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TP 14707
(08/2008)

PLACES OF REFUGE CONTINGENCY PLAN ATLANTIC REGION (PORCP – ATL)

EDITION 1
12 AUGUST 2008



TC-1003091



Canada

<p>Responsible Authority</p> <p>The Regional Director Marine Safety Atlantic Region is responsible for this document, including any change, correction, or update.</p>	<p>Approval</p> <hr/> <p>Alan Milne, Acting Regional Director Marine Safety Atlantic Region</p>
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Date Revised:

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SECTION 1

The Places of Refuge Contingency Plan (PORCP) applies to all situations where a ship is in need of assistance and requests a place of refuge within Canadian waters. This includes Canada's internal waters, territorial sea and the Exclusive Economic Zone (EEZ).

The PORCP also applies in the case where a ship is destined for Canada and has reported a problem (a defect, deficiency or a casualty).

The PORCP does not apply to distress situations where the safety of life is involved. In such cases, established search and rescue procedures shall be followed.

TP 14707E "The National Places of Refuge Contingency Plan" is available at the following link:
<http://www.tc.gc.ca/MarineSafety/tp/tp14707/menu.htm>.

SECTION 2

Coastal Area Review of Potential Places of Refuge in the Atlantic Region

BACKGROUND

The consideration of potential “Places of Refuge” for ships in need of assistance became necessary and timely in light of the recent adoption by IMO of Resolution A.949(23) “*Guidelines on Places of Refuge for Ships in Need of Assistance*” and Resolution A. 950(23) “*Maritime Assistance Services*”(MAS). These guidelines offer advice to both coastal states and masters of ships as to the manner in which situation giving rise to a request for access to a place of refuge might be best handled.

The focus on the “Places of Refuge” issue was brought up by three significant shipping disasters (oil tankers “ERIKA”, “CASTOR” and “PRESTIGE”), which impacted mainly the coasts of Europe. These incidents resulted in very serious damage to coastline ecosystems, communities and businesses. The scale of the damage and the political response to it have given rise to intense international interest and concern. This has led to the development of the Guidelines, which provide a framework for decision making that will help to ensure a thorough and balanced risk assessment, all concerns of the stakeholders to be considered and the best risk control strategy decided and implemented in a timely and safely manner.

Transport Canada has developed the *National Places of Refuge Contingency Plan (PORCP)* TP 14707E as a framework for deciding a suitable “Places of Refuge” in Canada.

EVALUATION OF THE ATLANTIC COAST LINE

This process will facilitate the risk evaluation and compare one option to another in the event of an incident. The most suitable “Place of Refuge” can only be determined after the details of the specific incident are known and thoroughly considered on a case by case basis, as the limitations, operation considerations, hazards and associated risks can vary greatly with each incident.

Transport Canada Marine Safety – Atlantic Region has taken this into consideration when performing the evaluation of the Atlantic Coast of Canada in order to assemble data that will be used to expedite the case specific analysis and decision making process. This evaluation of the Atlantic Canada coastline is not a process for “pre-designation” or “pre-identification”, but is meant to establish factors of suitability of such places, facilities, and resources to assist a ship in these places and will help to identify the nature and degree of risk from the environmental social and economic point of view.

CURRENT STATUS

Transport Canada Marine Safety Branch supports the IMO Resolutions A .949(23) and A .950(23) regarding the Places of Refuge for ships in need of assistance and Maritime Assistance Services.

National Contingency Plans for responding to a request for a place of refuge have been developed at Transport Canada Headquarters in Ottawa.

DEPARTMENTAL POSITION

Transport Canada recognizes that because of the international nature of shipping, action to mitigate risks and prevent incidents related to ships requesting places of refuge is most effectively carried out through the implementation of IMO Resolution A. 949(23) *“Guidelines on Places of Refuge for Ships in Need of Assistance”* and Resolution A. 950(23) *“Maritime Assistance Services”(MAS)*.

Transport Canada is committed to consult with other Federal and Provincial Departments to form an assessment team as well as with all other interested stakeholders to select suitable “place of refuge” on a case-by-case basis when a request is received on the East Coast of Canada

Transport Canada is committed to maintaining and updating the national and regional Contingency Plan. Transport Canada will carry out a risk assessment on a case to case basis together with a decision making mechanism regarding Places of Refuge for ships in need of assistance in order to ensure a safe, efficient and environmentally friendly transportation system.

Atlantic Region List of Evaluated Places of Refuge

Ref #	Place of Refuge Name	Province	Chart Sailing Directions	Winter Ice	Pilotage VTMS Port Authority	Anchorage Depths Bottom	Swing Area	Shelter Provided	Response Org.	Oil Handling Facilities	Facilities
1.	Saint John, (Courtney Bay)	New Brunswick	4117 4116 ATL 106	Ice Free	Compulsory Fundy Traffic Saint John Port Authority	Areas A & B 11 to 25 m, Mud, Sand Area C 30 to 50 m, Sand, Shale	1 mile 1.5 miles	Exposed SW to SE winds / seas Very large tides and currents	ALERT	Canaport Offshore & Onshore	Tugs Berths Contractors TCMS Office
2.	Shelburne	Nova Scotia	4209 ATL 105	Ice Free	Non-Compulsory No VTMS Public Port	N & S of Adament Rk in 9 to 13 m, mud. 3.8 Cables E of Harts Pt, 11 m, mud.	3 cables 2 cables	Sheltered	ECRC	No	Shipyard 3,000 tonnes Contractors
3.	Halifax	Nova Scotia	4237 4201 4202 4203 ATL 105	Ice Free	Compulsory Halifax Traffic Halifax Port Authority	Inner Hbr 1 to 7 , 14 to 20 m, Mud Bedford Basin 8 to 12 , 40 to 70 m, Mud, Rock Approaches A & B 40 to 60 m Rock	1.8 cables 4 cables 1 mile	Sheltered Open to N to NE Exposed, Poor Holding Ground	ECRC	Imperial Oil Ultramar Wilson Fuels McAsphalt	Shipyard 36,000 tonnes & 173 m Tugs Berths (Oil, Containers, General) Contractors TCMS Office
4.	Chedabucto Bay Inhabitants Bay Strait of Canso Superport	Nova Scotia	4335 4306 4307 4308 ATL 104	Possible Pack Ice Ice Free Ice Free	Compulsory Canso Traffic Public Ports	A to F , 25 to 48 m. Mud I 18 m in Mud Very deep water	2 miles 1 mile	Open to E'ly Sheltered Sheltered	PTMSC	Statia Terminal	Tugs Berths (Oil, Stone, Coal General) Contractors TCMS Office

Ref #	Place of Refuge Name	Province	Chart Sailing Directions	Winter Ice	Pilotage VTMS Port Authority	Anchorage Depths Bottom	Swing Area	Shelter Provided	Response Org.	Oil Handling Facilities	Facilities
5.	Sydney	Nova Scotia	4266 ATL 104	Pack Ice Heavy Pressure	Compulsory No VTMS Public Port	6 cables NW Point Edward, 11 m in Mud 6 cables NE Point Edward, 15m in Mud	5 cables 4 cables	Open to N to NE Sheltered	ECRC	Imperial Oil	Shipyard 2,000 tonnes Berths (Oil, General, Coal) Contractors TCMS Office
6.	Chaleur Bay Dalhousie Belledune	New Brunswick	4486 4920 4426 ATL 108	Pack Ice Heavy Pressure	Non-Compulsory No VTMS Public Ports Belledune Port Authority	Nepisiguit Bay 23m in SSh Berths Berths	2 miles	Open to NE Sheltered Sheltered	ECRC	NB Power Belldune	Berths Contractors TCMS Office
7.	Corner Brook Bay of Islands Humber Arm	Newfoundland & Labrador	4652 4653 ATL 109	Pack Ice Heavy Pressure	Compulsory No VTMS Corner Brook Port Corporation	Bay of Islands, 1 mile N of Seal Island, 80 to 100m Humber Arm, 80 to 100 m throughout, in Mud	1 mile 4 cables	Open to NW Sheltered	ECRC	Irving Oil	Berths (Oil, General) Contractors TCMS Office
8.	Marystown	Newfoundland & Labrador	4587 ATL 102	Possible Pack Ice	Non-Compulsory Placentia Traffic Public Port	6 cables N of Seal Rk, 76m in Mud/Gravel	6 cables		ECRC	No	Shipyard 3000 tonnes Berths Contractors TCMS Office

