869’
4	49° 32.482’	123° 17.118’
5	49° 32.574’	123° 17.483’
6	49° 32.874’	123° 17.425’

Lost Reef (Portion of Subarea 28-2)

Point	Latitude (North)	Longitude (West)
1	49° 29.799’	123° 18.203’
2	49° 29.935’	123° 18.007’
3	49° 29.882’	123° 17.832’
4	49° 29.591’	123° 17.519’
5	49° 29.547’	123° 17.941’
6	49° 29.799’	123° 18.203’

Brunswick Point (Portion of Subarea 28-2)

Point	Latitude (North)	Longitude (West)
1	49° 28.577’	123° 14.965
2	49° 28.434’	123° 14.732’
3	49° 28.177’	123° 15.031’
4	49° 28.397’	123° 15.377’
5	49° 28.577’	123° 14.965

Lions Bay and Kelvin Grove (Portion of Subarea 28-2)

Point	Latitude (North)	Longitude (West)
1	49° 27.629’	123° 15.761’
2	49° 27.315’	123° 14.516’
3	49° 26.950’	123° 14.595’
4	49° 26.952’	123° 15.046’
5	49° 27.195’	123° 15.655’
6	49° 27.629’	123° 15.761’

Halkett Point (Portion of Subarea 28-2)

Point	Latitude (North)	Longitude (West)
1	49° 27.036’	123° 18.686‘
2	49° 26.897’	123° 18.444’
3	49° 26.696’	123° 18.578’
4	49° 26.657’	123° 18.776’
5	49° 26.742’	123° 18.984’
6	49° 27.036’	123° 18.686‘

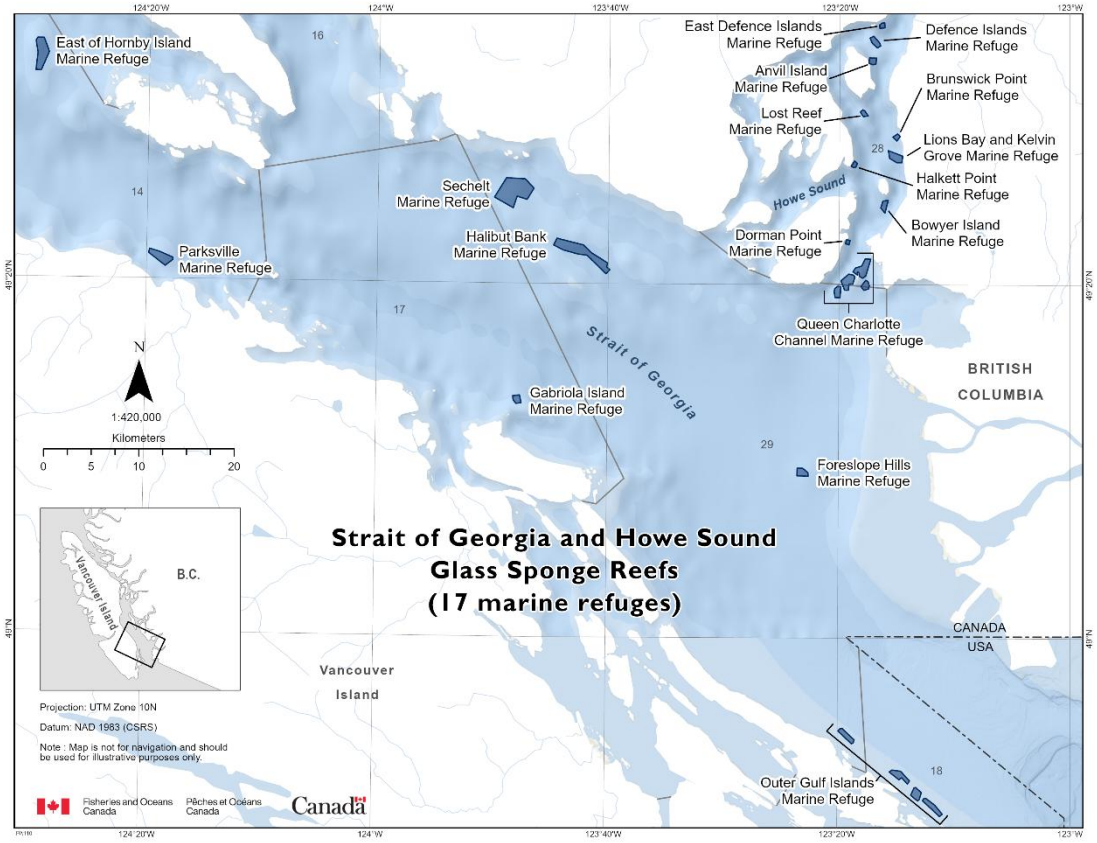
Bowyer Island (Portion of Subarea 28-2)

Point	Latitude (North)	Longitude (West)
1	49° 24.774’	123° 16.219’
2	49° 24.820’	123° 15.763’
3	49° 24.096’	123° 16.043’
4	49° 24.389’	123° 16.408’
5	49° 24.774’	123° 16.219’

Dorman Point (Portion of Subarea 28-2)

Point	Latitude (North)	Longitude (West)
1	49° 22.577’	123° 19.379’
2	49° 22.543’	123° 19.051’
3	49° 22.287’	123° 19.152’
4	49° 22.351’	123° 19.454’
5	49° 22.577’	123° 19.379’

The Strait of Georgia and Howe Sound Glass Sponge Reef Marine Refuge is shown in the map below:



Additional Measures

The glass sponge reefs are very fragile, in order to protect and conserve these reefs and the species that rely on them, avoid anchoring wherever possible, and do not fish. Furthermore, if you observe fisheries violations, please reach out to the 24 hour hotline (1-800-465-4336) or email DFO.ORR-ONS.MPO@dfo-mpo.gc.ca.

2.5 - Xaana Kaahlii Marine Refuge

The Xaana Kaahlii Marine Refuge can be found within the Northern Shelf Bioregion in Haida Gwaii, British Columbia. The fishery area closure was established in 2025 as a variation order under the Fisheries Act. This fishery area closure was granted marine refuge status due to the additional benefits it provides to ecologically and culturally important species and habitats, including multiple species of salmon, seabirds and their habitat, to contribute to long-term conservation and species biodiversity. The fishery area closures prohibit commercial and recreational fishing activities within the areas indicated on the map below (with the exception of recreational shore-based angling, which is permitted).

Coordinates of the Xaana Kaahlii Marine Refuge

The Xaana Kaahlii Marine Refuge is approximately 7.16 km2 in size. The geographic boundary of this area is expressed in Latitude and Longitude, and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes, and seconds. The Xaana Kaahlii Marine Refuge is comprised of three zones within the inlet – zones 422, 423, and 424. Each zone is bounded by a line connecting the points in the order listed in the tables below. Those portions of Subarea 2-1 that lie inside lines:

Gandlaay Sgaagiidaay (Slatechuk Creek) (Zone 422):

Point	Description	Latitude (North)	Longitude (West)
1	Commencing at a point on land at	53° 13.649’	132° 13.500'
2	Then southerly to a point on land at	53° 13.303'	132° 13.595'
3	Then southerly to a point on land	53° 13.056’	132° 14.151'
4	Then easterly to a point on land at	53° 13.129'	132° 14.603'
5	Then northerly to the beginning point	53° 13.649’	132° 13.500'

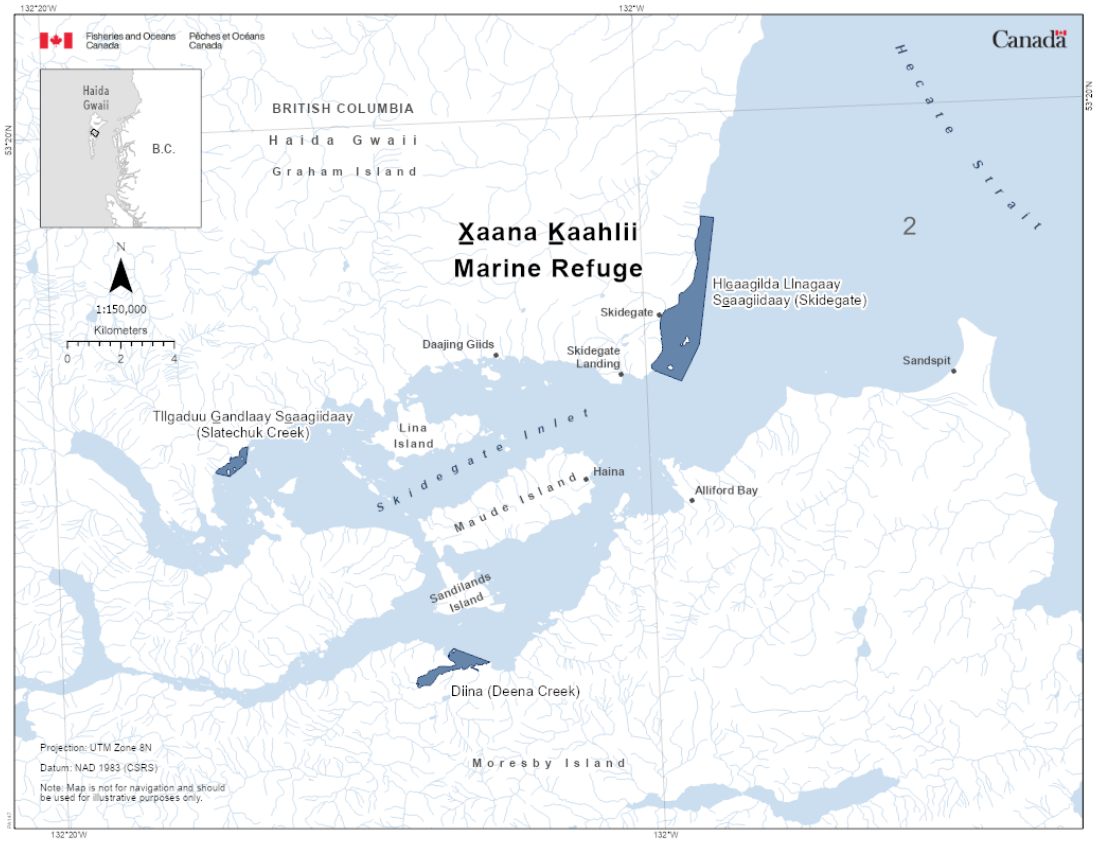
Diina (Deena Creek) (Zone 423):

Point	Description	Latitude (North)	Longitude (West)
1	Commencing at a point in water at	53° 09.415’	132° 06.870’
2	Then southeasterly to a point on land at	53° 09.105’	132° 05.650’
3	Then westerly following a shoreline to a point on land	53° 09.246’	132° 07.064'
4	Then northerly to a point on land at	53° 09.306'	132° 07.036'
5	Then northerly to a point on land	53° 09.381'	132° 06.947'
6	Then northerly to the beginning point	53° 09.415’	132° 06.870’

Hlg̲aagilda Llnagaay Sg̲aagiidaay (Skidegate) (Zone 424):

Point	Description	Latitude (North)	Longitude (West)
1	Commencing at a point on land at	53° 17.933’	131° 57.984’
2	Then easterly to a point in water at	53° 17.887’	131° 57.517’
3	Then southerly to a point in water at	53° 15.335’	131° 58.180’
4	Then southerly to a point in water at	53° 14.616’	131° 58.830’
5	Then northwesterly to a point on land at	53° 14.856’	131° 59.749’
6	Then northerly following the shoreline to the beginning point	53° 17.933’	131° 57.984’

The X̲aana K̲aahlii Marine Refuge in the map below:



3 - Marine Refuges in the Canadian Arctic

The following section provides information on area-based measures that have been recognized as marine refuges in Arctic Canada.

3.1 - Davis Strait Marine Refuge

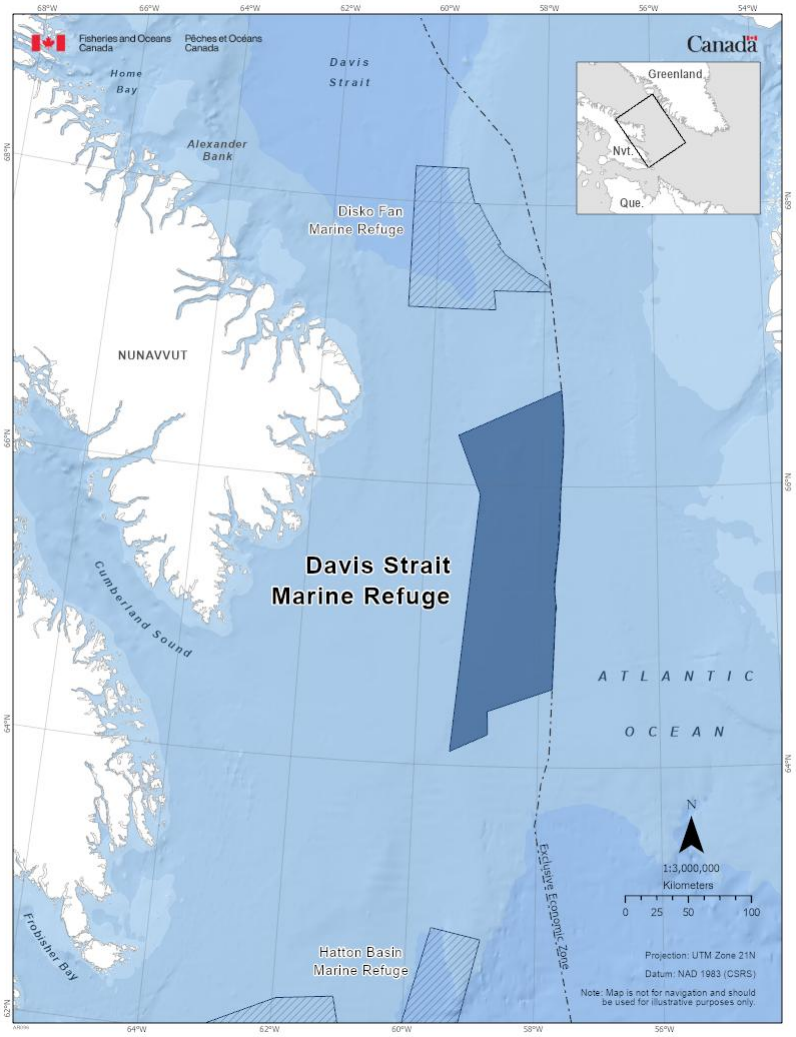
The Davis Strait Marine Refuge is found adjacent to Nunavut within the Eastern Arctic Bioregion. The fishery area closure was established in 2017 as a licence condition and variation order. This fishery area closure was granted marine refuge status due to the additional benefits it provides to conserve sensitive benthic areas. The fishery area closure prohibits all bottom-contact fishing activities.

Coordinates

The Davis Strait Marine Refuge is approximately 17, 298 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The area (in Divisions 0A and 0B) is bounded by a line joining the following points in the order in which they are listed:

Point	Latitude (North)	Longitude (West)
1	66° 41' 06.100"	57° 40' 12.300"
2	66° 37' 52.600"	57° 39' 27.100"
3	66° 36' 01.000"	57° 38' 59.200"
4	66° 30' 16.300"	57° 38' 02.100"
5	66° 24' 30.000"	57° 37' 33.600"
6	66° 18' 40.900"	57° 37' 33.200"
7	66° 15' 00.000"	57° 37' 50.400"
8	66° 12' 50.400"	57° 37' 00.500"
9	66° 03' 29.800"	57° 39' 27.300"
10	65° 57' 37.000"	57° 39' 55.600"
11	65° 57' 30.000"	57° 39' 55.600"
12	65° 51' 44.900"	57° 40' 26.400"
13	65° 50' 48.600"	57° 40' 27.400"
14	65° 37' 35.300"	57° 41' 44.700"
15	65° 34' 44.700"	57° 42' 10.600"
16	65° 23' 19.500"	57° 44' 49.900"
17	65° 18' 05.000"	57° 45' 41.800"
18	65° 14' 31.300"	57° 44' 59.500"
19	65° 11' 29.700"	57° 44' 13.200"
20	65° 08' 47.400"	57° 43' 41.200"
21	65° 06' 02.500"	57° 43' 57.100"
22	64° 33' 22.400"	57° 46' 29.200"
23	64° 23' 30.400"	58° 50' 16.200"
24	64° 13' 36.400"	58° 49' 23.000"
25	64° 06' 00.500"	59° 26' 00.200"
26	65° 56' 00.000"	59° 04' 00.200"
27	66° 21' 00.000"	59° 29' 00.000"
28	66° 41' 06.100"	57° 40' 12.300"

The Davis Strait Marine Refuge is shown in the map below:



Additional Measures

All commercial fishing vessels operating in NAFO Subarea 0 are required to carry a Vessel Monitoring System. This data is monitored regularly to aid compliance monitoring of the fishery closure. As well air surveillance is conducted. Other complementary tools (e.g. At-sea Observers, fishing logbooks) are also employed.

Voluntary Measures

1. Vessels should avoid passage through this area if possible. Avoidance is the most effective means to eliminate or reduce acoustic disturbances and vessel collisions to marine mammals.
2. Vessels should adhere to the following operating measures while maneuvering around marine mammals:
    a. Avoid any sudden changes in speed or direction.
    b. Avoid heading directly toward marine mammals.
    c. Travel parallel to marine mammals.
    d. If it is not possible to maneuver around a marine mammal or group of marine mammals, slow down immediately, maintain a minimum distance of 100 metres and wait until animals are more than 400 metres away before slowly resuming speed.

e. If operating a sailing vessel with an auxiliary motor, leave it in idle or use the echo sounder to signal presence.

3. Vessels must comply with all relevant provisions of the Marine Mammal Regulations pursuant to the *Fisheries Act*.

4. Marine mammal collisions, entanglements, distressed or dead animals should be reported to the Marine Animal Response Society's emergency hotline (1-866-567-6277), or via VHF channel 16. Sightings of healthy marine mammals should be reported to XMARwhalesightings@dfo-mpo.gc.ca. The following information about the sighting should be included: date, time, location, and species. Photos and videos should be submitted if available.

5. Please ensure that you are mitigating any risk of bottom contact in these sensitive areas. Anchoring is discouraged in the marine refuges if possible. Anchoring will be accepted for any safety reasons.
6. Please ensure that you are mitigating any risk of bottom contact in these sensitive areas. Anchoring is discouraged in the marine refuges if possible, to avoid. Anchoring will be accepted for any safety reasons.

3.2 - Disko Fan Marine Refuge

The Disko Fan Marine Refuge is found adjacent to Nunavut within the southern Baffin Bay in the Eastern Arctic Bioregion. Originally called the Narwhal Overwintering and Coldwater Coral Zone, it was closed to all Greenland Halibut fishing in 2008 via variation order and licence conditions, but allowed for shrimp fishing at shallower depths (<400m). In 2017, this fishery area closure was renamed to Disko Fan Marine Refuge and the area closed to all fishing activity; it was granted marine refuge status due to the additional benefits it provides to conserve coral concentrations and minimize impacts on winter food source and overwintering habitat for narwhal.

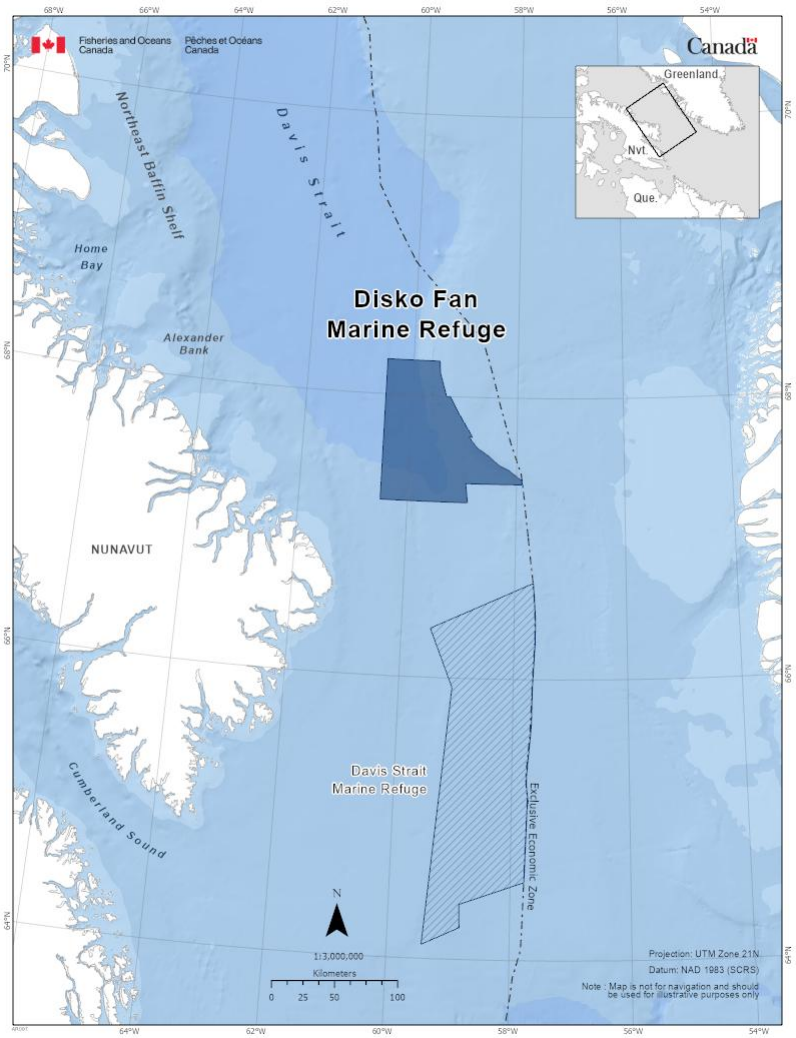
Coordinates

The Disko Fan Marine Refuge is approximately 7,485 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Disko Fan Marine Refuge (in NAFO Divisions 0A) is bounded by a line joining the following points in the order in which they are listed:

Point	Latitude (North)	Longitude (West)
1	68° 15' 00.000"	59° 30' 00.000"
2	68° 10' 00.000"	59° 29' 00.000"
3	68° 00' 00.000"	59° 21' 00.000"
4	68° 00' 00.000"	59° 16' 30.000"
5	67° 54' 00.000"	59° 08' 00.000"
6	67° 43' 00.000"	58° 50' 00.000"
7	67° 43' 00.000"	58° 54' 00.000"
8	67° 38' 30.000"	58° 44' 30.000"
9	67° 35' 00.000"	58° 31' 00.000"
10	67° 31' 00.000"	58° 19' 00.000"
11	67° 29' 00.000"	58° 08' 00.000"
12	67° 24' 50.000"	57° 53' 37.700"
13	67°23' 08.000"	57°52' 58.200"

14	67°23' 08.000"	58°56' 14.600"
15	67°15' 00.000"	58°53' 37.400"
16	67°15' 00.000"	60°30' 00.000"
17	68°15' 00.000"	60°30' 00.000"
18	68°15' 00.000"	59°30' 00.000"

The Disko Fan Marine Refuge is shown in the map below:



Additional Measures

All commercial fishing vessels operating in NAFO Subarea 0 are required to carry a Vessel Monitoring System. This data is monitored regularly to aid compliance monitoring of the fishery closure. As well air surveillance is conducted. Other complementary tools (e.g. At-sea Observers, fishing logbooks) are also employed.

Voluntary Measures

1. Vessels should avoid passage through this area if possible. Avoidance is the most effective means to eliminate or reduce acoustic disturbances and vessel collisions to marine mammals.
2. If passage through this area is required, vessel speed should decrease to 10 knots or less and post a look-out to increase the likelihood of sighting and avoiding marine mammals. Increased caution should be exercised in conditions of reduced visibility, such as rain, fog, rough sea state, or at night. Be aware that marine mammals often travel in small groups dispersed over an area of several miles.
3. Vessels should adhere to the following operating measures while maneuvering around marine mammals:
    a. Avoid any sudden changes in speed or direction.
    b. Avoid heading directly toward marine mammals.
    c. Travel parallel to marine mammals.
    d. If it is not possible to maneuver around a marine mammal or group of marine mammals, slow down immediately, maintain a minimum distance of 100 metres and wait until animals are more than 400 metres away before slowly resuming speed.
    e. If operating a sailing vessel with an auxiliary motor, leave it in idle or use the echo sounder to signal presence.
4. Vessels must comply with all relevant provisions of the Marine Mammal Regulations pursuant to the *Fisheries Act*.
5. Marine mammal collisions, entanglements, distressed or dead animals should be reported to the Marine Animal Response Society's emergency hotline (1-866-567-6277), or via VHF channel 16. Sightings of healthy marine mammals should be reported to XMARwhalesightings@dfo-mpo.gc.ca. The following information about the sighting should be included: date, time, location, and species. Photos and videos should be submitted if available.
6. Please ensure that you are mitigating any risk of bottom contact in these sensitive areas. Anchoring is discouraged in the marine refuges if possible, to avoid. Anchoring will be accepted for any safety reasons.

3.3 - Hatton Basin Marine Refuge

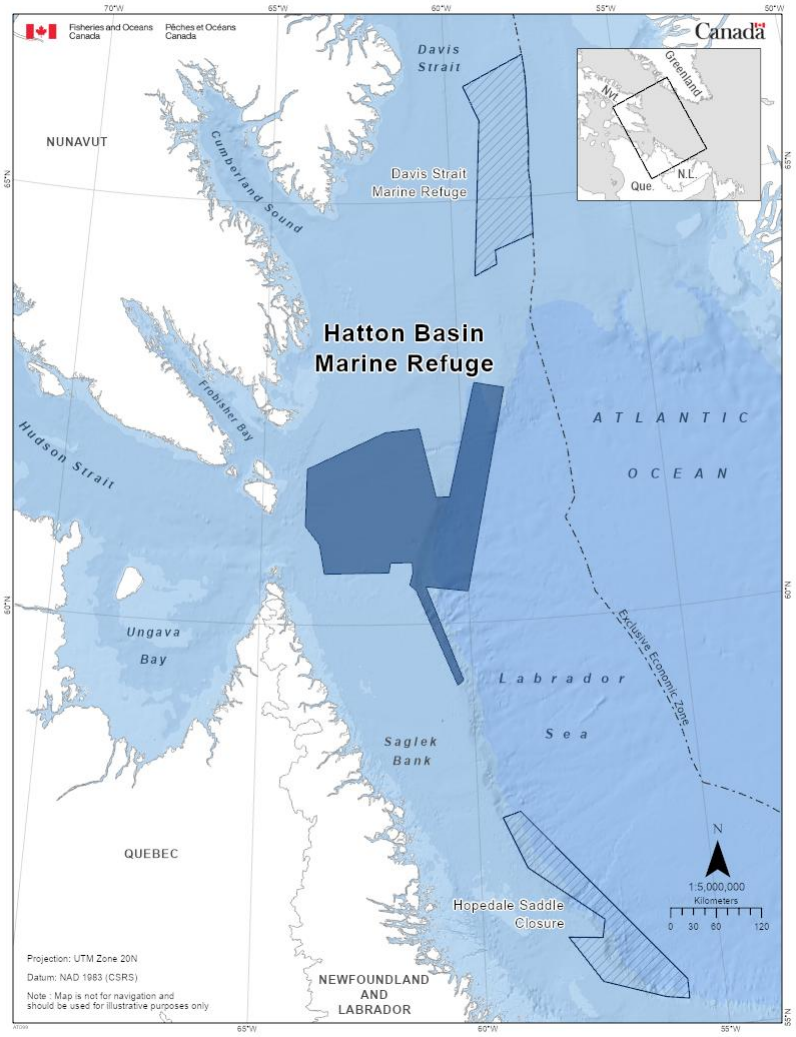
The Hatton Basin Marine Refuge can be found in the Eastern Arctic and Newfoundland-Labrador Shelves Bioregions. The fishery area closure was established in 2017 as a variation order and licence of condition. This fishery area closure was granted marine refuge status due to the additional benefits it provides to conserve cold-water corals and sponges. The fishery area closure prohibits all bottom-contact fishing activities. This area is the only known overwintering area for northern Hudson Bay narwhal.

Coordinates

The Hatton Basin Marine Refuge is approximately 42,459 km^2 in size. The geographic boundary of this area is expressed in Latitude and Longitude and these point references are based on the Geodetic System North American Datum 1983 (NAD83). Positions are expressed in degrees, minutes and seconds. The Hatton Basin Marine Refuge (in NAFO Divisions 0B and 2G) is bounded by a line connecting the points in the order they are listed:

Point	Latitude (North)	Longitude (West)
1	62° 16' 49.758"	61° 56' 38.046"
2	62° 19' 06.918"	61° 04' 22.448"
3	61° 29' 59.958"	60° 41' 55.329"
4	61° 29' 59.958"	60° 22' 07.689"
5	62° 50' 31.518"	59° 37' 08.050"
6	62° 45' 58.278"	58° 51' 02.172"
7	60° 22' 28.159"	60° 00' 24.490"
8	60° 26' 32.959"	61° 01' 12.728"
9	59° 28' 37.519"	60° 19' 03.010"
10	59° 19' 14.839"	60° 12' 22.690"
11	59° 15' 45.679"	60° 20' 53.530"
12	60° 23' 43.399"	61° 15' 03.968"
13	60° 28' 06.199"	61° 24' 18.368"
14	60° 36' 37.399"	61° 19' 33.968"
15	60° 44' 01.279"	61° 20' 14.288"
16	60° 44' 00.559"	61° 51' 41.767"
17	60° 37' 00.799"	61° 53' 53.527"
18	60° 36' 22.639"	63° 27' 37.804"
19	60° 57' 04.639"	63° 35' 00.244"
20	61° 10' 15.199"	63° 56' 15.003"
21	61° 51' 01.038"	63° 54' 12.963"
22	62° 16' 49.758"	61° 56' 38.046"

The Hatton Basin Marine Refuge is shown in the map below:



Additional Measures

Voluntary Measures

1. Vessels should avoid passage through this area if possible. Avoidance is the most effective means to eliminate or reduce acoustic disturbances and vessel collisions to marine mammals.
2. If passage through this area is required, vessel speed should decrease to 10 knots or less and post a look-out to increase the likelihood of sighting and avoiding marine mammals. Increased caution should be exercised in conditions of reduced visibility, such as rain, fog, rough sea state, or at night. Be aware that marine mammals often travel in small groups dispersed over an area of several miles.
3. Vessels should adhere to the following operating measures while maneuvering around marine mammals:
    a. Avoid any sudden changes in speed or direction.
    b. Avoid heading directly toward marine mammals.
    c. Travel parallel to marine mammals.
    d. If it is not possible to maneuver around a marine mammal or group of marine mammals, slow down immediately, maintain a minimum distance of 100 metres and wait until animals are more than 400 metres away before slowly resuming speed.

e. If operating a sailing vessel with an auxiliary motor, leave it in idle or use the echo sounder to signal presence.

4. Vessels must comply with all relevant provisions of the Marine Mammal Regulations pursuant to the *Fisheries Act*.
5. Marine mammal collisions, entanglements, distressed or dead animals should be reported to the Marine Animal Response Society's emergency hotline (1-866-567-6277), or via VHF channel 16. Sightings of healthy marine mammals should be reported to XMARwhalesightings@dfo-mpo.gc.ca. The following information about the sighting should be included: date, time, location, and species. Photos and videos should be submitted if available.
6. Please ensure that you are mitigating any risk of bottom contact in these sensitive areas. Anchoring is discouraged in the marine refuges if possible, to avoid. Anchoring will be accepted for any safety reasons.

General Information on Rockfish Conservation Areas

Rockfish Conservation Areas (RCAs) are a network of 162 area-based management measures that were fully established in British Columbia (BC) by 2007. The establishment of RCAs which cover over 4,350 km² of the Canadian Pacific coast are in place to slow down or stop further rockfish population declines associated with recreational and commercial fisheries. The ecological conservation objectives of RCAs are to increase inshore rockfish and lingcod population densities, to increase the abundance of inshore rockfish in older age and larger size classes, and to protect inshore rockfish and lingcod habitat. The fisheries activities listed below are restricted in order to help protect rockfish from mortality and to support their conservation.

Commercial harvesters may not fish for:

- salmon by troll
- groundfish by means of bottom trawl, hook and line, mid-water trawl, or trap
- tuna by hook and line
- shrimp by trawl

Recreational fishers may not fish for:

- any species by spearfishing
- groundfish by angling
- salmon by trolling, jigging or mooching
- octopus by angling
- squid by jigging

Maps and coordinates: Maps of protected areas in the Pacific Ocean.

Authority: Department of Fisheries and Oceans (DFO)

5B General Guidelines for National Parks

National Parks of Canada and National Park Reserves of Canada

General Guidelines for National Parks and National Park Reserves

Under the *Canada National Parks Act*, S.C. 2000, c. 32, the Parks Canada Agency has the authority to administer national parks (listed under Schedule 1 of the Act) and national park reserves (listed under Schedule 2 of the Act) on behalf of the people of Canada and is responsible for granting permission to enter any lands or waters for which it has jurisdiction. Visitor permits and/or business licenses are required before entering the boundaries of all national parks and national park reserves, and other permitting requirements may exist, including for research.

For general information regarding Canada's National Parks and National Park Reserves, please contact the Parks Canada National Information Service at 1-888-773-8888, email information@pc.gc.ca, or visit the Parks Canada website.

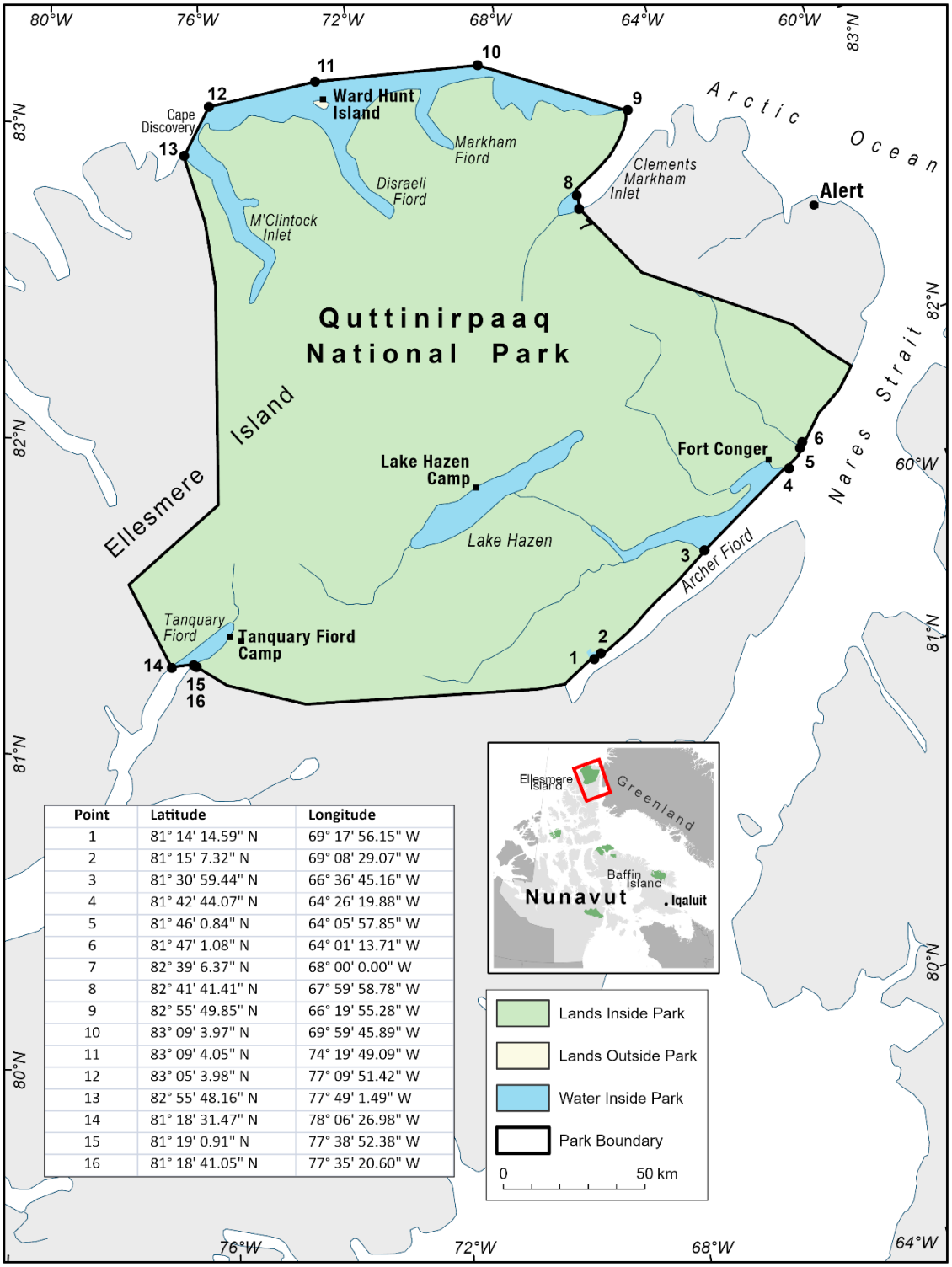
1. National Parks in Nunavut

With the exception of Inuit accessing national parks for rights-based activities under the N*unavut Agreement*, anyone entering a national park in Nunavut, including all marine areas, requires authorization from Parks Canada. Authorization normally occurs through a visitor use permit, a business licence, or a research permit.

All persons wishing to enter marine areas of national parks in Nunavut must contact local Parks Canada staff and register prior to entering. Additional permit requirements and restrictions may apply.

1.1 Quttinirpaaq National Park of Canada

Coordinates



Point	Latitude	Longitude
1	81° 14' 14.59" N	69° 17' 56.15" W
2	81° 15' 7.32" N	69° 08' 29.07" W
3	81° 30' 59.44" N	66° 36' 45.16" W
4	81° 42' 44.07" N	64° 26' 19.88" W
5	81° 46' 0.84" N	64° 05' 57.85" W
6	81° 47' 1.08" N	64° 01' 13.71" W
7	82° 39' 6.37" N	68° 00' 0.00" W
8	82° 41' 41.41" N	67° 59' 58.78" W
9	82° 55' 49.85" N	66° 19' 55.28" W
10	83° 09' 3.97" N	69° 59' 45.89" W
11	83° 09' 4.05" N	74° 19' 49.09" W
12	83° 05' 3.98" N	77° 09' 51.42" W
13	82° 55' 48.16" N	77° 49' 1.49" W
14	81° 18' 31.47" N	78° 06' 26.98" W
15	81° 19' 0.91" N	77° 38' 52.38" W
16	81° 18' 41.05" N	77° 35' 20.60" W

Restrictions

With the exception of Inuit accessing the national park for rights-based activities under the Nunavut Agreement, persons wishing to enter marine areas within Quttinirpaaq National Park must contact Parks Canada at 1-867-975-4673 or at nunavut.info@pc.gc.ca prior to entering the national park.

The following additional restrictions and prohibitions also apply:

- Cruise ship access may only be permitted in Tanquary Fiord and designated areas in Discovery Harbour; cruise ships are prohibited in all other marine areas.
- Private Yacht Access is permitted in Tanguary Fiord.
- Private motorized activities are prohibited.
- Recreational fishing is prohibited.

Permitting Requirements

Visitor use permits are required for all visitors. A visitor use permit is granted after visitors participate in a mandatory orientation, register and pay the park use fee. To arrange an orientation and obtain a visitor permit, contact Parks Canada in advance of your trip.

In addition to visitor use permits, permits are required for operating a business (guiding, outfitting), filming and commercial photography, landing an aircraft, establishing a cache or base camp, or transporting a firearm through the park. Permit applications may take up to 90 days to be processed. Not all activities are permitted in national parks. For further information, or to apply for one of these permits, contact permits.nunavut.permis@pc.gc.ca (May to November) field work and by October 30 for winter and spring (December to April) field work. Contact rechercheparcsnunavut-nunavutparksresearch@pc.gc.ca for details on what is required in research and collection permit applications.

Reporting of Incidents

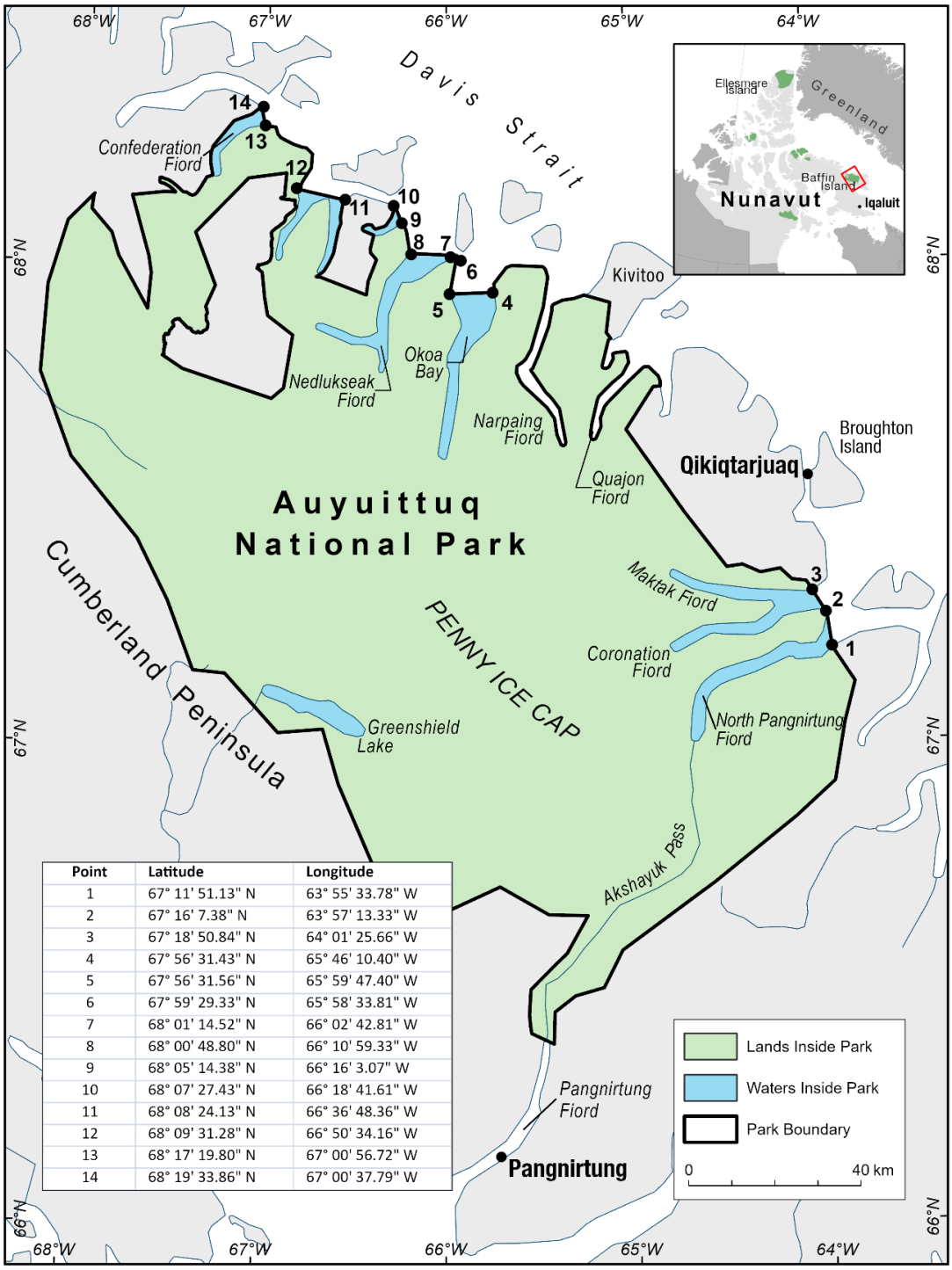
All incidents occurring within Quttinirpaaq National Park must be promptly reported to Parks Canada by calling 1-877-852-3100 or 1-780-852-3100.

Contact Information

Quttinirpaaq National Park
Parks Canada
PO Box 278
Iqaluit, NU
X0A 0H0
Phone: 1-867-975-4673
Fax: 1-867-975-4674
Email: nunavut.info@pc.gc.ca

1.2 Auyuittuq National Park of Canada

Coordinates



Point	Latitude	Longitude
1	67° 11' 51.13" N	63° 55' 33.78" W
2	67° 16' 7.38" N	63° 57' 13.33" W
3	67° 18' 50.84" N	64° 01' 25.66" W
4	67° 56' 31.43" N	65° 46' 10.40" W
5	67° 56' 31.56" N	65° 59' 47.40" W
6	67° 59' 29.33" N	65° 58' 33.81" W
7	68° 01' 14.52" N	66° 02' 42.81" W
8	68° 00' 48.80" N	66° 10' 59.33" W
9	68° 05' 14.38" N	66° 16' 3.07" W
10	68° 07' 27.43" N	66° 18' 41.61" W
11	68° 08' 24.13" N	66° 36' 48.36" W
12	68° 09' 31.28" N	66° 50' 34.16" W
13	68° 17' 19.80" N	67° 00' 56.72" W
14	68° 19' 33.86" N	67° 00' 37.79" W

Restrictions

With the exception of Inuit accessing the national park for rights-based activities under the Nunavut Agreement, persons wishing to enter marine areas within Auyuittuq National Park must contact Parks Canada staff in Pangnirtung at 1-867-473-2500, in Qikiqtarjuaq at 1-867-927-8834, or at nunavut.info@pc.gc.ca prior to entering the national park.

The following additional restrictions and prohibitions also apply:

- Private motorized activities are prohibited in all marine areas.
- Cruise ships are currently prohibited in fiords located within the national park.
- Commercially guided motorized boat access may be permitted within Coronation, Maktak, and North Pangnirtung Fiords.
- All marine areas of Coronation and Maktak Fiords are seasonally closed to access in late August or early September for the remainder of the calendar year to enable Inuit to undertake rights-based activities. Closure dates vary from year to year, according to the timing of activities. Contact Parks Canada staff in Qikiqtarjuaq (1-867-927-8834) for details on this closure.
- Recreational fishing requires a permit.

Permitting Requirements

Visitor use permits are required for all visitors. A visitor use permit is granted after visitors participate in a mandatory orientation, register and pay the park use fee. To arrange an orientation and obtain a visitor permit, contact Parks Canada in advance of your trip.

In addition to visitor use permits, permits are required for operating a business (guiding, outfitting), filming and commercial photography, landing an aircraft, establishing a cache, base camp, transporting a firearm through the park, or recreational fishing. Permit applications may take up to 90 days to be processed. Not all activities are permitted in national parks. For further information, or to apply for one of these permits, contact permits.nunavut.permis@pc.gc.ca.

Permit applications for research and collection activities within park boundaries need to be submitted by February 28 for summer and fall (May to November) field work and by October 30 for winter and spring (December to April) field work. Contact rechercheparcsnunavut-nunavutparksresearch@pc.gc.ca for details on what is required in research and collection permit applications.

Reporting of Incidents

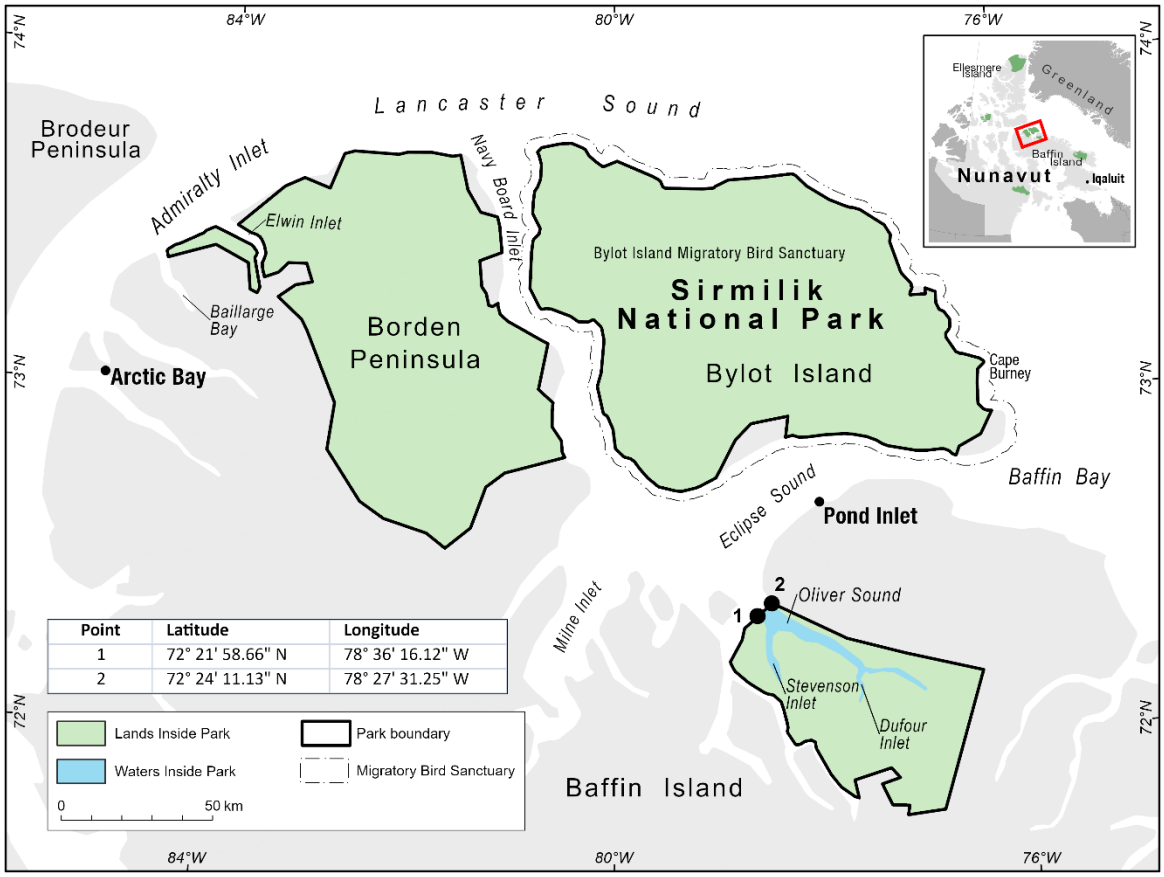
All incidents occurring within Auyuittuq National Park must be promptly reported to Parks Canada by calling 1-877-852-3100 or 1-780-852-3100.

Contact Information

Auyuittuq National Park Parks Canada PO Box 353 Pangnirtung, NU X0A 0R0 Phone: 1-867-473-2500 Fax: 1-867-473-8612 Email : nunavut.info@pc.gc.ca	or	Auyuittuq National Park Parks Canada PO Box 122 Qikiqtarjuaq, NU X0A 0B0 Phone: 1-867-927-8834 Fax: 1-867-927-8454

1.3 Sirmilik National Park of Canada

Coordinates



Restrictions

With the exception of Inuit accessing the national park for rights-based activities under the Nunavut Agreement, persons wishing to enter marine areas within Sirmilik National Park must contact Parks Canada staff at 1-867-899-8092 or at sirmilik.info@pc.gc.ca prior to entering the national park.

The following additional restrictions and prohibitions also apply:

- Access to Oliver Sound requires a permit and/or business license
- Large vessels (e.g., cruise ships) are prohibited from entering Oliver Sound.
- Recreational fishing is prohibited.

Permitting Requirements

Visitor use permits are required for all visitors. A visitor use permit is granted after visitors participate in a mandatory orientation, register and pay the park use fee. To arrange an orientation and obtain a visitor permit, contact Parks Canada staff in advance of your trip.

In addition to visitor use permits, permits are required for operating a business (guiding, outfitting), filming and commercial photography, landing an aircraft, establishing a cache or base camp, or transporting a firearm through the park. Permit applications may take up to 90 days to be processed. Not all activities are permitted in national parks. For further information, or to apply for one of these permits, contact permits.nunavut.permis@pc.gc.ca.

Permit applications for research and collection activities within national park boundaries need to be submitted by February 28 for summer and fall (May to November) field work and by October 30 for winter and spring (December to April field work). Contact rechercheparcsnunavut-nunavutparksresearch@pc.gc.ca for details on what is required in research and collection permit applications.

Additional Recommendations

For access to waters adjacent to Bylot Island, the Canadian Wildlife Service should be contacted because it is responsible for the management of the Bylot Island Migratory Bird Sanctuary, which includes a marine component.

Reporting of Incidents

All incidents occurring within Sirmilik National Park must be promptly reported to Parks Canada by calling 1-877-852-3100 or 1-780-852-3100.

Contact Information

Sirmilik National Park
Parks Canada
PO Box 300
Pond Inlet, NU
X0A 0S0
Phone: 1-867-899-8092
Fax: 1-867-899-8104
Email: sirmilik.info@pc.gc.ca

1.4 Ukkusiksalik National Park of Canada

Coordinates



Restrictions

With the exception of Inuit accessing the national park for rights-based activities under the Nunavut Agreement, persons wishing to enter marine areas within Ukkusiksalik National Park must contact Parks Canada staff at 1-867-462-4500 or at ukkusiksalik.info@pc.gc.ca prior to entering the national park.

The following additional restrictions also apply:

- Access to Wager Bay requires a permit and/or business license.
- Anyone wishing to enter into, use and/or travel through Ukkusiksalik National Park must be accompanied by an authorized bear guard while in the national park.

Permitting Requirements

Visitor use permits are required for all visitors. A visitor use permit is granted after visitors participate in a mandatory orientation, register and pay the park use fee. To arrange an orientation and obtain a visitor permit, contact Parks Canada staff in advance of your trip.

In addition to visitor use permits, permits are required for operating a business (guiding, outfitting), filming and commercial photography, landing an aircraft, establishing a cache or base camp, or transporting a firearm through the park. Permit applications may take up to 90 days to be processed. Not all activities are permitted in national parks. For further information, or to apply for one of these permits, contact permits.nunavut.permis@pc.gc.ca.

Permit applications for research and collection activities within park boundaries need to be submitted by February 28 for summer and fall (May to November) field work and by October 30 for winter and spring (December to April) field work. Contact rechercheparcsnunavut-nunavutparksresearch@pc.gc.ca for details on what is required in research and collection permit applications.

Reporting of Incidents

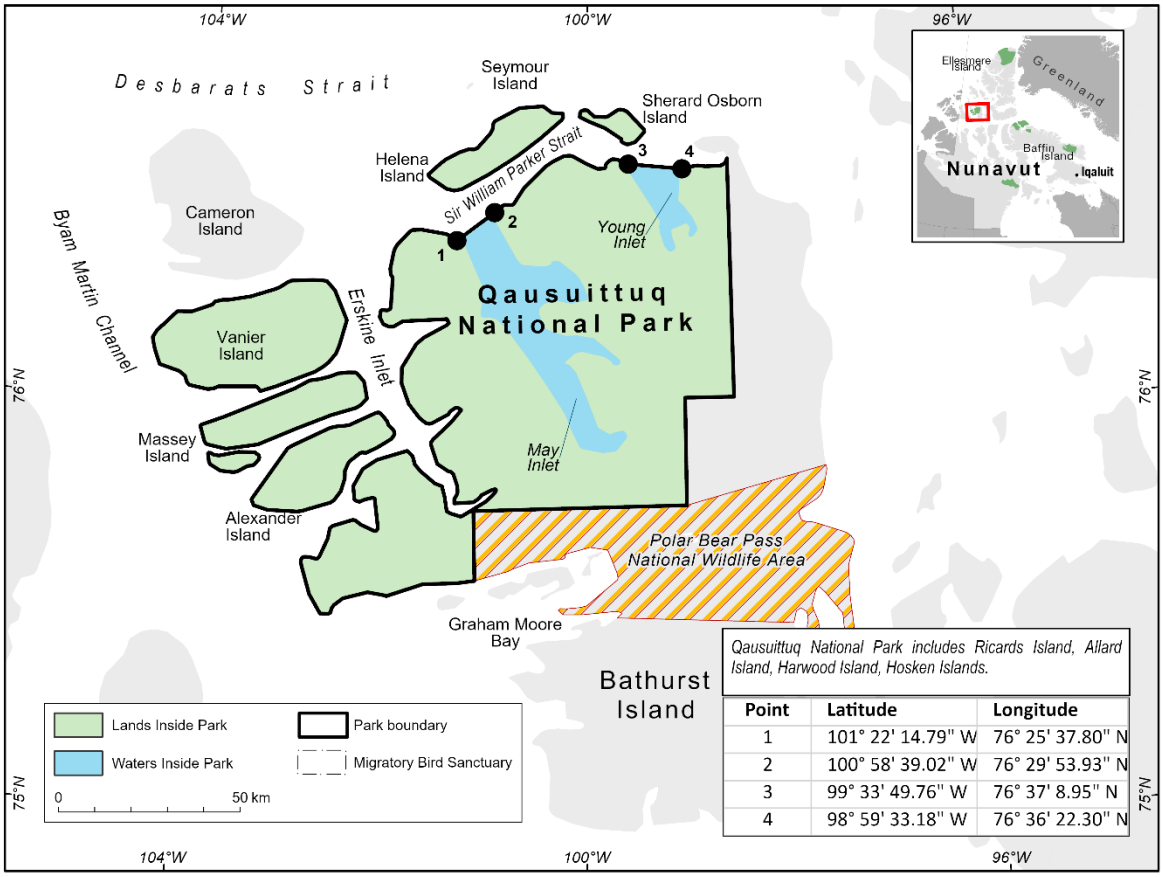
All incidents occurring within Ukkusiksalik National Park should be promptly reported to Parks Canada by calling 1-877-852-3100 or 1-780-852-3100.

Contact Information

Ukkusiksalik National Park
Parks Canada
P.O. Box 220
Naujaat, NU
X0C 0H0
Phone: 1-867-462-4500
Fax: 1-867-462-4095
Email: ukkusiksalik.info@pc.gc.ca

1.5 Qausuittuq National Park of Canada

Coordinates



Qausuittuq National Park includes Ricards Island, Allard Island, Harwood Island, Hosken Islands.

Point	Latitude	Longitude
1	101° 22' 14.79" W	76° 25' 37.80" N
2	100° 58' 39.02" W	76° 29' 53.93" N
3	99° 33' 49.76" W	76° 37' 8.95" N
4	98° 59' 33.18" W	76° 36' 22.30" N

Restrictions

With the exception of Inuit accessing the national park for rights-based activities under the Nunavut Agreement, persons wishing to enter marine areas within Qausuittuq National Park must contact Parks Canada staff at 1-867-252-3000 or at nunavut.info@pc.gc.ca prior to entering the national park.

The following additional restrictions also apply:

- Access to May and Young Inlets requires a permit and/or business license.

Permitting Requirements

Visitor use permits are required for all visitors. A visitor use permit is granted after visitors participate in a mandatory orientation, register and pay the park use fee. To arrange an orientation and obtain a visitor permit, contact Parks Canada staff in advance of your trip.

In addition to visitor use permits, permits are required for operating a business (guiding, outfitting), filming and commercial photography, landing an aircraft, establishing a cache or base camp, or transporting a firearm through the park. Permit applications may take up to 90 days to be processed. Not all activities are permitted in national parks. For further information, or to apply for one of these permits, please contact permits.nunavut.permis@pc.gc.ca.

Permit applications for research and collection activities within park boundaries need to be submitted by February 28 for summer and fall (May to November) field work and by October 30 for winter and spring (December to April) field work. Contact recherchesparcsnunavut-nunavutparksresearch@pc.gc.ca for details on what is required in research and collection permit applications.

Reporting of Incidents

All incidents occurring within Qausuittuq National Park should be promptly reported to Parks Canada by calling 1-877-852-3100 or 1-780-852-3100.

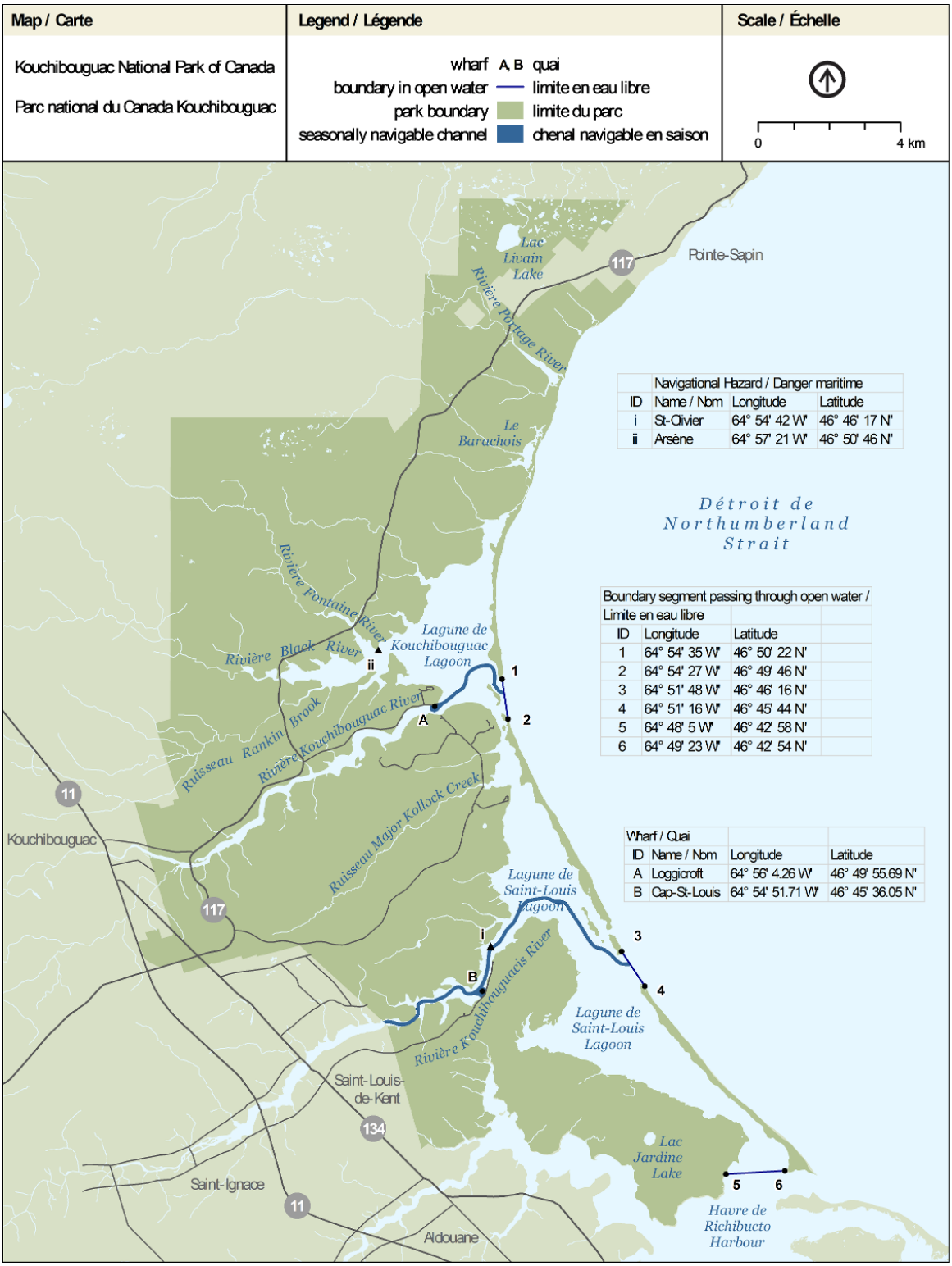
Contact Information

Qausuittuq National Park
Parks Canada
PO Box 123
Resolute Bay, NU, X0A 0V0
Phone: 1-867-252-3000
Email: nunavut.info@pc.gc.ca

2. Coastal National Parks in Eastern Canada

2.1 Kouchibouguac National Park of Canada

Coordinates



Coordinates marking boundary segments passing through open water are given in the table below. These locations are approximate since sand can shift from year to year and during extreme weather events.

ID	Longitude	Latitude
1	64º 54' 35" W	46º 50' 22" N
2	64º 54' 27" W	46º 49' 46" N
3	64º 51' 48" W	46º 46' 16" N
4	64º 51' 16" W	46º 45' 44" N
5	64º 48' 05" W	46º 42' 58" N
6	64º 49' 23" W	46º 42' 54" N

Two wharves operate within Kouchibouguac National Park for the purpose of supporting commercial fishing operations as well as recreational boating.

Coordinates of the wharves are:

ID	Name / Nom	Longitude	Latitude
A	Loggiecroft	64° 55' 48" W	46° 49' 57" N
B	Cap-St-Louis	64° 54' 45" W	46° 46' 02" N

Mariners are advised of the possibility of remnant wharf piles near the surface of the water in two areas of the park. Their depth and visibility varies with the tides and turbidity of the water. Navigate with extreme caution in these areas. Two navigational danger buoys are installed each year by Parks Canada at the Arsène location from April 15 to October 31.

Coordinates of these hazards are :

ID	Name / Nom	Longitude	Latitude
i	St-Olivier	64° 54' 42 W"	46° 46' 17 N"
ii	Arsène	64° 57' 21 W"	46° 50' 46 N"

Notes:

Boundary of outward (or easterly) edge of sand beaches can change from year to year and with extreme weather events which cause sand to shift.

Navigable water channels on the Kouchibouguac River from Loggiecroft Wharf to the Northumberland Strait and on the Kouchibouguacis River from the westerly park boundary to the Northumberland Strait, including the wharf at Cap-St-Louis, are marked from April 20 to October 30 subject to ice conditions and fishing seasons.

Coordinates are derived using the NAD83 datum.

Restrictions

- Personal watercrafts (“Jet skis”) are prohibited in all park waters at all times.
- Night-time boating is only permitted within marked channels on the Kouchibouguac and Kouchibouguacis rivers.
- Overnight anchoring (mooring) of boats is prohibited outside the authorized limits of the wharves.
- Please respect the marked “closed” and “study” zones of the park, where important nesting sites and sensitive ecological areas are located.

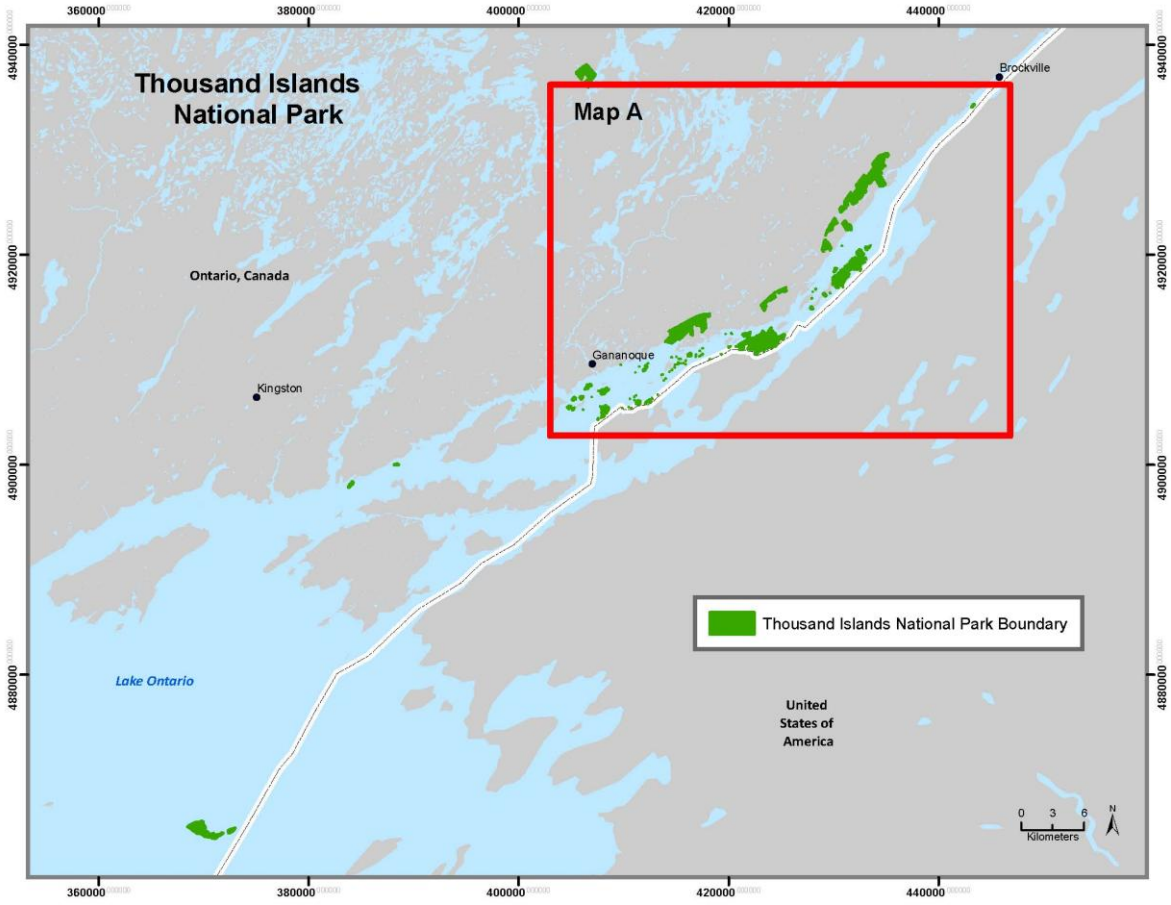
Contact Information

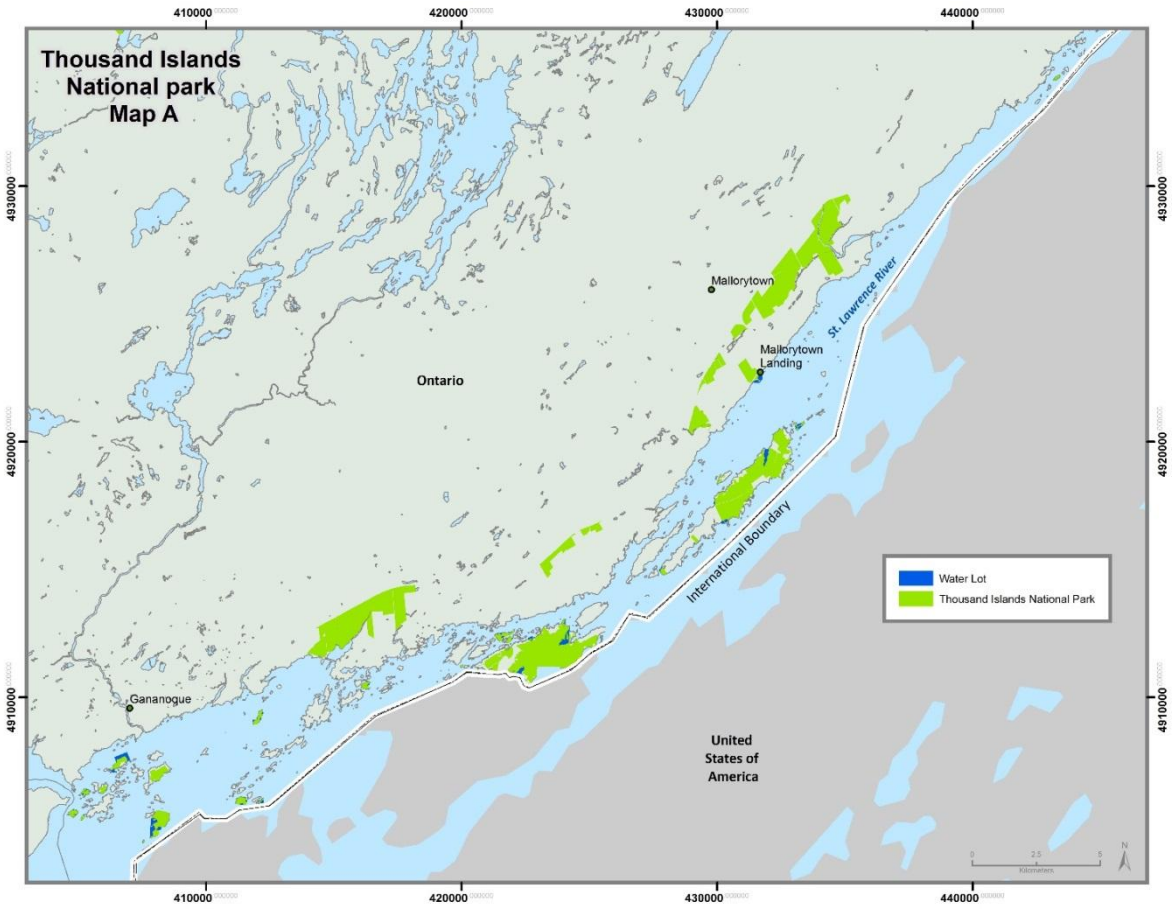
Kouchibouguac National Park
Parks Canada
186, Route 117
Kouchibouguac National Park, New Brunswick
E4X 2P1
Phone: 506-876-2443
Fax: 506-876-4802
Email: kouchibouguac@pc.gc.ca

3. National Parks in Central Canada

3.1 Thousand Islands National Park of Canada

Coordinates





Thousand Islands National Park consists of several ecologically important mainland properties and more than 20 islands between Kingston and Brockville.

Established in 1904 as the first Canadian national park east of the Rockies, Thousand Islands celebrated its centennial in 2004. The park islands and mainland properties are protected under the *Canada National Park Act* (S.C. 2000, c.32).

Restrictions

Thousand Islands manages sixty-two water lots along the park's shoreline (see Map A above). Most water lots have public access docks or mooring cans which require permits for daily or overnight use. The water lot in front of Central Grenadier Island contains a quiet zone marked by water spars.

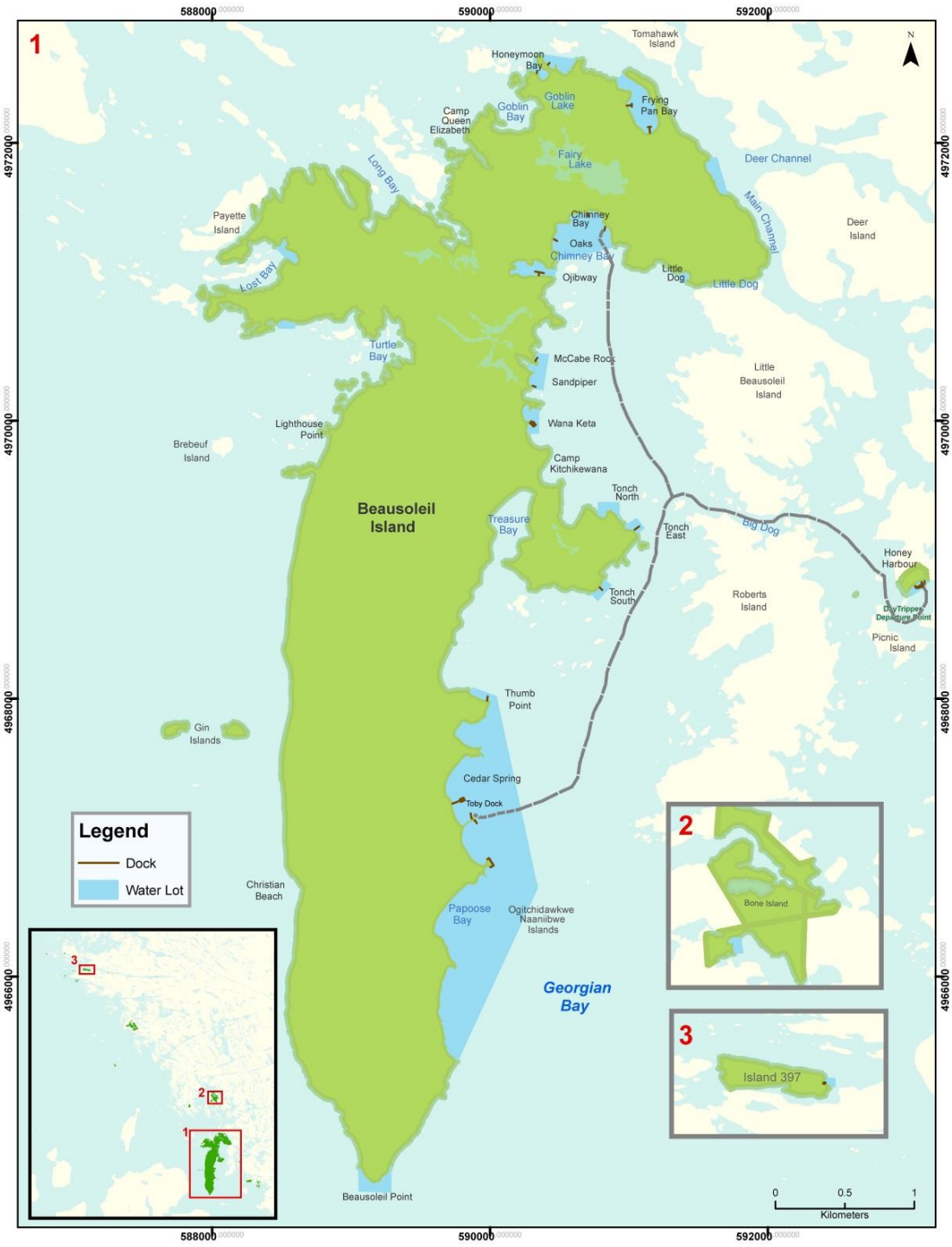
Contact

To purchase permits or for further questions concerning Thousand Islands National Park, contact us at:

Thousand Islands National Park
Parks Canada
2 County Rd 5
Mallorytown, ON
K0E 1R0
Phone: 613-923-5261
Email: pnmille-iles-thousandislandsnp@pc.gc.ca
Thousand Islands National Park website

3.2 Georgian Bay Islands National Park of Canada / Beausoleil Island National Historic Site

Coordinates



Georgian Bay Islands National Park of Canada / Beausoleil Island National Historic Site

Georgian Bay Islands National Park is made up of 48 islands that are strewn along 50 km of eastern Georgian Bay from Honey Harbour to Twelve Mile Bay and are part of the world famous 30,000 Islands. Beausoleil Island, also recognized as a National Historic Site, is the largest park island and is the hub for activities.

Established in 1929, Georgian Bay Islands National Park straddles an area of St. Lawrence lowlands and pure Canadian Shield and forms a core part of the Georgian Bay Biosphere Reserve. The park islands are protected under the *Canada National Park Act* (S.C. 2000, c.32).

Restrictions

Georgian Bay Islands manages several water lots along the park's shoreline (see map above). Several water lots have public access docks which require mooring permits.

The water lot in front of Cedar Spring contains a quiet zone marked by water spars and a designated swimming area. The Tobey dock within this water lot is also monitored for length of stay restrictions. The water lot in Chimney Bay contains a quiet zone marked by water spars. The water lot in Honeymoon Bay contains a designated swimming area.

Contact

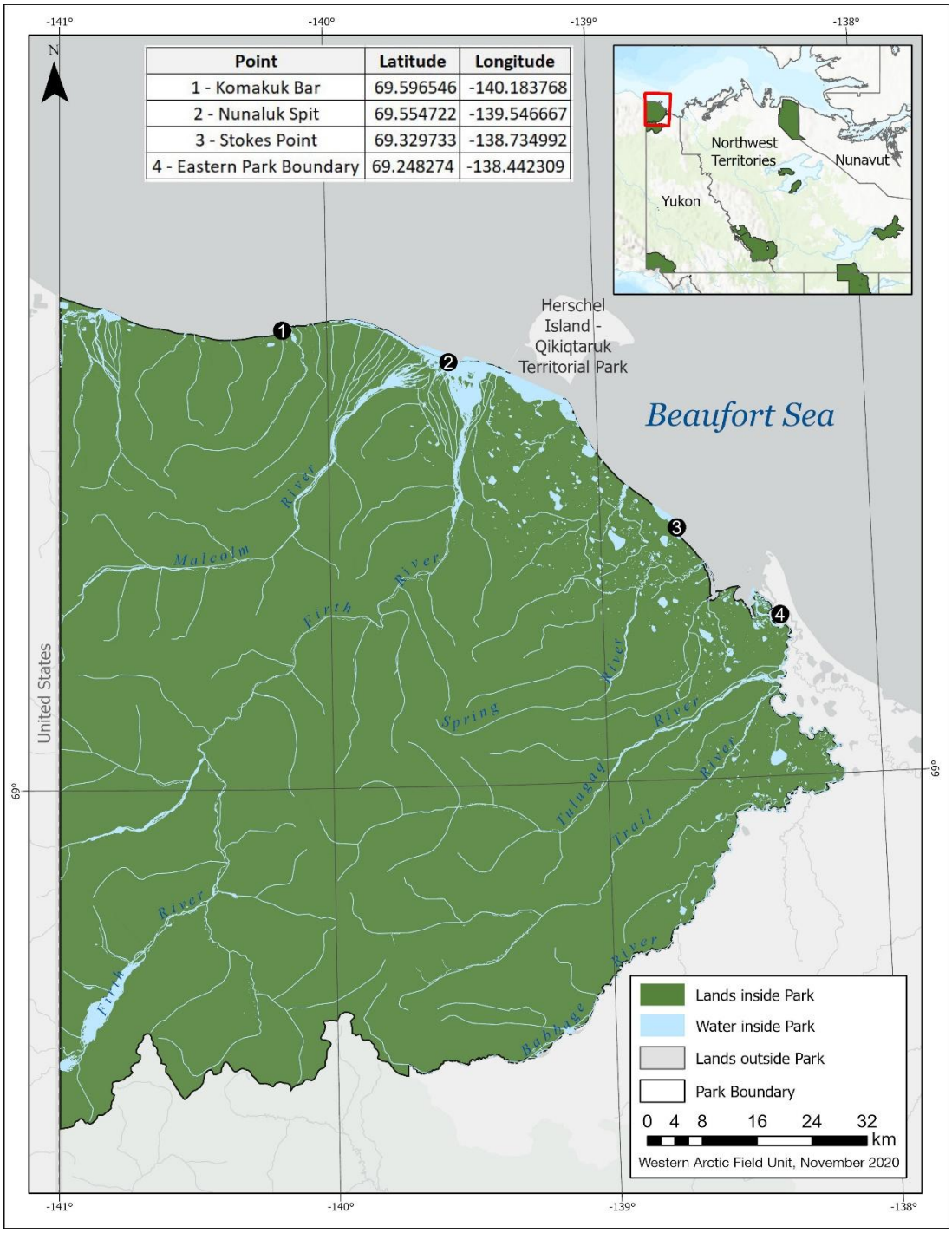
To purchase permits or for further questions concerning Georgian Bay Islands National Park, contact us at:

Georgian Bay Islands National Park
Parks Canada
901 Wye Valley Rd, Box 9
Midland, ON
L4R 4K6
Phone: 705-526-8907
Fax: 705-526-5939
Email: info.gbi-ibg@pc.gc.ca
Georgian Bay Islands National Park website

4 National Parks in Yukon

4.1 Ivvavik National Park of Canada

Ivvavik, meaning ‘a place for giving birth, a nursery,' in Inuvialuktun, the language of the Inuvialuit, was established to protect a portion of the calving grounds of the Porcupine caribou herd and represent the Northern Yukon and Mackenzie Delta natural regions.



Ivvavik National Park includes all shoals, islands, sandbars and spits that may be periodically exposed at low tide within 3.5 kilometres of the shore and all islands, sandbars and spits lying within Phillips Bay, not including Herschel Island and its sandbars spits and immediately adjoining islets.

Restrictions

With the exception of Inuvialuit to whom the *Inuvialuit Final Agreement* applies, anyone entering Ivvavik National Park, including all vessels wishing to enter marine areas or land a vessel within Ivvavik National Park must register with the Parks Canada office by phone at 1-867-678-5443 or by email at infoinuvik-inuvikinfo@pc.gc.ca prior to entering the park. Additional permit requirements and restrictions may apply.

The following activities are restricted or prohibited:

- **Trapping, hunting and firearms -** Only traditional harvesters who have the free and unrestricted right of access to the national park for the purpose of harvesting may engage in trapping, hunting and the carrying of firearms;
- **Mining -** Panning for gold, mining, and mineral exploration is prohibited. It is illegal to remove, deface, damage or destroy rocks, minerals, and other natural objects;
- **Fires -** Open fires are prohibited in the park, except at Nunaluk Spit;
- **Off-road Vehicles -** The use of ATVs, snowmobiles, dirt bikes, or other off-road vehicles for recreational purposes is prohibited;
- **Garbage and human waste -** All garbage, including human waste, must be packed out. Burning or burying garbage and waste is not acceptable.

Permitting Requirements

For information on obtaining a permit for any of the activities listed below, please contact the Parks Canada office in Inuvik by phone at 1-867-678-5443 or email at infoinuvik-inuvikinfo@pc.gc.ca. Please note that some permit applications are subject to external impact assessment processes and it may take up to four (4) months to issue a permit. Permits are required in advance for the following activities:

- **Visitor Use Permits** - All day use, overnight, and multi-day trip visitors must obtain a Parks Canada permit and must register prior to entering;
- **Military exercises** - All personnel and equipment operating on behalf of any Canadian or foreign armed forces for the purposes of training, or entry and travel by any means;
- **Fuel caching** - Storage of petroleum-based fuel in any location for future use;
- **Food caching** - Storage of food stuffs in any location for future use;
- **Filming or photography for commercial purposes** - Filming and photography activities conducted where the photographer:
  1) is working to fulfill a commercial contract (including stock agencies);
  2) is salaried for the purpose; or
  3) Requires special permission or assistance from Parks Canada to access areas or resources (including Parks Canada staff);
- **Use of drones/UAVs**- The use of drones/UAVs requires a special permit, unauthorized use is illegal;
- **Research and collection** – All research and collection of data and objects (including all natural science, social science, and archaeological research and collection), requires a permit;
- **Fishing** – An Ivvavik National Park Fishing Permit is required, daily catch and possession limit for Dolly Varden is reduced to 1, the aggregate daily catch and possession limit for all species is reduced to 3, and several inland lakes and rivers are closed to all fishing; and
- **Transporting a firearm through the Park** - Firearms may be transported through the park to another destination, but must be unloaded and securely encased**.**

Reporting of Incidents

Please report all incidents, including those relating to wildlife, safety, spills and violations occurring within Ivvavik National Park promptly to Parks Canada by calling 1-877-852-3100.

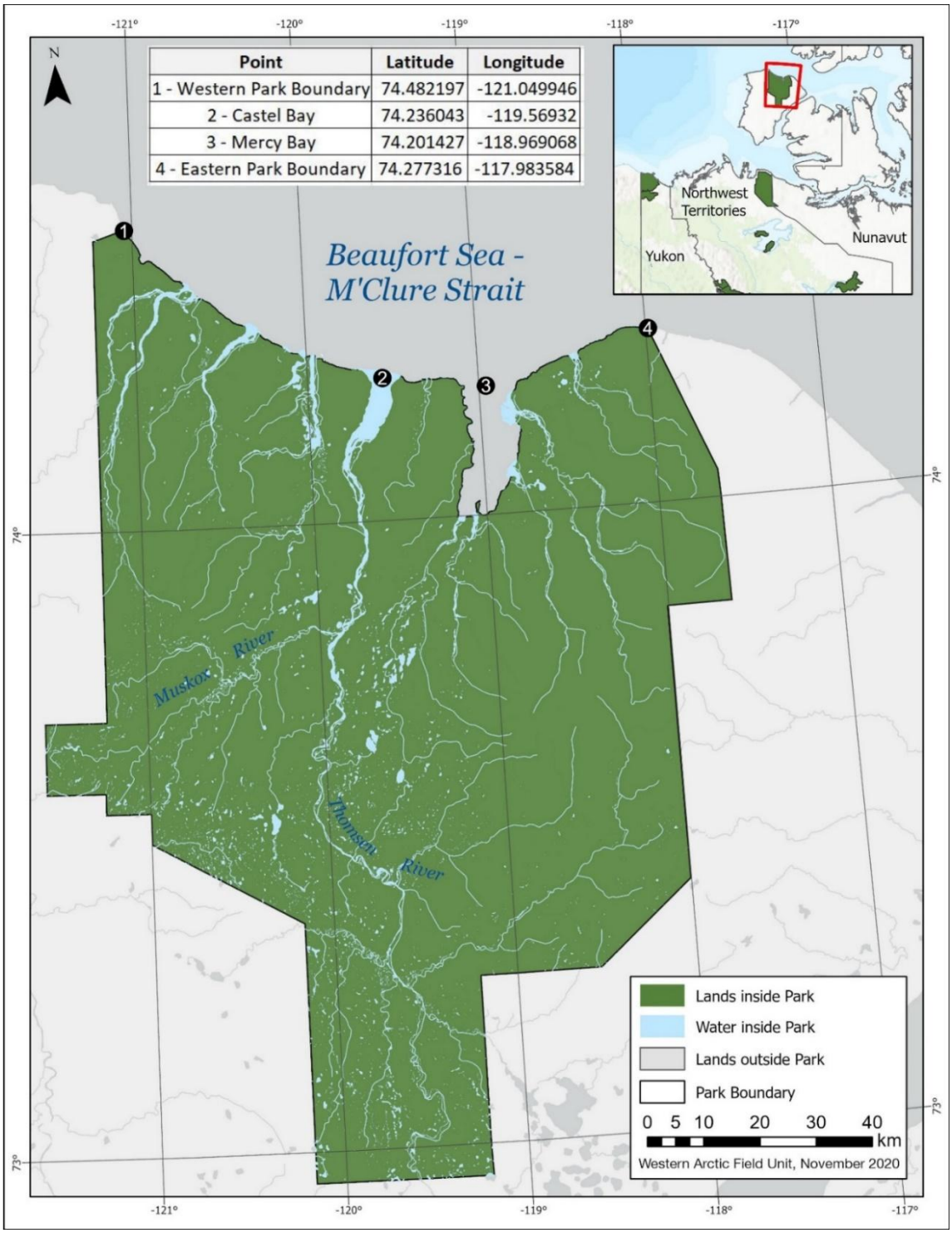
Contact Information

Ivvavik National Park
Parks Canada
81 Kingmingya Road
P.O. Box 1840
Inuvik, Northwest Territories
Canada X0E 0T0
Phone: 867-678-5443
Fax: 867-777-8820
Email: infoinuvik-inuvikinfo@pc.gc.ca
Ivvavik National Park website

5 National Parks in Northwest Territories

5.1 Aulavik National Park of Canada

Aulavik, meaning “ place where people travel ” in Inuvialuktun, protects more than 12,000 square kilometres of arctic lowlands on the north end of Banks Island. The park encompasses a variety of landscapes from fertile river valleys to polar deserts, buttes and badlands, rolling hills, and bold seacoasts. Aulavik National Park is one of the most isolated parks in North America, and rescue services and facilities are limited.



Restrictions

Inuvialuit, to whom the *Inuvialuit Final Agreement* applies, have the free and unrestricted right of access to the national park for the purpose of harvesting. With the exception of Inuvialuit, all vessels wishing to enter marine areas or land a vessel within Aulavik National Park must contact the park office in Inuvik by phone at 1-867-678-5443 or by email at infoinuvik-inuvikinfo@pc.gc.ca prior to entering the park.

All visitor groups that require a stop in the community of Sachs Harbour en route to Aulavik National Park should contact the Hamlet of Sachs Harbour prior to booking their trip to receive the most current information on access, restrictions or precautions in Sachs Harbour.

The following activities are restricted or prohibited:

- **Trapping, hunting and firearms** - Only traditional harvesters who have the free and unrestricted right of access to the national park may engage in trapping, hunting and the carrying of firearms;
- **Mining -** Panning for gold, mining, and mineral exploration is prohibited. It is illegal to remove, deface, damage or destroy rocks, minerals, and other natural objects;
- **Fires** - Open fires are prohibited in the park;
- **Off-road Vehicles -** The use of ATVs, snowmobiles, dirt bikes, or other off-road vehicles for recreational purposes is prohibited; and
- **Garbage and human waste** - All garbage, including human waste, must be packed out. Burning or burying garbage and waste is not acceptable.

Permitting Requirements

For information on obtaining a permit for any of the activities listed below, please contact the Parks Canada office in Inuvik by phone at 867-678-5443 or email at infoinuvik-inuvikinfo@pc.gc.ca. Please note that some permit applications are subject to external impact assessment processes and it may take up to four (4) months to issue a permit. Permits are required in advance for the following activities:

- **Visitor Use Permits** - All day use, overnight, and multi-day trip visitors require a Parks Canada permit and must register prior to entering the park;
- **Military exercises** - All personnel and equipment operating on behalf of any Canadian or foreign armed forces for the purposes of training, or entry and travel by any means;
- **Fuel caching** - Storage of petroleum-based fuel in any location for future use;
- **Food caching** - Storage of food stuffs in any location for future use;
- **Filming or photography for commercial purposes** - Filming and photography activities conducted where the photographer:
  1) is working to fulfill a commercial contract (including stock agencies);
  2) is salaried for the purpose; or
  3) Requires special permission or assistance from Parks Canada to access areas or resources (including Parks Canada staff);
- **Use of drones/UAVs** - requires a special permit, unauthorized use is illegal;
- **Research and collection** – All research and collection of data and objects (including all natural science, social science, and archaeological research and collection) requires a permit;
- **Fishing** – an Aulavik National Park Fishing Permit is required, and the aggregate daily catch and possession limit for all species is reduced to 1; and
- **Transporting a firearm through the Park** - Firearms may be transported through the park to another destination, but must be unloaded and securely encased.

Reporting of Incidents

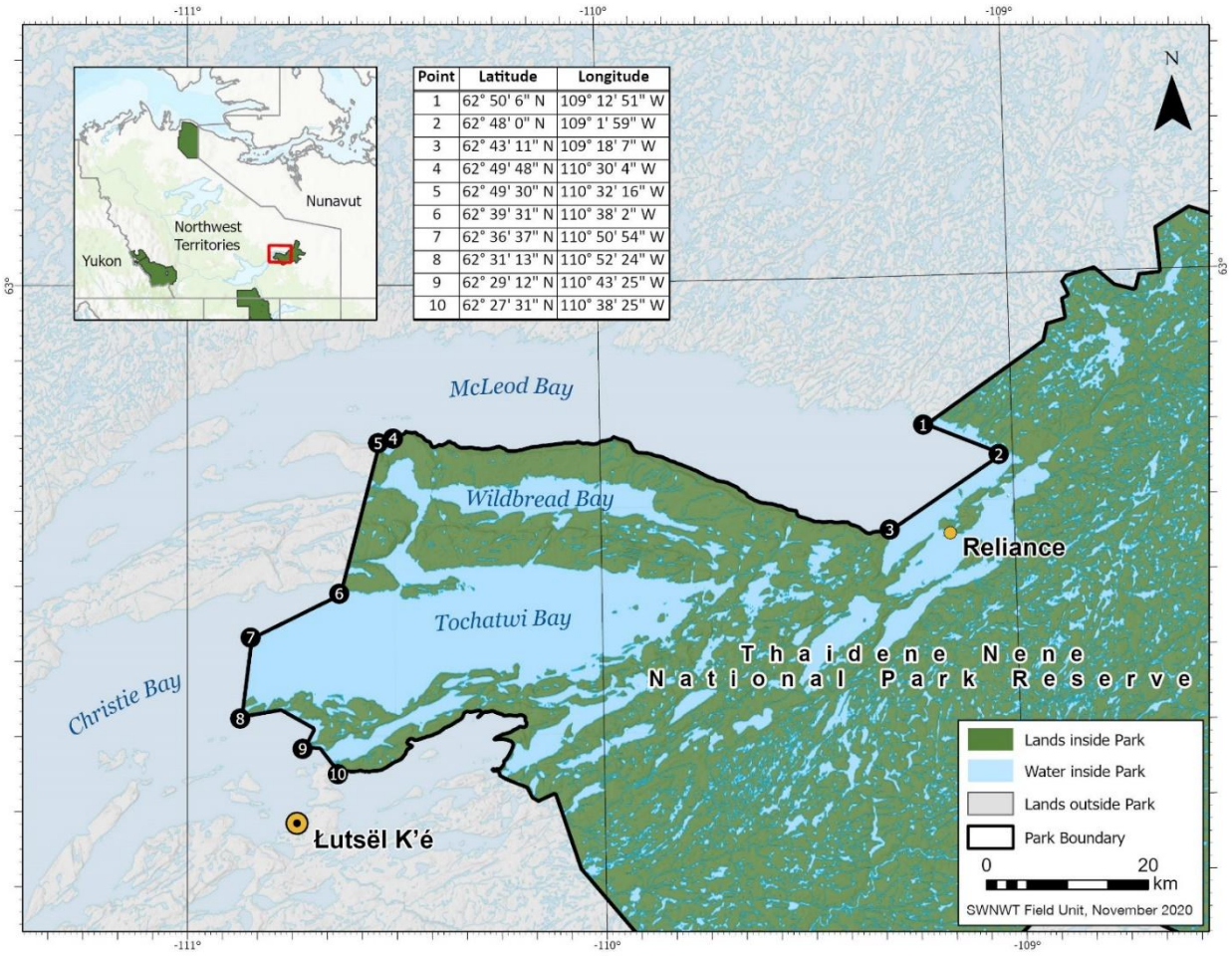
Please report all incidents, including those relating to wildlife, safety, spills and violations, occurring within Aulavik National Park promptly to Parks Canada by calling 1-877-852-3100.

Contact Information

Aulavik National Park
Parks Canada
81 Kingmingya Road
P.O. Box 1840
Inuvik, Northwest Territories
Canada X0E 0T0
Phone: 867-678-5443
Fax: 867-777-8820
Email: infoinuvik-inuvikinfo@pc.gc.ca
Aulavik National Park website

5.2 Thaıdene Nëné National Park Reserve of Canada

Thaıdene Nëné National Park Reserve protects 14,070 km^2 of land and water on the east arm of Tu Nedhé Great Slave Lake and includes nationally significant boreal forest, freshwater and tundra ecosystems. This is a culturally rich area, including traditional and present-day hunting, fishing, gathering and spiritual areas used by Indigenous peoples. The national park reserve is part of the Thaıdene Nëné Indigenous Protected Area. The Park's management is shared between Parks Canada and Indigenous Governments: Łutsël K'é Dene First Nation, Northwest Territory Métis Nation, Deninu K'ue First Nation and Yellowknives Dene First Nation.



Point	Latitude	Longitude
1	62° 50' 6" N	109° 12' 51" W
2	62° 48' 0" N	109° 1' 59" W
3	62° 43' 11" N	109° 18' 7" W
4	62° 49' 48" N	110° 30' 4" W
5	62° 49' 30" N	110° 32' 16" W
6	62° 39' 31" N	110° 38' 2" W
7	62° 36' 37" N	110° 50' 54" W
8	62° 31' 13" N	110° 52' 24" W
9	62° 29' 12" N	110° 43' 25" W
10	62° 27' 31" N	110° 38' 25" W

Restrictions

With the exception of Indigenous people who are harvesting or practicing traditional use and lease holders, all visitors must register before entering Thaıdene Nëné National Park Reserve. Groups are asked to limit themselves to 15 people. There is no fee to register.

The following activities are restricted or prohibited in Thaıdene Nëné National Park Reserve:

- **Collection of rocks, plants and other natural objects** - Visitors may harvest berries, medicinal and healing plants, and wood for campfires and temporary shelters, but must not remove other objects;
- **Historic and pre-historic resources** - Disturbing or collecting cultural or historic, resources and artifacts is illegal. Visitors are asked to report any cultural artifacts and their location; and
- **Hunting** - Only Indigenous harvesters exercising Sec.35 rights, pre-2019 lease holders possessing a NWT small game hunting licence, or holders of a Special Harvester Licence are allowed to hunt.

The following activities are not restricted:

- **Harvesting berries and plants** - Visitors are allowed to pick berries and gather medicinal and healing plants in the Park Reserve for personal use;
- **Cutting and gathering wood -** Visitors can cut and collect wood for personal campfires and temporary shelters;
- **Pets -** Visitors may bring pets to the park but must keep dogs and other pets under physical control at all times, not leave pets unattended, and clean up after their pet(s);
- **Firearms -** Visitors are permitted to carry firearms for defense against wildlife; and
- **Snowmobiles** - Visitors are allowed to travel by snowmobile without a permit.

Permitting Requirements

People who are applying for a film permit, research and collection permit or a business licence, should ensure that they submit an application early. These permits and licences are reviewed with the management board, and depending on the permit/licence, the review may require a preliminary screening under the *Mackenzie Valley Resource Management Act*. Please contact the Parks Canada office in Yellowknife, NT, by emailing thaidene.nene@pc.gc.ca for permits and additional information.

Permits are required in advance for the following activities:

- **Fishing** - A Parks Canada fishing permit is required, and NWT catch limits apply in the Park Reserve (NWT fishing licences are NOT valid within the park reserve; the terms and conditions of a Parks Canada fishing permit are available online);
- **Use of drones/UAVs** – Commercial drone/UAV use requires a special permit. Recreational use of drones/UAVs is prohibited;
- **Film permits** - A film permit is required for anyone taking pictures or video footage for commercial reasons (e.g., film production, photography contract, or intending to sell images, or providing images to expedition sponsors);
- **Aircraft** - Take-offs and landings require a Parks Canada aircraft access permit (and a business license is also required for commercial operators), seasonal access permits are available at no charge;
- **Guided outfitting and business licenses** - Commercial and non-profit organizations require a business licence (including any trade, industry, employment, occupation, activity or special event carried on in the national park reserve, for profit, gain, fundraising or commercial promotion, and includes an undertaking carried on in a park by a charitable organization, or by an organization or individual on a non-profit basis);
- **Fuel caching** - A fuel caching permit is required to store fuel in the national park reserve. Public fuel caching is only permitted at the Reliance fuel cache (permits are available at no charge); and
- **Research and collection** - All research and collection of data and objects (including all natural science, social science, and archaeological research and collection) requires a permit.

Reporting of Incidents

Report all incidents, including those relating to wildlife, safety, spills and violations, to Parks Canada by calling toll free at 1-877-852-3100 or by satellite phone at 1-780-852-3100.

Area Closures
Please check for area closures prior to travel.

Contact Information

Thaıdene Nëné National Park Reserve
Parks Canada
Box 1166, Yellowknife Main PO,
Yellowknife NT
Canada X1A 1C0
Email: thaidene.nene@pc.gc.ca
Thaidene Nene National Park Reserve website

6. National Historic Sites of Canada

General Guidelines for National Historic Sites

Under the *Canada National Parks Act,* S.C., 2000, c. 32, the Parks Canada Agency has the authority to manage national historic sites under its administration on behalf of the people of Canada and is responsible for granting permission to enter any lands or waters for which it has jurisdiction. Visitor permits and/or business licenses may be required to enter a national historic site, and other permitting requirements may exist.

For general information regarding Canada's National Historic Sites, please contact the Parks Canada National Information Service at 1-888-773-8888 or information@pc.gc.ca, or visit the Parks Canada website.

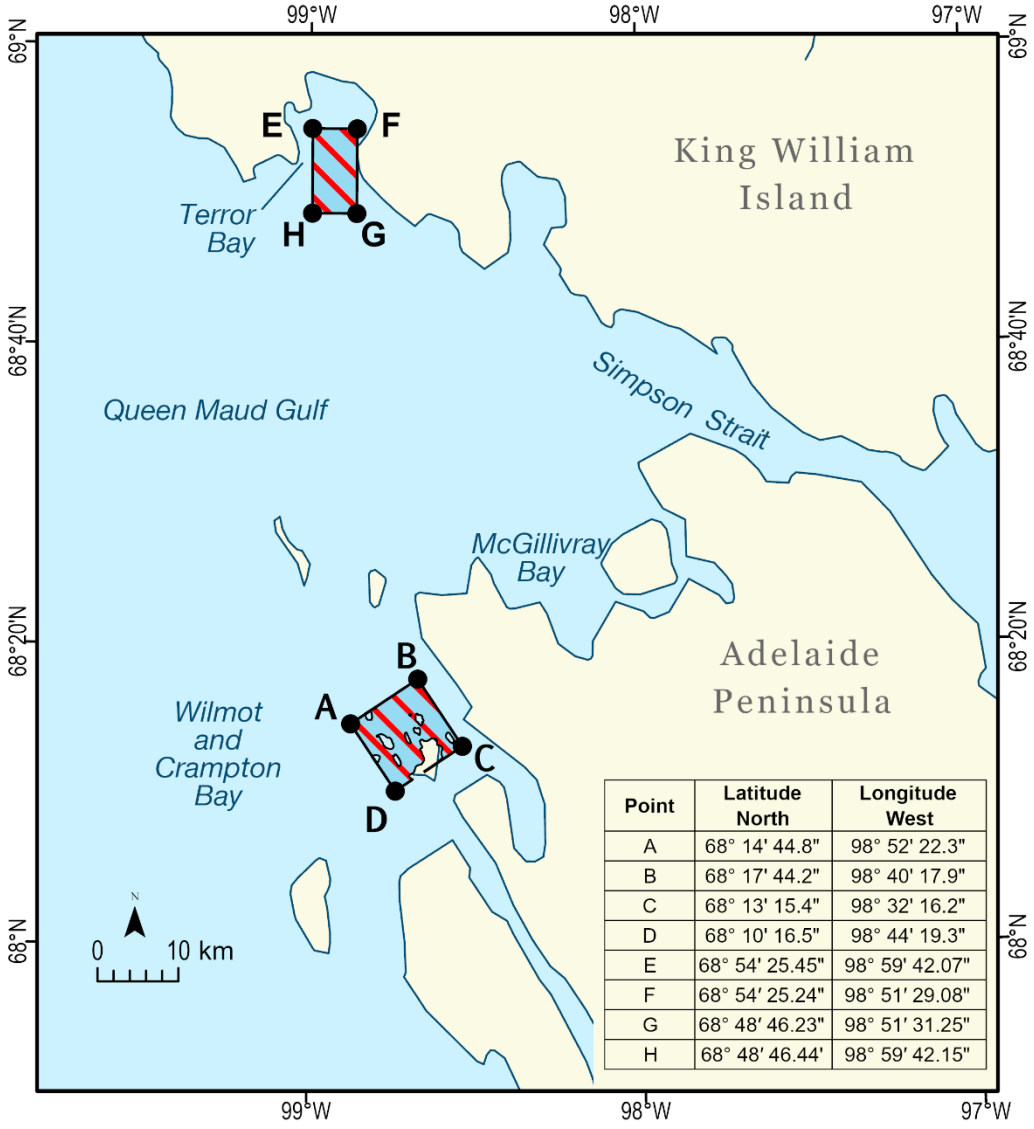
6.1 Wrecks of HMS *Erebus* and HMS *Terror* National Historic Site of Canada

In 1992, the wrecks of HMS *Erebus* and HMS *Terror* were designated as a national historic site under the *Historic Sites and Monuments Act*, R.S.C., 1985, c. H-4, despite the locations of both wrecks being unknown at that time. The wrecks were designated for their direct association with Sir John Franklin's last expedition. In September 2014, an expedition led by Parks Canada discovered the wreck of HMS *Erebus*. Two years later, the wreck of HMS *Terror* was located.

In April 2015, a 10 km by 10 km area of seabed surrounding HMS *Erebus* was added to the *National Historic Sites of Canada Order*, C.R.C., c. 1112. In 2017, the site of HMS *Terror* was added, comprising a protected area measuring 57.8 km^2 (approximately 6 km by 10 km). The sites now benefit from legal protection under the *Canada National Parks Act*, S.C. 2000, c. 32 and relevant regulations, which prohibit the removal of artifacts and allow for control of access and activities that may damage the wrecks. This is the 168th national historic site administered by Parks Canada and the first in Nunavut to be co-managed with Inuit.

Coordinates

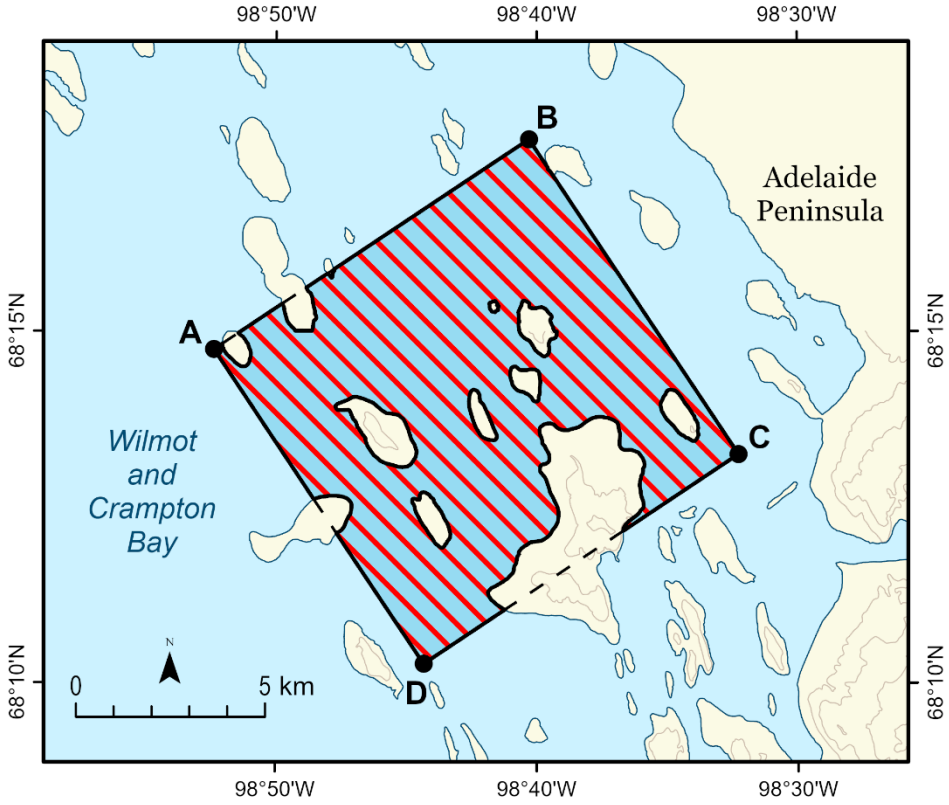
WRECKS OF HMS *EREBUS* AND HMS *TERROR* NATIONAL HISTORIC SITE OF CANADA

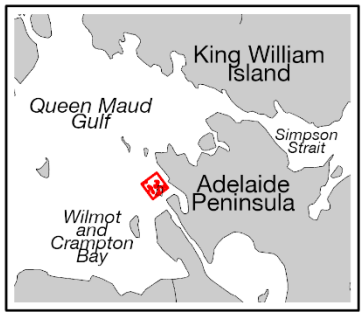


Point	Latitude North	Longitude West
A	68° 14' 44.8"	98° 52' 22.3"
B	68° 17' 44.2"	98° 40' 17.9"
C	68° 13' 15.4"	98° 32' 16.2"
D	68° 10' 16.5"	98° 44' 19.3"
E	68° 54' 25.45"	98° 59' 42.07"
F	68° 54' 25.24"	98° 51' 29.08"
G	68° 48' 46.23"	98° 51' 31.25"
H	68° 48' 46.44'	98° 59' 42.15"

HMS *Erebus* Component

WRECKS OF HMS *EREBUS* AND HMS *TERROR* NATIONAL HISTORIC SITE OF CANADA:
HMS *EREBUS* COMPONENT



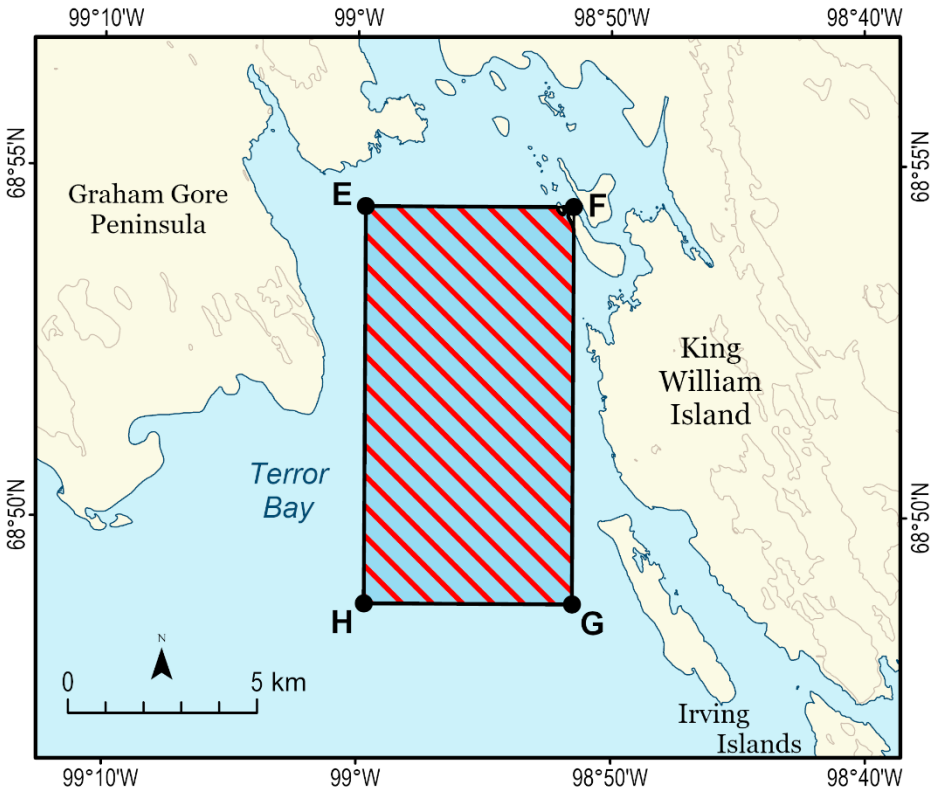


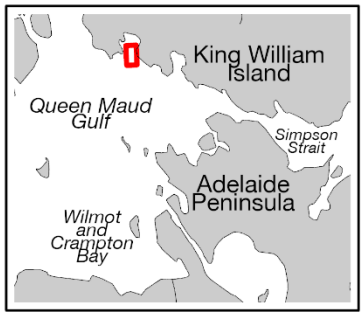
Point	Latitude North / nord	Longitude West / ouest
A	68° 14' 44.8"	98° 52' 22.3"
B	68° 17' 44.2"	98° 40' 17.9"
C	68° 13' 15.4"	98° 32' 16.2"
D	68° 10' 16.5"	98° 44' 19.3"

NAD83 (CSRS / SCRS)

HMS *Terror* Component

WRECKS OF HMS *EREBUS* AND HMS *TERROR* NATIONAL HISTORIC SITE OF CANADA:
HMS *TERROR* COMPONENT





Point	Latitude North / nord	Longitude West / ouest
E	68° 54' 25.45"	98° 59' 42.07"
F	68° 54′ 25.24"	98° 51′ 29.08"
G	68° 48′ 46.23"	98° 51′ 31.25"
H	68° 48′ 46.44'	98° 59′ 42.15"

NAD83 (CSRS / SCRS)

Restrictions and Permitting Requirements

1. No person shall enter the Wrecks of HMS *Erebus* and HMS *Terror* National Historic Site of Canada without written authorization from the Field Unit Superintendent, except where a person is an Inuk accessing the site for harvesting as provided in the *Nunavut Agreement* (NA). Cruise ships and other vessels are currently not allowed in the Wrecks of HMS *Erebus* and HMS *Terror* National Historic Site of Canada unless authorized by the Field Unit Superintendent.

   Anyone wishing to enter the national historic site for official reasons (e.g., other government departments) should contact Parks Canada at least 90 days in advance of their trip.

2. No person shall conduct the following restricted activities without written authorization from the Field Unit Superintendent:
   a. engaging in activities for the purpose of discovering, surveying or documenting archaeological, historical or cultural resources, including wreck that has heritage value;
   b. engaging in activities that may physically disturb or damage archaeological, historical or cultural resources, including wreck that has heritage value;
   c. removing archaeological, historical or cultural resources, including wreck that has heritage value;
   d. anchoring, except when undertaken by an Inuk under the Nunavut Agreement for purposes of harvesting; and
   e. diving, except when undertaken by an Inuk under the Nunavut Agreement for purposes of harvesting.

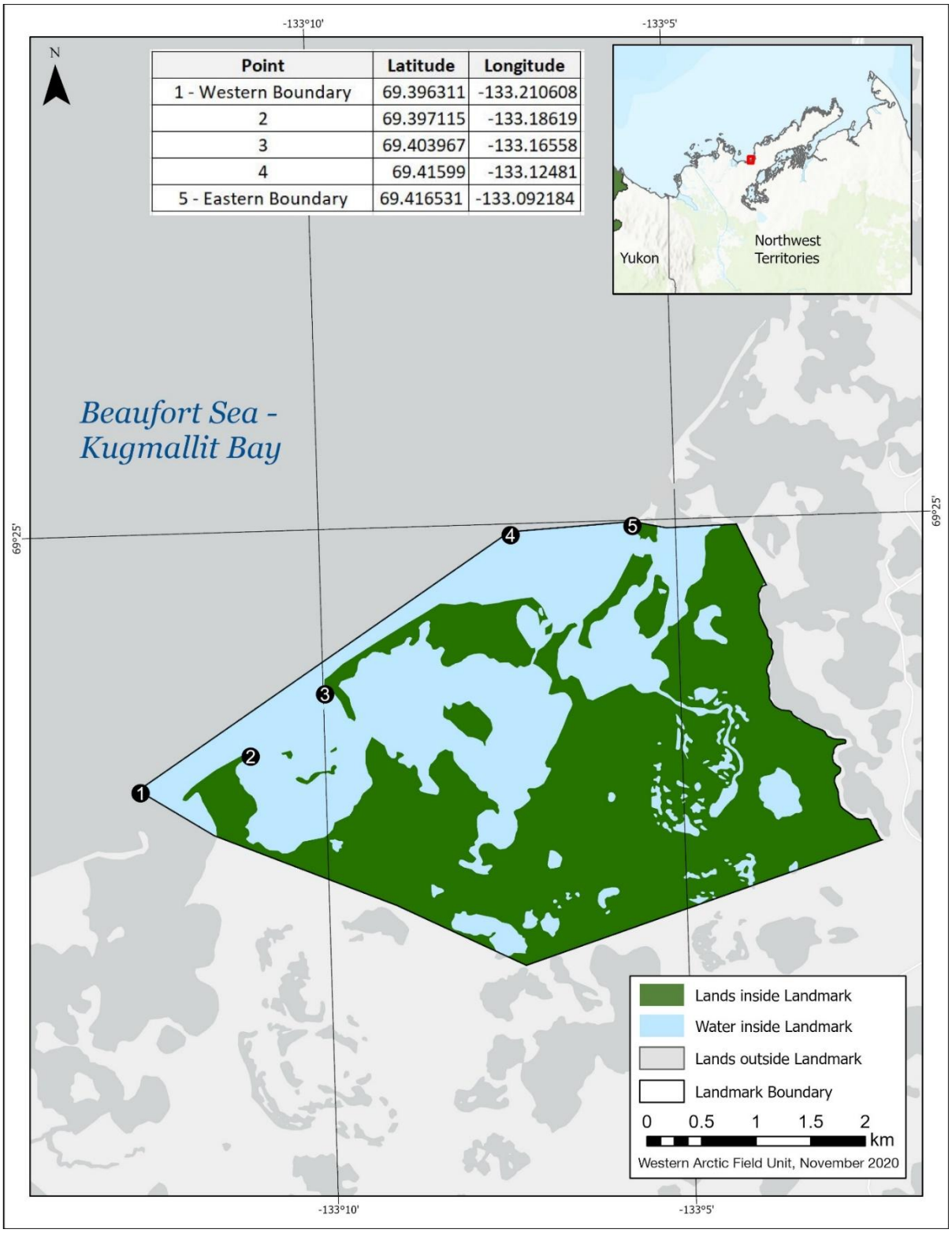
Reporting of Incidents

All incidents occurring within the Wrecks of HMS *Erebus* and HMS *Terror* National Historic Site of Canada must be promptly reported to the Marine Communications and Traffic Services Centre in Iqaluit using the available Canadian Coast Guard marine radio channel or by calling 1-867-979-5269.

Contact Information

Nunavut Field Unit
Parks Canada
PO Box 278
Iqaluit, NU
X0A 0H0
Phone: 867-975-4673
Fax: 867-975-4674
Email: nunavut.info@pc.gc.ca

6.2 Pingo Canadian Landmark National Historic Site of Canada



Restrictions

With the exception of Inuvialuit who have the free and unrestricted right of access to the national landmark for the purpose of harvesting, all vessels wishing to enter marine areas or land a vessel within Pingo Canadian Landmark, must contact the park office in Inuvik by phone at 1-867-678-5443 or email at infoinuvik-inuvikinfo@pc.gc.ca prior to entering National Historic Site.

The following activities are prohibited in the Pingo Canadian Landmark:

- **Off road vehicles** - Recreational use of all-terrain vehicles and dirt bikes anywhere within the Pingo Canadian Landmark, at any time of the year.
- **Snowmobiles** - Anywhere within the Pingo Canadian Landmark between April 15th and October 31st, and at any time of year on the actual pingos (from base upwards toward summit).
- **Hiking on the actual pingos** - From base upwards toward summit, between April 15th and October 31st.

Permitting Requirements

For information on obtaining a permit for any of the activities listed below, please contact the Parks Canada office in Inuvik by phone at 1-867-678-5443 or by email at infoinuvik-inuvikinfo@pc.gc.ca. Please note that some permit applications are subject to external impact assessment processes and it may take up to 4 months to issue a permit. Permits are required in advance for the following activities:

- **Military exercises** - All personnel and equipment operating on behalf of any Canadian or foreign armed forces for the purposes of training, or entry and travel by any means;
- **Fuel caching** - Storage of petroleum-based fuel in any location for future use;
- **Non-Inuvialuit business activities and special events** - Activities conducted by non-Inuvialuit businesses (for example cruise ship visitation);
- **Filming or photography for commercial purposes** - Filming and photography activities conducted where the photographer:
  1) is working to fulfill a commercial contract (including stock agencies);
  2) is salaried for the purpose; or
  3) Requires special permission or assistance from Parks Canada to access areas or resources (including Parks Canada staff);
- **Use of drones/UAVs** - The use of drones/UAVs requires a special permit, unauthorized use is illegal**;**
- **Research and collection** – All research and collection of data and objects (including all natural science, social science, and archaeological research and collection) requires a permit; and
- **Transporting a firearm** – Firearms may be transported on or through the National Historic Site but must be unloaded and securely encased.

Reporting of Incidents

Please report all incidents, including those relating to wildlife, safety, spills and violations, occurring within the Pingo Canadian Landmark promptly to Parks Canada by calling 1-877-852-3100.

Contact Information

Pingo Canadian Landmark National Historic Site
Parks Canada
81 Kingmingya Road
P.O. Box 1840
Inuvik, Northwest Territories
Canada X0E 0T0
Phone: 867-678-5443
Fax: 867-777-8820
Email: infoinuvik-inuvikinfo@pc.gc.ca
Pingo Canadian Landmark website

Authority: Parks Canada

5C National Marine Conservation Areas

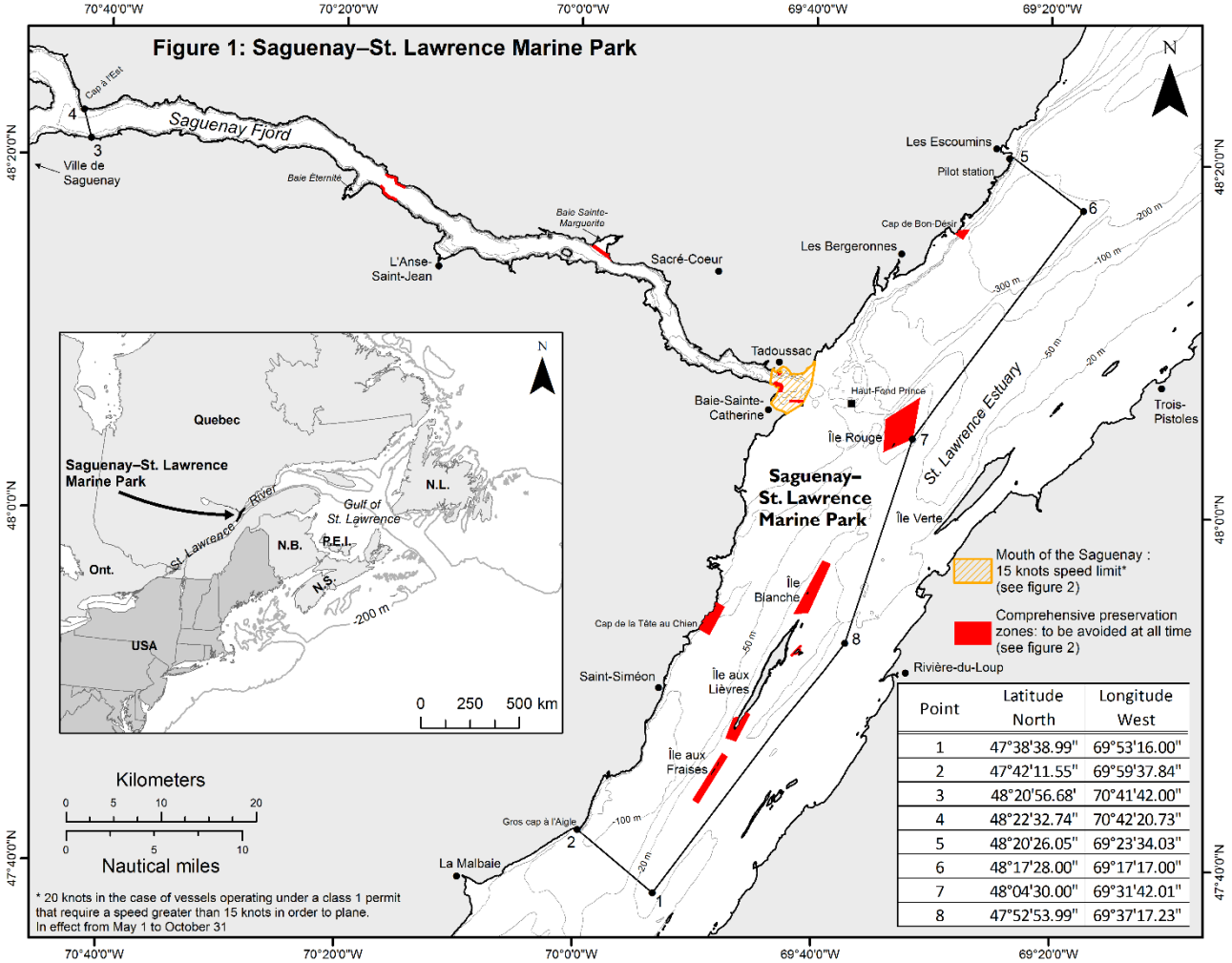
1. National Marine Conservation Areas in Eastern Canada

1.1 The Saguenay-St. Lawrence Marine Park, Quebec

The Saguenay-St. Lawrence Marine Park exists by virtue of two acts, one from the Government of Canada and the other from the Government of Quebec (*Saguenay-St. Lawrence Marine Park Act*, S.C. 1997, c. 37 and *Loi sur le parc marin du Saguenay-Saint-Laurent*, R.S.Q, c. P-8.1). The Marine Park includes the Saguenay Fjord, downstream from Cap à l'Est, and the northern portion of the St. Lawrence Estuary between Gros Cap à l'Aigle upstream to Les Escoumins downstream (Figure 1). The Marine Park covers approximately 1,245 km^2, includes the water column and seabed, and extends to the normal high-tide line. It protects representative portions of St. Lawrence Estuary and Saguenay Fjord ecosystems.

The Marine Park and surrounding waters are well known for the resident St. Lawrence beluga whale population and the wide diversity of marine mammals that migrate here, mainly to feed, between the months of April and November. Whales involved in feeding behaviour may suddenly surface unexpectedly. Heightened awareness on the mariner's part is necessary to prevent collisions with whales.

Oceanographic conditions in the area produce very strong currents and periodical fog in summer. The presence of numerous ports and marinas, as well as an important whale-watching industry, generates intense navigational activity, particularly between Tadoussac and Les Escoumins.



Point	Latitude North	Longitude West
1	47°38'38.99"	69°53'16.00"
2	47°42'11.55"	69°59'37.84"
3	48°20'56.68'	70°41'42.00"
4	48°22'32.74"	70°42'20.73"
5	48°20'26.05"	69°23'34.03"
6	48°17'28.00"	69°17'17.00"
7	48°04'30.00"	69°31'42.01"
8	47°52'53.99"	69°37'17.23"

Marine Mammal Protection

A. Marine Activities in the Saguenay–St. Lawrence Marine Park Regulations

Marine Activities in the Saguenay–St. Lawrence Marine Park Regulations (SOR/2002-76) regulate activities at sea, notably whale watching. One of their main objectives is to reduce the impact of navigation on marine mammals. The regulations indicate the maximum navigation speed permitted throughout the park, as well as the distances and speeds to be respected when whales are present. These distances vary depending on the risk status of a given species.

The main prescribed behaviours include:

1. General prohibitions

   No person shall engage in behaviour that may disturb, kill or injure a marine mammal. Any collision with a marine mammal must immediately be reported to a park warden by dialling 1-866-508-9888.

2. Distance requirements

   A minimum distance of 400 meters from all marine mammals endangered or at risk (blue whale, North Atlantic right whale and beluga whale) must be respected.

   No person shall approach within 200 meters of any other whale species.

3. Speed limits

   The maximum navigational speed within the Marine Park is 25 knots.

   From May 1st to Oct 31st, it is prohibited for a vessel's pilot to navigate at a speed greater than 15 knots in the mouth of the Saguenay, whose limits are defined in Figures 1 and 2.

   If a vessel unexpectedly encounters a threatened or endangered whale species (ex. blue whale) at less than 400 meters, the captain must reduce the speed of the vessel to a speed no greater than the minimum speed required to maneuver the vessel and move away to a distance greater than 400 meters.

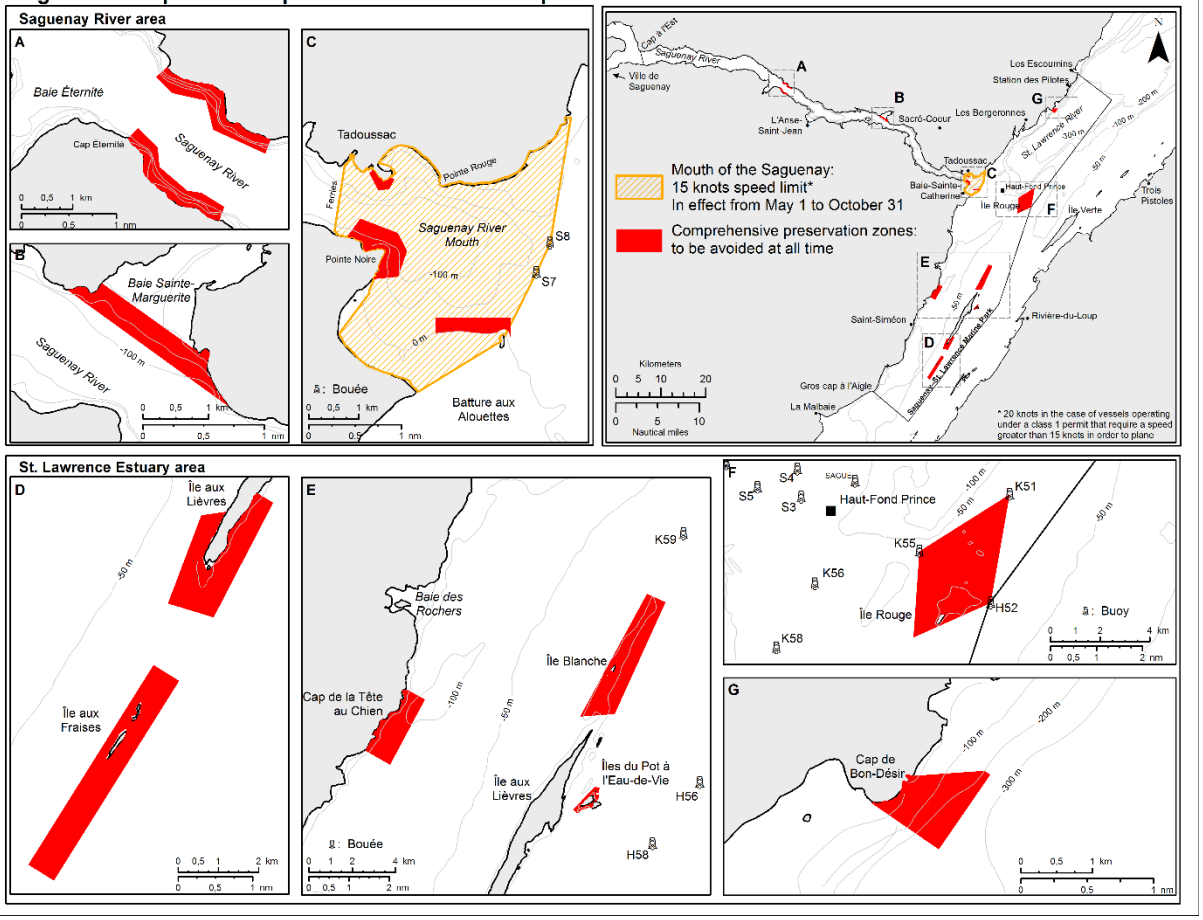
A permit is required to operate a marine tour business, to carry out scientific activities and for film productions.

For more information on the Regulations, consult the Saguenay-St. Lawrence Marine Park website.

B. Zoning

The zoning of the Marine Park is designed to protect specific habitats and the species that live within them while promoting ecologically sustainable use of the Marine Park and quality visitor experiences. *Comprehensive preservation zones* were created to protect especially sensitive habitat (Figure 2). These zones cover 3% of the Marine Park's surface area and include sectors that are particularly important to marine mammals and seabirds caring for their young and for resting. All mariners are requested to avoid these zones.

Figure 2: Comprehensive preservation zones and speed limit zone



C. Marine Mammal Emergencies

To report a marine mammal that is either in trouble or dead, call 1-877-722-5346.

Information

For questions concerning the Saguenay–St. Lawrence Marine Park, contact Parks Canada at 418-235-4703 or saguenay@pc.gc.ca, or visit Saguenay-St. Lawrence Marine Park website.

For general information regarding Parks Canada's National Marine Conservation Areas, National Parks or National Historic Sites, please contact our National Information Service at 1-888-773-8888 or information@pc.gc.ca, or visit the Parks Canada website.

2. National Marine Conservation Areas in the Great Lakes

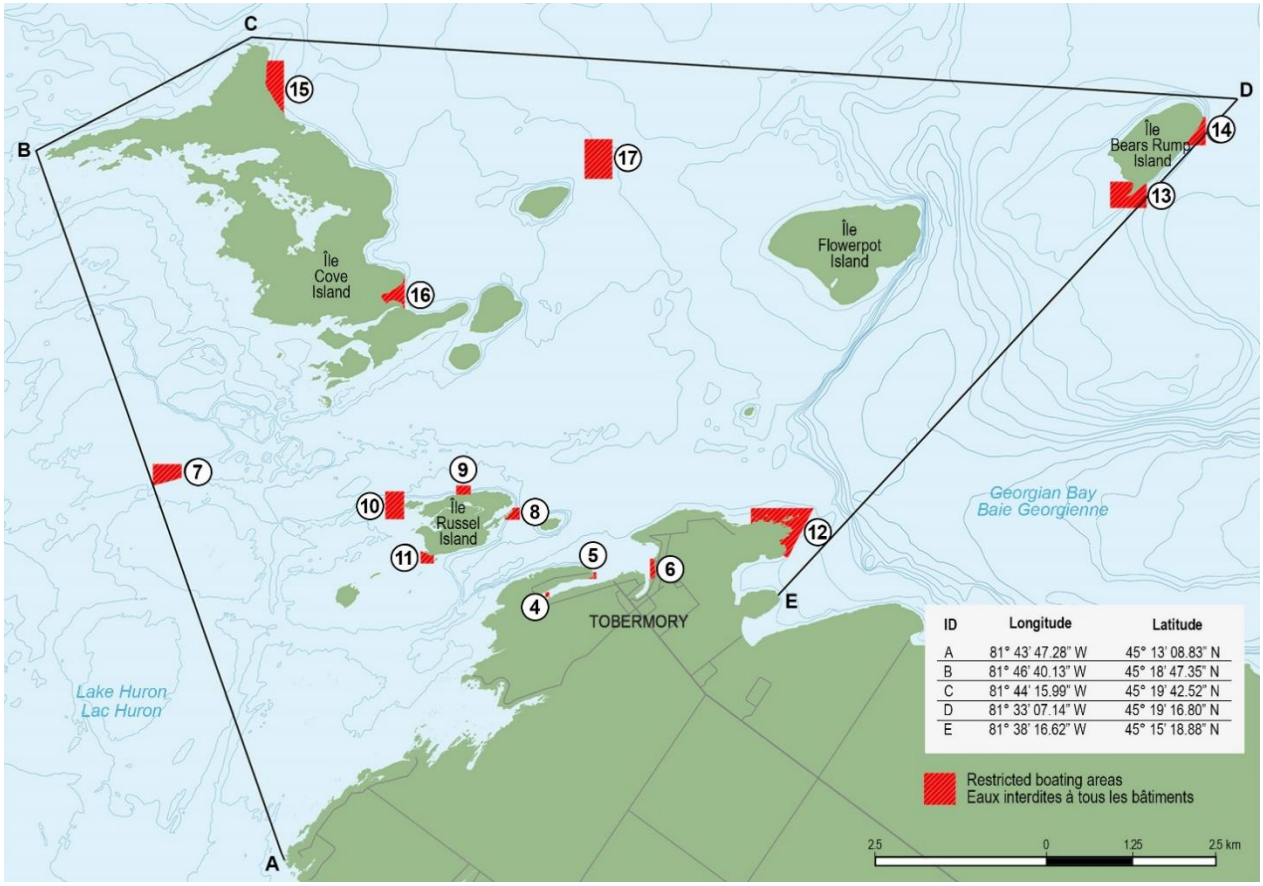
2.1 Fathom Five National Marine Park, Ontario

Fathom Five National Marine Park is a 114 km^2 protected area located on Lake Huron near Tobermory, Ontario. Most of the islands within the park are protected under the *Canada National Parks Act* (S.C. 2000, c. 32) and the waters are managed in the "spirit" of the *Canada National Marine Conservation Areas Act* (S.C. 2002, c. 18) using a variety of provincial and federal legislation.

Fathom Five National Marine Park was first established in 1972 as a provincial park and later in 1987 became the first site to be under the stewardship of Parks Canada's National Marine Conservation Area program. It is situated along the edge of the Niagara Escarpment, which descends 165 m into the clear waters of Lake Huron and periodically emerges as an archipelago of 21 islands, smaller islets, reefs and shoals between the Saugeen (Bruce) Peninsula and Manitoulin Island. The park is renowned for its 22 shipwrecks which are one of the most representative collections of historic vessels in the Great Lakes and provide outstanding diving opportunities.

Weather can be unpredictable in Fathom Five National Marine Park with strong winds and currents, and there is high vessel traffic in the Tobermory Harbours due to a passenger ferry service, commercial tour boats, commercial dive charters, and recreational vessels operating in the area.

Coordinates



Map showing the boundaries of Fathom Five National Marine Park and 14 restricted boating areas described in the *Vessel Operation Restriction Regulations* (SOR/2022-175; Schedule 1, Part 2, Items 4 to 17).

Restricted Areas

Parks Canada manages 14 restricted navigation zones in Fathom Five National Marine Park through a delegation of authority from Transport Canada. These areas are described in the *Vessel Operation Restriction Regulations* (SOR/2022-175; Schedule 1, Part 2, Items 4 to 17) and are indicated on the map above. All motorized and non-motorized vessels require a permit to enter the restricted areas, and vessel operators must comply with conditions set out in the permit to ensure safe and efficient navigation, minimize risk to the safety of persons, and protect the public interest and the environment within the area. Additional restrictions apply to the restricted areas in the Tobermory Harbours, including but not limited to:

(a) Motorized commercial or recreational vessels are not permitted to enter the restricted areas described as Item 5 associated with Big Tub Lighthouse; and,

(b) Motorized recreational vessels are not permitted to enter the restricted area described as Item 4 associated with the *Sweepstakes* and *City of Grand Rapids* shipwrecks, except for property owners adjacent to the restricted area. All other vessels must adhere to an access schedule and other vessel-specific conditions outlined in the permit.

In accordance with the *Vessel Operation Restriction Regulations* (SOR/2022-175; Schedule 6, Part 2, Item 29 under “Georgian Bay Area”), a speed limit of 10kph is also in effect throughout Big Tub Harbour from the shore to a line connecting points at coordinates 45°15′29″ 81°40′21″ and 45°15′29″ 81°40′02″.

Mooring Locations

Moorings are maintained within many of the restricted boating areas to facilitate diving and protect the historic shipwrecks. Mooring locations may vary on an annual basis but coordinates for the 2026 season are listed in the table below.

Shipwreck Name	Easting	Northing	Latitude	Longitude
Arabia	447220	5017855	45° 18' 43.3800" N	81° 40' 23.6352" W
	447220	5017775	45° 18' 41.0112" N	81° 40' 23.6820" W
Charles P. Minch	444281	5015922	45° 17' 40.1352" N	81° 42' 37.7172" W
	444543	5015795	45° 17' 36.5424" N	81° 42' 26.2224" W
Dunk’s Point	450362	5012779	45° 16' 00.3468" N	81° 37' 57.8748" W
	450441	5012264	45° 15' 43.6536" N	81° 37' 54.0696" W
Forest City	456178	5018358	45° 19' 02.6400" N	81° 33' 32.7600" W
	456206	5018319	45° 19' 01.2400" N	81° 33' 31.4800" W
John Walters	444840	5012060	45° 15' 34.9416" N	81° 42' 14.8680" W
James C. King	444389	5012931	45° 16' 03.6300" N	81° 42' 31.5720" W
	444323	5012906	45° 16' 03.0576" N	81° 42' 34.4772" W
Newaygo	441074	5013316	45° 16' 14.8800" N	81° 45' 03.8844" W
	441058	5013253	45° 16' 13.3068" N	81° 45' 04.3740" W
	440978	5013114	45° 16' 08.6808" N	81° 45' 09.1620" W
Philo Scoville	445300	5013057	45° 16' 07.6404" N	81° 41' 49.8012" W
Sweepstakes	446607	5011556	45° 15' 19.7964" N	81° 40' 49.5048" W
	446617	5011536	45° 15' 19.1772" N	81° 40' 49.0224" W
Truellen	444992	5015115	45° 17' 14.4528" N	81° 42' 04.6188" W
The Tugs	448066	5011973	45° 15' 34.1424" N	81° 39' 42.6492" W
W.L. Wetmore	444297	5012669	45° 15' 55.3428" N	81° 42' 36.5184" W
	444364	5012641	45° 15' 55.0044" N	81° 42' 33.7716" W

Note:
Easting and Northing coordinates are Universal Transverse Mercator Projection Zone 17 North.
All projected and geographic coordinates are North American Datum 1983.

Permitting Requirements

- An access permit is required to enter the restricted boating areas in Fathom Five National Marine Park, although some vessel types may not be permitted to access the restricted area associated with the Sweepstakes and City of Grand Rapids shipwrecks in Big Tub Harbour.
- A dive permit is required to scuba dive in Fathom Five National Marine Park., All divers must also register and participate in an orientation program prior to obtaining a permit.

Both permits are available at the Parks Canada Visitor Centre in Tobermory, Ontario.

Information

For questions concerning Fathom Five National Marine Park, contact Parks Canada at 519-596-2233 or bruce-fathomfive@pc.gc.ca, or visit Fathom Five National Marine Park.

For general information regarding Parks Canada's National Marine Conservation Areas, National Parks or National Historic Sites, please contact our National Information Service at 1-888-773-8888 or information@pc.gc.ca, or visit the Parks Canada website.

3. National Marine Conservation Areas in Western Canada

3.1 Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage Site, British Columbia

Gwaii Haanas is a 5000 km^2 land-and-sea protected area located in Haida Gwaii, British Columbia (Figure 1). The area is cooperatively managed by the Council of the Haida Nation and Government of Canada through the Archipelago Management Board upholding guiding principles based on ethics and values of Haida law: respect, responsibility, interconnectedness, balance, seeking wise council. and giving and receiving. The terrestrial portion is protected under the *Canada National Parks Act* (S.C. 2000, c. 32) and the adjacent marine area is protected under the *Canada National Marine Conservation Areas Act* (S.C. 2002, c. 18). The entire area is protected as a Haida Heritage Site by the Council of the Haida Nation.

Gwaii Haanas National Marine Conservation Area (NMCA) Reserve is one of the first NMCAs established in Canada. NMCAs are intended to protect and conserve representative marine areas for the benefit, education and enjoyment of the people of Canada and the world.

Coordinates

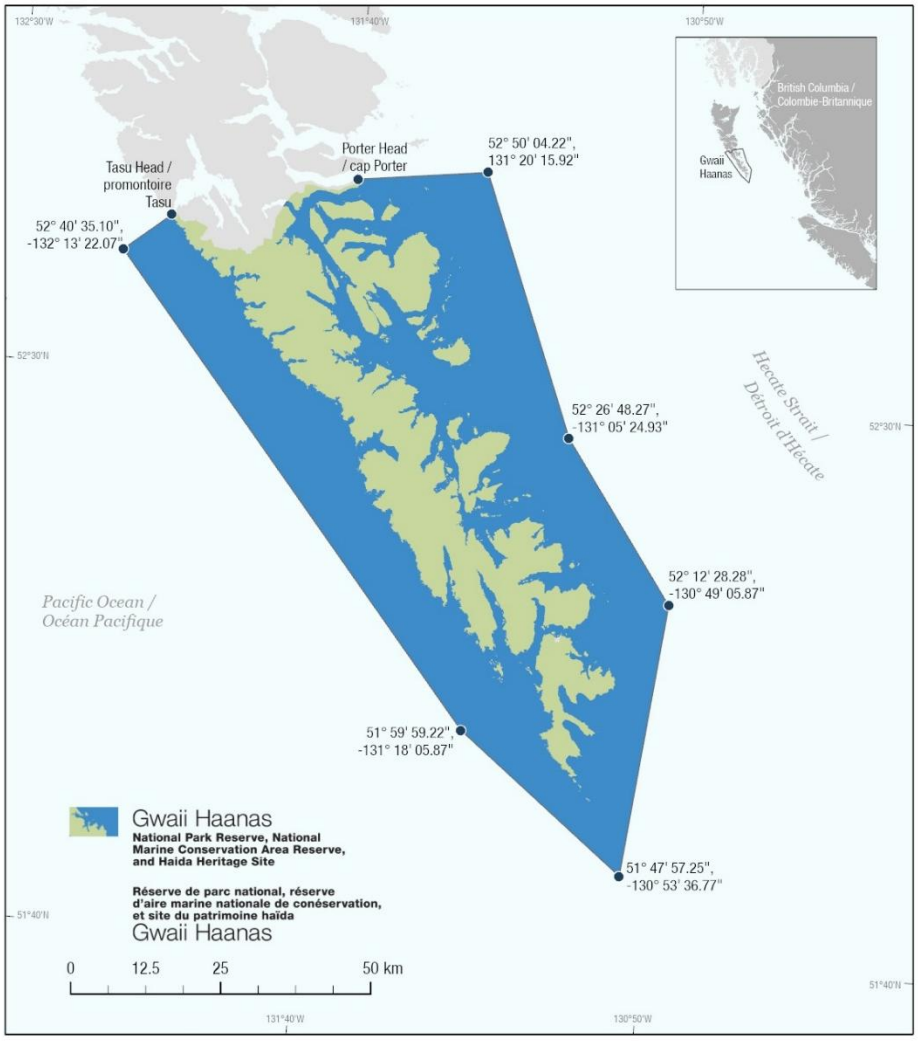


Figure 1: Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage site.
Note: Latitude and longitude coordinates are expressed using the North American Datum of 1983.

Zoning

Following an extensive consultation process, the Gwaii Haanas Gina ‘Waadluxan KilGuhlGa Land-Sea-People Management Plan 2018 – an integrated land and sea management plan for Gwaii Haanas was approved in November 2018. The zoning plan (Figure 2) was implemented on May 1, 2019. Marine strict protection zones protect ecological and cultural features while minimizing socio-economic impacts. See the Fishery Notice webpage for detailed geographic descriptions and section 7.0 of the management for permitted activities within marine strict protection zones.

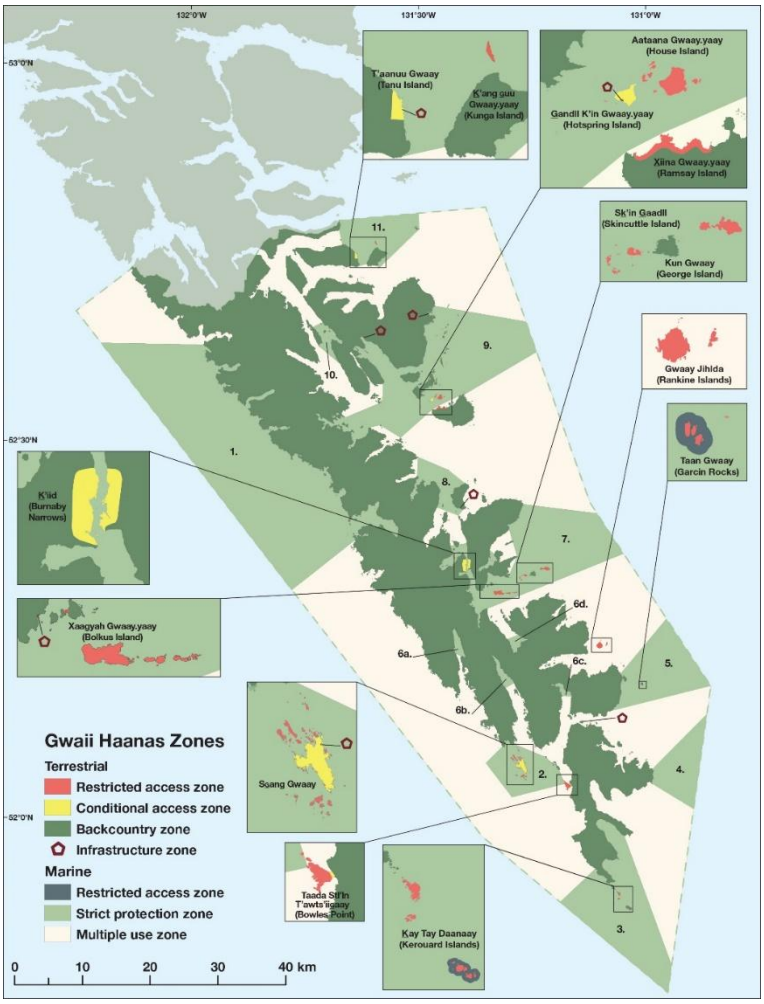


Figure 2: Terrestrial and marine zoning plan map from the Gwaii Haanas Gina ‘Waadluxan KilGuhlGa Land-Sea-People Management Plan 2018

Visiting Haida Gwaii Watchmen Sites and Permitting Requirements

Those who would like to visit Gwaii Haanas must make a reservation in advance and obtain a permit at the Gwaii Haanas office in Skidegate or by calling 1-877-559-8818. Independent visitors are also required to participate in an orientation prior to entering the area. Visitors choosing to visit with a licensed tour operator will receive their orientation via their guides. These requirements do not apply to people of Haida ancestry.

Visitors are welcome at the Haida Gwaii Watchmen Sites at K̲'uuna Llnagaay (Skedans), T'aanuu Llnagaay (Tanu), Hlk'yah G̲awG̲a (Windy Bay), Gandll K'in Gwaay.yaay (Hotspring Island), and SG̲ang Gwaay (Anthony Island). Haida citizens are at each of the sites between May and September to safeguard these places of living Haida culture. Watchmen sites can be visited between 9:00 am and 6:00 pm. The Watchmen are on call seven days a week and need their downtime in the evenings. Visitors are encouraged to plan travel days to end before 4:00 pm, so they have plenty of time to experience the site before 6:00 pm close. All visitors must contact the on-site Haida Gwaii Watchmen by radio (marine channel 6) before coming ashore. No more than 12 visitors are permitted ashore at one time.

Restrictions

- Commercial and recreational extraction of all types (e.g., fishing, plant harvesting) are prohibited within the marine strict protection zones (see the Fisheries and Oceans Canada website Fishery Notice for detailed geographic descriptions).
- Removal of any items from above the high tide line in Gwaii Haanas (i.e, within the Gwaii Haanas terrestrial area) is strictly prohibited.
- The Huxley Island Operations Station is closed until further notice to protect the public from hazards associated with a landslide at this facility. Although a land-based closure, for safety reasons it is important that mariners do not approach the site. For a map of the location and current status of this closure please refer to Important Bulletins on the Gwaii Haanas website.

Information

For questions concerning Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage Site, contact Parks Canada at 1-877-559-8818 or gwaiihaanas@pc.gc.ca, or visit the Gwaii Haanas website.

For general information regarding Parks Canada's National Marine Conservation Areas, National Parks or National Historic Sites, please contact our National Information Service at 1-888-773-8888 or information @pc.gc.ca, or visit the Parks Canada website.

Authority: Council of the Haida Nation and Parks Canada Agency

5D General Guidelines for National Wildlife Areas

National Wildlife Areas of Canada

National Wildlife Areas (NWAs) are protected and managed according to the *Wildlife Area Regulations* under the *Canada Wildlife Act*. The primary purpose of most NWAs is the protection and conservation of wildlife and their habitat. For this purpose, and according to the legislation, activities that could interfere with the conservation of wildlife are prohibited in an NWA. Consequently, there are prohibited activities in all NWAs and there is no public access for some of them. Nonetheless, the Minister of the Environment has the ability to authorize activities, whether through public notice or the issuance of permits, for those activities benefiting wildlife and their habitat, or that are not inconsistent with the purpose for which the NWA was established and are consistent with the management plan goals for the NWA.

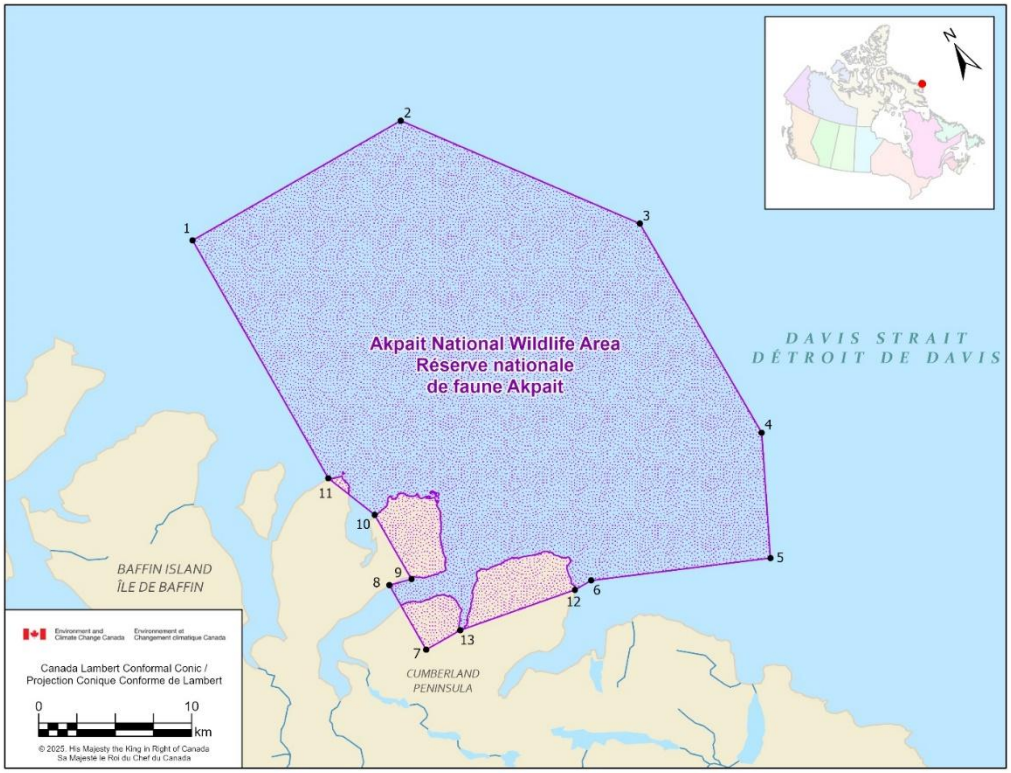
For general information regarding Canada's National Wildlife Areas, please contact Environment and Climate Change Canada at 1-800-668-6767 (in Canada only) or enviroinfo@ec.gc.ca, or visit our website.

General Guidelines for National Wildlife Areas in Nunavut

Canadian and foreign vessels are not allowed to enter NWAs and MBSs in Nunavut without a permit. These protected areas are managed according to their associated Inuit Impact and Benefit Agreement (IIBA) for National Wildlife Areas and Migratory Bird Sanctuaries in the Nunavut Settlement Area. Any foreign vessel ship captain who is planning to enter in any of these protected areas without a permit, claiming a right of innocent passage, is strongly advised to communicate with Environment and Climate Change Canada (Canadian Wildlife Service) at least four months in advance.

Akpait National Wildlife Area

Coordinates



All geographic coordinates (latitude and longitude) are expressed in the North American Datum 1983 (NAD83) Canadian Spatial Reference System (CSRS).

Point	Latitude	Longitude
1	67°08′00″ N	61°51′00″ W
2	67°08′00″ N	61°29′06″ W
3	67°00′35″ N	61°15′00″ W
4	66°52′00″ N	61°15′00″ W
5	66°48′00″ N	61°20′00″ W
6	66°50′30″ N	61°35′00″ W
7	66°51′17″ N	61°51′00″ W
8	66°53′55″ N	61°51′00″ W
9	66°53′43″ N	61°49′00″ W
10	66°56′21″ N	61°49′00″ W
11	66°58′17″ N	61°51′00″ W
12	66°50’30” N	61°36’41” W
13	66°51’17” N	61°47’29” W

Prohibitions

Navigating within Akpait National Wildlife Area without a permit is prohibited except for Inuit exercising their rights as per the Nunavut Agreement or the Inuit Impact and Benefit Agreement.

Permitting Requirements

A permit must be obtained to either navigate within or conduct any type of activity in the National Wildlife Area. Activities that may be permitted will be in accordance with the conservation objectives of the National Wildlife Area management plan. A permit is not required for Inuit exercising their rights within the National Wildlife Area as per the Nunavut Agreement or the Inuit Impact and Benefit Agreement.

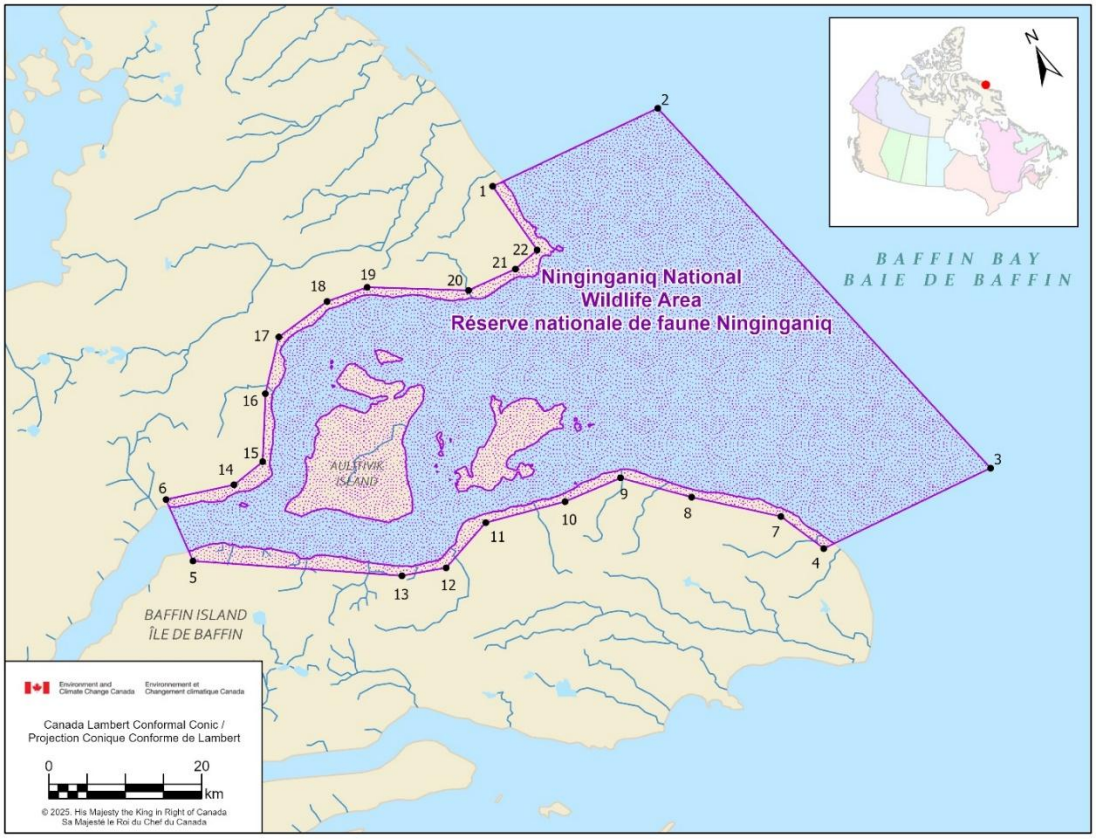
More information on access and permitting for Akpait National Wildlife Area can be obtained by contacting the Environment and Climate Change Canada regional office.

Contact Information

Environment and Climate Change Canada - Northern Region
Canadian Wildlife Service
Protected Areas
301-933 Mivvik Street
Iqaluit, Nunavut
X0A 3H0
Telephone: 867-975-4641
Toll Free: 1-800-668-6767 (in Canada only)
Email: CWSPermitNorth-PermisNordSCF@ec.gc.ca

Ninginganiq National Wildlife Area

Coordinates



All geographic coordinates (latitude and longitude) are expressed in the North American Datum 1983 (NAD83) Canadian Spatial Reference System (CSRS).

Point	Latitude	Longitude
1	69°50′00″ N	67°13′16.87″ W
2	69°50′00″ N	66°36′03″ W
3	69°17′00″ N	66°07′13″ W
4	69°17′00″ N	66°44′03.04″ W
5	69°34′43.78″ N	68°40′00″ W
6	69°39′27.57″ N	68°40′00″ W
7	69°20’20.42”N	66°49’02.63”W
8	69°24’15.05”N	67°03’31.74”W
9	69°27’35.80”N	67°14’46.48”W
10	69°27’44.66”N	67°26’53.39”W
11	69°28’44.21”N	67°43’08.79”W
12	69°27’00.18”N	67°54’05.06”W
13	69°27’47.29”N	68°02’51.73”W
14	69°38’27.38”N	68°26’10.99”W

Point	Latitude	Longitude
15	69°39’07.15”N	68°19’00.43”W
16	69°43’25.24”N	68°12’50.42”W
17	69°46’39.12”N	68°05’41.79”W
18	69°47’32.06”N	67°53’42.01”W
19	69°47’16.38”N	67°45’05.69”W
20	69°44’05.59”N	67°26’41.32”W
21	69°44’03.59”N	67°16’12.67”W
22	69°44’36.52”N	67°10’33.68”W

Prohibitions

Navigating within Ninginganiq National Wildlife Area without a permit is prohibited except for Inuit exercising their rights as per the Nunavut Agreement or the Inuit Impact and Benefit Agreement.

Permitting Requirements

A permit must be obtained to either navigate within or conduct any type of activity in the National Wildlife Area. Activities that may be permitted will be in accordance with the conservation objectives of the National Wildlife Area management plan. A permit is not required for Inuit exercising their rights within the National Wildlife Area as per the Nunavut Agreement or the Inuit Impact and Benefit Agreement.

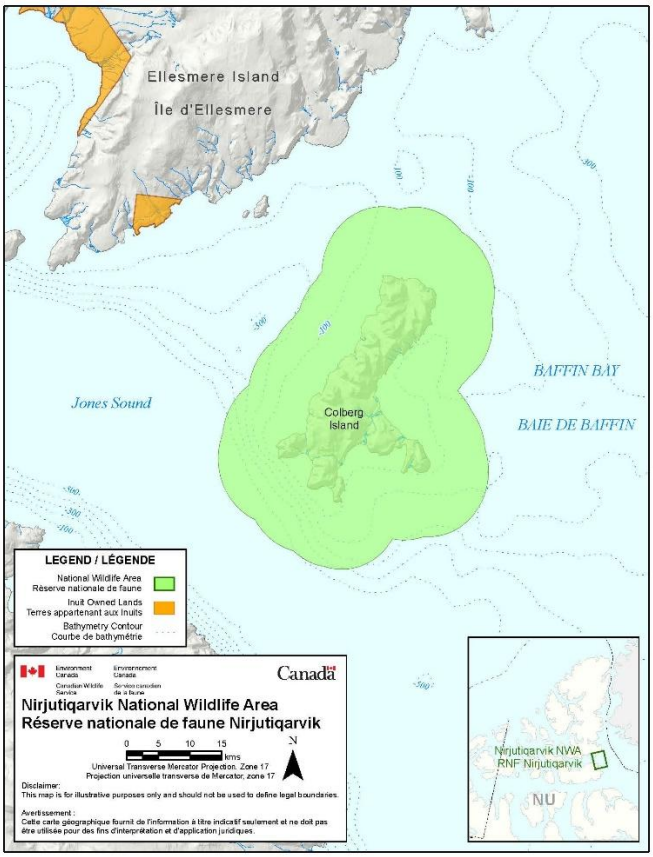
More information on access and permitting for Ninginganiq National Wildlife Area can be obtained by contacting the Environment and Climate Change Canada regional office.

Contact Information

Environment and Climate Change Canada - Northern Region
Canadian Wildlife Service
Protected Areas
301-933 Mivvik Street
Iqaluit, Nunavut
X0A 3H0
Telephone: 867-975-4641
Toll Free: 1-800-668-6767 (in Canada only)
Email: CWSPermitNorth-PermisNordSCF@ec.gc.ca

Nirjutiqarvik National Wildlife Area

Coordinates



All geographic coordinates (latitude and longitude) are expressed in the North American Datum 1983 (NAD83) Canadian Spatial Reference System (CSRS).

All of the island known as Coburg Island, the centre of which having approximate latitude 75°57′50″ and approximate longitude 79°19′30″; and also all that land covered by water immediately adjacent to said Coburg Island and extending 10 km (5.4 Nautical Miles) from the ordinary high-water mark thereof.

Prohibitions

Navigating within Nirjutiqarvik National Wildlife Area without a permit is prohibited except for Inuit exercising their rights as per the Nunavut Agreement or the Inuit Impact and Benefit Agreement.

Permitting Requirements

A permit must be obtained to either navigate within or conduct any type of activity in the National Wildlife Area. Activities that may be permitted will be in accordance with the conservation objectives of the National Wildlife Area management plan. A permit is not required for Inuit exercising their rights within the National Wildlife Area as per the Nunavut Agreement or the Inuit Impact and Benefit Agreement.

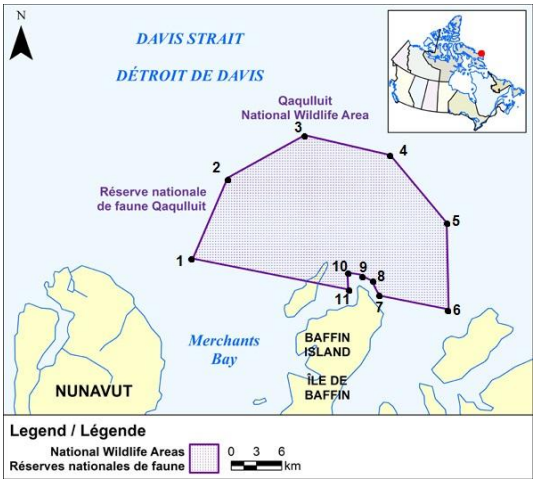
More information on access and permitting for Nirjutiqarvik National Wildlife Area can be obtained by contacting the Environment and Climate Change Canada regional office.

Contact Information

Environment and Climate Change Canada - Northern Region
Canadian Wildlife Service
Protected Areas
301-933 Mivvik Street
Iqaluit, Nunavut
X0A 3H0
Telephone: 867-975-4641
Toll Free: 1-800-668-6767 (in Canada only)
Email: CWSPermitNorth-PermisNordSCF@ec.gc.ca

Qaqulluit National Wildlife Area

Coordinates



All geographic coordinates (latitude and longitude) are expressed in the North American Datum 1983 (NAD83) Canadian Spatial Reference System (CSRS).

Point	Latitude	Longitude
1	67°17′13.53″ N	62°47′28.04″ W
2	67°21′05.00″ N	62°37′07.13″ W
3	67°21′40.56″ N	62°22′47.50″ W
4	67°18′24.40″ N	62°11′09.29″ W
5	67°13′05.16″ N	62°07′02.76″ W
6	67°08′01.14″ N	62°12′15.74″ W
7	67°10′31.73″ N	62°21′46.00″ W
8	67°11′35.41″ N	62°21′58.76″ W
9	67°12′15.21″ N	62°23′25.39″ W
10	67°12′38.43″ N	62°25′04.87″ W
11	67°11′38.90″ N	62°26′01.70″ W

Prohibitions

Navigating within Qaqulluit National Wildlife Area without a permit is prohibited except for Inuit exercising their rights as per the Nunavut Agreement or the Inuit Impact and Benefit Agreement.

Permitting Requirements

A permit must be obtained to either navigate within or conduct any type of activity in the National Wildlife Area. Activities that may be permitted will be in accordance with the conservation objectives of the National Wildlife Area management plan. A permit is not required for Inuit exercising their rights within the National Wildlife Area as per the Nunavut Agreement or the Inuit Impact and Benefit Agreement.

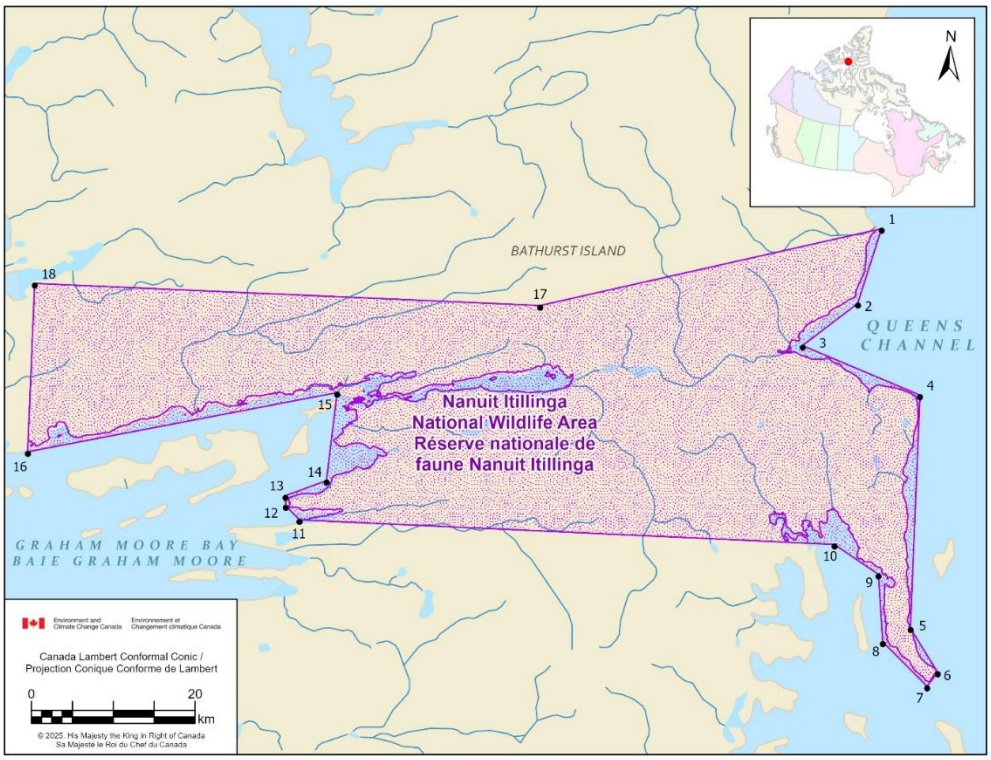
More information on access and permitting for Qaqulluit National Wildlife Area can be obtained by contacting the Environment and Climate Change Canada regional office.

Contact Information

Environment and Climate Change Canada - Northern Region
Canadian Wildlife Service
Protected Areas
301-933 Mivvik Street
Iqaluit, Nunavut
X0A 3H0
Telephone: 867-975-4641
Toll Free: 1-800-668-6767 (in Canada only)
Email: CWSPermitNorth-PermisNordSCF@ec.gc.ca

Nanuit Itillinga (Polar Bear Pass) National Wildlife Area

Coordinates



All coordinates quoted herein being Universal Transverse Mercator coordinates in Zone 14;

Point	Northing	Easting
1	8 421 000	540 000
2	8 412 000	537 600
3	8 406 700	531 300
4	8 401 500	545 500
5	8 373 800	545 700
6	8 368 700	549 200
7	8 367 000	548 000
8	8 372 000	542 500
9	8 380 000	541 600
10	8 383 300	536 200
11	8 383 300	472 600
12	8 384 900	470 900
13	8 386 100	470 800
14	8 388 100	475 600
15	8 398 600	476 400
16	8 390 000	440 000
17	8 410 000	500 000
18	8 410 000	440 000

Prohibitions

Navigating within Nanuit Itillinga (Polar Bear Pass) National Wildlife Area without a permit is prohibited except for Inuit exercising their rights as per the Nunavut Agreement or the Inuit Impact and Benefit Agreement.

Permitting Requirements

A permit must be obtained to either navigate within or conduct any type of activity in the National Wildlife Area. Activities that may be permitted will be in accordance with the conservation objectives of the National Wildlife Area management plan. A permit is not required for Inuit exercising their rights within the National Wildlife Area as per the Nunavut Agreement or the Inuit Impact and Benefit Agreement.

More information on access and permitting for Nanuit Itillinga (Polar Bear Pass) National Wildlife Area can be obtained by contacting the Environment and Climate Change Canada regional office.

Contact Information

Environment and Climate Change Canada - Northern Region
Canadian Wildlife Service
Protected Areas
301-933 Mivvik Street
Iqaluit, Nunavut
X0A 3H0
Telephone: 867-975-4641
Toll Free: 1-800-668-6767 (in Canada only)
Email: CWSPermitNorth-PermisNordSCF@ec.gc.ca

Authority: Environment and Climate Change Canada

5E Regulatory Requirements for Scott Islands Marine National Wildlife Area

Scott Islands marine National Wildlife Area

Scott Islands marine National Wildlife Area was established on June 27, 2018[1]. For more information on the establishment of this protected area and the associated regulations you may refer to the following publications, Canada Gazette, Part 2, Volume 152, Number 13: Scott Islands Protected Marine Area Establishment Order and Canada Gazette, Part 2, and Volume 152, Number 13: Scott Islands Protected Marine Area Regulations. The regulations themselves may be accessed at Scott Islands Protected Marine Area Regulations.

Coordinates

Scott Islands marine National Wildlife Area is located in Queen Charlotte Sound north of Vancouver Island, and includes parts of two marine bioregions, the Northern Shelf and the Offshore Pacific.

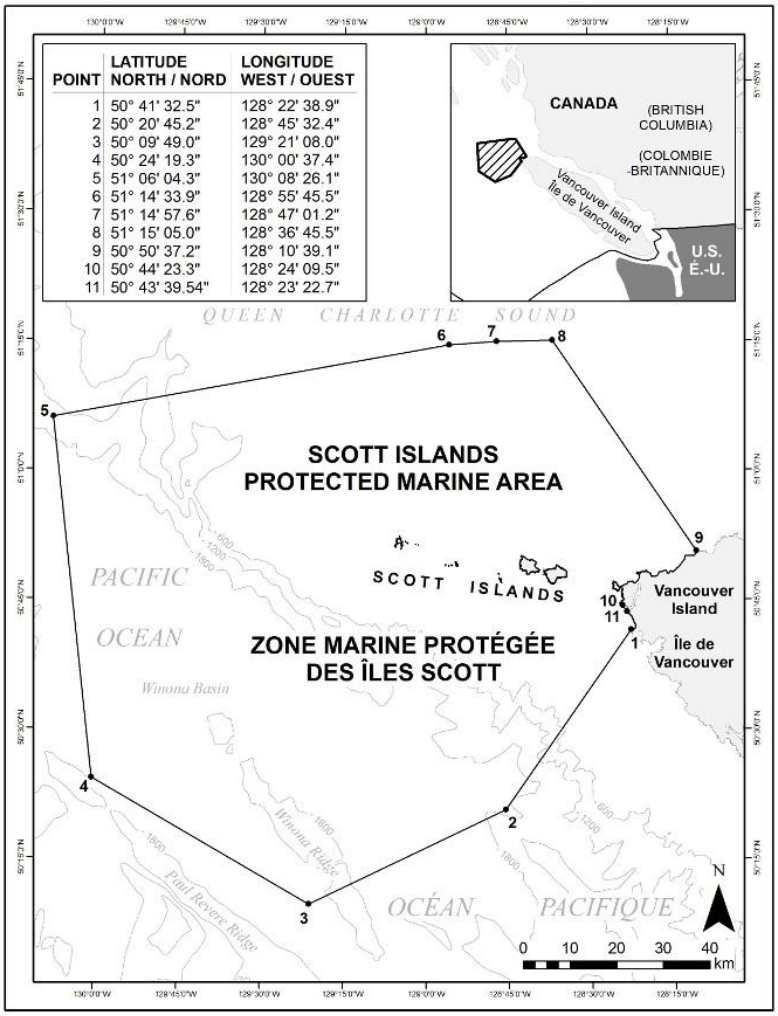
The described area contains approximately 11 546 square kilometers, except all islands and all foreshore lying above the low water line.