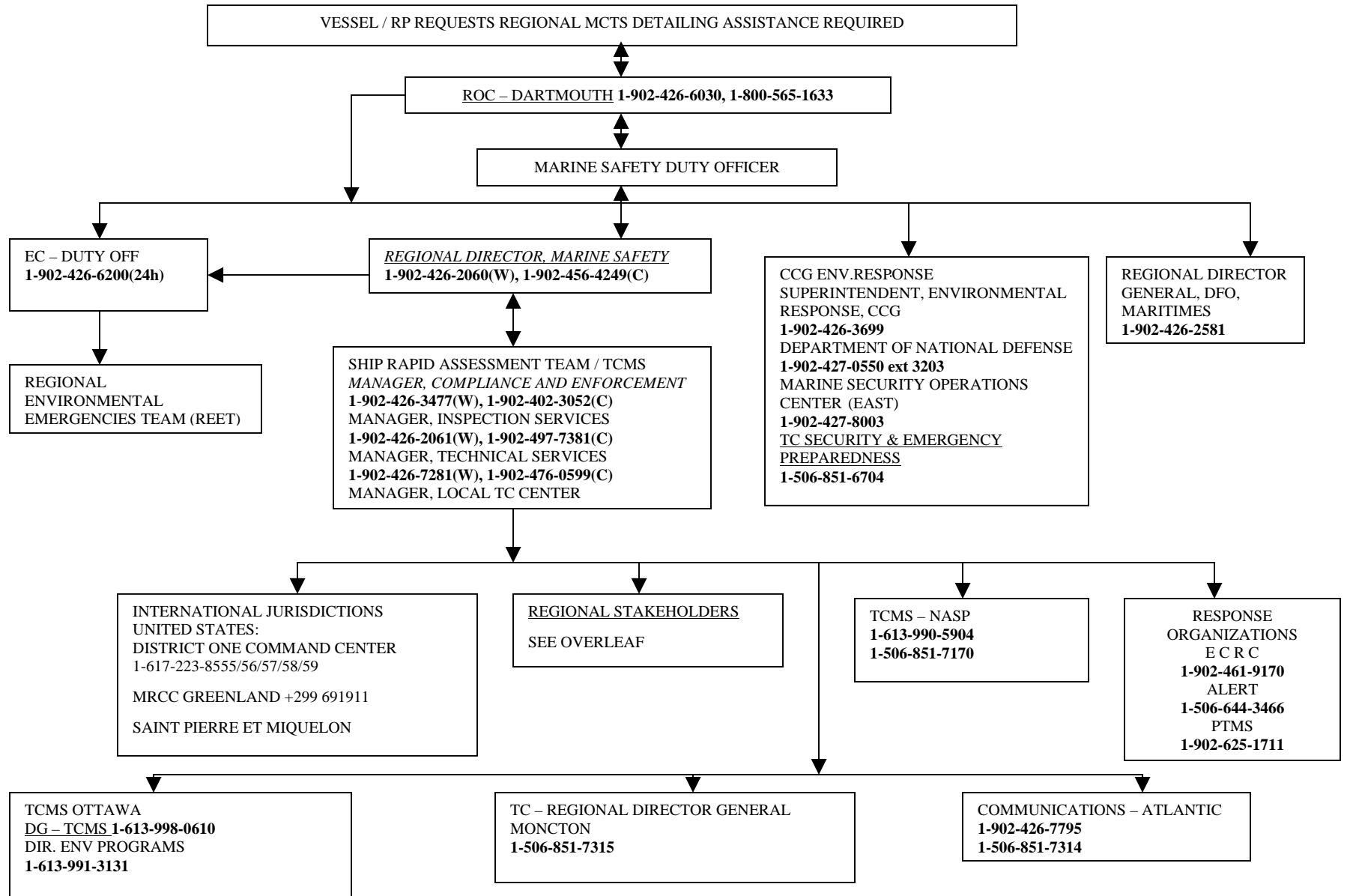
9.	Come by Chance Whiffen Head	Newfoundl and & Labrador	4839 4622	Possible Pack Ice	Compulsory	AA 80m RG Emergencies Only	5 cables	Sheltered	ECRC	Newfoudla nd Transshipm ent Ltd.	Tugs
					Placentia Traffic	BB 75m MRS Crude Tankers	5 cables	Sheltered			Berths 326,000 dwt 67,000 dwt
					Public Port	CC 55m MR Product Tankers	5 cables				Contractors
			ATL 102			DD 30m MSh Product Tankers	2.5 cables	Sheltered			
						EE 25m M Vessels less than 10,000 dwt	1 cable	Sheltered			
10.	Lewisporte Indian Arm	Newfound- land &Labrador	4865 ATL 101	Pack Ice Heavy Pressure	Compulsory No VTMS Public Port	9 cables NW of Mussel Bed Rock. 50m in Mud	9 cables	Sheltered	ECRC	Imperial Oil	Berth Contractors TCMS Office
11.	Hamilton Inlet Groswater Bay (Approaches)	Newfound- land & Labrador	4732 5140 5135 ATL 120	Pack Ice Heavy Pressure Ice bergs, berg bits	Available, Non- Compulsory No VTMS Goose Bay is a Public Port	3.9 miles E of East Sister Island. 45m in Mud	1.5 miles	Sheltered	ECRC	No	Goose Bay Lies further west. Offers airport, hospital, and hotels.

SECTION 3

Places of Refuge Contingency Plan, Provincial Contact List / NB, NS, PEI

ORGANIZATION	NEW BRUNSWICK	NOVA SCOTIA	PRINCE EDWARD ISLAND
Regional Operations Center (ROC)		1-902-426-6030, 1-800-565-1633, 1-902-426-6334 (Fax)	
Superintendent, ROC		1-902-426-3706	
Rescue Coordination Centre		1-902-427-8200, 1-800-565-1582	
Joint Rescue Coordination Center (JRCC)		1-902-427-2102	
Director, Maritime Services, CCG		1-902-426-9022, 1-902-426-6207 (Fax)	
Regional Environmental Emergencies Team (REET)		1-902-426-6030, 1-902-426-6200 (24h) 1-800-565-1633, 1-902-426-9709 (Fax)	
Regional Director, Transport Canada, Marine Safety		1-902-426-2060, 1-902-426-9049 (Fax)	
Manager, Compliance & Enforcement, TCMS		1-902-426-3477, 1-902-471-9637 (Cell) 1-902-426-6657 (Fax)	
Regional Director General, DFO, Maritimes		1-902-426-2581	
Assistant Commissioner, CCG		1-902-426-3907, 1-902-426-4312 (Fax)	
Superintendent, Environmental Response, CCG		1-902-426-3699, 1-902-426-4828 (Fax)	
Senior Response Officer, CCG		1-902-426-3818, 1-902-426-4828	
Director, Operational Services, CCG		1-902-426-6146	
Director, Technical Services, CCG		1-902-426-3939	
Marine Superintendent, CCG		1-902-426-0955	
DFO Communications		1-902-426-3555	
Public Safety & Emergency Preparedness	1-506-452-3020 1-506-452-3906 (Fax)	1-902-426-2082, 1-902-426-2087 (Fax)	1-902-566-7047 1-902-566-7045 (Fax)
Emergency Measures	1-506-453-2133 1-800-561-4034	1-902-424-5620	1-902-888-8050
Provincial Department of the Environment	1-506-778-6032 1-506-778-6796 (Fax)	1-902-424-5300	1-902-368-5057 1-902-368-5544 (Fax)
Environment Canada		1-902-426-6200, 1-902-426-9709 (Fax)	
Marcom Operations (MOC)		1-902-427-2501	
Response Organizations	ALERT: 1-506-644-3466 ECRC: 1-902-461-9170 / 1-613-930-9690	ECRC: 1-902-461-9170 / 1-613-930-9690 PTMS: 1-902-625-1711 ALERT: 1-506-644-3466	ECRC: 1-902-461-9170 / 1-613-930-9690
Harbour Master		1-902-426-9357, 1-902-426-3904 (Fax)	
Indian & Northern Affairs	1-506-452-3842	1-902-426-0663, 1-902-426-0665 (Fax)	
DFO Aboriginal Programs	1-506-529-5871	1-902-742-6827, 1-902-742-6893 (Fax)	
Canadian Food Inspection Agency	1-506-452-4874	1-902-426-5775, 1-902-426-1739 (Fax)	
Department of National Defense		1-902-427-0550, 1-902-427-1334 (Fax)	
Canadian Border Services Agency		1-902-426-4934, 1-800-461-9999	
Canutec Bilingual Services		Emergency 1-613-996-6666 (24h)	
Atlantic Pilotage Authority		1-877-272-3477(24h), 1-902-426-4733	

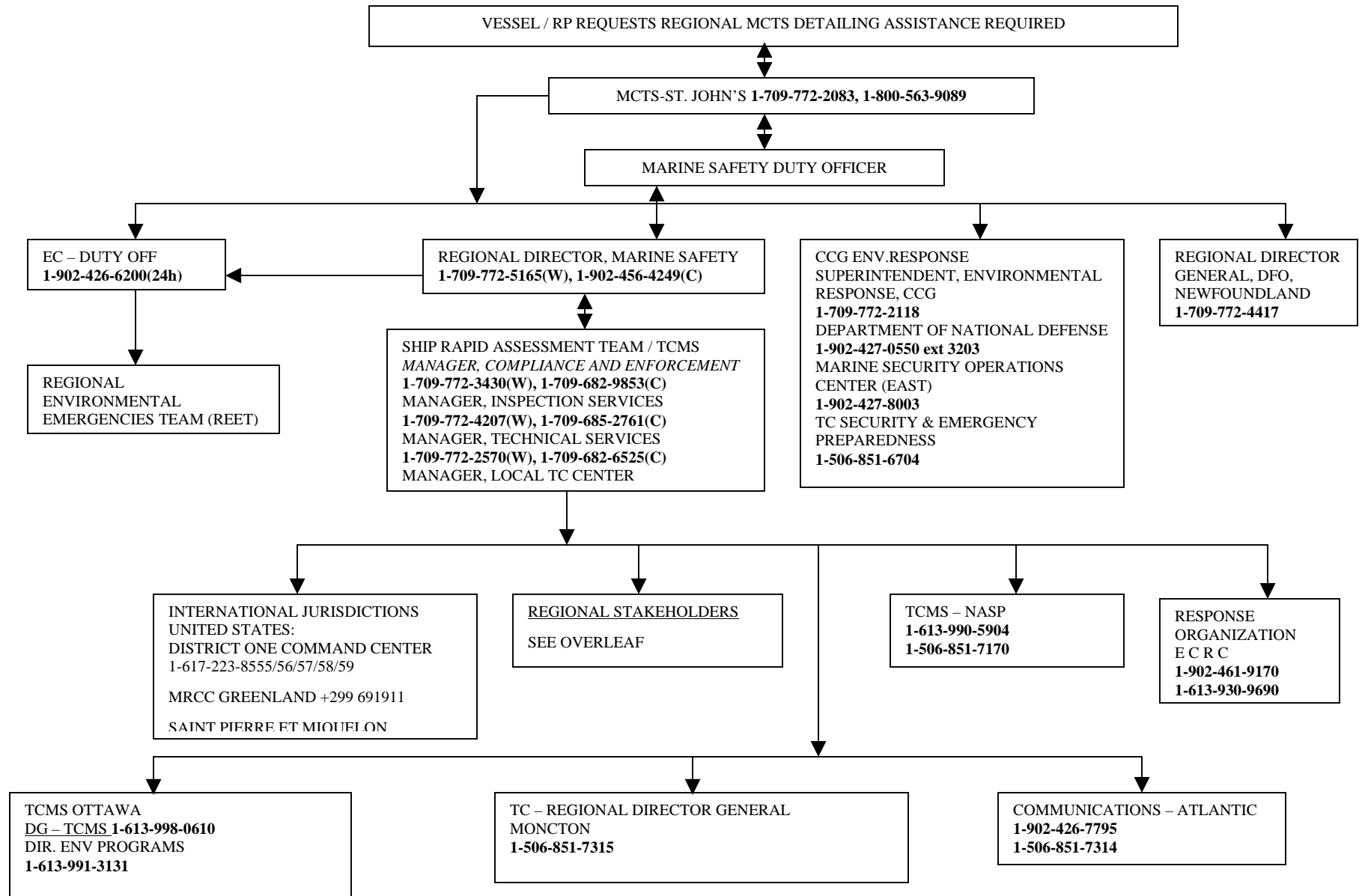
Places of Refuge Contingency Plan Provincial Process Flowchart, (NS, NB, PEI)