The boundaries of Scott Islands marine National Wildlife Area boundary extent are provided below as coordinates*.

Point	Latitude (North)	Longitude (West)
1	50° 41’ 32.5” N	128° 22’ 38.9” W
2	50° 20’ 45.2” N	128° 45’ 32.4” W
3	50° 09’ 49.0” N	129° 21’ 08.0” W
4	50° 24’ 19.3” N	130° 00’ 37.4” W
5	51° 06’ 04.3” N	130° 08’ 26.1” W
6	51° 14’ 33.9” N	128° 55’ 45.5” W
7	51° 14’ 57.6” N	128° 47’ 01.2” W
8	51° 15’ 05.0” N	128° 36’ 45.5” W
9	50° 50’ 37.2” N	128° 10’ 39.1” W
10	50° 44’ 23.3” N	128° 24’ 09.5” W
11	50° 43’ 39.54” N	128° 23’ 22.7” W

[1] The term “marine National Wildlife Area” is the common name used to ensure consistency with Environment and Climate Change Canada’s protected areas network. The term “protected marine area” is the legal name for a marine National Wildlife Area established under section 4.1(1) of the *Canada Wildlife Act*

Map of Scott Islands marine National Wildlife Area

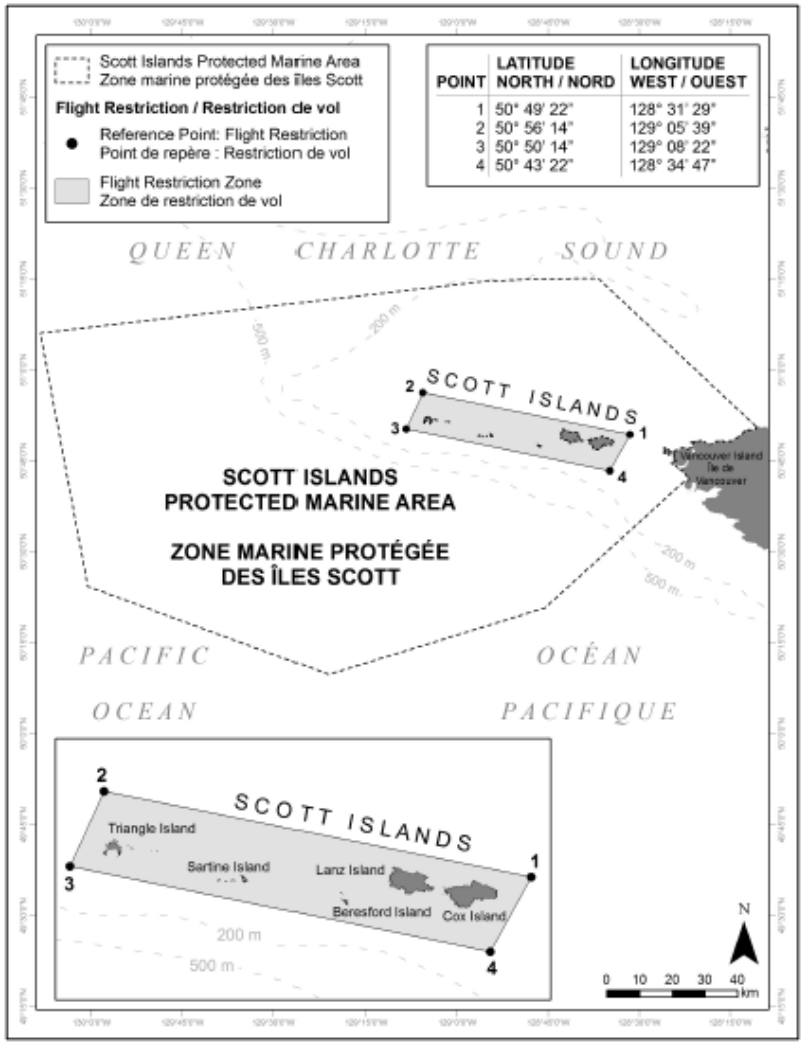


Map showing an area off the northwestern coast of Vancouver Island, British Columbia including the boundaries of Scott Islands marine National Wildlife Area. The marine National Wildlife Area follows a portion of the northwestern coast of Vancouver Island and extends out into the Pacific Ocean. One inset lists the latitude and longitude coordinates of the marine National Wildlife Area boundaries, and the second inset shows the location of the marine National wildlife Area in British Columbia in relation to the U.S.A. The scale on the map is in kilometers and is provided in this document for illustrative purposes only and may not reflect the reality on site.

Scott Islands marine National Wildlife Area Flight Restriction Zone extent is provided below as coordinates*.

Point	Latitude (North)	Longitude (West)
1	50° 49’ 22.0” N	128° 31’ 29.0” W
2	50° 56’ 14.0” N	129° 05’ 39.0” W
3	50° 50’ 14.0” N	129° 08’ 22.0” W
4	50° 43’ 22.0” N	128° 34’ 47.0” W

Map of Scott Islands marine National Wildlife Area Flight Restriction Zone



Map showing the Flight Restriction Zone and boundaries for Scott Islands marine National Wildlife Area. An inset lists the latitude and longitude coordinates of the Flight Restriction Zone within the marine National Wildlife Area. The scale on the map is in kilometers and is provided in this document for illustrative purposes only and may not reflect the reality on site.

The flight restriction zone applies to all aircraft, including drones (Unmanned Aerial Vehicles). Aeronautical charts are available from NavCanada for a fee. Drone pilots can use the interactive Drone Site Selection Tool to determine where drone flight is prohibited, restricted or potentially hazardous.

*All geographic coordinates (latitude and longitude) are expressed in the North American Datum 1983 (NAD83) Canadian Spatial Reference System (CSRS).

Prohibitions (Prohibited Activities):

Under the *Canada Wildlife Act*, Scott Islands marine National Wildlife Area is protected and managed in accordance with *Scott Islands Protected Marine Area Regulations*. The primary purpose of Scott Islands marine National Wildlife Area is to conserve migratory seabirds and species at risk as well as the habitats, ecosystems, and marine resources that support them. Site-specific regulations are in place year-round that prohibit activities that may threaten the conservation of wildlife and wildlife habitats in this area (e.g., noise and physical disturbance caused by human activity, introduction of predators such as rodents, etc.). The regulations provide exemptions to the prohibitions in specific circumstances (see Exemption Section below). Permits may be issued to carry out activities that, although they may have an impact on the environment, have been evaluated to be compatible with Scott Island marine National Wildlife Area's conservation objectives. Permits may include terms and conditions to minimize the impact of an activity on wildlife and wildlife habitat. Transport Canada (TC) and Fisheries and Oceans Canada (DFO) retain authority over shipping and fishing through the *Canada Shipping Act, 2001* and *Fisheries Act*, respectively.

The following prohibitions are in place in Scott Islands marine National Wildlife Area:

a) Carrying out any activity that is likely to disturb, damage or destroy wildlife or its habitat in the Protected Marine Area or to remove wildlife or its habitat;
b) Dumping or discharging any waste material or substance that is likely to harm wildlife or degrade the quality of wildlife habitat;
c) Introducing any living organism that is likely to harm wildlife or degrade the quality of wildlife habitat;
d) Flying an aircraft[2] above the flight restriction zone described in subsection (2) at an altitude that is below 3500 feet above mean sea level;
e) Being within 300 metres of the low water mark of the Triangle, Sartine or Beresford Islands; or
f) Anchoring a vessel[3] of more than 400 gross tonnes within one nautical mile (1852 metres) of the low water mark of the Triangle, Sartine or Beresford Islands.

At all times, it is your responsibility to comply with all relevant federal, provincial or territorial legislation. The Province of BC (BC Parks) is responsible for the designation, management and conservation of the Ecological Reserves and Provincial Parks within Scott Islands marine National Wildlife Area. BC Parks is responsible for enforcement matters related to Ecological Reserves and Provincial Parks under the *Park Act* and *Park, Conservancy and Recreation Area Regulation*, *Ecological Reserve Act* and *Ecological Reserve Regulations*. Related provincial legislation may apply (e.g. the *BC Wildlife Act*). There are fishing restrictions in place within Scott Islands marine National Wildlife Area; provincial and federal fishing regulations (e.g., *Fisheries Act*, *Coastal Fisheries Protection Act*, and associated regulations) should be reviewed for current restrictions and licencing requirements. *Coastal Fisheries Protection Act*, and associated regulations) for current restrictions and licencing requirements.

[2] Aircraft includes an air vehicle which does not have a pilot on board. Unmanned aerial vehicle (UAV), or unmanned aircraft system (UAS), commonly known as drones, are considered aircraft under the Aeronautics Act and Canadian Aviation Regulations. (aéronef)
[3] Vessel means a boat, ship or craft that is designed, used or capable of being used solely or partly for navigation in, on, through or immediately above water, without regard to method of propulsion or lack of it, and includes any such vessel that is under construction, but does not include a floating object of a prescribed class established under the *Canada Shipping Act, 2001*. (bâtiment)

Exceptions

The federal regulations for Scott Islands marine National Wildlife Area include various exceptions to allow for certain activities, that would otherwise contravene one or more of the prohibitions, to occur without a permit issued under the regulations.

The following activities are exempt from all prohibitions ((a) to (f)) as listed above:

- Activities carried out for the purpose of public safety or national security or in response to an emergency; or
- Activities of foreign vessels or aircraft within the exclusive economic zone (EEZ) of Canada4.

The following activities are exempt from prohibitions (a) and (b) as listed above; all others still apply when conducting these activities:

- Fishing carried out in accordance with the Coastal Fisheries Protection Act and the Fisheries Act;
- Navigation of a vessel in accordance with the Canada Shipping Act, 2001; or

Navigation of military vessels, including foreign military vessels or vessels that belong to, or are under the command of, the Canadian Forces.

The following activities are exempt from prohibitions (d) and (e) as listed above:

- A federal or provincial enforcement officer when they are performing their duties or functions or a person who is acting under their directions or control.
- An employee or officer of the government of British Columbia who, in the course of performing their duties or functions, is carrying out an activity for the purpose of wildlife research or the conservation or interpretation of wildlife, or a person who is acting under the direction or control of that employee or officer.

Permitting Requirements

Prohibited activities that are not already exempted and do not compromise the conservation objectives of Scott Islands marine National Wildlife Area may be permitted upon application. Refer to the Permits section of the regulations and the permitting guidance document, National Wildlife Areas designated under the Wildlife Area Regulations and protected marine areas designated under the Canada Wildlife Act: permitting guidance - Canada.ca. Depending on the type of activity, other federal or provincial permits or authorizations may be required to undertake an activity in Scott Islands marine National Wildlife Area. The Province of British Columbia (BC Parks) will continue to accept applications and make decisions on proposals within provincial protected area boundaries and separate authorizations may be required for the marine area (federal) and land (provincial). Contact your regional federal and provincial permitting office for more information on permit requirements.

More information on access and permitting for Scott Islands marine National Wildlife Area can be obtained by contacting the Environment and Climate Change Canada regional office.

[4] Unless the application of the prohibitions is consistent with Article 56 of the United Nations Convention on the Law of the Sea, signed by Canada on December 10, 1982, which addresses rights, jurisdiction, and duties of the coastal state in the EEZ.

General Guidance for Vessels and Aircraft in Scott Islands marine National Wildlife Area

Refer to Guidelines to avoid disturbance to seabird and waterbird colonies in Canada - Canada.ca for information about the impacts of disturbance to seabirds and waterbird breeding colonies and guidelines to avoid disturbance of colonies.

Many of the world's richest seabird colonies have been destroyed by introduced predators. The following are important biosecurity guidelines that should be considered to ensure that no predators (e.g., rodents, including rats) are introduced to Scott Islands marine National Wildlife Area:

- Visually inspect, pack and seal transported materials against rodent intrusion. Ensure all concealed spaces and compartments or voids are rodent-free;
- Store or transport materials in facilities or containers known to be inaccessible to rodents;
- Inspect packed materials for rodent intrusion before the last stage of transport; suspicious packages should be re-inspected and re-packed.
- Never throw a rodent from a vessel or aircraft. They are good swimmers and will reach land.

Contact Information

Pacific Region

Environment and Climate Change Canada
Canadian Wildlife Service
5421 Robertson Road, RR#1, Delta, British Columbia,
V4K 3N2
Telephone: 1 (250) 327-4101
Email: scfpacpermitscwspacpermits@ec.gc.ca

Authority: Environment and Climate Change Canada

A3 Ice Navigation

6 Ice Navigation, Routeing and Requests for Icebreaker Assistance

1 Hudson Strait and Canadian Arctic

Northern Canada Vessel Traffic Services Zone

Mariners should be aware of the existence of the Northern Canada Vessel Traffic Services Zone established by the *Northern Canada Vessel Traffic Services Zone Regulations.* These regulations require certain vessels to report information to the Northern VTS before entering the Northern VTS zone and while navigating within it. In general, the Northern VTS zone covers the waters of Ungava Bay, Hudson Bay and James Bay and Canada's coastal northern waters within the area enclosed by the 60th parallel of north latitude, the 141st meridian of west longitude and the outer limit of the exclusive economic zone; however, where the international boundary between Canada and Greenland is less than 200 nautical miles from the baselines of the territorial sea of Canada, the international boundary shall be substituted for that outer limit.

Ice operations support in Northern VTS waterways is provided by the Canadian Coast Guard. Icebreaker assistance as well as ice information and ice routing should be requested through Northern VTS. For more detailed information on this VTS system, the definition of waters it covers and the requirements to make certain reports and obtain clearance, mariners should refer to Part 3 of the Radio Aids to Marine Navigation (Atlantic, St. Lawrence, Great Lakes, Lake Winnipeg, Arctic and Pacific).

For general information on ice conditions:

During Business Hours (0700-1900 Eastern Time 7-days/week):

Ice Operations:

Telephone: 514-283-2784
Email : DFO.ICEOPS-ARCGLACE.MPO@dfo-mpo.gc.ca

Ice Conditions:

Tel: (514) 283-1752
Email :ssgarctique-issarctic@ec.gc.ca

For After Hours Ice Information:

Address:	Northern VTS, P.O. Box 189, Iqaluit (NU) X0A 0H0
Telephone:	(867) 979-5724 or 979-5269
Facsimile:	(867) 979-4264

1.1 Ice Regime Routeing Message

Every message required by paragraph 9(1) of the ASSPPR must contain all designators listed in Table 2. The update message required by paragraph 9(2) of the ASSPPR must include designators A to K. Every message must be addressed to TRANSPORT CANADA and be provided to one of the Marine Communications and Traffic Services Centres that is designated by the Canadian Coast Guard to receive Northern VTS reports. The intended route described by designator G of Table 2 may include more than one Shipping Safety Control Zone.

Table 2 – Ice regime routing message template

Item	Designator	Subject	Information
1	A	Vessel	The vessel's name and the name of the state whose flag the vessel is entitled to fly.
2	B	Call Sign and IMO Number	The vessel's call sign and International Maritime Organization (IMO) ship identification number.
3	C	Vessel Ice Class	The Ice Class that corresponds to the Ice Class indicated on the Polar Ship Certificate. For vessels with no Polar Ship Certificate, the Ice Class indicated on the vessel Classification Society Certificate.
4	D	Date & UTC Time	A 6-digit group followed by a Z: the first 2 digits giving the day of the month, the next two digits giving the hour, and the last two digits giving the minutes.
5	E	Final Destination	The name of the final destination.
6	F	Position, Course & Speed	• A 4-digit group giving the latitude in degrees and minutes suffixed with N, and a 5-digit group giving the longitude in degrees and minutes suffixed with W. • The true course. A 3-digit group. • The speed in knots. A 2-digit group.
7	G	Intended Route	• A series of 4-digit groups giving the latitude in degrees and minutes suffixed with N, and • 5-digit groups giving the longitude in degrees and minutes suffixed with W to describe the planned route.
8	H	Ice Regime(s) to be encountered	For each regime along the planned route, a series of ice concentration in tenths (C), the corresponding ice type (IT) using the ice type symbol or the egg code, followed by the letter IN for AIRSS message or RIO for POLARIS message and the resulting Ice Numeral (IN) or Risk Index Outcome (RIO): **AIRSS** C_1, IT_1, C_2, IT_2, …, CT_n, IT_n, INxx **POLARIS** C_1, IT_1, C_2, IT_2, …, CT_n, IT_n, RIOxx
9	I	Source(s) of Ice Information	Indicate the source(s) used to determine the ice conditions, e.g. ice charts name/date, visual observations, reports from shore stations and from other ships in the area, helicopter (or drone) reconnaissance, satellite and airborne visual and radar imagery, or other means.
10	J	Other pertinent information or comments	Provide additional information that may have been considered or is pertinent to the assessment, such as limitations associated with the ice regime assessment, near regimes that are likely to drift into the proposed route, an alternate route that may be considered, or planned escorting needs.
11	K	Name of Escorting Vessel	Provide the name of the escorting vessel if the ice numeral has been determined for the track of an escorting vessel.
12	L	Ice Navigator(s) and officers certified for ships operating in polar waters	Name(s) and certification information of Ice Navigator(s) and officers certified in accordance with the STCW Convention requirements for ships operating in polar waters.

Item	Designator	Subject	Information
13	M	Ship Master	Name of the Master and certification information in accordance with the STCW Convention requirement for ships operating in polar waters.

2 East Coast, Estuary and Gulf of St. Lawrence

During the winter navigation season a similar service is provided to ships intending to transit or to operate in the East Coast and Gulf of St. Lawrence waters. Access to this service can be obtained by contacting the Eastern Canada Traffic System (Eastern VTS). Eastern VTS communications procedures are specified in the current Radio Aids to Navigation publications.

(a) For general information on ice conditions and icebreaker assistance along the main shipping route in the Gulf of St. Lawrence:

24 hours assistance, 7-days/week:

Icebreaking operations:

Telephone: 514-283-1746
Email: DFO.IceOpsStLawrence.GlacesOpsStLaurent.MPO@dfo-mpo.gc.ca

Ice conditions (Business hours)

Telephone: 514-283-1752 / 2069
Toll-Free: 1-855-201-0086
Email: ec.ssgstlaurent-issstlawrence.ec@canada.ca

Mailing address:
Montreal Ice Office
Canadian Coast Guard
105 McGill Street, 5th floor
Montréal, Québec, H2Y 2E7

Outside of Business Hours:
Les Escoumins Traffic
Email : ecareg.escoumins@innav.gc.ca
Telephone : 418-233-3483

(b) For general information on ice conditions and icebreaker assistance in Chaleur Bay, New Brunswick, Prince Edward Island, Nova Scotia and Newfoundland and Labrador waters:

Telephone: 709-772-2078
Toll-Free: 1-800-565-1633
Email (24 hour assistance): vts.labrador@innav.gc.ca
Email (general inquiries): dfo.iceatlantic-glacesatlantique.mpo@dfo-mpo.gc.ca
Email (ice conditions): ec.ssgatlantique-issatlantic.ec@canada.ca

Mailing address:
St. John's Ice Centre
Canadian Coast Guard
250 Southside Road
St. John's, NL, A1E 0A3

3 St. Lawrence River

In the St. Lawrence River west of longitude 66°00'W to Montréal, ship movement is under the general control of the Vessel Traffic Services (VTS) system. During the winter navigation season, the ice operation center will provide, via "Escoumins Traffic" or "Québec Traffic", the recommended ice routes to be used.

For general information on ice conditions and icebreaker assistance:

24 hours assistance, 7-days/week:

Icebreaking operations:

Telephone: 514-283-1746
Email: DFO.IceOpsStLawrence.GlacesOpsStLaurent.MPO@dfo-mpo.gc.ca

Ice conditions (Business hours)

Telephone: 514-283-1752 / 2069
Email: ec.ssgstlaurent-issstlawrence.ec@canada.ca

Mailing address: Montreal Ice Office
Canadian Coast Guard
105 McGill Street, 5th floor
Montréal, Québec, H2Y 2E7

Outside of Business Hours :

Les Escoumins Traffic
Email : ecareg.escoumins@innav.gc.ca
Telephone : 418-233-3483

Quebec Traffic
Telephone : 418-648-7244
Email : queraa1@innav.gc.ca

4 Canadian Great Lakes

Vessels entering Canadian waters of the Great Lakes may obtain ice information, routing advice and request icebreaker assistance by contacting the following address:

During Business Hours (0700-1900 Eastern Time 7-days/week):

Icebreaking operations:

Telephone: 514-283-2784
Email: DFO.IceOpsGreatLakes.GlacesOpsGrandsLacs.MPO@dfo-mpo.gc.ca

Ice conditions

Telephone: 514-283-1752 / 2069
Email: ec.ssggrandslacs-issgreatlakes.ec@canada.ca

Mailing address: Montreal Ice Office
Canadian Coast Guard
105 McGill Street, 5th floor
Montréal, Québec, H2Y 2E7

Outside of Business Hours:
Sarnia Traffic
Telephone: 519-337-6221
Email: supervisor.sarnia@innav.gc.ca

5 General Remarks

A limited number of icebreakers are available for the support of shipping and icebreaking requests are prioritized according to the Levels of Service. It is emphasized, therefore, that it may not be possible to provide icebreaker support at short notice. In order to make the most efficient use of all available resources, it is important that the MCTS Centres are kept informed of the position and projected movements of vessels in Canadian waters.

E-Nav Portal: Ice Conditions (canada.ca)
Icebreaking Website: Icebreaking
General Information: info@dfo-mpo.gc.ca

Authority: Canadian Coast Guard

7 Information about Navigation in Ice

Ice Navigation in Canadian Waters is published by the Canadian Coast Guard in collaboration with Transport Canada Marine Safety, the Canadian Ice Service of Environment Canada and the Canadian Hydrographic Service of Fisheries and Oceans Canada. The publication is intended to assist ships operating in ice in all Canadian waters, including the Arctic. This document will provide Masters and watchkeeping crew of vessels transiting Canadian ice-covered waters with the necessary understanding of the regulations, shipping support services, hazards, and navigation techniques in ice.

The nautical publication is available for download, free-of-charge, from
Canadian Coast Guard Ice Navigation in Canadian Waters manual
(It is important to note that the paper version of the document is no longer available.)

7.1 General

Ice is an obstacle to any ship, even an icebreaker, and the inexperienced Navigation Officer is advised to develop a healthy respect for the latent power and strength of ice in all its forms. However, it is quite possible, and continues to be proven so, for well-found ships in capable hands to navigate successfully through ice-covered waters.

The first principle of successful ice navigation is to maintain freedom of manoeuvre. Once a ship becomes trapped, the vessel goes wherever the ice goes. Ice navigation requires great patience and can be a tiring business with or without icebreaker escort. The open water long way round a difficult ice area whose limits are known is often the fastest and safest way to port, or to the open sea when leaving a port.

Experience has proven that in ice of higher concentrations, four basic ship handling rules apply:

1. keep moving - even very slowly, but try to keep moving;
2. try to work with the ice movement and weaknesses but not against them;
3. excessive speed almost always results in ice damage; and
4. know your ship’s manoeuvring characteristics.

7.2 Requirements for Ships Operating in Ice

The propulsion plant and steering gear of any ship intending to operate in ice must be reliable and must be capable of a fast response to manoeuvring orders. The navigational and communications equipment must be equally reliable and particular attention should be paid to maintaining radar at peak performance.

Light and partly loaded ships should be ballasted as deeply as possible, but excessive trim by the stern is not recommended, as it cuts down manoeuvrability and increases the possibility of ice damage to the more vulnerable lower area of the exposed bow. Engine room suction strainers should be able to be removed easily and to be kept clear of ice and snow. Good searchlights should be available to aid in visibility during night navigation with or without icebreaker support.

Ships navigating in ice-covered waters may experience delays and, therefore, should carry sufficient fresh water, supplies and manoeuvring fuel, especially vessels which use heavy bunker fuel for main propulsion.

7.3 Adverse Environmental Conditions

Ships and their equipment at sea in Canadian winters and in high latitudes are affected by the following:

- low surface temperatures;
- high winds;
- low sea-water injection temperatures;
- high humidity;
- ice conditions ranging from slush ice to solid pack;
- snow, sleet, and freezing rain;
- fog and overcast, especially at the ice/water interface; and
- superstructure icing when there is the great and dangerous possibility of heavy and rapid icing with consequent loss of stability.

7.3.1 Superstructure Icing

Superstructure icing is a complicated process which depends upon meteorological conditions, condition of loading, and behavior of the vessel in stormy weather, as well as on the size and location of superstructure and rigging. The more common cause of ice formation is the deposit of water droplets on the vessel's structure. These droplets come from spray driven from wave crests and from ship-generated spray. Ice formation may also occur in conditions of snowfall, sea fog (including Arctic sea smoke), a drastic fall in ambient temperature, and from the freezing of raindrops on contact with the vessel's structure. Ice formation may sometimes be caused or accentuated by water shipped on board and retained on deck.

Vessel icing is a function of the ship's course relative to the wind and seas and generally is most severe in the following areas: stem, bulwark and bulwark rail, windward side of the superstructure and deckhouses, hawse pipes, anchors, deck gear, forecastle deck and upper deck, freeing ports, containers, hatches, aerials, stays, shrouds, masts, spars, and associated rigging. **It is important to maintain the anchor windlass free of ice so that the anchor may be dropped in case of emergency.** Constant spray entering the hawse pipes may freeze solid inside the pipe, also anchors stowed in recessed pockets may freeze in place, both conditions preventing letting the anchor go. It is good practice in freezing spray to leave anchors slightly lowered in the hawse pipe in order to free them from ice accretion when needed. It is also advisable to maintain securing claws in place in case of slippery brakes, so that the anchors can be readily released in the event of a power blackout.

Superstructure icing is possible whenever air temperatures are -2.2°C or less and winds are 17 knots or more. It is very likely to take place when these conditions occur at the same time. In fresh water, such as the Great Lakes and the St. Lawrence River, superstructure icing will occur at 0°C and below, and accumulate faster than in salt water conditions.

Generally speaking, winds of Beaufort Force 5 may produce slight icing; winds of Force 7, moderate icing; and winds of above Force 8, severe icing.

Under these conditions, the most intensive ice formation takes place when wind and sea come from ahead. In beam and quartering winds, ice accumulates more quickly on the windward side of the vessel, thus leading to a constant list which is extremely dangerous as the deck-immersion point could easily be reached with a loaded vessel.

Vessel icing may impair the stability and safety of a ship.

The effects of freezing spray can be minimized by slowing down in heavy seas to reduce bow pounding, running with the sea, or seeking more sheltered sea conditions near-shore or in sea ice. Another option may be to head to warmer waters, although this is not possible in many Canadian marine areas.

Under severe icing conditions, manual removal of ice may be the only method of preventing a capsize. It is important for the Master to consider the predicted duration of an icing storm and the rate at which ice is accumulating on his vessel in determining which strategy to follow.

Several tips for minimizing icing hazards on fishing vessels are:

- head for warmer water or a protected coastal area;
- place all fishing gear, barrels, and deck gear below deck or fasten them to the deck as low as possible;
- lower and fasten cargo booms;
- cover deck machinery and boats;
- fasten storm rails;
- remove gratings from scuppers and move all objects which might prevent water drainage from the deck;
- make the ship as watertight as possible;
- if the freeboard is high enough, fill all empty bottom tanks containing ballast piping with sea-water; and
- establish reliable two-way radio communication with either a shore station or another ship.

Freezing spray warnings are included in marine forecasts by Environment Canada. However, it is difficult to provide accurate icing forecasts as individual vessel characteristics have a significant effect on icing. Graphs assessing the rate of icing based on air temperature, wind speed, and sea-surface temperature can provide a guide to possible icing conditions, but should not be relied on to predict ice accumulation rates on a vessel. Caution should be exercised whenever gale-force winds are expected in combination with air temperatures below -2°C.

7.4 Ships Navigating Independently

Experience has shown that non-ice-strengthened ships with an open water speed of about 12 knots can become hopelessly beset in heavy concentrations of relatively light ice conditions, whereas ice-strengthened ships with adequate power should be able to make progress through first-year ice of 6/10 to 7/10 concentrations. Such ships are often able to proceed without any assistance other than routing advice. In concentrations of 6/10 or less, most vessels should be able to steer at slow speed around the floes in open pack ice without coming into contact with very many of them.

7.4.1 Entering the Ice

The route recommended by the Ice Superintendent through the appropriate reporting system i.e. Eastern VTS or Northern VTS, is based on the latest available information and Masters are advised to adjust their course accordingly. The following notes on ship-handling in ice have proven helpful:

a) Do not enter ice if an alternative, although longer, open water route is available.

b) It is very easy and extremely dangerous to underestimate the hardness of ice.

c) Enter the ice at low speed to receive the initial impact; once into the pack, increase speed gradually to maintain headway and control of the ship, but do not let the speed increase beyond the point at which she might suffer ice damage. Particular attention should be paid to applied power in areas of weak ice or open leads, pools, etc. where the speed might increase unnoticed to dangerous levels if power is not taken off.

d) Be prepared to go "Full Astern" at any time.

e) Navigation in pack ice after dark should not be attempted without high-power searchlights which can be controlled easily from the bridge; if poor visibility precludes progress, heave to in the ice and keep the propeller turning slowly as it is less susceptible to ice damage than if it were completely stopped, blocks of ice will also be prevented from jamming between the blades and the hull.

f) Propellers and rudders are the most vulnerable parts of the ship; ships should go astern in ice with extreme care, and always with the rudder amidships. If required to ram ice when brought to a halt, ships should not go astern into unbroken ice, but should move astern only in the channel previously cut by their own passage.

g) All forms of glacial ice (icebergs, bergy bits, growlers) in the pack should be given a wide berth, as they are current-driven whereas the pack is wind-driven. Large features of old ice may be moving in a direction up-wind or across wind according to the direction of the current.

h) Wherever possible, pressure ridges should be avoided and a passage through pack ice under pressure should not be attempted. The ship may have to be stopped in the ice until the pressure event is ended.

i) When a ship navigating independently becomes beset, it usually requires icebreaker assistance to free it. However, ships in ballast can sometimes free themselves by pumping and transferring ballast from side to side, and it may require very little change in trim or list to release the ship, especially in high-friction areas of heavy snow-cover.

The Master may wish to engage the services of an Ice Navigator in the Arctic.

7.5 Main Engine Cooling Systems

There is potential for ice and slush to enter sea bays or sea inlet boxes, blocking sea-water flow to the cooling system. This problem is encountered by a majority of ships entering ice-covered waters, especially when in ballast at light drafts. If water cannot be obtained for the cooling system, the main engines will not perform properly and may overheat causing the engines to shut down, or to be seriously damaged. The design of ships that operate in ice must prevent the cooling system from becoming blocked by ice.

Warning: Blockage of the sea boxes can cause the main engine cooling system to overheat, requiring reduced power to be used or the engine to be shut down completely.

Means must be provided to clear the sea bays if they do become blocked by ice. There are several design features which can ease operation or eliminate these problems:

a) High and low inlet grilles can be provided as far apart as possible.

b) Weir-type sea inlet boxes will overcome the problem of suction pipe clogging. The principle is commonly used by icebreakers in the Baltic Sea. The suction is separated from the sea inlet grilles by a vertical plate weir. Any ice entering the box can float to the top and is unlikely to be drawn back down to the suction level.

c) De-icing return(s) can be arranged to feed steam or hot water to the sea inlet box top, where frazil ice may have accumulated, or directly to the cooling system suction where a blockage may have occurred.

d) Ballast water recirculation through the cooling water system allows ballast tanks to be used as coolers, alleviating any need to use blocked sea inlet boxes. It should be noted that, while this solution is effective, it is usually a short-term solution unless vast quantities of ballast water are available or if the ship is fitted with shell circulation coolers because the recirculated ballast water will become too warm for effective cooling.

e) Means should be provided to clear the systems manually of blockage by ice.

The navigators and engineers should be aware of these potential problems and the solutions available to them on their ship.

7.6 Hull Fractures

Over the last several winter seasons, a number of bulk carriers and tankers developed fractures in their hulls while navigating in ice, off the East Coast of Canada or in the Gulf of St. Lawrence. The Load Line Regulations require that the master of every ship be supplied with a loading manual to enable him to arrange for the loading and ballasting of his ship in such a way as to avoid the creation of any unacceptable stresses.

Masters should be aware, while navigating in Canadian East Coast Waters and in the Gulf of St. Lawrence during the winter season, that low temperatures increase the brittleness of steel. This fact may be aggravated by wind force, sea conditions, and load distribution, temperatures of heated cargoes or oil fuels and length/beam ratio of vessels. Therefore, when there is a combination of:

(a) gale force winds;

(b) short, steep seas;

(c) very cold temperatures, and

(d) high length/beam ratio in vessels in ballast or in part-loaded condition.

Masters should minimize longitudinal stresses by reducing speed and maintaining the most advantageous ballast distribution as long as is necessary.

Authority: Canadian Coast Guard

7A Voyage Planning for Vessels Intending to Navigate in Canada's Northern Waters

1 Purpose

This notice is intended to assist mariners, owners and operators of vessels intending on navigating in Canada's northern waters in preparing for, and executing, a safe voyage.

The recommendations and information provided in this notice are complementary to any other legal obligation of the owner, operator, master and all who have an interest in the vessel, and to the exercise of due diligence and good seamanship practices that are required from the master of a vessel.

2 Background

The Canadian Arctic is full of challenges to maritime navigation due to its climatic conditions, low temperatures, hazardous and variable ice conditions, and geography. The region is remote and vast, making repairs, rescue, or clean-up operations difficult. Roads, airstrips, and ports are sparse, and search and rescue resources are limited. Emergencies can draw resources from other needed services such as icebreaking and community re-supply. In addition, the Canadian Arctic is environmentally sensitive and slow to recover from damage, so the impact of a pollution incident could have significant consequences. The mariner must also keep in mind that most of Canada's Arctic waters have not been surveyed to modern standards.

Consequently, Arctic navigation requires vessel crews with specialized knowledge. A safe voyage starts with a detailed voyage plan that considers the Canadian Arctic's unique conditions, navigational challenges, and hazards along with the vessel's capabilities and operational limitations.

3 Voyage Planning

International Maritime Organization (IMO) voyage planning guidelines and IMO's *International Code for Ships Operating in Polar Waters* (Polar Code) provisions must be considered when planning a voyage to Canadian Arctic waters. Chapter 11 refers to voyage planning and provides information on conducting a safe voyage.

The *Navigation Safety* Regulations, 2020 (NSR 2020) requires the master of a vessel before the vessel embarks on a voyage, to plan the voyage considering the Annex to IMO resolution A.893(21), *Guidelines for Voyage Planning*. If charts, documents, and publications are required to be kept on board under section 142 of NSR 2020, the master is to use those charts, documents, and publications to the extent that they relate to voyage planning.

Particularly relevant to Canadian Arctic navigation, the voyage plan shall, among other things, anticipate all known navigational hazards and adverse weather conditions and avoid, as far as possible, actions and activities that could cause damage to the environment. Passenger vessels should also consider IMO Resolution A.999 (25) *Guidelines on Voyage Planning for Passenger Ships Operating in Remote Areas* and Transport Canada's *Guidelines for the Operation of Passenger Vessels in Canadian Arctic Waters*. (TP 13670)

Considerations

In preparation for every Arctic voyage, the Master of the vessel must develop a comprehensive voyage plan. Given the unique risks associated with Arctic operations, the following factors should be considered, inter alia:

- Source, date, quality of hydrographic surveys, Category Zone of Confidence (CATZOC) information and data.
- Up-to-date charts of the appropriate scale, including all relevant Notices to Mariners (NOTMARs) and radio navigational warnings.
- Accuracy and availability of charting for the intended route, particularly in infrequently used areas.

- Contingency plans for emergencies where limited Search and Rescue (SAR) support is available, including SAR Cooperation Plans in accordance with SOLAS Regulation V/7.3 and MSC.1/Circ.1184.
- Compliance with Chapter 11 of the Polar Code.
- Avoidance of navigation in uncharted or insufficiently surveyed areas.
- Adequate Under Keel Clearance (UKC).
- Squat calculations and operational limitations.
- Bridge manning requirements.
- Identification of Places of Refuge.
- Position fixing methodology and intervals.
- Identification of No-Go Areas.
- Identification of Areas to be Avoided (ATBA).

Minimum Risk Mitigation Measures

- Transit in waters charted to modern standards, giving due consideration to the quality and limitations of available hydrographic data. Avoid transits through under-surveyed areas where possible. Where transit through such areas is necessary, conduct an appropriate risk assessment and ensure suitable mitigation measures and contingency plans are in place prior to transit.
- Reduce speed when required, including in the presence of ice or limited visibility during hours of darkness.
- Maintain a safe distance from land.
- Continuously monitor ice and weather conditions.
- Develop contingency routing for unforeseen wind, ice, or sea state conditions.
- Request icebreaker escort services, as required.
- Post additional lookouts.

Additional Operational Guidance

- Carriage of additional navigational aids, in addition to regulatory requirements, with suitably qualified crew to operate and maintain them, such as forward-looking sonar. Such equipment should be used only when appropriate and at spectrum ranges of 200 kHz or above to minimize disturbance to marine mammals.
- Subject to vessel and crew safety and availability, the use of spotting craft or other methods to survey waters ahead of passenger vessels, taking into consideration the quality of available hydrographic data.
- Use of supernumerary navigational experts possessing local knowledge of the intended area of operations.

Chart Accuracy Awareness

Mariners are advised to navigate with caution and remain fully cognizant of the CATZOC information available through Electronic Navigational Charts (ENCs) and displayed within Electronic Chart Display and Information Systems (ECDIS).

The Zone of Confidence (ZOC) indicates the overall level of confidence in the hydrographic data used to produce a chart for a given area. CATZOC is the classification used on ENCs to describe the quality and reliability of the underlying survey data. Hydrographic Offices assess the quality of hydrographic data and classify zones based on depth accuracy, position accuracy, and seafloor coverage. Mariners should consult their ECDIS operating manual to determine how to access the quality of data information. CATZOC categories (A1, A2, B, C, D, and U) range from high-quality, modern surveys (A1) to very low or unassessed confidence (D or U). Areas with lower ZOC or CATZOC ratings may contain significant positional or depth uncertainties.

The CATZOC in ENCs should not be confused with Source Classification diagrams, which can be found on Canadian Hydrographic Service paper charts. The purpose of Source Classification diagrams is to guide navigators and those planning 'navigational operations' (including the planning of new routes and official routeing measures) to the degree of confidence they should have in the adequacy and accuracy of charted depths and their positions. A Source diagram will provide details of the survey from which each part of the chart has been compiled, specifically with the age and survey methodology of the data.

Regarding CATZOC, the following should be noted:

1. High accuracy depth information (ZOC A1 and A2), shown as five stars or more.
2. Medium accuracy depth information (ZOC B), shown as four stars.
3. Poor accuracy depth information (ZOC C, D and U), shown as three stars or less; or letter U.

Zones of Confidence (ZOC) Table

ZOC	Position Accuracy	Depth Accuracy		Seafloor Coverage	Typical Survey Characteristics
A1	± 5m + 5% depth	= 0.50 + 1%d		Full area search undertaken. Significant seafloor features detected and depths measured.	Controlled, systematic survey high position and depth accuracy achieved using DGPS or a minimum three high quality lines of position (LOP) and a multibeam, channel or mechanical sweep system.
		Depth (m)	Accuracy (m)		
		10 30 100 1000	± 0.6 ± 0.8 ± 1.5 ± 10.5		
A2	± 20m	= 1.00 + 2%d		Full area search undertaken. Significant seafloor features detected and depths measured.	Controlled, systematic survey achieving position and depth accuracy less than ZOC A1 and using a modern survey echosounder and a sonar or mechanical sweep system.
		Depth (m)	Accuracy (m)		
		10 30 100 1000	± 1.2 ± 1.6 ± 3.0 ± 21.0		
B	± 50m	= 1.00 + 2%d		Full search area not achieved; uncharted features, hazardous to surface navigation are not expected but may exist.	Controlled, systematic survey achieving similar depth but lesser position accuracies than ZOC A2, using a modern survey echosounder, but no sonar or mechanical weep system.
		Depth (m)	Accuracy (m)		
		10 30 100 1000	± 1.2 ± 1.6 ± 3.0 ± 21.0		
C	± 500m	= 2.00 + 5%d		Full area search not achieved, depth anomalies may be expected.	Low accuracy survey or data collected on an opportunity basis such as sounding on passage.
		Depth (m)	Accuracy (m)		
		10 30 100 1000	± 2.5 ± 3.5 ± 7.0 ± 52.0		

D	Worse than ZOC C	Worse than ZOC C	Full search not achieved, large depth anomalies expected.	Poor quality data or data that cannot be quality assessed due to lack of information.
U	Unassessed – The quality of the bathymetric data has yet to be assessed.			

Source: United Kingdom Hydrographic Office

Zones of Confidence Symbols

The number of stars is an indication of the CATZOC value:

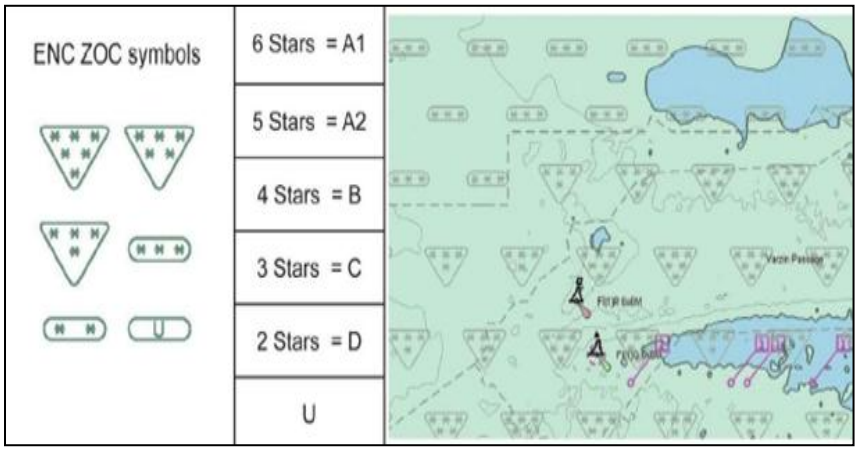
6 stars = A1 (in a triangle)

5 stars = A2 (in a triangle)

4 stars = B (in a triangle)

3 stars = C (in a horizontal bar)

2 stars = D (in a horizontal bar)



Source: International Hydrographic Office

Use of Navigational Information and Maintaining Adequate Safety Margins

Effective voyage planning in Arctic waters requires mariners to make full and informed use of all available navigational aids and reliable information sources. This includes, where available, consideration of ENC quality indicators such as the CATZOC. In addition, given the variability in the accuracy of hydrographic data across many Arctic areas, mariners should apply appropriate safety margins when assessing under-keel clearance, particularly when planning routes or deviating from an intended passage. Charted depths and features should not be relied upon in isolation; rather, they should be interpreted within the broader context of data quality, environmental conditions, and operational risk to support prudent, risk-based navigation.

Transport Canada has developed *Guidelines for Assessing Ice Operational Risk* (TP 15383). The information is intended for planning and operational purposes and is written for a diverse audience, including vessel designers, recognized organizations, vessel owners and operators, vessel **management** companies, communication and ice information agencies, the public at large and most importantly the bridge team. This publication can be ordered by contacting: marinesafety-securitemaritime@tc.gc.ca.

4 Charts and Notices

At present, about 18.4% of Canadian Arctic waters are surveyed to modern standards. In addition, the mariner must be aware of the horizontal datum used for the chart. Global Navigation Satellite System (GNSS) positions can only be plotted directly on North American Datum 1983 (NAD 83) (equivalent to World Geodetic System 1984 (WGS 84)) charts. For charts with other datums, the appropriate correction must be applied. Some Arctic charts do not have a reference datum and therefore there are no corrections available for these charts. In such cases, alternative sources of positional information should be used such as radar and visual lines of position when possible. It is always recommended that more than one means is used to fix a position.

As always, mariners must use up-to-date nautical charts and nautical publications to plan each voyage. This includes making use of annual and monthly *Notices to Mariners* and *Northern Canada Sailing Directions*. Of note, given the challenges in charting Canada's northern waters, confirming chart anomalies, and servicing aids to navigation, mariners must ensure that all Navigational Warnings (broadcast and written) and NAVAREA warnings that are in force in the area are considered. Further information can be obtained from the Canadian Coast Guard (CCG).

- For a list of charts and publications required onboard the vessel, please refer to NSR 2020, Part 1, Division 6. The master of a vessel must ensure that the charts, documents and publications required under this Division, before being used to plan and execute a voyage, are correct and up-to-date, and based on information that is contained in Notices to Mariners or a Navigational Warnings.
- Attention is also drawn to section 7 of the *Collision Regulations* related to *Notices to Mariners and Navigational Warnings.*
- The Arctic Regional Hydrographic Commission (ARHC) and the Arctic Council Working Group on the Protection of the Arctic Marine Environment (PAME) have officially released a joint advisory titled "Caution Required When Navigating in Arctic Waters". This 2026 advisory serves as a critical update to the original cautionary note issued in the ARHC in 2017. The updated notes reflects significant shifts in the region, specifically addressing the challenges posed by a rapidly changing Arctic, the emergence of new maritime routes, and a steady increase in vessel traffic.

5 Ice Advisory Service, Northern Vessel Traffic Services (Formerly NORDREG) Reporting, and Sail Plans

The CCG operates an ice advisory service to support vessels navigating in Canada's northern waters during the navigation season. Vessels can obtain up-to-date information on ice conditions, advice on routes, aids to navigation and icebreaker support, when available and considered necessary, by contacting Northern Vessel Traffic Services (Formerly NORDREG). Weather, ice advisories, and forecasts are also broadcasted daily. Vessels subject to the *Vessel Traffic Services Zones Regulations* must report to Northen VTS as required by the regulations. Masters are reminded to promptly report all defects to Northern VTS when operating in the Canadian Arctic, as required by Vessel Traffic Services Regulations.

Vessels not required to report to Northern Vessel Traffic Services should, at a minimum, file a sail plan with a responsible person. This person should be instructed to call the Joint Rescue Coordination Centre if the vessel becomes overdue. In circumstances where it is not possible to file a sail plan with a responsible person, a sail plan may be filed by telephone, radio or in person, with a Marine Communications and Traffic Services (MCTS) Centre. While at sea, masters and operators who have filed a sail plan are encouraged to file a daily position report during long trips. After completion of the voyage, the vessel must close (or deactivate) their sail plan. Forgetting to do so can result in an unwarranted search.

All vessels to which Part 1 of the *Arctic Shipping Safety and Pollution Prevention Regulations* (ASSPPR) applies must report, as per section 9 of that regulation. More information on this topic can be found in section 8 of this notice.

The CCG publication *Radio Aids to Marine Navigation* should be consulted for further information including details on the Northern Vessel Traffic Services Zone, reporting, radio frequencies and times for ship/shore communications and broadcasts.

6 Ice Navigation in Canadian Waters

The CCG publication, *Ice Navigation in Canadian Waters* indicates the necessary precautions to be taken by vessel navigating in Canadian ice-covered waters. The document provides masters and watch keeping officers with the necessary information to achieve an understanding of the hazards, navigation techniques, and response of the vessel. It includes information on passage planning for routes in ice-covered waters and principles of high latitude navigation. Every vessel of 100 gross tonnage, or over, navigating in Canadian waters in which ice may be encountered is required to carry and make use of this publication (NSR 2020).

7 Contingency Planning

Two vessels groundings during the 2010 Canadian Arctic shipping season, one in 2018, and two in 2025 serve as a strong reminder of the critical importance of contingency planning and thorough risk assessment for Arctic operations.

As stated in the IMO Guidelines for Voyage Planning (A.893(21)), a detailed voyage plan should include, among other things, "*contingency plans for alternative action to place the vessel in deep water or proceed to a port of refuge or safe anchorage in the event of any emergency necessitating abandonment of the plan, taking into account existing shore-based emergency response arrangements and equipment and the nature of the cargo and of the emergency itself.*"

Access to emergency support services in Canadian Arctic waters is extremely limited, and there are currently no dedicated emergency response organizations operating in the Canadian North. Accordingly, it is highly recommended that shipowners pre-arrange emergency support prior to the voyage, including towing assistance, salvage support, and spill response capability.

Vessels are also reminded that CCG icebreakers are unavailable in the Canadian Arctic during the winter months, and this should be considered when assessing the minimum survival time. Accordingly, vessels should be equipped with adequate life-saving appliances, survival equipment, and thermal protection suitable for extended survival periods, and the same should be reflected in the Polar Ship Certificate and Record of Equipment, as well as the Polar Waters Operational Manual (PWOM).

8 Arctic Waters Pollution Prevention Act and the Polar Code

Vessels intending to operate within Canadian Arctic waters are subject to certain unique requirements in addition to those common to vessels operating elsewhere in Canada. The nature of these additional requirements varies from one vessel to another and depends on, among other things, vessel type, vessel size, area of operation, or activity in which the vessel is engaged. The *Arctic Waters Pollution Prevention Act* (AWPPA) and its associated regulations establish these unique requirements. The primary objectives are to address:

- the unique hazards associated with polar operations,
- the additional demands that polar operations place on vessels, their systems, and operations (including navigation), and
- the vulnerability of coastal Arctic communities and polar ecosystems to vessel operations.

The Polar Code entered into force on 1 January 2017 and was implemented in Canada with the ASSPPR and communicated out to mariners via SSB No.: 05/2018. The Polar Code is mandatory for vessels operating under the *International Convention for the Safety of Life at Sea* (SOLAS) and the *International Convention for the Prevention of Pollution from Ships* (MARPOL). It regulates the design, construction, equipment, operational, training, search and rescue and environmental protection matters relevant to vessels operating in polar waters.

Details of Canada's requirements and additional guidance for vessels operating in its Arctic waters can be found on Transport Canada's website and by contacting Transport Canada's Prairie and Northern Region Marine Safety and Security office.

8.1 Zone Dates, AIRSS, and POLARIS

Arctic waters under Canadian jurisdiction are divided into 16 zones. The *Shipping Safety Control Zones Order* prescribes these zones (SSCZ). Schedule 1 of the ASSPPR outlines earliest entry and the latest exit dates for each zone and for each category of vessel. The zones have been organized in such a way that zone 1 has historically had the most severe ice conditions, and zone 16 the least. Higher ice-strengthened vessels can operate for longer periods in higher severity zones.

For vessels intending to operate outside of the dates of this prescriptive system have the option of using either the Arctic Ice Regime Shipping System (AIRSS) or the Polar Operational Limit Assessment Risk Indexing System (POLARIS). Both AIRSS and POLARIS are methodologies for determining ice operational risk that considers a vessel's ice class and the prevailing ice conditions observed from the vessel's bridge. Transport Canada recognizes that the use of either AIRSS or POLARIS by identical vessels in identical ice regimes could produce minor differences in operating outcomes depending upon which system is used. To help address certain situations where this variance could occur, the Regulations therefore require that all Polar Class vessels and/or all vessels built after January 1, 2017, must use POLARIS. For vessels build before this date that carry a Polar Ship Certificate, they should use the system stipulated on the certificate. All other vessels are afforded the option of using either AIRSS or POLARIS when operating outside the zone dates. These vessels are required to submit their AIRSS or POLARIS message upon their first point of entry into each SSCZ or modification of their voyage. See ASSPPR for application information.

The details on the AIRSS system are found in the TP12259 - Arctic Ice Regime Shipping System (AIRSS) Standard. For additional information on using the Zone Dates, AIRSS and POLARIS see *Guidelines for Assessing Ice Operational Risk* (TP 15383).

8.2 Polar Ship Certificate and Polar Waters Operating Manual

Section 6 of the ASSPPR has the effect of making the safety-related Polar Code requirements applicable to certain vessels operating in polar waters. All vessels to which section 6 of the ASSPPR apply, intending to operate in polar waters, must have a valid Polar Ship Certificate (PSC) onboard. For Canadian vessels the PSC will generally be issued by a Recognized Organization (RO). These vessels will also need to carry a PWOM. The PWOM will provide the Owner, Operator, Master, and crew with sufficient information regarding the vessel's operational capabilities and limitations to support their decision-making process. All crew members need to know the procedures and equipment described in the PWOM relevant to their assigned duties.

Vessels are reminded to observe the operational limitations stated in the Polar Ship Certificate, including but not limited to:

- Maximum/Minimum operating draughts
- Temperature limitations
- Latitude limitations
- Permitted ice conditions

Operations outside these limits should not be undertaken.

8.3 Pollution Prevention

The ASSPPR contains a range of safety and pollution prevention requirements that address the unique risks confronted by ships operating in Canada's Arctic. The regulations incorporate certain requirements of the Polar Code, albeit with the addition of Canadian modifications, that help ensure that strict safety measures and discharge requirements of the *Arctic Waters Pollution Prevention Act* are maintained.

Except where otherwise indicated, the pollution prevention sections of the ASSPPR apply to all Canadian vessels operating in polar waters, and foreign vessels operating within the SSCZ (including fishing vessels, pleasure craft, and vessels without a mechanical means of propulsion).

9 Certificate of Proficiency and Ice Navigators

Vessels operating in polar waters are required to be crewed by personnel adequately trained, qualified, and experienced for operating in polar conditions. For Canadian Arctic waters the requirements are outlined in the *ASSPPR*.

Personnel training and qualification requirements per the *Arctic Shipping Safety and Pollution Prevention Regulations*

<table>
<tr><td rowspan="2"></td><td colspan="3">Requirements based on ice conditions or Zone Dates**</td></tr>
<tr><td colspan="3">Polar Code</td><td rowspan="2">Outside Zone dates in row 14 of the schedule</td></tr>
<tr><td>Ice Free</td><td>Open Waters</td><td>Other Waters</td></tr>
<tr><td>Passenger vessels certified to Chapter 1 of SOLAS</td><td></td><td rowspan="3">Basic training for master, chief mate, and officers in charge of a navigational watch</td><td rowspan="3">Advanced training for master and chief mate

Basic training for officers in charge of a navigational watch</td><td></td></tr>
<tr><td>Tankers 500 gross tonnage or more certified to Chapter 1 of SOLAS</td><td></td><td></td></tr>
<tr><td>Other vessels 500 gross tonnage or more</td><td></td><td></td><td></td></tr>
<tr><td>Vessels 300 gross tonnage or more (including fishing vessels and pleasure craft) *</td><td></td><td></td><td></td><td rowspan="3">Advanced training for ships operating in polar waters

Or

Experience as outlined in section 10(2)(b)(i) of ASSPPR</td></tr>
<tr><td>Vessels carrying, or towing/pushing a vessel carrying, pollutants or dangerous goods*</td><td></td><td></td><td></td></tr>
<tr><td>Vessels towing/pushing another vessel with a combined tonnage of 500 or more*</td><td></td><td></td><td></td></tr>
</table>

**Vessels not certified to Chapter 1 of SOLAS*
***Chart is provided as a visual reference. Operators should consult the ASSPPR and Polar Code for further information specific to their vessel*

1. Ice terminologies such as Ice Free and Open Waters, are defined in the Polar Code.

   The following definitions are to be noted

   - **Open Water:** A large area of freely navigable water in which ice is present in concentrations less than 1/10. No ice of land origin is present.
   - **Bergy Water:** An area of freely navigable water in which ice of land origin is present. Other ice types may also be present, although the total concentration of all other ice is less than 1/10.
   - **Ice Free:** No ice present.
   - **Other Waters:** Waters that are neither Ice-Free nor Open Water.

   Operators are reminded that the Canadian Arctic is generally considered to be ‘Other Waters’.

2. Basic training and advanced training for ships operating in polar waters, as required by the ASSPPR and the Polar Code, is defined in Chapter V Regulation V/4 of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW).

3. Experience outlined in section 10(2)(b)(i) of the ASSPPR states that the Ice Navigator must:
    - have served on a vessel in the capacity of master or person in charge of the deck watch for at least 50 days, of which 30 days must have been served in international Arctic waters while the vessel was in ice conditions that required the vessel to be assisted by an icebreaker or that required manoeuvres to avoid concentrations of ice that might have endangered the vessel.
4. All Ice Navigators on a vessel must have all the qualifications under the *Canada Shipping Act, 2001* to act as a master or a person in charge of the deck watch.

Additional Information and Coming Amendments

For additional training and certification requirements, see Ship Safety Bulletin 20/2023, which explains how masters, deck officers and any other crew members can meet certification and familiarization training requirements for those on certain ships operating in polar waters. While the ASSPPR and the Polar Code require officers to have certification for vessel operating in polar waters in accordance with the STCW Convention, the requirements to obtain this certification are being addressed in coming amendments to the Marine Personnel Regulations.

Having qualified persons or Ice Navigators on board does not absolve the master and officers of the navigational watch of their duties and obligations for the safety of the vessel and protection of the environment.

10 Further Considerations

The following section outlines recommended measures to mitigate the impact of shipping on traditional hunting and fishing, environmentally sensitive areas, marine mammals, and caribou migration in the Canadian Arctic. It is strongly recommended that the vessel operator review these measures before undertaking a voyage in the Canadian Arctic.

The master shall plan a route considering Chapter 11 of the Polar Code and the following:

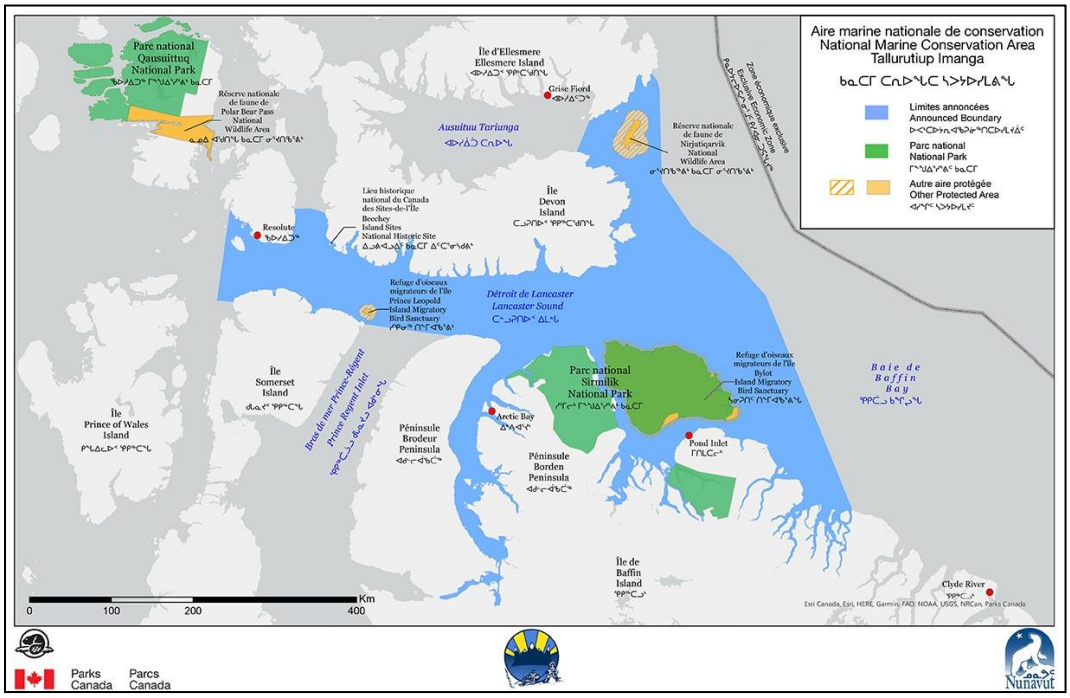
- Current information on relevant vessel's routing systems, speed recommendations and vessel traffic services relating to known areas with densities of marine mammals, including seasonal migration areas.
- National protected areas along the route.
    - Section A of Annual Notice to Mariners provides information on Marine Mammals Guidelines and Marine Protected Areas, including the Canadian Arctic and refers to general regulatory requirements for all Oceans Act Marine Protected Areas which should be reviewed regularly for updates.
    - There are regulatory requirements for vessels operating in the Tuvaijuittuq Marine Protected Area.
    - Voluntary measures are in place to minimize risks of vessel collisions, and potential impacts of underwater noise on beluga whales and bowhead whales in the two established Marine Protected Areas (the Tarium Niryutait Marine Protected Areas and the Anguniaqvia niqiqyuam Marine Protected Areas) in Canada's Western Arctic within the Inuvialuit Settlement Region.
    - Vessels navigating in the Kitikmeot Region should also refer to section A of Annual Notice to Mariners. Note that there are measures in place for the protection of hunters and trappers and migrating caribou.
- The vessel should consider maintaining an extra lookout when transiting Canadian Arctic waters.
- It is recommended that vessels carry individuals with local knowledge of the vessel's area of operations.

- Vessels could be subjected to land use conformity and impact assessment determinations in the Canadian Arctic. Vessels should contact relevant territorial authorities with details of their planned transit before undertaking a voyage through the Canadian waters (ex: Nunavut Planning Commission and Environmental Impact Screening Committee).
- When transiting through the Tallurutiup Imanga National Marine Conservation Area (TINMCA), Sarvarjuaq Marine Protected Area and Qikiqtait Marine Protected Area notwithstanding emergency situations, vessels must navigate with caution and remain at a safe and practicable distance from sensitive areas.

Tallurutiup Imanga National Marine Conservation Area

The Tallurutiup Imanga (TI) National Marine Conservation Area (NMCA), located in Nunavut and encompassing Lancaster Sound and adjacent Arctic waters, covers approximately 108,000 km² and protects one of the most biologically productive marine ecosystems in the Arctic. The area provides critical habitat for narwhal, beluga, bowhead whales, walrus, polar bears, seals, seabirds, and Arctic char, while also supporting Inuit harvesting, travel, and cultural practices.

Below is a map showing the area of TINMCA.



Source: Parks Canada

Sarvarjuaq Marine Protected Area

The Sarvarjuaq Marine Protected Area (MPA) was established in March 2026 in northern Baffin Bay within the North Water Polynya region. The protected area covers approximately 73,700 km² and includes ecologically significant marine habitat supporting narwhal, beluga, walrus, seals, seabirds, and other Arctic marine species. The area was established under the *Oceans Act* through collaboration between the Government of Canada and the Qikiqtani Inuit Association to support the conservation of ecologically and culturally important marine ecosystems, while recognizing Inuit harvesting rights and stewardship responsibilities.

Qikiqtait Marine Protected Area

The Qikiqtait Marine Protected Area (MPA) is in Lancaster Sound and eastern Jones Sound in the High Arctic region of Nunavut. Established under the Oceans Act in March 2026, the protected area conserves approximately 13,700 km² of ecologically significant marine habitat that supports polar bear, walrus, seals, narwhal, seabirds, and Arctic char populations, as well as important migratory and feeding areas for marine mammals. The MPA was established through collaboration between the Government of Canada and Inuit partners, including the Qikiqtani Inuit Association, and supports Inuit-led conservation and stewardship objectives while recognizing existing Inuit harvesting rights and traditional use activities.

11 References

Department of Justice Canada

- Arctic Shipping Safety and Pollution Prevention Regulations
- Arctic Waters Pollution Prevention Act
- Canada Shipping Act, 2001
- Collision Regulations
- Marine Personnel Regulations
- Navigation Safety Regulations, 2020
- Shipping Safety Control Zones Order
- Vessel Traffic Services Zone Regulations

Transport Canada

- Prairie and Northern Region
- Marine Publications Abstracts
- How to Meet the STCW Requirements for Masters, Deck Officers and Other Crew Members of Certain Canadian Ships Operating in Polar Waters (Ship Safety Bulletin No. 20/2023)
- Coming into force: New Arctic Shipping Safety and Pollution Prevention Regulations - SSB No.: 05/2018
- TP 12259 Arctic Ice Regime Shipping System (AIRSS) Standard
- TP 13670 Guidelines for the Operation of Passenger Vessels in Canadian Arctic Waters
- TP 15383 Guidelines for Assessing Ice Operational Risk

Canadian Coast Guard

- Ice Navigation in Canadian Waters
- Marine Communications and Traffic Services – Contacts
- Navigational Warnings (NAVWARN)
- Notices to Mariners (NOTMAR)
- Navigational Areas (NAVAREAs)
- Radio Aids to Marine Navigation

Fisheries and Oceans Canada

- Northern Canada Sailing Directions

PAME:

- Protection of the Arctic Marine Environment
- Polar Water Operational Manual (PWOM)

IMO Resolutions

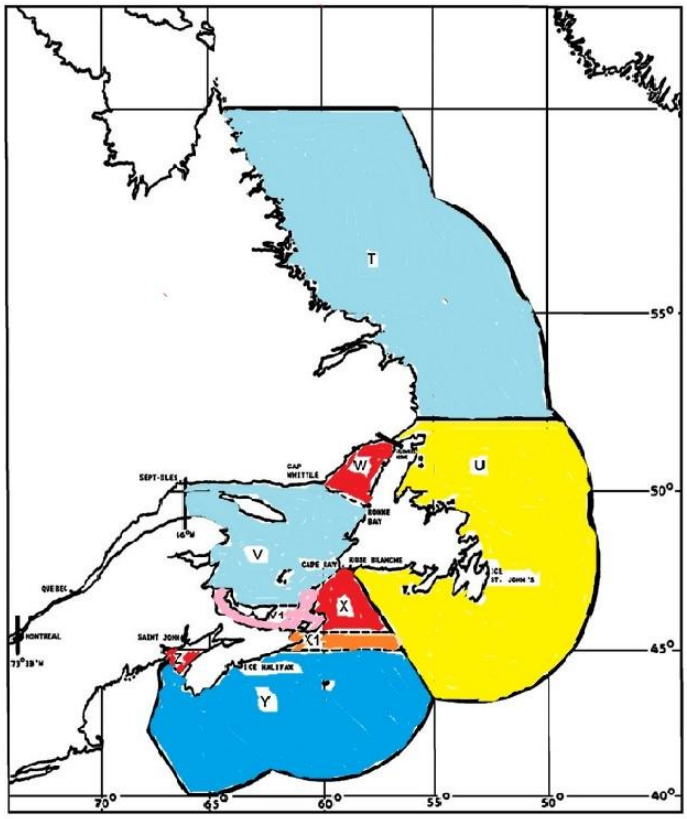
- A.893(21) Guidelines for Voyage Planning
- A.999(25) Guidelines on Voyage Planning for Passenger Ships

Authority: Transport Canada

7B Joint Industry - Government Guidelines for the Control of Oil Tankers and Bulk Chemical Carriers in the Ice Control Zones of Eastern Canada (JIGs) TP15163

These Guidelines apply to all laden oil tankers and to tankers carrying liquid chemicals in bulk when proceeding through an active Ice Control Zone in Eastern Canadian waters and fishing zones south of 60° North. The Canadian Coast Guard may declare any ice control zone to be an active Ice Control Zone and promulgate this information via Navigational Warning and Notices to Mariners. When proceeding through an active Ice Control Zone, all ships to which the Guidelines apply should, have on board at least one "Ice Advisor", who meets the requirements as prescribed in JIGs. Joint Industry - Government Guidelines for the Control of Oil Tankers and Bulk Chemical Carriers in the Ice Control Zones of Eastern Canada (JIGs) TP15163

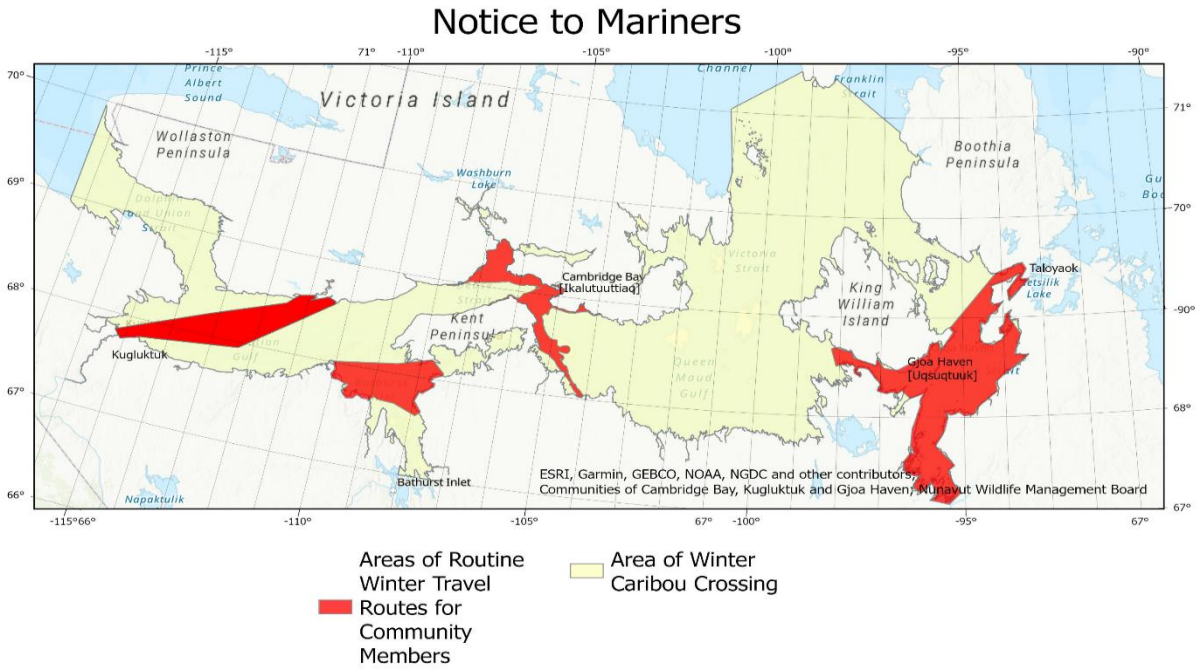
Figure: Eastern Canada Ice Control Zones



Map showing colors to distinguish individual Ice Control Zones

Authority: Canadian Coast Guard and Transport Canada

7C Vessels Intending to Navigate in Kitikmeot Region in Canada's Northern Waters



Navigation In Kitikmeot Region

Dolphin and Union Caribou migrate between Victoria Island and the Mainland and King William Island areas. The open ice created by vessels jeopardizes the migration of the caribou in the fall and spring. Opened areas also present significant risks to the safety of people crossing the sea ice in the region.

Voluntary Avoidance

Voluntary measures apply to any vessel transiting within the protection zone outlined in this notice (see yellow and red areas in map above) and should only be taken when they will not jeopardize the safety of navigation. These include:

1. Slowdown to minimum safe speed from December 1st to June 30th (Red Areas);
2. Slowdown to minimum safe speed if caribou or people are encountered;
3. Use local information to avoid passing in front of caribou or people traveling on sea ice as crossing routes may be subject to change;
4. Avoid opening multiple leads.

Reporting

Notice required a week prior and follow up call/emails before transiting the areas as follows. October 15th to November 30th and April 15th to June 30th to minimize risks to migrating caribou (Yellow Area), and December 1st to June 30th (Red Areas) to minimize risks to people traveling across sea ice. Preferred method of communication is via phone call.

Notice should be made, in order, to:

1. Gjoa Haven (Uqsuqtuuk)
    a) Hamlet Office: 867-360-7141
    b) Hunters and Trappers Organization Manager: 867-360-6028
2. Cambridge Bay (Ikalutuuttiaq)
    a) Hamlet Main Office: 867-983-4600
    b) Hamlet After Hours of Arctic Senior Administrative Officer: 867-983-5203
    c) Ekaluktutiak Hunters and Trappers Organization (EHTO) Main Office: 867-983-2426
    d) Ekaluktutiak Hunters and Trappers Organization (EHTO) After Hours: 867-445-3614
    e) Email: cambay@krwb.ca
3. Kugluktuk
    a) Hamlet Office: 867-982-6500
    b) Hunters and Trappers Organization Office: 867-982-4924
    c) Email: kugluktuk@krwb.ca

Caribou Crossing Area Boundaries

Below are the coordinates points for reference. The area south of the northern coordinates can be referenced within the map.

Boundaries	
Western Boundary	69° 95' N 117° 37' W 68° 96' N 117° 37' W
Northern Boundary points (clockwise order)	
• Victoria Island	70° 21' N 101° 08' W
• North of Tingauyalik Island (Smaller island to Southwest)	70° 40' N 100° 98' W
• North of Umingmalik Island (Gateshead Island)	71° 02' N 101° 16' W
• Boothia Peninsula	71° 43' N 099° 29' W

Authority: Transport Canada

7D Vessels Intending to Navigate in the St. Lawrence Waterway, West of Les Escoumins Pilot Station Starting from December Each Year

The following requirement will be enforced for vessels transiting the St. Lawrence waterway, west of Les Escoumins pilot station starting December each year. Enforcement date will be broadcast through Navigational Warning (NAVWARN) except for Wide beam vessels (Notice 27A) with breadth greater than 32.5 meters en route to a location upstream of Quebec bridges up to Montreal. For Wide beam vessels, enforcement date is fixed to start on December 1st.

Canadian Regulations for Navigation in frazil ice or ice slush

The Gulf of St-Lawrence and the St-Lawrence River provide unique conditions for navigation during winter months. Between the months of December and March, whenever the water temperature drops below +0.5° C (at the port of Quebec) chances of encountering frazil ice may arise therefore vessel icing or any machinery system blockage can occur without warning.

Vessels navigating the Gulf and river of the St-Lawrence are not required to be ice classed.

Canadian regulations require that foreign vessels in the internal waters of Canada and Canadian vessels that navigate in frazil ice or ice slush conditions meet the requirements for the design and construction of sea inlets set out in the annex to *IMO Circular MSC/Circ.504, Guidance on design and construction of sea inlets under slush ice conditions,* are complied with or that other equivalent means are used to prevent frazil ice or ice slush from blocking sea inlets.

Foreign vessels should refer to *Vessel Construction and Equipment Regulations* SOR/2023-257 section 117. Canadian vessels should refer to the Regulations and publication TP 15415 Canadian Modifications for the Vessel Construction and Equipment Regulations.

Transport Canada will restrict any non-compliant vessel from transiting the St-Lawrence waterway, west of Les Escoumins pilot station by enforcing the above requirement.

A temporary system installation may be accepted based on the following:

- For one voyage only,
- Approved and installed in accordance with rules of a Classification Society,
- Underwater modifications may be postponed until next scheduled dry docking,
- Any returning vessels having had a temporary system will once again require Classification Society approval, and
- Other requirements may apply.

Ship specific procedures as per ISM Code, shall address all risks associated with the vessel operation in cold weather climates and strictly followed by all crew members.

Any vessel experiencing operational difficulties caused by icing or sea water cooling issues during its transit shall make immediate corrective actions. If not, the vessel's Master may be directed to seek any necessary assistance to proceed to a place of refuge.

Compliant Sea Water (S.W.) Cooling system

A compliant S.W. cooling system is required on each vessel transiting through the St. Lawrence waterway, west of Les Escoumins pilot station. Transport Canada maintains a list of known vessels with compliant S.W. cooling system. Vessels are encouraged to ensure that their IMO numbers are on the list. If they are not in the list, contact Transport Canada Winternav office at winternav@tc.gc.ca.

Vessels are deemed compliant provided their IMO number is on the list and that S.W. cooling system has not been modified/altered since last information submitted to Transport Canada.

When a vessel S.W. cooling system is non-compliant or an unknown type, *Winter Navigation Vessel Information Form* about the vessel's system must be forwarded to Transport Canada Winternav office at winternav@tc.gc.ca.

The annual winter navigation documentations listed below can be obtained by writing to winternav@tc.gc.ca:

- Winter Navigation Vessel Information Form
- Diagrams of compliant and non-compliant S.W. cooling systems
- List of vessel IMO numbers with compliant S.W. cooling system
- Marine Safety Checklist for Operation in Ice Covered Waters to use for guidance only.

Following mandatory and recommended documents to be kept on board during winter months by all vessels transiting west of Les Escoumins pilot station:

- Ice Navigation in Canadian Waters, Canadian Coast Guard, 2022
- TP 14335 Winter Navigation on the River and Gulf of St. Lawrence, 2011 (available upon request through the Transport Canada Marine Publications website)
- TP 15163 Joint Industry – Government Guidelines for the Control of Oil Tankers and Bulk Chemical Carriers in Ice Control Zones of Eastern Canada JIGGS, 2015.

Authority: Transport Canada

A4 Fishing Activity

8 Information Concerning Fishing Vessels on the East and West Coasts of Canada

1 General

1.1 When navigating in coastal waters, mariners should exercise caution in areas where large concentrations of fishing vessels may operate. Many of these fishing vessels use nets which frequently extend to a considerable distance from the vessel and may be difficult to see.

WEST COAST

2 Georgia Strait - Fraser River

2.1 Many fishing vessels using gill nets operate, both by day and night, in the Fraser River and its approaches. The period of operation is approximately from July 1 to November 1, and sporadically throughout the year.

2.2 Mariners are advised to navigate with caution in this area since gill nets can be up to 375 meters in length.

3 Approaches to Juan de Fuca Strait - La Pérouse Bank - Swiftsure Bank - Estevan Point

3.1 Mariners are warned that during the period from approximately April 15 to September 30, numerous fishing vessels may be encountered inside the 50 fathom line off Estevan Point, La Pérouse, Swiftsure Bank and in the approaches to Juan de Fuca Strait. These vessels may be trolling or towing nets. At night, such vessels may frequently be at anchor. Vessels approaching these areas from any direction are advised to pass to seaward and clear of the banks due to the prevalence of restricted visibility in this vicinity. Vessels which are obligated to cross these banks should navigate with caution to avoid risk of collision with fishing vessels Mariners can receive radar derived information concerning the locations of large concentrations of fishing vessels by contacting the Marine Communications and Traffic Services (MCTS) Centre at Prince Rupert Traffic.

4 Juan de Fuca Strait

4.1 Numerous fishing vessels using drift nets or purse seine nets may be encountered, both day and night, in the Juan de Fuca Strait. The period of operation is approximately from July 1 to November 1. Drift nets can extend up to 552 meters in length from the end that is attached to the operating vessel. The free end is marked by a white light.

5 West Coast of Vancouver Island

5.1 Large fishing/factory ships may operate off the West Coast of Vancouver Island between Cape Flattery and Estevan Point from June to November. These ships may be fishing, working cargo or drifting.

6 Fishing Vessel Advisory Notice

Commercial ships and fishing vessels using the inside passage waters of British Columbia during the commercial fishing season.

6.1 Fishing vessels when in transit (not fishing) are advised to monitor the VESSEL TRAFFIC SERVICES CHANNEL for the VTS Sector they are in.

6.2 All commercial vessels transiting an open fishing ground are advised to monitor VHF Channel 78A (156.925 MHz) in addition to the Vessel Traffic Services Channel for the VTS Sector they are in. Vessels while in transit through the grounds should broadcast their intended track at frequent intervals (every ½ hour) on VHF Channel 78A, and more frequently under reduced visibility conditions.

6.3 Fishing vessels and other vessels when underway are required by regulation to travel with high intensity deck lights extinguished. Vessels in contravention are subject to severe penalties.

6.4 All vessels, including vessels engaged in a commercial fishery, are advised that it is imperative that correct lights and shapes are exhibited in accordance with the *International Regulations for Preventing Collisions at Sea, 1972* as amended.

6.5 Gill Net fishing vessels should remain on the end of their net to enable transiting vessels, when known to be in transit in an active fisheries area, to identify where the fishing vessel is in relation to her net. In addition, at night, it is recommended that the Gill Net fishing vessel indicate the lie of her net to transiting vessels by directing the beam of her searchlight in the direction of the danger.

6.6 All vessels when transiting or crossing a Traffic Separation Scheme (Lanes) are required to observe Rule 10 of the International Regulations for preventing *Collisions at Sea, 1972* (with Canadian modifications) as amended.

Refer to Part 3 of the Radio Aids to Marine Navigation publication, for information on zones, sectors and VHF frequencies.

7 Use of Radiotelephone

7.1 Vessels to seaward of Juan de Fuca Strait and within waters under Canadian jurisdiction are required to maintain a continuous listening watch on the VHF radiotelephone channel in accordance with the provisions of the *Navigation Safety Regulations, 2020*.

7.2 Mariners can communicate with Fisheries patrol vessels or "Prince Rupert Traffic" to exchange information or assist in making a safe passage. These patrol vessels can initially be contacted on VHF Channel 16 (156.8 MHz).

7.3 The Vessel Traffic Services (VTS) for the coastal waters of southern British Columbia designates VHF channels for specific sectors. Refer to Part 3 of the Radio Aids to Marine Navigation publication, for details.

7.4 Mariners are recommended to refer to the appropriate US sources for radiotelephone procedures when navigating in US waters.

EAST COAST

8 Bay of Fundy and Grand Manan Basin

8.1 Mariners may encounter large concentrations of fishing vessels throughout the year in the southern approaches to the Bay of Fundy and within the area of Grand Manan Basin.

8.2 Vessels proceeding through these areas should navigate with caution to avoid risk of collision with vessels engaged in fishing, and maintain a continuous radio watch on VHF Channel 16.

8.3 Use of the traffic separation scheme in the Bay of Fundy is compulsory.

8.4 The MCTS Centre at Saint John "Fundy Traffic" may be contacted for detailed information concerning fishing vessel concentrations. Refer to Part 3 of the Radio Aids to Marine Navigation publication for details.

9 Grand Banks of Newfoundland

9.1 Mariners are advised that large concentrations of fishing vessels may be encountered in all areas on the Grand Banks of Newfoundland.

9.2 Vessels proceeding through areas of the Grand Banks are advised to navigate with caution to avoid risk of collision with vessels engaged in fishing, and to maintain a continuous radio watch on VHF Channel 16.

9.3 Rule 10(s) of the Collision Regulations states that "a vessel making a transatlantic voyage shall, as far as practicable, avoid crossing the Grand Banks of Newfoundland and Labrador north of latitude 43° north".

10 Strait of Belle Isle and Approaches

10.1 Mariners may encounter large concentrations of fishing vessels throughout the navigation season in the Strait of Belle Isle and approaches.

10.2 Vessels transiting through this area should navigate with caution to avoid risk of collision with vessels engaged in fishing, and maintain a continuous radio watch on VHF Channel 16.

10.3 The MCTS Centre at St. Anthony, St. Anthony Coast Guard Radio, may be contacted for information concerning fishing activity.

11 Use of Radiotelephone

11.1 Mariners are reminded of the requirement to maintain a continuous listening watch on the appropriate bridge-to-bridge VHF radiotelephone channel in accordance with the *VHF Radiotelephone Practices and Procedures Regulations* while navigating in waters under Canadian jurisdiction.

Authority: Canadian Coast Guard
Transport Canada

9 Marking of Fishing Gear

In order to carry out their duties, Government vessels must operate wherever necessary and cannot be confined to customary commercial routes. Government vessels are instructed to exercise reasonable care to avoid damage to fish nets, traps and trawl lines. Similarly, fishermen should exercise reasonable precautions for protection of their nets when setting their equipment. Accordingly, fishermen are warned that they cannot expect favorable consideration of claims for damage to their nets, traps and trawls, attributed to Government vessels, unless they are marked in a manner so that, under prevailing conditions, the markers are visible to a ship's lookout in sufficient time to avoid fouling their gear.

Authority: Canadian Coast Guard (Fleet)

9A Closure to Crab Fishing: Deltaport and Tsawwassen Ferry Terminal

The Vancouver Fraser Port Authority (VFPA), doing business as Port of Vancouver, is an organization established and governed by the *Canada Marine Act*, as well as the *Port Authorities Management Regulations* and Letters Patent issued pursuant to the Act. VFPA is responsible for maintaining safe navigation in the waters within its jurisdiction.

The Department of Fisheries & Oceans (DFO) is the federal agency that delivers programs and services that support sustainable use and development of Canada's waterways and aquatic resources. Section 24 of the *Fisheries Act* states that fishing apparatus "shall not be set or used in such manner or in such place as to obstruct […] navigation."

VFPA and DFO have jointly determined that safety of navigation in the area described below under 'Description of "Navigational Closure Area"' requires closure to commercial crab fishing.

Purpose
The purpose of this closure is to maintain a safe approach for deep sea vessels, berthing tugs and ferries transiting in and out of Deltaport and Tsawwassen Ferry Terminal.

Fishing Gear: "Crab Floats & Traps"
Crab floats and traps must remain at all times outside of the closure area described below and shown in the attached map. **This area is reserved for navigation only.** Any crab floats and traps placed in the closure area will be removed under the authority of VFPA/DFO. Crab fishers are reminded to consider the impact on navigation when placing gear outside the closure area.

Information on the "Navigational Closure Area" for Deltaport & Tsawwassen Ferry Terminal

Description of the "Navigational Closure Area"
The Navigational Closure Area includes the turning basin adjacent to the container terminal, approaches to the Coal berth and Tsawwassen Ferry Terminal as shown on the attached map* and defined below. Coordinates are shown in chart datum (NAD 83).

Restricted Area Coordinates: Starting from the in-shore end of turning basin

49° 01' 34"N - 123° 08' 47"W
49° 01' 28"N - 123° 08' 32"W
49° 00' 57"N - 123° 08' 27"W
49° 00' 56"N - 123° 08' 11"W
49° 00' 36"N - 123° 07' 46"W
49° 00' 26"N - 123° 07' 59"W
49° 00' 22"N - 123° 07' 50"W
49° 00' 28"N - 123° 07' 35"W
49° 00' 07"N - 123° 07' 07"W
49° 00' 07"N - 123° 11' 16"W
49° 00' 55"N - 123° 11' 16"W
49° 00' 46"N - 123° 10' 35"W
49° 01' 05"N - 123° 10' 19"W
49° 00' 49"N - 123° 09' 32"W, then following the shoreline of Deltaport to the beginning point.

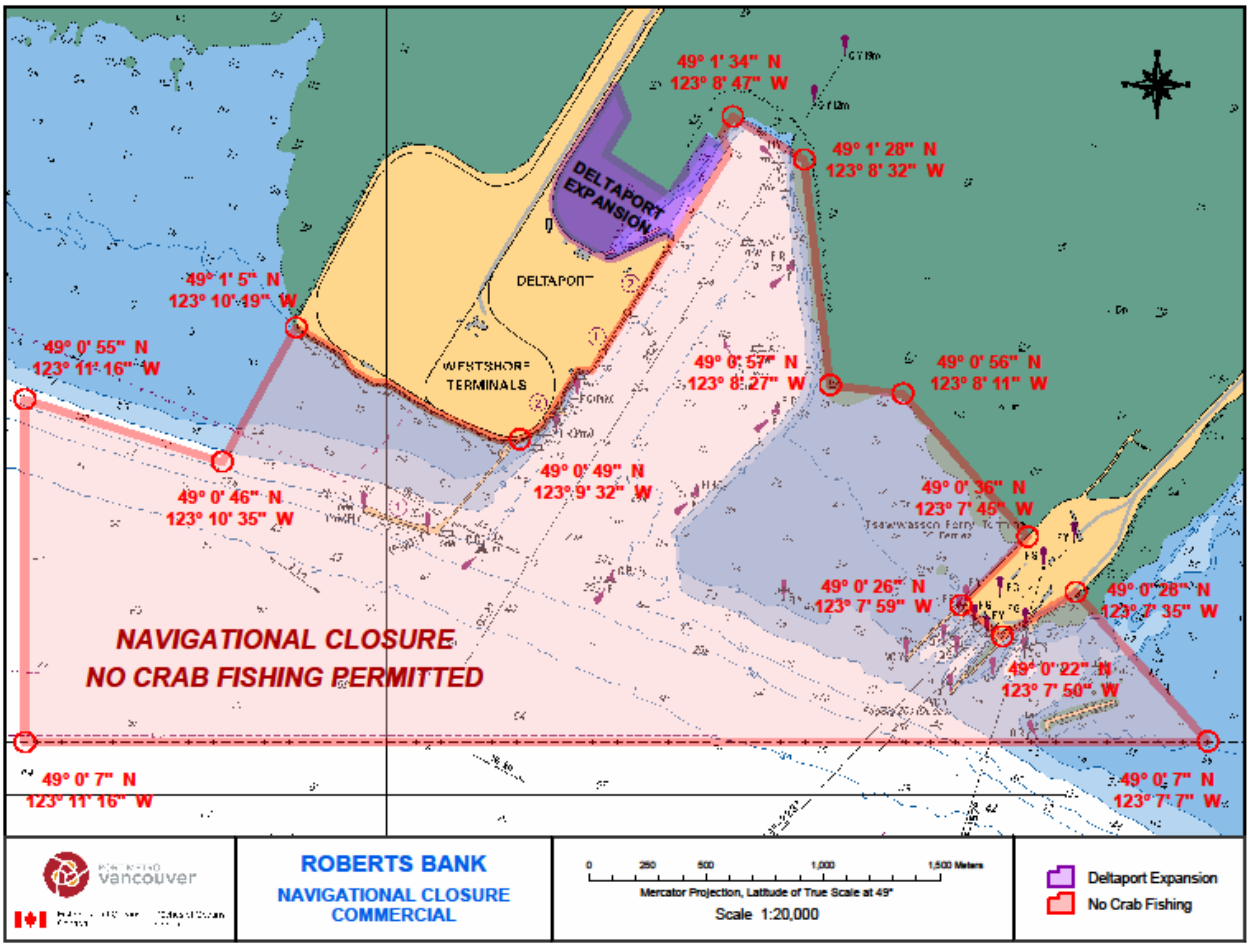
Contact List

In the case of a "Marine Emergency," contact the Canadian Coast Guard radio on VHF 16, or for non-emergencies, contact the Marine Communications and Traffic Services at 250-363-6333.

For Navigational issues, contact VFPA's Operations Center at 604-665-9086

For Fisheries issues and violations, contact the local office of Fisheries and Oceans Canada, the Steveston Field Office at 604-664-9250 during normal business hours or the DFO Observe Record Report (ORR) after-hours line at 1-800-465-4336.

For Boating Safety issues, contact Transport Canada, Office of Boating Safety at 250-480-2792.



Authority: Vancouver Fraser Port Authority

A5 Navigation Safety

10 Routeing of Ships

1 GENERAL

1.1 Rule 10 of the *Collision Regulations* applies to all ships navigating in or near a routeing system.

1.2 The information on ships' routeing in this Notice was up-to-date at the time of printing. Monthly editions of the Notices to Mariners must be consulted for additions and amendments.

1.3 Ships which depart from these routes and meet with collisions may involve themselves in legal liability. Admiralty courts have held that, where traffic routeing systems are observed for the common safety of ships and are recognized on official charts, "it is negligent navigation to leave them without reason."

1.4 The Canadian compulsory routeing systems are modified by the provisions that fall under the heading "Canadian Modifications" to Rule 10 of the *Collision Regulations* as follows:

.1 In Canadian waters and fishing zones, a vessel engaged in fishing may fish in any direction in or near a traffic separation scheme, but shall not impede the passage of any vessel following a traffic lane.

.2 Every power-driven vessel of more than 20 metres in length is required to use the route within a traffic separation scheme or routeing system by which it can safety proceed to its destination.

.3 Conditional exemptions are also made for special purpose vessels.

1.5 Detailed information on the routeing of ships, which includes traffic separation schemes, deep water routes, areas to be avoided and other routeing measures, can be found in the appropriate *Sailing Directions* and in the International Maritime Organization (IMO) publication titled "*Ships' Routeing*."

2 CANADIAN ROUTEING MEASURES

2.1 **Compulsory Canadian Routeing Systems adopted by IMO.**

- **In the Approaches to Chedabucto Bay**
  Reference charts: 4013, 4233, 4301, 4321, 4335 and 4374 (Canada)
- **In the Bay of Fundy and Approaches**
  Reference charts: 4010, 4011, 4012, 4116 (Canada)
- **In the Strait of Juan de Fuca and its Approaches**
  Reference charts: 3440, 3461, 3462, 3601, 3602 and 3606 (Canada)
- **In Haro Straight and Boundary Pass**
  Reference charts: 3461, 3462, 3440, 3441 and 3601 (Canada)

Additional information Applicable in the Haro Straits and Boundary Pass

A) Turn Point Special Operating Area

The Turn Point Special Operating Area (SOA) has been established to enhance order and predictability, the efficient and safe movement of goods and services, and to further reduce the risk of accidents with respect to vessels transiting the boundary waters of Haro Strait and Boundary Passage in the vicinity of Turn Point on Stuart Island, Washington.

The Turn Point SOA consists of those Canadian and United States waters contained within a four (4) sided area connected by the following coordinates:

- 48°41.324N 123°14.245W (Turn Point Light, LL255/US 19790);
- 48°42.400N 123°13.967W;
- 48°41.087N 123°17.631W (Arachne Reef Light, LL254.3);
- 48°39.732N 123°16.438W (Tom Point Light, LL225).

B) Application

These procedures apply to all Canadian and United States VTS participant vessels within or approaching the Turn Point SOA from Boundary Passage, southbound for Haro Strait; and from Haro Strait, northbound for Boundary Passage or Swanson Channel, however, they do not apply to vessels southbound out of Swanson Channel.

C) Movement Procedures

a) A VTS participant, if towing astern, do so with as short a hawser as safety and good seamanship permits.

b) A VTS participant of 100 metres or more in length (LOA) will make best efforts consistent with safety and industry practices:

1. not to enter the Turn Point SOA when another VTS participant of 100 metres or more in length is already located within the SOA, unless;
    i. when following astern a minimum 0.5NM (5 cables) separation is maintained with the vessel ahead,
    ii. when overtaking in the SOA with the concurrence of Victoria MCTS that there is no opposing traffic and a CPA of at least 0.5NM (5 cables) is maintained.
    iii. if outbound from Boundary Pass and meeting an inbound vessel from Haro Strait already in the SOA, enter only after the outbound vessel is past the vector heading of the inbound vessel engaged in the turn and maintain at least a 0.5NM (5 cables) CPA,
    iv. if inbound from Haro Strait and meeting an outbound vessel from Boundary Pass already in the SOA, enter only after the outbound vessel has crossed a bearing line between Turn Point and Arachne Reef and maintain at least a 0.5NM (5 cables) CPA
2. maintain a distance off of Turn Point of at least 0.3 NM (3 cables).

All VTS participants approaching the Turn Point SOA are expected to make safe passing arrangements with other VTS participants at either Monarch Head or Blunden Islet southbound; and Lime Kiln Light (LL222/US19695) or Kellett Bluff Light (LL229/US19720) northbound. These arrangements should be made no later than reaching CIP 6 at Gowlland Point (LL253/US19800) southbound and approximately abeam Danger Shoal Light and Horn Buoy (US19775) northbound.

- **In the Strait of Georgia**
  Reference charts: 3462, 3463, 3492 and 3601 (Canada)

Mariners can obtain most up to date information on charts at Nautical charts and services.

2.2 **Recommended Canadian Routeing Systems**

- **Johnstone Strait - Race and Current Passages Traffic Separation Scheme**
  Reference chart: 3544 (Canada)

  Mariners using this traffic separation scheme should be aware of the following recommendation and caution:

  "Mariners are recommended to use their radiotelephone to provide information of their presence and warnings to other ships".

  CAUTION

  In some instances a large vessel proceeding westbound on an ebb tide may have difficulty in making the turn to starboard into Current Passage and clearing Ripple Shoal. Under such circumstances the master may decide to proceed against the traffic flow through Race Passage and should make every effort to warn other traffic in the area."

- **Broughton Strait - Haddington Island Traffic Separation Scheme**
  Reference chart: 3546 (Canada)

  Mariners using this traffic separation scheme should be aware of the following recommendation and caution:

  "Mariners are recommended to use their radiotelephone to provide information of their presence and warnings to other ships".

  CAUTION

  In some instances large vessels and tugs with long tows proceeding eastbound may have difficulty in making the turn to starboard to pass south of Haddington Island. Under such circumstances the master may decide to proceed against the traffic flow through Haddington Passage but should make every effort to warn other traffic in the area."

- **Vancouver and Approaches Traffic Separation Scheme**
  Reference charts: 3463, 3496 and 3526 (Canada)
- **Gulf and River St. Lawrence Routeing System**
  Reference charts: 1203, 1220, 1221, 1236, 1320, 4002, 4013, 4020, 4021, 4022, 4024, 4025, 4026, 4680 and 4731 (Canada)
- **Halifax and Approaches Routeing System**
  Reference chart: 4012, 4013, 4237, 4320, 8007 (Canada)
- **Placentia Bay Routeing System**
  Reference charts: 4839, 4841, 4622, 4624, 4016 and 4047 (Canada)
- **Bull Arm Routeing System**
  Reference chart: 4839, 4851 (Canada)
  Mariners can obtain most up to date information on charts at Nautical charts and services.

2.3 **Recommended Great Lakes Routeing Measures**

.1 The Great Lakes routing measures consist of a system of recommended courses on Lakes Ontario, Erie, Huron, Michigan and Superior.

.2 These courses are delineated on both Canadian and the United States general charts of the Great Lakes and are described in the appropriate Sailing Directions.

.3 In the interest of navigational safety and environmental protection, mariners are advised to observe these courses.

.4 The person in charge of the navigation of the ships may exercise discretion in departing from the recommended courses whenever weather or ice conditions render it necessary.

2.4 **Ice Routeing**

Refer to Notice to Mariners No. 6 for ice routeing in Canadian waters.

2.5 **Tanker Exclusion Zone - Pacific Coast**

.1 A tanker exclusion zone (TEZ) has been established off the Pacific coast of Canada as a result of the discontinuance of the Trans Alaska Pipeline Tanker Routes.

.2 The purpose of the TEZ is to keep laden tankers west of the zone boundary in an effort to protect the shoreline and coastal waters from a potential risk of pollution.

.3 The zone boundary follows the Canada/Alaska border to a point approximately 115 miles west of Langara Island, thence southward to approximately 73 miles southwest of Cape St. James, thence to 40 miles southwest of Amphitrite Point and thence due east to just off Cape Flattery.

.4 The TEZ is defined as follows:

a line from	54°00'00"N	136°17'00"W
thence to	51°05'00"N	132°30'00"W
thence to	48°32'00"N	126°30'00"W
thence to	48°32'00"N	125°09'00"W

.5 Loaded TAPS crude oil tankers transiting along the Pacific coast are requested to remain seaward of this zone boundary.

2.6 **Precautionary Area**

- **Terra Nova** Floating Production Storage and Offloading **(FPSO) (Grand Banks of Newfoundland)** Ships should navigate with particular caution in the area having a 10 nm radius centered on 46°28'.53N ad 048°28'.86W. Any ship planning to transit the precautionary area is advised to contact the FPSO vessel on VHF channel 16 and to comply with the instructions given while transiting the area. Ship movement in the area is monitored on a 24 hour basis.

  Reference Charts: 4000, 4001, 8011 and 8012 (Canada)

2.7 **Area to be avoided (ATBA)**

- **Roseway Basin Seasonal ATBA (June through December) (South of Nova Scotia)**
  Reference Charts 4003, 4012 and 4230 (Canada)

3 International Routeing Measures

3.1 The IMO publication entitled "*Ships' Routeing*" contains the full details and coordinates of all IMO routeing measures and *Associated Rules and Recommendations on Navigation*. Details for obtaining this IMO publication can be found in Notice to Mariners No. 14. The appropriate *Sailing Directions* should also be referred to for additional information.

4 Use of Routeing Systems

4.1 Routeing systems are intended for use by day and by night in all weather, in ice free waters or under light ice conditions where no extraordinary maneuvers or icebreaker assistance are required.

4.2 Routeing systems are recommended for use by all ships unless stated otherwise. Bearing in mind the need for adequate under-keel clearance, a decision to use a routeing system must take into account the charted depth, the possibility of changes in the sea-bed since the time of the last survey, and the effects of meteorological and tidal conditions on water depths.

4.3 A ship navigating in or near a traffic separation scheme shall in particular comply with Rule 10 of the Collision Regulations to minimize the development of risk of collision with another ship. The other rules of the Collision Regulations apply in all respects, and particularly the rules of part B, sections II and III, if risk of collision with another ship is deemed to exist.

4.4 At junction points where traffic from various directions meet, a true separation of traffic is not really possible, as ships may need to cross routes or change to another route. Ships should therefore navigate with great caution in such areas and be aware that the mere fact that a ship is proceeding along a through-going route gives that ship no special privilege or right of way.

4.5 A deep-water route is primarily intended for use by ships which, because of their draught in relation to the available depth of water in the area concerned, require the use of such a route. Through traffic to which the above consideration does not apply should, as far as practicable, avoid using deep-water routes. A deep-water route is a route within defined limits which has been surveyed for clearance of sea bottom and submerged obstacles as indicated on a chart.

4.6 A precautionary area should be avoided, if practicable, by passing ships not making use of the associated traffic separation schemes or deep-water routes, or entering or leaving adjacent ports. A precautionary area is an area within defined limits where ships must navigate with particular caution and within which the direction of traffic flow may be recommended.

4.7 In a two-way route, including two-way deep-water route, ships should as far as practicable keep to the starboard side. A two-way route is a route within defined limits inside which two-way traffic is established. The aim is to provide safe passage of ships through waters where navigation is difficult or dangerous.

Authority: Transport Canada

10A Mandatory Ship Reporting System

1. General

1.1 Chapter V of the Safety of Life at Sea (SOLAS) Convention allows for the introduction of mandatory ship reporting systems adopted by the International Maritime Organization (IMO).

1.2 Canadian ships are required to comply with any mandatory ship-reporting system adopted by IMO, which may apply to them and should report to the shore-based authority without delay when entering and, if required, when leaving the area covered by the system.

1.3 These systems are located in waters beyond Canadian jurisdiction, and details may be found in the radio aids to navigation publications of the appropriate administrations or in the relevant sections of the Admiralty List of Radio Signals, published by the United Kingdom.

Authority: Transport Canada

10B Danger Message Reporting

1. Danger messages shall be reported by the master of every vessel in any waters. The details of reporting systems may be found in the Radio Aids to Navigation publications of the appropriate administrations or in the Canadian Radio Aids to Marine Navigation. The master of every ship shall communicate the information required under section 112 of the *Canada Shipping Act, 2001* and SOLAS CH: V Regulations 31 and 32. by all means at the master's disposal to ships in the vicinity, to the nearest coastal States, and Flag state (in the case of loss of freight Container) if the ship encounters:

   A. dangerous ice, a dangerous derelict or any other direct danger to navigation.

   B. a tropical storm1 or a storm that the master has reasonable grounds to believe might develop into a tropical storm.

   C. Loss or observation of freight container(s) at sea

   D. winds of force 10 or higher on the Beaufort Scale for which no storm warning has been received by the ship; or

   E. sub-freezing air temperatures associated with gale force winds, causing severe ice accretion on superstructures.

   All radio communications shall be preceded by the safety signal, using the procedure prescribed by the *International Radio Regulations*.

2. In the event of the ship referred to in paragraph (1) being abandoned, or in the event of a report from such a ship being incomplete or unobtainable, the company, as defined in regulation IX/1.2, shall, to the fullest extent possible, assume the obligations placed upon the master by this regulations.

3. The following information is required in a danger messages:

   A. if the ship encounters dangerous ice, a dangerous derelict, or any other direct danger to navigation,

      i) the kind of the ice, derelict or other danger encountered,

      ii) the position of the ice, derelict or other danger when last observed, and

      iii) the time and date, in coordinated universal time (UTC), when the danger was last observed;

   B. if the ship encounters a tropical storm or a storm that the master has reasonable grounds to believe might develop into a tropical storm,

      i) a statement that a tropical storm has been encountered or a storm that the master has reasonable grounds to believe might develop into a tropical storm has been encountered, as the case may be,

      ii) the time and date, in coordinated universal time (UTC), and the position of the ship when the storm was last observed, and

      iii) if feasible,

         a) the barometric pressure, with the reading corrected if practicable, the unit of measure (such as millibars, millimetres or inches) and whether the reading is corrected or not,

         b) the barometric tendency that indicates the change in barometric pressure during the past three hours,

         c) the true wind direction,

         d) the wind force on the Beaufort Scale,

[1] For the purposes of this section, tropical storm means a hurricane, typhoon, cyclone or other storm of a similar in nature, and the master of a ship is deemed to have encountered a tropical storm if the master has reason to believe there is such a storm in the vicinity.

e) the state of the sea, such as smooth, moderate, rough or high,

f) the size of swell, such as slight, moderate or heavy, the true direction from which it comes and, if practicable, the period or length of swell, such as short, average or long, and

g) the true course and speed of the ship;

C. Loss or observation of freight container(s) at sea

i) Loss of freight Container(s) from a ship

a) General Information

- Type of report: Loss of freight container(s) from a ship
- Time (Universal Coordinated Time) and date
- Ship's identity (IMO Number/Name/Call Sign/MMSI Number)
- From: Master of the ship or contact details of their representative reporting on Master's behalf
- To: Nearest Coastal State where the incident occurred and flag State
- The message number:

In chronological order if other freight container loss messages are sent following the first one.

At the earliest, safe, and practicable opportunity, a thorough inspection shall be conducted. The number or estimated number of lost freight container(s) shall be verified. A message containing this verified number shall be marked as "final" and sent to the same recipients.

b) Position Reporting*

Position in latitude and longitude, or true bearing and distance in nautical miles from a clearly identified landmark (where possible)

- Position of the ship when freight container(s) were lost; or
- If the position of the ship when the freight container(s) were lost, is not known, the estimated position of the ship when the freight container(s) were lost; or
- If an estimated position of the ship when the freight container(s) were lost, is not known or cannot be determined, the position of the ship upon discovery of the loss.

Where available, a system of mechanical, electronic, and/or visual aids can be used, allowing near real-time reporting of the drop point of the freight container(s).

c) Total number or estimated number of freight container(s) lost, as appropriate:

d) Type of goods in freight container(s):

- Dangerous goods: Yes/No
- UN Number (if known)

e) Description of freight container(s) lost as far as available and practicable:

i. Dimension of freight container(s) (e.g., 20 foot);
ii. Type(s) of freight container(s) (e.g., reefer); and
iii. Number or estimated number of empty freight container(s)

f) Additional information, if available and practicable, for example, but not limited to:
- Cargo description according to the dangerous goods manifest (if applicable)
- Description of any cargo spill
- Wind direction and speed
- Sea current direction and speed
- Estimated drift direction and speed of lost freight container(s)
- Sea state and wave height

ii) Observation of freight container(s) drifting at sea

a) General Information
- Type of report: Observation of freight container(s) drifting at sea
- Time (Universal Coordinated Time) and date
- Ship's identity (IMO Number/Name/Call Sign/MMSI Number)
- From: Master of the ship
- To: Nearest Coastal State to the position of observation

b) Position Reporting

Time (Universal Coordinated Time), date and position of the observed freight container(s) in latitude and longitude, or true bearing and distance in nautical miles from a clearly identified landmark (where possible)

c) Total number of freight container(s) observed.

d) Additional information, if available and practicable, for example, but not limited to:
- Dimension of freight container(s) (e.g. 20 foot)
- Type(s) of freight container(s) (e.g. reefer)
- Description of any cargo spill
- Wind direction and speed
- Sea current direction and speed
- Estimated drift direction and speed of observed freight container(s)
- Sea state and wave height

D. if the ship encounters winds of a force of 10 or more on the Beaufort Scale for which no storm warning has been received by the ship,

i) a statement that winds of a force of 10 or more on the Beaufort Scale have been encountered, and

ii) the information set out in subparagraph (B)(ii) and as much of the information set out in clauses (B)(iii)(a) to (d) and (g) as practicable; and

E. if the ship encounters sub-freezing air temperatures associated with gale force winds, causing severe ice accretion on superstructures,

i) the time and date, in coordinated universal time (UTC), and position of the ship when the observation was made,

ii) the air temperature,

iii) the sea temperature, if practicable, and

iv) the wind force and direction.

Examples of the information required to be communicated in danger messages are set out in the schedule below.

Danger Messages

Item	Danger	Examples of Danger Messages
1	Dangerous ice	TTT ICE. LARGE BERG SIGHTED IN 4506N, 4410W, AT 0800 UTC. MAY 15. MV NON SUCH. NON.SUCH@GMAIL.COM
2	Dangerous derelicts	TTT DERELICT. OBSERVED DERELICT ALMOST SUBMERGED IN 4006N, 1243W, AT 1630 UTC. APRIL 21. MV NON SUCH. NON.SUCH@GMAIL.COM.
3	Other direct dangers to navigation	TTT NAVIGATION. ALPHA LIGHTSHIP NOT ON STATION. 1800 UTC. JANUARY 3. MV NON SUCH. NON.SUCH@GMAIL.COM.
4	A tropical storm or a storm that the master has reasonable grounds to believe might develop into a tropical storm	TTT STORM. 0030 UTC. AUGUST 18. 2004N, 11354E. BAROMETER CORRECTED 994 MILLIBARS, TENDENCY DOWN 6 MILLIBARS. WIND NW, FORCE 9, HEAVY SQUALLS. HEAVY EASTERLY SWELL. COURSE 067, 5 KNOTS. TTT STORM. APPEARANCES INDICATE APPROACH OF HURRICANE. 1300 UTC. SEPTEMBER 14. 2200N , 7236W. BAROMETER CORRECTED 29.64 INCHES, TENDENCY DOWN .015 INCHES. WIND NE, FORCE 8, FREQUENT RAIN SQUALLS. COURSE 035, 9 KNOTS. TTT STORM. CONDITIONS INDICATE INTENSE CYCLONE HAS FORMED. 0200 UTC. MAY 4. 1620N, 9203E. BAROMETER UNCORRECTED 753 MILLIMETRES, TENDENCY DOWN 5 MILLIMETRES. WIND S BY W, FORCE 5. COURSE 300, 8 KNOTS. TTT STORM. TYPHOON TO SOUTHEAST. 0300 UTC. JUNE 12. 1812N, 12605E. BAROMETER FALLING RAPIDLY. WIND INCREASING FROM MV NON SUCH. NON.SUCH@GMAIL.COM.
5A	Loss of freight Container(s) from ship	TTT LOSS OF FREIGHT CONTAINER(S) FROM A SHIP AT 1630 UTC. APRIL 21. IMO XXXXXXX. MASTER MV NON SUCH. NON.SUCH@GMAIL.COM. MAG 001
5 B	Position Reporting	TTT LOSS OF FREIGHT CONTAINER(S) FROM A SHIP IN 4006N, 06543W, AT 1330 UTC. APRIL 21. IMO XXXXXXX. TOTAL NUMBER LOST 25, DANGEROUS GOODS YES (CLASS 1,2,3 & 7) 15X TEU 10 X FEU INCLUDES 5 REEFER WIND NNW 8 DRIFT SW 2.5 KTS MASTER MV NON SUCH. NON.SUCH@GMAIL.COM. MAG FINAL
6 A	Observation of freight container(s) drifting at sea	TTT OBSERVATION OF FREIGHT CONTAINER(S) DRIFTING AT SEA 1000 UTC. APRIL 23. IMO XXXXXXX. MASTER MV NON SUCH. NON.SUCH@GMAIL.COM.
6 B	Position Reporting	TTT OBSERVATION OF FRIGHT CONTAINER(S) AT SEA IN 3955N, 06602W, AT 1030 UTC. APRIL 23.TOTAL NUMBER OBSERVED 10, 8X TEU 2 X FEU WIND NNW 8 DRIFT SW 2.5 KTS SEA 7 SWELL 10M MASTER MV NON SUCH. NON.SUCH@GMAIL.COM.

Item	Danger	Examples of Danger Messages
7	Winds of force 10 or higher on the Beaufort Scale for which no storm warning has been received by the ship	TTT STORM. WIND FORCE 11, NO STORM WARNING RECEIVED. 0300 UTC. MAY 4. 4830N, 30W. BAROMETER CORRECTED 983 MILLIBARS, TENDENCY DOWN 4 MILLIBARS. WIND SW, FORCE 11 VEERING. COURSE 260, 6 KNOTS. MV NON SUCH. NON.SUCH@GMAIL.COM.
8	Sub-freezing air temperatures associated with gale force winds, causing severe ice accretion on superstructures	TTT EXPERIENCING SEVERE ICING. 1400 UTC. MARCH 2. 69N, 10W. AIR TEMPERATURE 18°F (-7.8°C). SEA TEMPERATURE 29°F (-1.7°C). WIND NE, FORCE 8. MV NON SUCH. NON.SUCH@GMAIL.COM.

Authority: Transport Canada

11 Collision Regulations

NOTE

The "*Collision Regulations*" are the *International Regulations for Preventing Collisions at Sea, 1972* with Canadian modifications. The *Collision Regulations* are amended from time to time to give effect to international and Canadian amendments as necessary. These regulations may be accessed through the Transport Canada website at Collision Regulations.

1 Special rules and provisions of a local nature

1.1 Special rules or provisions, where applicable, are shown as "Canadian Modifications" and immediately follow the appropriate international rule to which they apply.

1.2 Other provisions regulating navigational conduct in Canadian waters may be found in the following:

.1 Vessel Operation Restriction *Regulations,*

.2 Navigation Safety Regulations, 2020, and

.3 *Special regulations made by port and harbour authorities.*

2 Non-displacement craft

2.1 Non-displacement vessels including air cushion vessels (ACVs) may be encountered in all waters.

2.2 ACVs are very maneuverable and create minimum wake. When operating at high speed in the non-displacement mode these vessels are capable of making rapid course alterations and only require a short stopping distance. Conversely, when maneuvering at relatively low speed similar to a conventional vessel, they have poor directional control and create considerable wake.

2.3 At present, all ACVs operating in Canadian waters are fully amphibious and are propelled and steered by airscrews, rudders and controllable air ducts. Having virtually no contact with the surface over which they operate, they create no wake when traveling at high speed, but when the wind is on the beam or when turning, they have considerable drift or yaw angles. The direction of their bows, and the aspect of their navigation lights, which are identical to those of a similar sized conventional vessel, may not provide a true indication of their direction of motion. To indicate this, all ACVs when operating in the non-displacement mode are required to display an all-round flashing yellow light, flashing at 120 flashes or more per minute.

2.4 Mariners on conventional vessels in the vicinity of an ACV should take due note of the true track of the ACV when interpreting apparent collision situations and executing avoiding action.

2.5 Amphibious ACVs generate high noise levels, consequently sound signals made by other vessels may not be heard by the operator on the ACV.

2.6 Since amphibious ACVs operate with zero draught, they frequently navigate outside normal shipping channels. Unless displaying distress signals, no action should be taken to warn them, report them or follow them.

2.7 With the exception of the *Collision Regulations*, amphibious ACVs under Canadian jurisdiction are generally not required to comply with regulations made under the *Canada Shipping Act, 2001* (CSA 2001).

Alternative means of ensuring at least an equivalent level of safety to that of a conventional vessel engaged in similar operations are administered under the *Aeronautics Act,* conforming to the IMO "Code of Safety for Dynamically Supported Craft".

4 Signals for dredging or underwater operations

4.1 Vessels engaged in dredging or underwater operations, when restricted in their ability to maneuver, are required to display the lights and shapes as described in Rule 27(b) and (d).

4.2 A rigid replica of the International Code Flag "A" is an acceptable alternative to the shapes specified in Rule 27(d). This provision only applies to small vessels restricted in their ability to maneuver and that are engaged in diving operations. Vessels engaged in dredging and underwater operations, other than diving, are not permitted to use this signal.

4.3 This rigid replica is to be displayed on board the vessel to ensure its all-round visibility and is to be not less than 1 metre in height to ensure that mariners in the vicinity can clearly see it and take appropriate action.

4.4 In waters where small vessels frequently operate, mariners will often see the "Diver Down" flag on floats or buoys. This flag is red with a diagonal white stripe running from the top of the hoist to the bottom of the fly and indicates an area where scuba diving or other diving activity is in progress. Vessels should keep well clear and proceed at slow speed.

4.5 Despite its general use, the "Diver Down" flag is not a substitute for the "A" flag, required by these regulations.

5 Improper use of searchlights and floodlights at sea

5.1 Mariners navigating in coastal waters have frequently reported the improper use of searchlights and floodlights. These reports are most common from mariners navigating the inner passage of British Columbia.

5.2 The improper use of these lights could affect the safe navigation of vessels and be construed as a violation of the *Collision Regulations* because the glare of such lights may:

.1 interferes with the night vision of mariners in the vicinity and prevents the keeping of a proper look-out - Rules 5 and 20(b)

.2 mask the navigation lights of the vessel using these lights, thereby making the determination of its heading and its type of operation impossible for other mariners - Rule 20 (impair distinctive character of navigation lights), and

.3 make it difficult for mariners to identify aids to navigation and their geographical location in the vicinity of the vessel using these lights - Rule 36 (mistaken for any aid to navigation or embarrass another vessel).

5.3 Several reports have also been made where a vessel using sodium vapor floodlights has mistakenly been reported as a vessel on fire. Such reports have alerted the Rescue Coordination Centre (RRC) or the Marine Rescue Sub-centre (MRSC) and rescue units have been dispatched in response to a false alarm. The use of these floodlights will ultimately tend to reduce the level of vigilance on the part of other mariners. This could result in an actual distress situation not being reported. Sodium vapor floodlights could also be mistaken for "flames on a vessel (as from a burning tar barrel, oil barrel, etc.)", which is a distress signal prescribed in Annex IV of the *Collision Regulations*.

5.4 Mariners are therefore warned that when using all types of searchlights and floodlights they must be properly directed or adequately screened to ensure that, under any conditions, such lights will not embarrass another vessel, show beyond the immediate vicinity of the vessel or be misinterpreted.

5.5 This notice does not prohibit a vessel from using any lights provided they cannot be mistaken for the lights specified in the *Collision Regulations,* or interfere with the keeping of a proper look-out. Similarly any vessel may fit or carry a searchlight or floodlight provided it is used in such a way as not to embarrass another vessel.

5.6 Small boat operators are reminded that night vision impairment can last for several minutes, even after the searchlight has been turned off. Operators using searchlights for search and identification purposes should reduce their speed so that action to avoid collision can be taken within the range of vision of the searchlight. The speed of the boat should not be increased until after the searchlight has been extinguished and the night vision of the operator has fully recovered.

6 Special lights and markings

6.1 The lights and markings described in this paragraph are not required by the *Collision Regulations*. Mariners, however, should be aware of their existence and purpose.

6.2 **Night signal for vessels requiring health clearance**

The International Code of Signals states that a vessel requiring "Health Clearance", may by night carry a red light over a white light in a vertical line about 2.0 m apart and visible all round the horizon. Such lights should only be exhibited within the vicinity of a port.

6.3 **Boats servicing navigational aids**

.1 Small outboard motor boats are used in servicing navigational aids from Grondines-Est to Sarnia. These vessels have red hulls and are appropriately marked "CCG."

.2 Mariners are cautioned to proceed at a safe speed when passing buoys being serviced by these boats.

6.4 **Marking of fishing gear in all waters of the Pacific Coast under Canadian jurisdiction**

.1 A gill net operated from a commercial fishing vessel has attached to each end of it:

1) by day, a buoy painted iridescent or plain orange and not less than 125 cm in circumference.
2) by night, a lantern showing a white light.

.2 A long line used in fishing is marked by a buoy attached to each end of the line.

.3 A crab, shrimp or prawn trap set singly is marked by a buoy.

7 Radar Reflectors on Small Vessels

7.1 Small vessel owners/operators are reminded that their vessels can be very difficult to detect on radar and this can result in their being run-down or swamped by larger vessels.

7.2 Rule 40 of the *Collision Regulations* requires small vessels of less than 20 metres in length, or vessels constructed primarily of non-metallic materials, to fit or carry a radar reflector. These vessels offer very poor radar targets. An efficient radar reflector, if properly fitted, can effectively increase the echoing area of a vessel's corresponding radar target and greatly improve its chances of being detected.

7.3 Ship Safety Bulletin 07/2008 describes the safety features of using this device.

Authority: Transport Canada

12 Damage Caused by Excessive Speed

1 Caution

1.1 During recent years there has been a marked increase in damage to wharves, boat-houses, small boats, moored ships, and erosion of the shoreline caused by draw-off and wave disturbance created by the passage of ships and boats.

1.2 Additionally, there is a risk of causing serious bodily harm to persons in, on or near the shore. Children are particularly vulnerable to this hazard.

1.3 The amount of draw-off and the size and intensity of the waves at any given speed varies with the hull form and draft of each vessel. Other factors include the vessel's proximity to the shore and the configuration of the channel.

1.4 High water levels will increase and extend the damaging effects of a vessel's passage, and must be taken into account.

1.5 Masters, pilots, operators and owners of vessels may be subject to court action for damages sustained by injured parties as a result of damage or injury caused by the passage of their vessels.

1.6 Regulations designed to control this type of damage would require speed limits to be set sufficiently low to prevent damage by any type of vessel. This might impose unrealistic speed restrictions on some vessels, thereby making navigation unsafe by reducing their ability to maintain steerageway, or cause undue economic and recreational restraints.

1.7 Regulatory control of vessels' speed can be avoided if each person in charge of navigating a vessel, who best knows its characteristics, exercises restraint and reduces speed as necessary. Due consideration must be given to all the factors that may contribute to damage.

2 Special speed restrictions

2.1 Speed restrictions are described in:

.1 *Collision Regulations*,

.2 Sailing directions,

.3 The Seaway Handbook,

.4 *Vessel Operation Restriction Regulations*,

.5 *Navigation Safety Regulations, 2020,*

.6 Various Notices to Mariners and Seaway Notices, and

.7 Various harbour regulations and acts.

2.2 Those in charge of navigating vessels should refer to current Notices to Mariners and Navigational Warnings for information about temporary or amended speed restrictions. Temporary speed restrictions may be established for the purpose of safe navigation or for the protection of persons or property at or near the shore.

Authority: Transport Canada

A6 Charts and Publications

13 Navigation Safety Regulations, 2020

The *Navigation Safety Regulations, 2020 (NSR 2020)* require all ships in waters under Canadian jurisdiction, to have on board, maintain and use appropriate charts, tide tables, lists of lights and other nautical publications issued by or on the authority of the Canadian Hydrographic Service. Some vessels may carry charts and publications issued by the hydrographic office or other relevant government institution of a foreign state.

The NSR 2020 Division 6 provides detailed Canadian requirements for Charts and publications including electronic nautical charts and publications. Mariners should always consult NSR 2020 to ensure compliance.

Many Nautical publications in Canada are now available in electronic form and can be downloaded from the Internet for example *Chart 1 – Symbols, Terms and Abbreviations*, chart catalogues, *Notices to Mariners (NOTMAR)*, *Sailing Directions*, *List of Lights, Buoys and Fog Signals*, *Annual Edition of Notices to Mariners*, *Radio Aids to Marine Navigation*, *CCG Ice Navigation in Canadian Waters*.

An up-to-date list of Canadian charts and nautical publications is available online in the Monthly Edition of *Notices to Mariners* at Notices to Mariners or Nautical charts.

Authority: Transport Canada

14 Canadian Nautical Charts and Publications and International Publications

Canadian nautical charts and publications are available from authorized Canadian Hydrographic Service (CHS) Chart Dealers. Alternatively, please contact the CHS Sales and Distribution office:

Canadian Hydrographic Service
Client Services
200 Kent Street
Ottawa, ON, K1A 0E6
Telephone: (613) 998-4931 or 1-866-546-3613
E-mail: chsinfo@dfo-mpo.gc.ca

NOTE:
Regional Chart Catalogues and digital Chart Index are available in PDF format on the Canadian Hydrographic Service website.

NOTE:
Canadian Tide and Current Tables are available on the Canadian Hydrographic Service website.

NOTE:
Canadian Sailing Directions are available on the Canadian Hydrographic Service website.

NOTE:
The *List of Lights, Buoys and Fog Signals* publication are available on the Notices to Mariners website.

NOTE:
Acts and Regulations can be accessed through Justice Canada website. All regulations are published in bilingual format.

Non-official up-to-date consolidations of the regulations may be accessed through the Transport Canada website.

St. Lawrence Seaway Publications
The Seaway Handbook (includes Seaway Regulations) / *Le Manuel de la Voie maritime* (comprenant le Règlement sur la Voie maritime) available in English and French.
Pleasure Craft Guide / Guide des embarcations de plaisance, bilingual edition
Above publications are available from: St. Lawrence Seaway Management Corporation 202 Pitt Street Cornwall, ON, K6J 3P7 Telephone: (613) 932-5170 Facsimile: (613) 932-7286
Notices to Mariners (Avis aux navigateurs) are issued on the last Friday of each month, and are available in English and French.

[1]Denotes that every ship fitted with radiotelegraph or radiotelephone installation must carry these regulations.

International Publications

1. Radio Publications

Compulsorily-fitted ship stations not on Convention voyages are required to carry the publication ''*Radio Aids to Marine Navigation*.'' Additionally, ships making Convention voyages but remaining within Sea Areas A1 or A2 must carry the ITU publication ''*List of Ship Stations''* or ''*List of Call Signs and Numerical Identities,''* as well as a publication that lists the radiocommunication services of the coast stations in the area in which the ship is navigating, such as the U.S. National Imagery and Mapping Agency (NIMA) publication ''*Radio Navigational Aids* – Pub 117.''

Ships making Convention voyages in Sea Areas A3 or A4 must carry the documents listed in Section VA of the ITU publication ''*Manual for Use by the Maritime Mobile and Maritime Mobile-Satellite Services''* as well as the IMO publication ''*Master Plan of the Shore-Based Facilities for the Global Maritime Distress and Safety System (GMDSS Master Plan).''*

ITU publications can be ordered from:

Sales Service
International Telecommunication Union
Place des Nations
CH-1211 Geneva 20
Switzerland

Telephone: +41 22 730 6141 (English)
Telephone: +41 22 730 6142 (French)
Facsimile: +41 22 730 5194

E-mail: sales@itu.int

NIMA publications from:

Superintendent of Documents
P.O. Box 371954
Pittsburgh, PA 15250-7954
USA

Telephone: (202) 512-1800
Facsimile: (202) 512-2250

List	Title	Price
IV	List of Coast Stations and Special Service Stations, Edition 2021, CD (ITU)	213 CHF (Swiss francs)
V	List of Ship Stations and Maritime Mobile Service Identity Assignments, Edition 2022, CD (ITU)	322 CHF (Swiss francs)
	Manual for Use by the Maritime Mobile and Maritime Mobile-Satellite Services, Edition 2020 (ITU)	295 CHF (Swiss francs)

2. IMO Publications

The following publications and all other texts issued by IMO, as listed in the IMO Publications Catalogue, which is free, may be ordered through the IMO website or from:

IMO Publishing Service
International Maritime Organization
4 Albert Embankment
London, SE1 7SR
United Kingdom
☎: + 44(0)20-7735-7611
: + 44(0)20-7587-3241
✉: sales@imo.org

Payment must be made with order in pounds sterling or U.S. dollar equivalent.
(E = English edition, F = French edition)

IMO has over 200 titles available in printed and electronic format. Details are available on the IMO website.

Since April 1st, 2013, in an effort to adopt and focus on newer technologies, the Canadian Coast Guard (CCG) ceased the printing of its List of Lights book, Annual Edition of the Notices to Mariners and also the Radio Aids to Marine Navigation Annual Publication. For complete details, please visit the Notices to Mariners website.

AUTHORIZED DEALERS - CANADIAN HYDROGRAPHIC SERVICE

The authorized dealers at major Canadian and Foreign seaports distribute Canadian charts necessary for commercial shipping in their districts.

Canadian Hydrographic Service
Client Services
200 Kent Street
Ottawa, ON, K1A 0E6
Telephone: (613) 998-4931 or 1-866-546-3613
E-mail: chsinfo@dfo-mpo.gc.ca

Authority: Canadian Hydrographic Service (CHS)

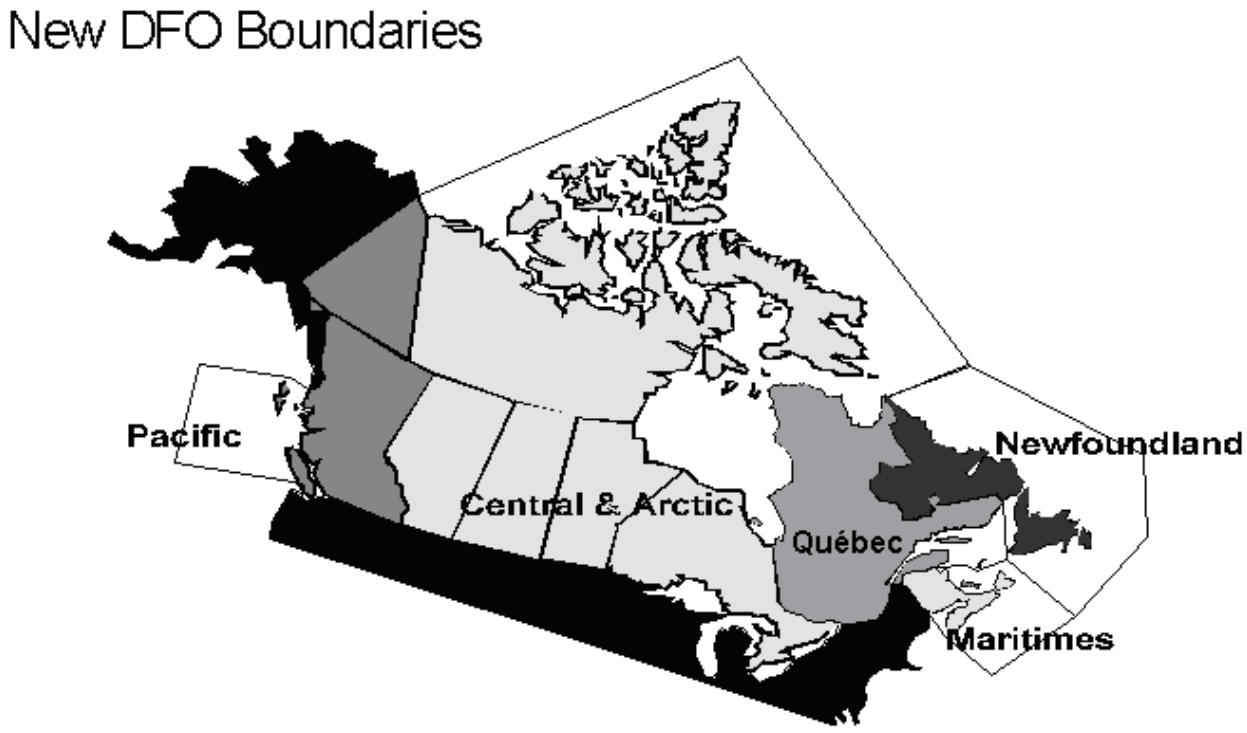
A7 Obstructions

15 Aquaculture Facilities

The placement of aquaculture facilities in Canada's navigable waterways has reached high concentration levels in many areas. Cautionary buoys are deployed to mark the aquaculture work, and information buoys are used to mark the perimeters of the leased sites. Mariners are advised to exercise caution and give wide berth to the buoys. Mariners should not attempt to navigate through aquacultures sites unless it is apparent that navigation channels are properly marked.

Navigational Warnings will be published by the regional authorities of the Canadian Coast Guard in the event of changes to the approved positions of existing aquaculture facilities and when new facilities are approved.

Authority: Transport Canada (Navigation Protection Program)



The Pacific Region is made up of the Province of British Columbia and the Yukon Territory. The Central and Arctic Region includes the provinces of Alberta, Saskatchewan, Manitoba, and Ontario, and the territories of Nunavut and the Northwest Territories. The Maritimes Region includes the provinces of New Brunswick, Nova Scotia and Prince Edward Island. The regions of Quebec and Newfoundland are bounded by their respective provincial boundaries.

Authority: Transport Canada

16 Submarine and Overhead Cables

Symbols for submarine and overhead cables shown on most Canadian Hydrographic Service charts do not differentiate between cables conducting electric power, often at high voltages, and those that do not (See *Chart No. 1*, *D26-27 and L30.1-32*).

Because cables are subject to frequent change, those installed, removed or modified since the date of publication of a chart may not be shown. Changes are made through *Notices to Mariners* only as follows:

a) for new submarine cables - if the cable is located on a chart other than a small-craft chart and if located in an area accessible to commercial shipping where anchoring or trawling may damage the cable

b) for new overhead cables - if the cable is considered to be a hazard to navigation

c) for existing overhead cables - if changes of significance to navigation in the vertical clearance occurs, or if the cable is removed.

1. SUBMARINE CABLES

WARNING - Mariners should exercise every caution to avoid anchoring or trawling in cable areas, even though there may be no specific prohibition against doing so. Danger to mariners and serious interference with communications or power supplies may result from damage to submarine cables. Equal care should be taken wherever the symbol for a submarine cable is shown on any chart.

In the event of any vessel fouling a submarine cable, every effort should be made to clear the anchor or gear by normal methods. Should these efforts fail, the anchor or gear should be slipped and abandoned without attempting to cut the cable. **High voltages are fed into some submarine cables and serious risk of loss of life or severe burns exists if any attempt to cut the cable is made.**

a) Vessels responsible for breaking or damaging a submarine cable could face legal proceedings and could be held liable for the costs and expenses resulting from the damages to that cable.

b) Vessels shall keep at least one nautical mile from vessels engaged in laying or repairing submarine cables. Fishing gear and nets shall be kept at the same distance. Fishing vessels shall be allowed up to twenty-four hours in order to enable them to obey this notice.

c) Buoys marking cables shall not be approached within ¼ nautical mile, and fishing gear and nets shall be kept the same distance from them.

d) Vessels who can prove that they have sacrificed an anchor, a net or other fishing gear, in order to avoid injury to a submarine cable, may receive compensation from the owner of the cable.

For additional information, consult the International Cable Protection Committee website.

2. OVERHEAD CABLES

The vertical clearance of overhead cables is given above Higher High Water, Large Tide in tidal waters. In non-tidal waters, vertical clearance is given above Chart Datum. Therefore, in non-tidal waters, the height of the water level above Chart Datum must be subtracted from the charted clearance to give the actual clearance at a particular time (See *Chart No. 1, D22*).

WARNING - Because of the danger of arcing from overhead cables, mariners are cautioned to ensure an adequate clearance for safety between their vessel and all overhead cables. Be particularly careful with high-voltage cables. If the clearance to avoid a dangerous electrical discharge between a high-voltage cable and a vessel passing under it cannot be obtained from local authorities, then allow at least 7 m less than the vertical clearance.

Mariners are cautioned that the actual clearance of an overhead cable may differ from its charted value due to changes in atmospheric conditions, water levels and other factors. In particular, heavy icing may significantly reduce charted vertical clearances.

Mariners are advised to consult the appropriate volume of CHS *Sailing Directions* to ensure they are familiar with local conditions.

Authority: Canadian Hydrographic Service (CHS)

17 Reports of Shoal Soundings

1 Reports of shoal soundings must provide adequate supportive information in order for the Canadian Hydrographic Service to be able to chart such soundings.

2 Shoal depths reported with insufficient supporting information may not be possible to chart or even locate in subsequent searches conducted by hydrographic surveys.

3 In order to make full use of reports of shoal soundings, Navigating Officers are requested to note the following essential details:

(a) Obtain the position of the shoal depth by taking a position fix over it, as well as on each side of the shoal depth. If this is not practicable, then provide the position of the ship with a bearing and distance to the position of the shoal sounding.

(b) Indicate the method used to position the depth, e.g. Radar, GPS, etc., and the horizontal datum of the position fix, e.g. NAD83, NAD27, WGS84, etc. It is helpful to mark the details on a chart, which will be promptly replaced by the Canadian Hydrographic Service. Please note that all navigation warnings (NAVWARNs) are ultimately broadcasted in NAD83 positions.

(c) Number the position fixes and insert the time (time is important since the height of the Tide must be found in order to obtain the chart depth). Note the time zone, e.g. GMT, UTC, PST, etc.

(d) For digital echosounders, chart plotters, integrated sounder/positioning displays:

- Use your cell phone, smart phone or digital camera to take a picture of the display or displays when observing the shoal position, or remote position of vessel if sitting over the shoal is not safe or possible, and when observing the least depth of the shoal;
- Be sure the display shows a digital depth readout, the depth units, the date, time and time zone (if available);
- On the *Marine Information Report and Suggestion Sheet* (MIRSS), indicate the draft of the transducer. If the draft is set into the sounder, so that depths read from water line, then also indicate this on the MIRSS;
- For chart plotters, or integrated position and depth displays, be sure the position is in latitude and longitude to as many decimal places as the unit will allow.
- For vessel positions remote from the shoal, indicate the estimated bearing and distance from the location where the picture of the position display was taken.

NOTE: Mariners and shore authorities are reminded of the requirements to inform appropriate Coast Guard agencies whenever potential hazards to navigation are identified. Refer to Part 3 of the Radio Aids to Marine Navigation (RAMN) publication. To report emergencies or navigational hazards, contact your nearest Marine Communications and Traffic Services (MCTS) centre.

Authority: Canadian Hydrographic Service (CHS)

A8 Oil and Gas – Exploration and Exploitation of Natural Resources

18 Lighting and Marking of Exploration and Exploitation Vessels and Platforms

Rule 42 of the *Collision Regulations* requires that exploration and exploitation vessels when on station or engaged in drilling or production operations exhibit a white light or series of lights flashing in unison the Morse Code letter U (..-) at intervals of not more than 15 seconds. These lights are in lieu of lights required elsewhere in the Regulations and must be visible all around the horizon at a range of 15 miles.

These vessels are also required to be fitted with sound signal appliances that sound the Morse Code letter U (..-) at 30 second intervals in restricted visibility.

The horizontal and vertical extremities of an exploration or exploitation vessel are lighted and marked in accordance with the requirements set out in the Standard 621 - Obstruction Markings and Lighting published under authority of the Aeronautics Act.

The owner or operator of an exploration or exploitation vessel having a derrick extending more than 60 m above the water should inform the appropriate Regional Manager, Marine Safety of its location or movements so action may be initiated to inform low-flying aircraft.

Authority: Transport Canada

19 Lighting and Markings of Structures or Works for the Exploration and Development of Natural Resources

Pursuant to the *Navigable Waters Works Regulations SOR/70-35*, structures or works used for the exploration or development of natural resources, and the transport, removal or handling of such resources from the bed of a navigable water, shall be equipped with the prescribed lights and sound signals. (Ref. paras 8-10 inclusive) (SOR/84-182).

These structures or works may be of a permanent, temporary or floating character, and may be fixed or anchored to the bed of the waterway.

In addition to the foregoing, such works require the approval of the Minister of Transport Canada under the terms of the *Canadian Navigable Waters Act*.

Authority: Transport Canada

20 Safety of Offshore Exploration and Exploitation Vessels

1 Offshore exploration and exploitation vessels in waters under Canadian jurisdiction

1.1 Some offshore exploration and exploitation work takes place in waters under Canadian jurisdiction (see attached drawing). Such areas of operation have been established on the Grand Banks of Newfoundland, on the Scotian Shelf off Nova Scotia and Sable Island, in the Beaufort Sea off the Mackenzie Delta, in Hudson Bay and the Canadian waters of Lake Erie.

1.2 Frequently, complaints are received from these exploration or exploitation vessels stating that dangerous situations have developed because passing ships have come much too close to their areas of operation.

1.3 The most common complaint is the lack of any response to safety radiotelephone calls transmitted from these vessels to warn approaching ships. Most of these calls are made on the VHF distress, safety and calling frequency Channel 16 (156.8 MHz).

1.4 Other means of attracting attention such as the use of a signaling lamp and/or searchlight, the firing of rockets to draw the attention of the approaching ship, and the dispatching of a stand-by vessel to intercept have not always proved to be effective.

1.5 Some passing ships have also been observed using offshore exploration and exploitation vessels as a navigational way-point on a trans-oceanic voyage. This is a dangerous practice because it tends to concentrate passing ships at a place where their presence could adversely affect safe navigation.

1.6 Most of these waters are noted for their adverse weather conditions. Icebergs, extended periods of reduced visibility and ice coverage make it all the more difficult for passing ships and exploration and exploitation vessels to identify and make contact with each other.

1.7 Mariners are reminded when navigating in areas where exploration or exploitation work takes place to:

.1 give all offshore exploration and exploitation vessels a wide berth and if necessary make any course alterations in ample time so that there is no doubt to the personnel on such vessels that they have been seen and will be avoided by a wide margin;

.2 maintain a continuous listening watch on the VHF radio-telephone distress, safety and calling frequency Channel 16 (156.8 MHz) and to respond to navigation safety calls on that frequency in accordance with:

.2.1 the appropriate Canadian legislation (see Navigation Safety Regulations, 2020 which apply in Canadian waters and fishing zones);

.2.2 Regulation 12 of Chapter IV of SOLAS which requires ships fitted with VHF radiotelephone to maintain a continuous listening watch on the navigating bridge on VHF DSC Channel 70 and Channel 16 when practicable; and

.3 monitor the bridge-to-bridge VHF Channel 13 in certain areas of the Great Lakes in accordance with the Navigation Safety Regulations, 2020.

.4 contact the most convenient Marine Communications and Traffic Services Centre (MCTS) free of charge, to obtain the latest information on the positions of offshore exploration and exploitation vessels by addressing the request to:

.4.1 "Eastern VTS" for East Coast waters,

.4.2 "Northern VTS" for Arctic waters,

.4.3 "Marine Communications and Traffic Services Centre (MCTS) Sarnia (Sarnia Traffic)" for Canadian Great Lakes waters, and

.4.4 "Western VTS" for West Coast waters; and

.5 plot the most recent positions of all offshore exploration and exploitation vessels so that a route can be planned to safely avoid such vessels.

2 Notices to Mariners and broadcast Navigational Warnings

2.1 (a) A temporary Notice to Mariners is published quarterly. This gives a complete list of the up-to-date positions of every reported offshore exploration and exploitation vessel in waters under Canadian jurisdiction, except on the Great Lakes. These notices are promulgated in Section I of the monthly Notices to Mariners edition numbers 1, 4, 7 and 10. In the event of changes in the position of such vessel(s) a Navigational Warning (NAVWARN), formerly called a Notice to Shipping, will be issued.

(b) Production Platforms can indicate a permanent offshore structure which significantly affects navigation. These changes are charted by Notice to Mariners or through New Edition of a chart.

2.2 On the Great Lakes (presently only in Lake Erie) exploration and exploitation vessels change positions too frequently to warrant being published as a Notice to Mariners. Subsequently, information on their positions is promulgated by Navigational Warning broadcasts. For the positions of all drill barges and exploration or exploitation vessels operating East of Long Point, mariners may also call Seaway Long Point on VHF Channel 11 for the latest information prior to transiting this area.

2.3 Selected Marine Communications and Traffic Services Centres (MCTS) also broadcast twice daily:

.1 any new Navigational Warning over a 48 hour period; and

.2 for five days on the list of active NAVWARNs.

These navigational warnings and the list of active NAVWARNs contain any revision to the position of every reported exploration and exploitation vessel operating in waters under Canadian jurisdiction.

A list of MCTS Centres, the frequencies and times of broadcast can be found in Part 2 of the Canadian Coast Guard publication *Radio Aids to Marine Navigation* and in the *List of Coast Stations and Special Service Stations*, published by the International Telecommunication Union.

2.4 The United States also broadcast daily NAVAREA IV (Atlantic Ocean) and NAVAREA XII (Pacific Ocean) warnings to shipping which may include reported movement and relocation of exploration and exploitation vessels. All such movements are summarized monthly in section III of the Notices to Mariners published by the United States. It also contains a list by number of all NAVAREA warnings still in effect. The quarterly edition summarizes the details of all NAVAREA warnings still in effect and includes the positions of all reported exploration and exploitation vessels.

2.5 Canada broadcast daily NAVAREA XVII and NAVAREA XVIII warnings to ships in Arctic waters which may include reported movement and relocation of exploration and exploitation vessel. These NAVAREA warnings are available on the CCG e-Navigation Maritime Information Portal, Navigational Warning section, located at: e-Navigation Portal.

2.6 Mariners are reminded that *Section 7* of the *Canadian Collision Regulations* states that, “Every vessel shall navigate with particular caution where navigation may be difficult or hazardous and, for that purpose, shall comply with any instructions and directions contained in Notices to Mariners and NAVWARNs[1].”

3 Safety zones

3.1 In Canadian Waters, Rule 43 of the *Collision Regulations* establishes safety zones which are 500 meters in all directions from an exploration or exploitation vessel or 50 meters beyond the boundaries of its anchor pattern, whichever area is greater. Ships are prohibited from Navigating within a Safety Zone unless they are specifically exempted. The Regulations permit under certain circumstances the establishment of a larger safety zone.

[1] The expression “Notice to Shipping” (NOTSHIP) was replaced by “Navigational Warning” (NAVWARN) in January 2019.

3.2 Navigational warning signals may be used by offshore exploration and exploitation vessels in imminent danger of being rammed, or by stations that consider a ship is in imminent danger of running aground. These navigational warning signals may be displayed or transmitted by International code flags, danger sounds or light signals using Morse code prior to the broadcast of a vital navigational warning. The power of this transmission should, where practicable, be limited to the minimum necessary for reception by ships in the immediate vicinity of the offshore exploration or exploitation vessel or of the land concerned. The navigational warning signal should be immediately followed by a VHF DSC broadcast giving the identity and position of the offshore exploration or exploitation vessel as part of a vital navigational warning to shipping. Stations that consider a ship is in imminent danger of running aground should similarly provide as much identification and position information as possible as part of a vital navigational warning to the endangered vessel.

3.3 In Canadian Waters, Rules 41 and 42 of the *Collision Regulations* states that exploration and exploitation vessels may transmit radar transponder signals if authorized to do so and shall display the appropriate identification panels and lighting in a manner that does not compromise the safety of navigation.

4 Violations

Persons in charge of exploration or exploitation vessels must ensure that such units exhibit the proper lights and sound the prescribed signals. They should also take all reasonable measures to give early warning to ensure that unauthorized ships keep clear if it appears that these ships may enter the safety zone. Ships that violate safety zones should be reported to the nearest Transport Canada Marine Safety office immediately following the incident for follow-up action. The information required in this report is stated below for the use of all mariners when reporting a near miss incident to the appropriate responsible authority.

4.1 Date and time of incident

4.2 Location of unit

4.3 Name of drilling unit

4.4 Name of stand-by vessel

4.5 Name(s) of other support vessel(s) used during incident

4.6 Offending vessel:

a) Name
b) Port of Registry (or Flag of Registry)
c) Course
d) Speed
e) Estimated size and description
f) Bearing and distance of CPA

4.7 Weather Conditions:

a) Sea, swell, state and direction
b) Visibility
c) Precipitation
d) Wind speed and direction

4.8 Description of light and sound

4.9 Plotting charts from the drilling unit and the stand-by vessel depicting the incident

4.10 Report of actions taken by unit and all vessels involved in incident

4.11 Copy of radar log

4.12 A summary of all communications exchanged; and/or attempts to communicate that are pertinent to the incident.

5 Before entering an area of exploration and exploitation

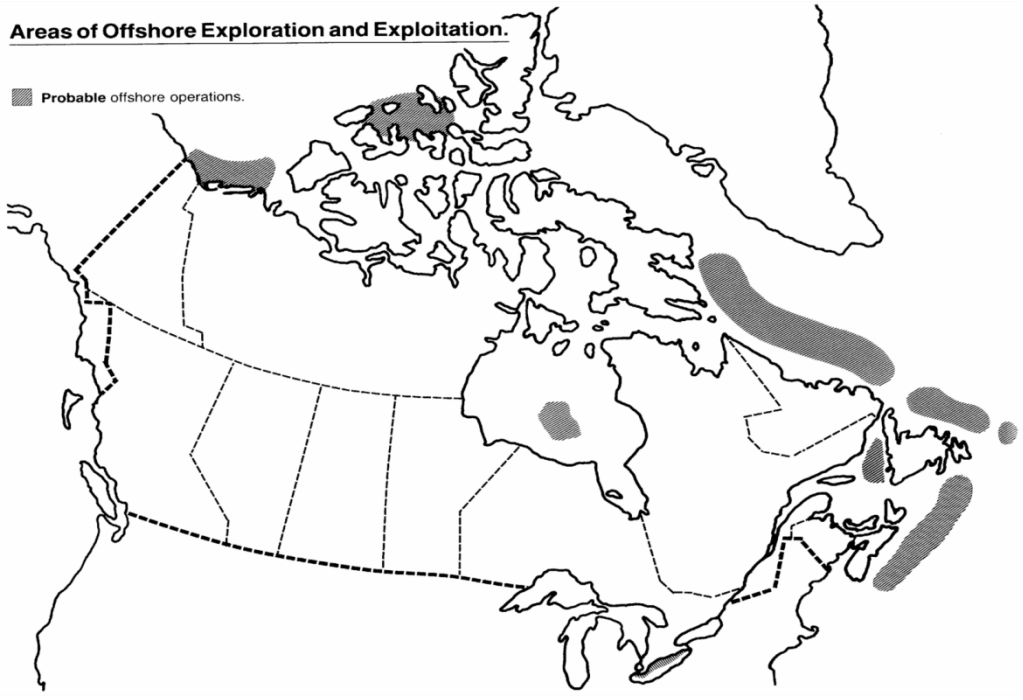
5.1 Mariners are advised to obtain up-to-date position reports on drilling vessels and production installations before entering an area of exploration or exploitation. This information is available by contacting, as appropriate, Eastern VTS, Northern VTS or Western VTS via any Marine Communications and Traffic Services Centre (MCTS).

5.2 Mariners should make contact with the Marine Communications and Traffic Services Centre (MCTS) described in paragraph 1.7.4 of this notice as soon as possible to ensure receipt of timely information on the current position of each exploration and exploitation vessel as this information may not be contained in the latest Notice to Mariners.

6 Abandoned Artificial Islands

In Arctic waters, mariners may encounter artificial islands. These islands, which are man-made structures, are marked on navigation charts. A number of these artificial islands have been abandoned and are marked on the chart by the symbol "Aband". Mariners are warned that abandoned artificial islands tend to wear down below the wave action depth line and continue to be a hazard to shipping.

Authority: Transport Canada



Abandoned Artificial Islands - Hazard to shipping

21 Caution when Anchoring in the Proximity of Underwater Exploitation Facilities in Lake Erie

Before anchoring in the Canadian waters of Lake Erie mariners are cautioned to note the underwater positions of existing exploitation facilities.

Mariners are cautioned that damage to these exploitation facilities can be extremely hazardous because pressurized natural gas is both toxic and flammable. Ships may also be liable for any damage that they may cause to these facilities which supply a very large area of southern Ontario.

The following coordinates designate an area in Long Point Bay that is recommended as a suitable anchorage.

42°36'18"N 80°10'00"W
42°36'18"N 80°11'27"W
42°38'24"N 80°14'40"W
42°42'30"N 80°14'40"W
42°42'30"N 80°10'00"W

Authority: Transport Canada

22 Seismic Surveys

Seismic surveys for the exploitation of offshore oil and mineral resources are conducted in all Canadian and adjacent waters. Details of these surveys may be broadcast to mariners by coastal Marine Communications and Traffic Services Centers; however, mariners may encounter surveys in progress without prior notice.

In accordance with the requirements of the *Oil and Gas Production and Conservation Act*, operators of seismic surveys are required to obtain authorization to conduct a geological or geophysical survey from the National Energy Board (NEB). When requesting an authorization from NEB, the proponent shall provide information concerning the dates of activity, the proposed location of the survey, and a full description of the vessel(s) and equipment. In addition, NEB requires that operators forward weekly telex reports which describe the progress of the survey, location of the vessel(s) and any significant details.

Seismic survey vessels that are restricted in their ability to maneuver are required to exhibit the lights and signals described in *Rule 27* of the *Collision Regulations*; and sound the appropriate sound signals described in *Rules 34 and 35* of the *Collision Regulations*. Mariners should give such vessels a wide berth.

Survey vessels can operate independently or in company and may tow sensing devices streamed 2.5 to 3.5 miles astern, and if there are multi-streamers, they may be 50 m or 100 m apart. The sensing device is ballasted so that it remains submerged just below the surface or at streamer depths ranging between 10 m and 20 m. An orange float is usually attached to the end of the cable to mark the extent of the streamers. A white light and a radar reflector are fitted on this float. The display of this light is consistent with the intent of *Rule 24(g)* of the *Collision Regulations.*

In the process of surveying, repeated shock waves may be generated at intervals of 5 to 10 seconds by mechanical or electrical energy sources or by using compressed air. Dynamite is rarely employed for this purpose, but if used, large charges of up to 1000 Kgs may be fired. In the course of the survey, the vessel will usually be making way through the water at speeds of 4 to 5 knots; however, vessels may stop for extended periods during the survey while repairs are made to equipment.

If charges are being fired by radio or electrically triggered detonators, survey vessels may suspend radio and radar transmissions in order to avoid accidental firings. Vessels being called by a signaling light should, therefore, answer by the same means and not use their radio.

Explosive charges may be contained in cylinders, canisters, tubes or bags which may not be marked as dangerous. No attempt should be made to recover such items, and any inadvertently taken aboard in trawls, etc., should be jettisoned immediately.

Authority: Transport Canada

B Pilotage Services in Canadian Waters

23 General Information on Pilotage Service

1 PILOTAGE MESSAGES - GENERAL

Masters of vessels requiring a pilot are reminded that a request for such service must be submitted in sufficient time to enable the pilot to meet the vessel.

The message should include the following:

(a) The time in UTC that the pilot is required on board.

(b) The place the vessel is to be boarded.

(c) The duty to be performed.

(d) Whether or not the vessel has been granted radio pratique.

The minimum notice of a vessel's ETA at the pilot stations that is required to avoid delay in obtaining a pilot is shown below for various pilotage districts. ETA's must be revised if necessary prior to arrival at the pilotage station.

2 PILOT MESSAGES - GREAT LAKES

1.0 GENERAL

To ensure safe and efficient pilotage services within the Great Lakes region, it is essential that ship owners, agents, or masters follow the following instructions for requesting a pilot that outline the required information, notification timelines, and contact details for arranging pilotage services for arrivals, departures, and transits through key areas such as St-Lambert Lock and other Great Lakes ports. Compliance with these requirements helps the Great Lakes Pilotage Authority (GLPA) coordinate pilot availability and maintain operational safety standards.

2.0 HOW TO REQUEST A PILOT

2.1 Required Information for Arrival/Departure:

- Name of the vessel;
- Call sign;
- Port of registry;
- Lloyd’s registry number;
- Length overall;
- Breadth;
- Moulded depth;
- Gross tonnage;
- Net Tonnage;
- Deadweight;
- Deepest draft;
- Speed;
- Last port of call;
- Destination;
- Agent of the ship and/or billing agent;
- Type of cargo carried.

2.2 Ships Upbound Entering the Seaway at St-Lambert Lock:

- Provide 12 hours notice (prospect) before the ship's estimated time of arrival at St-Lambert Lock;
- Confirm the pilot requirement six (6) hours (order) before the ship's estimated time of arrival at St-Lambert Lock.

For additional information or clarification, please contact our Eastern Dispatchers at:

Phone: 1 (613) 933-2991 Ext. 210 or 1 (877) 879-0607

Email: cornwalldispatcheastern@glpa-apgl.com

2.3 Ships Departing any Port within the Great Lakes Region:

- Provide 12 hours notice (prospect) before the ship's estimated time of departure from a Great Lakes region port;
- Confirm the pilot requirement six (6) hours (order) before the ship's estimated time of departure.

For information regarding the Eastern Region (St-Lambert to Cape Vincent). Please contact our Eastern dispatchers at:

Phone: 1 (613) 933-2991 Ext. 210 or 1 (877) 879-0607

Email: cornwalldispatcheastern@glpa-apgl.com

For additional information regarding the Western Region (Cape Vincent to Port Huron), please contact our Western dispatchers at:

Phone: 1 (613) 933-2991 Ext. 211 or 1 (877) 879-0607

Email: cornwalldispatchwestern@glpa-apgl.com

2.4 International District No. 3

For International District no. 3 (Lake Huron, St. Mary's River and Lake Superior), please contact our Western Region dispatchers at:

Phone: 1 (613) 933-2991 Ext. 211or 1 (877) 879-0607

2.5 To Contact our U.S. counterparts:

- District no. 1: Seaway Pilots Association: 1 (315) 705-2153
- District no. 2: Lakes Pilots Association: 1 (810) 982-1762
- District no. 3: Western Great Lakes Pilots Association: 1 (715) 392-5200

3.0 HOW TO CANCEL/MODIFY A PROSPECT OR ORDER

3.1 Agents or masters can place a prospect (12 hours notice) with a possibility to make two (2) changes. After three (3) prospects, the agent or master needs to put in a firm order or cancel and restart the cycle.

3.2 All prospect changes and order confirmation must be communicated to the dispatcher 6 hours prior to the estimated time of departure of a port, anchorage or arrival inbound at St-Lambert Lock.

Example: Prospect for departure is placed for 11:00/15, a prospect change or confirmation of order must be initiated and received by the dispatcher by 05:00/15.

3.3 A prospect change cannot be extended past 12 hours from the intended estimated time of departure from a port, anchorage or arrival inbound at St-Lambert Lock.

Example: The prospect for departure is for 11:00/15. The agent communicates to the dispatcher his/her intention to change the prospect. The new prospect cannot extend past 23:00/15. There are no charges for prospect cancellation.

3.4 If the prospect cycle is cancelled at any time, a new prospect can only be started on or after the intended time of the previous prospect.

Example: The prospect for departure is for 11:00/15 and the agent cancel at 05:00/15. If a new prospect is immediately initiated the new prospect can only be started at 11:00/15 for a 23:00/15 departure time.

3.5 If an order is cancelled, cancellation charges will apply. A new 12-hour prospect will be required before placing a new order. A new 12-hour prospect can be initiated at anytime.

3.6 A prospect or order may be waived with the permission of an officer of the Authority or his/her delegate if a pilot is available. Additional charges apply.

3 PILOT MESSAGES - GULF AND RIVER ST. LAWRENCE

(Extract from the *General Pilotage Regulations* Part 2, Division 2 Laurentian Pilotage Authority)

Arrival Notices:

7(1) The owner, master or agent of a vessel arriving in the compulsory pilotage area at the Les Escoumins pilot boarding station must provide the following, as applicable

(a) For vessels arriving from a location east of the Strait of Belle Isle, Cabot Strait, or Canso Strait:

(i) An initial notice 24 hours before the vessel's estimated time of arrival (ETA). (ii) A second notice 12 hours before the ETA. (iii) A final notice to confirm or adjust the ETA 6 hours prior to the ETA.

(b) For vessels arriving from a location west of the Strait of Belle Isle, Cabot Strait, or Canso Strait:

(i) An initial notice 12 hours before the ETA.

(ii) A final notice to confirm or adjust the ETA 6 hours prior to the ETA.

[Policy 19.]

(2) The notices mentioned in subsections (1)a) and b) must be given by calling a coastal marine radio station or a pilot dispatch center.

8 The owner, master or agent of a ship that is to arrive in the compulsory pilotage area from any point above the entrance to St. Lambert Lock shall give notice of the immediate and ultimate destinations of the ship in the compulsory pilotage area by calling the St. Lawrence Seaway Radio Control when passing Iroquois Lock and Beauharnois Lock.

Departure Notices

9 The owner, master or agent of a ship that is to depart from a berth in the compulsory pilotage area for any purpose, other than making a movage, shall, by calling the pilot dispatch centre,

a. Provide an initial notice 12 hours before the vessel's departure time.

b. Provide a final notice at least 4 hours prior to departure to confirm or adjust the departure time.

[Policy 7.]

[Policy 19.]

- Shift Notices in the Ports of Montreal and Quebec:
  - The 3-hour notice aligns with our operational requirements.
- Contact Information:
  - **Email**: Pilote.mtl@apl.gc.ca
  - **Phone**: (514) 496-2156 or 1 (800) 361-0747

Additional operational contacts or details can be provided to facilitate communication between mariners and our teams if required.

Validation of Processes

The described processes, including request transmissions via SCTM centers and adherence to international regulations (SOLAS, IMO), meet our internal requirements.

Points to Monitor

If regulatory or technological changes are anticipated for the upcoming season, we recommend an update in the next edition.

Notices of movage

10(1) The owner, master or agent of a ship that is to make a movage shall,

(a) in any harbour within the compulsory pilotage area other than the Harbour of Montreal or the Harbour of Québec,

(i) give a first notice of the estimated time of movage 12 hours before the estimated time of movage, and

(ii) give a final notice confirming or correcting the estimated time of movage 4 hours before the estimated time of movage,

(b) in the Harbour of Montreal or the Harbour of Québec, give a notice of movage 3 hours before the time of movage.

(2) The notices referred to in subsection (1) shall be given by calling the pilot dispatch centre.

Optional Notices

11(1) Notwithstanding sections 9 and 10, the owner, master or agent of a ship that is to depart or make a movage may within 8 hours after having given the first notice referred to in paragraph 9(a) or subparagraph 10(1)(a)(i), give a second notice confirming or correcting the estimated time of departure from or movage in any compulsory pilotage area.

(2) If a second notice has been given in respect of a ship pursuant to subsection (1), the time of departure or movage of that ship shall not be later than 12 hours from the time that notice was given.

Required Information

12 If the owner, master or agent of a ship gives a notice referred to in subparagraph 7(1)(a)(i) or 7(1)(b)(i), they shall state,

(a) in the case of the first arrival of the ship in the compulsory pilotage area in any calendar year,

(i) the name, nationality, call sign and agent of the ship,

(ii) the length, breadth, moulded depth, deepest draft, speed, deadweight tonnage and the largest net registered tonnage of the ship, and

(iii) the immediate and ultimate destinations of the ship within the compulsory pilotage area, and

(b) in the case of any subsequent arrival, movage or departure of the ship in the compulsory pilotage area in any calendar year,

(i) the name, call sign, deepest draft, the speed of the ship and any changes in the information provided under paragraph (a), and

(ii) the immediate and ultimate destinations of the ship within the compulsory pilotage area.

13 If a ship has on board one or more holders of pilotage certificates who are certificated for the compulsory pilotage area through which the ship is to proceed, the master of the ship shall, each time the ship proceeds through the area, state

(a) the names of the holders of pilotage certificates and the certificate numbers, and

(b) the information specified in subparagraphs 12 (b)(i) and (ii).

14. If in any case referred to in sections 7, 8, 9, 10 or 11, the owner, master or agent of a ship fails without reasonable cause to give the notice required by that section for that case, the Authority is not required to provide that ship with the services of a pilot.

4 PILOT MESSAGES – EAST COAST

Notice to obtain pilots for compulsory – Arrivals and Departures.

The Atlantic Pilotage Authority (APA) has established a central dispatch office in Halifax, N.S. All pilot orders for arrival, departure or moves are placed through the Atlantic Pilotage Authority Dispatch Office (APA DISPATCH). Pilots may still be ordered through any Marine Communications and Traffic Services (MCTS) Centre with a clear request to <<Please forward to Atlantic Pilotage Authority Dispatch, Halifax>>. The name of the port where the pilot is required should be clearly identified.

Only masters, owners or agents may order pilots. To avoid delays in obtaining pilots, the master, owner or agent at the designated ports listed below shall advise APA DISPATCH of the estimated time of arrival (ETA), Universal Coordinated Time (UTC), at the pilot boarding station as indicated in columns 4 and 5. Such notice shall be by one of the following means:

Telephone:	1 (877) 272-3477 (Toll Free)
Fax:	1 (866) 774-2477 (Toll Free) (fax to email direct)
Dispatch E-mail:	dispatch@atlanticpilotage.com
Internet address:	Atlantic Pilotage Authority

Inmarsat Users to Call:

Telephone:	1 (902) 426-7610
Fax:	1 (902) 425-1746 (fax to email direct)
Halifax, N.S.	VHF Ch 23

With reference to departures and moves, masters, owners or agents should advise APA DISPATCH with the notice as indicated in column 6.

Placing Calls to Dispatch

When calling dispatch it is of great help if the Dispatcher knows at the outset what type of call is coming in such as “a new order” or “a change in an existing order.” To place a new/original order please follow the guideline for information needed as below:

For a new/original order

(1) Port
(2) Vessel Name and Call Sign
(3) Date of Assignment (order date)
(4) Type of Order – e.g. Trip, Move, Trial Trip, etc.
(5) Draught
(6) Length/Breadth/Moulded Depth
(7) GRT
(8) Air Draught (if applicable)
(9) Certificate Number (if applicable)
(10) Agent Name
(11) Caller’s Name
(12) Taxes: Refer to page 1.5
(13) Special Instructions
(14) Hazards/Dangerous Cargo. e.g. H_2S gas concentrations present for tanker vessels.

For a confirmation of order

(1) Port
(2) Vessel Name
(3) Date and Time of Assignment
(4) Dispatcher will reconfirm original order information
(5) Caller's name

For a change of order

(1) Port
(2) Vessel Call Sign
(3) Date of Original Assignment
(4) Agent
(5) Caller's Name
(6) Information to be Changed

Facsimile / E-Mail

A facsimile form will be provided to all agents for the convenience of faxing information correctly. This form can also be used to place an order via E-Mail. Please refer to APA web page for a copy of the form.

TAX DECLARATION DOCUMENT

(SAMPLE LETTER)

Atlantic Pilotage Authority

TD Tower, Suite 1801

1791 Barrington Street

Halifax, Nova Scotia B3J 3K9

Dear Sir/Madam:

Please be advised we, _____ act in the capacity of shipping agents and hereby declare all our Principals for which we request services as Agents only, are non-resident, non-registrants. We, therefore, respectfully request all charges for all services rendered to the vessels of our Principals be zero rated. Should the status of any of our Principals change in the future, we undertake to inform you of the same so the appropriate tax rate may be applied.

Yours truly,

Atlantic Pilotage Authority | Administration de Pilotage de l'Atlantique | Canada

Pilot Order Form

To: ATLANTIC PILOTAGE AUTHORITY **From:**

EMAIL: dispatch@atlanticpilotage.com **Date:**

Fax to email: 1-866-774-2477 **Fax: 1-877-745-3477**

Dispatch Phone direct: 1-877-272-3477 **Web Site: https://www.atlanticpilotage.com**

Port: _____

Reason for pilot order: Arrival: _____ Departure: _____ Move: _____

Date required: _____ **Time required: _____**

Vessel Name: _____ **Number of Tugs: _____**

IMO number: _____ **Draft: _____**

Air Draft: _____ **Masters Name: _____**

Hazards to Report:

H_2S or other hazardous gases: _____ PPM: _____

Mechanical Issues: _____

Illnesses/ Quarantines: _____

Other: _____

Vessel Specs:

Length Overall: _____ Breadth: _____ Moulded Depth: _____

Docking Orders:

_____

_____

_____

Agent Information:

Agent representing vessel: _____ Phone: _____

Local representative: _____

Agent to receive Invoicing / Billing: _____

#	Area	Pilots	Pilot Boarding Station	Tentative ETA (hrs)	Confirm ETA (hrs)	Move / Departure (hrs)	VHF Ch
New Brunswick							
1.	Miramichi Apr. 16 - Dec. 10	Pilots Miramichi	47 07 30 N 64 47 00 W	24	4	4	16
1(a)	Miramichi Dec. 11 - Apr. 15	Pilots Miramichi	45 24 00 N 61 01 00 W	24	12	4	14
	Miramichi Note:	*All vessel transits at Miramichi will be subject to risk assessment prior to being accepted for pilotage*					
2.	Restigouche (a) Dalhousie (b) Campbellton	Pilots Dalhousie	48 03 12 N 66 15 00 W	12	4	4	16
3.	Saint John For Tankers and Liquid Natural Gas Carriers, the Compulsory Pilotage Area is extended:	Pilots Saint John Inbound Outbound	45 10 48 N 66 03 42 W 45 09 30 N 66 05 48W 45 10 48 N 66 03 42 W	12	4	4	16 12
4.	Belledune	Pilots Belledune	47 56 00 N 65 48 00 W	12	6	12 Tentative 6 Confirm (see Note 1)	16
		Note 1: A departure time within 12hrs of arrival time must be confirmed within one hour of vessel being secured on arrival					
Newfoundland							
	Bay of Exploits						
	(a) Botwood May 15 - Jan 1 Depending on ice conditions	Pilots Bay of Exploits	49 19 44 N 55 12 49 W	12	6	6	16
	(b) Lewisporte May 15 - Jan 1 Depending on ice conditions	Pilots Bay of Exploits	49 20 45 N 54 56 31.5 W	12	6	6	16
	(c) Botwood / Lewisporte Jan 2 - May 14 Depending on ice conditions	Pilots Bay of Exploits	Off St. John's 47 33 42 N 52 37 54 W	24	12	6	16 11
	Holyrood	Pilots St. John's	47 29 65 N 53 06 35 W	12	3	4 Tentative 3 Confirm	16 11
	Humber Arm	Pilots Corner Brook	49 04 08 N 58 09 18 W	12	6	6	16

#	Area	Pilots	Pilot Boarding Station	Tentative ETA (hrs)	Confirm ETA (hrs)	Move / Departure (hrs)	VHF Ch
	Placentia Bay	Pilots Placentia Bay	Off Argentia 47 20 00 N 54 06 30 W	12	4	12 Tentative 2 Confirm	16 12
	Argentia			12	4	12 Tentative 3 Confirm	
	St. John's	Pilots St. John's	47 33 30 N 52 35 06 W	12	3	4 Tentative 3 Confirm	16 11
	Stephenville	Pilots Stephenville	48 29 40 N 58 33 00 W	12	4	4	16 11
Nova Scotia							
	Cape Breton						
	(a) Sydney Harbour	Pilots Cape Breton	Sydney and Bras d'Or Lakes 46 20 30 N 60 07 00 W	12	6	12 Tentative 4 Confirm	16 12
	(b) Bras d'Or Lakes	Pilots Cape Breton	46 22 00 N 60 17 30 W	12	6	12 Tentative 4 Confirm	16 11
	(c) Strait of Canso	Pilots Cape Breton	Northern Approach 45 41 42 N 61 28 18 W	12	6	12 Tentative 4 Confirm	14
	Chedabucto Bay Vessels < 225.5 m (Less than 740 ft LOA)		Inner Approach 45 29 30 N 61 11 06 W	12	6	12 Tentative 4 Confirm	14
	Vessels > 225.5 m (Greater than 740 ft LOA)		Southern Approach 45 24 00 N 61 01 00 W	12	6	12 Tentative 4 Confirm	14

#	Area	Pilots	Pilot Boarding Station	Tentative ETA (hrs)	Confirm ETA (hrs)	Move / Departure (hrs)	VHF Ch
	(d) St. Peters Locks		Inner Approach 45 32 00 N 60 46 00 W or Southern Approach 45 24 00 N 61 01 00 W	12	6	12 Tentative 4 Confirm	14 14
	Halifax	Pilots Halifax	44 30 24 N 63 29 30 W	12	3	12 Tentative 1.5 Confirm	12
	Pugwash	Pilots Pugwash	45 54 30 N 63 40 42 W	12	4	4	17 7A 77
	Sheet Harbour	Pilots Halifax	44 30 24 N 63 29 30 W	24	6	6	16
Prince Edward Island							
	Charlottetown	Pilots Charlottetown	46 00 00 N 63 08 00 W	12	6	6	-
	Confederation Bridge	Pilots Confederation Bridge	Northwest Station 46 15 12 N 63 49 12 W Southeast Station 46 10 30 N 63 41 30 W	24	6	6	16

5 PILOTAGE MESSAGES WEST COAST, BRITISH COLUMBIA

Pilot boarding stations

1 There shall be a pilot boarding station

(a) off Victoria, B.C., adjacent to the VH buoy off Brotchie Ledge;

(b) off Cape Beale, at the entrance to Trevor Channel in Barkely Sound;

(c) off Triple Island, near Prince Rupert;

(d) off Pine Island, near Port Hardy,

(e) off Sand Heads, at the mouth of the Fraser River, for Area 1 pilot transfers; and

(f) at any other point or place in the region that the Authority considers necessary to ensure a safe and efficient pilotage service.

Notice to obtain pilots - Arrivals

2(1) The master, owner or agent of a ship that is to arrive in a compulsory pilotage area shall notify the Authority of the estimated time of arrival, universal co-ordinated time (UTC), of the ship at the pilot boarding station

(a) referred to in paragraph 1(a) at least 12 hours prior to arrival, and shall confirm or correct the estimated time of arrival not less than 4 hours prior to arrival;

(b) referred to in paragraph 1(b) at least 48 hours prior to arrival, and shall confirm or correct the estimated time of arrival not less than 12 hours prior to arrival;

(c) referred to in paragraph 1(c) at least 48 hours prior to arrival, and shall confirm or correct the estimated time of arrival not less than 12 hours prior to arrival; and

(d) designated pursuant to paragraph 1(d) at least 48 hours prior to arrival, and shall confirm or correct the estimated time of arrival not less than 12 hours prior to arrival.

(e) referred to in paragraph (e) at least 48 hours prior to arrival, and shall confirm or correct the estimated time of arrival not less than 12 hours prior to arrival.

Notice to obtain pilots - Departures and movages

(2) The master, owner or agent of a ship that is subject to compulsory pilotage - shall notify the Authority in advance of the local time that a pilot is required to be on board the ship that is to go:

(a) from one place in a compulsory pilotage area to any other place in a compulsory pilotage area;

(b) from one place in a compulsory pilotage area to a place outside a compulsory pilotage area; or

(c) from a place outside a compulsory pilotage area to any other place within a compulsory pilotage area.

2(1) The notices referred to in sub-section 2(1) shall be addressed *Pilots Victoria*, including the required information sent via any coast station by radiotelephone or other appropriate means or shall be given by calling a pilot dispatch centre.

2(2) The notice referred to in paragraph 2(2)(a) shall be given by calling a pilot dispatch centre as follows:

(a) The master, owner or agent of a ship departing from a place where pilotage service is required shall place a Notice of Requirement in Local Time with the Pilotage Authority at least 12 hours before the pilot or pilots are required to be on board the transportation to the ship specified in the Pilotage Order, or, at least 10 hours before the pilot or pilots are required to be on board the ship, if berthed at a place where pilots are based.

(b) The Pilot Order time specified in a Notice of Requirement may be delayed once, and/or cancelled, without payment of cancellation fees if prior notice of delay or cancellation is received by the Authority not less than:

(i) 6 hours prior to transportation in the case of long jobs, i.e. pilotage assignments involving ports, places or harbours on the West Coast of Vancouver Island, and ports, places or harbours north of 50° North Latitude, excluding Port Alberni, Campbell River, Duncan Bay, Prince Rupert and Kitimat;

(ii) 4 hours in the case of Roberts Bank, English Bay, Fraser River Ports, all anchorages and berths east of Berry Point and airports at Vancouver, Victoria and Cassidy.

(iii) 3 hours in all other cases.

(iv) 7 hours prior to transportation when airports and ferry terminals are used.

(3) The Authority may agree to waive the 12 hour Notice of Requirement providing the master, owner or agent gives reasonable cause for not complying.

(4) (a) All Notices of Requirement scheduled between the hours of 1200 and 1700 shall be confirmed, delayed or cancelled by 0900 hours daily - any subsequent delays or cancellations will incur the appropriate detention or cancellation fees.

(b) All Notices of Requirement scheduled between the hours of 1700 and 2100 shall be confirmed, delayed or cancelled by 1200 hours daily - any subsequent delays or cancellations will incur the appropriate detention or cancellation fees.

(c) Agents are requested to make their best efforts to ensure that orders scheduled to commence during the period from 2000 hrs to 1059 hrs the following morning shall be placed prior to 1730 hrs daily.

(5) In cases of emergency involving danger to life, limb or property, the Authority shall waive any Notice of Requirement and dispatch the first available pilot to cover the emergency.

Required information in Notice

4 A notice under section 2 may be verbal or, when required by the Authority, shall be in writing and shall state

(a) the pilotage service to be performed; and

(b) the name, nationality, length, breadth, gross tonnage and deepest draft of the ship.

6 PILOT BOARDING FACILITIES - PERTAINING TO FOREIGN FLAG VESSELS - CANADIAN TERRITORIAL WATERS

- East Coast Pilot Boarding Stations
- St. Lawrence River (Les Escoumins to St. Lambert) Pilot Boarding Stations
- Great Lakes Pilot Boarding Stations from St. Lambert Westward
- West Coast Pilot Boarding Stations

Under the Section 119 of Navigation Safety Regulations, 2020 ships using stations pilot boarding within the above regions are required to comply with Regulation 23 of Chapter V of the International Convention for the Safety of Life at Sea (SOLAS), 1974 as well as the requirements of the Annex to the IMO Resolution A.1045 (27), as amended periodically. The IMO Resolution A.889 (21) has been replaced by IMO Resolution A.1045 (27).