Places of Refuge Contingency Plan, Provincial Contact List / Newfoundland and Labrador

ORGANIZATION	NEWFOUNDLAND & LABRADOR
Regional Operations Center (ROC)	1-709-772-5202 (24h), 1-709-772-5369 (24h), 1-800-563-9089 (24h)
Superintendent, ROC	1-709-772-2310, 1-709-772-5369 (Fax)
Rescue Coordination Centre	1-709-772-2123, 1-709-772-5369 (Fax)
Marine Rescue Sub Center (MRSC)	1-709-772-5151, 1-800-563-2444
Director, Maritime Services, CCG	1-709-772-6338
Regional Environmental Emergencies Team (REET)	1-709-772-2083, 1-800-563-9089 1-709-772-7745 (24h)
Regional Director, Transport Canada, Marine Safety	1-709-772-5165, 1-902-426-9049 (Fax)
Manager, Compliance & Enforcement, TCMS	1-709-772-3430, 1-709-682-9853 (Cell) 1-709-772-0210 (Fax)
Regional Director General, DFO, Newfoundland	1-709-772-4417
Assistant Commissioner, CCG	1-709-772-5150
Superintendent, Environmental Response, CCG	1-709-772-2118, 1-709-772-4086 (Fax)
Senior Response Officer, CCG	1-709-772-0846, 1-709-772-4066 (Fax)
Director, Operational Services, CCG	1-709-772-5497, 1-709-772-2019 (Fax)
Director, Technical Services, CCG	1-709-772-5164, 1-709-772-3576 (Fax)
Marine Superintendent, CCG	1-709-772-5822, 1-709-772-3279 (Fax)
DFO Communications	1-709-772-7622
Public Safety & Emergency Preparedness	1-709-772-5522, 1-709-772-4532 (Fax)
Emergency Measures	1-709-729-0918
Provincial Department of the Environment	1-709-729-2557
Environment Canada	1-709-772-7745, 1-709-256-6623
Marcom Operations (MOC)	1-902-427-2501
Response Organizations	ECRC:1-902-461-9170 / 1-613-930-9690
Harbour Master	1-709-772-5199
Indian & Northern Affairs	1-709-896-6184, 1-709-896-6175 (Fax)
Canadian Food Inspection Agency	1-709-772-4714, 1-709-772-2282 (Fax)
Department of National Defense	1-902-427-0550, 1-902-427-1334 (Fax)
Canadian Border Services Agency	1-902-426-4934, 1-800-461-9999
Canutec Bilingual Services	Emergency 1-613-996-6666 (24h)
Atlantic Pilotage Authority	1-877-272-3477(24h), 1-902-426-4733

Places of Refuge Contingency Plan Provincial Process Flowchart (NL)



Port Authorities in the Atlantic Provinces

Canadian Port Authorities

			Tel	Fax
Halifax, Nova Scotia	P.O. Box 336, Ocean Terminals	Halifax, NS B3J 2P6	902-426-3503	902-426-9277
St. John's, NL	P.O. Box 6178, 1 Water Street	St. John's, NL A1C 5X8	709-738-4780	709-738-4769
Saint John, NB	133 Prince William Street – 5th floor	Saint John, NB E2L 2B5	506-636-4861	506-636-3846
Belledune, NB	112 Promenade Shannon Drive	Belledune, NB E8G 2W2	506-522-1200	506-522-0803

Public Ports administered by Transport Canada, Harbours and Ports – Atlantic Region

			Tel	Fax
Mr. Brian K. Mosher	Regional Director	P.O. Box 1013 Dartmouth, NS B2Y 4K2	902-426-2588	902-426-3904
Mr. Eric Hadley	Operations Manager		902-426-9357	902-426-3904
24/7 pager to Harbours and Ports – Security Officer			(902) 557-1723	

NOVA SCOTIA

Bridgewater
Digby
Hantsport
Liverpool
Louisbourg
Lunenburg
Mulgrave
North Sydney
Pictou
Port Hawkesbury
Pugwash
Shelburne
Sydney
Yarmouth

NEWFOUNDLAND & LABRADOR

Bay d'Espoir
Botwood
Come by Chance
Fortune
Goose Bay
Holyrood
Lewisporte
Long Harbour
Long Pond Manuels
Marystown
Port Aux Basques

PRINCE EDWARD ISLAND

Georgetown
Souris
Summerside

NEW BRUNSWICK

Dalhousie

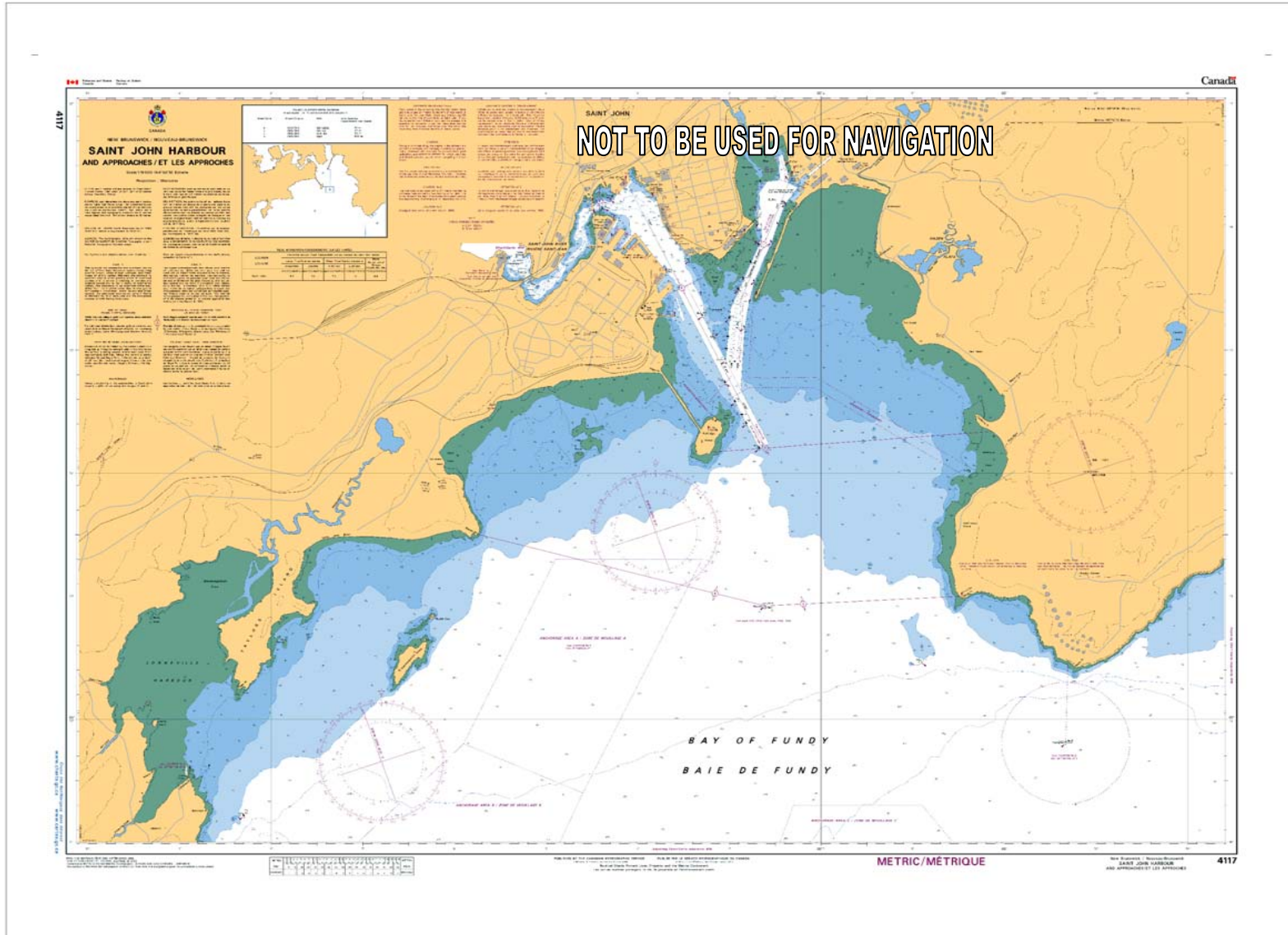
Harbours transferred without obligations relative to administering shipping (within the limits) under the *Canada Marine Act* or CSA