Authority: Transport Canada

23A Guidelines for Navigation Under the Confederation Bridge

1. TP 13681 - Guidelines for Navigation Under the Confederation Bridge applies to all vessels intending to transit under the Confederation Bridge (the Bridge) or navigating in its proximity.
2. Confederation Bridge Diagram (see Annex)
3. The central navigation channel, is within the Confederation Bridge Compulsory Pilotage Area established in the *General Pilotage Regulations* (made under the *Pilotage Act*). Canadian vessels over 1,500 GT and foreign vessels, are subject to compulsory pilotage in the Confederation Bridge Compulsory Pilotage Area, in accordance with the *General Pilotage Regulations*.
4. Pilotage is mandatory on all Canadian vessels over 1500 GT and foreign vessels intending to transit under the bridge and are to use the “central navigation channel” and in the case of a tug and tow, a combination of the Gross Tonnage of the tug and tow is used.
5. No Vessel should transit under the Bridge in inclement weather or ice conditions as outlined in TP 13681 section 5.0 General guidelines for all vessels.
6. Vessels over 500 GT, solely propelled by sail, shall not transit under the Bridge.
7. Reports made pursuant to the *Vessel Traffic Services Zones Regulations*, vessels subject to the *Vessel Traffic Services Zones Regulations* must, when intending to proceed within 5 nautical miles of the Bridge, also report to Northumberland Traffic:
   - ETA fairway buoy and confirm that Pilot has been ordered and ETA to the Pilot Station when vessel is subject to compulsory pilotage.
   - Draft, displacement in tonnes, air draft and name of local agent if not registered in Canada.
   - When the vessel has a **condition of class,** accident or a malfunction of its machinery, equipment or a deficiency in its crewing that may impair its safe navigation.
   - Where an obstruction or other hazard is identified in the central navigation channel or “near shore” navigation channels.
   - In the case of a towing vessel, where the towing vessel is having or anticipating difficulty in controlling its tow.
8. **Towing vessels:**
   - Must not drop anchor or anchor its tows in such a manner that they may swing across the central navigation channel.
   - Only one vessel or barge shall be towed under the bridge per tug.
   - Must not, when engaged in arranging its tow, obstruct the navigation of other vessels.
   - Must shorten its towing arrangement to the shortest extent possible without compromising safety. When the towline exceeds 75 metres a suitably sized tug should be secured to the stern of the tow.
   - Dead ship being towed are not permitted to transit under the Bridge,

9. Navigational Guidelines and Restrictions for Vessels over 1500GT transiting the "central navigation channel

- The navigation route for vessels over 1,500 GT transiting under the Bridge is through the central navigation channel.
- **Maximum Displacement at Time of Transit**

  Passenger Vessel : 34,000 Metric tonnes

  Cargo Vessel: 47,700 Metric tonnes

  Vessels exceeding the above maximum displacements need to submit a risk assessment that will include the use of an **escort tug,** as defined in TP 13681 section 3.0 Definitions.

  If the vessel is 20% greater than the maximum displacement, then 2 such **escort tugs** need to be included in the risk assessment.

  The risk assessment should be submitted to the Atlantic Regional Transport Canada Marine Safety and Security Office[1] and the Atlantic Pilotage Authority **15 business days prior to transit.**

- **Maximum Speed**

  Passenger vessels: **11 knots** over the ground within 2 nautical miles of the Bridge

  Cargo vessels: **8 knots** over the ground within 2 nautical miles of the Bridge

  The speed of a vessel transiting may be increased when circumstances demand, and to keep the vessel on track. Speed limits are subject to enforcement actions.

- **Maximum air draft (higher high water, large tides) - 48 meters**

10. Navigation Guidelines for Vessels 1,500 GT and Under – Transiting the "Near Shore Navigation Channels"

- Local vessels 1,500 GT and under, that are engaged in local traffic, may utilize the designated "near shore" navigation channels located on either side of the Strait.
- The **"near shore"** navigation channels are designated between piers **P3 and P4, P4 and P5, P42 and P43, P43 and P44**. Piers are located as follows:

  P3) 46º 14' 33.29" N, 63º 42' 53.76" W

  P4) 46º 14' 26.92" N, 63º 43' 00.96" W

  P5) 46º 14' 20.54" N, 63º 43' 08.16" W

  P42) 46º 10' 36.07" N, 63º 47' 53.11" W

  P43) 46º 10' 30.16" N, 63º 48' 01.09" W

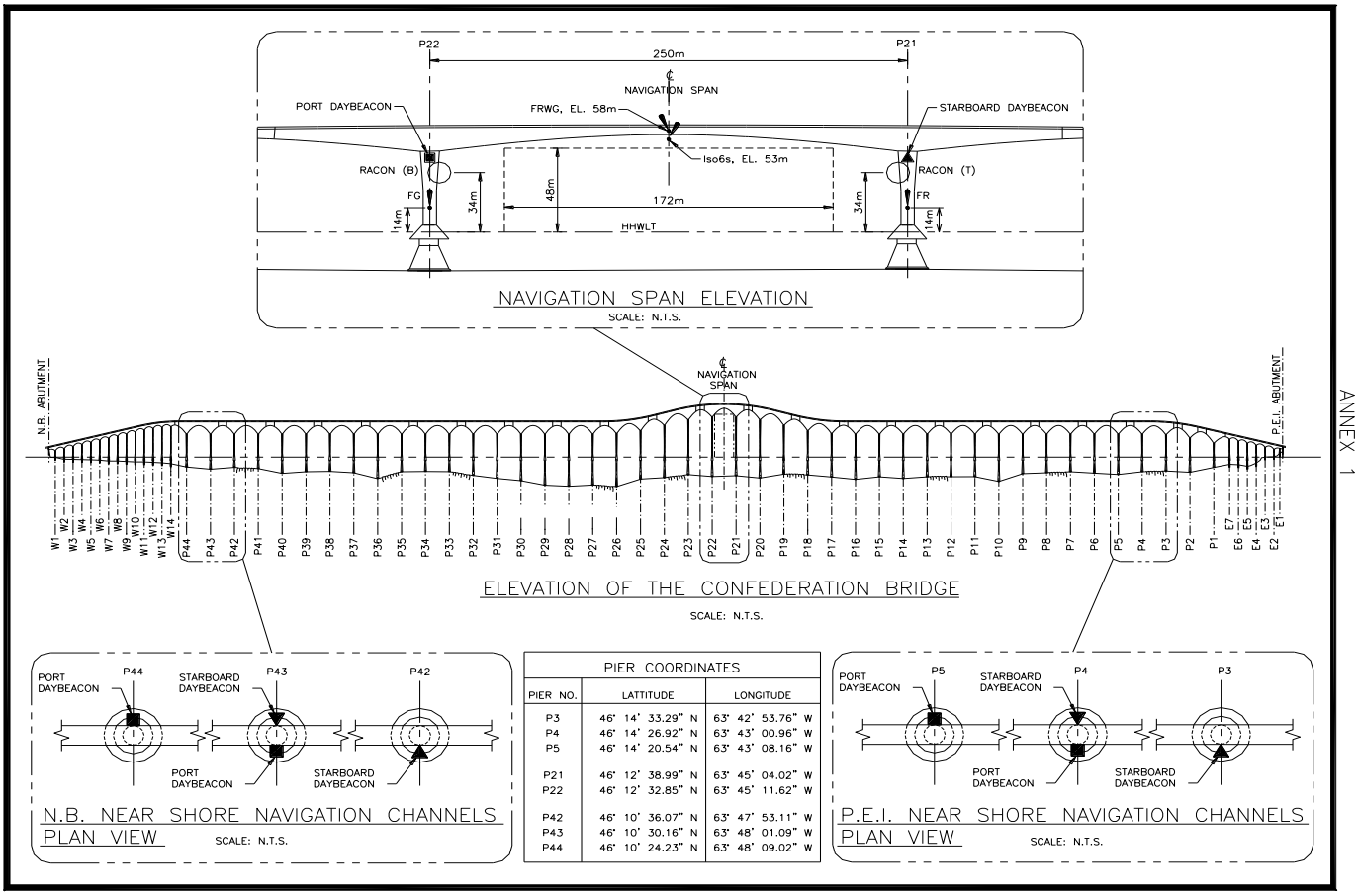
  P44) 46º 10' 24.23" N, 63º 48' 09.02" W

[1] Transport Canada Marine Safety and Security, Atlantic Regional Office (Charlottetown, PE) Jean Canfield Building
191 Great George Street
Charlottetown, PE
C1A 4L2
Local Number: 902-566-7987
Local Fax: 902-566-7991
Email: CharlottetownTCCAdmin-AdminCTCCharlottetown@tc.gc.ca

11. <u>Restriction for vessels transiting the near shore channels:</u>

- Maximum Speed over ground - **11 knots**
- Maximum air draft (higher high water, large tides) - **28 meters**

ANNEX



PIER COORDINATES

PIER NO.	LATTITUDE	LONGITUDE
P3	46° 14' 33.29" N	63° 42' 53.76" W
P4	46° 14' 26.92" N	63° 43' 00.96" W
P5	46° 14' 20.54" N	63° 43' 08.16" W
P21	46° 12' 38.99" N	63° 45' 04.02" W
P22	46° 12' 32.85" N	63° 45' 11.62" W
P42	46° 10' 36.07" N	63° 47' 53.11" W
P43	46° 10' 30.16" N	63° 48' 01.09" W
P44	46° 10' 24.23" N	63° 48' 09.02" W

ANNEX 1

Authority: Transport Canada

23B Suspension of Compulsory Pilotage Service for Miramichi, NB

The pilotage service is no longer available in the compulsory pilotage area of Miramichi, NB. The navigation channel is deficient in width, depth, and alignment and does not meet the recommended guidelines for the accommodation of commercial traffic. The process of infilling in the Miramichi River is continuous therefore (1) local knowledge may be incomplete or not up to date at any time; (2) ongoing infilling may exceed the currency of sounding surveys at any time and (3) the fixed and floating aids to navigation may not provide the degree of accuracy required by certified masters of commercial vessels to safely navigate the channel. Any further commercial use of the waterway in its current condition by vessels is solely at the discretion of the vessel master.

Authority: Transport Canada

24 Navigation Safety Regulations

Pilot Transfer Equipment and Arrangements

(1) Every ship engaged on a voyage in the course of which a pilot is likely to be employed shall be provided with pilot transfer equipment and arrangements in accordance with Regulation 23 of Chapter V of the Safety Convention.

(2) Pilot transfer equipment and arrangements with which a ship is provided shall meet the requirements of the annex to IMO Resolution A1045(27) as amended time to time, *Pilot Transfer Arrangements*.

(3) Despite subsection (1), in the case of a Canadian ship in the waters of the Great Lakes or St. Lawrence River, if the distance from the water to the point of access of the ship is more than five metres, the ship shall provide an accommodation ladder, or other equipment that provides equally safe and convenient access to and egress from the ship, so that the climb on the pilot ladder does not exceed five metres. (See Section 26. Additional Guidance on Pilot transfer Arrangements.)

SOLAS – Chapter V

REGULATION 23, Pilot transfer arrangements

1 Application

1.1 Ships engaged on voyages in the course of which pilots are likely to be employed shall be provided with pilot transfer arrangements.

1.2 Equipment and arrangements for pilot transfer which are installed[1] on or after 1 July 2012 shall comply with the requirements of this regulation, and due regard shall be paid to the standards adopted by the Organization[2].

1.3 Except as provided otherwise, equipment and arrangements for pilot transfer which are provided on ships before 1 July 2012 shall at least comply with the requirements of regulation 17[3] or 23, as applicable, of the Convention in force prior to that date, and due regard shall be paid to the standards adopted by the Organization prior to that date.

1.4 Equipment and arrangements installed on or after 1 July 2012, which are a replacement of equipment and arrangements provided on ships before 1 July 2012, shall, in so far as is reasonable and practicable, comply with the requirements of this regulation.

1.5 With respect to ships constructed before 1 January 1994, paragraph 5 shall apply not later than the first survey[4] on or after 1 July 2012.

1.6 Paragraph 6 applies to all ships.

2 General

2.1 All arrangements used for pilot transfer shall efficiently fulfil their purpose of enabling pilots to embark and disembark safely. The appliances shall be kept clean, properly maintained and stowed and shall be regularly inspected to ensure that they are safe to use. They shall be used solely for the embarkation and disembarkation of personnel.

[1] Refer to the Unified interpretation of SOLAS regulation V/23 (MSC.1/Circ.1375).
[2] Refer to the Pilot transfer arrangements (resolution,1045(27)).
[3] Refer to resolution MSC.99(73), renumbering previous regulation 17 as regulation 23, which entered into force on 1 July 2002.
[4] Refer to the Unified interpretation of the term "first survey" referred to in SOLAS regulations (MSC.1/Circ.1290).

2.2 The rigging of the pilot transfer arrangements and the embarkation of a pilot shall be supervised by a responsible officer having means of communication with the navigation bridge who shall also arrange for the escort of the pilot by a safe route to and from the navigation bridge. Personnel engaged in rigging and operating any mechanical equipment shall be instructed in the safe procedures to be adopted and the equipment shall be tested prior to use.

2.3 A pilot ladder shall be certified by the manufacturer as complying with this regulation or with an international standard acceptable to the Organization[5]. Ladders shall be inspected in accordance with regulations I/6, 7 and 8.

2.4 All pilot ladders used for pilot transfer shall be clearly identified with tags or other permanent marking so as to enable identification of each appliance for the purposes of survey, inspection and record keeping. A record shall be kept on the ship as to the date the identified ladder is placed into service and any repairs effected.

2.5 Reference in this regulation to an accommodation ladder includes a sloping ladder used as part of the pilot transfer arrangements.

3 Transfer arrangements

3.1 Arrangements shall be provided to enable the pilot to embark and disembark safely on either side of the ship.

3.2 In all ships where the distance from sea level to the point of access to, or egress from, the ship exceeds 9 m, and when it is intended to embark and disembark pilots by means of the accommodation ladder[6], or other equally safe and convenient means in conjunction with a pilot ladder, the ship shall carry such equipment on each side, unless the equipment is capable of being transferred for use on either side.

3.3 Safe and convenient access to, and egress from, the ship shall be provided by either:

.1 a pilot ladder requiring a climb of not less than 1.5 m and not more than 9 m above the surface of the water so positioned and secured that:

.1.1 it is clear of any possible discharges from the ship;

.1.2 it is within the parallel body length of the ship and, as far as is practicable, within the mid-ship half length of the ship;

.1.3 each step rests firmly against the ship’s side; where constructional features, such as rubbing bands, would prevent the implementation of this provision, special arrangements shall, to the satisfaction of the Administration, be made to ensure that persons are able to embark and disembark safely;

.1.4 the single length of pilot ladder is capable of reaching the water from the point of access to, or egress from, the ship and due allowance is made for all conditions of loading and trim of the ship, and for an adverse list of 15°; the securing strongpoints, shackles and securing ropes shall be at least as strong as the side ropes; or

.2 an accommodation ladder in conjunction with the pilot ladder (i.e. a combination arrangement), or other equally safe and convenient means, whenever the distance from the surface of the water to the point of access to the ship is more than 9 m. The accommodation ladder shall be sited leading aft. When in use, means shall be provided to secure the lower platform of the accommodation ladder to the ship's side, so as to ensure that the lower end of the accommodation ladder and the lower platform are held firmly against the ship's side within the parallel body length of the ship and, as far as is practicable, within the mid-ship half length and clear of all discharges;

[5] Refer to the recommendations by the International Organization for Standardization, in particular publication ISO 799:2004, *Ships and marine technology – Pilot ladders*.

[6] Refer to regulation II-1/3-9 on Means of embarkation on and disembarkation from ships, adopted by resolution MSC.256(84), together with the associated Guidelines (MSC.1/Circ.1331).

.2.1 when a combination arrangement is used for pilot access, means shall be provided to secure the pilot ladder and manropes to the ship's side at a point of nominally 1.5 m above the bottom platform of the accommodation ladder. In the case of a combination arrangement using an accommodation ladder with a trapdoor in the bottom platform (i.e. embarkation platform), the pilot ladder and man ropes shall be rigged through the trapdoor extending above the platform to the height of the handrail.

4 Access to the ship’s deck

Means shall be provided to ensure safe, convenient and unobstructed passage for any person embarking on, or disembarking from, the ship between the head of the pilot ladder, or of any accommodation ladder or other appliance, and the ship’s deck. Where such passage is by means of:

.1 a gateway in the rails of bulwark, adequate handholds shall be provided;

.2 a bulwark ladder, two handhold stanchions rigidly secured to the ship’s structure at or near their bases and at higher points shall be fitted. The bulwark ladder shall be securely attached to the ship to prevent overturning.

5 Shipside doors

Shipside doors used for pilot transfer shall not open outwards.

6 Mechanical pilot hoists

Mechanical pilot hoists shall not be used

7 Associated equipment

7.1 The following associated equipment shall be kept at hand ready for immediate use when persons are being transferred:

.1 two man-ropes of not less than 28 mm and not more than 32 mm in diameter properly secured to the ship if required by the pilot; man-ropes shall be fixed at the rope end to the ring plate fixed on deck and shall be ready for use when the pilot disembarks, or upon request from a pilot approaching to board (the manropes shall reach the height of the stanchions or bulwarks at the point of access to the deck before terminating at the ring plate on deck);

.2 a lifebuoy equipped with a self-igniting light;

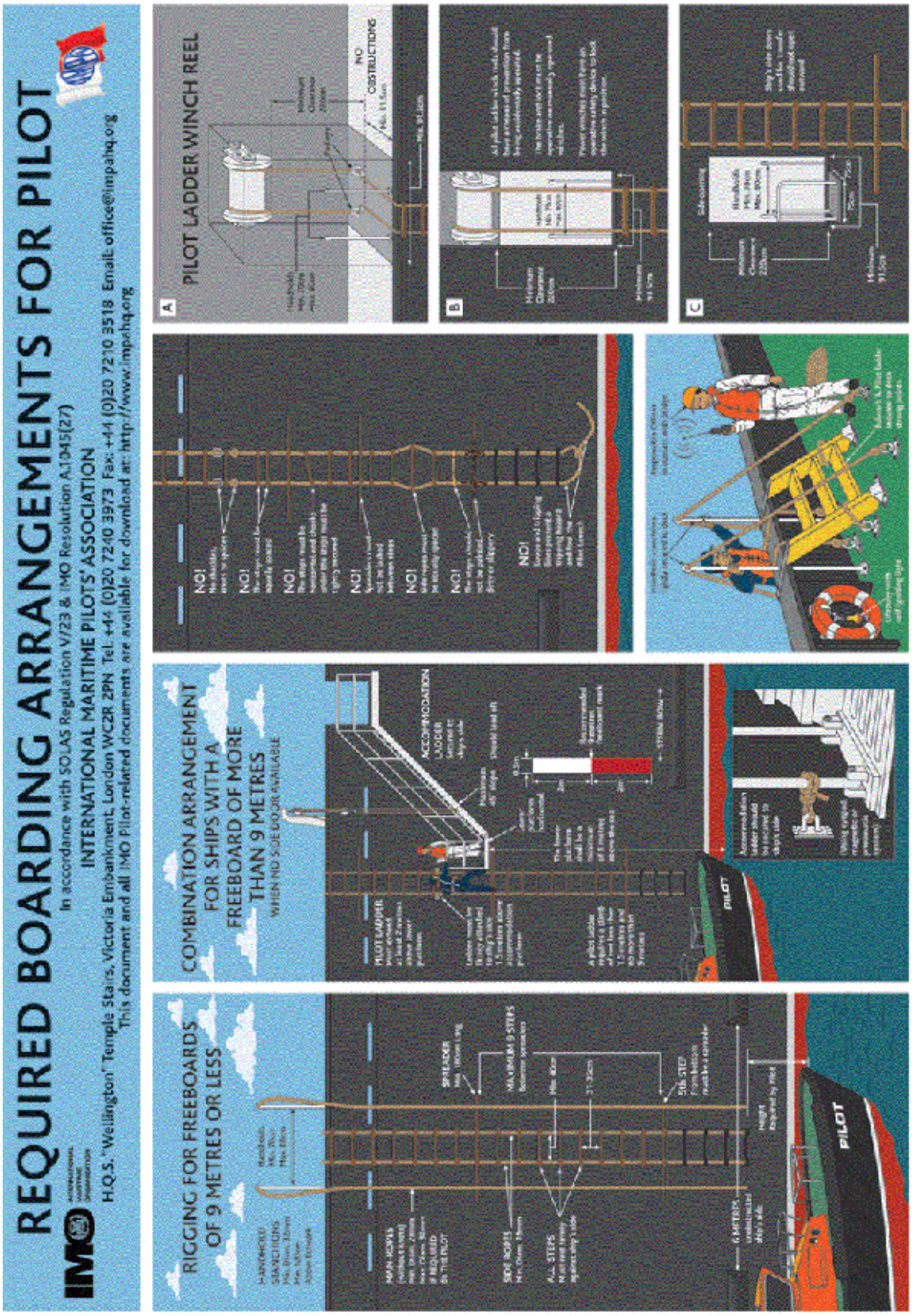
.3 a heaving line.

7.2 When required by paragraph 4 above, stanchions and bulwark ladders shall be provided.

8 Lighting

Adequate lighting shall be provided to illuminate the transfer arrangements overside, and the position on deck where a person embarks or disembarks.

Authority: Transport Canada



Pilot Transfer Arrangements amended by Resolution A.1108(29)

25 Information Concerning Pilot Transfer Arrangements on the St. Lawrence River

All ships must have pilot transfer equipment and arrangements that are compliant and deployed in accordance with the regulations, regardless of sea and swell conditions.

Pilot transfer is the responsibility of the transferring ship.

On the St. Lawrence River, between Les Escoumins and Saint-Lambert, the pilots would like ships to deploy their accommodation ladder in addition to a pilot ladder, regardless of the distance between the water and the point of access to the ship. However, this method will be considered only if the equipment is available on board.[1]

In order to minimize the vertical distance to be climbed on the pilot ladder, and where this is possible, the position of the pilot ladder will be adjusted in such a way as to lower the point at which the pilot moves between the pilot ladder and the accommodation ladder (Figure 1).

As requested by the pilots and after consultations,[2] it was determined that, alternatively, under certain conditions, it would be safe to lower the accommodation ladder to allow the pilot to move directly onto or off the pilot boat, provided the ship has the requisite equipment (Figure 2). Transport Canada, Marine Safety and Security, recognizes this as equipment that is “equally safe and convenient” as set out in the Regulations, provided that the following conditions are met:

1. Embarkation from the pilot ladder must be possible at all times.
2. When the pilot boat approaches the ship, the accommodation ladder is raised so that there is no risk or obstacle for personnel on the deck or for the superstructures of the pilot boat.
3. Once the pilot boat is in position, and under the supervision of personnel on the deck of the pilot boat and the ship's officer in charge of the transfer, the accommodation ladder is moved to its final position:
   a) at the place where the pilot will move between the accommodation ladder and the pilot ladder, depending on sea and swell conditions, or
   b) if there are no waves or swell, at a minimum distance of about 350 mm (the distance between two rungs of the ladder according to SOLAS) so that the pilot can embark directly from the deck or from the platform of the pilot boat.
4. The pilot(s) remain(s) inside the pilot boat or on the deck of the ship until all equipment is in final position and supported against the side of the ship.

The above transfer procedure also applies under winter conditions.

Lowering the point of transition between the accommodation ladder and the pilot ladder is thought to be an effective way of reducing the risks involved when transferring pilots in winter. Direct embarkation from the accommodation ladder will also be considered when a tug is being used instead of a pilot boat for transferring pilots in winter.

[1] Note that ships are not required to have accommodation ladders installed for this purpose if the distance between the water and the point of access is 5 metres or less in the case of Canadian ships, or 9 metres or less in the case of other ships.
[2] Working Group on Pilots’ Transfer during winter.

FIGURE 1: LOWERING THE POINT OF TRANSITION BETWEEN THE PILOT LADDER AND THE ACCOMODATION LADDER

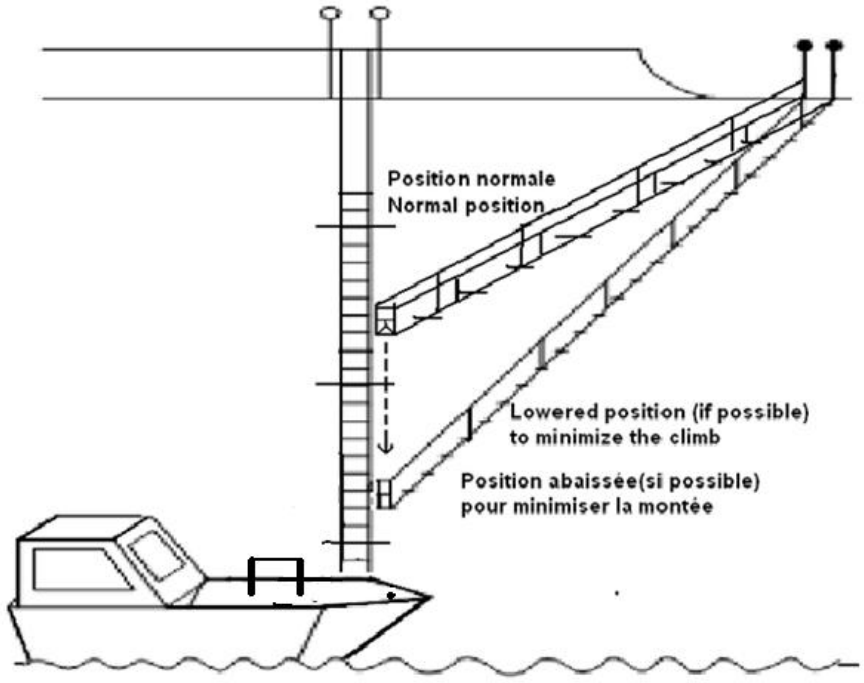
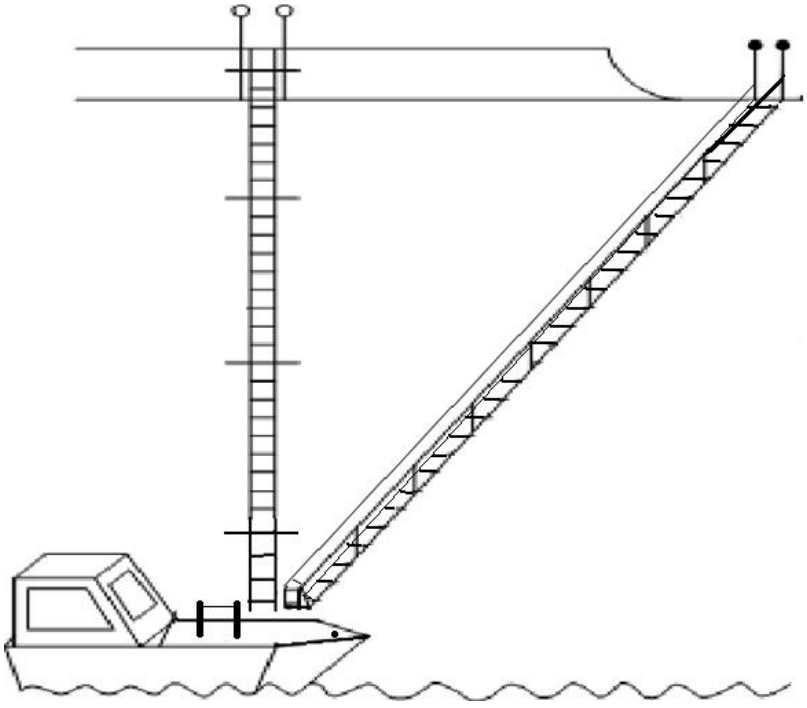


FIGURE 2: ACCOMODATION LADDER LOWERED TO ALLOW DIRECT BOARDING FROM THE PILOT VESSEL UNDER CERTAIN CONDITIONS



The above illustrations in Figure 1 and Figure 2 contain information concerning acceptable Pilot Transfer Arrangements.

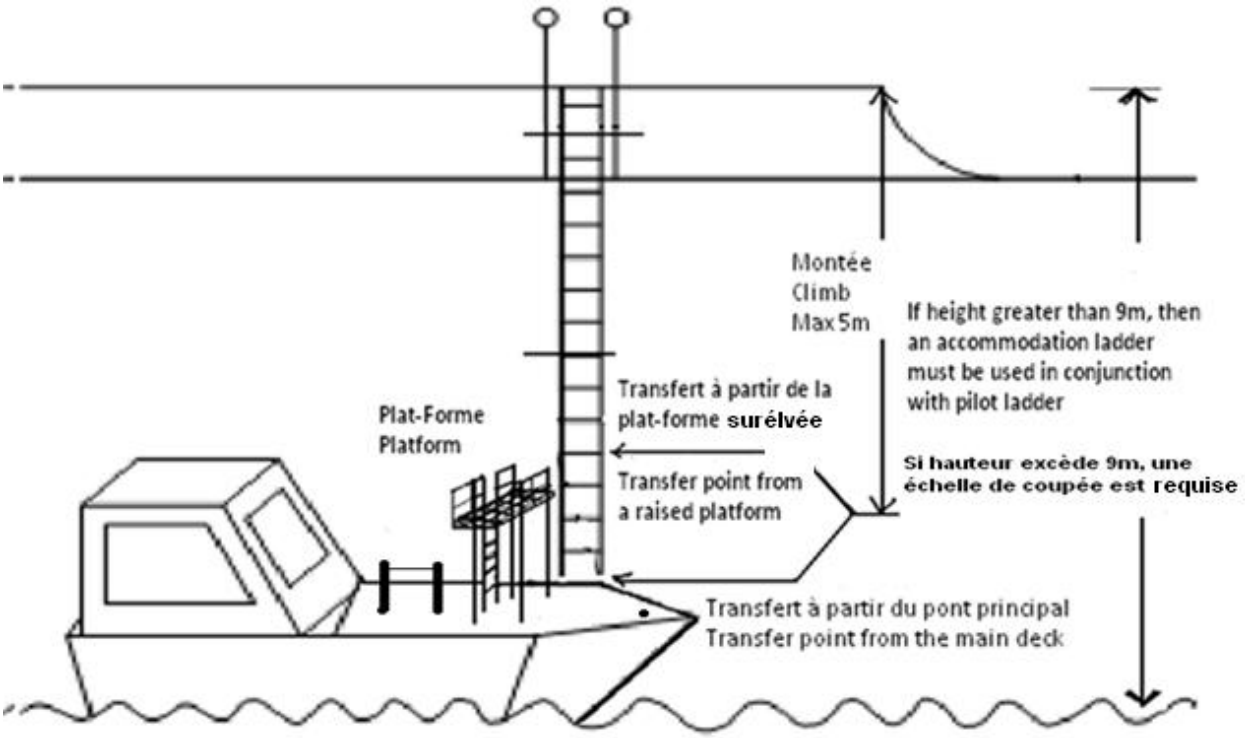
Authority: Transport Canada

26 Additional Guidance on Pilot Transfer Arrangements

The purpose of this notice is to ensure that the distance to be climbed on the pilot ladder does not exceed 5 metres for ships in the waters of the Great Lakes and the St. Lawrence River. The “transfer point,” where the pilot moves between the pilot boat and the pilot ladder, may be considered as the lower point of the climb. This transfer point will be unique to each pilot boat and may be the main deck of the pilot boat or a raised position on a platform or on the structure of the pilot boat that is specifically designed to allow pilots to embark more easily. The height of the transfer point above the water for a particular pilot boat may be obtained in advance from the pilot station when the services of a pilot are requested. If the distance from this transfer point to the point of access to or egress from the ship does not exceed 5 metres, an accommodation ladder may not be provided.

Notwithstanding the above, the regulations do not allow the use of a pilot ladder where the climb of the ladder would exceed a height of 9m above the water.

FIGURE 3: CLIMB ON THE PILOT LADDER MUST NOT EXCEED 5 METRES



The distance to be climbed on the pilot ladder does not exceed 5 metres for ships in the waters of the Great Lakes and the St. Lawrence River.

Authority: Transport Canada

C Marine Communications and Traffic Services

27A Guidelines for the Transit of Wide Beam Vessels and Long Vessels

27A.1 TRANSIT OF WIDE BEAM VESSELS AND LONG VESSELS IN THE QUÉBEC-MONTRÉAL SEGMENT

In this notice, the following definitions are used:

Wide beam vessel means a vessel whose overall length does not exceed 300.0 metres and whose moulded breadth is equal to or greater than 32.5 metres, but not exceeding 44.0 metres.

Long vessel means a vessel whose overall length is between 270.0 and 300.0 metres and whose moulded breadth does not exceed 44.0 metres.

This notice, including chart VN-301 “Directives for the Transit of ***Wide beam*** and ***Long*** Vessels in the St. Lawrence Waterway, 2019 Edition” defines the directives and conditions for the transit of wide beam and long vessels in the Québec-Montréal segment, according to the following sections:

1. Ice navigation **(G)**
2. Meeting in risk areas **(R)**
3. Overtaking in risk areas **(D)**
4. Anchorage areas **(M)**
5. Under keel clearance **(UKC)**
6. Assessment of the manoeuvrability of ***wide beam*** and ***long*** vessels
7. Other rules for managing ***wide beam*** and ***long*** vessel transits
8. Double pilotage

Chart VN-301 “Directives for the Transit of ***Wide beam*** and ***Long*** Vessels in the St. Lawrence Waterway, 2020 Edition” are available at: Chart VN-301 - 2020 Edition

Wide-beam vessels subject to this notice must submit for every inbound voyage the completed Wide-beam vessel Questionnaire to Transport Canada before arrival at the Escoumins pilot station. The questionnaire can be obtained by writing to AlerteNMD-AlertNMD@tc.gc.ca

1) Ice navigation (G)

G-1) Before a transit or leaving a berth in the Québec-Montréal segment, pilots of The Corporation des pilotes du Saint-Laurent Central (CPSLC) must assess the ice conditions, including weakened or unstable fast ice, with a view to determining whether these conditions could pose problems to shipping during the transit of a ***wide beam*** or ***long*** vessel.

G-2) ***Wide beam*** and ***long*** vessels which, given their operational conditions, appear unable to overcome the forces exerted by the ice, whether due to, amongst others:

- mechanical problems
- problems with the propulsion system
- limitations resulting from types of propulsion system programming / monitoring parameters shall not proceed upstream from Québec before the systems in question are re-established, to ensure safe passage at confined areas of the river.

G-3) When there is ice under pressure, as determined by the Canadian Coast Guard (CCG) Ice Office, ***wide beam*** and ***long*** vessels must proceed under the Québec bridges with the tidal currents.

G-4) In the Lac St-Pierre sector, pilots must give preference to the meeting of vessels during daylight and under good visibility in order to clearly perceive vessel movement, ice conditions and whether wake from passing vessels could result in the risk of fast ice breaking off.

2) Directives concerning the meeting of vessels in medium-risk and high-risk areas (R)

R-1) Meetings are prohibited in high-risk areas. The high-risk areas between Québec and Montréal for vessels with a combined breadth of between 65.0 metres and 72.6 metres and between 72.61 metres and 88.0 metres are identified on chart VN-301.

R-2) Medium risk areas identified on chart VN-301 are assessed by pilots to determine whether vessels may be able to safely meet where one or more of the factors listed below apply:

a) The medium-risk areas between Québec and Montréal for vessels with a combined breadth of between 65.0 metres and 72.6 metres and between 72.61 metres and 88.0 metres are identified on chart VN-301. Before the vessels meet, the pilots must notify Marine Communications and Traffic Services (MCTS) of the manoeuvres they have agreed on.

b) For these meetings and overtakings, the pilot and MCTS must provide a report in the established form. The CPSLC will consolidate these two reports in a database.

c) In assessing the risks associated with the meeting of vessels, pilots must take the following factors into consideration amongst others:

- Nighttime navigation
- Presence of lighted buoys
- Visibility
- Wind velocity and direction
- Maneuvering distance
- Marine traffic
- Vessel characteristics
- Passage under overhead cables and bridges
- Towing and dredging operations
- Channel characteristics

Specific sectors: Portneuf Bend, Sorel-Tracy Bend and Pointe à la Citrouille

In the context of a meeting with a tanker, the pilot must ensure that the angle of incidence on the tanker's longitudinal axis is under 30° in order to increase the likelihood (in the event of a collision) of a ricochet effect on the ship side instead of perforating her double hull.

R-3) Maximum vessel speed when meeting

a) During any meeting that occurs in an area identified by medium or low risk flag (white or yellow), the speed of each of the two (2) vessels shall not exceed a speed over water (SOW) of nine (9) knots.

b) According to the under-keel clearance (UKC) table in Notice to Mariners 27C, to account for interactions during vessel meetings, the minimum UKC must be increased by at least 50% of the squat value. For purposes of guidance, at a speed of nine (9) knots over the water (SOW), this increase of the vessel squat is about 30 cm.

R-4) Meetings with ***long*** vessels are prohibited in the following areas (See chart VN-301):

- Québec Bridges
- Sainte-Croix Bend
- Barre à Boulard/Rapides du Richelieu (upstream Q70)
- Cap Charles Bend
- Cap-à-la-roche Bend
- Champlain Bend
- Bécancour Bend
- Cap-de-la-Madeleine Bend
- Laviolette Bridge
- Île de Grâce Bend (Sainte-Anne-de-Sorel)
- Bellmouth Bend
- The segment between Cap Saint-Michel and Île aux Vaches
- The downstream sector of Tétreaultville

3) Directives on overtaking in medium-risk and high-risk areas (D)

D-1) Overtaking is prohibited in the high-risk areas identified on chart VN-301. The high-risk areas between Québec and Montréal for vessels with a combined breadth of between 65.0 metres and 72.6 metres and between 72.61 metres and 88.0 metres are identified on chart VN-301.

D-2) Medium-risk areas are assessed by pilots to determine whether a vessel may be able to safely overtake another where one or more of the factors listed below apply :

a) The medium-risk areas between Québec and Montréal for vessels with a combined breadth of between 65.0 metres and 72.6 metres and between 72.61 metres and 88.0 metres are identified on chart VN-301. Before a vessel overtakes another, the pilots must notify MCTS of the manoeuvres they have agreed on;

b) For these meetings and overtakings, the pilot and MCTS must provide a report in the established form. The CPSLC will consolidate these two reports in a database.

c) In assessing the risks associated with overtaking a vessel, pilots must take the following factors into consideration amongst others:

- Nighttime navigation
- Presence of lighted buoys
- Visibility
- Wind velocity and direction
- Maneuvering distance
- Marine traffic
- Vessel characteristics
- Passage under overhead cables and bridges
- Towing and dredging operations
- Channel characteristics

D-3) Speed control:

When planning to overtake another vessel, the pilot must obtain the authorization of the vessel to be overtaken. The vessels will adjust their speeds to obtain, ideally, a ratio of 2:1 (twice the speed) in order to minimize the interaction effects between the vessels. However, the overtaking vessel must not maintain a speed that could lead to accelerated shoreline erosion or cause shoreline property damage.

D-4) Overtaking is prohibited for ***long*** vessels in the following areas (See chart VN-301):

- Québec Bridges
- Sainte-Croix Bend
- Barre à Boulard/Rapides du Richelieu (upstream Q70)
- Cap Charles Bend
- Cap-à-la-roche Bend
- Champlain Bend
- Bécancour Bend
- Cap-de-la-Madeleine Bend
- Laviolette Bridge
- Île de Grâce Bend (Sainte-Anne-de-Sorel)
- Bellmouth Bend
- The segment between Cap Saint-Michel and Île aux Vaches
- The downstream sector of Tétreaultville

4) Directives concerning anchorage areas (M)

M-1) No anchoring of ***wide beam*** or ***long*** vessels at the Pointe-aux-Trembles (PAT) anchorage, except under exceptional circumstances.

M-2) The maximum permitted anchorage time for ***wide beam*** and ***long*** vessel in the Québec-Montréal segment is 24 hours. Weather conditions and forecasts must be favorable for the duration of the anchorage.
For ***long*** vessels, the 24 hours time limit may be extended as needed if conditions permit.

M-3) The anchorage areas permitted for ***wide beam*** vessels are the following:

- Saint-Nicolas
- Pointe-aux-Ormes, in summer only (1,2,3)
- Trois-Rivières (in front of city TR1 and TR4)
- Lanoraie (L1 to L4) (see M-6 and M-7 below)

M-4) The swinging circle of wide beam or long vessel must not impair or divert traffic

M-5) A pilot's presence is required for a ***wide beam*** vessel at anchor.

M-6) One of the two anchorages at Lanoraie, L3 or L4, shall be available as a priority when there are one or more wide beam vessels in the Québec-Montréal segment.

M-7) Lanoraie L1 anchorage is only permitted when there are no vessels expected or docked at the oil terminal in Tracy.

5) Directives concerning Under-Keel Clearance (UKC)

5.1 To ensure safe conduct and allow the coordination of the vessel transits in opposite directions in the Saint-Lawrence between Québec City and Montréal, vessels with beam equal to or greater than 32.50 metres (wide beam vessels) shall:

- Comply with the under-keel clearance calculation table as per Notice to Mariners 27C.
- When upbound:
  - Between Québec City and Batiscan, vessels shall have an under-keel clearance that allows for transit at a minimum speed of seven (7) knots over water (SOW).
  - Upstream of Batiscan, vessels shall have an under-keel clearance that allows for transit at a minimum speed of ten (10) knots over water (SOW).
- When downbound between Montréal and Québec City, vessels shall have an under-keel clearance that allows for transit at a minimum speed of seven (7) knots over water (SOW).

5.2 Special cases

If the prevailing water levels during transit do not allow an upbound ***wide beam*** vessel to meet the UKC standards corresponding to a speed of ten (10) knots over water (SOW), the UKC calculation for ***wide beam*** vessels with good manoeuvrability **(BM)** could exceptionally be done with a UKC calculation speed of up to seven (7) knots (SOW) under the following conditions:

a) The pilots check the vessel's draft at Québec and Trois-Rivières;

b) No meetings or overtaking in the area upstream of Trois-Rivières are permitted for vessels of combined breadth of 65 m or more. In addition, vessels must transit from Québec City at high tide to take advantage of the rising tide's current;

c) The Montréal Port Authority (MPA) coordinates vessel departures from all ports upstream of Trois-Rivières and when the combined breadth of vessels is 65 metres or more, in collaboration with the MCTS, to ensure that no meetings or overtakings occur in critical areas;

d) The vessel may not benefit from this condition if there is a vessel case file open with the CCG Alerting and Warning Network (AWN) having as its subject, amongst others:
   - Mechanical problems
   - Trouble with navigational equipment or any other AWN that contains information that could jeopardize navigational safety
   - Departure restrictions following evaluation of the AWN report by the concerned parties

If all of the above-mentioned conditions cannot be met, the vessel shall not be allowed to enter the upbound Québec-Montréal segment.

This exceptional authorization may be suspended by the competent authorities at any time depending on the prevailing information and circumstances during vessel transit.

6) Assessing the manoeuvrability of wide beam and long vessels

The manoeuvrability of ***wide beam*** and ***long*** vessels operating in the Québec–Montréal segment must be assessed to determine their behaviour in the channel based on the criteria established in the reports (manoeuvrability assessment). This report must be completed by the CPSLC pilots on the vessel's first voyages.

To adequately assess their manoeuvrability, each vessel must be assessed for a minimum of

- Four (4) round-trip transits for ***wide beam*** vessels
- Two (2) round-trip transits for ***long*** vessels
- One (1) round-trip transit for ***long*** or ***wide beam*** sister ship vessels on regular trade

Summer departure restrictions for ***wide beam*** and ***long*** vessels shall not apply when they have obtained a favourable assessment and are deemed to be of good maneuverability **(BM)** by the LPA and CPSLC.

7) Other rules for managing wide beam and long vessel transits

7.1 ***Wide beam*** vessels must favour mostly daytime transits between Québec City and Montréal, depending on weather conditions, traffic and other navigational risk factors.

7.2 To ensure the optimal and safe transit of ***wide beam*** vessels, the Laurentian Pilotage Authority (LPA), in collaboration with CPSLC, must determine and coordinate the passage schedule for these vessels in Québec City.

7.3 During hours of darkness, in favourable tide conditions, passage is allowed for upbound ***wide beam*** vessels until Grondines.

7.4 For downbound ***wide beam*** and ***long*** vessels the following departure rules apply:

- Departures must occur during the day, depending on the time of year, so transits or sections of transits are performed during daylight hours. Departure windows can be obtained from the LPA Assignment centre.
- When favourable tides do not match the schedule for several days, some vessels may, exceptionally, be allowed to sail following an agreement between the parties.

In the summer season[1], the above-mentioned rules in 7.4 do not apply when:

- The vessel was evaluated and judged to be of good manoeuvrability (BM) and,
- The pilot's portable unit (PPU) is equipped with a rate of turn indicator.

7.5 For upbound ***wide beam*** vessels, the following rules apply:

A vessel of good manoeuvrability (**BM**) will be able to perform a transit at a better tide point, without this transit being completed only during daylight hours.

Vessels of good manoeuvrability (**BM**) that regularly transit between Québec City and Montréal can submit an application to the competent authorities (TC, CCG and LPA in collaboration with CPSLC) to obtain a *special* exemption for upbound nighttime transits.

8) Double pilotage

Vessels, whose breadth is equal to or greater than 32.5 metres transiting in the segment between Québec and Montréal, are subject to double pilotage by Laurentian Pilotage Authority.

The ***wide beam*** and ***long*** vessel transit directives in the Québec-Montréal segment assume that the vessel pilots have taken other factors and conditions into consideration that could affect the vessel's behaviour. Pilots are responsible for the vessel's safety at all times.

1. Reference: Notice to industry issued by the LPA.

27A.2 TRANSIT OF VESSELS WITH COMBINED BREADTH NOT EXCEEDING 96 METRES IN THE TRAVERSE DU NORD SECTOR OF ÎLE D'ORLÉANS

Context

To improve the fluidity of marine traffic and ensure safe navigation, the Standing Committee on Marine Safety, co-chaired by the Canadian Coast Guard and Transport Canada, is recommending new guidelines on the transit of vessels with a combined breadth* of between **81.3 metres** and **96 metres** in the segments between buoys K-92 to K-112, K-112 to K-132 and K-132 to K-136 in the Traverse du Nord Sector of Île d'Orléans.

The guidelines described below are based primarily on the CCG and PIANC (World Association for Waterborne Transport Infrastructure) Guidelines for the Safe Design of Commercial Shipping Channels and consultations with the marine stakeholders involved.

It is important to note that the guidelines below are minimum requirements. Nothing in these rules shall exonerate any vessel, or the pilot, captain or crew thereof, from the consequences of any neglect to comply with these rules or of the neglect of any precaution, which may be required by the ordinary practice of seamen, or by the special circumstances of the case. The role of the Canadian Coast Guard and its officers is limited to providing the information at its disposal in a timely manner.

Definitions

Breadth: For this pilot project in the Traverse Nord, **vessel breadth** refers to the “moulded breadth” of a vessel.

Abbreviations

MCTS: Marine Communications and Traffic Services

CCG: Canadian Coast Guard

CLSLP: Corporation of the Lower St. Lawrence Pilots

UKC: Under-keel clearance

Effective Date

Beginning May 5, 2018, the following measures will apply to vessels with a combined breadth between **81.3 metres** and **96 metres**:

The new guideline on managing meetings of vessels is being implemented as a pilot project for a maximum trial period of 36 months. Adjustments may be made to the guidelines in consultation with stakeholders during this trial period.

After the trial period, the Standing Committee on Marine Safety will evaluate the temporary guidelines in this notice to propose a management and/or regulatory framework for implementing rules on the transit of vessels throughout the Traverse du Nord Sector.

Application

1. Two (2) vessels with a combined breadth equal to or greater than 81.3 metres are **prohibited** from meeting in the navigable channel of Traverse du Nord between buoys K-132 and K-136 and buoys K-92 and K-112.
2. Two (2) vessels with a combined breadth of between 81.3 metres and 96 metres might be permitted to meet between buoys K-112 and K-132 as long as the following minimum requirements are met:

    - Visibility is at least 5 nm so that the pilots can visually assess the approach between the two vessels;
    - Winds are 25 knots or less between buoys K-112 and K-132;
    - A minimum margin of safety/maneuverability according to the UKC table in effect is maintained;
    - Real-time data is available from the St-François tide gauge (IO);

The pilot is responsible for ensuring that all these minimum requirements are met and that there is no safety issue prior to meeting another vessel in the segment between buoys K-112 and K-132.

1. Traffic management (meetings between ships):

    - The MCTS officer shall provide information about marine traffic in a timely manner so that pilots can make the necessary arrangements to satisfy the guidelines on meetings of vessels.
    - The vessels involved shall notify the MCTS Officer of the agreed procedure that has been taken, to share appropriate information with relevant traffic.

If the breadth of one of the vessels exceeds 50 metres, with a combined breadth not exceeding 96 metres, the bridge crew and pilot will manage the meeting conditions utmost carefulness.

Guidelines on meetings

- To ensure safe passage, meeting places are identified and evaluated by pilots.
- The CLSLP shall provide a meeting report to CCG and TC authorities within 10 days of the meeting. This report must describe the vessels' condition, the passage conditions, the environmental factors, the maneuvering conditions and all relevant comments on how the vessels handled when they met.
- In assessing the risks associated with the meeting of vessels, pilots must take the following factors into consideration in all seasons:
    - ***Nighttime navigation.*** **All seasons.** Darkness makes it more difficult to evaluate distances background light can be confused with ship's navigation lights and aids to navigation. In addition, beacons are fewer and unlit in winter.
    - ***Visibility.*** When vessels meet, the visibility must be at least 5 nm for the pilots to visually assess the approach between the two vessels. Pilots must take into consideration that aids to navigation have a theoretical availability (75% availability) of 4.3 nm and that buoys can be hidden under the ice cover.
    - ***Wind velocity and direction.*** Under certain vessel load conditions, wind direction and velocity can influence vessel maneuverability.
    - ***Maneuvering distance.*** The pilot must ensure that he/she has sufficient distance to complete the maneuver and re-establish the course.
    - ***Marine traffic.*** The pilot must ensure that there are no other vessels maneuvering to meet in the sector and must also consider recreational boating and other nautical activities. All maneuver agreements that contradict these directives must be communicated to the sector's MCTS.
    - ***Vessel characteristics.*** The pilot must ensure that the vessel's maneuvering characteristics and the distance separating the vessels are sufficient to counter the interaction effects between them.
    - ***Towing and dredging operations.*** The MCTS officer must provide information on towing and dredging operations being carried out so that the pilot may adequately assess the situation and plan the vessel's passage. At the pilot's request, dredging operations must be stopped to ensure safe passage.
    - ***Channel characteristics.*** The pilot must take into consideration the channel configuration, type of bottom, currents and tides.
    - ***Meeting velocity.*** At all times, the velocity of vessels must make it possible to have a UKC that complies with the UKC standards in place given that during meetings of vessels, the squat is significantly increased. A safe speed suited to the conditions and the pilot's assessment must be maintained during meetings.
    - ***Any other circumstance*** that may affect navigation safety.

Other considerations:

Priority to navigate in the Traverse du Nord will be given to the deep-draught vessel leaving the St-Jean Anchorage area downbound.

Ice navigation

- The president of the CLSLP must coordinate the departure time of vessels with the Ice Operations Centre by assessing the risks associated with ice conditions.
- Vessels must ensure that conditions are favorable before entering the Traverse du Nord Sector, in accordance with notices or directives from the Ice Operations Centre (CCG).

The following conditions must be satisfied:

- For an upbound vessel destined for the Traverse du Nord, at Île Blanche, the pilot will notify the CCG Ice Operations Centre of the vessel's estimated time of arrival at buoy K-92 as well as report on how the vessel is handling in the ice to determine whether current conditions could cause problems for the vessel and for navigation during transit.
- Before a vessel leaves her berth, bound for the Traverse du Nord, the CLSLP pilot assigned to the vessel must contact the Ice Operations Centre so that they may assess the ice conditions to determine whether they could cause problems for the vessel and for navigation during transit.

- Vessels which, given their mechanical and operational conditions, appear unable to ensure safe navigation through the ice may not navigate the Traverse du Nord, as long as those conditions prevail.
- In the presence of ice, daylight meetings must always be prioritized to mitigate the risks of nighttime navigation in ice conditions.

Note: In applying these guidelines, it is understood that the pilot and bridge crew must consider all navigation hazards, collision risks and any specific circumstances, including the limitations of the vessels involved, and may therefore have to deviate from these measures to avoid imminent danger. In such a case, or any other incident or situation, the pilot must inform the MCTS officer, who will then forward the information to the other waterway users.

Authority: Canadian Coast Guard

Information concerning Pre-Arrival Information Report (PAIR) made pursuant to the Marine Transportation Security Regulations, can be found in Part 3 and 4 of the publication Radio Aids to Marine Navigation (RAMN).

27B General Information about Anchorage at Pointe Saint-Jean, Saint-Vallier, Saint-Nicolas and Pointe Deschambault

1 POINTE SAINT-JEAN ANCHORAGE

Reference: Chart 1317

Conditions of use

Effective December 1st 2012, the following measures shall apply to the anchorage of Saint-Jean (position: 46°54.7'N 070°52.5'W):

- The vessel shall obtain the authorization from the closest Marine Communications and Traffic Services;
- Anchorage will not be authorized in winter when it will be established that the current weather and ice conditions or the short-term forecast will be a threat for the safety of the vessel, the navigation and the environment;
- Short-term anchorage (less than 24 hours);
- Priority will be given to deep draft vessels.

2 SAINT-VALLIER ANCHORAGE

Reference: Chart 1317

Conditions of use

Effective December 1st 2012, the following measures shall apply to the anchorage of Saint-Vallier (position: 46°55.6'N 070°49.3'W):

- The vessel shall obtain the authorization from the closest Marine Communications and Traffic Services;
- Anchorage will not be authorized in winter when it will be established that the current weather and ice conditions or the short-term forecast will be a threat for the safety of the vessel, the navigation and the environment;
- The Anchorage is forbidden for 60 000 TDW and more vessels.

3 SAINT-NICOLAS AND POINTE DESCHAMBAULT ANCHORAGES

Reference: Chart 1315

Conditions of use

Effective March 1st 2023, the following measures shall apply to the Saint-Nicolas and Pointe Deschambault anchorages.
(position Saint-Nicolas: 46° 43.0'N; 071° 22.65'W)
(position Pointe Deschambault 46° 43.65'N; 071° 22.05'W) :

- The vessel shall obtain the authorization from the closest Marine Communications and Traffic Services;
- Anchorage will not be authorized in winter when it will be established that the current weather and ice conditions or the short-term forecast will be a threat for the safety of the vessel, the navigation and the environment;

- When strong winds forecast or weather warning is issued by the Environment Canada's marine forecast, i.e. sustained winds of more than 25 knots, vessels at the Saint-Nicolas and Pointe Deschambault anchorages will be assigned the services of a pilot or will have to contact the Quebec Port Authority for a dock assignment.

Authority: Canadian Coast Guard

Information concerning Pre-Arrival Information Report (PAIR) made pursuant to the Marine Transportation Security Regulations, can be found in Part 3 and 4 of the publication Radio Aids to Marine Navigation (RAMN).

27C Under Keel Clearance Table

1. CONTAINER SHIPS

ST. LAWRENCE RIVER, QUEBEC TO MONTREAL

Changing Table: Effective on: 2013-04-01

The actual amendment establishes new parameters for vessels width between 40.0 m and 44.0 m. To promote safety and efficiency of navigation and environmental protection, the Marine Communications and Traffic Services Officer (MCTSO) has the power to issue, in some cases, directions to a vessel under section 126 of the *Canada Shipping Act, 2001*. In exercising its powers, the MCTSO will consider the under-keel clearance for vessels transiting the area above Québec and will determine the required under-keel clearance of the ship according to the parameters given in the table below:

Vessel Beam not exceeding	**Vessel's speed over water not exceeding (Knots)**								
	7	8	9	10	11	12	13	14	15
	Required under-keel clearance (metres; which included estimated squat and the manoeuvrability's safety margin)								
24 m	0,79	0,88	0,96	1,04	1,22	1,41	1,63	1,88	2,17
26	0,83	0,90	0,98	1,07	1,25	1,45	1,68	1,93	2,23
28	0,84	0,91	1,00	1,09	1,28	1,48	1,72	1,98	2,29
30	0,86	0,93	1,01	1,11	1,31	1,52	1,76	2,03	2,34
32	0,87	0,94	1,03	1,14	1,34	1,55	1,80	2,08	2,40
34	0,88	0,96	1,05	1,16	1,36	1,58	1,84	2,12	2,45
36	0,89	0,97	1,07	1,18	1,39	1,62	1,88	2,16	2,50
38	0,90	0,98	1,08	1,20	1,42	1,65	1,92	2,20	2,55
40	0,91	1,00	1,10	1,22	1,44	1,68	1,96	2,24	2,60
42	0,92	1,01	1,12	1,24	1,47	1,71	1,99	2,29	2,65
44	0,93	1,02	1,13	1,26	1,49	1,74	2,03	2,33	2,70
	Estimated squat (metres)								
24 m	0,21	0,27	0,35	0,43	0,53	0,65	0,79	0,97	1,18
26	0,22	0,29	0,37	0,46	0,56	0,69	0,84	1,02	1,24
28	0,23	0,30	0,39	0,48	0,59	0,72	0,88	1,07	1,30
30	0,25	0,32	0,40	0,50	0,62	0,76	0,92	1,12	1,35
32	0,26	0,33	0,42	0,53	0,65	0,79	0,96	1,17	1,41
34	0,27	0,35	0,44	0,55	0,67	0,82	1,00	1,21	1,46
36	0,28	0,36	0,46	0,57	0,70	0,86	1,04	1,25	1,51
38	0,29	0,37	0,47	0,59	0,73	0,89	1,08	1,29	1,56
40	0,30	0,39	0,49	0,61	0,75	0,92	1,12	1,33	1,61
42	0,31	0,40	0,51	0,63	0,78	0,95	1,15	1,38	1,66
44	0,32	0,41	0,52	0,65	0,80	0,98	1,19	1,42	1,71
	Manoeuvrability/safety margin (metres)								
	0,61	0,61	0,61	0,61	0,69	0,76	0,84	0,91	0,99

*An exception to the margin of safety / manoeuvrability is allowed for a ship with a width not exceeding 24 m at a speed of 6 to 7 knots. Only in this case, a margin of 0.58 m is accepted instead of 0.61 m.

The above parameters are presented on the basis that the vessel's Master or Officer-in-charge has given consideration to other specific elements which may have an impact on under-keel clearance, some of which are: the accurate determination of water level (including tides) during vessel's transit; the vessel's speed; the wind and waves effects and the vessel's response to it; the estimation of the vessel's draught (changes in ballast); any additional squat effects due to passing within close proximity to the bank of the channel or when meeting / overtaking another vessel. The vessel's Master or Officer-in-charge has the ultimate responsibility for the vessel's safety at all times.

Authority: Canadian Coast Guard (TC-L95-133; AMA8035-10-1);
Notice to Mariners No. 462 of Edition No. 17 of 1995. Modification: 2013/03/21

2. OTHER SHIPS (Other than container ships)

ST. LAWRENCE RIVER, QUEBEC TO MONTREAL

Changing Table: Effective on: 2013-04-01

The actual amendment establishes new parameters for vessels width between 40.0 m and 44.0 m. To promote safety and efficiency of navigation and environmental protection, the Marine Communications and Traffic Services Officer (MCTSO) has the power to issue, in some cases, directions to a vessel under section 126 of the *Canada Shipping Act, 2001*. In exercising its powers, the MCTSO will consider the under-keel clearance for vessels transiting the area above Québec and will determine the required under-keel clearance of the ship according to the parameters given in the table below:

Vessel Beam not exceeding	**Vessel's speed over water not exceeding (Knots)**								
	7	8	9	10	11	12	13	14	15
	Required under-keel clearance (metres; which included estimated squat and the manoeuvrability's safety margin)								
24 m	0,80	0,90	0,97	1,06	1,24	1,44	1,66	1,92	2,21
26	0,85	0,92	1,00	1,09	1,29	1,49	1,73	1,99	2,29
28	0,86	0,94	1,03	1,13	1,33	1,54	1,79	2,06	2,37
30	0,88	0,96	1,05	1,16	1,37	1,59	1,85	2,13	2,46
32	0,89	0,98	1,08	1,19	1,41	1,64	1,91	2,19	2,53
34	0,91	1,00	1,10	1,23	1,45	1,69	1,97	2,26	2,61
36	0,93	1,02	1,13	1,26	1,49	1,74	2,02	2,32	2,69
38	0,94	1,04	1,16	1,29	1,53	1,78	2,08	2,39	2,77
40	0,96	1,06	1,18	1,32	1,57	1,83	2,13	2,44	2,84
42	0,97	1,08	1,21	1,36	1,61	1,88	2,18	2,51	2,91
44	0,99	1,10	1,23	1,39	1,65	1,93	2,24	2,57	2,98
	Estimated squat (metres)								
24 m	0,22	0,29	0,36	0,45	0,55	0,68	0,82	1,01	1,22
26	0,24	0,31	0,39	0,48	0,60	0,73	0,89	1,08	1,30
28	0,25	0,33	0,42	0,52	0,64	0,78	0,95	1,15	1,38
30	0,27	0,35	0,44	0,55	0,68	0,83	1,01	1,22	1,47
32	0,28	0,37	0,47	0,58	0,72	0,88	1,07	1,28	1,54
34	0,30	0,39	0,49	0,62	0,76	0,93	1,13	1,35	1,62
36	0,32	0,41	0,52	0,65	0,80	0,98	1,18	1,41	1,70
38	0,33	0,43	0,55	0,68	0,84	1,02	1,24	1,48	1,78
40	0,35	0,45	0,57	0,71	0,88	1,07	1,29	1,53	1,85
42	0,36	0,47	0,60	0,75	0,92	1,12	1,34	1,60	1,92
44	0,38	0,49	0,62	0,78	0,96	1,17	1,40	1,66	1,99

	Manoeuvrability/safety margin (metres)								
	0,61	0,61	0,61	0,61	0,69	0,76	0,84	0,91	0,99

*An exception to the margin of safety / manoeuvrability is allowed for a ship with a width not exceeding 24 m at a speed of 6 to 7 knots. Only in this case, a margin of 0.58 m is accepted instead of 0.61 m.

The above parameters are presented on the basis that the vessel's Master or Officer-in-charge has given consideration to other specific elements which may have an impact on under-keel clearance, some of which are: the accurate determination of water level (including tides) during vessel's transit; the vessel's speed; the wind and waves effects and the vessel's response to it; the estimation of the vessel's draught (changes in ballast); any additional squat effects due to passing within close proximity to the bank of the channel or when meeting / overtaking another vessel. The vessel's Master or Officer-in-charge has the ultimate responsibility for the vessel's safety at all times.

Authority: Canadian Coast Guard (TC-L95-133; AMA8035-10-1);
Notice to Mariners No. 462 of Edition No. 17 of 1995. Modification: 2013/03/21

D Search and Rescue

28 Search and Rescue in Canadian and Adjacent Waters

General Points

1 The Canadian Forces (CF) in co-operation with the Canadian Coast Guard (CCG) has overall responsibility for coordination of federal aeronautical and maritime Search and Rescue (SAR) activities in Canada, including Canadian waters and the high seas off the coasts of Canada. The CF provides dedicated SAR aircraft in support to marine SAR incidents. The CCG coordinates maritime SAR activities within this area and provides dedicated maritime SAR vessels in strategic locations. Joint Rescue Coordination Centres (JRCC) are maintained at Victoria, B.C., Trenton, ON and Halifax, NS. These centres are staffed 24 hours a day by Canadian Forces and Canadian Coast Guard personnel. Each JRCC is responsible for an internationally agreed designated area known as a Search and Rescue Region (SRR) (see Figure A.1). In addition, two Maritime Rescue Sub Centres (MRSC), staffed by Coast Guard Personnel are located in Québec, QC, and St. John's, NL to coordinate local maritime SAR operations. (See Annex A4).

2 The *"Oceans Act"* and the "*Canada Shipping Act, 2001"* (CSA, 2001) provide for the Minister of Fisheries and Oceans to delegate the authority necessary for maritime Search and Rescue coordination. This authority as exercised by JRCCs and MRSCs, empowers the Search and Rescue Mission Coordinator on duty, when they have knowledge of an actual distress, or a missing vessel or if signals or other information indicate a distress situation may exist, to order all vessels within a specified area to report their position, to take part in a search, and to carry out such other SAR operations as deemed necessary.

The master or person in charge of the vessel is obligated to comply with such orders except where such compliance would endanger their own vessel, tow or persons on board. It is Government SAR Policy to requisition federal government owned vessels for SAR operations before privately owned ships when the former are readily available and suitable for the operations at hand and to release requisitioned privately owned vessels from SAR operations as they are replaced by government ships.

3 The CSA, 2001 also allows the master of a vessel in distress to requisition any vessel or vessels to come to his/her assistance. Even if they have done so and the situation appears well in hand, it is advisable for the master to ensure that the JRCC/MRSC concerned is informed and kept up-to-date since the Centre has at its disposal expertise and communication links with resources specialized in SAR and other emergency agencies which may be of use to the master, for treatment and care of survivors (casualties).

4 A vessel requisitioned to proceed to the assistance of a vessel in distress is required to comply with the direction from JRCC/MRSC and/or the master of the vessel in distress. The CSA, 2001 sanctions penalties for refusal to give aid. The JRCC/MRSC may delegate its authority to the Commanding Officer of a SAR unit on scene, equipped with specialized SAR and communications equipment, who then becomes the "On-Scene Co-ordinator (OSC)". In the absence of a dedicated SAR unit, JRCC/MSRC authority may also be delegated to another vessel on scene. The duties of OSC are described in the International Aeronautical and Maritime Search and Rescue Manual (Volume III) (IAMSAR), a joint publication of the International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO) which should be referred to.

5 The JRCC/MRSC will attempt to inform owners or agents of vessels which have sent a distress signal, of the circumstances and action taken. Where possible, owners or agents of requisitioned ships will also be informed of action taken.

Distress communications

6 The procedures for handling distress messages are international and are described in the International Aeronautical and Maritime Search and Rescue Manual (IAMSAR), and IMO/ICAO publication and also in Canadian Coast Guard publication "Radio Aids to Marine Navigation". The CCG Radio system provides coverage of all maritime distress frequencies, although each station does not necessarily guard each frequency. Details of this system are contained in the relevant CCG Publication "Radio Aids to Marine Navigation" DFO 5470 and DFO 5471.

Marine Communications and Traffic Services standard operating procedures provides for the automatic relay of distress messages to JRCC/MRSC.

7 When selecting an appropriate frequency to broadcast distress messages or communicate with assisting vessels, masters should bear in mind that the statutory requirements to carry radio equipment differ from region to region. For instance, only VHF radio telephone equipment is mandatory for vessels when operating on the Great Lakes west of Montreal. Details of the required equipment are contained in the CCG Publication, "Radio Aids to Marine Navigation" (Atlantic and Great Lakes) DFO 5470.

8 Mariners are reminded that distress flares/signals as described in Annex IV of the *Collision Regulations* are for the use of a person or persons who are in distress and require immediate assistance. Any other use of distress flares is contrary to the *Canadian Shipping Act, 2001 (CSA, 2001)* and the International Convention for the Safety of Life At Sea (SOLAS). Organizations wishing to conduct training in the use of flares are encouraged to contact the flare manufacturer for information on where/how to obtain training aids.

Ship to air distress signal

9 A ship-to-air distress signal for use in Canadian waters has been designed in conjunction with SAR authorities. The signal consists of a cloth painted or impregnated with fluorescent paint showing a disc and square to represent the ball and flag of the well-known visual distress signal (see Figure 1). Evaluation tests by SAR aircraft indicate that the most suitable colour combination is black symbols on a background of orange-red fluorescent paint. The smallest useful size is 1.8 m (72 in.) by 1.1 m (45 in.) showing symbols which have dimensions of 46 cm (18 in.) and are 46 cm (18 in.) apart. Grommets or loops should be fitted at each corner to take securing lines (see illustration following this Notice).

As the purpose of the signal is to attract the attention of aircraft, it should be secured across a hatch or cabin top. In the event of foundering, it should be displayed by survival craft.

Canadian SAR authorities recognize this signal as a distress signal and will look for it during the execution of a search. Any aircraft, on seeing this signal, is requested to make a sighting report to the nearest JRCC/MRSC.

The signal is available commercially, but it can be made at home or aboard ship without difficulty. Unbleached calico, or similar material, together with a can of orange-red fluorescent spray paint, are the principal requirements. Recommended minimum dimensions are shown in the illustration following this Notice.

The signal is voluntary equipment, but it is hoped that the masters of tugs, fishing vessels and pleasure craft will take advantage of its usage to increase the effectiveness of SAR operations.

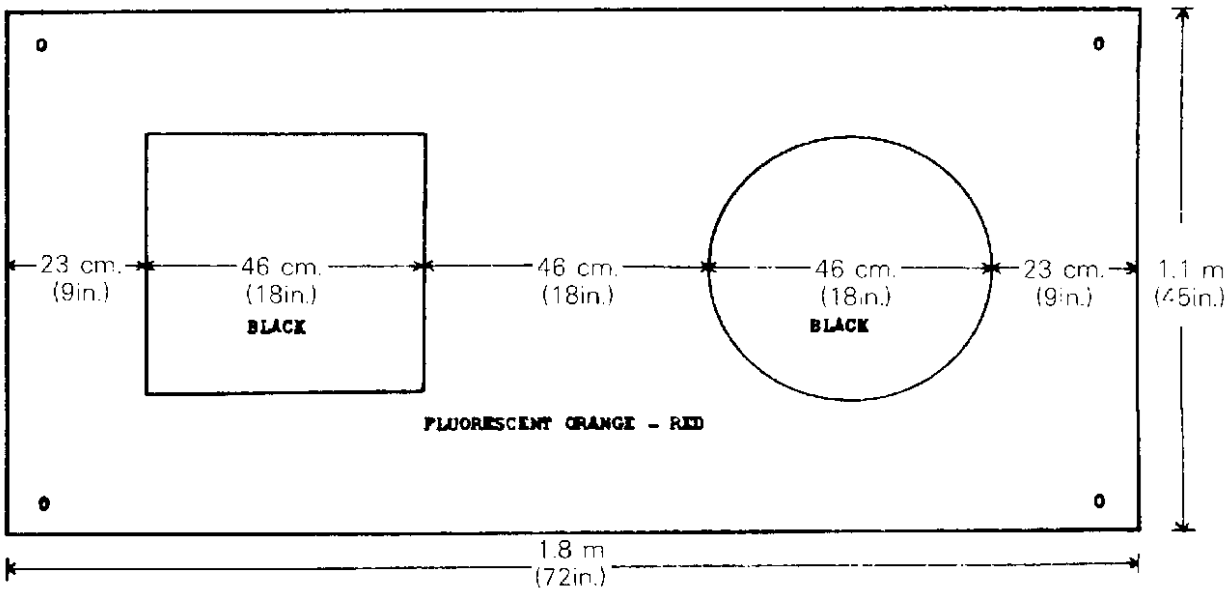


Figure 1 - Canadian Ship-to-Air Distress Signal Diagram

Paint must be fluorescent and otherwise reflective properties seriously reduced.

Assistance to Disabled Vessels

10 The CSA, 2001 does not authorize the Rescue Co-ordinator to order vessels to undertake salvage but the JRCC/MRSC will attempt to inform the stricken vessel and its owners, of the presence of nearby vessels and will normally issue a radio broadcast requesting if any vessels are available to provide assistance.

The CCG recognizes that the timely provision of towing assistance to disabled vessels can be an effective way of preventing loss of life and injury and expediting the resolution of an emergency situation under certain circumstances. However, the Federal Government or its agents will not directly assist disabled vessels merely on request and will not compete with commercial interest to provide direct assistance. Some incidents involving the use of the SAR system are clearly preventable or unreasonable. The response to these incidents occupies resources that may be needed for more serious incidents and may place responders in unnecessary danger.

Government vessels will undertake property salvage only when salvage is incidental to rescue, or is minor or unobtainable from the private sector or is likely to cause undue hardship through delay.

11 Canadian Joint Rescue Coordination Centres / Maritime Rescue Sub-Centres Emergency Contact Information

JRCC Victoria	1-800-567-5111 **(British Columbia and Yukon)** +1-250-413-8933 (Satellite, Local, or out of area) +1-250-413-8932 (fax) jrccvictoria@sarnet.dnd.ca (Email)
JRCC Trenton	1-800-267-7270 **(In Canada)** +1-613-965-3870 (Satellite, Local, or out of area) +1-613-965-7279 (fax) jrcctrenton@sarnet.dnd.ca (Email)
JRCC Halifax	1-800-565-1582 **(Maritimes Region)** +1-902-427-8200 (Satellite, Local, or out of area) +1-902-427-2114 (fax) jrcchalifax@sarnet.dnd.ca (Email)
MRSC Québec	1-800-463-4393 **(Québec Region)** +1-418-648-3599 (Satellite, Local, or out of area) +1-418-648-3614 (fax) mrscqbc@dfo-mpo.gc.ca (Email)
MRSC St. John's	1-800-563-2444 **(Newfoundland & Labrador Region)** +1-709-772-5151 (Satellite, Local, or out of area) +1-709-772-2224 (Fax) mrscsj@sarnet.dnd.ca (Email)

Ocean and coastal areas

12 Maritime SAR Patrols:

Specialized SAR vessels conduct patrols in areas of concentrated fishing, commercial, recreational and other maritime activities off both the Atlantic and Pacific Coasts.

13 Shore-based lifeboat stations:

Specialized SAR craft are stationed at the following locations for local operations; and are indicated on marine charts by the symbol CG:

(a) **East Coast:**
St. Anthony (seasonal), Twillingate (seasonal), Old Perlican (seasonal), Burin, Burgeo, Port-aux-Choix (seasonal), and Lark Harbour (seasonal), Nfld; Louisburg, Clark's Harbour, Bickerton, Sambro and Westport, N.S., Summerside and Souris, P.E.I. (seasonal), Shippagan (seasonal), and St. John, N.B.

(b) **West Coast:**
Victoria, Tofino, Bamfield, Port Hardy, Vancouver, Powell River, Campbell River, Bella Bella, Sandspit, Prince Rupert, Ganges, French Creek, Tahsis and Hartley Bay. Also, one SAR Hovercraft is available at Sea Island, B.C.

14 Inshore Rescue Boat:

Small SAR craft between 5 to 7 metres in length are operated between mid-May and early September on the east and west coasts in areas of peak activity. Locations may change due to operational needs and traffic patterns.

Great Lakes and Gulf and St. Lawrence River

15 Marine SAR Patrols

There are no SAR patrol on the St-Lawrence Estuary and Gulf. However, when the shore-based lifeboat stations terminate their operation because of the winter season, icebreakers may also provide some SAR coverage in the area.

16 Shore-Based lifeboat stations

Specialized lifeboats are stationed on a seasonal basis at the following locations: Cap aux Meules (Îles de la Madeleine), Rivière au Renard, Havre Saint-Pierre, Tadoussac, Kegashka, and Québec City for the St. Lawrence River portion. For the Great Lakes portion, lifeboat stations are located in Kingston, Cobourg, Port Weller, Port Dover, Amherstburg, Goderich, Tobermory, Meaford and Thunder Bay.

17 Inshore Rescue Boat:

SAR small Craft of a similar size and mode of operation to those described in paragraph 14 above are based at locations throughout the area.

Air facilities

18 The CAF maintain aircraft dedicated and equipped for SAR as follows:

(a) **Fixed Wing:**
Greenwood, N.S.; Trenton, Ont.; Winnipeg, Man., and Comox, B.C.

(b) **Helicopters:**
At Gander, Nfld.; Greenwood, N.S.; Trenton, Ont. and Comox, B.C.

Other facilities

19 Depending on the anticipated need, government vessels not normally used on routine SAR duties are occasionally tasked to such duties. Additionally, all Canadian government owned vessels and aircraft are available for SAR when required.

Blue flashing light

20 Rule 45 of the *Collision Regulations (COLREGS)* identifies the use of a blue flashing light by any government vessel or any vessel that is owned or operated by a harbour, river, county or municipal police force may exhibit as an identification signal a blue flashing light when the vessel:

a) is providing assistance in any waters to any vessel or other craft, aircraft or person that is threatened by grave and imminent danger and requires immediate assistance, or

b) is engaged in law enforcement duties in Canadian waters.

c) A vessel operated by the Canadian Coast Guard Auxiliary may exhibit a blue flashing light when participating in SAR operations at the request of the Canadian Coast Guard.

A vessel referred to in paragraph (a), (b) or (c) that exhibits a blue flashing light as an identification signal is not relieved from the obligation to comply with the Steering and Sailing Rules set out in Part B.

It is recommended that this light be fitted on as many government ships as possible, particularly the ships which may reasonably be expected to be engaged in search and rescue and law enforcement duties. The blue flashing light does not give a ship any special privileges under steering and sailing rules of the *Collision Regulations*. However, mariners should consider that the vessel exhibiting a blue flashing light is proceeding to carry out search and rescue or law enforcement duties.

The use, characteristics and definition of the blue flashing light are described in Rules 21, 22, 45 and Annex 1, which are the Canadian provisions to the *International Regulations for Prevention of Collision at Sea (COLREGS) - 1972.*

Canadian Coast Guard Auxiliary

21 The Canadian Coast Guard Auxiliary (CCGA) is an association of approximately 4000 dedicated volunteers operating more than 900 vessels to support the Canadian Coast Guard Maritime Search and Rescue. CCGA units are located on the East and West Coasts, the Gulf and River St. Lawrence, the Great Lakes, Lake Winnipeg, Great Slave Lake, Nunavut and on the Mackenzie River.

References

The following publications are available to the mariner and provide useful guidance in SAR.

(a) International Aeronautical and Maritime Search and Rescue Manual (IAMSAR) Volume III, IMO/ICAO publication.

(b) Radio Aids to Marine Navigation (Pacific and Western Arctic) DFO 5471; and Radio Aids to Marine Navigation (Atlantic, St-Lawrence, Great Lakes, Lake Winnipeg and Eastern Arctic) DFO 5470.

Plans for cooperation between search and rescue services and passenger ships

The preparation of a SAR co-operation plan is required under regulation V/7.3 of the SOLAS Convention:

> "Passenger ships, to which chapter I applies, shall have on board a plan for co-operation with appropriate search and rescue services in event of an emergency. The plan shall be developed in co-operation between the ship, the company (ship-owner) as defined in regulation IX/1, and the search and rescue services. The plan shall include provisions for periodic exercises to be undertaken to test its effectiveness. The plan shall be developed based on the guidelines developed by the Organisation."

Purposes of these plans are as follows:

- Enable early and efficient establishment of contact – in the event of an emergency – between a passenger ship, its operator's shore-based emergency response system and SAR services;
- Provide the SAR services with easily accessible and up-to-date information about the ship; and
- Provide the ship and its operators with easily accessible information about SAR and other emergency services available in the ships area of operation.

A SAR co-operation plan shall contain information on the ship-owner, ships, SAR services or SAR Data Provider, media relations and periodic exercises. Guidance and templates for the plan can be found in IMO's MSC.1/Circ.1079/Rev.1.,, which provides the guidelines for co-operation between search and rescue services and passenger ships. For information on SAR services and SAR facilities for the plans, please refer to the information included in this NOTMAR.

Further guidance from the *Canada Shipping Act, 2001*:

Answering distress signal

131. *(1) Subject to this section, the master of a vessel in Canadian waters and every qualified person who is the master of a vessel in any waters, on receiving a signal from any source that a person, a vessel or an aircraft is in distress, shall proceed with all speed to render assistance and shall, if possible, inform the persons in distress or the sender of the signal.*

Distress signal — no assistance

(2) If the master is unable or, in the special circumstances of the case, considers it unreasonable or unnecessary to proceed to the assistance of a person, a vessel or an aircraft in distress, the master is not required to proceed to their assistance and is to enter the reason in the official log book of the vessel.

Ships requisitioned

(3) The master of any vessel in distress may requisition one or more of any vessels that answer the distress call to render assistance. The master of requisitioned vessel in Canadian waters and every qualified person who is the master of a requisitioned vessel in any waters shall continue to proceed with all speed to render assistance to the vessel in distress.

Release from obligation

(4) The master of a vessel shall be released from the obligation imposed by subsection (1) when the master learns that another vessel is complying with a requisition referred to in subsection (3).

Further release

(5) The master of a vessel shall be released from an obligation imposed by subsection (1) or (3) if the master is informed by the persons in distress or by the master of another vessel that has reached those persons that assistance is no longer necessary.

Minister may designate rescue coordinators

130. *(1) The Minister may designate persons as search and rescue mission coordinators, to organize search and rescue operations.*

Powers – search and rescue mission coordinators

(2) On being informed that a person, a vessel or an aircraft is in distress or is missing in Canadian waters, in the exclusive economic zone of Canada or on the high seas off any of the coasts of Canada under circumstances that indicate that they may be in distress, a search and rescue mission coordinator may

(a) direct all vessels within an area that the search and rescue mission coordinator specifies to report their positions;

(b) direct any vessel to take part in a search for that person, vessel, or aircraft to otherwise render assistance;

(c) give any other directions that the search and rescue mission coordinator considers necessary to carry out search and rescue operations for that person, vessel or aircraft; and

(d) use any lands if it is necessary to do so for the purpose of saving the life of a shipwrecked person.

Offences and punishment

Contravention of Act

137. *(1) Every person who, or vessel that, contravenes any of the following commits an offence:*

(a) subsection 131(1) (assist persons in distress);

(b) subsection 131(3) (comply with requisition to assist person in distress); or

(c) section 132 (assist a person found at sea).

Punishment

(2) Every person who, or vessel that, commits an offence under subsection (1) is liable on summary conviction to a fine of not more than *$1,000,000* or to imprisonment for a term of not more than 18 months, or to both.

Defence

(3) No person on board a vessel may be convicted of an offence under *paragraph (1)(a), (b) or (c)* if *they had reasonable grounds to believe*that compliance with *subsection 131(1)*or *(3) or section 132, as* the case may be, would have *imperiled life, the* another vessel.

This is not an exhaustive list, nor a replacement for reading the *Canada Shipping Act, 2001*

Authority: Canadian Coast Guard (Search and Rescue)

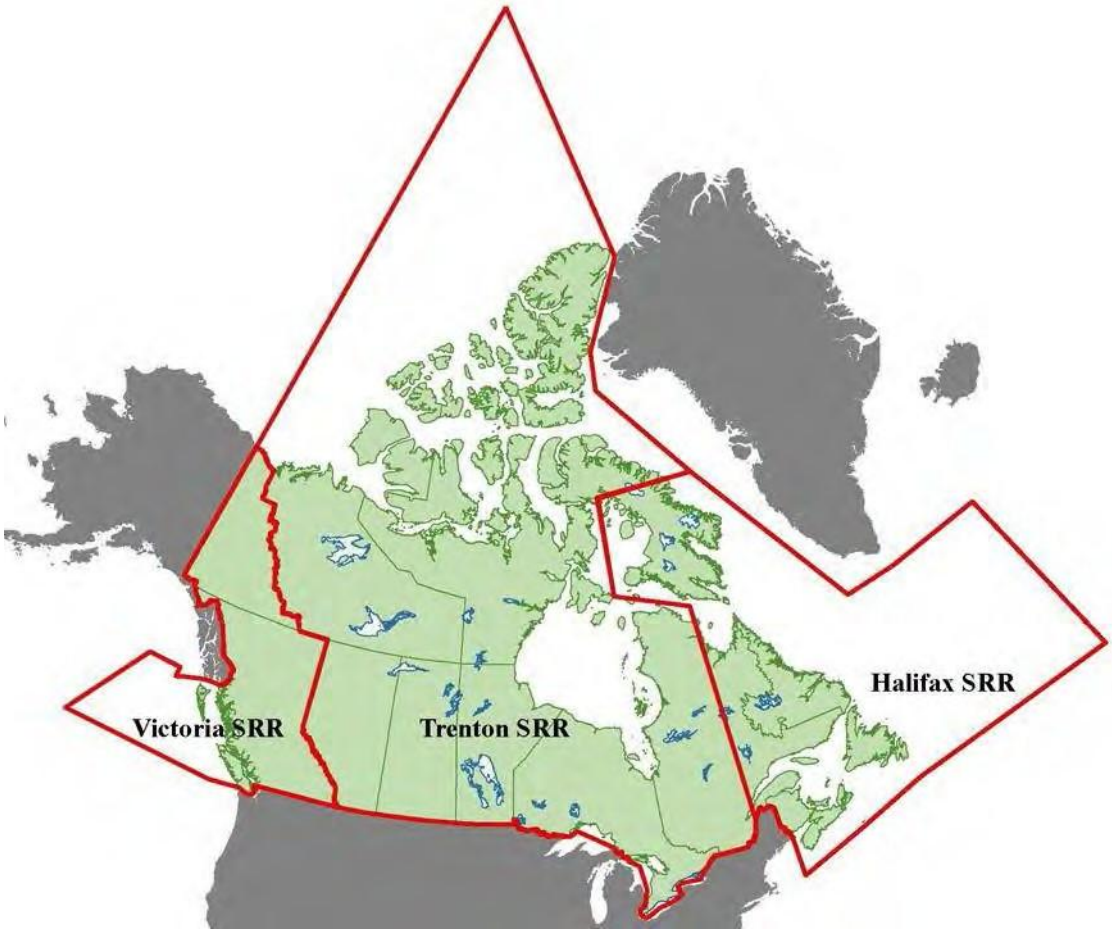


FIGURE A.1 – MAP OF CANADA WITH CANADIAN SEARCH AND RESCUE REGIONS (SRR) OUTLINED

Victoria SRR

54°42.5'N 130°36.5'W, along the Alaska – Canada border to the Beaufort Sea, east along the shoreline to the Yukon – North West Territory border, south along the Yukon – North West Territory border to 60°00'N, east along 60°00'N to the British Columbia – Alberta border, south along the British Columbia – Alberta border to the Canada – United States border, west along the Canada – United States border to 48°30'N 124°45'W, 48°30'N 125°00'W, 48°20'N 128°00'W, 48°20'N 145°00'W, 5440'N 140°00'W, 5440'N 136°00'W, 54°00'N 136°00'W, 54°13'N 134°57'W, 54°39.45'N 132°41'W and 54°42.5'N 130°36.5'W.

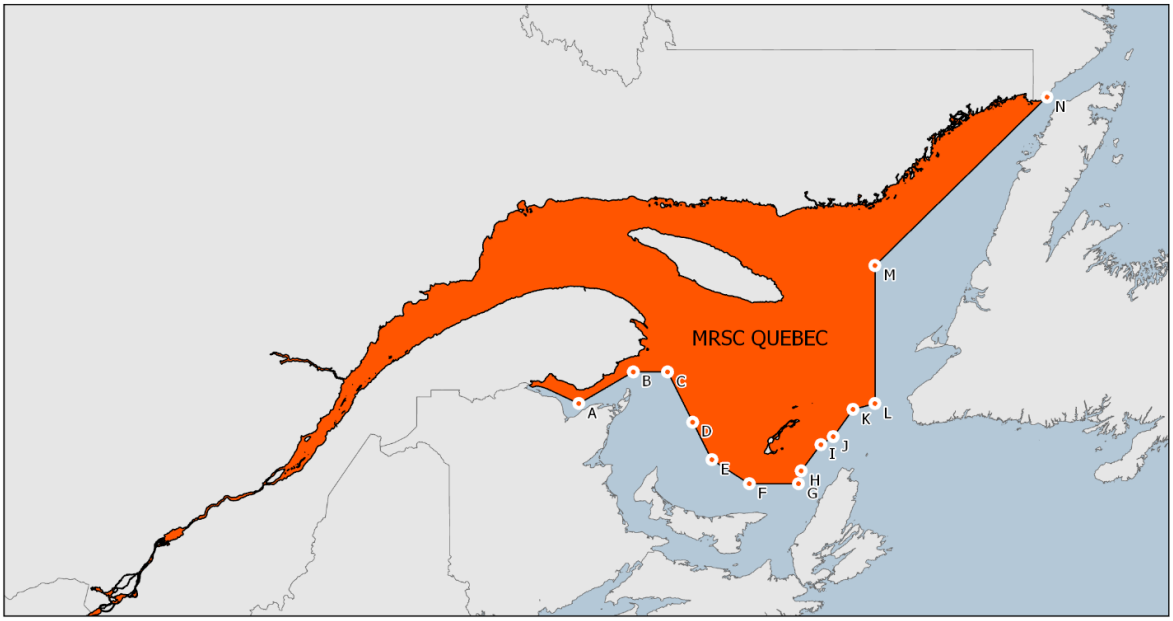
Trenton SRR

70°00'N 080°00'W, 64°00'N 080°00'W, 62°00'N 070°00'W, 46°42'N 070°00'W, westerly along the Canada – United States border to the Alberta – British Columbia border, north along the Alberta – British Columbia border to 60°00'N 120°00'W, westerly to 60°00'N 124°00'W, north along the Yukon – North West Territory border to the Beaufort Sea, westerly along the coast to the Canada – Alaska border, north along 141°00'W to the North Pole, south to 82°00'N 060°00'W, 78°00'N 075°00'W, 76°00'N 076°00'W, 74°00'N 068°18'W, 73°00'N 067°00'W, 70°00'N 063°00'W and west to 70°00'N 080°00'W.