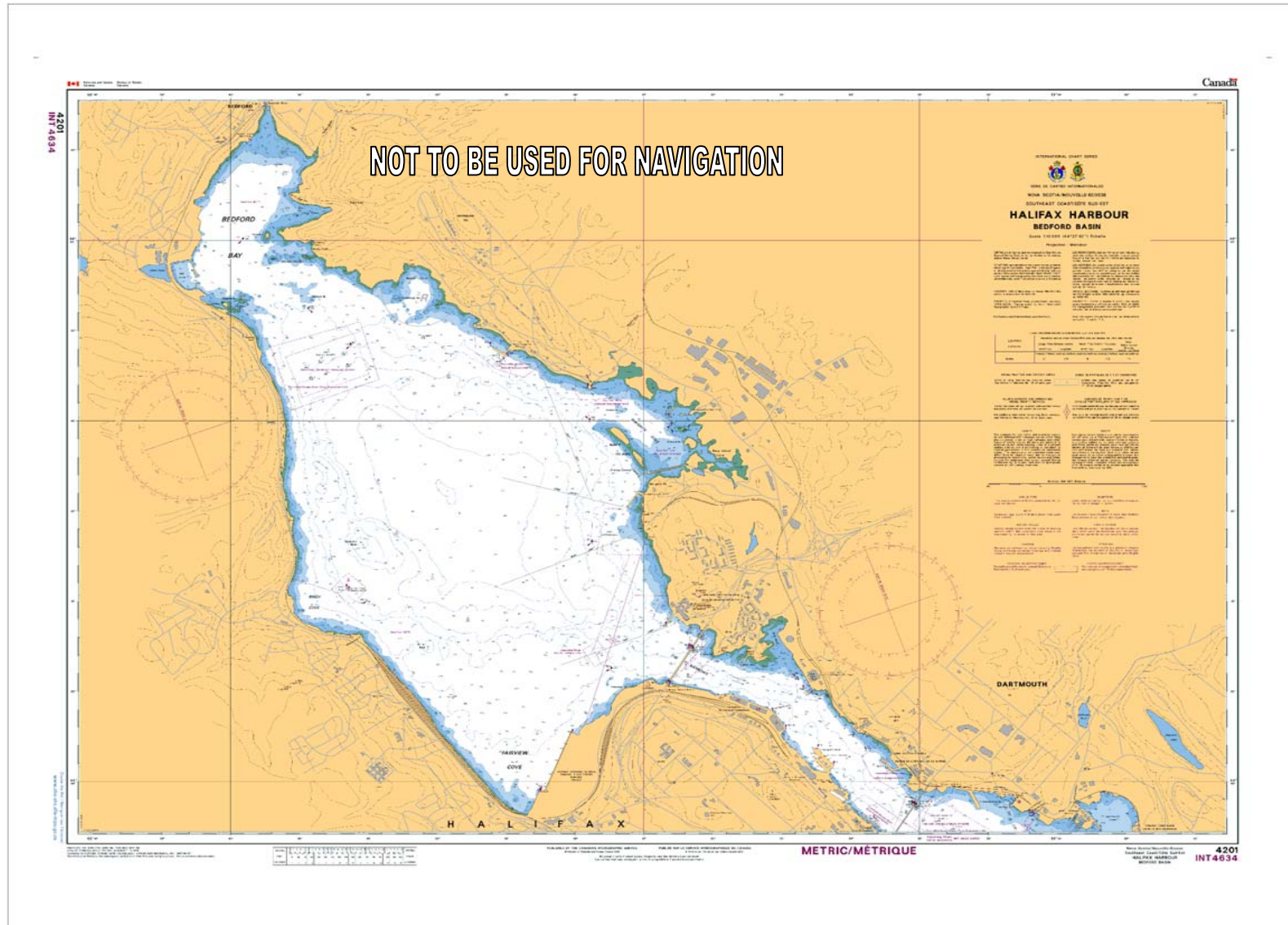
			Tel	Fax
Charlottetown, PEI	Charlottetown Port Authority Inc.	Stan H. MacPherson – President	902-566-2566	902-368-3558
Corner Brook, NL	Corner Brook Port Corporation	Jackie Chow – Port Manager	709-634-6600	709-634-6620
Stephenville, NL	Port Harmon Authority Limited	Cec Stein – President	709-643-5626	709-643-6130

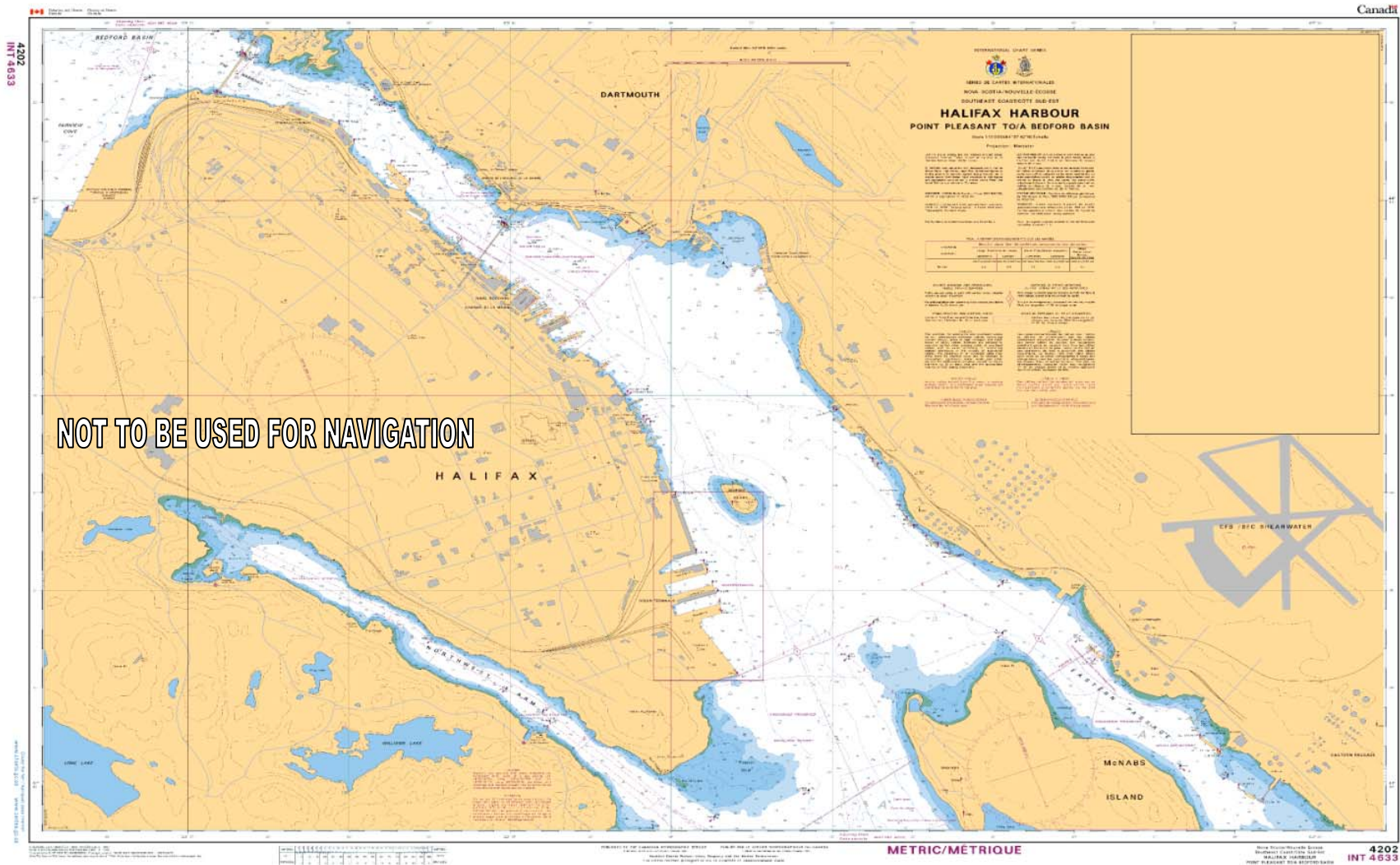
SECTION 4

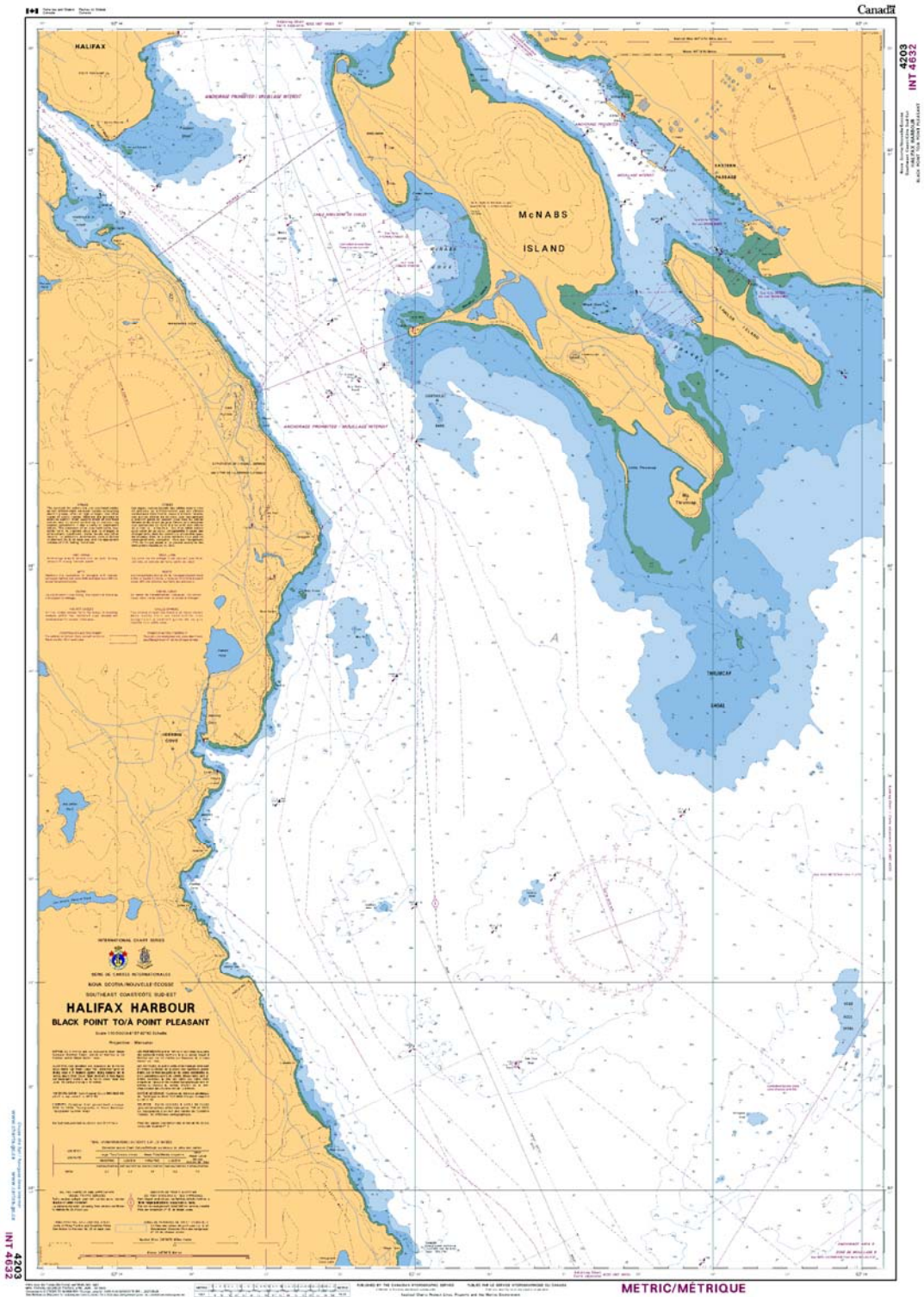
Reference Chartlets (Not to be Used for Navigation)