Halifax SRR

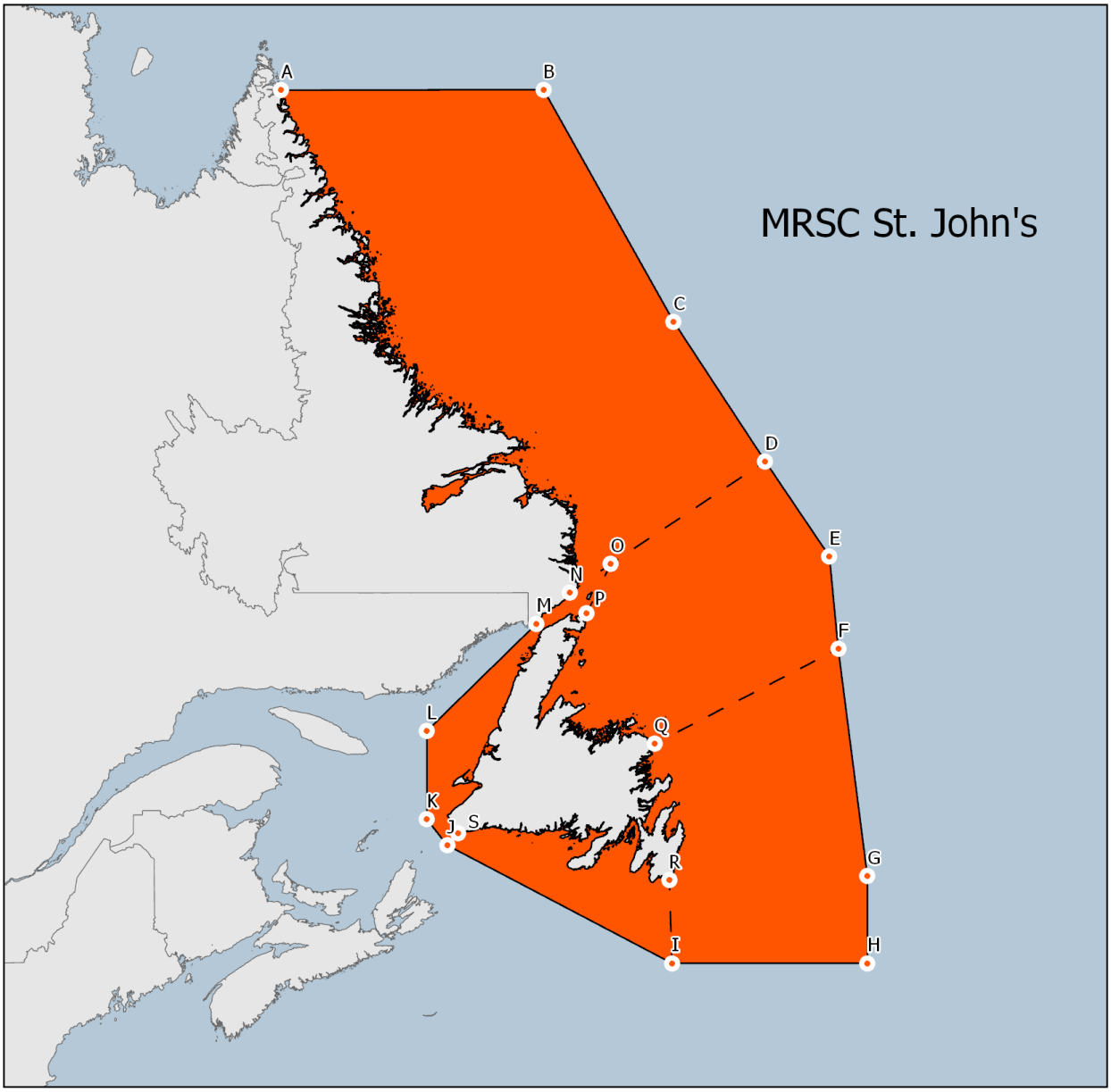
64°00'N 080°00'W, 70°00'N 080°00'W, 70°00'N 063°00'W, 65°30'N 058°39'W, 58°30'N 050°00'W, 58°30'N 030°00'W, 45°00'N 030°00'W, 45°00'N 053°00'W, 43°36'N 060°00'W, 41°52'N 067°00'W, 44°30'N 067°00'W, north to the Canada – United States border, westerly along the Canada – United States border to the 70th meridian, north along the 70th meridian to 62°00'N 070°00'W and north west to 64°00'N 080°00'W.

Annex A4 - Search and Rescue Sub-regions



	Latitude	Longitude		Latitude	Longitude
A	47° 50.0' N	65° 25.0' W	H	47° 00.0' N	61° 21.1' W
B	48° 13.3' N	64° 25.4' W	I	47° 19.7' N	60° 59.6' W
C	48° 13.3' N	63° 47.5' W	J	47° 25.4' N	60° 45.8' W
D	47° 36.4' N	63° 19.9' N	K	47° 45.7' N	60° 24.3' W
E	47° 08.4' N	62° 59.2' N	L	47° 50.0' N	60° 00.0' W
F	46° 50.4' N	62° 18.1' N	M	49° 30.0' N	60° 00.0' W
G	46° 50.4' N	61° 24.0' N	N	51° 27.0' N	56° 52.0' W

Figure A.2 - MRSC Québec Search and Rescue Sub-Region



	Latitude	Longitude		Latitude	Longitude
A	60° 00.0' N	64° 10.0' W	K	47° 50.0' N	60° 00.0' W
B	60° 00.0' N	56° 40.0' W	L	49° 30.0' N	60° 00.0' W
C	56° 31.0' N	52° 57.0' W	M	51° 27.0' N	56° 52.0' W
D	54° 15.0' N	50° 20.0' N	N	52° 00.0' N	55° 55.0' W
E	52° 38.0' N	48° 30.0' N	O	52° 30.0' N	54° 45.0' W
F	51° 00.0' N	48° 15.0' N	P	51° 38.0' N	55° 26.0' W
G	46° 44.0' N	47° 25.0' N	Q	49° 15.6' N	53° 29.7' W
H	45° 00.0' N	47° 25.0' W	R	46° 39.0' N	53° 04.0' W
I	45° 00.0' N	53° 00.0' W	S	47° 34.0' N	59° 07.0' W
J	47° 20.0' N	59° 25.0' W			

Figure A.3 - MRSC St. John's Search and Rescue Sub-Region

28A Helicopter Evacuations Procedures by Canadian Forces Search and Rescue Helicopters

Helicopter medical evacuations are a serious matter. Since they can be hazardous to both the patient and the helicopter crew, they should be used only as a last resort to prevent death or permanent injury. If you are out on a fishing boat, for example, and one of the crew members suffers a slight injury, you should NOT request a helicopter medical evacuation so that you might continue fishing.

The Joint Rescue Co-ordination Centre/Maritime Rescue Sub-Centre (JRCC/MRSC), if it is to intelligently evaluate the need for evacuation, must be presented with a clear picture of the situation. You can speed the process by having the following information ready:

(a) Name of vessel, call sign, position, course and speed.

(b) Patient's name, age and sex.

(c) State of consciousness.

(d) Respiration rate and difficulty or pain associated with breathing.

(e) Pulse rate, strength and regularity; temperature of patient.

(f) Nature and specific location of pain. Is pain dull, sharp, continuous, intermittent, confined to a small area or widespread?

(g) When injury occurred and cause - blow, burn, fall - nature of wound, cuts or bruises. State if patient has been moved.

(h) Determine amount of bleeding.

(i) Describe any deformity or abnormal functioning on the part of the patient.

(j) What treatment has been given and how patient has responded.

(k) ETA destination/intentions.

(l) Agent's or owner's name, address.

(m) Frequency vessel standing by on and other back-up frequencies available.

(n) If helo is to be involved: position on the ship best suited for helo hoist - clear of obstructions - and frequency for helo to contact vessel on.

NOTE 1: The details on the patient's conditions are necessary because, based on this information, the Regional Surgeon will or will not approve the use of a helo.

NOTE 2: You should advise the Coast Guard immediately if any of this information changes.

NOTE 3: The Coast Guard should be advised immediately if the evacuation by helicopter is no longer required due to alternate arrangements or if the patient expires.

In addition to regular communication methods, Masters of ships may obtain medical advice by addressing a radio-telegram to "Radiomedical" and routing it via the nearest Marine Communications and Traffic Services Centre which will refer to the appropriate regional medical authority and transmit the reply to the ship.

Preparations

Most rescue helicopters can proceed less than 150 miles offshore (from a fueling point), and then only if weather conditions permit. If an evacuation is necessary, you must be prepared to proceed within range of a helicopter. If you are beyond helicopter range, you must be prepared to change course as directed by the Coast Guard, so that a rendez-vous point can be selected.

Once the decision has been made to evacuate your patient, you should make the following preparations:

1 Provide continuous radio guard on 156.8 MHz (Channel 16 VHF-FM), 2182 kHz, Channel 70 VHF DSC or other specified voice frequency.

2 Select and clear the most suitable hoist area, preferably aft on the vessel, with a maximum radius of clear deck. (Ideally 16 metres or 50 feet radius). Secure loose gear, the headgear worn by the crew at the hoist area, awnings and antenna wires and trice up running rigging and booms. If the hoist is aft, lower the flag staff. The foredeck should be prepared only when the stern and amidships area cannot possibly be used. Be sure to advise the helicopter before it arrives, so that the pilot can make his approach to aft, amidships, or forward, as required. If the bow area is used for the hoist, then the speed should be brought to minimum steerage speed and alter the course to place the wind 090°- 120° off the starboard quarter, (i.e., wind from the North, the vessel heading South-West). If the stern area is used for the hoist, then the speed should be minimum steerage speed or best maneuvering speed and alter the course to place the wind + 015° to 030° on port bow, (i.e., wind from North, the vessel heading would be 015°-030°). Generally, the vessel should steer in a direction that will provide the most stable platform and, if possible, allow the helicopter to face into the wind when the helicopter is established over the hoist area. The vessel should maintain steerage speed or the best speed for the prevailing conditions during the hoist.

3 Point search lights vertically to aid the helicopter crew in locating the ship. Turn them off when the helicopter is on scene.

4 If the hoist is to take place at night, light the pickup area as well as possible. *Be sure that you do not shine any lights on the helicopter because they will blind the pilot*. Put lights on any obstructions in the vicinity, so the pilot will be aware of the position. A fixed wing aircraft may also illuminate the area with parachute flares during the hoisting operation.

5 Remember that there will be a high noise level under the helicopter and that voice communications on deck will be virtually impossible. Arrange a set of hand signals to be used among the crew members who will assist.

6 Leave the patient in a warm dry area. A SAR Tech that will be lowered to the vessel will evaluate the patient's condition and organize the hoisting of the patient to the helicopter.

7 Make sure the patient's documentation is available - passport, visa, hospital insurance card, etc. as well as his medical record - should be in an envelope or package, ready for transfer with them.

8 Have a life jacket available for the patient but do not put the life jacket on the patient until the SAR Tech has examined them.

Hoist operations

1 Change course to permit the ship to ride as easily as possible, with the wind preferably as referred in paragraph 2 of *Preparations*. Try to choose a course to keep the stack gases clear of the hoist area.

2 Reduce speed to ease ship's motion but maintain steerageway.

3 When you are ready for the hoist, signal the helicopter. If you do not have radio contact, signal "come on" with your hand or, at night, use flashlight signals. Once direct communications are established with the helicopter, their instruction will take precedent.

4 Allow the SAR Tech to touch the deck before assisting them, to avoid static electrical shock. DO NOT CONNECT ANY LINE LOWERED FROM THE HELICOPTER TO YOUR VESSEL; merely tend it by keeping a moderate tension on it by hand.

5 The SAR Tech will coordinate all subsequent actions with the helicopter. The helicopter will provide all necessary equipment.

6 Once the SAR Tech is on board, the helicopter will retract the hoist hook clear. When the litter and patient have been returned to the hoist area, the hoist hook will be lowered for attachment by the SAR Tech.

NEVER ATTACH THE HOOK TO YOUR VESSEL

By following these procedures, you can help ensure that a helicopter evacuation, if one is necessary, will be performed safely and as quickly as possible.

Authority: Canadian Coast Guard (Search and Rescue)

29 Communications from Aircraft: Distress, Urgency and Safety Signals

The following is an extract from the Canada Flight Supplement (CFS) and the Aeronautical Information Manual (AIM) and other documents:

1 None of the provisions in this order shall prevent the use, by an aircraft in distress, of any means at its disposal to attract attention, make known its position and obtain help.

Distress Signals

2 The following signals, used either together or separately, mean that grave and imminent danger threatens, and immediate assistance is requested:

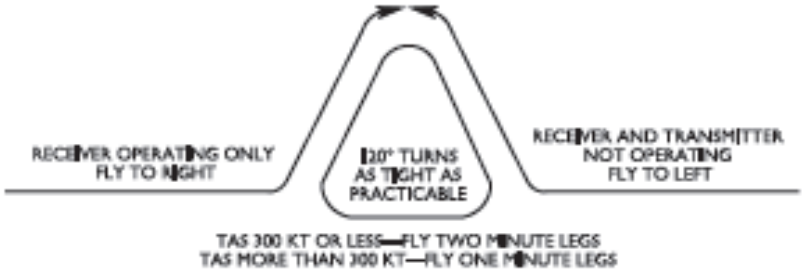
Airborne

(a) a signal made by radiotelegraphy or by any other signalling method consisting of the group . . . - - - . . . in Morse Code

(b) a signal sent by radiotelephony consisting of the spoken word *Mayday*, (3 times),

(c) When lost or in distress and unable to make radio contact, aircraft will fly two triangles as depicted, resume course, repeat at 5 minute intervals.

Figure 4.1—Radar Alerting Manoeuvres



From the Ground

(a) rockets or shells throwing red lights, fired one at a time at short intervals,

(b) a parachute flare showing a red light,

(c) a smoke signal giving off a volume of orange-coloured smoke.

3 Signals used by aircraft engaged in search and rescue operations to direct ships towards an aircraft, ship or person in distress:

(a) CIRCLE the vessel at least once,

(b) CROSS the vessel's projected course close AHEAD at low altitude while ROCKING the wings. (Opening and closing the throttle or changing the propeller pitch may also be practiced as an alternative means of attracting attention to that of rocking wings. This form of sound signal may be less effective.)

(c) HEAD in the direction in which vessel is to be directed; and,

(d) if the vessel does not respond, repeat the manoeuvres described in (a), (b) and (c), with the same meaning.

Note: Opening and closing the throttle or changing the propeller pitch may also be practiced as an alternative means of attracting attention to that of rocking wings. However, this form of sound signal may be less effective than the visual signal of rocking the wings owing to high noise level on board the vessel.

Urgency Signals

4 (1) The following signals, used either together or separately, mean that an aircraft wishes to give notice of difficulties which compel it to land without requiring immediate assistance:

(a) the repeated switching on and off of the landing lights; or

(b) the repeated switching on and off of the navigation lights in such manner as to be distinct from flashing navigation lights.

(2) The following signals, used either together or separately, mean that an aircraft has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or some person on board or within sight:

(a) in radiotelephony, three repetitions of the expression PAN PAN.

Reference:

Annex 2 to the Convention on International Civil Aviation, Rules of the Air, Appendix 1. Signals, July 2005
Canada Flight Supplement
Aeronautical Information Manual, TC-1005920

Authority: Canadian Coast Guard

29A Early Notification of Search and Rescue Authorities of Developing Situations

In the interest of ensuring the highest level of safety, mariners should immediately notify the Canadian Coast Guard, through any Marine Communications and Traffic Services Centre, of any situation which is or may be developing into a more serious situation requiring assistance from the Search and Rescue (SAR) System. The need for the earliest possible alerting of SAR Authorities to potential maritime emergencies cannot be over-emphasized.

This advice is given in accordance with IMO Circular MSC.1/Circ.892/Rev.1 and similar advice found in the ICAO/IMO International Aeronautical and Maritime SAR (IAMSAR) Manual Volume III. Further, there have been similar recommendations arising from serious SAR cases in the Canadian SAR Region where masters have failed to provide this notice until after the situation deteriorated.

This notification allows SAR authorities to carry out preliminary and contingency planning that could make a critical difference if the situation worsens. Time lost in the initial stages of a SAR mission may be crucial to its eventual outcome.

It is always best to consider the “worst-case scenario” and to alert SAR authorities accordingly. This notification places no obligations upon the master except to advise the Canadian Coast Guard when the situation has been corrected.

Authority: Canadian Coast Guard

30 Emergency Position Indicating Radiobeacons (EPIRBs) on Ships

1 Regulations

1.1 *Regulations concerning the carriage of emergency position indicating radiobeacons (EPIRBs) have been in effect since October 25, 1989. Expanded carriage requirements came into force on October 28th 2020 for vessels operating outside sheltered waters. The carriage requirements are contained in the Navigation Safety Regulations, 2020. In addition to the carriage requirements, there are technical requirements that every EPIRB must meet and important testing and inspection requirements.*

Consult Section 209, 228, 229, 230 and 239 of the *Navigation Safety Regulations, 2020* for more details

	< 8 m in Length	8 m to 12 m in Length	More than 12 m in Length
Near Coastal I and beyond	Float Free EPIRB	Float Free EPIRB	Float Free EPIRB
Near Coastal II	Float Free EPIRB Manual EPIRB 406 MHz PLB; or Portable waterproof VHF with DSC*	Float Free EPIRB Manual EPIRB; or 406 MHz PLB	Float Free EPIRB

*If operated exclusively in sea area A1.

2 Voluntary Carriage

2.1 The Canadian Coast Guard encourages the voluntary carriage of EPIRB on all vessels that are not required to carry this equipment.

Your EPIRB and SAR Services

Since 2009, only 406 MHz beacons are detected by the Cospas-Sarsat satellite system.

If a 406MHz beacon is sold or otherwise transferred to another operator or vessel, both parties must inform the Canadian Beacon Registry (CBR) immediately. Contact CBR at:

Canadian Beacon Registry
CFB Trenton, PO Box 1000 Stn Forces
Astra, ON, K0K 3W0
Telephone: 1-877-406-SOS1 (7671)
Fax: 1-877-406-FAX8 (3298)
Visit the Canadian Beacon Registry Website
E-mail: CBR@sarnet.dnd.ca

3 Emergency Beacon Registries

3.1 The *Navigation Safety Regulations, 2020* require Canadian vessel owners to register every beacon. Owners must also ensure that the information is up to date. It is advised that Owner / Operators verify and update their beacon registrations on a yearly basis.

3.2 These registries contain information about the beacon, the vessel it is on, the person who owns the beacon and their emergency contacts. This information is used for search and rescue purposes and will greatly assist in the speedy resolution of any beacon alarm incident. The responsibility of ensuring the accuracy of registry data rests with the beacon owner. Since lives may depend on this information, it is in the owner's best interests to ensure the initial and continuing accuracy of registered information.

3.3 In order to be registered the emergency beacon must be coded for Canada. EPIRB encoding guidelines are set out in the Cospas-Sarsat Handbook of Beacon Regulations for Canada (C/S S.007 CANADA) and is available under the following website Handbook of Beacon Regulations (C/S S.007) - International COSPAS-SARSAT.

3.4 EPIRBs must be registered with the Canadian Beacon Registry before the beacon is installed on the vessel.

3.5 Should any 406MHz beacon be retired from service, it must be disposed of with the batteries removed and as per the local electronics recycling regulations. The Canadian Beacon Registry must be advised if a beacon has been removed from service, placed into storage and / or disposed of.

4 Safe Transportation

4.1 The power source for EPIRBs is a long-life lithium battery. There are federal and provincial regulations governing the transportation of equipment containing these batteries, by land, sea or air.

4.2 Users should consult an EPIRB agent, a transportation company or the appropriate government transportation authority for guidance prior to the shipment of an EPIRB for any purpose other than normal use.

5 Warning

5.1 Investigations by the Canadian Coast Guard have determined that the Category 1 float-free, 406 MHz EPIRB on board some vessels have not been properly installed or armed in accordance with the manufacturer's instructions. Such equipment would therefore not function automatically in an emergency situation. It is imperative that mariners ensure that this float-free EPIRB is properly installed on board their vessel and set for automatic operation.

5.2 Regardless of a beacon passing a self-test, operators should not continue to utilize beacons beyond their battery expiration date and should follow the manufacturer's maintenance guideline. Should a beacon transmit in distress mode with an expired battery, there is no guarantee that said beacon will function as designed and this could lead to significant delays during an emergency.

6 Maintenance

6.1 Users should ensure that EPIRBs or PLB are inspected and tested at least once every six months in accordance with the *Navigation Safety Regulations, 2020.*

6.2 Users should read all instructions carefully and refer to the user manual for the manufacturer's recommendations on periodic maintenance.

6.3 Users should ensure that the label with the beacon's UIN (Hexcode) is firmly affixed and displayed on the beacon

7 False Alarms

7.1 In order to minimize the impact on SAR resources, in the event of accidental activation of an EPIRB, SAR authorities request that users:

.1 deactivate the beacon by turning the switch from ON to ARMED (or SAFE) position in certain models; and,

.2 call the Canadian Mission Control Centre at 1-800-211-8107 or (613) 965-7265 or the nearest JRCC/MRSC office to report the situation.

.3 Ensure that all beacons are registered with up-to-date contact information. Should a beacon activate in a non-distress situation, the JRCC/MRSC handling the case can utilize this information to quickly resolve false alarms without the unnecessary dispatching of limited resources.

Authority: Canadian Coast Guard (Search and Rescue, Ottawa)

E Marine Occurrences and Pollution

31 Reporting Marine Occurrences

The *Transportation Safety Board (TSB) Regulations*, made pursuant to the *Canadian Transportation Accident Investigation and Safety Board Act*, require that the person responsible for the ship (e.g. owner, operator, charterer, master, pilot, crew member) in Canadian waters, or a Canadian ship in any waters, report an occurrence (accident or incident) as soon as possible and by the quickest means available.

The information is to be reported to the TSB and this can be accomplished by reporting it via a marine radio station, a Marine Communications and Traffic Services (MCTS) Centre, a vessel traffic services station, a marine radio station operated by the St. Lawrence Seaway Management Corporation, a Canadian harbour radio station, or by contacting the TSB directly:

- Atlantic Region – Prince Edward Island, New Brunswick, Nova Scotia, Newfoundland and Labrador: 1 (902) 471-0820 or MarineNotifications.Atlantic@bst-tsb.gc.ca
- Central and Arctic Region - Ontario, Quebec, Northwest Territories, Nunavut: 1 (418) 580-3510 or MarineNotifications.Central@bst-tsb.gc.ca
- Pacific Region - British Columbia, Alberta, Saskatchewan, Manitoba, Yukon: 1 (604) 219-2414 or MarineNotifications.Pacific@bst-tsb.gc.ca
- Reports can also be made toll free to 1 (800) 387-3557 from anywhere in Canada. If you would like to make your report in French, please call the toll-free number.

If the occurrence took place outside of Canada call 1 (819) 994-3741 or email MarineNotifications@bst-tsb.gc.ca. Collect calls are accepted.

Persons responsible for ships are reminded that penalties may be incurred by failing to report a marine occurrence. The occurrence shall also be reported in writing, within 30 days following the occurrence, by completing the appropriate form. **Please note that workplace injuries on board vessels must also be reported directly to Transport Canada.**

The reporting form "REPORT OF A MARINE OCCURRENCE / HAZARDOUS OCCURRENCE REPORT" (form TSB 1808 (09-2014)) is bilingual, back-to-back. Mariners required to report occurrences are advised that TSB forms can be downloaded from the TSB website at Report a marine transportation occurrence.

The original TSB form is to be forwarded by email using the appropriate regional email address. Persons reporting an occurrence can also fax the form to 1 (819) 997-2239 or mail it to:

Transportation Safety Board of Canada
200 Promenade du Portage, Place du Centre, 4th floor
Gatineau QC K1A 1K8

Should further information be required, please contact the TSB using the contact information above.

Authority: Transportation Safety Board of Canada – Marine
(TSB - Marine)

32 Pollution – Compliance with Canadian Regulations

The attention of shipmasters is drawn to the –

Vessel Pollution and Dangerous Chemicals Regulations,

Ballast Water Regulations,

Arctic Shipping Safety and Pollution Prevention Regulations,

Response Organizations Regulations,

Environmental Response Regulations

Canada is responsible for the *Vessel Pollution and Dangerous Chemicals Regulations and Masters of vessels* should note that these regulations contain specific provisions for oil, noxious liquid substances and dangerous chemicals, pollutant substances, sewage, garbage, air, and anti-fouling systems. The regulations incorporate the provisions of MARPOL and the Anti-fouling Systems Convention. Canada has acceded to both these conventions, including all Annexes of MARPOL. However, stricter discharge provisions apply in internal and inland waters. Canada is committed to protecting its marine wildlife and ocean environment and will not tolerate the illegal discharge of oil, oily substances or other toxic substances in Canadian waters.

The North American Emission Control Area is in force and applies south of 60°N in waters under Canadian jurisdiction, including the 200-mile Exclusive Economic Zone. This measure also applies in waters of French territories of St. Pierre and Miquelon and the United States. As of January 1, 2015, all vessels in North American Emission Control Area must use fuel with a sulphur content of no more than 0.10%.

All crew members must be made aware of the consequences of illegally releasing oil or other toxic substances into Canadian waters, including the devastating effects on marine wildlife, the possibility of stiff fines and imprisonment, and the publication of the names of vessels and individual crew members that have been successfully prosecuted.

Vessels entering Canadian waters, including the 200-mile Exclusive Economic Zone, are closely monitored by aerial surveillance, patrol vessels, satellite imaging and port state control inspections.

Vessels suspected of illegally releasing oil, or other toxic substances into the marine environment, can be detained for investigation and can be prosecuted under Canadian laws. Owners, operators or individual crew members who are found guilty under Canadian laws can be fined up to $1 million.

Any discharge, or the danger of a discharge, of any pollutant must be reported by the quickest means available and in the manner prescribed in the *Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants* (TP 9834) or *International Maritime Organization Resolution A.851(20)* as amended. If a vessel has been unable to obtain compliant fuel for North American Emission Control Area, it must report to in accordance with procedures set out the Ship Safety Bulletin 04/2013, Reporting when compliant fuel is unavailable.

Masters of oil tankers should note that applicable tankers must carry either a Polar Ship Certificate or an International Oil Pollution Prevention Certificate as prescribed by the Regulations and a Certificate of Insurance or Other Financial Responsibility issued in accordance with the provisions of the *International Convention of Civil Liability for Oil Pollution Damage, 1992*.

Masters of laden oil and chemical tankers, operating in ice control zones of Eastern Canada, should refer to the Transport Canada publication *Joint Industry - Government Guidelines for the Control of Oil Tankers and Bulk Chemical Carriers in Ice Control Zones of Eastern Canada* (TP 15163) for guidance in the operation of their vessels while in ice control zones. A copy of the guidelines should be carried on board all applicable vessels.

Masters of vessels entering Canada's exclusive economic zone from seaward are advised to consult the *Ballast Water Regulations* (the Regulations) and the TP 13617 - List of Canada's designated alternate ballast water exchange areas and fresh waters (2021) to ensure compliance. With the exception of vessels specifically exempted from the provision of the Regulations, all vessels are expected to exchange or treat their ballast prior to ballast discharge in waters under Canadian jurisdiction. Vessels will also be required to salt-water flush ballast water tanks with open ocean water containing residual quantities of ballast water. The Master of a vessel, whether or not they are carrying ballast onboard, must ensure the vessel complies with the regulations and submits a completed ballast water reporting form as outlined in the Ship Safety Bulletin #07/2022 – Instructions for submitting Canadian Ballast Water Reporting Form (BWRF). In cases where Transport Canada determines that a vessel did not comply with the Regulations, the vessel may be subject to inspection and detention in accordance with subsection 222(1) of the *Canada Shipping Act, 2001*.

Transport Canada is the lead agency responsible for Canada's Marine Oil Spill Preparedness and Response Regime. The regime was established in 1995 to enable industry to respond to its own oil spills within the prescribed time standards and operating environments, for Canadian waters south of 60 degrees north latitude. The regime is built upon a partnership between government and industry. It sets rigorous standards for response organizations and oil handling facilities (including oil handling facilities north of 60), and establishes the requirements for national preparedness capacity. Please refer to the end of this Notice for Transport Canada contact information.

The Canadian Coast Guard is the lead federal agency responsible for ensuring an appropriate response to all ship-source spills and will place the onus of response on the polluter. The Canadian Coast Guard ensures the response is effective, timely, and appropriate to the incident. As the Canadian Coast Guard will be notified of all ship-source spill occurrences, polluters must communicate their intentions with the appropriate Canadian Coast Guard representative. Please refer to the end of this Notice for regional Canadian Coast Guard contact information.

Pursuant to Part 8 of the *Canada Shipping Act, 2001,* all oil tankers of 150 or more tonnes gross tonnage, all other vessels of 400 or more tonnes gross tonnage that carry oil as fuel or as cargo and groups of vessels that are towed or pushed, are of 150 gross tonnage or more and carry oil as cargo in Canadian waters south of the 60th parallel of latitude are required to enter into an arrangement with a Transport Canada certified response organization.

This does not apply to a non-Canadian vessel that is only transiting the territorial sea of Canada or the exclusive economic zone of Canada, and is not engaged in the loading or unloading of oil during transit.

The following is a list of Transport Canada certified response organizations and their Geographic Areas of Responsibility:

Western Canada Marine Response Corporation's (WCMRC) geographic area of response covers the waters bordering the Province of British Columbia (including the shorelines associated with such waters) and extending throughout the Exclusive Economic Zone (200 nautical miles offshore) and including, but not limited to, the inland waters of the Province.

Eastern Canada Response Corporation (ECRC)'s geographic area of response covers all the Canadian waters south of 60°N latitude in the provinces of Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan and Alberta, excluding the waters in the primary areas of response associated with the designated ports of Saint John, N.B. and Point Tupper, N.S.

Point Tupper Marine Services Ltd. (PTMS)'s geographic area of response comprises all the waters between an arc having a 50 nautical mile radius about Bear Head light, 45°33' North, 61°17' West, but not extending north of the Canso Causeway into St. George's Bay and the contiguous land mass and, for greater certainty, not to include the waters of the Bras d'Or Lakes, St. Andrews Channel, St. Patrick's Channel, Great Bras d'Or and other waters internal to Cape Breton Island.

Atlantic Emergency Response Team (ALERT) Inc.'s geographic area of response covers all the Canadian waters between the western boundary consisting of an arc having a 50 nautical mile radius about the point 45°08'03"N, 66°17'12"W, and the eastern boundary consisting of an arc having a 50 nautical mile radius about a point, centered on Cape Spencer Light.

Please refer to the end of this Notice for Response Organizations contact information.

Canada has signalled a willingness to address wrecked and/or abandoned vessels as a source threat with its accession to the *Nairobi International Convention on the Removal of Wrecks, 2007*, a framework which outlines the rights and obligations of vessel owners and coastal states with respect to wrecks resulting from a maritime casualty within a state's Exclusive Economic Zone (EEZ). The Wrecked, Abandoned or Hazardous Vessels Act (WAHVA), Canada's instrument to adhere to this convention, came into force on July 30, 2019. It holds owners responsible for their vessels by prohibiting abandonment and by enforcing the principle that owners are liable for the hazards and other issues that vessels and wrecks might pose. WAHVA also provides Transport Canada with authority to address all issues of vessel abandonment and dilapidation, and the Canadian Coast Guard with authority to address any vessel-related hazard, be it environmental, safety-related, or socio-economic in nature. Both organizations have powers to enforce compliance with directions they might issue to vessel owners under WAHVA.

<table>
<tr>
<td rowspan="2">CANADIAN COAST GUARD
(Marine Environmental & Hazards Response 24/7)

Western Region
1-800-889-8852

Central Region
1-800-265-0237

Arctic Region
1-867-979-5269

Atlantic Region South (NB,NS,PEI)
1-800-565-1633

Atlantic Region North (NFLD, LAB)

1-800-563-9089</td>
<td>RESPONSE ORGANIZATIONS

Western Canada Marine Response Corporation (WCMRC)
604-294-6001
604-294-9116 (24 hours)</td>
</tr>
<tr>
<td>Eastern Canada Response Corporation Ltd. (ECRC)
613-230-7369

Quebec Region
418-692-8989

Atlantic Region
902-461-9170

Great Lakes Region
519-862-2281</td>
</tr>
<tr>
<td rowspan="2">TRANSPORT CANADA

Marine Safety and Security, Navigation Safety, and Environmental Programs

330 Sparks Street, 10th floor, K1A 0N5
613-991-3131</td>
<td>Atlantic Emergency Response Team (ALERT) Inc.
506-632-4499 (24 hours)</td>
</tr>
<tr>
<td>Point Tupper Marine Services Ltd. (PTMS)
902-625-1711</td>
</tr>
</table>

Authority: Canadian Coast Guard

F National Defence – Military Notices

33 Caution when Approaching Canadian Ports

PART 1

Closing of ports; Stopping of movement in ports

1 Mariners are informed that, if it is necessary for the Department of National Defence to take control of certain Canadian Ports the following signals will be displayed from a conspicuous position at or near the ports concerned or by an Examination or Traffic Control Vessel.

2 The signals and their meanings are:

(a) *Entrance to the port prohibited.*

(i) By day – Three red balls disposed vertically

(ii) By night – Three flashing red lights disposed vertically and visible all round the horizon.

(b) *Entrance to the port permitted.*

By night – Three green lights disposed vertically and visible all round the horizon.

(c) *Movement of shipping within the port or anchorage prohibited.*

(i) By day - A blue flag.

(ii) By night - Red light, green light, red light disposed vertically and visible all round the horizon.

The lights described above will be carried in addition to the ordinary navigation lights of Examination Vessels.

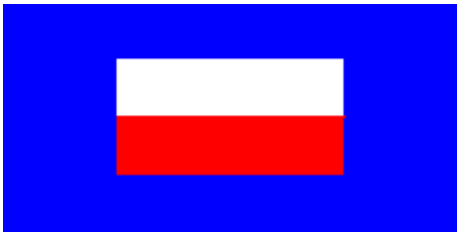
3 Masters of vessels are warned that should they approach the entrance to a port which is being controlled by the Department of National Defence they should not enter a declared *Dangerous Area* or approach boom defences without permission, nor should they anchor or stop in a dangerous area or prohibited anchorage unless instructed to do so. Masters are advised therefore to communicate with any Government or Port Authority vessel found patrolling in the area to ascertain the recommended approach route to the port.

PART 2

Examination service

4 In certain circumstances it may be necessary to take special measures to examine, or to establish the identity of, individual vessels desiring to enter ports and to control their entry. This is the function of the Examination Service, whose officers will be afloat in Examination Vessels or Traffic Control Vessels. These Vessels will wear the distinguishing flags of the Examination Service which are:

(a) The examination service special flag and



(b) The Canadian National Flag.

5 If ordered to anchor in an Examination Anchorage, Masters are warned that it is forbidden, except for the purpose of avoiding accident, to do any of the following without prior permission being obtained from the Examining Officer.

(a) To lower a boat.

(b) To communicate with the shore or with any other ship.

(c) To move the ship.

(d) To work cables.

(e) To allow any person or thing to leave the ship.

6 Any passenger or member of the crew who has embarked outside of Canada must be examined by a Canadian Immigration Officer before effecting admission to Canada.

PART 3

Other regulations in force

7 Nothing in this precautionary Notice is to be taken as overruling any regulations issued by local authorities at particular ports or by routing authorities of the Department of National Defence.

Authority: Department of National Defence (NDHQ)

34 Information Concerning Submarines

1. Introduction

The Canadian Armed Forces, Royal Canadian Navy, operates four Victoria Class submarines. Mariners are warned that they may encounter these submarines anywhere off the Canadian coast, particularly in the vicinity of Halifax including the operating areas south of Halifax, and Victoria including the Juan de Fuca Strait and the Georgia Strait, especially in the vicinity of Nanoose Bay. United States Navy submarines are also frequently encountered off the east and west coasts of Canada. Submarines may be surfaced or submerged, operating independently, or with surface ships and/or aircraft.

2. Submarine Presence Indicators

(a) Visual Signals Exhibited by Surface Ships Operating with Submarines

When a surface ship is operating with a submarine the surface ship will fly the International Code Group “NE Pennant 2”, meaning *Submarines are exercising in this vicinity; you should proceed with great caution*. Vessels should steer so as to give a wide berth to any ship flying this signal. If, for any reason, it is necessary to approach this ship, vessels should proceed at slow speed until warning is given of the danger zone by VHF bridge-to-bridge radio, flags or signal lamp. At all times, a good lookout should be kept for submarines whose presence may only be indicated by a periscope or snorkel showing above the water.

(b) Pyrotechnic Signals Released by Submarines

A submarine, when operating at depth, either independently or with a surface ship or aircraft, may indicate its position by releasing a *smoke candle* or *a flare*. (See para. 8)

(c) Navigation Warnings

Under certain circumstances, warnings that submarines are exercising in specified areas may be issued as *CANHYDROLANT* and *CANHYDROPAC* messages on standard navigational warning broadcasts.

3. Navigation Lights

(a) On many occasions, the overall arrangement of submarine lights and their small silhouettes, both while underway and at anchor, have led to submarines being mistaken for much smaller vessels. For instance, submarines at anchor by night have been confused with two separate vessels of less than 50 m (164 ft.) in length. The masthead and sidelights of submarines are placed well forward and very low over the water in proportion to the length and tonnage of these vessels. In particular, the masthead steaming light may be well forward of the midpoint of the submarine's length. The stern light is placed very low and may at times be partially obscured by spray and wash, but is invariably lower than the sidelights. Some submarines may be encountered which do not carry a forward steaming light and on which the stern light may be situated on the after end of the fin. In addition, if a submarine is sighted on, or shortly after, surfacing (or shortly before diving), it may not be displaying navigation lights as these are stowed whilst a submarine is submerged. Victoria Class submarine navigation lights are normally positioned as follows:

i. Masthead Steaming Light – above the fin about 9.27 m above the surface.
ii. Stern Light – at the back of the fin about 6.84 m above the surface.
iii. Side Lights – below and forward of the masthead light about 3.0 m apart and 7.63 m above the surface.
iv. Forward Anchor Light – in the bows about 5.5 m above the surface; and
v. After Anchor Light – at the stern about 3.3 m above the surface.

(b) In addition to displaying the prescribed navigation lights for such vessels, some submarines may show a yellow coloured light, producing 90 flashes per minute, visible all round the horizon for a distance of at least three nautical miles. The light is located over the fin about 10.16 m above the surface.

(c) Submerged submarines at periscope depth may show an all round or quick flashing red or yellow light to indicate their presence to exercising aircraft.

Note: In restricted waters submarines should be passed with caution, observing their limited manoeuvrability on the surface, deep draught and their vulnerability to collision.

4. Indications of a Submerged Submarine in Distress

A disabled submarine which is unable to surface will try to indicate its position using the following methods:

(a) Releasing distress buoys described in para 7 of this notice as soon as the accident occurs;

(b) Firing red pyrotechnic signals described in para 8 of this notice. While the submarine may fire these signals at any time, the signals are most likely to be released on the approach of surface vessels and in response to sound signals in para (5) (e). These are special message carrying smoke candles, which also release dye. Every effort should be made to obtain this message, which will be in a tubular container attached to the top of the smoke candle;

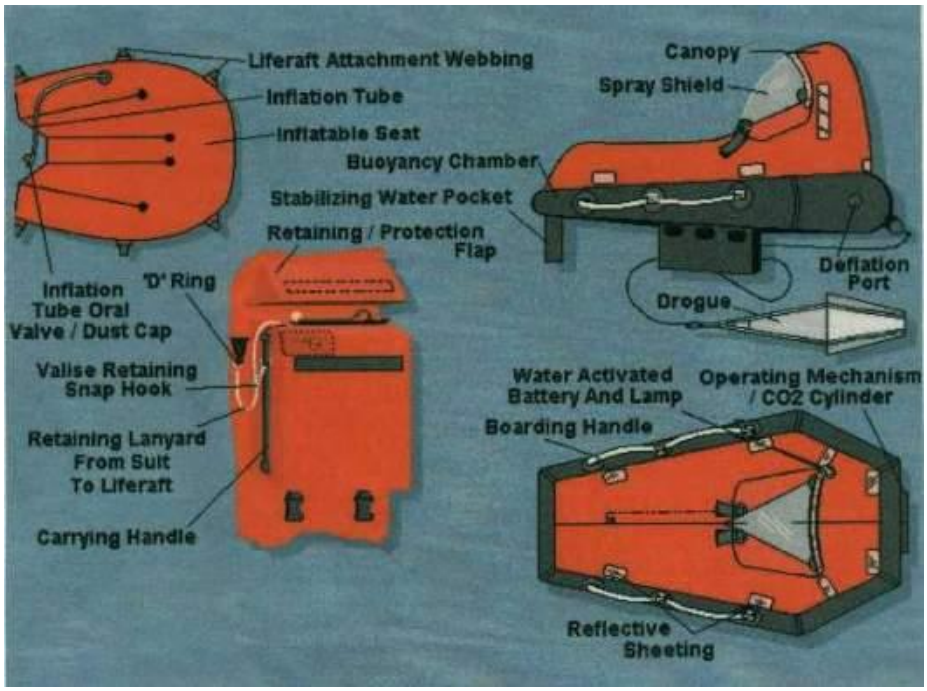
(c) Pumping out fuel or lubricating oil;

(d) Releasing air bubbles;

(e) Personnel or debris floating on the surface. The personnel may be unconscious or incoherent due to decompression sickness (DCS) problems and unable to explain their position. They may or may not be wearing a Submarine Escape Suit or a Submarine Surface Abandonment Suit.



Mk10 Submarine Escape Suit with MK 18 Single Individual Life Raft



Mk 18 One Man Life Raft which comes with Submarine Escape Suit

5. Submarine Surface Abandonment

(a) There are a myriad of reasons that may force a crew of a submarine to abandon their vessel. In most cases, these will include damage sustained as a result from a fire, flood, atmosphere contamination, or reactor emergency. Circumstances leading to the crew abandoning a submarine will develop rapidly and very likely result in a swift evacuation with little preparation time.

(b) Surface abandonment from a submarine is accomplished by evacuating the submarine using the main deck hatches or sail/ fin hatches. This is an extremely difficult evolution, particularly in higher sea states and, unlike surface ships, submarines offer no freeboard protection and are usually not fitted with large life rafts and/ or ready-use provisions to support and sustain the crew.

(c) Once the crew has successfully abandoned the submarine, survivors face numerous challenges and adverse conditions while waiting for rescue forces. Survivors from an abandoned submarine are unlikely to have experienced decompression sickness; however, there may be casualties or major injuries from smoke inhalation, radiation, or hypothermia.

(d) Survivors are likely to be in an Escape Suit or in some instances, a Submarine Surface Abandonment Suit and may be tethered together or in portable or fixed life rafts.

Submarine Surface Abandonment Suit

The Submarine Surface Abandonment Suit (SSAS) is a high-performance one-piece, one-size-fits-all immersion suit designed to provide an exceptional level of thermal protection and floatation to personnel immersed in colder waters for a period of up to 12 hours.



Submarine Surface Abandonment Suit

Portable Six-Person Submarine Inflatable Life Raft

Victoria Class submarines carry ten portable six-person submarine inflatable life rafts. These life rafts are designed for use in the event personnel are forced to abandon ship and are to be deployed in conjunction with the SSAS.



6. Submarine Disaster Actions

(a) In any submarine accident, time is the most vital factor affecting the chances of rescue of survivors. At the first indication that a submarine accident has occurred – by sighting the indications noted in para 4 of this notice or actually being in collision with a submarine – *an immediate report should be made by the quickest available means to the Headquarters of Maritime Forces Atlantic in Halifax NS, Phone (902) 427-2501 or the Headquarters of Maritime Forces Pacific in Esquimalt BC, Phone (250) 363-2425 as appropriate, or to the nearest Marine Communications and Traffic Services Centre.*

(b) The aim of a submarine rescue operation is to save lives and will have to achieve the following:

i. Fix the exact position of the submarine;
ii. Get a ship standing by to pick up survivors, if practicable, with boats already lowered;
iii. Inform the trapped personnel that help is at hand;
iv. Get medical assistance to recovered survivors;
v. Get a recompression chamber to the scene; and
vi. Get divers, rescue equipment, etc., on the scene to assist the submarine personnel.

(c) There are Maritime Forces Atlantic and Pacific organizations designed to respond to a submarine search and rescue event, which are kept at an immediate readiness for action. It is clear, however, that any ship may at any time find evidence of a submarine disaster, and if it takes prompt and correct action as described above may be in a position to play a vital role. There should be no reluctance to make a report of a suspected submarine accident because the observer has been unable to establish beyond any reasonable doubt that a submarine accident has occurred. Canadian Maritime Forces Atlantic and Pacific are prepared to react appropriately.

(d) At any time after a submarine accident, survivors may start attempting to escape. Conditions inside are likely to deteriorate rapidly and postponement of escape will only be made in order to allow rescue ships time to reach the scene. Any ship finding a submarine indicator buoy should not therefore, leave the position but should remain in the area, well clear, ready to pick up survivors. The survivors will ascend nearly vertical and it is important that plenty of sea room be given to enable them to do so in safety. On arrival at the surface, personnel may be exhausted or ill, and if circumstances are favourable, the presence of a boat already lowered is very desirable. Some personnel may require recompression and it will be the aim of the Commander of either Maritime Forces Atlantic or Pacific as appropriate to get personnel to a recompression chamber without delay.

(e) In order that those trapped in the submarine are aware that help is at hand, rescue forces may drop up to 12 small explosive charges (individually at five second intervals) into the sea. There is no objection to the use of small charges for this purpose, but it is vital that they are not dropped too close, as sailors in the process of making ascents are particularly vulnerable to underwater explosions and may easily receive fatal injuries. A distance of a quarter of a nautical mile is considered to be safe. If no small charges are available, the running of an echo sounder or tapping on the ship's hull with a hammer from a position below the waterline is likely to be heard in the submarine. These signalling methods will reassure trapped survivors and therefore should be done at regular intervals.

7. Canadian Submarine Distress Buoys

(a) Canadian Victoria Class submarines are fitted with two indicator buoys which are tethered to the submarine by a mooring line. These buoys are marked as either FORWARD or AFT to indicate the end of the submarine from which they were released and are marked with the submarine's identification number. They can be released from inside the vessel in case of emergency or, if for any reason, the submarine is not able to surface. These buoys do not contain a telephone and there is, therefore, no requirement to approach it. Great care should be taken to avoid damage to the buoy and its mooring line and it should only be touched if it shows signs of sinking. In this case, a boat should endeavour to support the buoy while putting minimum possible strain on the nylon

line. Attaching a life raft to the buoy may be the best means of achieving adequate support. There is a great danger of parting the mooring line and losing the location of the distressed submarine.

(b) Victoria Class submarine indicator buoys are Type 639 model 060 buoys. These buoys, with Scotch-lite orange and silver reflective tape wrapped alternately around the upper half of the body, have a white light which flashes every two seconds. The buoy has a visual three-digit identifier in accordance with ATP 57 – NATO Submarine Search and Rescue Manual. There is a mooring bolt on the bottom from which is suspended 1000 m of 1.3 cm (circumference) nylon mooring line. The buoys float with a freeboard of about 15.2 cm. The buoy has an extending vertical whip antenna, which extends to a height of 1.77 meters above the buoy. A white light which flashes approximately twice every second for at least 40 hours is mounted in the centre of the top surface. In darkness, and during good weather, the visibility of the light without binoculars is 3.2 kilometres. For identification purposes, the following inscription is carried on each buoy around the top surface.

IN ENGLISH - *S.O.S. identification number). Finder inform Navy, Coastguard or Police. Do not secure to or touch.*

IN FRENCH - *S.O.S. numéro d'identification). Prévenir immédiatement autorités maritimes. Défense de toucher.*

Each Canadian submarine has two buoys which are fitted with an automatic transmitting radio unit operating on 243.0 MHz, and the Global Maritime Distress and Safety System (GMDSS) frequency 406.025 MHz. The signals are transmitted automatically when the indicator buoy is released. On frequency 243 MHz, the sound is a high-pitched tone dropping to a low-pitched tone, then a break. This is repeated and these repeating tones will trigger automatic receiving SAR equipment. On the GMDSS frequency, a 15-digit code is transmitted in digitalized format. This code is received by satellite, which will correspond to the specific indicator buoy. The code is identified by the Rescue Coordination Centres. Ships hearing these signals should immediately report their position and depth of water and, if possible, an indication of signal strength. If such a buoy is sighted in depths of water greater than 1000 m, it is certain to be adrift, and this fact should also be reported as soon as possible.



639 Indicator Buoy

(c) Submarine Emergency Positioning Indicating Radio Beacon (SEPIRB) is a (GMDSS) that is approved for use on submarines.

The SEPIRB has the following features:

- COSPAS-SARSAT approved 406 MHz/121.5 MHz (homing)
- Global Positioning System (GPS) position data supplied in (COSPAS-SARSAT) message
- Capable of both submarine launch and manually by hand

Four are carried on board and can be fired from the submerged signal ejectors.

The SEPIRB is designed for launch from submarines or by hand over the side. The SEPIRB is a 3 inch diameter device with a maximum overall length of 41.285 inches and a maximum weight of 8.2 lbs.

The SEPIRB has a minimum operational life of 48 hours.

The SEPIRB is activated after the launch tab is bent back during submarine launch or manually by hand.

Once on the surface, the SEPIRB immediately begins to obtain a GPS fix and begins transmitting a 406.025 MHz digital message to the COSPAS-SARSAT system containing its initial GPS fix (default value until GPS fix is obtained), elapsed time from activation, and unique ID number. No further updates of position are performed.

Six hours after activation, the SEPIRB will begin transmission of a 121.5 MHz homing beacon signal to assist in the location of the buoy. Operation continues until deactivation or end of battery life (min. of 48 hrs).



SEPIRB

8. Submarine Pyrotechnics

There is a possibility that submarine pyrotechnics may be confused with aircraft marine markers, floats, sonobuoys, etc. Therefore, when making identification, reference should be also made to paragraph 9.

(a) *Smoke Candles* – When fired from a submerged submarine, these white candles burn for up to 4 minutes emitting smoke and flame and can be seen by day or night.

(b) *Flares* – A container floats to the surface and a small explosive hurls a container about 150 m (450 ft) into the air. The red or green flare descends suspended from a parachute. Similar to a *VERI flare*, light is visible for about 15 to 45 seconds.

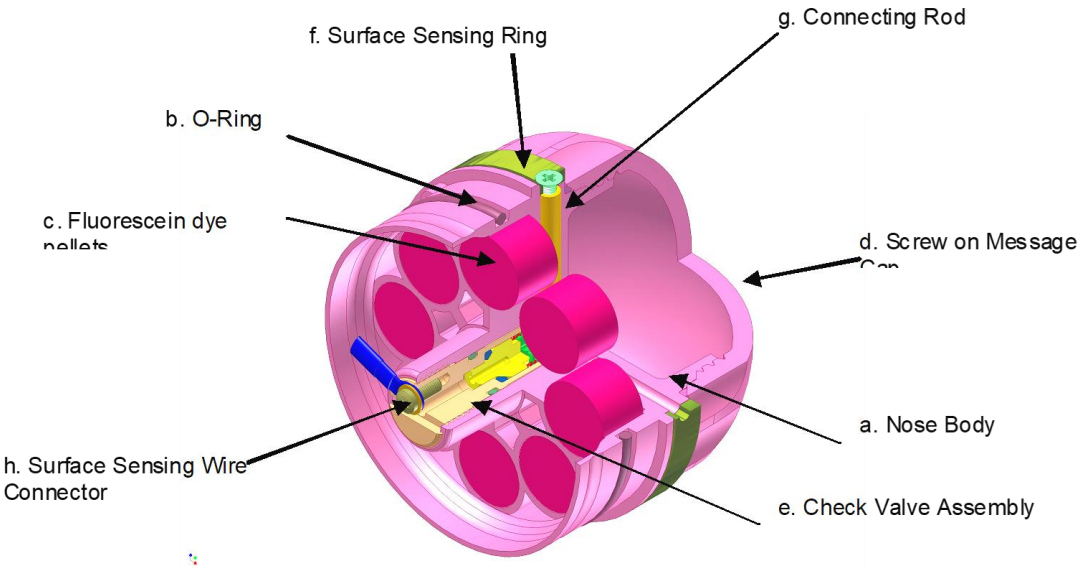
(c) *Message Carrier* – When the red flare floats to the surface and the canister is hurled into the air, the top of the flare is ejected and floats on the surface. It releases a green fluorescent dye in the water to mark its location. Within the top there is a message compartment that could contain a message from the bottomed submarine. Every effort should be made to obtain the message.



SUBMARINE LAUNCHED FLARE (SLF) MK2



Message Carrier Area of Nose Assembly SLF MK2



SLF MK2 (R) – Nose Assembly showing Dye Package



Submarine Launched Red Para Flare deployed

9. Marine Markers

The following may be dropped by aircraft or ships and, unless closely examined, may be mistaken for submarine pyrotechnics:

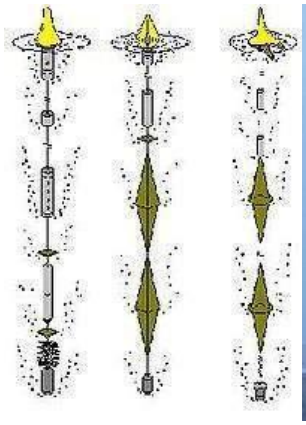
(a) Sonobuoys

All sonobuoys currently in use by the Canadian Armed Forces are cylindrical in shape prior to deployment and have the following dimensions:

Diameter - 120.7 mm to 123.8 mm
Length - 909.6 mm to 917.6 mm

Once deployed, however, the physical characteristics of the sonobuoys vary considerably, depending on purpose and manufacturer.

Warning - Some sonobuoys contain lithium batteries, which are potentially hazardous. Improper handling of the lithium power supply could result in extreme battery temperatures, venting of toxic gases, fire and explosion. Most sonobuoys employ CO_2 gas bottles to inflate the surface float and may be hazardous if accidental activation occurs during handling.





(b) Warning – Markers contain pyrotechnic composition (red phosphorous) and, if not completely burned out, are very dangerous and may cause severe burns if handled.



Marine Location Marker C2A2

Authority: Department of National Defence (NDHQ)

35 Firing Practice and Exercise Areas

Explanatory Notes

1 Firing and bombing practices, and defence exercises, take place in a number of areas off the coasts of Canada.

2 The principal types of practices carried out are:

(a) Bombing practice from aircraft.

(b) Air to air, and air to sea or ground firing. The former is carried out by aircraft at a large white or red sleeve, a winged target, or flag towed by another aircraft moving on a steady course. The latter are carried out from aircraft at towed or stationary targets on sea or land, the firing taking place to seaward in the case of those on land. All marine craft operating as range safety craft, target towers or control launches for radio controlled targets will display, for identification purposes, while in or in the vicinity of the danger area, the following markings:

(i) A large red flag at the masthead;

(ii) A painted canvas strip, 1.8 m (6 ft.) by .9 m (3 ft.) with red and white chequers in .3 m (1 ft.) squares, on the fore deck or cabin roof.

(c) Anti-aircraft firing.

This may be from guns, missiles or machine guns at a target towed by aircraft as in (b) above, a pilotless target aircraft, or at balloons or kites. Practice may take place from shore batteries or ships. Warning signals as a rule are shown from shore batteries; ships fly a red flag.

(d) Firing from shore batteries or ships at sea at fixed or floating targets. Warning signals usually shown as in (c).

(e) Firing at remote-controlled craft.

These craft are approximately 20.7 m (68 ft.) in length and carry not under command shapes and lights, as well as normal navigation lights. Exercises consisting of surface firing by ships, practice bombing, air to sea firing and rocket firing will be carried out against these craft or targets towed by them. A control craft will keep visual and radar watch up to approximately 8 nautical miles and there will be cover from the air over a much greater range to ensure that other shipping will not be endangered.

3 Warning signals, when given, usually consist of red flags by day and red fixed or red flashing lights at night. The absence of any such signal cannot, however, be accepted as evidence that a practice area does not exist. Warning signals are shown from shortly before practice commences until it ceases. Ships and aircraft carrying out night exercises may illuminate with bright red or orange flares.

4 CAUTION. A vessel may be aware of the existence of a practice area from Local Notices to Mariners or similar method of promulgation and by observing the warning signals of the practice. The Range Authorities are responsible for ensuring that there should be no risk of damage from falling shell-splinters, bullets, etc., to any vessel which may be in a practice area.

Except where stated under Employment, areas are only in use intermittently or over limited periods, and when it is intended that a firing practice and exercise area be used, this information *will* be promulgated by local Canadian Coast Guard *Marine Radio Broadcasts* and may also be advertised in local newspapers. Maritime Command vessels are informed by Navigational Warning Messages *CANHYDROLANT or CANHYDROPAC.*

5 (a) The DND Sea area alphabetical identification designators in this Notice are used for marine purposes and are quoted in marine warning messages advertising the reservation of sea space for armed forces exercises. They are also shown in areas displayed on marine charts, however, not all areas are so displayed. Designators for marine areas on the West Coast are prefixed W; those for areas in the Great Lakes are prefixed L; those for the East Coast are not prefixed.

(b) **Area descriptions**

All bearings are true and those relating to arcs are from seaward. Miles are in nautical miles. Unless otherwise specified coordinates are based on North American Datum 1983 (NAD 83) which is equivalent to WGS 84.

(c) **Employment abbreviations**

The following abbreviations are used to indicate the employment of DND Exercise Areas:

A/A	Anti-Aircraft Firing
Missile	Surface to Air Missile Firing
S	Surface Firing
S.ht	Surface Firing High Trajectory
T	Torpedo Firing
NF	Non-Firing area for general purpose type exercise
A to A	Air to Air Firing
A to S	Air to Sea Firing
B	Bombing
R	Rocket Firing
A	Non-Firing area for general purpose type air exercises
A/S.he	Anti-Submarine Exercise including high explosive projectiles
A/S	Anti-Submarine Exercise excluding high explosive projectiles
SS	Subsurface Exercises

6 The airspace identification numbers used in this Notice conform to the International Civil Aviation Organization (ICAO) Standards for airspace designations.

The identification system consists of a three-part code as follows:

(a) The assigned national identification letters - Canada is *CY;* and

(b) The letter *R* for a restricted area or the letter *D* for a danger area; and

(c) A three-digit number which will identify the airspace. This number will also indicate the region of Canada within which the area is located according to the following criteria:

101 to 199	British Columbia
201 to 299	Alberta
301 to 399	Saskatchewan
401 to 499	Manitoba
501 to 599	Ontario
601 to 699	Québec
701 to 799	New Brunswick; Nova Scotia; Prince Edward Island; Newfoundland
801 to 899	Yukon Territory
901 to 999	Northwest Territories; Arctic Islands

EXAMPLE: CYD401

CY	CY indicates Canada,
D	Indicates Danger Area,
401	Indicates the assigned number of the area in Manitoba

7 WARNING

The portion of WG (Diagram 14) enclosed by pecked lines is an active surface, sub-surface, air and torpedo firing/operations area which may also include use of active sonar. Operations are generally (though not exclusively) conducted from 0700-1730 Monday to Saturday during which times area WG is considered extremely hazardous to marine traffic. Additionally, any number of lit and unlit Mooring Buoys may be within Area WG at various locations throughout the year to be used for military purposes. These buoys may be placed, moved and/or removed without notice. Mariners are to exercise caution whenever transiting this area, and vessels are required to remain clear whenever WG is active. Area WG constitutes a defence establishment as defined in the *National Defence Act* to which the *Defence Controlled Access Area Regulations* apply.

EAST COAST

Nova Scotia Area					
Sea Areas	**Air Space**	**Location**	**Coordinates**	**Employment**	**Diagram**
***ALPHA**		Charts 4001, 4003, 4012, 4320 and 8007	44°42′N 63°00′W 44°19′N 63°00′W 44°19′N 63°40′W 44°28′N 63°40′W	Sub surface operations area. *** Does not include Halifax Hbr. Extends to harbour limits only.**	**1**
		Chart 4013	44°42′N 63°00′W 44°19′N 63°00′W 44°19′N 63°40′W		
BRAVO		Charts 4001, 4003, 4012 and 4320	44°28′N 63°40′W 44°19′N 63°40′W 44°19′N 64°00′W 44°28′N 64°05′W	Sub surface operations area.	
CHARLIE ONE		Charts 4001, 4003, and 4012	44°28′N 64°05′W 44°19′N 64°00′W 44°00′N 64°00′W 44°00′N 64°40′W	Sub surface operations area.	**1**
		Chart 4320	44°28′N 64°05′W 44°19′N 64°00′W 44°00′N 64°00′W 44°00′N 64°25′W		
CHARLIE TWO		Charts 4001, 4003, and 4012	44°00′N 64°40′W 44°00′N 64°00′W 43°30′N 64°00′W 43°30′N 65°24′W	Sub surface operations area.	**1**
		Chart 4320	44°00′N 64°00′W 44°00′N 64°25′W 43°55′N 64°00′W 43°55′N 64°25′W		
		Chart 8006	43°30.0′N 65°24.5′W 43°30.0′N 64°00.0′W 43°33.0′N 64°00.0′W		

Nova Scotia Area					
Sea Areas	**Air Space**	**Location**	**Coordinates**	**Employment**	**Diagram**
CHARLIE THREE		Charts 4001, 4003, 4012 and 8006	43°30′N 65°00′W 43°30′N 64°00′W 43°00′N 64°00′W 43°00′N 65°00′W	Sub surface operations area.	**1**
DELTA ONE	To 20,000 feet	Charts 4001, 4003, 4012 and 4320	44°19′N 64°00′W 44°19′N 63°45′W 44°10′N 63°45′W 44°10′N 64°00′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
DELTA TWO	To 20,000 feet	Charts 4001, 4003, 4012 and 4320	44°19′N 63°45′W 44°19′N 63°30′W 44°10′N 63°30′W 44°10′N 63°45′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
		Charts 4013 and 8007	44°19′N 63°40′W 44°19′N 63°30′W 44°10′N 63°30′W 44°10′N 63°40′W		
DELTA THREE	To 20,000 feet	Charts 4001, 4003, 4012 and 4320	44°10′N 63°45′W 44°10′N 63°30′W 44°00′N 63°30′W 44°00′N 63°45′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
		Charts 4013 and 8007	44°10′N 63°40′W 44°10′N 63°30′W 44°00′N 63°30′W 44°00′N 63°40′W		
DELTA FOUR	To 20,000 feet	Charts 4001, 4003, 4012 and 4320	44°10′N 64°00′W 44°10′N 63°45′W 44°00′N 63°45′W 44°00′N 64°00′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
ECHO ONE		Charts 4001, 4003 and 4013	44°59′N 62°00′W 44°00′N 62°00′W 44°00′N 63°00′W 44°42′N 63°00′W	Sub surface operations area.	**1**
		Chart 4012	44°42′N 63°00′W 44°00′N 63°00′W 44°00′N 62°40′W		
		Chart 4320	44°42′N 63°00′W 44°00′N 63°00′W 44°00′N 62°45′W		
		Chart 8007	44°42′N 63°00′W 44°00′N 63°00′W 44°00′N 62°00′W 44°52′N 62°00′W		
HOTBOX ONE	To 5,000 feet	Charts 4013	44°00’N 063°00’W 44°19’N 063°00’W 44°19’N 062°30’W 44°00’N 062°30’W	Sub surface operations area. Firing Exercise (FIREX)	**1**

Nova Scotia Area					
Sea Areas	**Air Space**	**Location**	**Coordinates**	**Employment**	**Diagram**
ECHO TWO	To 20,000 feet	Charts 4001, 4003 4012, 4013, 4320 and 8007	44°19′N 063°30′W 44°19′N 063°00′W 44°10′N 063°00′W 44°10′N 063°30′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
ECHO THREE	To 20,000 feet	Charts 4001, 4003 4012, 4013, 4320 and 8007	44°10’N 063°30’W 44°10’N 063°00’W 44°00’N 063°00’W 44°00’N 063°30’W	Sub surface operations area. Firing Exercise (FIREX)	**1**
FOXTROT ONE		Charts 4001, 4003 and 4011	45°03′N 66°46′W 44°48′N 66°46′W and 44°36′N 66°54′W 44°00′N 66°54′W 44°00′N 66°09′W	Sub surface operations area.	**1**
		Chart 4012	Southern limit at 44°00′N 66°40′W 44°00′N 66°09′W		
FOXTROT TWO		Charts 4001, 4003 and 4011	43°43′N 66°00′W 43°00′N 66°00′W 43°00′N 66°54′W 44°00′N 66°54′W 44°00′N 66°09′W	Sub surface operations area.	**1**
		Chart 4012	44°00′N 66°40′W 44°00′N 66°09′W 43°43′N 66°00′W 43°00′N 66°00′W 43°00′N 66°40′W		
		Chart 8006	43°33′N 66°00′W 43°00′N 66°00′W 43°00′N 66°36′W		
FOXTROT THREE		Charts 4001, 4003 and 4012	43°30′N 65°24′W 43°30′N 65°00′W 43°00′N 65°00′W 43°00′N 66°00′W 43°43′N 66°00′W	Sub surface operations area.	**1**
		Chart 4011	43°00′N 65°30′W 43°00′N 66°00′W 43°43′N 66°00′W		
		Chart 8006	43°33.0′N 66°00.0′W 43°00.0′N 66°00.0′W 43°00.0′N 65°00.0′W 43°30.0′N 65°00.0 W 43°30.0′N 65°24.5′W		
FOXTROT FOUR		Charts 4001, 4003 and 8006	43°00′N 66°00′W 43°00′N 65°00′W 42°00′N 65°00′W 42°00′N 66°00′W	Sub surface operations area.	**1**

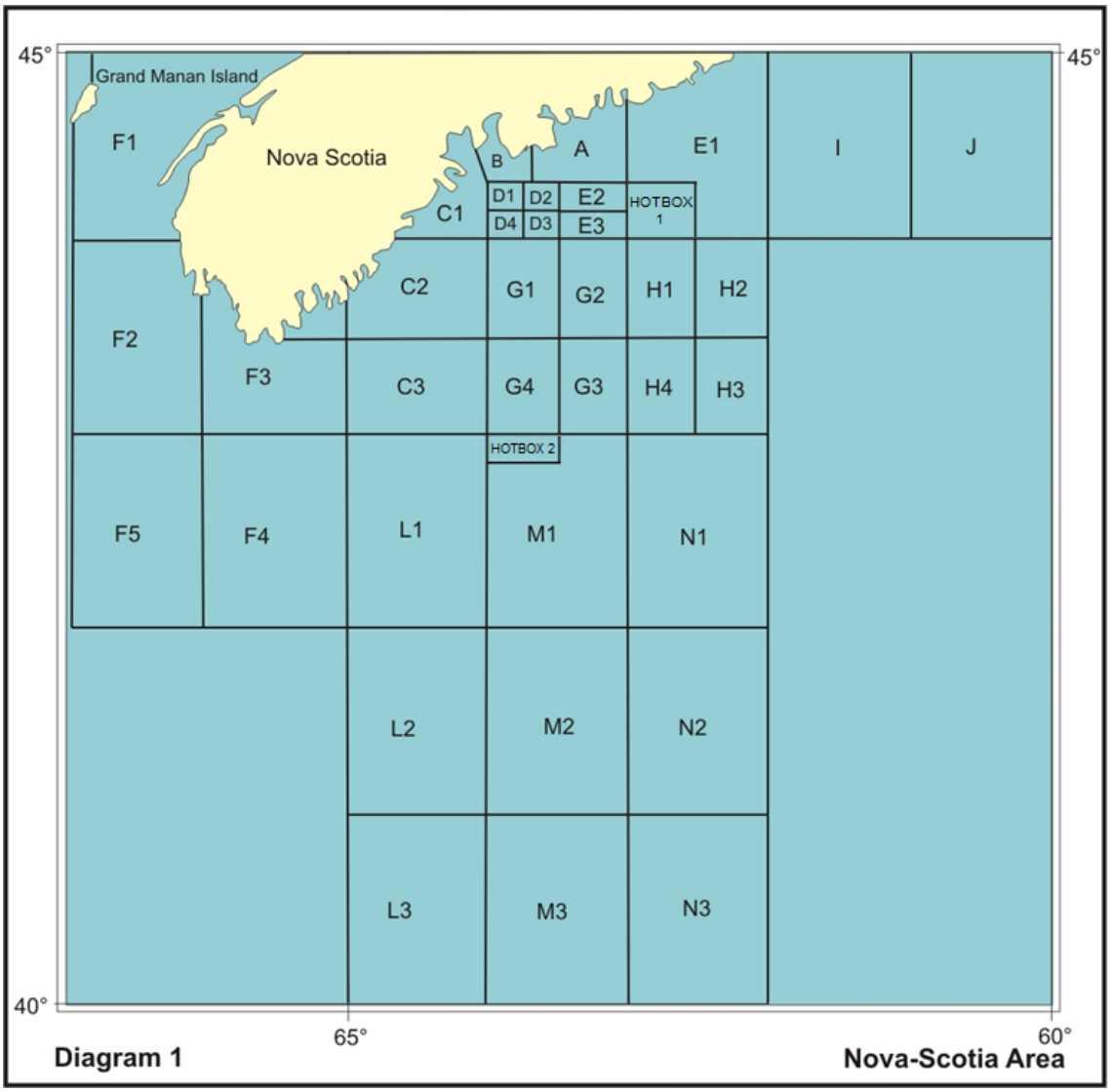
Nova Scotia Area					
Sea Areas	**Air Space**	**Location**	**Coordinates**	**Employment**	**Diagram**
		Chart 4011	43°00′N 66°00′W 43°00′N 65°30′W 42°27′N 66°00′W		
		Chart 4012	43°00′N 66°00′W 43°00′N 65°00′W 42°40′N 65°00′W 42°40′N 66°00′W		
FOXTROT FIVE		Charts 4001 and 4003	43°00′N 66°54′W 43°00′N 66°00′W 42°00′N 66°00′W 42°00′N 66°54′W	Sub surface operations area.	**1**
		Chart 4011	43°00′N 66°54′W 43°00′N 66°00′W 42°27′N 66°00′W 42°27′N 66°54′W		
		Chart 4012	43°00′N 66°40′W 43°00′N 66°00′W 42°40′N 66°00′W 42°40′N 66°40′W		
		Chart 8006	43°00′N 66°36′W 43°00′N 66°00′W 42°00′N 66°00′W 42°00′N 66°36′W		
GOLF ONE	To 30,000 feet	Charts 4001, 4003 and 4012	44°00′N 64°00′W 44°00′N 63°30′W 43°30′N 63°30′W 43°30′N 64°00′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
		Charts 4013 and 8007	44°00′N 63°40′W 44°00′N 63°30′W 43°30′N 63°30′W 43°30′N 63°40′W		
		Chart 4320	44°00′N 64°00′W 44°00′N 63°30′W 43°55′N 63°30′W 43°55′N 64°00′W		
		Chart 8006	43°33′N 64°00′W 43°30′N 64°00′W 43°30′N 63°30′W 43°33′N 63°30′W		
GOLF TWO	To 30,000 feet	Charts 4001, 4003, 4012 and 8007	44°00′N 63°30′W 44°00′N 63°00′W 43°30′N 63°00′W 43°30′N 63°30′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
		Chart 4013	44°00′N 63°30′W 44°00′N 63°00′W 43°52′N 63°00′W 43°52′N 63°30′W		

Nova Scotia Area					
Sea Areas	**Air Space**	**Location**	**Coordinates**	**Employment**	**Diagram**
		Chart 4320	44°00′N 63°30′W 44°00′N 63°00′W 43°55′N 63°00′W 43°55′N 63°30′W		
		Chart 8006	43°33′N 63°30′W 43°30′N 63°30′W 43°30′N 63°00′W 43°33′N 63°00′W		
GOLF THREE	To 30,000 feet	Charts 4001, 4003, 4012, 8006 and 8007	43°30′N 63°30′W 43°30′N 63°00′W 43°00′N 63°00′W 43°00′N 63°30′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
GOLF FOUR	To 30,000 feet	Charts 4001, 4003, 4012 and 8006	43°30′N 64°00′W 43°30′N 63°30′W 43°00′N 63°30′W 43°00′N 64°00′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
		Chart 8007	43°30′N 63°40′W 43°30′N 63°30′W 43°00′N 63°30′W 43°00′N 63°40′W		
HOTEL ONE	To 30,000 feet	Charts 4001, 4003 and 8007	44°00′N 63°00′W 44°00′N 62°30′W 43°30′N 62°30′W 43°30′N 63°00′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
		Chart 4012	44°00′N 63°00′W 44°00′N 62°40′W 43°30′N 62°40′W 43°30′N 63°00′W		
		Chart 4013	44°00′N 63°00′W 44°00′N 62°30′W 43°52′N 62°30′W 43°52′N 63°00′W		
		Chart 4320	44°00′N 63°00′W 44°00′N 62°45′W 43°55′N 62°45′W 43°55′N 63°00′W		
		Chart 8006	43°33′N 63°00′W 43°30′N 63°00′W 43°30′N 62°34′W		
HOTEL TWO	To 30,000 feet	Charts 4001, 4003 and 8007	44°00′N 62°30′W 44°00′N 62°00′W 43°30′N 62°00′W 43°30′N 62°30′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
		Chart 4013	44°00′N 62°30′W 44°00′N 62°00′W 43°52′N 62°00′W 43°52′N 62°30′W		

Nova Scotia Area					
Sea Areas	**Air Space**	**Location**	**Coordinates**	**Employment**	**Diagram**
HOTEL THREE	To 30,000 feet	Charts 4001, 4003 and 8007	43°30′N 62°30′W 43°30′N 62°00′W 43°00′N 62°00′W 43°00′N 62°30′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
HOTEL FOUR	To 30,000 feet	Charts 4001, 4003 and 8007	43°30′N 63°00′W 43°30′N 62°30′W 43°00′N 62°30′W 43°00′N 63°00′W	Sub surface operations area. Firing Exercise (FIREX)	**1**
		Chart 4012	43°30′N 63°00′W 43°30′N 62°40′W 43°00′N 62°40′W 43°00′N 63°00′W		
		Chart 8006	43°00′N 62°34′W 43°00′N 63°00′W 43°30′N 63°00′W 43°30′N 62°34′W		
INDIA		Charts 4001, 4003 and 4013	45°16′N 61°00′W 44°00′N 61°00′W 44°00′N 62°00′W 44°59′N 62°00′W	Sub surface operations area.	**1**
		Chart 8007	44°52′N 62°00′W 44°00′N 62°00′W 44°00′N 61°00′W 44°52′N 61°00′W		
JULIET		Charts 4001, 4003 and 4013	45°53′N 60°00′W 44°00′N 60°00′W 44°00′N 61°00′W 45°16′N 61°00′W	Sub surface operations area.	**1**
		Chart 8007	44°52′N 61°00′W 44°00′N 61°00′W 44°00′N 60°00′W 44°52′N 60°00′W		
LIMA ONE		Charts 4001, 4003 and 8006	43°00′N 65°00′W 43°00′N 64°00′W 42°00′N 64°00′W 42°00′N 65°00′W	Sub surface operations area.	**1**
		Chart 4012	43°00′N 65°00′W 43°00′N 64°00′W 42°40′N 64°00′W 42°40′N 65°00′W		
LIMA TWO		Charts 4001 and 4003	42°00′N 65°00′W 42°00′N 64°00′W 41°00′N 64°00′W 41°00′N 65°00′W	Sub surface operations area.	**1**
		Chart 8006	41°24′N 65°00′W 42°00′N 65°00′W 42°00′N 64°00′W 41°24′N 64°00′W		

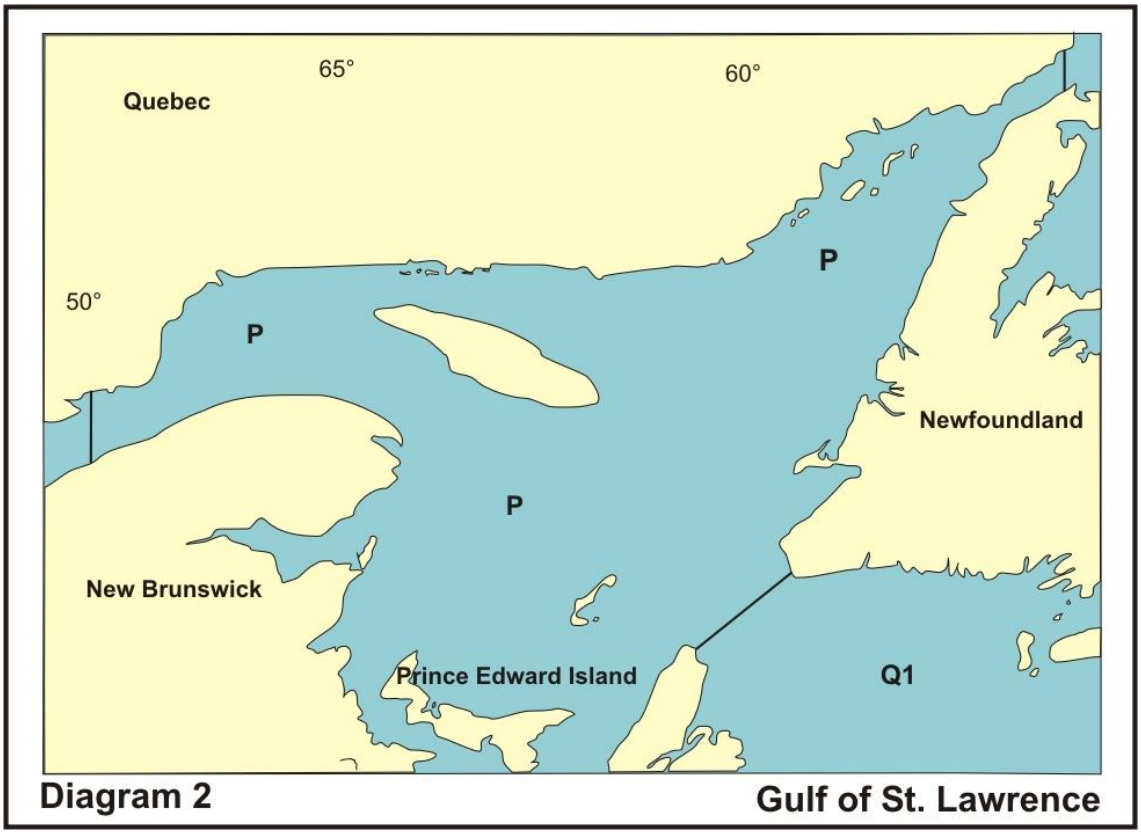
Nova Scotia Area					
Sea Areas	**Air Space**	**Location**	**Coordinates**	**Employment**	**Diagram**
LIMA THREE		Charts 4001 and 4003	41°00′N 65°00′W 41°00′N 64°00′W 40°00′N 64°00′W 40°00′N 65°00′W	Sub surface operations area.	**1**
MIKE ONE		Charts 4001, 4003 and 8006	43°00′N 64°00′W 43°00′N 63°00′W 42°00′N 63°00′W 42°00′N 64°00′W	Sub surface operations area.	**1**
		Chart 4012	43°00′N 64°00′W 43°00′N 63°00′W 42°40′N 63°00′W 42°40′N 64°00′W		
		Chart 8007	43°00′N 63°40′W 43°00′N 63°00′W 42°44′N 63°00′W		
HOTBOX TWO	To 5,000 feet	Chart 4001, 4003 and 8006	42°50’N 064°00’W 43°00’N 064°00’W 43°00’N 063°30’W 42°50’N 063°30’W	Sub surface operations area. Firing Exercise (FIREX)	**1**
MIKE TWO		Charts 4001 and 4003	42°00′N 64°00′W 42°00′N 63°00′W 41°00′N 63°00′W 41°00′N 64°00′W	Sub surface operations area.	**1**
		Chart 8006	41°24′N 64°00′W 42°00′N 64°00′W 42°00′N 63°00′W 41°24′N 63°00′W		
MIKE THREE		Charts 4001 and 4003	41°00′N 64°00′W 41°00′N 63°00′W 40°00′N 63°00′W 40°00′N 64°00′W	Sub surface operations area.	**1**
NOVEMBER ONE		Charts 4001 and 4003	43°00′N 63°00′W 43°00′N 62°00′W 42°00′N 62°00′W 42°00′N 63°00′W	Sub surface operations area.	**1**
		Chart 4012	43°00′N 63°00′W 43°00′N 62°40′W 42°40′N 62°40′W 42°40′N 63°00′W		
		Chart 8006	42°00′N 62°34′W 42°00′N 63°00′W 43°00′N 63°00′W 43°00′N 62°34′W		
		Chart 8007	42°44′N 63°00′W 43°00′N 63°00′W 43°00′N 62°00′W 42°44′N 62°00′W		

Nova Scotia Area					
Sea Areas	**Air Space**	**Location**	**Coordinates**	**Employment**	**Diagram**
NOVEMBER TWO		Charts 4001 and 4003	42°00′N 63°00′W 42°00′N 62°00′W 41°00′N 62°00′W 41°00′N 63°00′W	Sub surface operations area.	**1**
		Chart 8006	41°24′N 63°00′W 42°00′N 63°00′W 42°00′N 62°34′W		
NOVEMBER THREE		Charts 4001 and 4003	41°00′N 63°00′W 41°00′N 62°00′W 40°00′N 62°00′W 40°00′N 63°00′W	Sub surface operations area.	**1**



Gulf of St. Lawrence Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
PAPA		Chart 4001	Gulf of St Lawrence bounded by lines joining: 47°00′N 60°25′W 47°37′17.1″N 59°18′16.8″W 51°35′N 56°00′W 51°54′N 56°00′W 49°18′N 68°00′W 48°41′N 68°00′W	Sub surface operations area.	**2**
QUÉBEC ONE		Chart 4001	46°56′N 55°30′W 46°00′N 55°30′W 45°17′N 60°00′W 45°53′N 60°00′W and 47°00′N 60°25′W to 47°37′17.1″N 59°18′16.8″W	Sub surface operations area. ***Does not include the French territorial waters of Saint-Pierre et Miquelon.**	**2 & 3**
		Chart 4003	45°53′N 60°00′W 45°17′N 60°00′W 45°35′N 58°15′W		
		Chart 4013	45°53′N 60°00′W 45°17′N 60°00′W 45°27′N 59°00′W		
QUÉBEC TWO		Chart 4001	45°17′N 60°00′W 46°00′N 55°30′W 45°20′N 55°30′W 44°45′N 60°00′W	Sub surface operations area. ***Does not include the French Territorial waters of Saint-Pierre et Miquelon.**	**3**
		Chart 4003	45°17′N 60°00′W 45°35′N 58°15′W 45°02′N 58°15′W 44°45′N 60°00′W		
		Chart 4013	45°17′N 60°00′W 45°27′N 59°00′W 44°55′N 59°00′W 44°45′N 60°00′W		
		Chart 8007	44°52.0′N 60°00.0′W 44°45.0′N 60°00.0′W 44°47.5′N 59°45.0′W		
QUÉBEC THREE		Chart 4001	44°45′N 60°00′W 45°20′N 55°30′W 44°00′N 55°30′W 44°00′N 60°00′W	Sub surface operations area. ***Does not include the French territorial waters of Saint-Pierre et Miquelon.**	**3**
		Chart 4003	44°45′N 60°00′W 45°02′N 58°15′W 44°00′N 58°15′W 44°00′N 60°00′W		
		Chart 4013	44°45′N 60°00′W 44°55′N 59°00′W 44°00′N 59°00′W 44°00′N 60°00′W		

Gulf of St. Lawrence Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
		Chart 8007	44°00.0′N 59°45.0′W 44°00.0′N 60°00.0′W 44°45.0′N 60°00.0′W 44°47.5′N 59°45.0′W		
ROMEO		Chart 4201 (Halifax Harbour)	An arc from shoreline to shoreline centred on 44°42′43″N 63°38′40″W with radius of 365 metres	Underwater demolition training (Maximum explosive weight 10 Kilograms)	**4**
SIERRA ONE		Chart 4001	48°40′N 53°05′W 48°40′N 50°00′W 46°47′N 50°00′W 46°00′N 55°30′W 46°56′N 55°30′W	Sub surface operations area.	**3**
SIERRA TWO		Chart 4001	46°00′N 55°30′W 46°47′N 50°00′W 46°10′N 50°00′W 45°20′N 55°30′W	Sub surface operations area.	**3**
SIERRA THREE		Chart 4001	45°20′N 55°30′W 46°10′N 50°00′W 44°00′N 50°00′W 44°00′N 55°30′W	Sub surface operations area.	**3**



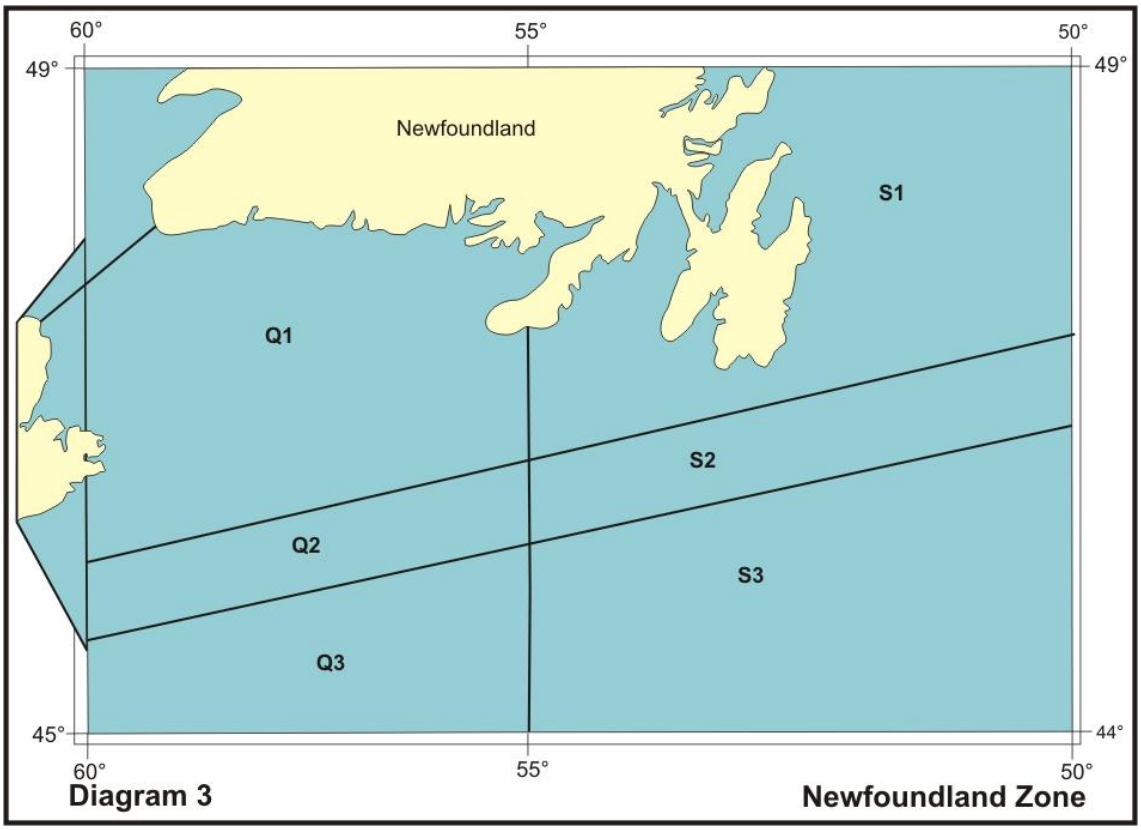


Diagram 3 Newfoundland Zone

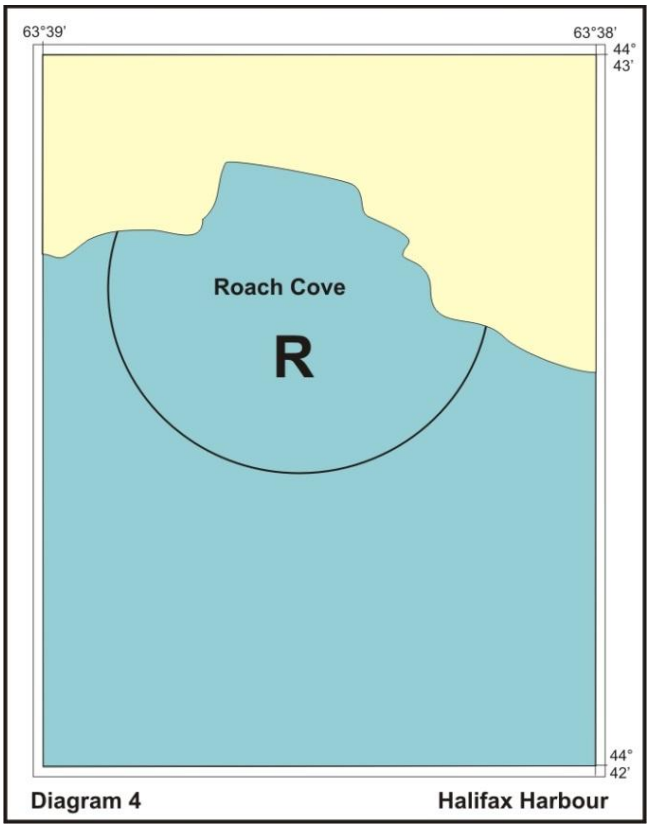


Diagram 4 Halifax Harbour

Alexandra Point (PEI) & Georgian Bay Firing Area					
Designators		Location	Coordinates	Employment	Diagram
DND	DOT				
		Alexandra Point, Prince Edward Island, Firing Area (Chart 4466)	From Alexandra Point (46°11′25"N 63°02′58″W) extending 1.9 nautical mile limited by an arc of 029°, from 184° to 213°.		**6**
	CYD501	CYD501 Ontario (Firing Area of Meaford) (Chart 2201)	44°42′48"N 80°46′11″W 44°44′40″N 80°46′22″W 44°44′40″N 80°39′32″W 44°44′25″N 80°37′17″W 44°42′50″N 80°35′45″W 44°41′11″N 80°35′35″W 44°39′45″N 80°37′41″W	1 S	**5**