- CHS 4116 Approaches to Saint John
- CHS 4117 Saint John Harbour and Approaches
- CHS 4201 Halifax Harbour – Bedford Basin
- CHS 4202 Halifax Harbour – Point Pleasant to Bedford
- CHS 4203 Halifax Harbour – Black Point to Point Pleasant
- CHS 4237 Approaches to Halifax Harbour
- CHS 4209 Shelburne Harbour
- CHS 4307 Canso Harbour to Strait of Canso
- CHS 4335 Strait of Canso
- CHS 4426 Restigouche River
- CHS 4486 Chaleur Bay
- CHS 4652 Humber Arm
- CHS 4653 Bay of Islands

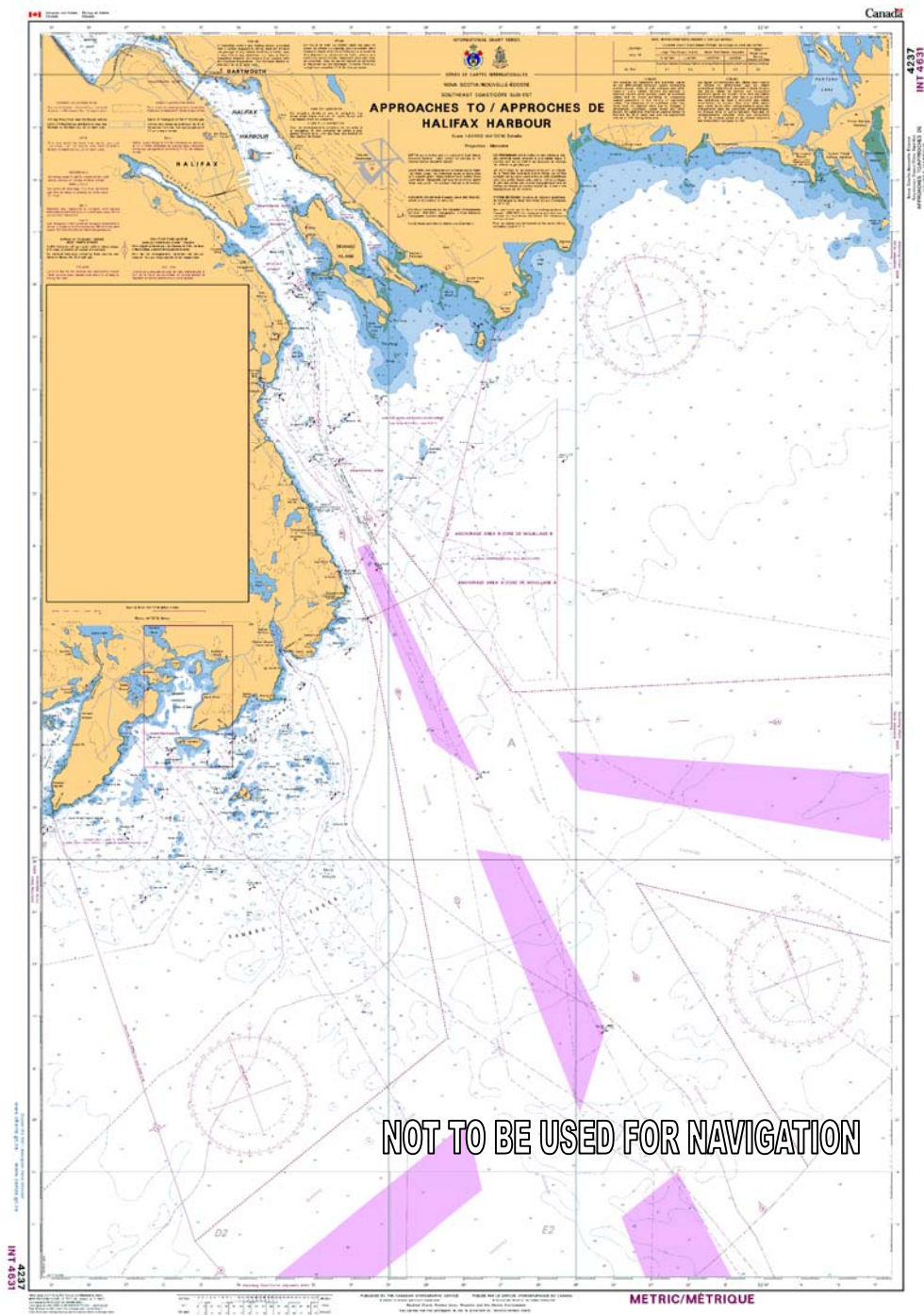