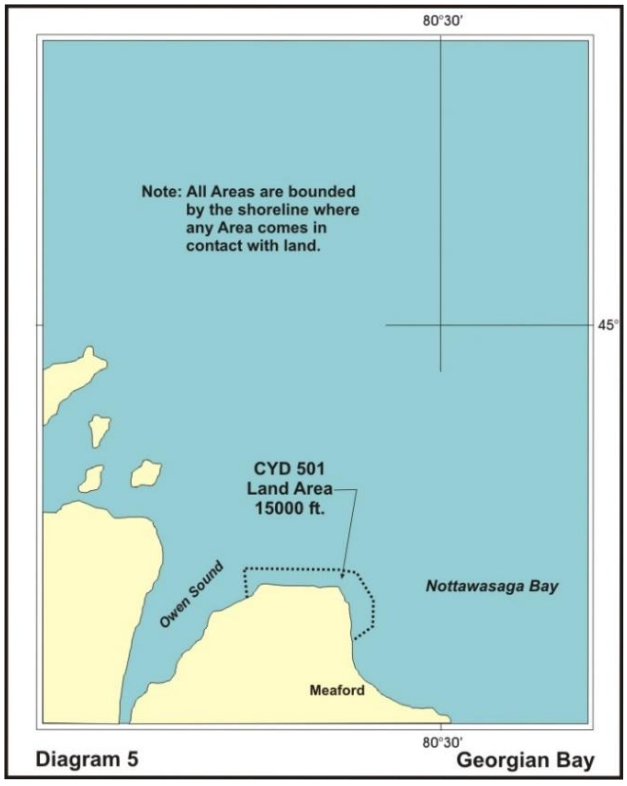


Diagram 5 Georgian Bay

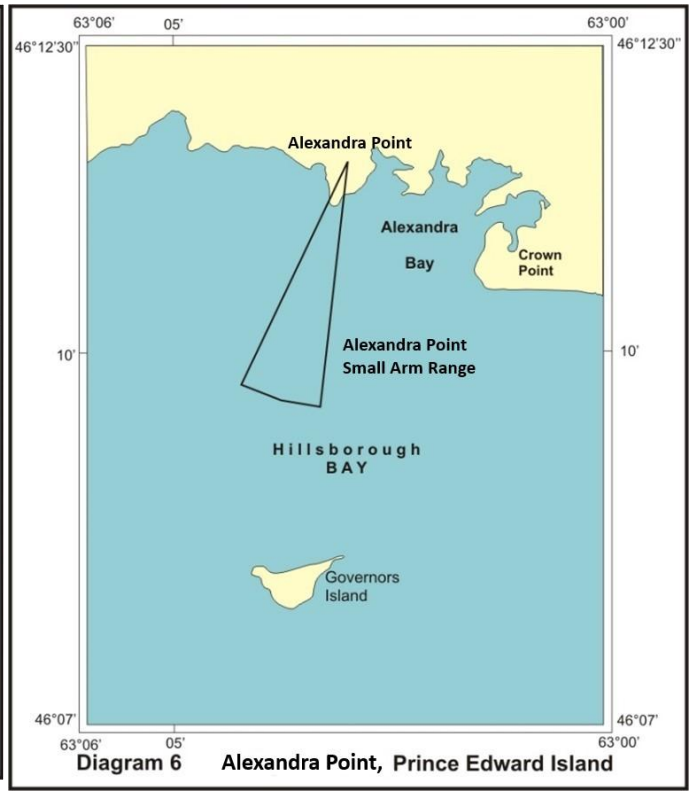
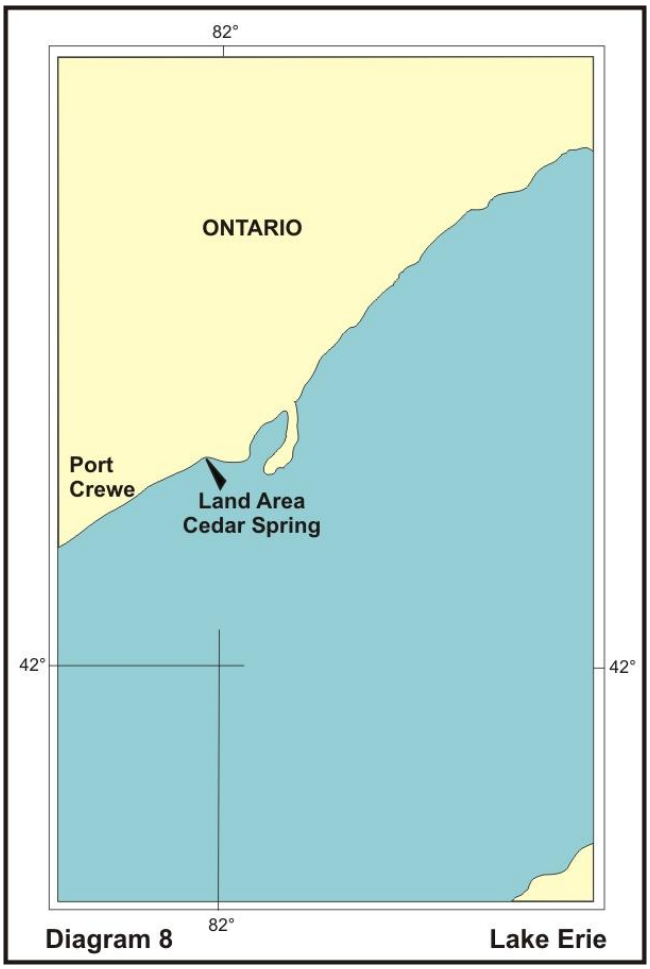
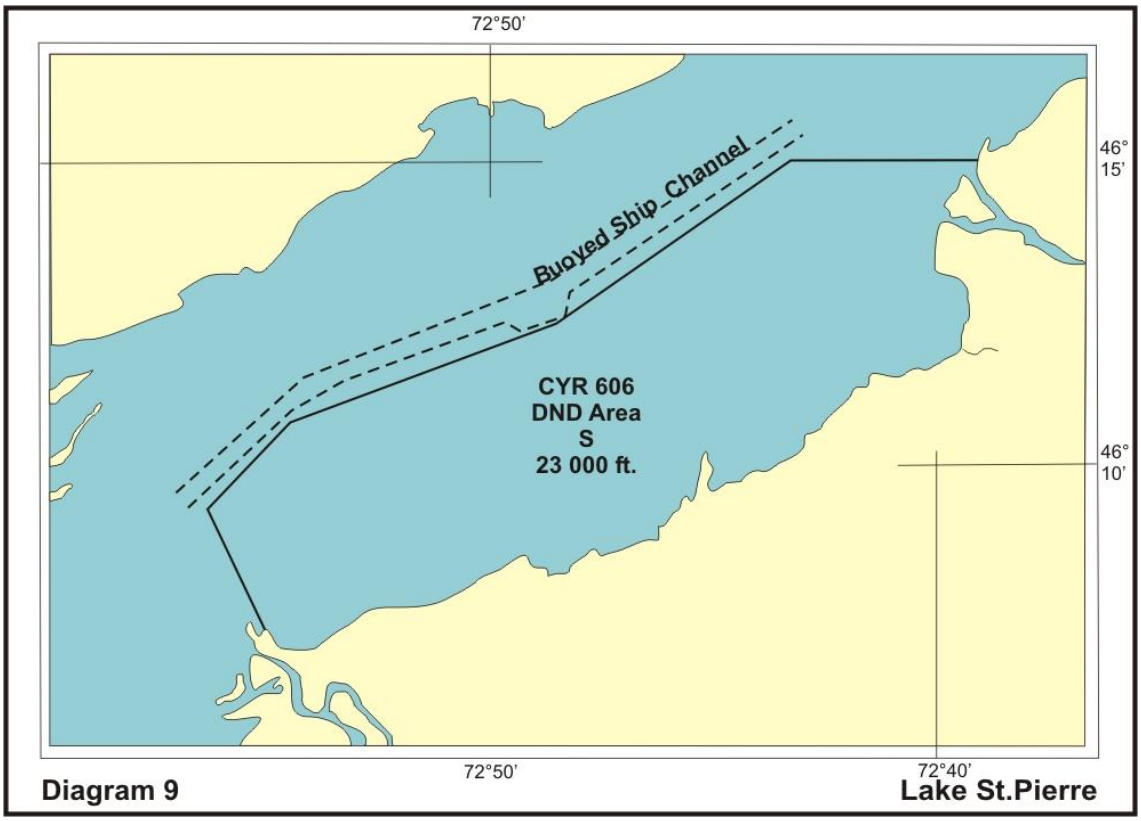


Diagram 6 Alexandra Point, Prince Edward Island

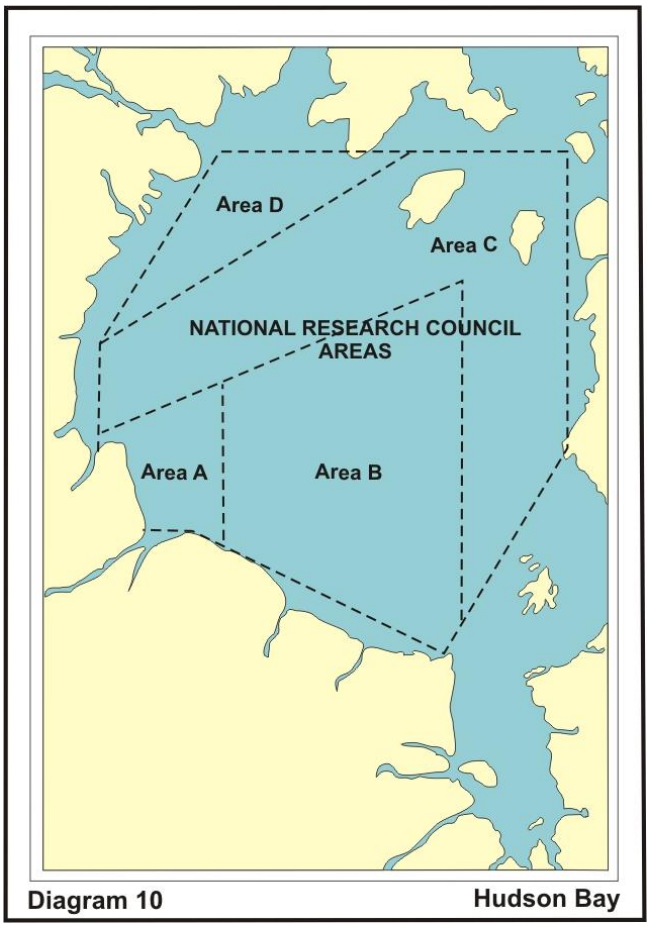
Lake Ontario & Erie Area Firing Area					
Designators		Location	Coordinates	Employment	Diagram
DND	DOT				
		Erie Lake (Cedar Springs, Ontario) (Chart 2100)	Offshore, from 42°16′00″N 82°01′00″W, limited by an arc of 020°; from 308 1/2° to 328 ½° of 4,000 yards.		**8**
		Ontario Lake, Grimsby, Firing Area (Chart 2077)	43°13′21"N 79°36′59″W 43°13′28″N 79°36′59″W 43°14′45″N 79°36′13″W 43°14′29″N 79°35′33″W 43°13′18″N 79°36′33″W 43°13′12″N 79°36′47″W		**7**
		Ontario Lake, Niagara-on-the-Lake Firing Area (Chart 2043)	43°15′31"N 79°06′13″W 43°16′22″N 79°07′43″W 43°16′46″N 79°07′13″W 43°15′45″N 79°05′55″W 43°15′35″N 79°05′53″W		**8**



DND Inspection Services - Lake St. Pierre (Québec) Area					
Designators		Location	Coordinates	Employment	Diagram
DND	DOT				
	CYR606	Lac St. Pierre, Quebec (South of Shipping Channel) (Chart 1312)	Marine portion bounded by south shore of Lake St. Pierre and lines joining: 46°15′00″N 72°39′14″W 46°15′00″N 72°43′20″W 46°12′18″N 72°48′41″W 46°10′54″N 72°54′18″W 46°09′20″N 72°56′20″W 46°07′21″N 72°55′00″W	1 In continuous use 2 S	**9**



National Research Council Areas - Hudson Bay					
Rocket Area		Location	Coordinates	Employment	Diagram
DND	DOT				
		Hudson Bay and Strait Churchill, Manitoba (Chart 5000)	AREA *A* 58°56′00″N 94°00′00″W 57°18′00″N 94°00′00″W 57°20′00″N 91°08′00″W 57°04′00″N 90°00′00″W 59°46′30″N 90°00′00″W AREA *B* 59°46′30″N 90°00′00″W 57°04′00″N 90°00′00″W 55°13′00″N 82°30′00″W 55°28′00″N 82°00′00″W 61°27′00″N 82°00′00″W AREA *C* 55°28′00″N 82°00′00″W 58°55′00″N 78°28′00″W 63°15′00″N 78°28′00″W 63°15′00″N 83°00′00″W 60°21′00″N 94°00′00″W 58°56′00″N 94°00′00″W 59°46′30″N 90°00′00″W 61°27′00″N 82°00′00″W AREA *D* 63°15′00″N 83°00′00″W 63°15′00″N 90°00′00″W 60°21′00″N 94°00′00″W	1 R 2 Dependent on the characteristics of each rocket, the trajectory will cross all altitudes up to approximately 600,000 feet during a period not exceeding 30 minutes the time of launch. It is that majority of rockets launched will impact at a point within Area A (see diagram 10). Radar and other surveillance procedures will be used over the area during the range operations. No rocket will be launched if it is known that an aircraft or ship is likely to be endangered. Information about a launch will be published through a Navigational Warning issued by Iqaluit MCTS. Further details can be obtained by Telephone: 867-979-5269 Email: NAVWARN.MCTSIqaluit@innav.gc.ca	**10**



Authority: Department of National Defence (NDHQ)

West Coast Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
CHARLIE ALPHA 1		Chart 3000	51°30′00″N 129°20′00″W 51°30′00″N 129°00′00″W 51°15′00″N 129°00′00″W 51°15′00″N 129°20′00″W	Sub surface operations area.	**11**
CHARLIE ALPHA 2		Chart 3000	51°30′00″N 129°00′00″W 51°30′00″N 128°40′00″W 51°15′00″N 128°40′00″W 51°15′00″N 129°00′00″W	Sub surface operations area.	**11**
CHARLIE ALPHA 3		Chart 3000	51°30′00″N 128°40′00″W 51°30′00″N 128°20′00″W 51°15′00″N 128°20′00″W 51°15′00″N 128°40′00″W	Sub surface operations area.	**11**
CHARLIE ALPHA 4		Chart 3000	51°30′00″N 128°20′00″W 51°30′00″N 128°00′00″W 51°15′00″N 128°00′00″W 51°15′00″N 128°20′00″W	Sub surface operations area.	**11**
CHARLIE ALPHA 5		Chart 3000	51°30′00″N 128°00′00″W 51°30′00″N 127°40′00″W 51°15′00″N 127°40′00″W 51°15′00″N 128°00′00″W	Sub surface operations area.	**11**
Areas CHARLIE ALPHA 6 to CHARLIE ALPHA 14 inclusive not allocated					
CHARLIE BRAVO 1		Chart 3000	51°15′00″N 129°20′00″W 51°15′00″N 129°00′00″W 51°00′00″N 129°00′00″W 51°00′00″N 129°20′00″W	Sub surface operations area.	**11**
CHARLIE BRAVO 2		Chart 3000	51°15′00″N 129°00′00″W 51°15′00″N 128°40′00″W 51°00′00″N 128°40′00″W 51°00′00″N 129°00′00″W	Sub surface operations area.	**11**
CHARLIE BRAVO 3		Chart 3000	51°15′00″N 128°40′00″W 51°15′00″N 128°20′00″W 51°00′00″N 128°20′00″W 51°00′00″N 128°40′00″W	Sub surface operations area.	**11**
CHARLIE BRAVO 4		Chart 3000	51°15′00″N 128°20′00″W 51°15′00″N 128°00′00″W 51°00′00″N 128°00′00″W 51°00′00″N 128°20′00″W	Sub surface operations area.	**11**
CHARLIE BRAVO 5		Chart 3000	51°15′00″N 128°00′00″W 51°15′00″N 127°40′00″W 51°00′00″N 127°40′00″W 51°00′00″N 128°00′00″W	Sub surface operations area.	**11**
Areas CHARLIE BRAVO 6 to CHARLIE BRAVO 14 inclusive not allocated					
CHARLIE CHARLIE 1		Chart 3000	51°00′00″N 129°20′00″W 51°00′00″N 129°00′00″W 50°45′00″N 129°00′00″W 50°45′00″N 129°20′00″W	Sub surface operations area.	**11**

West Coast Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
CHARLIE CHARLIE 2		Chart 3000	51°00′00″N 129°00′00″W 51°00′00″N 128°40′00″W 50°45′00″N 128°40′00″W 50°45′00″N 129°00′00″W	Sub surface operations area.	**11**
CHARLIE CHARLIE 3		Chart 3000	51°00′00″N 128°40′00″W 51°00′00″N 128°20′00″W 50°45′00″N 128°20′00″W 50°45′00″N 128°40′00″W	Sub surface operations area.	**11**
CHARLIE CHARLIE 4		Chart 3000	51°00′00″N 128°20′00″W 51°00′00″N 128°00′00″W 50°45′00″N 128°00′00″W 50°45′00″N 128°20′00″W	Sub surface operations area.	**11**
CHARLIE CHARLIE 5		Chart 3000	51°00′00″N 128°00′00″W 51°00′00″N 127°40′00″W 50°45′00″N 127°40′00″W 50°45′00″N 128°00′00″W	Sub surface operations area.	**11**
Areas CHARLIE CHARLIE 6 to CHARLIE CHARLIE 14 inclusive not allocated					
CHARLIE DELTA 1	CYR 106 to 23,000 feet	Chart 3000	50°45′00″N 129°20′00″W 50°45′00″N 129°00′00″W 50°30′00″N 129°00′00″W 50°30′00″N 129°20′00″W	Sub surface operations area.	**11 & 12**
CHARLIE DELTA 2		Chart 3000	50°45′00″N 129°00′00″W 50°45′00″N 128°40′00″W 50°30′00″N 128°40′00″W 50°30′00″N 129°00′00″W	Sub surface operations area.	**11**
CHARLIE DELTA 3		Chart 3000	50°45′00″N 128°40′00″W 50°45′00″N 128°20′00″W 50°30′00″N 128°20′00″W 50°30′00″N 128°40′00″W	Sub surface operations area.	**11**
CHARLIE DELTA 4		Chart 3000	50°45′00″N 128°20′00″W 50°45′00″N 128°00′00″W 50°30′00″N 128°00′00″W 50°30′00″N 128°20′00″W	Sub surface operations area.	**11**
CHARLIE DELTA 5		Chart 3000	50°45′00″N 128°00′00″W 50°45′00″N 127°40′00″W 50°30′00″N 127°40′00″W 50°30′00″N 128°00′00″W	Sub surface operations area.	**11**
CHARLIE DELTA 6		Chart 3000	50°45′00″N 127°40′00″W 50°45′00″N 127°20′00″W 50°30′00″N 127°20′00″W 50°30′00″N 127°40′00″W	Sub surface operations area.	**11**
Areas CHARLIE DELTA 7 to CHARLIE DELTA 14 inclusive not allocated					
CHARLIE ECHO 1	CYR 106 to 23,000 feet	Chart 3000	50°30′00″N 129°20′00″W 50°30′00″N 129°00′00″W 50°15′00″N 129°00′00″W 50°15′00″N 129°20′00″W	Sub surface operations area.	**11 & 12**

West Coast Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
CHARLIE ECHO 2	CYR 106 to 23,000 feet	Chart 3000	50°30′00″N 129°00′00″W 50°30′00″N 128°40′00″W 50°15′00″N 128°40′00″W 50°15′00″N 129°00′00″W	Sub surface operations area.	**11 & 12**
CHARLIE ECHO 3		Chart 3000	50°30′00″N 128°40′00″W 50°30′00″N 128°20′00″W 50°15′00″N 128°20′00″W 50°15′00″N 128°40′00″W	Sub surface operations area.	**11**
CHARLIE ECHO 4		Chart 3000	50°30′00″N 128°20′00″W 50°30′00″N 128°00′00″W 50°15′00″N 128°00′00″W 50°15′00″N 128°20′00″W	Sub surface operations area.	**11**
CHARLIE ECHO 5		Chart 3000	50°30′00″N 128°00′00″W 50°30′00″N 127°40′00″W 50°15′00″N 127°40′00″W 50°15′00″N 128°00′00″W	Sub surface operations area.	**11**
CHARLIE ECHO 6		Chart 3000	50°30′00″N 127°40′00″W 50°30′00″N 127°20′00″W 50°15′00″N 127°20′00″W 50°15′00″N 127°40′00″W	Sub surface operations area.	**11**
Areas CHARLIE ECHO 7 to CHARLIE ECHO 14 inclusive not allocated					
CHARLIE FOXTROT 1	CYR 106 to 23,000 feet	Chart 3000	50°15′00″N 129°20′00″W 50°15′00″N 129°00′00″W 50°00′00″N 129°00′00″W 50°00′00″N 129°20′00″W	Sub surface operations area.	**11**
CHARLIE FOXTROT 2	CYR 106 to 23,000 feet	Chart 3000	50°15′00″N 129°00′00″W 50°15′00″N 128°40′00″W 50°00′00″N 128°40′00″W 50°00′00″N 129°00′00″W	Sub surface operations area.	**11**
CHARLIE FOXTROT 3	CYR 106 to 23,000 feet	Chart 3000	50°15′00″N 128°40′00″W 50°15′00″N 128°20′00″W 50°00′00″N 128°20′00″W 50°00′00″N 128°40′00″W	Sub surface operations area.	**11 & 12**
CHARLIE FOXTROT 4	CYR 106 to 23,000 feet	Chart 3000	50°15′00″N 128°20′00″W 50°15′00″N 128°00′00″W 50°00′00″N 128°00′00″W 50°00′00″N 128°20′00″W	Sub surface operations area.	**11**
CHARLIE FOXTROT 5		Chart 3000	50°15′00″N 128°00′00″W 50°15′00″N 127°40′00″W 50°00′00″N 127°40′00″W 50°00′00″N 128°00′00″W	Sub surface operations area.	**11**
CHARLIE FOXTROT 6		Chart 3000	50°15′00″N 127°40′00″W 50°15′00″N 127°20′00″W 50°00′00″N 127°20′00″W 50°00′00″N 127°40′00″W	Sub surface operations area.	**11**

West Coast Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
CHARLIE FOXTROT 7		Chart 3000	50°15′00″N 127°20′00″W 50°15′00″N 127°00′00″W 50°00′00″N 127°00′00″W 50°00′00″N 127°20′00″W	Sub surface operations area.	**11**
Areas CHARLIE FOXTROT 8 to CHARLIE FOXTROT 14 inclusive not allocated					
CHARLIE GOLF 1	CYR 106 to 23,000 feet	Chart 3000	50°00′00″N 129°20′00″W 50°00′00″N 129°00′00″W 49°45′00″N 129°00′00″W 49°45′00″N 129°20′00″W	Sub surface operations area.	**11 & 12**
CHARLIE GOLF 2	CYR 106 to 23,000 feet	Chart 3000	50°00′00″N 129°00′00″W 50°00′00″N 128°40′00″W 49°45′00″N 128°40′00″W 49°45′00″N 129°00′00″W	Sub surface operations area. Firing Exercise Area.	**11 & 12**
CHARLIE GOLF 3	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	50°00′00″N 128°40′00″W 50°00′00″N 128°20′00″W 49°45′00″N 128°20′00″W 49°45′00″N 128°40′00″W	Sub surface operations area. Firing Exercise Area.	**11 & 12**
CHARLIE GOLF 4	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	50°00′00″N 128°20′00″W 50°00′00″N 128°00′00″W 49°45′00″N 128°00′00″W 49°45′00″N 128°20′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE GOLF 5	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	50°00′00″N 128°00′00″W 50°00′00″N 127°40′00″W 49°45′00″N 127°40′00″W 49°45′00″N 128°00′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE GOLF 6	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	50°00′00″N 127°40′00″W 50°00′00″N 127°20′00″W 49°45′00″N 127°20′00″W 49°45′00″N 127°40′00″W	Sub surface operations area.	**11**
CHARLIE GOLF 7		Chart 3000	50°00′00″N 127°20′00″W 50°00′00″N 127°00′00″W 49°45′00″N 127°00′00″W 49°45′00″N 127°20′00″W	Sub surface operations area.	**11**
CHARLIE GOLF 8		Chart 3000	50°00′00″N 127°00′00″W 50°00′00″N 126°40′00″W 49°45′00″N 126°40′00″W 49°45′00″N 127°00′00″W	Sub surface operations area.	**11**
♣ = Only that portion of the area that is within Area WP (Defined at Diagram 11)					

West Coast Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
CHARLIE GOLF 9		Chart 3000	50°00′00″N 126°40′00″W 50°00′00″N 126°20′00″W 49°45′00″N 126°20′00″W 49°45′00″N 126°40′00″W	Sub surface operations area.	**11**
Areas CHARLIE GOLF 10 to CHARLIE GOLF 14 inclusive not allocated					
CHARLIE HOTEL 1	CYR 106 to 23,000 feet	Chart 3000	49°45′00″N 129°20′00″W 49°45′00″N 129°00′00″W 49°30′00″N 129°00′00″W 49°30′00″N 129°20′00″W	Sub surface operations area.	**11**
CHARLIE HOTEL 2	CYR 106 to 23,000 feet	Chart 3000	49°45′00″N 129°00′00″W 49°45′00″N 128°40′00″W 49°30′00″N 128°40′00″W 49°30′00″N 129°00′00″W	Sub surface operations area. Firing Exercise Area.	**11 & 12**
CHARLIE HOTEL 3	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°45′00″N 128°40′00″W 49°45′00″N 128°20′00″W 49°30′00″N 128°20′00″W 49°30′00″N 128°40′00″W	Sub surface operations area. Firing Exercise Area.	**11 & 12**
CHARLIE HOTEL 4	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°45′00″N 128°20′00″W 49°45′00″N 128°00′00″W 49°30′00″N 128°00′00″W 49°30′00″N 128°20′00″W	Sub surface operations area. Firing Exercise Area.	**11 & 12**
CHARLIE HOTEL 5	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°45′00″N 128°00′00″W 49°45′00″N 127°40′00″W 49°30′00″N 127°40′00″W 49°30′00″N 128°00′00″W	Sub surface operations area. Firing Exercise Area.	**11 & 12**
CHARLIE HOTEL 6	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°45′00″N 127°40′00″W 49°45′00″N 127°20′00″W 49°30′00″N 127°20′00″W 49°30′00″N 127°40′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE HOTEL 7	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°45′00″N 127°20′00″W 49°45′00″N 127°00′00″W 49°30′00″N 127°00′00″W 49°30′00″N 127°20′00″W	Sub surface operations area. ♣ Firing Exercise Area	**11 & 12**
CHARLIE HOTEL 8	CYR 106 to 23,000 feet	Chart 3000	49°45′00″N 127°00′00″W 49°45′00″N 126°40′00″W 49°30′00″N 126°40′00″W 49°30′00″N 127°00′00″W	Sub surface operations area.	**11**
♣ = Only that portion of the area that is within Area WP (Defined at Diagram 11)					

West Coast Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
CHARLIE HOTEL 9		Chart 3000	49°45′00″N 126°40′00″W 49°45′00″N 126°20′00″W 49°30′00″N 126°20′00″W 49°30′00″N 126°40′00″W	Sub surface operations area.	**11**
CHARLIE HOTEL 10		Chart 3000	49°45′00″N 126°20′00″W 49°45′00″N 126°00′00″W 49°30′00″N 126°00′00″W 49°30′00″N 126°20′00″W	Sub surface operations area.	**11**
Areas CHARLIE HOTEL 11 to CHARLIE HOTEL 14 inclusive not allocated					
CHARLIE INDIA 1	CYR 106 to 23,000 feet	Chart 3000	49°30′00″N 129°20′00″W 49°30′00″N 129°00′00″W 49°15′00″N 129°00′00″W 49°15′00″N 129°20′00″W	Sub surface operations area.	**11**
CHARLIE INDIA 2	CYR 106 to 23,000 feet	Chart 3000	49°30′00″N 129°00′00″W 49°30′00″N 128°40′00″W 49°15′00″N 128°40′00″W 49°15′00″N 129°00′00″W	Sub surface operations area. Firing Exercise Area.	**11 &12**
CHARLIE INDIA 3	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°30′00″N 128°40′00″W 49°30′00″N 128°20′00″W 49°15′00″N 128°20′00″W 49°15′00″N 128°40′00″W	Sub surface operations area. ♦ Firing Exercise Area.	**11 & 12**
CHARLIE INDIA 4	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°30′00″N 128°20′00″W 49°30′00″N 128°00′00″W 49°15′00″N 128°00′00″W 49°15′00″N 128°20′00″W	Sub surface operations area. Firing Exercise Area.	**11 & 12**
CHARLIE INDIA 5	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°30′00″N 128°00′00″W 49°30′00″N 127°40′00″W 49°15′00″N 127°40′00″W 49°15′00″N 128°00′00″W	Sub surface operations area. Firing Exercise Area.	**11 & 12**
CHARLIE INDIA 6	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°30′00″N 127°40′00″W 49°30′00″N 127°20′00″W 49°15′00″N 127°20′00″W 49°15′00″N 127°40′00″W	Sub surface operations area. **Primary Firing Exercise Area**.	**11 & 12**
CHARLIE INDIA 7	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°30′00″N 127°20′00″W 49°30′00″N 127°00′00″W 49°15′00″N 127°00′00″W 49°15′00″N 127°20′00″W	Sub surface operations area. ♣ **Primary Firing Exercise Area**.	**11 & 12**
♣ = Only that portion of the area that is within Area WP (Defined at Diagram 11)					

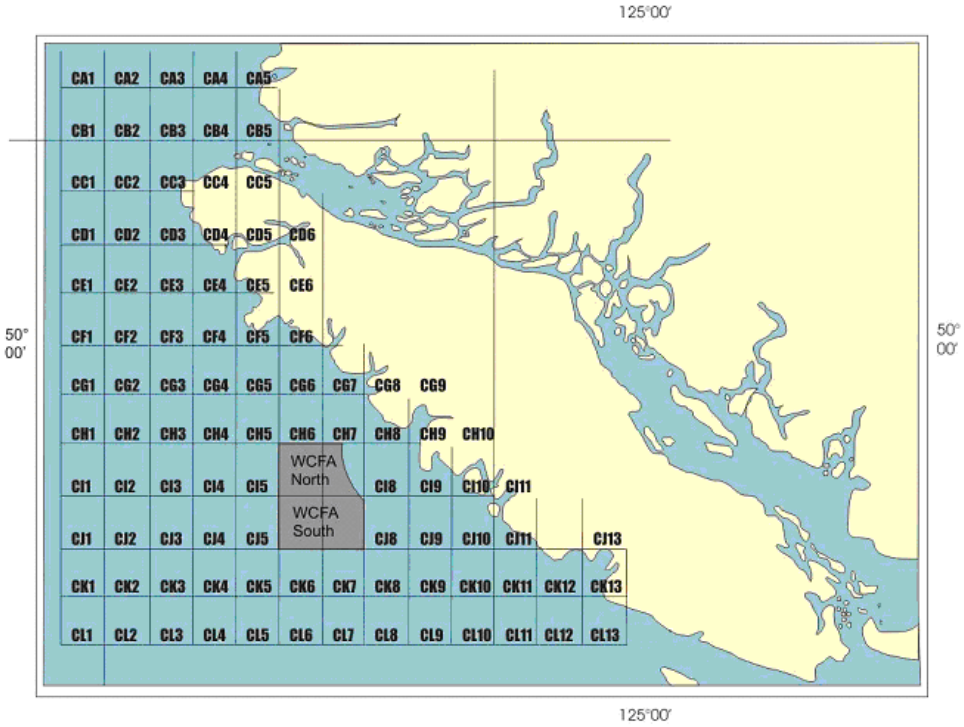
West Coast Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
CHARLIE INDIA 8	CYR 106 to 23,000 feet	Chart 3000	49°30′00″N 127°00′00″W 49°30′00″N 126°40′00″W 49°15′00″N 126°40′00″W 49°15′00″N 127°00′00″W	Sub surface operations area.	**11**
CHARLIE INDIA 9	CYR 106 to 23,000 feet	Chart 3000	49°30′00″N 126°40′00″W 49°30′00″N 126°20′00″W 49°15′00″N 126°20′00″W 49°15′00″N 126°40′00″W	Sub surface operations area.	**11**
CHARLIE INDIA 10		Chart 3000	49°30′00″N 126°20′00″W 49°30′00″N 126°00′00″W 49°15′00″N 126°00′00″W 49°15′00″N 126°20′00″W	Sub surface operations area.	**11**
CHARLIE INDIA 11		Chart 3000	49°30′00″N 126°00′00″W 49°30′00″N 125°40′00″W 49°15′00″N 125°40′00″W 49°15′00″N 126°00′00″W	Sub surface operations area.	**11**
Areas CHARLIE INDIA 12 to CHARLIE INDIA 14 inclusive not allocated					
CHARLIE JULIET 1	CYR 106 to 23,000 feet	Chart 3000	49°15′00″N 129°20′00″W 49°15′00″N 129°00′00″W 49°00′00″N 129°00′00″W 49°00′00″N 129°20′00″W	Sub surface operations area.	**11**
CHARLIE JULIET 2	CYR 106 to 23,000 feet	Chart 3000	49°15′00″N 129°00′00″W 49°15′00″N 128°40′00″W 49°00′00″N 128°40′00″W 49°00′00″N 129°00′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE JULIET 3	CYR 106 to 23,000 feet	Chart 3000	49°15′00″N 128°40′00″W 49°15′00″N 128°20′00″W 49°00′00″N 128°20′00″W 49°00′00″N 128°40′00″W	Sub surface operations area. Firing Exercise Area.	**11 & 12**
CHARLIE JULIET 4	CYR 106 to 23,000 feet	Chart 3000	49°15′00″N 128°20′00″W 49°15′00″N 128°00′00″W 49°00′00″N 128°00′00″W 49°00′00″N 128°20′00″W	Sub surface operations area. Firing Exercise Area.	**11 & 12**
CHARLIE JULIET 5	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°15′00″N 128°00′00″W 49°15′00″N 127°40′00″W 49°00′00″N 127°40′00″W 49°00′00″N 128°00′00″W	Sub surface operations area. Firing Exercise Area.	**11 & 12**
CHARLIE JULIET 6	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°15′00″N 127°40′00″W 49°15′00″N 127°20′00″W 49°00′00″N 127°20′00″W 49°00′00″N 127°40′00″W	Sub surface operations area. Primary Firing Exercise Area Surface.	**11 & 12**
♣ = Only that portion of the area that is within Area WP (Defined at Diagram 11)					

West Coast Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
CHARLIE JULIET 7	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°15′00″N 127°20′00″W 49°15′00″N 127°00′00″W 49°00′00″N 127°00′00″W 49°00′00″N 127°20′00″W	Sub surface operations area. ♣ Primary Firing Exercise Area Surface.	**11 & 12**
CHARLIE JULIET 8	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°15′00″N 127°00′00″W 49°15′00″N 126°40′00″W 49°00′00″N 126°40′00″W 49°00′00″N 127°00′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE JULIET 9	CYR 106 to 23,000 feet CYR 101 23,000 to 60,000 feet	Chart 3000	49°15′00″N 126°40′00″W 49°15′00″N 126°20′00″W 49°00′00″N 126°20′00″W 49°00′00″N 126°40′00″W	Sub surface operations area.	**11**
CHARLIE JULIET 10		Chart 3000	49°15′00″N 126°20′00″W 49°15′00″N 126°00′00″W 49°00′00″N 126°00′00″W 49°00′00″N 126°20′00″W	Sub surface operations area.	**11**
CHARLIE JULIET 11		Chart 3000	49°15′00″N 126°00′00″W 49°15′00″N 125°40′00″W 49°00′00″N 125°40′00″W 49°00′00″N 126°00′00″W	Sub surface operations area.	**11**
CHARLIE JULIET 12		Chart 3000	49°15′00″N 125°40′00″W 49°15′00″N 125°20′00″W 49°00′00″N 125°20′00″W 49°00′00″N 125°40′00″W	Sub surface operations area.	**11**
CHARLIE JULIET 13		Chart 3000	49°15′00″N 125°20′00″W 49°15′00″N 125°00′00″W 49°00′00″N 125°00′00″W 49°00′00″N 125°20′00″W	Sub surface operations area.	**11**
Area CHARLIE JULIET 14 not allocated					
CHARLIE KILO 1	CYR 106 to 23,000 feet	Chart 3000	49°00′00″N 129°20′00″W 49°00′00″N 129°00′00″W 48°45′00″N 129°00′00″W 48°45′00″N 129°20′00″W	Sub surface operations area.	**11**
CHARLIE KILO 2	CYR 106 to 23,000 feet	Chart 3000	49°00′00″N 129°00′00″W 49°00′00″N 128°40′00″W 48°45′00″N 128°40′00″W 48°45′00″N 129°00′00″W	Sub surface operations area.	**11**
♣ = Only that portion of the area that is within Area WP (Defined at Diagram 11)					

West Coast Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
CHARLIE KILO 3	CYR 106 to 23,000 feet	Chart 3000	49°00′00″N 128°40′00″W 49°00′00″N 128°20′00″W 48°45′00″N 128°20′00″W 48°45′00″N 128°40′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE KILO 4	CYR 106 to 23,000 feet	Chart 3000	49°00′00″N 128°20′00″W 49°00′00″N 128°00′00″W 48°45′00″N 128°00′00″W 48°45′00″N 128°20′00″W	Sub surface operations area. ♣ Firing Exercise Area	**11 & 12**
CHARLIE KILO 5	CYR 106 to 23,000 feet	Chart 3000	49°00′00″N 128°00′00″W 49°00′00″N 127°40′00″W 48°45′00″N 127°40′00″W 48°45′00″N 128°00′00″W	Sub surface operations area. Firing Exercise Area	**11 & 12**
CHARLIE KILO 6	CYR 106 to 23,000 feet	Chart 3000	49°00′00″N 127°40′00″W 49°00′00″N 127°20′00″W 48°45′00″N 127°20′00″W 48°45′00″N 127°40′00″W	Sub surface operations area. Firing Exercise Area	**11 & 12**
CHARLIE KILO 7	CYR 106 to 23,000 feet	Chart 3000	49°00′00″N 127°20′00″W 49°00′00″N 127°00′00″W 48°45′00″N 127°00′00″W 48°45′00″N 127°20′00″W	Sub surface operations area. Firing Exercise Area.	**11 & 12**
CHARLIE KILO 8	CYR 106 to 23,000 feet	Chart 3000	49°00′00″N 127°00′00″W 49°00′00″N 126°40′00″W 48°45′00″N 126°40′00″W 48°45′00″N 127°00′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE KILO 9	CYR 106 to 23,000 feet	Chart 3000	49°00′00″N 126°40′00″W 49°00′00″N 126°20′00″W 48°45′00″N 126°20′00″W 48°45′00″N 126°40′00″W	Sub surface operations area.	**11**
CHARLIE KILO 10		Chart 3000	49°00′00″N 126°20′00″W 49°00′00″N 126°00′00″W 48°45′00″N 126°00′00″W 48°45′00″N 126°20′00″W	Sub surface operations area.	**11**
CHARLIE KILO 11		Chart 3000	49°00′00″N 126°00′00″W 49°00′00″N 125°40′00″W 48°45′00″N 125°40′00″W 48°45′00″N 126°00′00″W	Sub surface operations area.	**11**
CHARLIE KILO 12		Chart 3000	49°00′00″N 125°40′00″W 49°00′00″N 125°20′00″W 48°45′00″N 125°20′00″W 48°45′00″N 125°40′00″W	Sub surface operations area.	**11**
CHARLIE KILO 13		Chart 3000	49°00′00″N 125°20′00″W 49°00′00″N 125°00′00″W 48°45′00″N 125°00′00″W 48°45′00″N 125°20′00″W	Sub surface operations area.	**11**
Area CHARLIE KILO 14 not allocated					
♣ = Only that portion of the area that is within Area WP (Defined at Diagram 11)					

West Coast Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
CHARLIE LIMA 1		Chart 3000	48°45′00″N 129°20′00″W 48°45′00″N 129°00′00″W 48°30′00″N 129°00′00″W 48°30′00″N 129°20′00″W	Sub surface operations area.	**11**
CHARLIE LIMA 2	CYR 106 to 23,000 feet	Chart 3000	48°45′00″N 129°00′00″W 48°45′00″N 128°40′00″W 48°30′00″N 128°40′00″W 48°30′00″N 129°00′00″W	Sub surface operations area.	**11**
CHARLIE LIMA 3	CYR 106 to 23,000 feet	Chart 3000	48°45′00″N 128°40′00″W 48°45′00″N 128°20′00″W 48°30′00″N 128°20′00″W 48°30′00″N 128°40′00″W	Sub surface operations area.	**11**
CHARLIE LIMA 4	CYR 106 to 23,000 feet	Chart 3000	48°45′00″N 128°20′00″W 48°45′00″N 128°00′00″W 48°30′00″N 128°00′00″W 48°30′00″N 128°20′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE LIMA 5	CYR 106 to 23,000 feet	Chart 3000	48°45′00″N 128°00′00″W 48°45′00″N 127°40′00″W 48°30′00″N 127°40′00″W 48°30′00″N 128°00′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE LIMA 6	CYR 106 to 23,000 feet	Chart 3000	48°45′00″N 127°40′00″W 48°45′00″N 127°20′00″W 48°30′00″N 127°20′00″W 48°30′00″N 127°40′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE LIMA 7	CYR 106 to 23,000 feet	Chart 3000	48°45′00″N 127°20′00″W 48°45′00″N 127°00′00″W 48°30′00″N 127°00′00″W 48°30′00″N 127°20′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE LIMA 8	CYR 106 to 23,000 feet	Chart 3000	48°45′00″N 127°00′00″W 48°45′00″N 126°40′00″W 48°30′00″N 126°40′00″W 48°30′00″N 127°00′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE LIMA 9	CYR 106 to 23,000 feet	Chart 3000	48°45′00″N 126°40′00″W 48°45′00″N 126°20′00″W 48°30′00″N 126°20′00″W 48°30′00″N 126°40′00″W	Sub surface operations area. ♣ Firing Exercise Area.	**11 & 12**
CHARLIE LIMA 10		Chart 3000	48°45′00″N 126°20′00″W 48°45′00″N 126°00′00″W 48°30′00″N 126°00′00″W 48°30′00″N 126°20′00″W	Sub surface operations area.	**11**
CHARLIE LIMA 11		Chart 3000	48°45′00″N 126°00′00″W 48°45′00″N 125°40′00″W 48°30′00″N 125°40′00″W 48°30′00″N 126°00′00″W	Sub surface operations area.	**11**
♣ = Only that portion of the area that is within Area WP (Defined at Diagram 11)					

West Coast Area					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
CHARLIE LIMA 12		Chart 3000	48°45′00″N 125°40′00″W 48°45′00″N 125°20′00″W 48°30′00″N 125°20′00″W 48°30′00″N 125°40′00″W	Sub surface operations area.	**11**
CHARLIE LIMA 13		Chart 3000	48°45′00″N 125°20′00″W 48°45′00″N 125°00′00″W 48°30′00″N 125°00′00″W 48°30′00″N 125°20′00″W	Sub surface operations area.	**11**
Note: All Vancouver Island (VI) Areas are bounded by the shoreline where any area comes in contact with land.					



West Coast Firing Area NORTH
49° 30′ 00″N - 127° 40′ 00″W
49° 15′ 00″N - 127° 40′ 00″W
49° 15′ 00″N - 127° 02′ 30″W
49° 24′ 36″N - 127° 10′ 12″W

(WCFA NORTH)
49° 27′ 42″N - 127° 11′ 00″W
49° 30′ 00″N - 127° 14′ 00″W

West Coast Firing Area SOUTH
49° 15′ 00″N - 127° 40′ 00″W
49° 00′ 00″N - 127° 40′ 00″W
49° 00′ 00″N - 127° 00′ 00″W
49° 12′ 18″N - 127° 00′ 00″W

(WCFA SOUTH)
49° 15′ 00″N - 127° 02′ 30″W

Area WP
50° 00′ 00″N - 129° 00′ 00″W
49° 10′ 00″N - 129° 00′ 00″W
48° 39′ 00″N - 128° 00′ 00″W
48° 39′ 00″N - 126° 35′ 00″W
49° 24′ 36″N - 127° 10′ 12″W
49° 27′ 42″N - 127° 11′ 00″W
49° 30′ 00″N - 127° 14′ 00″W
50° 00′ 00″N - 128° 10′ 00″W

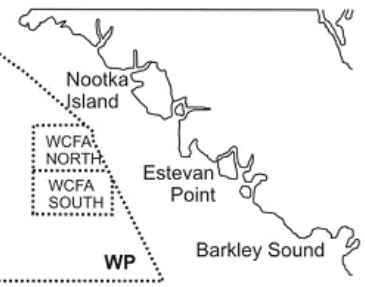


Diagram 11 **West Coast Firing Areas (WCFA)**

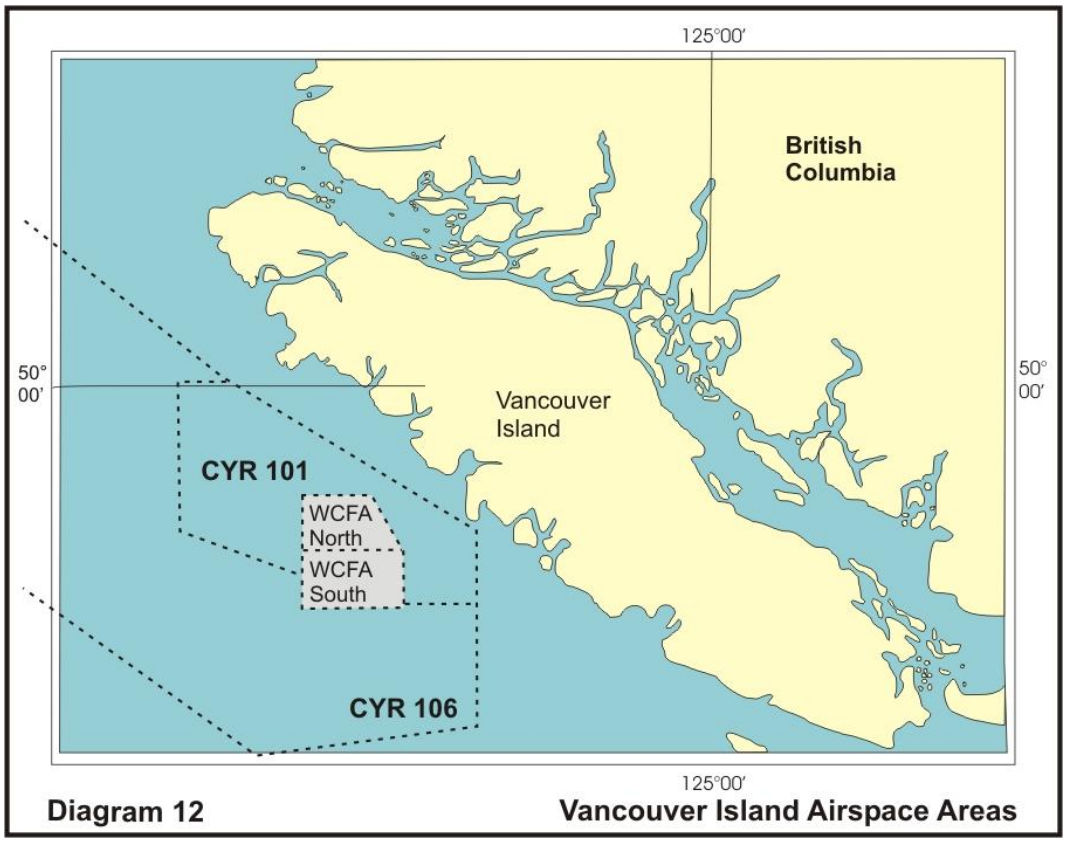


Diagram 12 **Vancouver Island Airspace Areas**

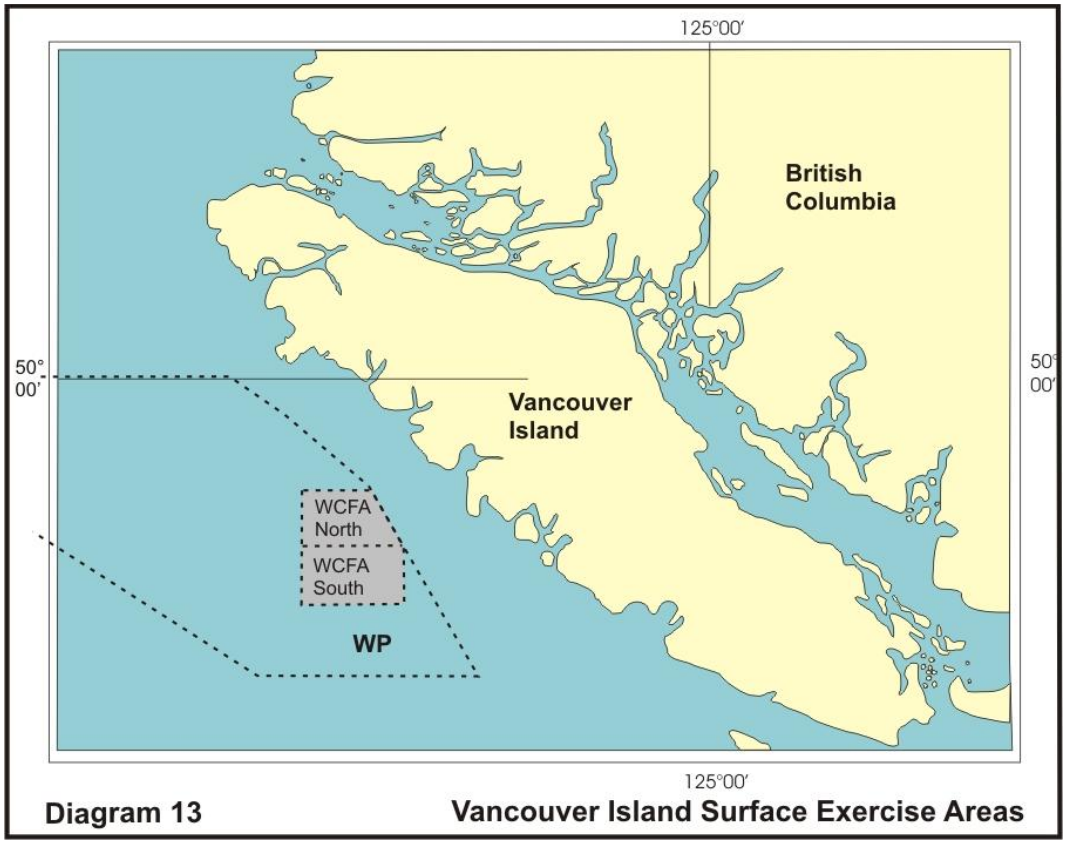
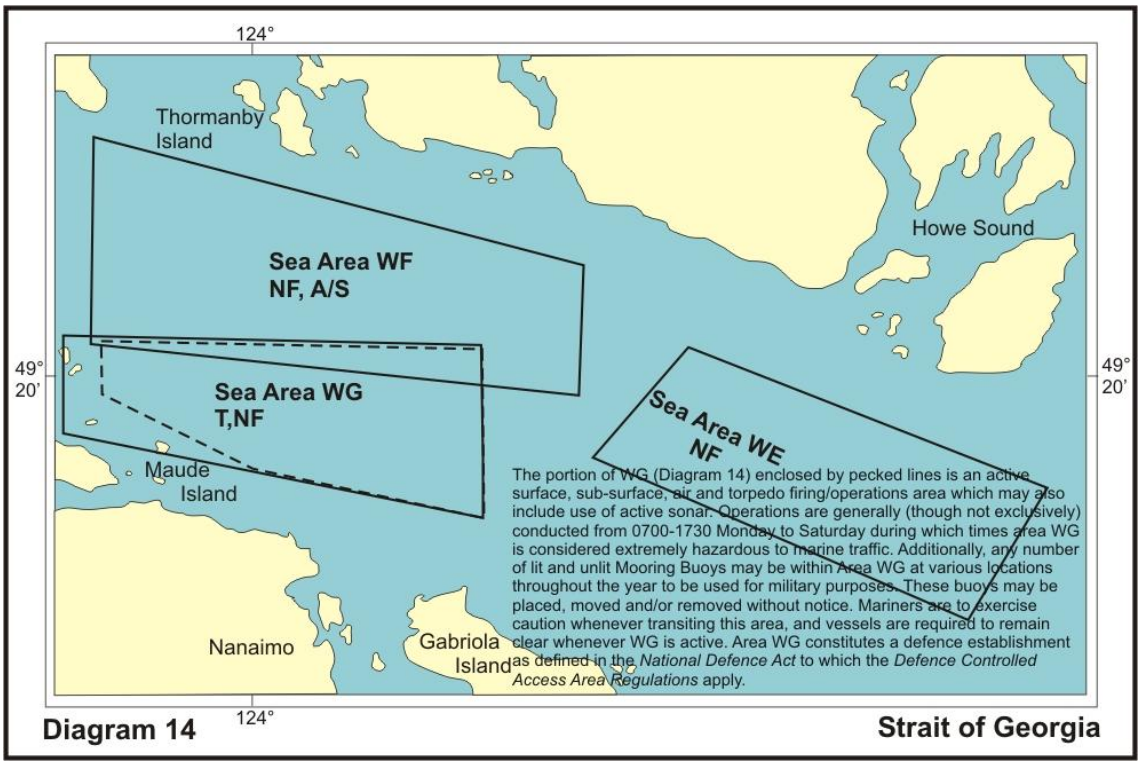
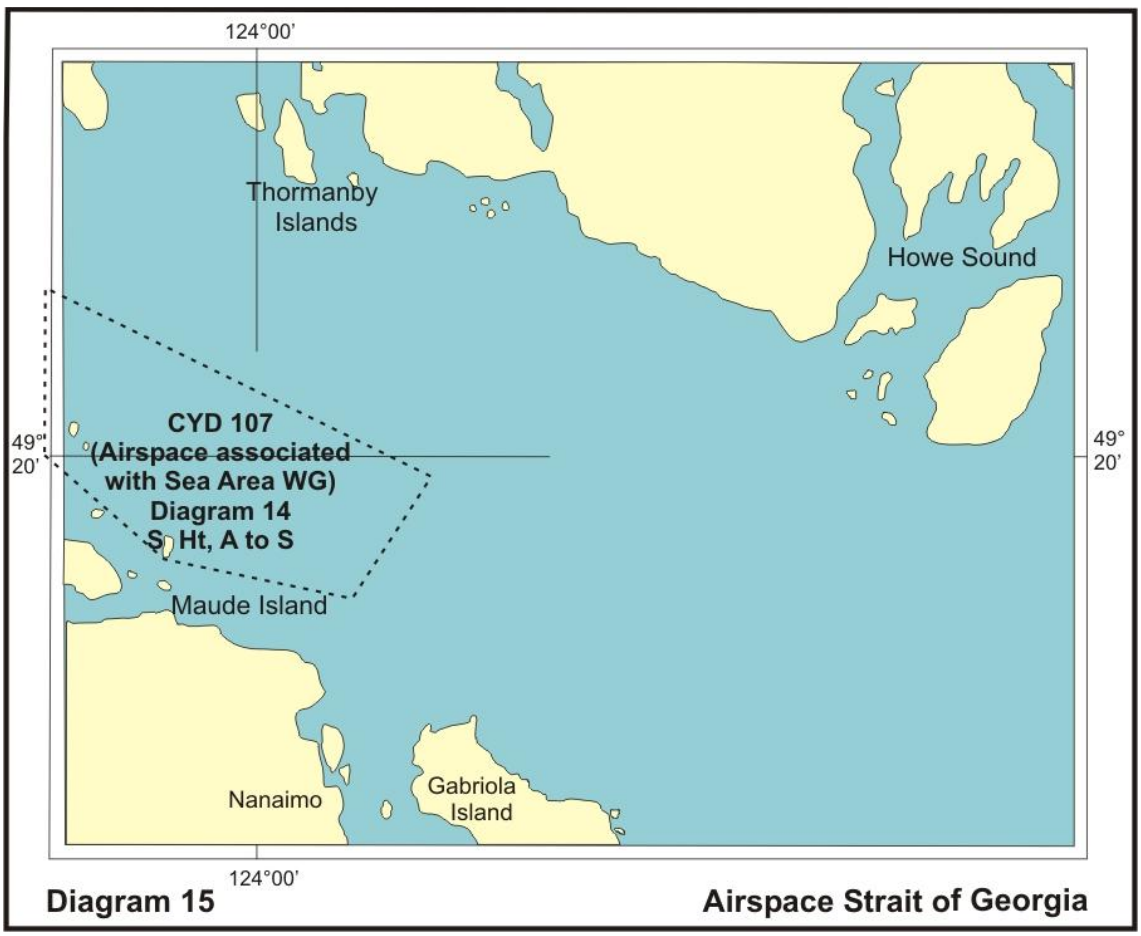
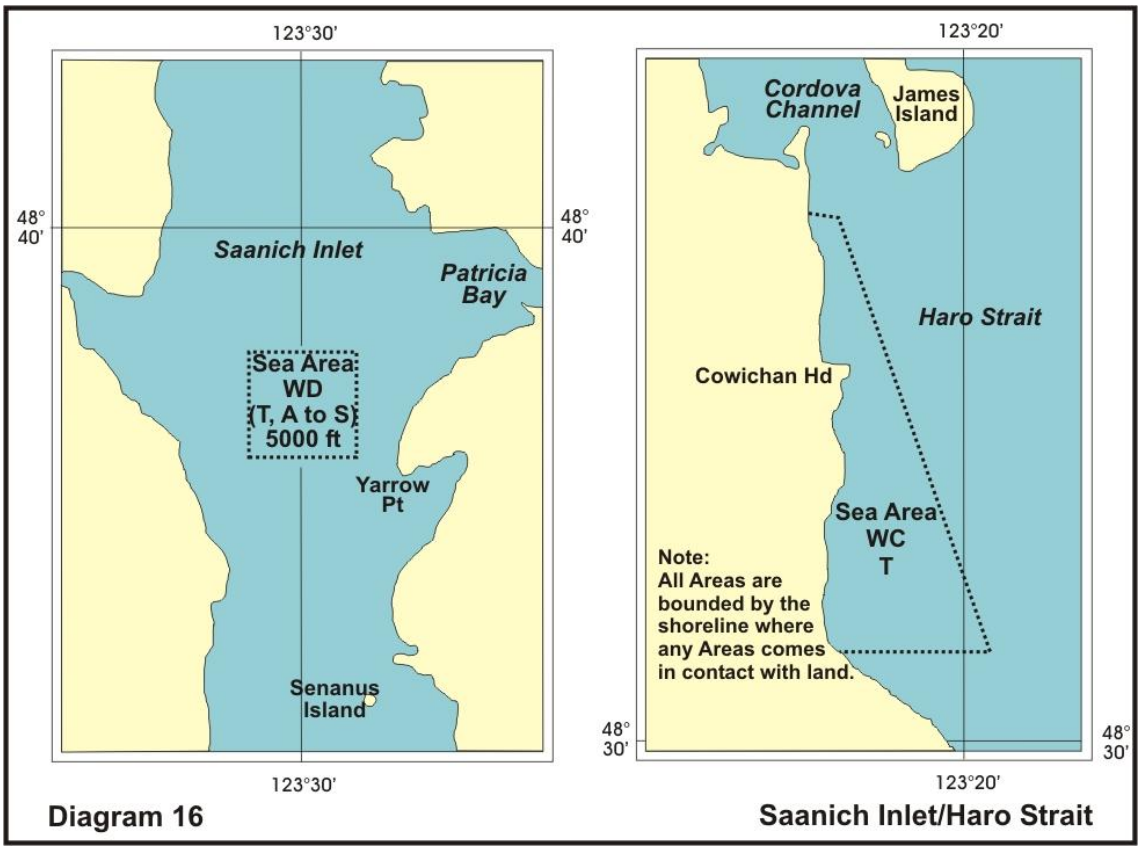


Diagram 13 **Vancouver Island Surface Exercise Areas**

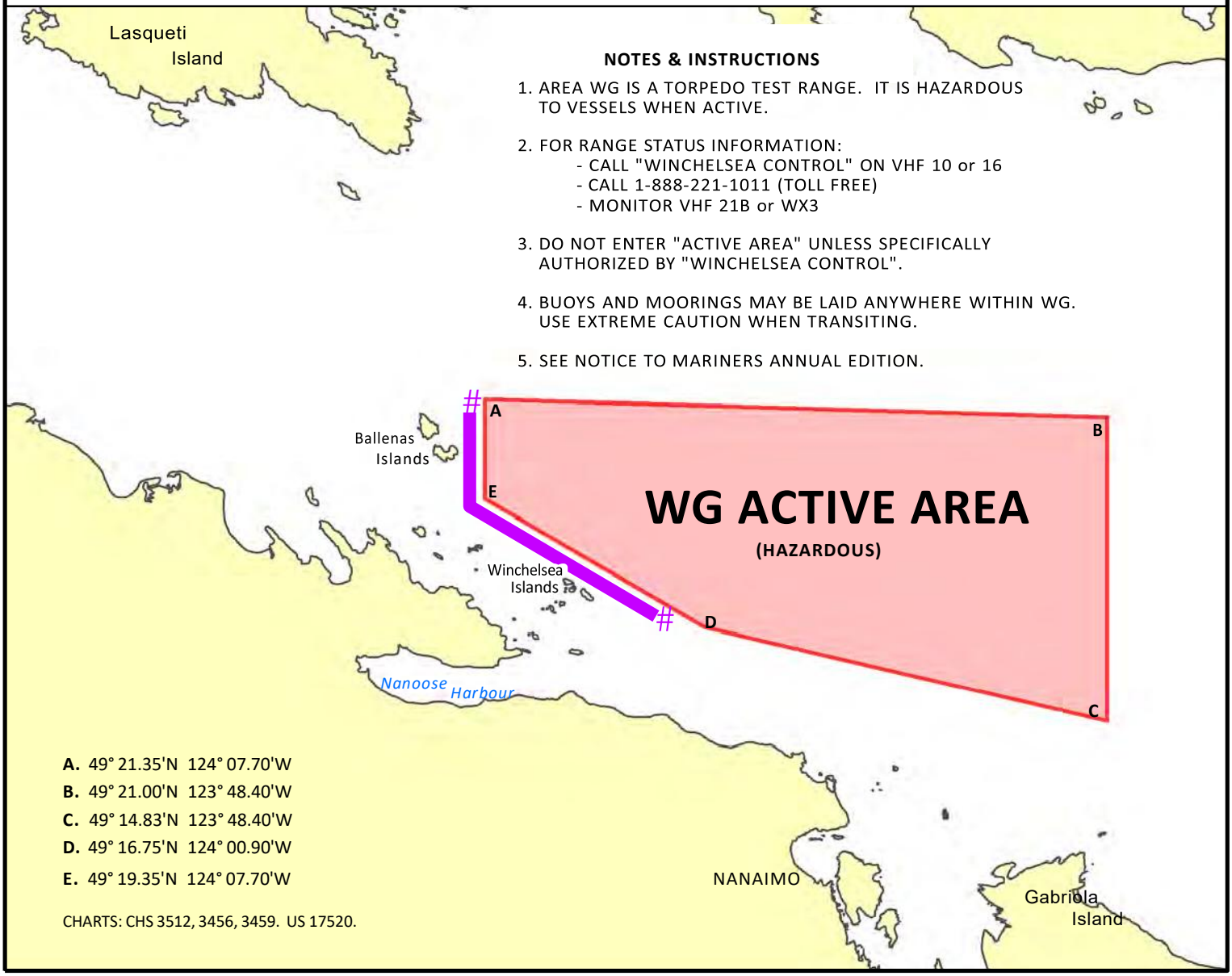
Strait of Georgia (Area SOG)					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
Strait of Georgia (**AREA SOG**)		Charts 3513, 3512, and 3463	Area bounded to the West by Vancouver Island East by British Columbia mainland North by lat. 50°10′00″N; and South by lat. 49°00′00″N.	Sub surface operations area.	**18**
WC		Chart 3462	48°35′25″N 123°22′18″W 48°35′25″N 123°21′48″W 48°31′57″N 123°19′42″W 48°31′57″N 123°21′59″W	Firing Exercise (Torpedo) (**TORPEX**) Sub surface operations area.	**16**
WD	To 5,000 feet	Chart 3441	48°38′48″N 123°30′45″W 48°38′48″N 123°29′15″W 48°37′48″N 123°29′15″W 48°37′48″N 123°30′45″W	Surface and Sub surface general operations area.	**16**
WE		Chart 3463	49°11′00″N 123°24′00″W 49°17′00″N 123°43′00″W 49°21′00″N 123°38′00″W 49°16′00″N 123°20′00″W	Non-firing exercises. Sub surface operations area.	**14**
WF		Chart 3512	49°19′18″N 123°43′30″W 49°21′18″N 124°08′00″W 49°28′42″N 124°08′00″W 49°24′18″N 123°43′30″W	Air, Sub surface and surface operations area.	**14**
WG	To 13,500 feet CYR 107	Chart 3512	49°21′28″N 124°09′30″W 49°21′00″N 123°48′24″W 49°14′50″N 123°48′24″W 49°18′02″N 124°09′30″W	Air, Sub surface and surface operations area. Firing Exercise (Torpedo) (**TORPEX**)	**14 & 15**
WI	To 1,000 feet CYA 124	Chart 3513	49°46′30″N 124°50′00″W 49°46′30″N 124°40′00″W 49°43′30″N 124°40′00″W 49°31′30″N 124°16′00″W 49°33′00″N 124°28′00″W	Air and Sub surface exercise area. Firing Exercise (Air Dropped Explosives) (**EEREX**)	**17**
WN	To 1,000 feet	Chart 3514	49°50′06″N 124°02′12″W 49°48′21″N 124°05′06″W 49°47′51″N 124°05′26″W 49°46′40″N 124°03′16″W 49°46′41″N 123°59′50″W 49°46′54″N 123°59′32″W 49°47′22″N 123°58′54″W 49°48′30″N 123°57′30″W 49°49′23″N 124°00′03″W	Surface and Sub surface general operations area. Surface to Bottom	**19**
Note: All of SOG Area is bounded by the shoreline where the area comes in contact with land					


124°
Thormanby Island
Howe Sound
Sea Area WF
NF, A/S
49° 20'
Sea Area WG
T,NF
Sea Area WE
NF
Maude Island
The portion of WG (Diagram 14) enclosed by pecked lines is an active surface, sub-surface, air and torpedo firing/operations area which may also include use of active sonar. Operations are generally (though not exclusively) conducted from 0700-1730 Monday to Saturday during which times area WG is considered extremely hazardous to marine traffic. Additionally, any number of lit and unlit Mooring Buoys may be within Area WG at various locations throughout the year to be used for military purposes. These buoys may be placed, moved and/or removed without notice. Mariners are to exercise caution whenever transiting this area, and vessels are required to remain clear whenever WG is active. Area WG constitutes a defence establishment as defined in the National Defence Act to which the Defence Controlled Access Area Regulations apply.
Nanaimo
Gabriola Island
124°
Diagram 14
Strait of Georgia


124°00'
Thormanby Islands
Howe Sound
49° 20'
CYD 107
(Airspace associated with Sea Area WG)
Diagram 14
S, Ht, A to S
Maude Island
Nanaimo
Gabriola Island
124°00'
Diagram 15
Airspace Strait of Georgia


123°30'
48° 40'
Saanich Inlet
Patricia Bay
Sea Area WD (T, A to S) 5000 ft
Yarrow Pt
Senanus Island
123°30'
123°20'
Cordova Channel
James Island
Haro Strait
Cowichan Hd
Sea Area WC T
Note:
All Areas are bounded by the shoreline where any Areas comes in contact with land.
48° 30'
123°20'
Diagram 16
Saanich Inlet/Haro Strait

NOTICE OF HAZARDOUS AREA
DEPARTMENT OF NATIONAL DEFENCE
TORPEDO TEST RANGE



A. 49° 21.35'N 124° 07.70'W
B. 49° 21.00'N 123° 48.40'W
C. 49° 14.83'N 123° 48.40'W
D. 49° 16.75'N 124° 00.90'W
E. 49° 19.35'N 124° 07.70'W

CHARTS: CHS 3512, 3456, 3459. US 17520.

Canadian Forces Maritime Experimental and Test Ranges (CFMETR) - Nanoose Bay, BC

The Canadian Forces Maritime Experimental and Test Ranges tests ship and aircraft systems and torpedoes launched by surface vessels, submarines, or aircraft. No explosives are used; however, a hazard exists due to the possibility of the torpedo homing on vessels and then the vessel being struck by the torpedo on its way to the surface.

Testing is usually carried out during daylight hours Monday to Saturday. During testing, area "WG" is "Active". Any vessel within the area will be required to clear or stop on demand from the "Winchelsea Island Control" or any of the range vessels or range helicopter. The positions of these coordinates are clearly marked on the diagram above.

A transit area 1,000 yards north of Winchelsea Island and 1,000 yards east of South Ballenas Island is recommended to enable mariners to transit safely around the active area. It also facilitates unimpeded access to marina facilities in Schooner Cove and Nanoose Bay. The active range area is clearly depicted on CHS charts 3512, 3456 and 3459 by means of pecked lines.

Additional information on active range hours or for safe transit through the area may be obtained from:

a. Winchelsea Island Control at 1-888-221-1011 (next day's activity only);

b. CFMETR Range Officer at 250-468-5002 (long range planning);

c. Winchelsea Island Control VHF CH 10 or 16 (for safe transit area information when approaching Area "WG"). or

d. CMB VHF 21B or Weather 3 (listen only, for active times).

e. Navigational Warning. Prince Rupert MCTS Centre at 250-627-3070. NAVWARN.MCTSPrinceRupert@innav.gc.ca

f. Victoria MCTS Centre at 250-363-6333.

Area "WG" constitutes a "Defence Establishment" as defined in the National Defence Act to which the Defence Controlled Access Area Regulations apply. Vessels which do not comply with direction from either Winchelsea control or Range Patrol Vessels may be charged for trespassing.

Range vessels exhibit a flashing red light in addition to the prescribed lights and shapes. These vessels may operate outside of scheduled hours and should not be approached within 3,000 yards because they may be in a three-point moor with mooring lines extending to buoys 1,500 yards away. Additionally, lighted and unlighted mooring buoys are randomly located within the area. Mariners are advised to use caution when transiting this area during non-active range periods to avoid mooring buoys and lines.

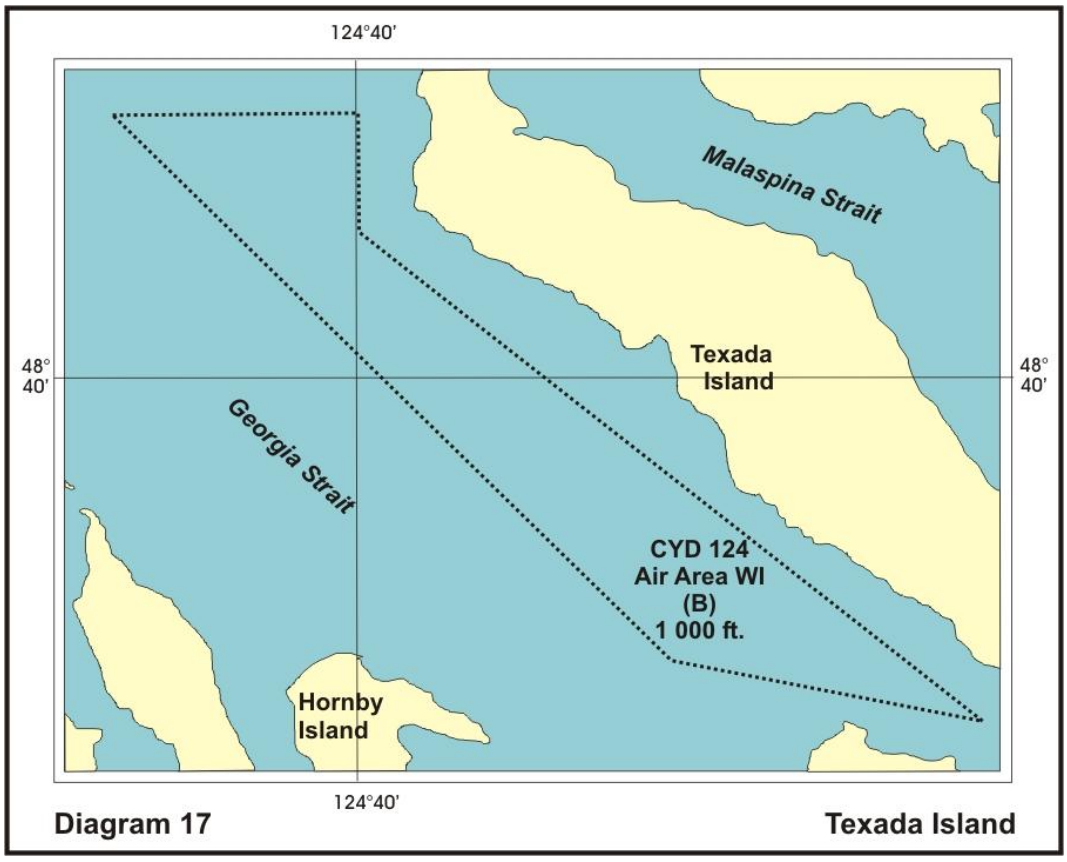


Diagram 17 Texada Island

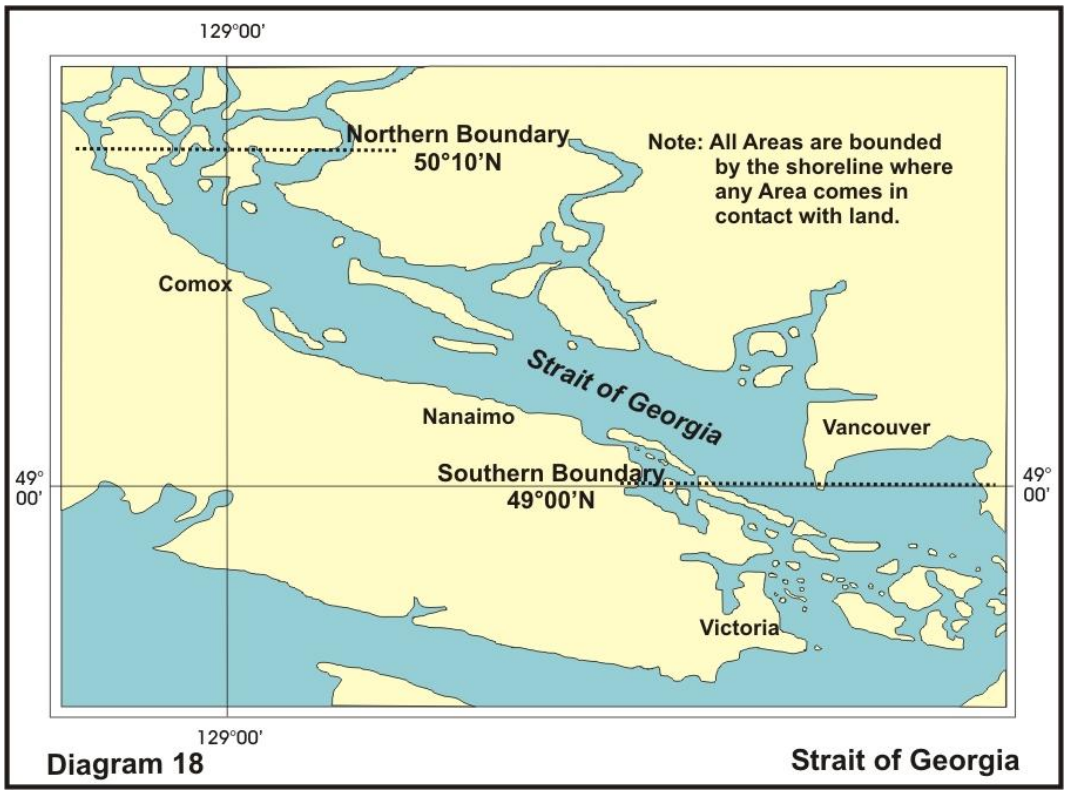
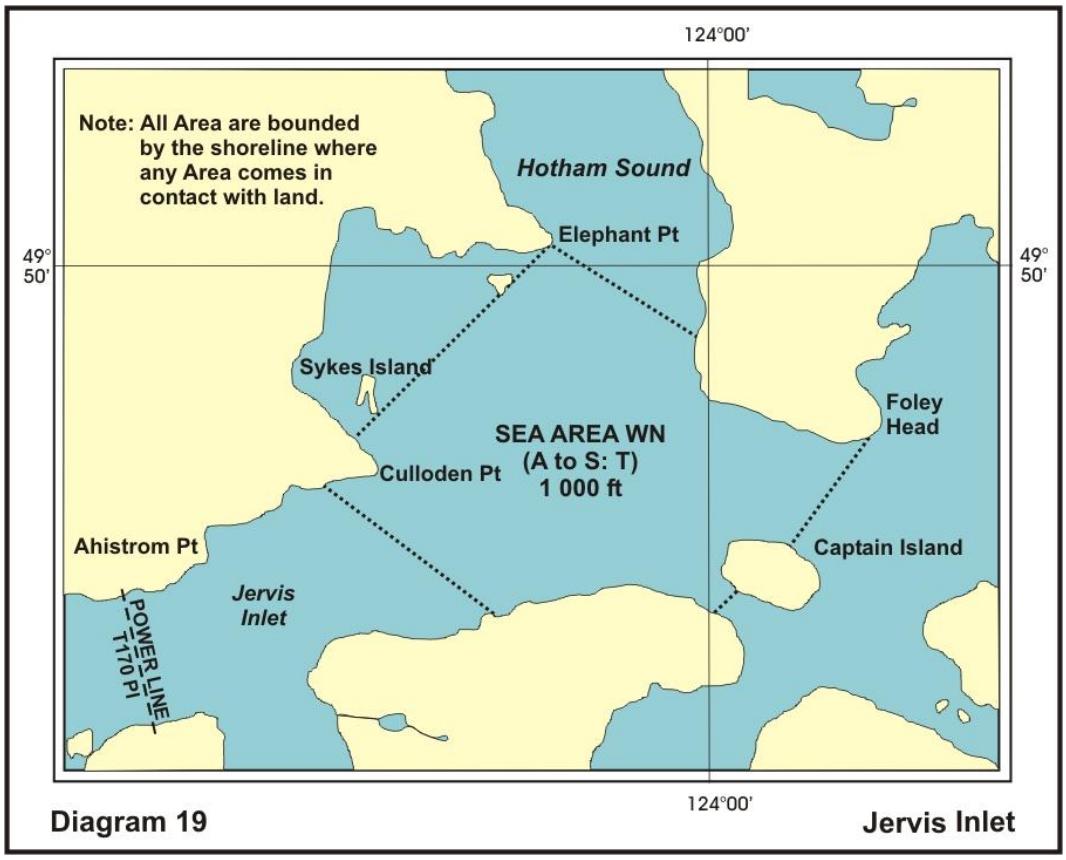


Diagram 18 Strait of Georgia



Esquimalt Harbour Approaches Areas				
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**
BANKS 1		Charts 3461 3440	48°24'28" N 123° 18'30" W (INTERSECTION OF LAND) 48°16'00" N 123°18'30" W 48°16'00" N 123°35'00" W 48°18'38" N 123°35'00" W (INTERSECTION OF LAND) THE COASTLINE BACK TO ORIGIN	Sub surface operations area. Surface to Bottom.
BANKS 2		Charts 3461 3440	48°27'00" N 123°17'22" W (INTERSECTION OF LAND) 48°27'00" N 123°09'18" W (INTERNATIONAL BORDER) 48°25'22" N 123°06'54.5" W (INTERNATIONAL BORDER) 48°25'00" N 123°00'00" W 48°14'30" N 123°00'00" W 48°14'30" N 123°18'30" W 48°24'28" N 123°18'30" W (INTERSECTION OF LAND)	Sub surface operations area. Surface to Bottom.

Esquimalt Harbour Approaches Areas				
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**
BANKS 3		Charts 3461 3440	48°14’30” N 123°18’30” W 48°14’30” N 123°00’00” W 48°25’00” N 123°00’00” W 48°25’00” N 122°50’00” W 48°08’04” N 122°50’00” W (INTERSECTION OF LAND)	Sub surface operations area. Surface to Bottom.
WA	To 10,000 feet CYD 102	Chart 3461	48°20’36” N 123°31’34” W 48°23’15” N 123°28’36” W 48°25’50” N 123°26’45” W 48°24’25” N 123°23’15” W 48°15’21” N 123°23’15” W 48°13’36” N 123°31’48” W 48°20’00” N 123°34’30” W	General surface and air operations area. Firing Exercise (Pyrotechnics) (**PYROEX**)
WB	To 10,000 feet CYD 102	Chart 3461	48°24’25” N 123°23’15” W 48°23’47” N 123°18’12” W 48°24’45” N 123°16’00” W 48°18’30” N 123°13’28” W 48°17’03” N 123°14’48” W 48°15’21” N 123°23’15” W	General surface and air operations area. Firing Exercise (Pyrotechnics) (**PYROEX**)
WK	To 10,000 feet CYD 102	Chart 3461		General surface and air operations area**.** **Inactive**
WL	To 10,000 feet CYD 102	Chart 3461		General surface and air operations area**.** **Inactive**
WQ	To 3,000 feet CYD 103	Chart 3641	Bentinck Island demolition Range A circle with 1 mile radius centered on 48°18’42” N 123°32’36” W	Demolition exercise (**DEMOEX**)
Note: All of JDF Strait Area is bounded by the shoreline where the area comes in contact with land				

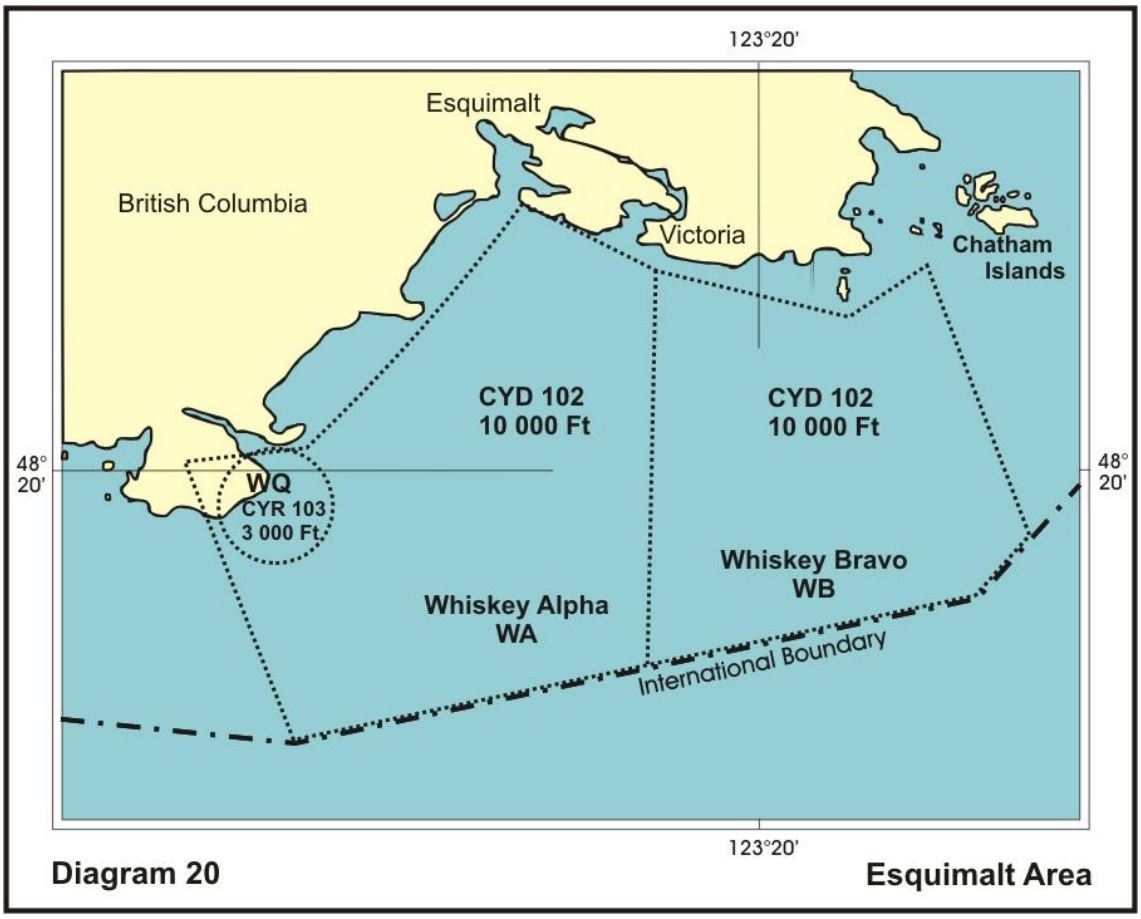


Diagram 20 **Esquimalt Area**

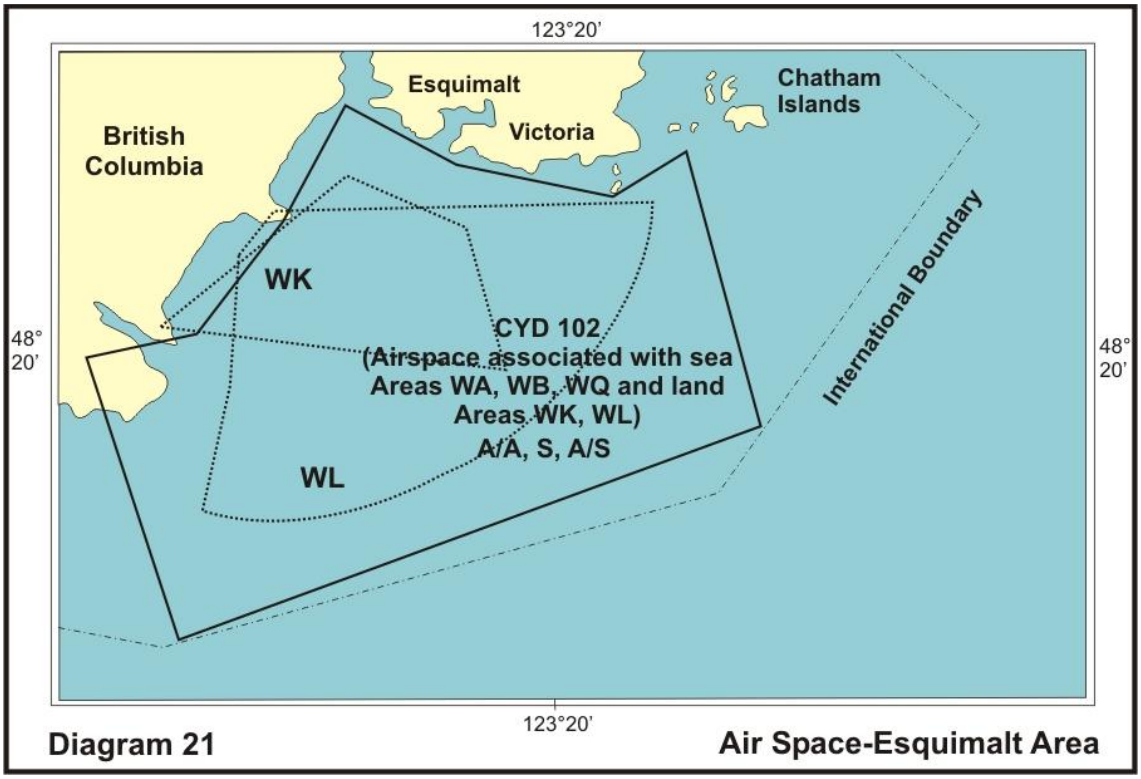


Diagram 21 **Air Space-Esquimalt Area**

Strait of Juan de Fuca (Area SJDF)					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
Juan De Fuca Strait (**SJ 1**)		Chart 3606	48°27’14” N 124°35’00” W 48°29’36” N 124°43’38” W 48°22’30” N 125°00’00” W 48°22’30” N 124°35’00” W	Sub surface operations area. Surface to Bottom.	
Juan De Fuca Strait (**SJ 2**)		Chart 3606	NORTHERN BOUNDARY ALONG A LINE FOLLOWING THE US/CANADIAN INTERNATIONAL BOUNDARY WESTERN BOUNDARY OF 124°35’00” W EASTERN BOUNDARY OF 124°17’35” W COAST OF THE STATE OF WASHINGTON TO THE SOUTH	Sub surface operations area. Surface to Bottom.	
Juan De Fuca Strait (**SJ 3**)		Chart 3606	NORTHERN BOUNDARY ALONG A LINE FOLLOWING THE US/CANADIAN INTERNATIONAL BOUNDARY WESTERN BOUNDARY OF 124°17’35” W EASTERN BOUNDARY OF 123°50’00” W COAST OF THE STATE OF WASHINGTON TO THE SOUTH	Sub surface operations area. Surface to Bottom.	
Juan De Fuca Strait (**SJ 4**)		Chart 3606	48°06’48” N 123°18’30” W (INTERSECTION OF LAND) 48°16’00” N 123°18’30” W 48°16’00” N 123°50’00” W 48°09’20” N 123°50’00” W (INTERSECTION OF LAND) THE COASTLINE BACK TO ORIGIN	Sub surface operations area. Surface to Bottom.	