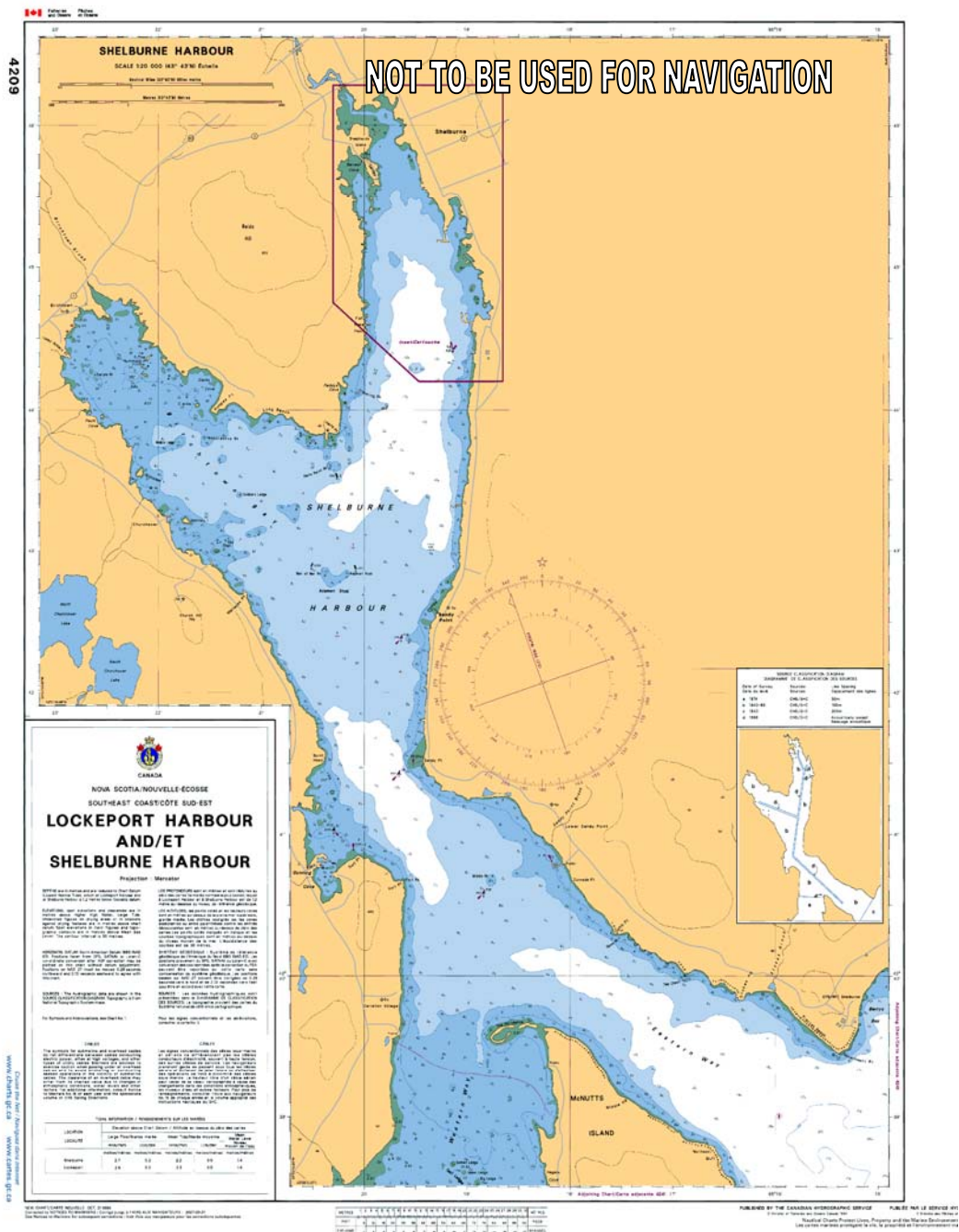


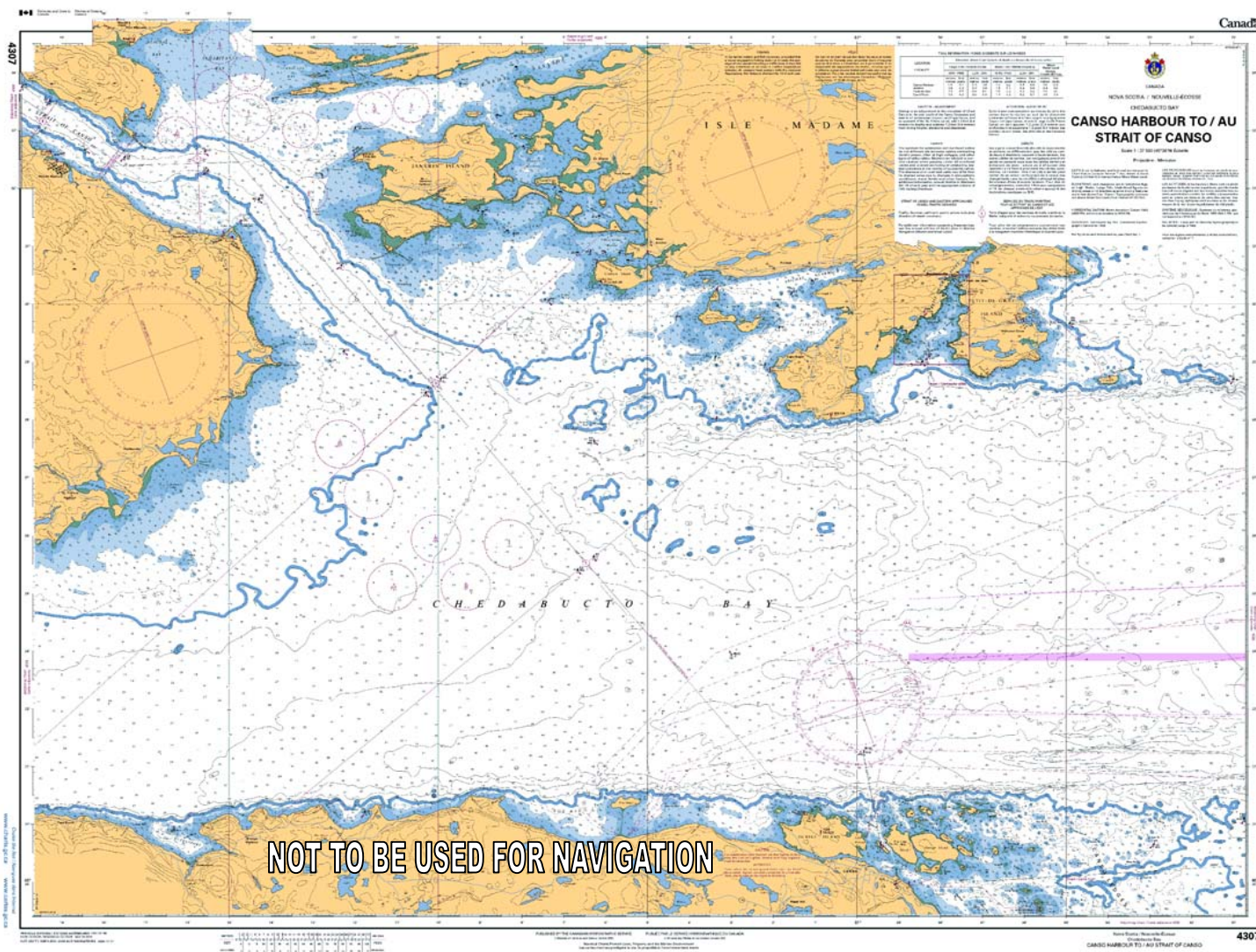


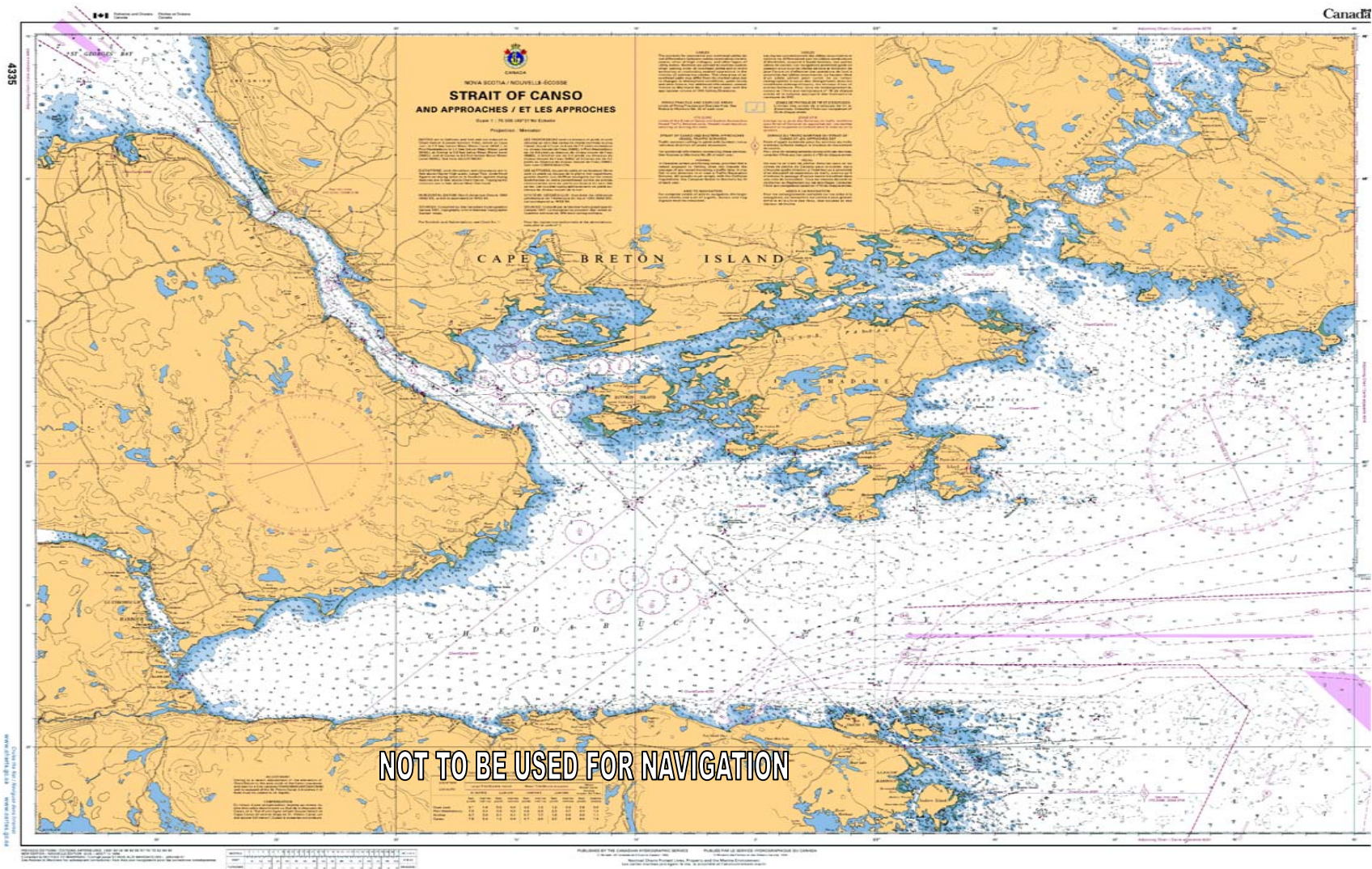


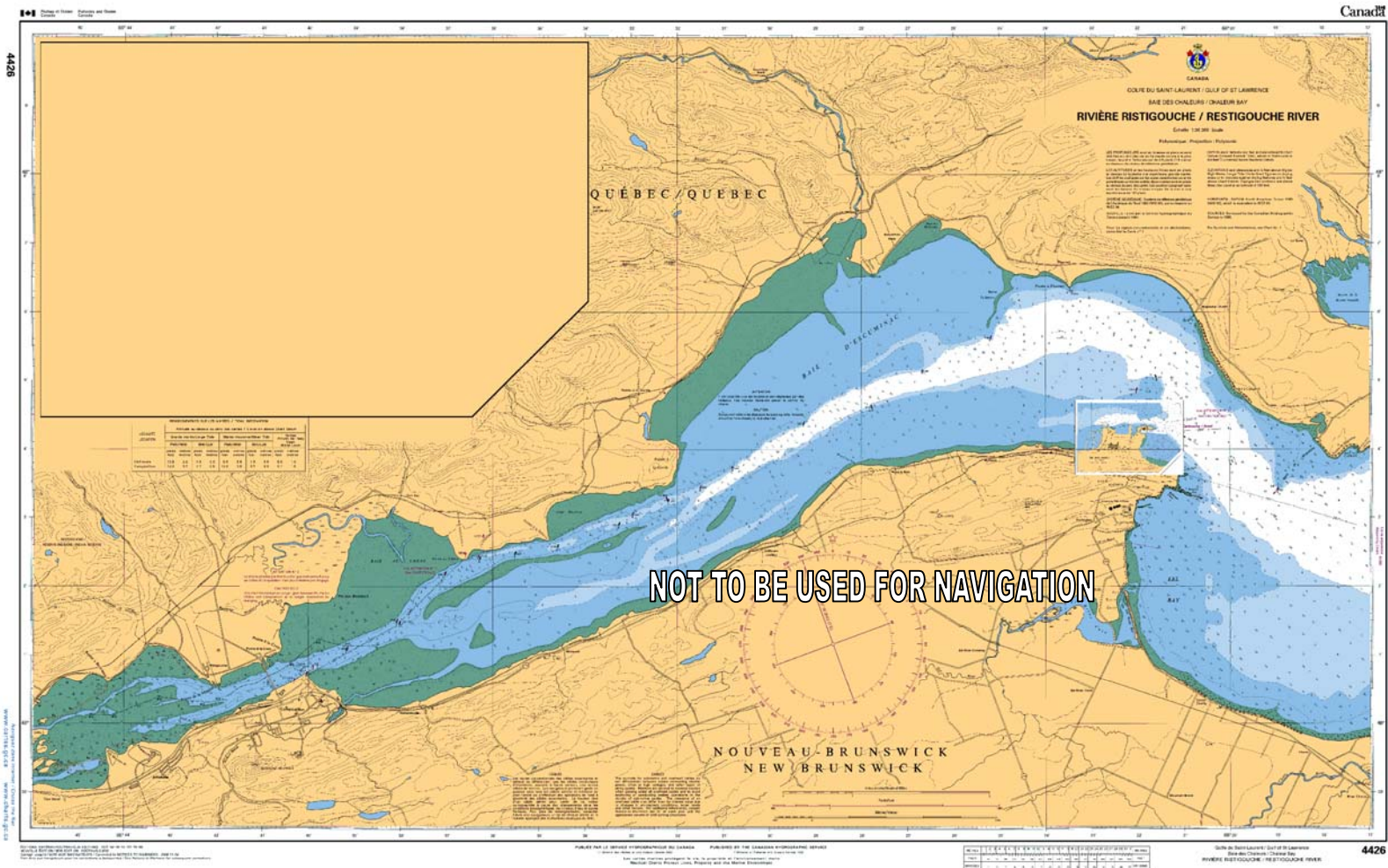
NOT TO BE USED FOR NAVIGATION

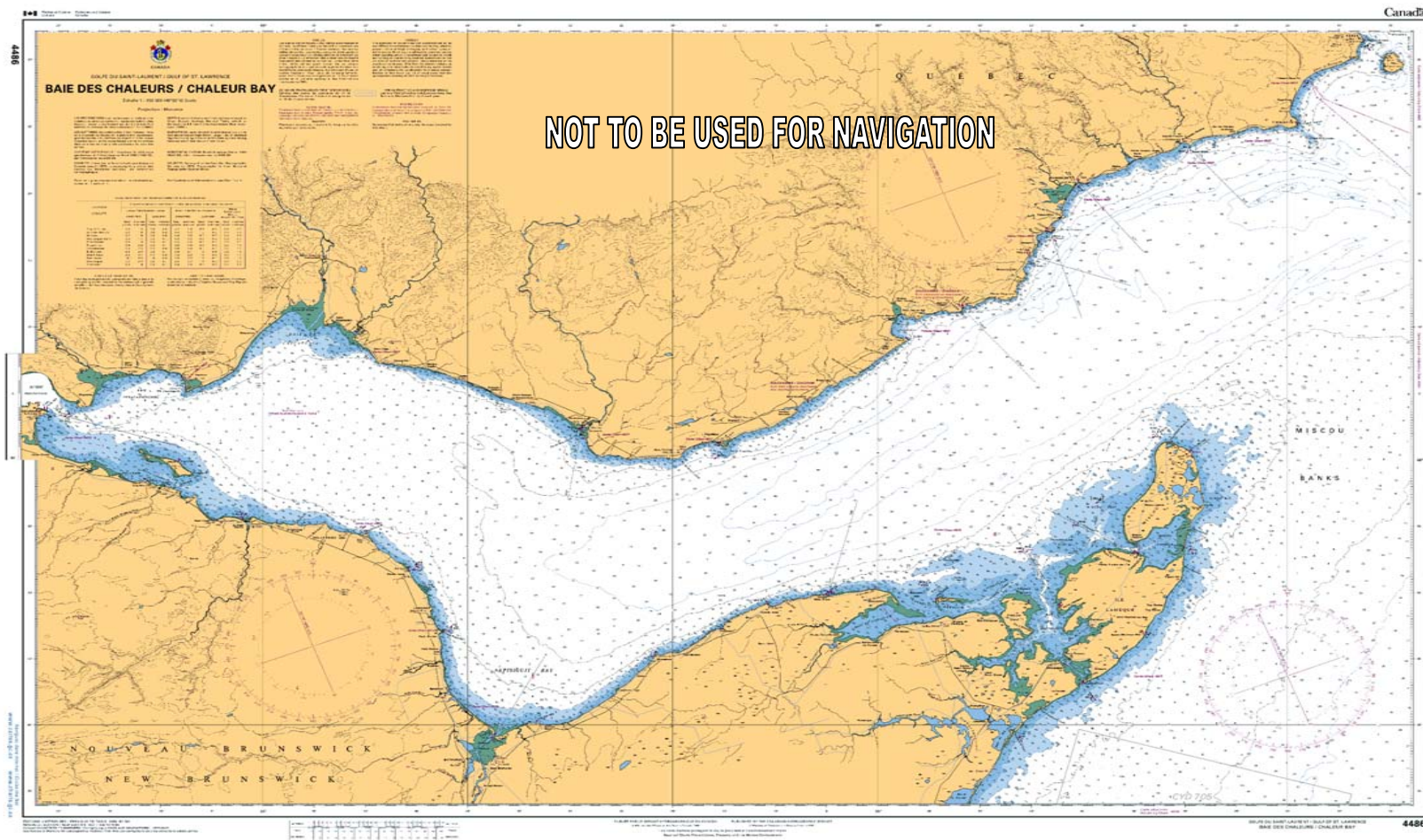