Strait of Juan de Fuca (Area SJDF)					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
Juan De Fuca Strait (**SJ 5**)		Chart 3606	COAST OF VANCOUVER ISLAND TO THE NORTH WESTERN BOUNDARY OF 124°35'00" W EASTERN BOUNDARY OF 124°17'35" W SOUTHERN BOUNDARY ALONG A LINE FOLLOWING THE US/CANADIAN INTERNATIONAL BOUNDARY	Sub surface operations area. Surface to Bottom.	
Juan De Fuca Strait (**SJ 6**)		Chart 3606	COAST OF VANCOUVER ISLAND TO THE NORTH WESTERN BOUNDARY OF 124°17'35" W EASTERN BOUNDARY OF 123°35'00" W SOUTHERN BOUNDARY ALONG A LINE FOLLOWING THE US/CANADIAN INTERNATIONAL BOUNDARY	Sub surface operations area. Surface to Bottom.	
Juan De Fuca Strait (**SJ 7**)		Chart 3606	COAST OF VANCOUVER ISLAND TO THE NORTH WESTERN BOUNDARY OF 125°00' 00" W EASTERN BOUNDARY OF 124°35' 00" W SOUTHERN BOUNDARY ALONG A LINE CONNECTING THE FOLLOWING POINTS: 48°27'14" N 124°35'00" W, 48°29'36" N 124°43'38" W, 48°22'30" N 125°00'00" W	Sub surface operations area. Surface to Bottom.	
WH	To Unlimited CYD 109	Chart 3606	48°22'00" N 123°55'05" W 48°16'51" N 123°55'05" W 48°17'54" N 124°00'43" W 48°22'29" N 124°17'35" W 48°28'18" N 124°17'35" W	Firing Exercise (Surface) (**FIREX**)	
Note: All of JDF Area is bounded by the shoreline where the area comes in contact with land.					

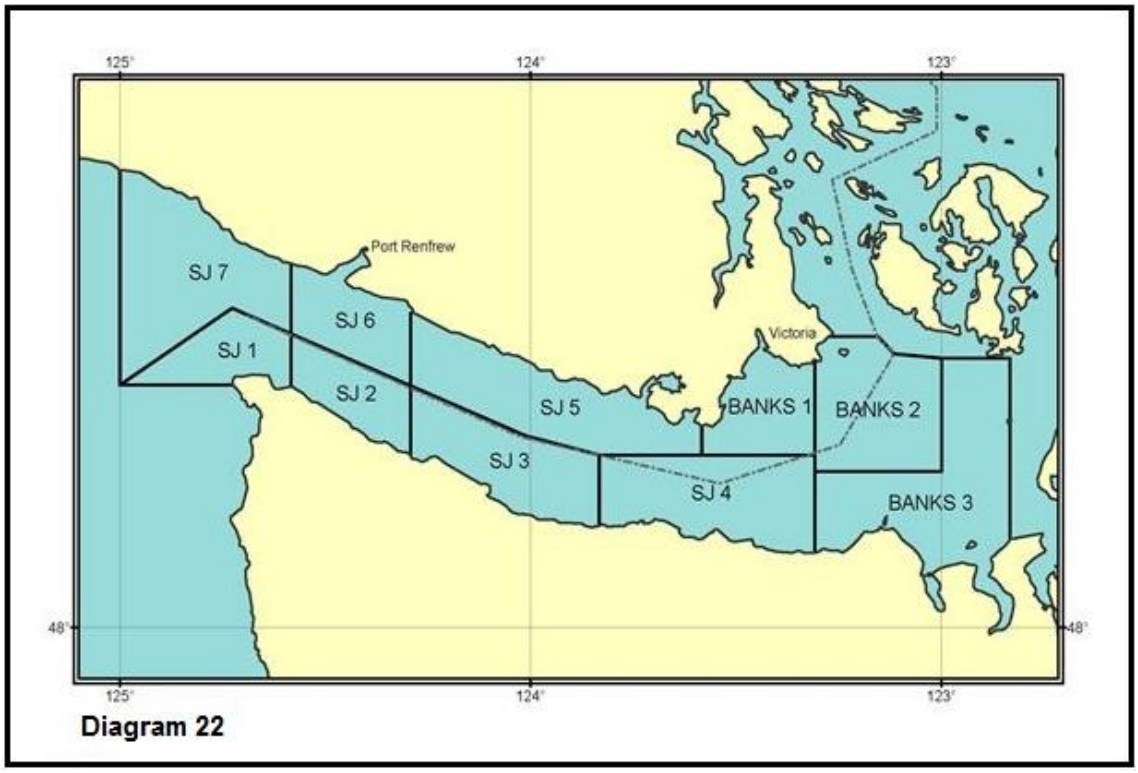


Diagram 22

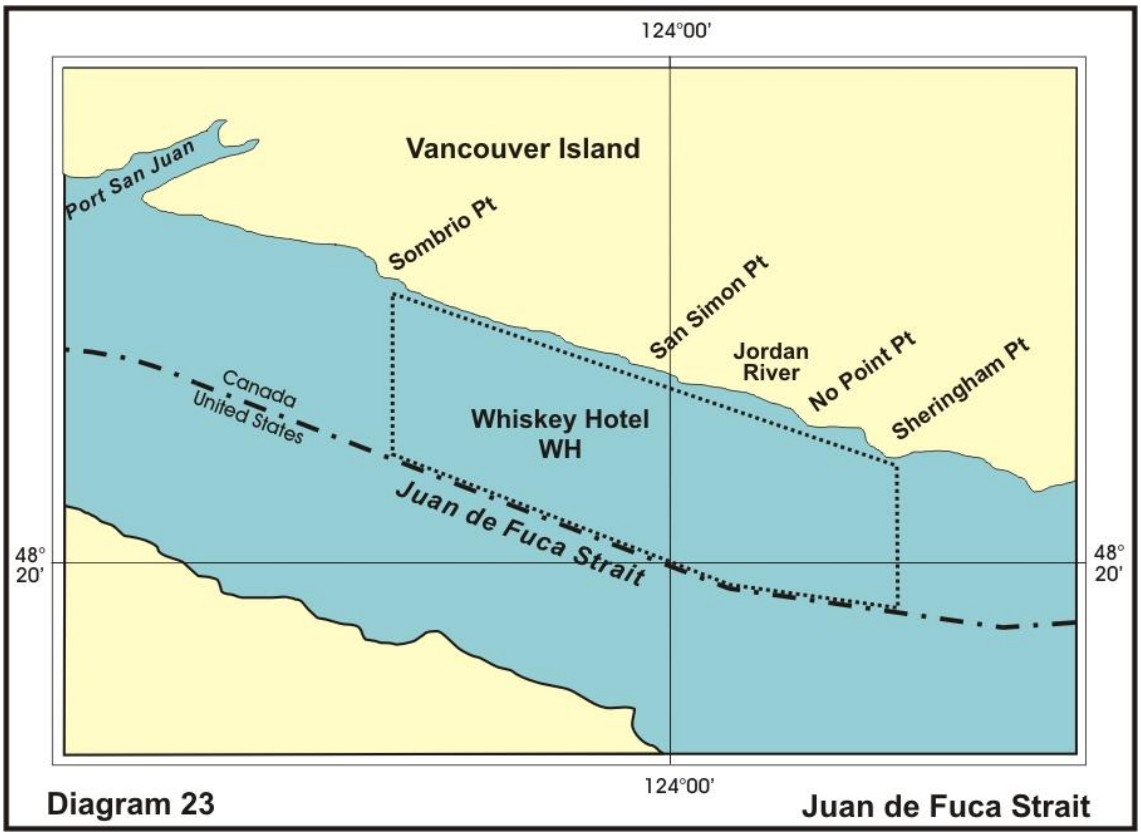


Diagram 23 **Juan de Fuca Strait**

Queen Charlotte Island (QCI) Areas					
Sea Area	**Airspace**	**Location**	**Coordinates**	**Employment**	**Diagram**
DIXON		Chart 3002	54°25′00″N 134°00′00″W 54°25′00″N 130°00′00″W 54°00′00″N 130°00′00″W 54°00′00″N 132°30′00″W 53°30′00″N 132°30′00″W 53°30′00″N 134°00′00″W	Sub surface operations area.	**24**
HECATE		Chart 3002	54°00′00″N 130°00′00″W 54°00′00″N 132°30′00″W 53°30′00″N 132°30′00″W 52°00′00″N 131°00′00″W 51°30′00″N 130°00′00″W 51°30′00″N 127°20′00″W	Sub surface operations area.	**24**
MORESBY		Chart 3002	52°00′00″N 132°30′00″W 52°00′00″N 131°00′00″W 51°30′00″N 130°00′00″W 51°30′00″N 129°20′00″W 50°15′00″N 129°20′00″W 51°00′00″N 130°00′00″W	Sub surface operations area.	**24**
GRAHAM		Chart 3002	53°30′00″N 134°00′00″W 53°30′00″N 132°30′00″W 52°00′00″N 131°00′00″W 52°00′00″N 132°30′00″W	Sub surface operations area.	**24**
Note: All Queen Charlotte Island (QCI) Areas are bounded by the shoreline where any area comes in contact with land					

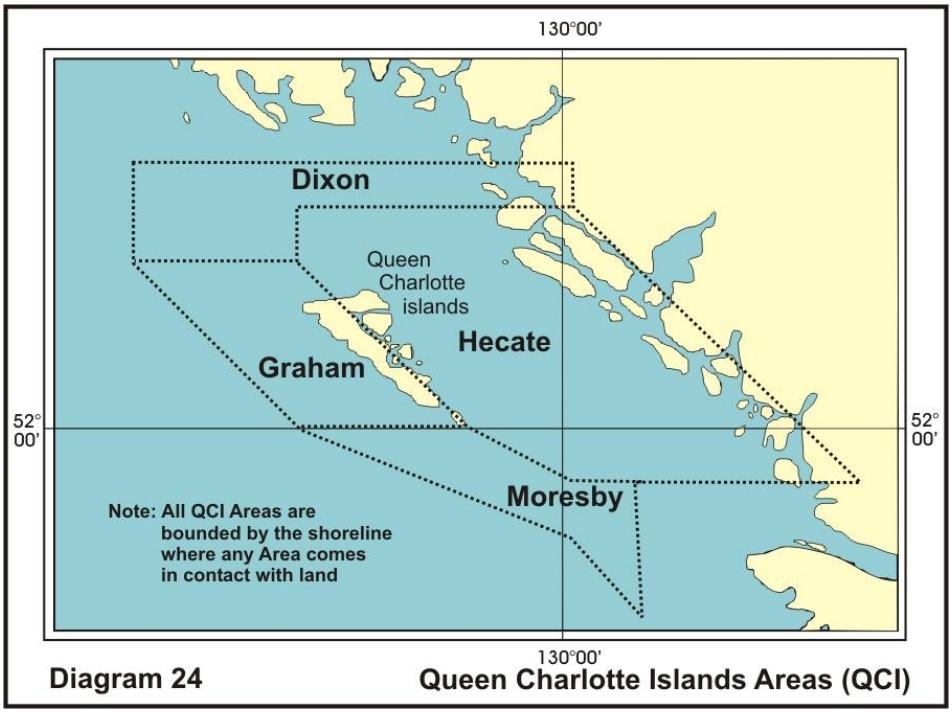


Diagram 24 **Queen Charlotte Islands Areas (QCI)**

36 Vital Intelligence Sightings – MERINT Reporting Procedures

1 In order to extend the early warning coverage for the defence of the North American continent a plan is now in existence for the reporting of vital intelligence sightings during peacetime. Reports originating from ships will be known as MERINT (pronounced *MUR-ENT*) messages.

2 All Canadian vessels should originate MERINT reports as and when applicable. Types of reports shall be as follows:

(a) MERINT report - initial sighting.

(b) AMPLIFYING report - a report giving additional significant information that becomes available.

(c) CANCELLATION report - a report cancelling an initial sighting or amplifying report.

3 MERINT reports should be made under the following circumstances:

(a) Immediately upon a vital intelligence sighting, except when the vessel is within territorial waters of a country other than Canada, the U.S.A. or Greenland.

(b) When a situation previously reported changes sufficiently to warrant an amplifying report.

(c) When subsequent observation nullifies an initial sighting or amplifying report so as to warrant a cancellation report.

Note: In the event a report cannot be made by radio, the master should report the details of the MERINT sighting to the appropriate Canadian or U.S. consular or military authority immediately upon arrival in port. Such reports should be made by the quickest available means.

4 MERINT messages should be transmitted to the nearest or most convenient Canadian or U.S. Government coast station. No address is necessary for such messages as coast stations hold detailed instructions for the delivery of MERINT messages.

5 All airborne and waterborne objects which appear to be hostile, suspicious or unidentified should be reported.

(a) The following are examples:

(i) Guided missiles.

(ii) Unidentified flying objects.

(iii) Submarines.

(iv) Surface warship positively identified as not Canadian or U.S.

(v) Aircraft or contrails (vapour trails made by high flying aircraft) which appear to be directed against Canada, the U.S., their territories or possessions.

(b) Reports should not be made on the following objects:

(i) Surface craft or aircraft in normal passage.

(ii) Known Canadian or U.S. military ships and submarines.

(iii) Known Canadian or U.S. Government ships.

(iv) Known Canadian or U.S. military aircraft.

6 MERINT reports shall contain the following data, as applicable, in the order listed:

(a) The word MERINT as the first word of the message.

(b) The name and call sign of the reporting ship.

(c) The object sighted. A brief description containing the following items should be given.

(i) Number of aircraft, vessels, missiles, etc.

(ii) Category of object, general description, etc. i.e. size, shape, type of propulsion, etc.

(d) Reporting ship's position at time of sighting.

(e) Date and time of sighting in G.M.T.

(f) Altitude of object (if applicable) expressed as low, medium or high.

(g) Direction of travel of object.

(h) Estimated speed of object.

(i) Any observed identification, insignia or other significant information.

Note: MERINT reports should not be withheld or delayed due to lack of data for any of the above items.

7 When calling a coast station to deliver a MERINT message the call should be preceded by the word *MERINT* transmitted three times as a priority indicator. If this priority indicator does not produce satisfactory precedence the International Urgency Signal may be used.

Example:

MERINT MERINT MERINT - HALIFAX COAST GUARD RADIO HALIFAX RADIO HALIFAX COAST GUARD RADIO - THIS IS KINGFISH KINGFISH KINGFISH - OVER.

8 The following are examples of MERINT messages:

(a) INITIAL report.

MERINT PACIFIC LOGGER VICTOR GOLF ROMEO XRAY SIX JET BOMBERS FIVE ONE NORTH ONE THREE FIVE WEST ONE FOUR ONE FIVE ZERO TWO ZULU HEADED SOUTHEAST HIGH WITH CONTRAILS SPEED ABOUT FIVE ZERO ZERO MILES PER HOUR NO IDENTIFICATION BROKEN CLOUDS - OVER.

(b) AMPLIFYING report.

MERINT AMPLIFY PACIFIC LOGGER VICTOR GOLF ROMEO XRAY ONE FOUR ONE FIVE ZERO TWO ZULU TWO ADDITIONAL JET BOMBERS SIGHTED CIRCLING TO SOUTH - WEST ONE FOUR ONE FIVE ZERO EIGHT ZULU - OVER.

(c) CANCELLATION report.

MERINT CANCEL PACIFIC LOGGER VICTOR GOLF ROMEO XRAY ONE FOUR ONE FIVE ZERO TWO ZULU IDENTIFIED AS UNITED STATES AIRCRAFT - OVER.

Authority: Department of National Defence (NDHQ)

37 Handling of Unexploded Ordnance

The following information, of concern mainly to fishing vessels, is being published for the benefit of any other vessels which may have occasion to draw nets or trawls:

1 Fishers operating off the coasts of Canada are warned that both non-explosive and explosive ordnance may be discovered in normal fishing areas. These ordnance items may be brought to the surface in nets or trawls.

- Non-explosive ordnance such as practice torpedoes will normally be painted bright orange; smaller non-explosive ordnance will normally be a dark blue or light blue. Any item which cannot be readily identified by sight as non-explosive ordnance should be treated as explosive in character. Explosive ordnance, small or large, will normally be painted or marked in yellow, red or green. If there is any doubt about the identity of any object brought up by nets or trawls, it should be considered as an explosive. It should be noted that ordnance having been in the water for longer periods of time will most likely have lost its markings and, like ordnance found on land, will likely have rusted.

2 Practice ammunition still dangerous:

a. Orange torpedoes could still contain Otto Fuel;

b. Dummy ammunition formerly had a dark blue marking; currently, it has a bronze marking;

c. Colour Codes Above 20mm

i.	Yellow	High Explosive
ii.	Brown	Low Explosive
iii.	Grey	Chemical
iv.	Black	Armour Defeating
v.	Light Green	Smoke
vi.	Light Red	Incendiary
vii.	Orange	Recoverable

d. When a colour for a primary role does not in itself indicate the presence of an explosive or other hazardous material, the presence of these materials may be indicated by narrow bands or by letters applied in an appropriate colour of the code.

3 Explosive ordnance may still be dangerous even after having been in the water for many years. Suspected explosive ordnance should be treated with great care, and if observed in the net or trawl while still outboard, no attempt should be made to bring it alongside or aboard. The trawl should be lowered and where possible, towed clear of regular fishing grounds before cutting away the net as necessary.

4 In the event that a suspected explosive ordnance item cannot be released or freed by cutting the net or line, the following actions are advised:

(i) Stream the object as far aft as possible.

(ii) Notify the nearest Joint Rescue Coordination Centre (JRCC) and stand by for instructions or help.

(iii) Position the crew at the forward end of the vessel, keeping the deck house between them and the object astern.

(iv) Maintain steerageway as necessary to stay in the area until help or instructions arrive.

5 In the event of a suspected ordnance item not having been detected until the contents of the trawl have been discharged on deck, the following action should be taken:

(i) Great care should be taken to avoid bumping the object.

(ii) It should be stowed on deck away from heat and vibration.

(iii) It should be firmly chocked up and well secured to prevent movement.

(iv) It should be kept covered up and dampened down. (This is important because any explosive which may have become exposed to the atmosphere is liable to become very sensitive to shock if allowed to dry out).

(v) Notify the nearest Joint Rescue Coordination Centre (JRCC) and stand by for instructions. The JRCC will then contact the nearest EOD team for direction.

6 A ship with a suspected explosive item on board or in her gear should warn other ships in the vicinity and give them her position.

Note: The accompanying plates showing ordnance used currently and formerly by DND ships and aircraft will assist in identifying explosive ordnance that may be recovered from the sea.

Naval Underwater Charge



Signal Underwater Sound MK411
(Reduced Charge) (SUS) Signal
Underwater Sound
MK 410 (High Explosive)



Depth Charge High
Explosive DM211
Anti-Frogman



Signal Sound Marine MK
NC 1 Mod 1

Naval Decoy



82 mm Rocket Practice
MASS Decoy



MK 234 Electronic Decoy
Cartridge (Nulka)



Cartridge 5.125 Inch
Chaff



Rocket 100mm Radar
Echo Practice C20

Naval Pyrotechnics



Signal Smoke
Aircraft Orange Drift
Indicator C8



Marker Location
marine C2A1



Marker Man Over
Board (MMOB)



38mm Hand Held
Illuminating Signal
Flare (Radaflare)



Signal Smoke and
Illumination Marine
Mk 66 Mod 2



Signal Smoke Marine
MK3 Orange



Marker Man
Overboard
Smoke and Light

Length 500 mm
Diameter 190 mm
(including the float)



Signal Illum
Marine Red Pinpoint
Mk7

Length 247 mm
Diameter 35 mm

Naval Pyrotechnics



Rocket 100 mm
Radar echo P8

Length 1700 mm
Diameter 102 mm



100 mm Infra red
Decoy P6

Length 1600 mm
Diameter 103.2 mm



Flare Aircraft
Parachute
LUU 2AB/2BB

Length 91.4 cm
Diameter 12.4 cm



Signal Underwater
Sound Mk411

Length 38.1 cm
Diameter 7.62 cm



Signal sound Marine

Height 8.89 cm
Diameter 7.62 cm



Signal Illum A-C
Single star 1.5 inch

Length 82.6 mm
Diameter 38 mm



Marker Location
Marine
C1A1 or C1A2

Length 47 cm
Diameter 7.56 cm



5.125 inch chaff
Mk 182

Length 1206.5 mm
Diameter 130 mm

Naval Pyrotechnics



Marker Location
Marine Mk 58

Length 21.5 inches
Diameter 4.9 inches



Signal Distress
Day and Night

Length 135 mm
Diameter 42 mm



Marker Man
Overboard, Light
And Smoke,
Series III

Naval Shells



40 mm



57 mm



76 mm



20 mm

Naval Shells



Mk46 torpedo



Mk48 Torpedo



Cart 57mm Pre-Fragmented High Explosive



Cartridge 40mm High Explosive-tracer (HE-T)



Cartridge 57mm Non-Frag Brown Band
Low Explosives





Both are inert
Dummy 40mm
Drill 40mm



<u>Cartridges 40mm Practice (BL/P)</u>

Projectile inert but could have live primer and propellant in cartridge case

Other Possible Ordnance



Depth Charge
HE DM211
Anti-Frogman

Length 268 mm
Diameter 60 mm



Practice bomb



2.75 inch
rocket motor



2.75 inch
warhead



Post-WWII
British Naval
Projectiles
Length
254-610 mm
Diameter
50-150 mm



Anti-submarine
charge
(hedgehog)
Length 100 cm
Diameter 18 cm



Anti-Submarine
(AS) Mortar
Length 150 cm
Diameter
305 mm

Authority: Department of National Defence (NDHQ)

38 Cautions with Regard to Ships Approaching Formations, Convoys, Aircraft Carriers and Other Warships at Sea and Aircraft Carriers at Anchor

Formations and Convoys

1 The attention of shipowners and mariners is called to the danger to all concerned which is caused by single vessels approaching a formation of warships or merchant vessels in convoy, so closely as to involve risk of collision, attempting to pass ahead of, or through such a formation or convoy.

2 Mariners are therefore warned that single vessels should adopt early measures to keep out of the way of a formation or convoy.

3 Although a single vessel is advised to keep out of the way of a formation or convoy, this does not entitle vessels sailing in company to proceed without regard to the movements of the single vessel.

Vessels sailing in a formation or convoy should accordingly keep a careful watch on the movements of any single vessel approaching the formation or convoy and should be ready, in case the single vessel does not keep out of the way; to take such action as will best aid to avert collision.

Aircraft carriers

4 Attention is drawn to the uncertainty of the movements of aircraft carriers, which must usually turn into the wind when aircraft are taking off or landing. While operating aircraft, aircraft carriers will show the lights or shapes as prescribed by Rule 27(b) of Schedule I of the *Collision Regulations*. Aircraft carriers may display red or white flight deck lighting during night flying operations.

5 Mariners are warned that by night, aircraft carriers have:

(a) their steaming lights placed permanently off the centre line of the ship and at considerably reduced horizontal separation.

(b) Alternative positions for their side lights:

(i) on either side of the hull,

(ii) on either side of the island structure, in which case the port bow light may be as much as 30.5 m (100 ft.) from the port side of the ship.

6 Certain aircraft carriers exhibit anchor lights as follows:

Four *white* lights located in the following manner:

In the forward part of the vessel at a distance of not more than 1.5 m (5 ft.) below the flight deck, two lights in the same horizontal plane, one on the port side and one on the starboard side.

In the after part of the vessel at a height of not less than 4.6 m (15 ft.) lower than the forward lights, two lights in the same horizontal plane, one on the port side and one on the starboard side.

Each light is visible over an arc of at least 180°. The forward lights visible over a minimum arc from one point on the opposite bow to one point from right astern on their own side, and the after lights from one point on the opposite quarter to one point from right ahead on their own side.

Ships which operate helicopters

7 Mariners are warned that certain ships of the Maritime Command operate helicopters and cannot manoeuvre freely when helicopters are taking off or landing. Such ships are fitted with hangars and landing platforms, and when operating at night use red or white flood lighting.

8 By night, such ships in addition to the lights prescribed in Rule 27(b) of Schedule I of the *Collision Regulations* may exhibit the following lights:

(a) Red aircraft warning lights on the foremast, visible 360°. The lights will be on continuously when a helicopter is in the vicinity of the ship.

(b) A cluster of six red, green, or yellow lights, mounted on the after side of the helicopter hangar, visible from red 090° to green 090° through the stern. These lights will be used intermittently as required when helicopters are landing.

(c) Subdued white flight-deck illumination lights. These lights will present a general white glow to other ships.

(d) White, high intensity, flight deck flood lights, fitted on the after side of the hangar, visible from red 090° to green 090° through the stern may be used after the helicopter has landed.

(Red deck lights and flood lights may be used instead of white.)

(e) Lighting associated with Helicopter Operation may be shown in addition to masthead lights, side lights and overtaking light, at the discretion of the officer in tactical command (OTC).

Replenishment-at-Sea

9 Canadian and Allied Warships in conjunction with auxiliaries frequently exercise Replenishment-at-Sea. While doing so the two or more ships taking part are connected by jack-stays and hoses. They display the signals prescribed by Rule 27(b) of Schedule I of the *Collision Regulations.*

10 Mariners are warned that while carrying out these exercises the ships are restricted both in manoeuvrability and speed. Other vessels are to keep well clear in accordance with Rules 2 and 18 of the above Regulations.

11 Lights and shapes carried by North Atlantic Treaty Organization Mine Countermeasures Vehicles.

Mariners are warned that Canadian, Allied Warships and Helicopters engaged in mine countermeasure activities, cannot manoeuvre freely whilst so engaged. These ships/aircraft may be encountered singly or in formation. Attention is directed to the lights and shapes displayed during these operations:

a. Minehunters

Ships engaged in minehunting will show the lights or shapes prescribed in Rule 27(f) of Schedule I of the *Collision Regulations*. Minehunters normally work in conjunction with small boats and inflatable rubber dinghies from which diving or mine disposal operations are conducted. These may be up to 1,000 metres from the minehunter. When showing the lights or shapes prescribed in Rule 27(f) of Schedule I of the *Collision Regulations*, other vessels should not approach closer than 1,000 metres of the minehunter. When a dinghy is being used to operate divers or conduct mine disposal operations, the minehunters in addition to the lights and shapes prescribed above will:

(1) By Day:
Display Flag 'A' or Flag 'B' of the International Code of Signals as appropriate.

(2) By night:
(a) Signal the letter 'U' by flashing light when approached by other vessels.
(b) Make a warning signal in accordance with Rule 36 of Schedule I of the *Collision Regulations* if approaching vessels do not take avoiding action.

b. Diving Dinghies

When operating divers or conducting mine disposal operations, the dinghy will be required to:

(1) By day:

Display/be prepared to display Flag 'A' or Flag 'B' of the International Code of Signals as appropriate when approached by other vessels.

(2) By night:

(a) Display/be prepared to display an all-round white light in accordance with Rule 23(c) of Schedule I of the *Collision Regulations*.

(b) Be prepared to show a signal to attract attention in accordance with Rule 36 of Schedule I of the *Collision Regulations.*

c. Minesweepers

(1) Ships engaged in minesweeping will show the lights or shapes prescribed in Rule 27(f) of Schedule I of the *Collision Regulations*. Other vessels should not approach closer than 1,000 metres from the minesweeper.

(2) In addition, the minesweepers may carry the following Station-Keeping Lights:

Two vertical white lights, dimmer controlled, visible from 020° before the beam on either side to right astern. In smaller minesweepers, where the lower light may not be visible through the whole area, it may be necessary to carry two lower lights, one on each side, visible from 020° before the beam to right astern.

d. Helicopters

The helicopter shall be equipped with a quick flashing amber light to indicate that gear is being towed.

Authority: Department of National Defence (NDHQ)

39 Naval Messages to Canadian Merchant Ships Including Small Craft and Fishing Vessels

1 IT IS IMPORTANT THAT MASTERS ENSURE THAT THIS NOTICE IS AVAILABLE TO AND UNDERSTOOD BY THEIR RADIO OFFICERS AND OTHER MEMBERS OF THE CREW RESPONSIBLE FOR OPERATING SHIP'S RADIO EQUIPMENT.

2 Canada subscribes to the Commonwealth GBMS organization by which NAVAL MESSAGES are passed to Commonwealth Merchant Ships.

3 The procedures for passing NAVAL MESSAGES to Canadian and Commonwealth ships in Canadian areas are described hereunder. Such messages will be important and may be vital to your ship's safety and welfare.

I *Ships fitted with Radiotelegraph Equipment* (Ocean Shipping) will comply with the procedure outlined for the GBMS Organization in Admiralty Annual Notice to Mariners No. 3A. THIS PROCEDURE WILL BE BROUGHT INTO FORCE BY CANADIAN MESSAGE A.

II Other vessels, primarily those fitted *with Radiotelephone Equipment* (Coastal Shipping) will be informed of the commencement of emergency procedures by a special message from National Defence Headquarters. This will be on the normal working frequency of each MCTS Centre making scheduled weather broadcasts and repeated at intervals until sufficiently promulgated. Such broadcasts will be preceded by a general call to all stations on the calling frequency. The following points concerning transmissions after emergency procedures have been brought into force are to be noted and observed:

(a) Ships are to continue to receive messages from MCTS Centres serving the waters in which they are operating.

(b) Naval messages will be broadcasted immediately following scheduled weather broadcasts.

(c) The text of each naval message will indicate the Naval Authority which has originated it and will contain if necessary, details of the locality to which it refers. The last group in the text will consist of a six figure date-time group to indicate the date and time the message was originated.

Example:

All Canadian Merchant Ships, this is St. John's Coast Guard Radio. Here is a message from National Defence Headquarters (or Maritime Command Headquarters, or Maritime Headquarters Pacific) begins ... (text). I say again... (repetition of text) ends. This is St. John's Coast Guard Radio. OUT.

(d) Messages are not to be acknowledged unless ships are specifically directed in the text to make acknowledgement.

(e) Ships are to maintain radio silence *EXCEPT* to transmit:

(i) reports of distress or enemy activity;

(ii) essential commercial traffic which is ship's business. In certain circumstances restrictions will be imposed on this traffic. Information and instructions for this will be given in a naval message. No private or personal messages will be permitted in any circumstances.

4 Tests of these procedures may be conducted from time to time in conjunction with Naval Exercises. The texts of test messages will always begin and end with the words, This is a test message. Masters of ships receiving a test message are required to forward brief reports by mail through their owners to National Defence Headquarters, Ottawa, Canada, stating the time and the approximate position at which the message was received.

5 Radio Officers and others concerned should note that in peace time Canadian Naval Messages and Admiralty Messages will be transmitted through Canadian Coast Guard Marine Communications and Traffic Services Centres only.

Authority: Department of National Defence (NDHQ)

40 Contamination Prediction System for Merchant Ships at Sea and the MERWARN System

Ref: NATO ATP-45

1 Introduction

Radioactive fallout from nuclear explosions and chemical and biological contamination (hereafter collectively referred to as contamination) on sea and land targets, particularly from the latter, may affect large areas of adjacent waters. The areas affected will depend upon the prevailing wind conditions, and any ship close to or approaching these areas will be in grave danger. It is therefore essential that shipping should be warned of the fallout hazards and contamination in order that:

(a) Passive defence measures, such as switching on washdown systems, may be taken.

(b) Course may be altered, if necessary, to avoid the dangerous zones.

2 Danger zones

All shipping in waters out to 200 nautical miles from any coast at the outset of nuclear release must be regarded as being in an area of possible fallout danger from that release on shore.

3 Ground zero (GZ)

The point on the surface of the earth at, or vertically below or above, the centre of a planned or actual nuclear detonation (GZ).

4 The MERWARN System - Warnings to Merchant Ships at Sea.

A simplified contamination warning system has been established throughout NATO for broadcasting, via MERCOMMS and coastal radio stations, warnings of contamination dangerous to merchant shipping. This system calls for the origination, by NATO naval authorities, of five types of messages:

(a) MERWARN NBC Effective Downwind Message (MERWARN NBC EDM). The MERWARN NBC EDM is a prediction, for a specified sea area and time interval, of the fallout, which will result from a one megaton (1 MT) nuclear surface explosion. It will give the master of a ship, observing a nuclear explosion, an immediate indication of the area likely to be affected by fallout.

(b) MERWARN NBC 3 NUC. The MERWARN NBC 3 NUC will be issued after a nuclear attack and gives fallout data for a specific nuclear explosion or series of explosions, which will be identified in the message.

(c) MERWARN NBC Chemical Downwind Message, (MERWARN NBC CDM). This contains a forecast of the meteorological data needed for the chemical hazard area prediction procedure.

(d) MERWARN NBC 3 CHEM. This message is issued to pass immediate warning of a predicted chemical contamination and hazard area.

(e) MERWARN DIVERSION ORDER. This is a general diversion order, based upon the fallout threat, whereby merchant ships proceeding independently are passed evasive routing instructions of a general nature.

Note: In some cases it may be better to provide warning of contamination by means of general plain language messages rather than by the formats above. The messages in a., b. and c. above are explained in more detail in the following paragraphs. Biological procedures for shipping are the same as for land and are described in Chapter 9 to the NATO ATP-45.

5 MERWARN Originating and Diversion Authorities.

MERWARN Originating and Diversion authorities will be designated by national or NATO commanders before commencement of operations.

6 Precedence of NBC Messages.

All MERWARN NBC messages should be given the precedence FLASH (Z) to ensure rapid handling on any military circuit between the originating authority and the MERCOMMS and/or coastal radio stations. This precedence should not be used where the rules for the use of the International Safety Signal (TTT for CW and Security for voice circuits) apply. (See para 7).

7 Method of Promulgation.

All MERWARN NBC EDM, MERWARN NBC CDM, MERWARN NBC 3 CHEM and NBC 3 NUC messages will be transmitted in plain language, using GMT, preceded by the International Safety Signal (TTT for CW and Security for voice circuits) from the appropriate MERCOMMS station and from all the coastal radio stations of the area concerned. Thus masters need not concern themselves with the identity of the MERWARN originators, but only with the sea areas covered by each message.

8 Relay Responsibilities.

Originating authorities are responsible for relaying to:

(a) The appropriate Coast Earth Station (INMARSAT) (CES), Coast Radio Station (CRS) under their control and/or other CRS in their geographic area.

(b) Their own national authorities (for transmission to merchant ships not yet copying MERCOMMS).

(c) Adjacent MERWARN originators and shipping diverting authorities within the geographical area affected by each MERWARN NBC 3 NUC message.

Note: Adjacent MERWARN originators are responsible for relaying to CES/CRS under their control as necessary.

9 MERWARN EDM

MERWARN NBC EDM is a prediction, for a specified sea area and time interval, of the fallout, which will result from a one megaton (1 MT) nuclear surface explosion. It will give the master of a ship, observing a nuclear explosion, an immediate indication of the area likely to be affected by fallout. MERWARN NBC EDM will be issued at 12 hour intervals from the time of activation of the MERCOMMS system, and will be valid 12 hours ahead from the date and time given in the first line of the message (A). In the event of changing meteorological conditions it may be necessary for the originating authorities to issue MERWARN NBC EDM more frequently. The original MERWARN NBC EDM will automatically be overruled by the latest MERWARN EDM issued. The following standard format will be used:

(a) Message identifier (MERWARN NBC EDM) and date-time-group (GMT) from which valid for 12 hours ahead.

(b) Specified sea area for which valid.

(c) Effective downwind direction (degrees, 3 digits) and effective downwind speed (knots, 3 digits).

(d) Downwind distance of Zone I (nautical miles, 3 digits).

(e) Additional information.

Example:

(a) MERWARN NBC EDM 180600ZSEP1999

(b) Baltic Sea west of 15° 00'E

(c) 045 - 020

(d) 078

(e) NIL.

Note: Sets (b)., (c). and (d). may be repeated for different sea areas should this be considered necessary.

10 MERWARN NBC 3 NUC, Standard Format

MERWARN NBC 3 NUC will be issued after a nuclear attack producing fallout, and gives fallout data for a specific explosion or series of explosions, which will be identified in the message. MERWARN NBC 3 NUC messages are issued as soon as possible after the attack, and at six hour intervals (to the nearest hour) thereafter, for as long as the fallout danger exists. They contain information, which enables the master of a ship to plot the danger area. The standard format of MERWARN NBC 3 NUC contains the sets ALFA, DELTA, FOXTROT and PAPAB of the military NBC 3 NUC message (see ATP-45, Chapter 2). The MERWARN NBC 3 NUC has the following structure:

MERWARN NBC 3 NUC (Message identifier)

ALFA: Strike Serial Number (as defined by the naval authority)

DELTA: Date-time Group of detonation (GMT)

FOXTROT: Location of attack (latitude and longitude, or geographical place name) and qualifier (2 digits as to refer in ATP-45, Annex C, para C.17).

PAPAB: Effective wind speed (3 digits and unit of measurement), downwind distance of Zone I (3 digits and unit of measurement), cloud radius (2 digits and unit of measurement), left and right radial line of the predicted fallout hazard area (3 digits and unit of measurement each).

Example:

MERWARN NBC 3 NUC

ALFA/UK/NBCC/02-001/N//
DELTA/021405ZSEP1999//
FOXTROT/451230N014312E/AA//
PAPAB/012KTS/028NM/02NM/272DGT/312DGT//

11 MERWARN NBC 3 NUC, Plain Language Format.

The MERWARN NBC 3 NUC standard format may not be suitable after a multiple nuclear attack, which produces fallout from several bursts in a large or complex target area. In such cases warnings will be plain language statements of a more general nature, indicating area affected and expected movement of the fallout.

Example 1:

MERWARN NBC 3 NUC

ALFA/UK/02-001/N//
DELTA/021405ZSEP1999//

Fallout extends from Glasgow area to eastern Ireland at 021405Z and is spreading westwards with 12 Knots. Irish Sea is likely to be affected within an area of 60 nautical miles of the British coast.

Example 2:

MERWARN NBC 3 NUC

ALFA/IT/15-001/N//
DELTA/150630ZFEB1999//

Fallout is estimated to be occurring at 150830Z over Adriatic Sea east of the coast line Bari/Brindisi up to a distance of 30 nautical miles. Fallout is moving south-eastwards with 016 Knots, getting weaker. It is not expected to be dangerous after 151000Z.

12 MERWARN NBC CDM.

The MERWARN NBC CDM message contains information needed for CHEM/BIO hazard prediction by the master of a merchant ship. The MERWARN NBC CDM will be issued as required via the MERCOMMS and will be valid as specified. In the event of changes in the meteorological conditions, the MERWARN NBC CDM will be updated as required.

(a) The following standard format will be used:

ALFA: Message identifier (MERWARN NBC CDM), date/time group (GMT) from which valid 6 hours ahead.

BRAVO: Specified sea area for which valid.

CHARLIE: Representative downwind direction (degrees, 3 digits) and representative downwind speed (knots, 3 digits).

DELTA: Maximum downwind hazard distance (nautical miles, 3 digits).

ECHO: Additional information.

Example:

ALFA	MERWARN NBC CDM 180600ZSEP1999//
BRAVO	BALTIC SEA WEST OF 15°00'E//
CHARLIE	045/020//
DELTA	010//
ECHO	NIL//

13 MERWARN NBC 3 CHEM.

MERWARN NBC 3 CHEM. This message is issued to pass immediate warning of a predicted chemical contamination and hazard area. MERWARN NBC 3 CHEM reports are issued as soon as possible after each attack. They contain sufficient information to enable the master of a ship to plot the downwind hazard area.

(a) The following standard format will be used for MERWARN NBC 3 CHEM:

MERWARN NBC 3 CHEM (Message identifier)

ALFA: Strike serial number (as defined by naval authority).

DELTA: Date/time group (Z) of start and end of attack.

FOXTROT: Location of event.

GOLF: Delivery Means.

INDIA: Release Information.

PAPAA: Predicted attack and hazard area.

Note: If representative downwind speed is 5 knots or less, or variable, this letter item will consist of three (3) digits instead of coordinates, representing the radius of a circle in nautical miles centred on the location of the attack contained in set FOXTROT.

YANKEE: The representative downwind direction and speed.

ZULU: Information on actual weather conditions.

GENTEXT: Remarks

Note: Some of the letter items above may not be completed in the report that is received, but there will be sufficient information for a Downwind Hazard plot to be carried out.

(b) The MERWARN NBC 3 CHEM standard format may not be suitable after a multiple chemical attack, which produces a hazard from several attacks or depositions in a large or complex target area. In such cases warnings will be plain language statements of a more general nature, indicating areas affected and expected movement of the hazard.

Example 1:

MERWARN NBC 3 CHEM

ALFA/DA/NBCCC-4/003/C//
DELTA/020300ZSEP1999//
GENTEXT/PERSISTENT NERVE AGENT VAPOUR HAZARD EXISTS FROM NORFOLK TO HATTERAS AT 020300Z SEP 1999 AND IS SPREADING SOUTH-EASTWARDS AT 017 KNOTS. SEA AREA OUT TO 100 NAUTICAL MILES FROM COAST LIKELY TO BE AFFECTED BY 020600ZSEP1999//

Example 2:

MERWARN NBC 3 CHEM

ALFA/DA/NBCC-3/003/C//
DELTA/020300ZSEP1999//
GENTEXT/PERSISTENT NERVE AGENT VAPOUR HAZARD AT 020600 SEP 99 IS ESTIMATED TO BE OCCURRING OVER MOST OF THE SEA AREAS OUT TO 40 MILES EAST OF THE COAST LINE FROM NORFOLK TO HATTERAS. HAZARD IS EXPECTED TO HAVE DISPERSED BY 021000Z SEP1999//

14 MERWARN DIVERSION ORDER.

In addition to the origination of MERWARN NBC EDM and MERWARN NBC 3 NUC messages, naval authorities may, if circumstances dictate, broadcast general diversion orders, based upon the fallout threat, whereby merchant ships proceeding independently will be passed evasive routing instructions of a more general nature, using the standard Naval Control of Shipping (NCS) identifier MERWARN DIVERSION ORDER.

(a) MERWARN DIVERSION ORDER

(b) English Channel closed. All shipping in North Sea remain north of 052 degrees N until 031500ZSEP1999.

15 Other Warnings.

ATP-2, VOL II, gives instructions for the display of signals by ships, which have received a MERWARN NBC 3 NUC message, which affects their area. Ships arriving from sea but remaining beyond visual/aural range of shore stations should continue to keep radio watch in order to receive MERWARN Messages.

APPENDIX "A"

MERWARN Fall-out Plotting - Action by Masters

1 Effective Downwind Direction and Downwind Speed.

Winds in the atmosphere vary considerably with height, both in direction and speed, and have a major influence on the distribution of radioactive fallout from a nuclear cloud. The worst contamination will fall to the surface along a path represented by the average wind between the surface and the middle of the nuclear cloud. Based upon meteorological information on the wind conditions in the air space between the surface and the height of the nuclear cloud, NBC Collection Centres will compute the average direction and speed of the radioactive particles' path from the nuclear cloud to the surface. The results of this computation make the fallout prediction, expressed in the terms of effective downwind direction and wind speed. It should be noted that the direction of the effective downwind is the direction towards which the wind blows. This direction is also known as the fallout axis. The surface wind will usually be considerably different from the effective downwind, both in direction and speed, and the surface wind should never be used to estimate the drift of fallout.

2 The fall-out pattern criteria

The predicted fallout area consists of two zones, Zone I and II, the criteria of which are:

(a) Zone I is the zone of immediate concern. Within this zone there will be areas where exposed, unprotected personnel may receive doses of 150 cGy or greater, within 4 hours. Casualties among personnel may occur within portions of this zone.

(b) Zone II is the zone of secondary hazard. Within this zone the total dose received by exposed, unprotected personnel is not expected to reach 150 cGy within a period of 4 hours after the actual arrival of fallout, not even when the radioactive fallout remains on the deck of the ship.

(c) Outside the two zones the risk will be less. This radiation risk considers the total dose received by exposed, unprotected personnel, not to exceed 75 cGy.

WARNING

At all time consideration must be given to both external and internal radiation doses. Potential residence times in specified contaminated areas could allow exposure to equal the maximum dose allowed by any of the zones mentioned above. In addition, this is a maximum permissible dose approach that requires diligent application of ALARA.

3 Ship's fall-out template

To simplify the plotting and presentation of fallout information in ships, while preserving a reasonable accuracy, a "Fallout Template" is required. A "Ship's Fallout Template" is shown in Figure G40-I, designed for use in naval ships as well as in merchant ships. The table containing cloud radii and safety distances at the bottom of the template is for use in naval ships only, and should not be used by merchant ships. For the purpose of further simplification, merchant ships are to use cloud radii and safety distance as follows:

(a) Plotting from MERWARN NBC EDM: Use cloud radius 10 nautical miles and safety distance 15 nautical miles in all cases.

(b) Plotting from MERWARN NBC 3 NUC: Use the cloud radius given in the MERWARN NBC 3 NUC and, in all cases, a safety distance of 15 nautical miles.

4 Fall-out plotting in merchant ships

When a nuclear explosion is reported in a MERWARN NBC 3 NUC message, the master of a merchant ship should immediately plot the fallout area, using the information contained in the message. When a MERWARN NBC 3 NUC is not available, e.g. when a nuclear detonation is observed from the ship, the data contained in the current MERWARN NBC EDM should be used. The plotting procedures are almost identical in the two cases. The transparent Ship's Fallout Template is used, and the plotting should be made in the following order:

(a) Look up fourth and fifth field of set PAPAB (left and right radial line of the fallout area) and calculate the bisector. This line is the equivalent to the downwind direction. Draw the grid north (GN) line from the centre of the inverted compass rose (GZ) through the number of degrees on the compass rose equal to the above calculated downwind direction.

(b) Using the scale of the chart on which the plot is to be used and with GZ as centre and the downwind distance of Zone I (set PAPAB, field two) as radius, draw an arc between the two radial lines printed on the template on each side of the downwind axis. Using double the distance of Zone I as radius, draw another arc, representing the Zone II downwind distance.

(c) Using the chart scale, with GZ as centre draw a semicircle upwind of GZ, the radius of the circle being the radius given in the MERWARN NBC 3 NUC, (set PAPAB, field three). The pre-printed semi circles may be helpful.

(d) From the intersections of the Zone I arc with the two radial lines, draw lines to the ends of the cloud radius semi circle.

(e) Determine the area in which fallout deposition is predicted to occur at any given time after the detonation:

(1) Multiply the effective downwind speed (from MERWARN NBC 3 NUC, set PAPAB, first field) by the time after burst (in hours), the result being a distance in nautical miles.

(2) To and from this distance add and subtract a safety distance of 15 nautical miles (see para 4.b.) to allow for finite cloud size, diffusion and wind fluctuations. The result is two distances.

(3) With GZ as centre and the two distances obtained in (2) as radii, draw arcs across the plotted fallout area.

(4) The area enclosed between the two arcs will contain, in most cases, the area of deposition of fallout at this particular time after the burst. (See the worked example in para 5).

5 Plotting from MERWARN NBC 3 NUC

Example:

(a) Given:

MERWARN NBC 3 NUC

ALFA/UK/NBCC/09-001/N//
DELTA/091715ZSEP1999//
FOXTROT/PLYMOUTH/AA//
PAPAB/018KTS/040NM/05NM/275DGT/315DGT//

(b) Problem:

Determine the predicted fallout area and the area within which fallout is predicted to deposit at the surface at 091845ZSEP1999.

(c) Solution:

See Figure 11-II.

(1) Calculate the downwind direction 295 degrees as bisector from left and right radial line from set PAPAB, fourth and fifth field. Draw the GN line from GZ through 295 degrees of the inverted compass rose on the template.

(2) From set PAPAB, the downwind distance of Zone I is 040 nautical miles. Therefore the Zone II downwind distance is 2 x 40 = 80 nautical miles. Using the appropriate chart scale, with GZ as centre and 40 and 80 nautical miles as radii, draw arcs between the two radial lines.

(3) From set PAPAB, third field, the cloud radius is 05 nautical miles. With GZ as centre and 5 nautical miles as radius draw the cloud radius semicircle upwind of GZ. The pre-printed semi circles may be helpful.

(4) Connect the ends of the cloud radius semi circles with the intersection of the left and right radial lines and the Zone I arc.

(5) 091845Z is 1½ hours after the burst. From set PAPAB, first field, obtain the speed of the effective downwind, i.e. 018 knots.

018 knots * 1½ h = 27 nautical miles.

The safety distance is always 15 nautical miles.

27 + 15 = 42 nautical miles, and

27 - 15 = 12 nautical miles.

(6) With GZ as centre and 42 and 12 nautical miles as radii draw arcs across the fallout pattern. The area enclosed by the two arcs and the contour of the pattern is the area within which fallout is predicted to deposit at the surface at 091845ZSEP 1999.

6 Contamination Plotting in Merchant Ships.

When a chemical attack is reported in a MERWARN NBC 3 CHEM message, the following procedure should be followed:

(a) Plot the location of the attack from the details in set FOXTROT.

(b) Plot the coordinates or radius of the circle contained in set PAPAA.

7 Observations without MERWARN NBC 3 CHEM.

If a MERWARN NBC 3 CHEM is not received but either observations of an attack, or a local report of an attack is received, then the following procedure should be carried out:

(a) Mark the actual or suspected location of the attack on the chart.

(b) Draw a circle, radius 0.5 NM, centred on the attack location. From the centre of the attack area draw the representative downwind direction, which is contained in set CHARLIE of the MERWARN NBC CDM.

(c) Place the centre of the ship's chemical template on the centre of the attack area. Position the centre line of the template on the representative downwind direction line.

(d) Keeping the centre line of the template on the representative downwind direction, move the template upwind until the 20° lines of the template make tangents with the circle around the attack area.

(e) Mark the tangent lines using the holes in the template. Join these marks with the attack area circle.

(f) If the chemical agent is identified as nerve agent, take the downwind hazard distance for the miosis level from ATP-45, Annex E for the agent. Measure this distance from the centre of the attack area on the downwind direction line and mark it. Through this point draw a line perpendicular to the representative direction line until it meets the 2 tangents.

(g) If the agent is unknown then use the downwind hazard distance of 44 NM as this will be the worst case.

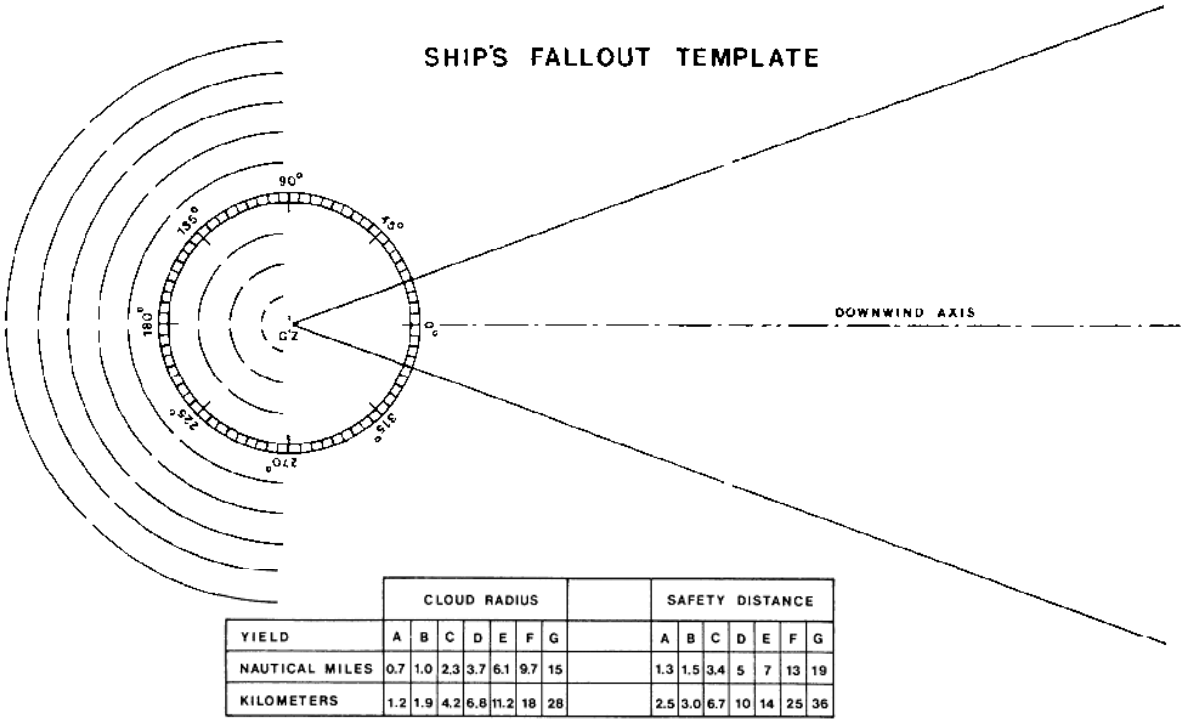
(h) The hazard area is now defined as the area bounded by:

(1) The upwind radius of the attack area.

(2) The 20° tangents.

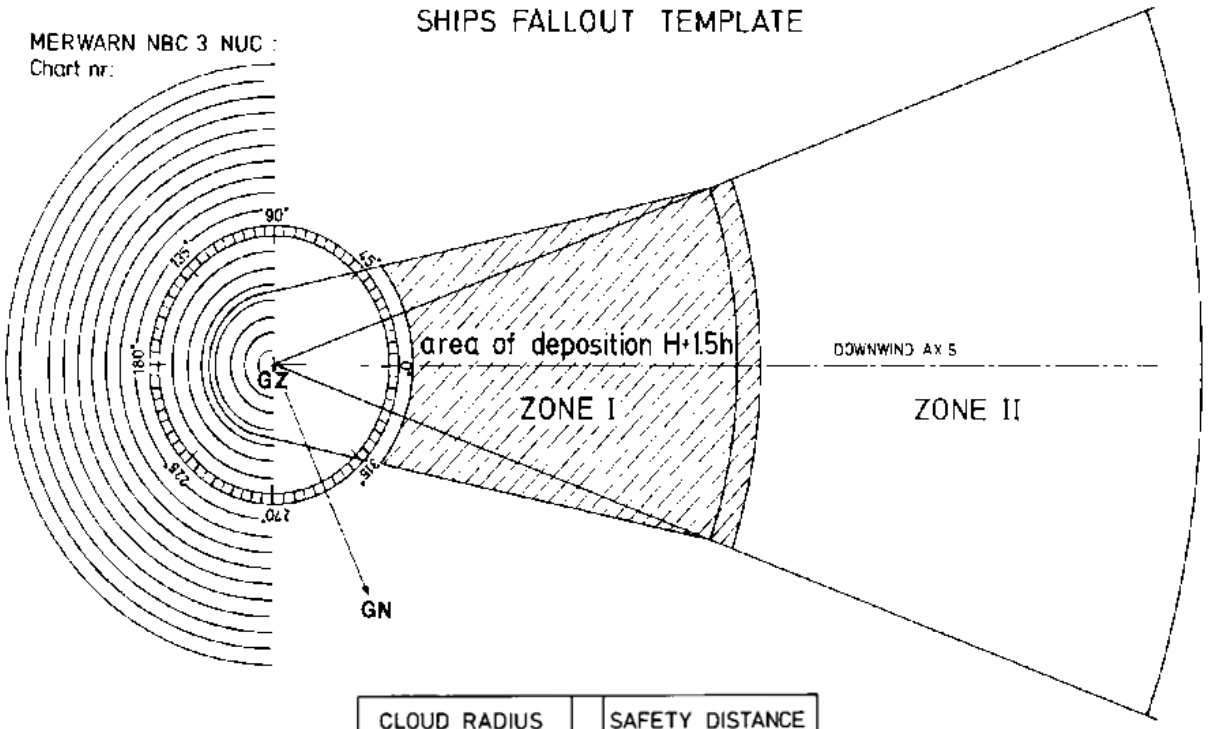
(3) The downwind hazard distance line.

(i) Adjustments to the downwind hazard distance can be made as and when the agent is identified.



YIELD	CLOUD RADIUS A	B	C	D	E	F	G		SAFETY DISTANCE A	B	C	D	E	F	G
NAUTICAL MILES	0.7	1.0	2.3	3.7	6.1	9.7	15		1.3	1.5	3.4	5	7	13	19
KILOMETERS	1.2	1.9	4.2	6.8	11.2	18	28		2.5	3.0	6.7	10	14	25	36

Figure G40-I, Ship's Fallout Template.



	CLOUD RADIUS							SAFETY DISTANCE						
YIELD	A	B	C	D	E	F	G	A	B	C	D	E	F	G
NAUTICAL MILES	.7	1.0	2.3	3.7	6.1	9.7	15	1.3	1.5	3.4	5	7	13	19
KILOMETERS	1.2	1.9	4.2	6.8	11.2	18	28	2.5	3.0	6.7	10	14	25	36

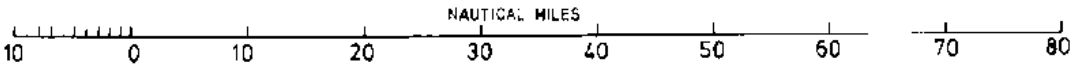


Figure 40-II, Fallout Plotting, using Ship's Template.

APPENDIX "B"

Instructions to Masters in an EMERGENCY on defence against Nuclear fall-out

1 Attacks with nuclear weapons may be expected on land targets adjacent to your route. Such attacks are likely to result in radioactive fall-out being deposited over large sea areas, through which you may have to pass. It may be possible to issue a general warning to indicate which areas are likely to be dangerous at any particular time.

2 As fall-out will probably be in the form of fine dust, which may well be invisible, you should observe the following precautions during nuclear fall-out.

3 If your ship is equipped with the necessary instruments to detect fall-out, these precautions may be relaxed accordingly.

Precautions to be taken

4 If your ship has a pre-arranged radioactive counter-measure plan prepared, ensure that all the measures laid down in that plan are carried out. If no such plan is in existence, improvise measures as indicated below:

(a) Select a group, or groups, of compartments as low down in the ship and as far removed from the ship's sides as possible within which the crew can take shelter. These spaces should be equipped with washing and lavatory facilities, and sufficient food should be stowed there to last for the passage through the dangerous area. Spaces selected should be capable of being completely shut down with all ventilation and other openings secured.

(b) Strike below, or cover, as much weather deck gear as possible, particularly absorbent materials such as rope, awnings, etc. Ensure that food stores and galleys are closed down with all openings closed. Stop all ventilation fans and close or cover all ventilation and other openings, which are not essential for running machinery and continued steaming. In the absence of suitable closures, the use of canvas covers, adhesive tape, etc., is recommended.

(c) Rig all available fire-fighting/wash-deck hoses and nozzles to spray water continuously over as much of the weather decks and superstructure as possible, to prevent contamination settling. If complete coverage is impossible, concentrate effort on the navigating position, over the top of the shelter position(s) and above the machinery spaces.

(d) If a continued spraying of the upper-works is impracticable, organize working parties at frequent intervals to wash down the weather decks and superstructure to reduce the build-up of contamination.

(e) Reduce the number of your crew who must remain on the weather decks or in positions near the weather decks, or in machinery spaces, to the bare minimum required for safe steaming, and keep the remainder in the selected shelter position(s).

(f) Ensure that all men who must remain in exposed positions (including machinery spaces, unless ventilation can be stopped) are fully clothed, preferably in "foul weather" clothing, with all the skin covered so far as practicable.

(g) During your passage, so far as the numbers of appropriately skilled personnel allow, change round those manning exposed or relatively unsheltered positions (including the machinery spaces) as often as possible, in order to spread the radiation dosage. Remember that this advice also applies to YOU; take as much shelter as the safe navigation of your ship will permit.

(h) Ensure that all men who have been exposed remove at least their outer clothing on returning to shelter, wash thoroughly their exposed skin, especially the hands, face and neck, as soon as possible, and in any case before drinking or eating.

(i) Restrict unnecessary movement throughout the ship, to minimize the possible spread of contamination.

(j) Unless essential, do not distil water for drinking while in the dangerous areas.

(k) As soon as possible after clearing the dangerous area, carry out a thorough hosing down of the entire weather decks and superstructure.

Authority: Department of National Defence (DND)

41 General Warning Regarding Steaming and Anchor Lights Exhibited by H.M.C. Ships

Mariners, Shipowners and others concerned are advised that H.M.C. and H.M. Ships by virtue of their special construction, may be unable to comply with the following regulations: *Collision Regulations* – Rule 23 (a)(ii) of Schedule I. H.M.C. Ships have been exempted from carrying the second steaming light.

Authority: Canada Shipping Act, 2001
Department of National Defence (NDHQ)

42 Agreement Between the Government of Canada and the Government of the Union of Soviet Socialist Republics Concerning the Prevention of Incidents at Sea

Note: This notice has been removed from the Annual Edition of Notices to Mariners.

43 Caution with Regard to Ships Approaching Controlled Access Zones Surrounding His Majesty's Canadian Naval Facilities, Warships and Allied Warships while Underway, at Anchor or Stationary

1 The attention of ship owners and mariners is called to understand that a "controlled access zone" means a zone, designated by the Minister of National Defence that includes all corresponding airspace above, and water and land below, the zone.

2 Attention is drawn to the following definition: A "ship" means His Majesty's Canadian Ship as defined in subsection 2(1) of the *National Defence Act* or a ship under the control of a visiting force that is legally in Canada by virtue of the *Visiting Forces Act* or otherwise.

3 Mariners are therefore warned that the Coordinates of the Controlled Access Zones will be reflected in the next available update to the affected nautical charts.

4 Mariners are warned that the MND has designated as controlled access zones certain areas or parts of areas of water described in the Controlled Access Zone Order (Halifax, Esquimalt and Nanoose Harbours). The areas of water described below are hereby designated as controlled access zones for an indeterminate period.

ACCESS TO CONTROLLED ACCESS ZONES

5 The Chief of the Defence Staff, having regard to safety or security, may:

a. permit persons or classes of persons to have access to a controlled access zone without conditions;

b. permit persons or classes of persons to have access to a controlled access zone on such conditions as the Chief of the Defence Staff considers appropriate in the circumstances; or

c. prohibit persons or classes of persons from having access to a controlled access zone.

6 DND will give notice as soon as possible that access to a controlled access zone is permitted or prohibited and of the conditions of access to the zone, and of any changes to that permission or prohibition or to those conditions, to all persons who may be affected by them via Annual Edition of Notice to Mariners, Monthly Notice to Mariners and through the local VTMS. Mariners are encouraged to contact the local Queen's Harbour Master if it is deemed that their navigational passage will transit through a designated Control Zone.

7 Mariners are cautioned that every person on entering or exiting a controlled access zone shall, on the demand of a security guard, submit to a search of their person or any property or thing under their control. Should a person refuse to submit to a search, then:

a. if the person is seeking entry to the controlled access zone, they may be refused entry; or

b. if the person is exiting the zone, the person or any property or thing under their control may be searched by a security guard, which search shall be carried out with only such force as is necessary for that purpose.

8 A security guard may without a warrant search any property or thing in a controlled access zone if the security guard has reasonable grounds to believe that the property or thing is, or may contain anything that is, likely to endanger the safety or security of HMC Ship's, DND personnel, Visiting Forces and DND facilities.

9 Every person who is in a controlled access zone with permission shall comply with every condition of access established for the zone and every direction given under this Order by a security guard and the person, or any property or thing under the person's control, may be removed from the zone by a security guard if the person fails to comply with any of those conditions or directions.

10 Every person who is in a controlled access zone without permission shall comply with every direction given under this Order by a security guard and the person, or any property or thing under the person's control, may be removed from the zone by a security guard if the person fails to comply with any of those directions.

CONTROLLED ACCESS ZONES FOR HALIFAX, NS., ESQUIMALT AND NANOOSE HARBOURS BC

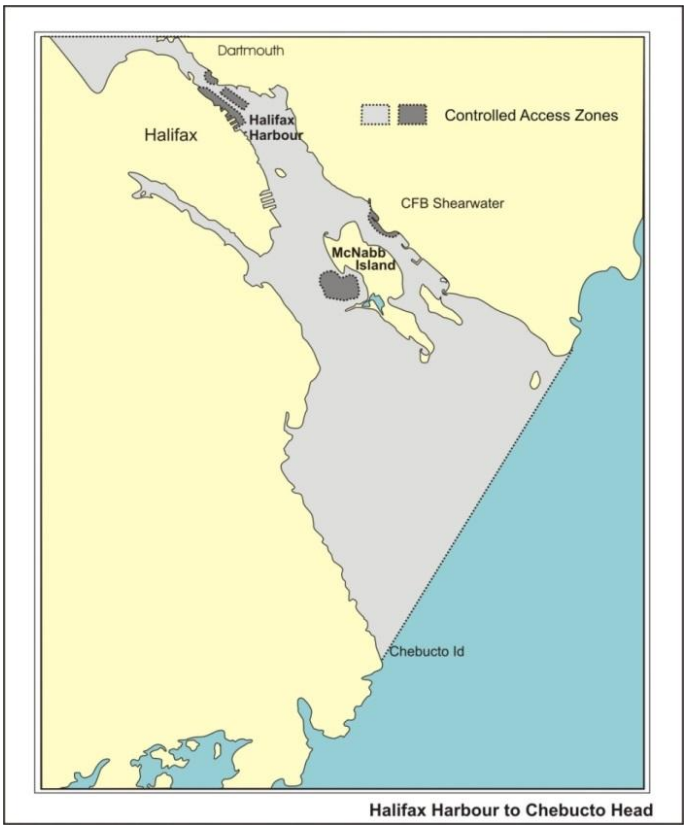
11 a. Halifax, Nova Scotia: The area of water in Halifax Harbour and the contiguous area of water bounded by a straight line joining the following coordinates:
(1) 44°30.19′N, 63°31.19'W
(2) 44°35.55'N, 63°26.61'W

b. Esquimalt, British Columbia:

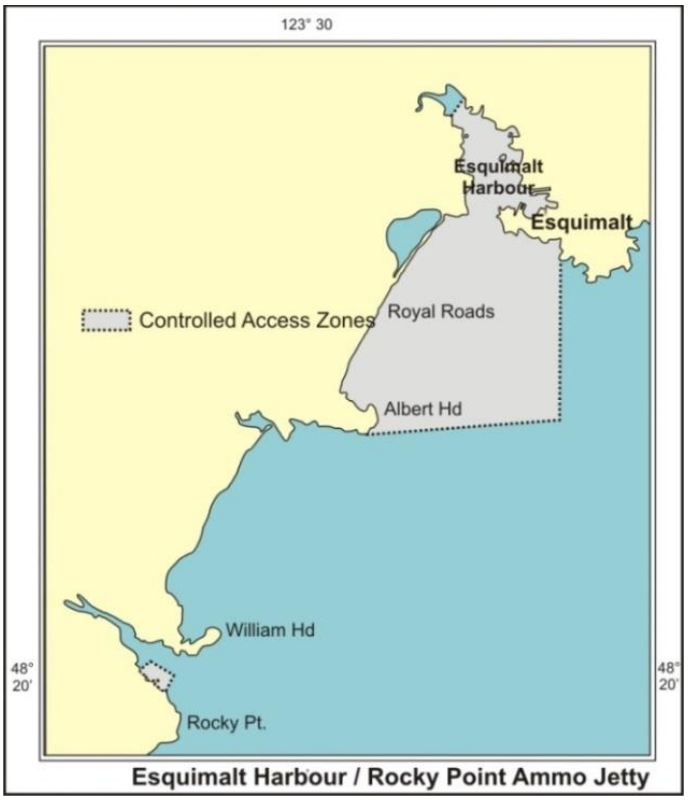
(1) The area of water in Esquimalt Harbour bounded on the northwest by a straight line joining coordinates 48°27.13'N, 123°27.23'W and 48°27.36'N, 123°27.01'W, and the contiguous area of water bounded by straight lines joining the following coordinates:
(a) 48°25.31'N, 123°25.21'W
(b) 48°23.21'N, 123°25.21'W
(c) 48°23.03'N, 123°28.79'W

(2) The area of water contiguous to the naval jetty at Canadian Forces Ammunition Depot Rocky Point, Canadian Forces Base Esquimalt, bounded by straight lines joining the following coordinates:
(a) 48°20.04'N, 123°33.20'W
(b) 48°20.16'N, 123°32.98'W
(c) 48°20.12'N, 123°32.70'W
(d) 48°19.98'N, 123°32.56'W
(e) 48°19.78'N, 123°32.69'W

c. Nanoose Bay, British Columbia: The area of water in Nanoose Harbour and the contiguous area of water bounded by straight lines joining the following coordinates:
(a) 49°16.38'N, 124°07.05'W
(b) 49°16.38'N, 124°06.05'W
(c) 49°15.96'N, 124°06.05'W
(d) 49°15.94'N, 124°06.32'W
(e) 49°15.28'N, 124°06.30'W



Halifax Harbour to Chebucto Head



Esquimalt Harbour / Rocky Point Ammo Jetty

DESIGNATED CONTROLLED ACCESS ZONES WITHIN HARBOURS

d. The area of water in Halifax Harbour contiguous to naval jetty NA1 at Canadian Forces Base Halifax, bounded by straight lines joining the following coordinates:
   (a) 44°37.98'N, 63°31.50'W
   (b) 44°37.86'N, 63°31.48'W
   (c) 44°37.81'N, 63°31.42'W
   (d) 44°37.73'N, 63°31.55'W
   (e) 44°37.58'N, 63°31.43'W
   (f) 44°37.45'N, 63°31.22'W
   (g) 44°37.38'N, 63°30.93'W
   (h) 44°37.45'N, 63°30.75'W

e. The area of water in Halifax Harbour contiguous to naval jetties NB, NC, ND, NE, NF, NG, NH, NI, NJ and NK2 at Canadian Forces Base Halifax, bounded by straight lines joining the following coordinates:
   (a) 44°39.87'N, 63°35.52'W
   (b) 44°39.93'N, 63°35.40'W
   (c) 44°39.78'N, 63°35.12'W
   (d) 44°39.49'N, 63°34.55'W
   (e) 44°39.33'N, 63°34.43'W
   (f) 44°39.20'N, 63°34.64'W

f. The area of water in Halifax Harbour contiguous to naval jetty NL3 at Canadian Forces Base Halifax, bounded by straight lines joining the following coordinates:
   (a) 44°40.22'N, 63°35.27'W
   (b) 44°40.14'N, 63°35.42'W
   (c) 44°40.03'N, 63°35.35'W
   (d) 44°39.96'N, 63°35.19'W
   (e) 44°39.98'N, 63°35.09'W

g. The area of water in Halifax Harbour contiguous to naval jetty NN3 at Canadian Forces Base Halifax, bounded by straight lines joining the following coordinates:
   (a) 44°42.52'N, 63°38.23'W
   (b) 44°42.38'N, 63°38.22'W
   (c) 44°42.29'N, 63°38.08'W
   (d) 44°42.24'N, 63°37.87'W
   (e) 44°42.32'N, 63°37.73'W

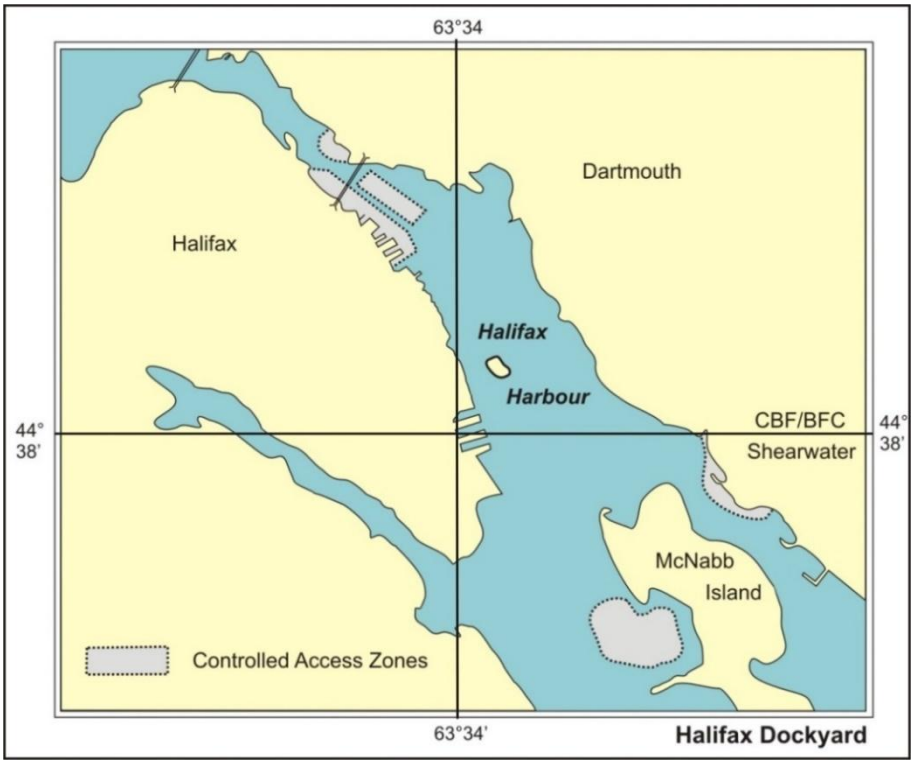
h. The area of water in Halifax Harbour in the Bedford Basin, bounded by straight lines joining the following coordinates:
   (a) 44°42.06'N, 63°39.55'W
   (b) 44°42.23'N, 63°38.92'W
   (c) 44°42.55'N, 63°39.06'W
   (d) 44°42.41'N, 63°39.71'W
   (e) 44°42.06'N, 63°39.55'W

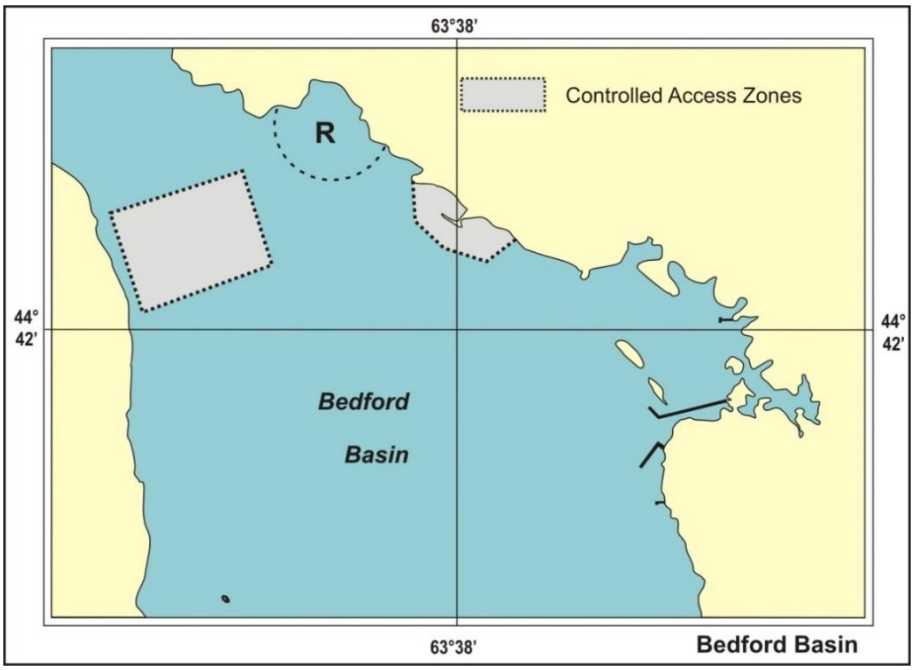
i. The area of water in Halifax Harbour south of the MacDonald Bridge, bounded by straight lines joining the following coordinates:
   (a) 44°39.92'N, 63°34.91'W
   (b) 44°39.63'N, 63°34.34'W
   (c) 44°39.51'N, 63°34.48'W
   (d) 44°39.77'N, 63°35.05'W
   (e) 44°39.92'N, 63°34.91'W

j. The area of water in Halifax Harbour near McNabb Island, bounded by straight lines joining the following coordinates:
   (a) 44°36.34'N, 63°32.45'W
   (b) 44°36.32'N, 63°32.05'W
   (c) 44°36.37'N, 63°31.85'W
   (d) 44°36.39'N, 63°31.72'W
   (e) 44°36.65'N, 63°31.76'W
   (f) 44°36.74'N, 63°31.92'W
   (g) 44°36.69'N, 63°32.14'W
   (h) 44°36.80'N, 63°32.30'W
   (i) 44°36.73'N, 63°32.66'W
   (j) 44°36.34'N, 63°32.45'W

k. The area of water the perimeter of which is 200 metres from the perimeter of a ship that is moving within Halifax Harbour or the contiguous water, bounded by a straight line joining coordinates 44°30.19'N, 63°31.19'W and 44°35.55'N, 63°26.61'W

l. The area of water the perimeter of which is 500 metres from the perimeter of a ship that is stationary, including a ship that is at anchor, within Halifax Harbour





m. The area of water in Esquimalt Harbour contiguous to the naval jetties at Canadian Forces Base Esquimalt, bounded by straight lines joining the following coordinates:
   (a) 48°25.73'N, 123°26.25'W
   (b) 48°25.90'N, 123°26.53'W
   (c) 48°26.15'N, 123°26.44'W
   (d) 48°26.21'N, 123°26.05'W
   (e) 48°26.12'N, 123°25.72'W

n. The area of water in Esquimalt Harbour contiguous to the naval jetties at Canadian Forces Base Esquimalt, bounded by straight lines joining the following coordinates:
   (a) 48°26.91'N, 123°26.99'W
   (b) 48°26.88'N, 123°26.65'W
   (c) 48°26.31'N, 123°26.52'W
   (d) 48°26.13'N, 123°26.61'W
   (e) 48°26.18'N, 123°26.90'W

o. The area of water the perimeter of which is 200 metres from the perimeter of a ship that is underway within Esquimalt Harbour, bounded on the northwest by a straight line joining coordinates 48°27.13'N, 123°27.23'W and 48°27.36'N, 123°27.01'W, or within the contiguous area of water bounded by straight lines joining the following coordinates:
   (a) 48°25.31'N, 123°25.21'W
   (b) 48°23.21'N, 123°25.21'W
   (c) 48°23.03'N, 123°28.79'W

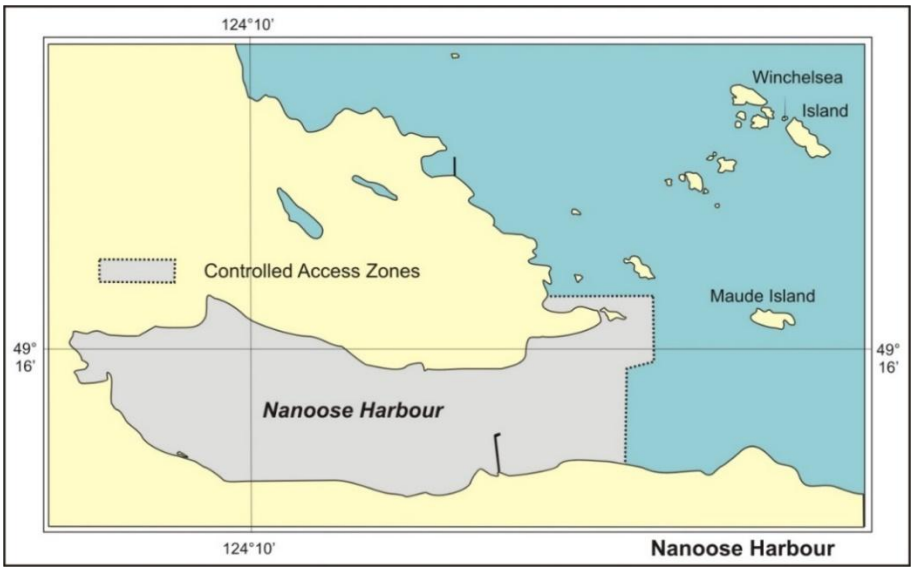
p. The area of water the perimeter of which is 100 metres from the perimeter of a ship that is stationary, including a ship that is at anchor, within Esquimalt Harbour, bounded on the northwest by a straight line joining coordinates 48°27.13'N, 123°27.23'W and 48°27.36'N, 123°27.01'W, or within the contiguous area of water bounded by straight lines joining the following coordinates:
   (a) 48°25.31'N, 123°25.21'W
   (b) 48°23.21'N, 123°25.21'W
   (c) 48°23.03'N, 123°28.79'W

q. The area of water contiguous to the naval jetty at Canadian Forces Ammunition Depot Rocky Point, Canadian Forces Base Esquimalt, bounded by straight lines joining the following coordinates:
   (a) 48°20.04'N, 123°33.20'W
   (b) 48°20.16'N, 123°32.98'W
   (c) 48°20.12'N, 123°32.70'W
   (d) 48°19.98'N, 123°32.56'W
   (e) 48°19.78'N, 123°32.69'W

r. The area of water in Nanoose Harbour contiguous to the naval jetties at Canadian Forces Maritime Experimental and Test Ranges, bounded by straight lines joining the following coordinates:
   (a) 49°15.93'N, 124° 08.10'W
   (b) 49°15.83'N, 124° 08.10'W
   (c) 49°15.82'N, 124° 09.01'W
   (d) 49°15.93'N, 124° 09.46'W
   (e) 49°16.15'N, 124° 09.50'W

s. The area of water the perimeter of which is 200 metres from the perimeter of a ship that is underway within Nanoose Harbour or the contiguous area of water, bounded by straight lines joining the following coordinates:
   (a) 49°16.38'N, 124°07.05'W
   (b) 49°16.38'N, 124°06.05'W
   (c) 49°15.96'N, 124°06.05'W
   (d) 49°15.94'N, 124°06.32'W
   (e) 49°15.28'N, 124°06.30'W

t. The area of water, which is 100 metres from the perimeter of a ship that is stationary, including a ship that is at anchor, within Nanoose Harbour or the contiguous area of water, bounded by straight lines joining the following coordinates:
   (a) 49°16.38'N, 124°07.05'W
   (b) 49°16.38'N, 124°06.05'W
   (c) 49°15.96'N, 124°06.05'W
   (d) 49°15.94'N, 124°06.32'W
   (e) 49°15.28'N, 124°06.30'W



Authority: Department of National Defence (NDHQ)

G General Information

44 The International Hydrographic Organization

Note: This notice has been removed from the Annual Edition of Notices to Mariners.

45 Horizontal Datum of Charts

The Canadian Hydrographic Service (CHS) has adopted WGS84 which is compatible with Global Navigation Satellite Systems (GNSS). Existing paper nautical charts may also reference the North American Datum 1983 (NAD83), which is considered equivalent to WGS84. In a limited number of cases, an older horizontal datum may be used and will require GNSS positions to be adjusted using the chart-specific Horizontal Datum note, as shown on the chart. The mariner should always check the Horizontal Datum note shown on CHS charts for additional instructions.

Authority: Canadian Hydrographic Service (CHS)

46 Canadian Coast Guard Regional Offices

Mariners or other persons wishing to communicate with the Canadian Coast Guard concerning aids to navigation may do so at the following offices:

ATLANTIC REGION

Regional Headquarters

P.O. Box 5667
St. John's, NL A1C 5X1

Operations Supervisor, Aids to Navigation
175 McIlveen Drive
Saint John, NB
E2L 4B3
Telephone: 1-506-636-4708 **(B)**

MCTS Refer to RAMN **(H/N)**

Navigational Warnings

Telephone: 1-709-695-2168 **(B) (H/N)**
1-902-564-7751 **(B) (H/N)**
1-800-686-8676 **(B) (H/N) (TF)**

Email: NAVWARN.MCTSPortAuxBasques@innav.gc.ca
NAVWARN.MCTSSydney@innav.gc.ca

ARCTIC REGION

Yellowknife, NT Superintendent
Navigational Programs
5120 49th Street, 3rd Floor
Yellowknife, NT
X1A 1P8

Telephone: 1-867-444-0109 **(B)**

Email: DFO.CCGArcticAidsNavigation-AidesalaNavigationArctiqueGCC.MPO@dfo-mpo.gc.ca

Navigational Warnings

Telephone: 1-867-979-5269 **(B) (H/N)**

Email: NAVWARN.MCTSIqaluit@innav.gc.ca

CENTRAL REGION

St. Lawrence Sector

Québec, QC Superintendent, Aids to Navigation
Supervisor, Operations
1550, Avenue D'Estimauville
Québec, QC G1J 5E9

Telephone: 1-418-649-6999 **(B)**
1-581-443-6293 **(B)**

Email: DFO.AtoNStLawrence-StLaurentAalaN.MPO@dfo-mpo.gc.ca

Great Lakes Sector

Sarnia, ON Supervisor, Operations
Aids to Navigation
520 Exmouth Street
Sarnia, ON N7T 8D1

Telephone: 1-226-402-1052 **(E)**
1-705-773-4342 **(E)**

Email: DFO.CCGCentralAtoNGreatLakes-GrandsLacsAalaNCentreGCC.MPO@dfo-mpo.gc.ca

MCTS Refer to RAMN **(H/N)**

Navigational Warnings

Telephone : 1-613-925-0666**(B) (H/N)**

Email : AVNAV.SCTMPrescott@innav.gc.ca

WESTERN REGION

Victoria, BC Superintendent
Aids to Navigation and Waterways
25 Huron Street
Victoria, BC V8V 4V9

Telephone: 1-250-480-2600 **(E)**
1-800-667-2179 **(TF)**

Email: DFO.CCGWesternAidstoNavigation-AidesalaNavigationOuestGCC.MPO@dfo-mpo.gc.ca

Navigational Warnings

Telephone: 1-250-627-3070 **(H/N)**

Email: NAVWARN.MCTSPrinceRupert@innav.gc.ca

(B) Bilingual Service **(E) English Only Service** **(TF) Toll Free** **(H/N) Holidays and Nights**