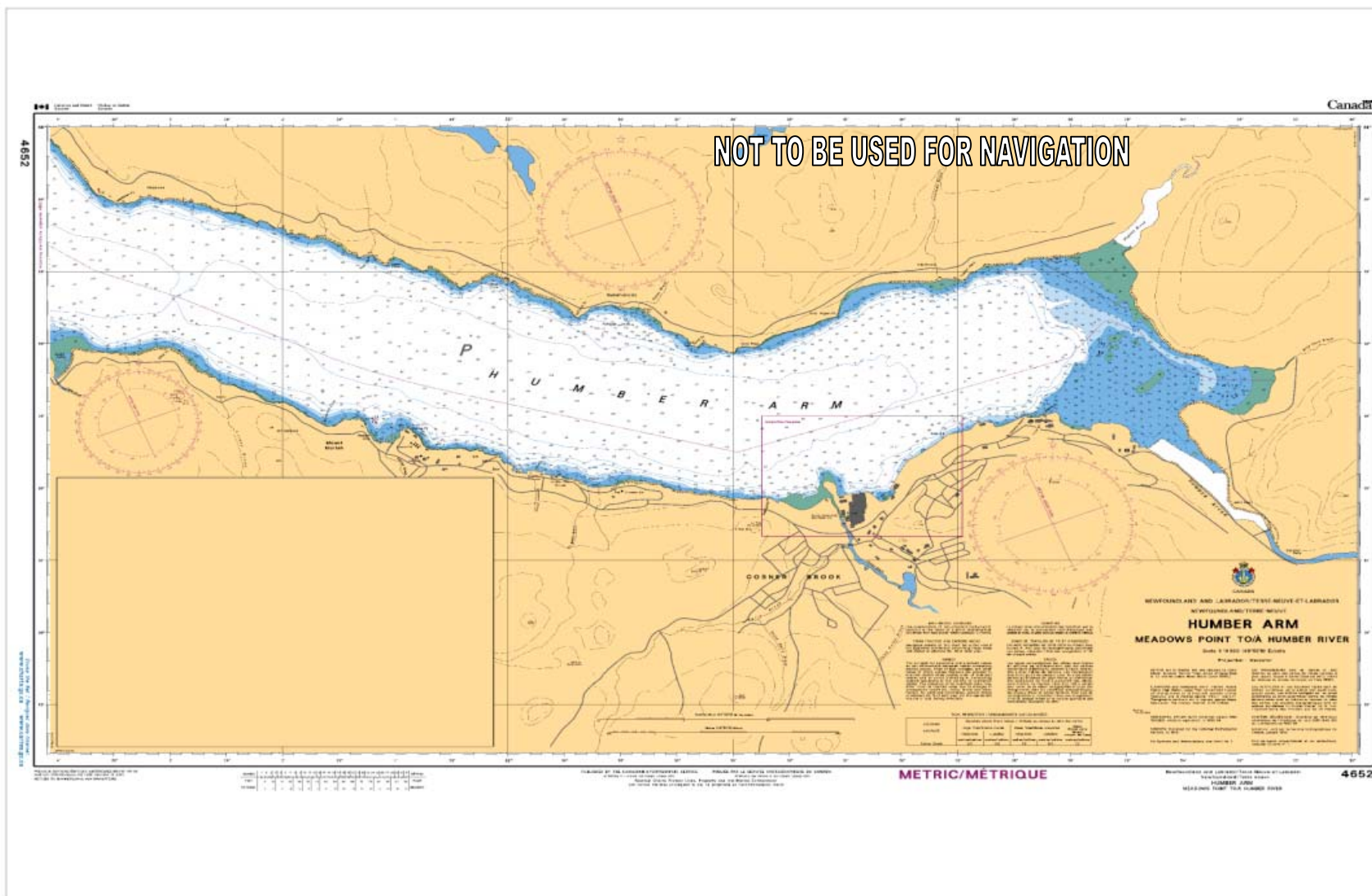


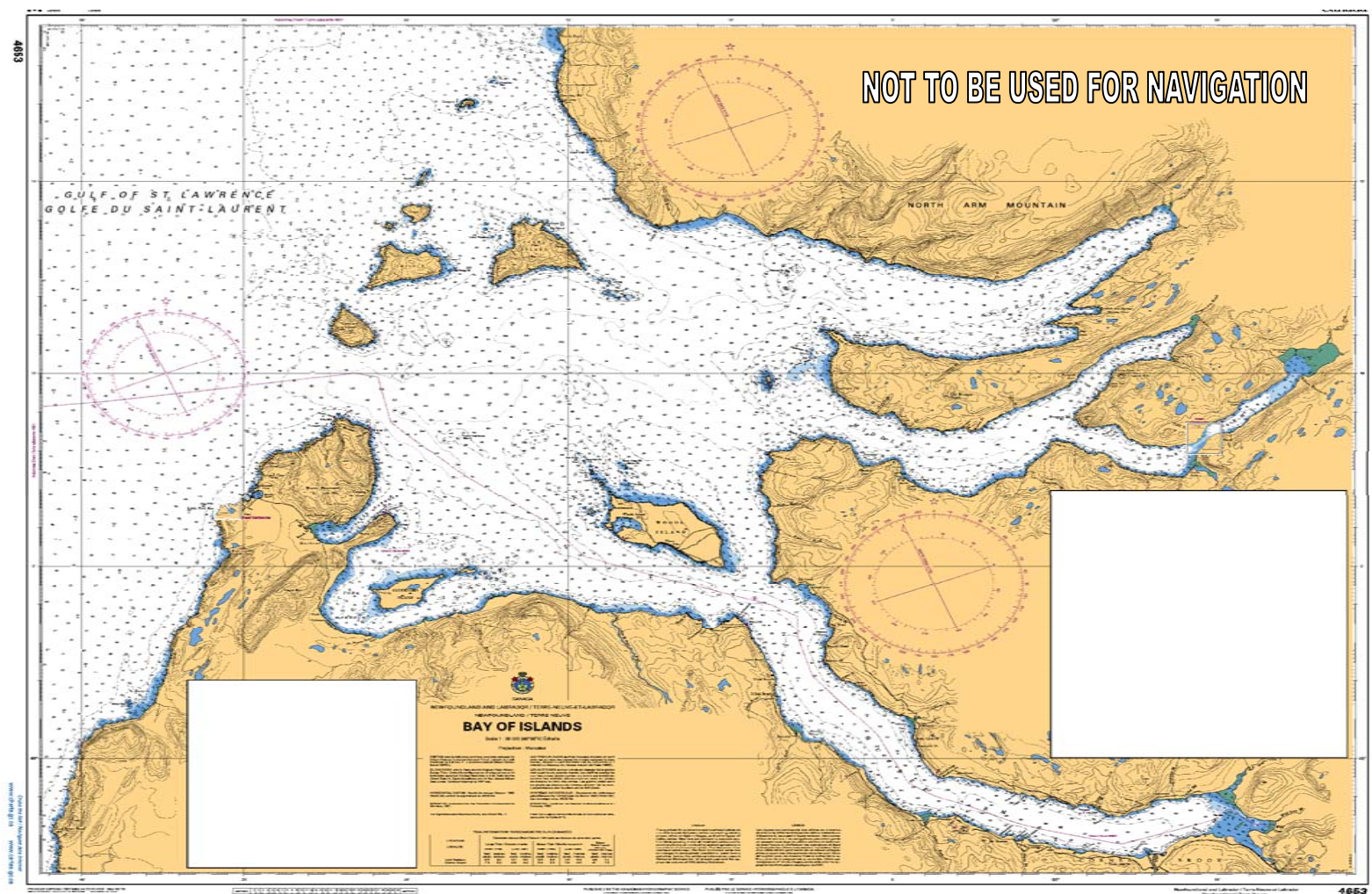












SECTION 5

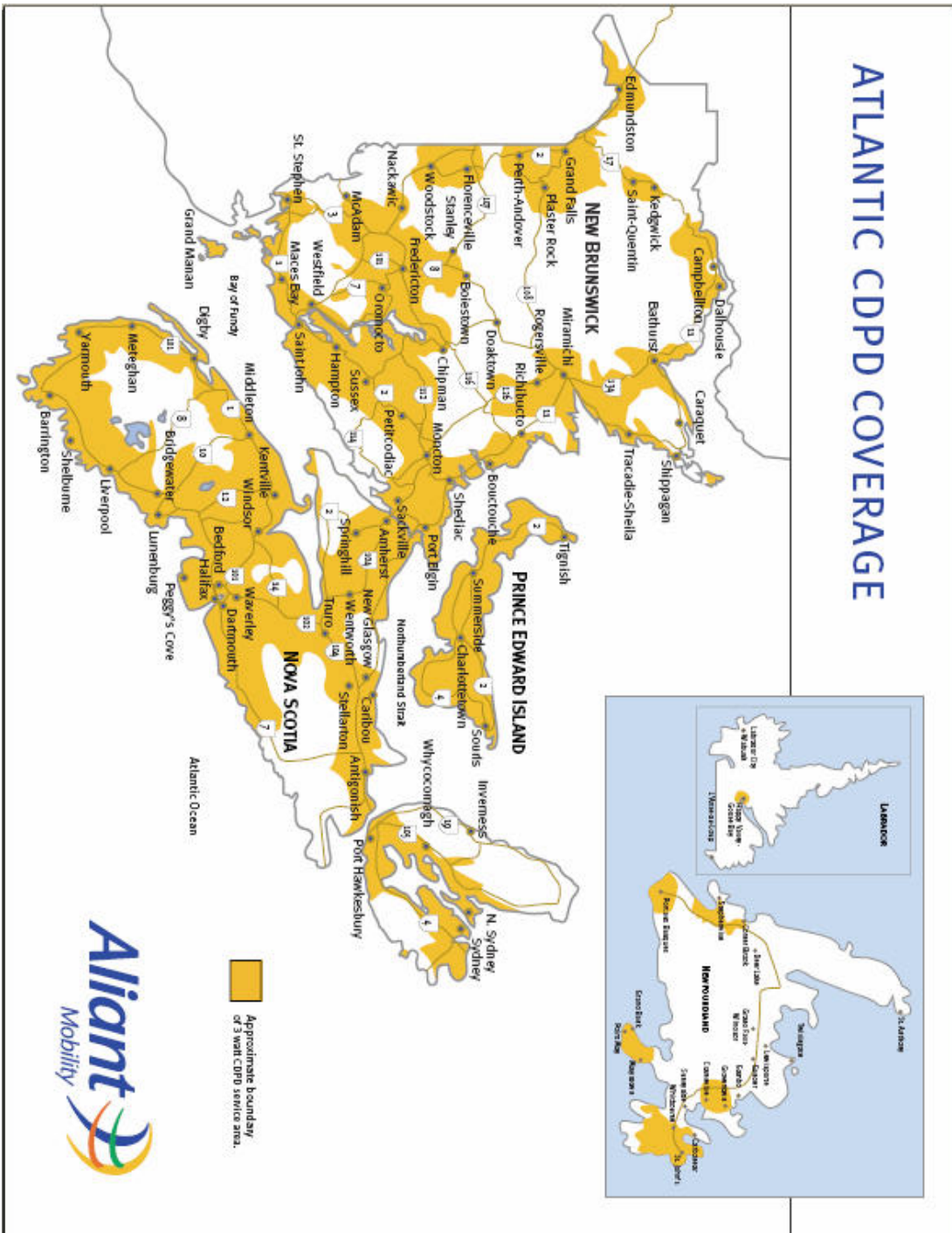
VHF and Wireless Communications

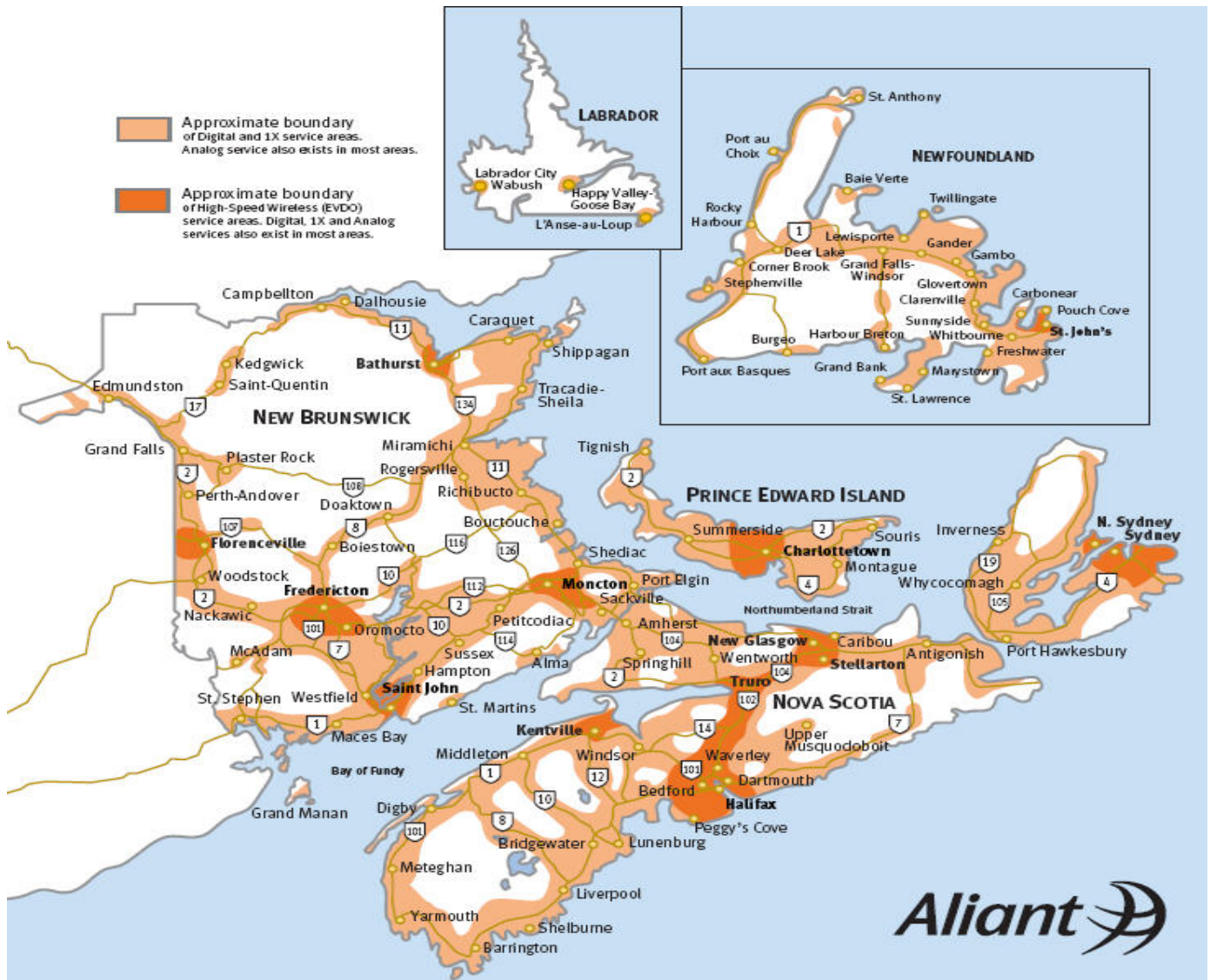
Mobile Phone Coverage Map

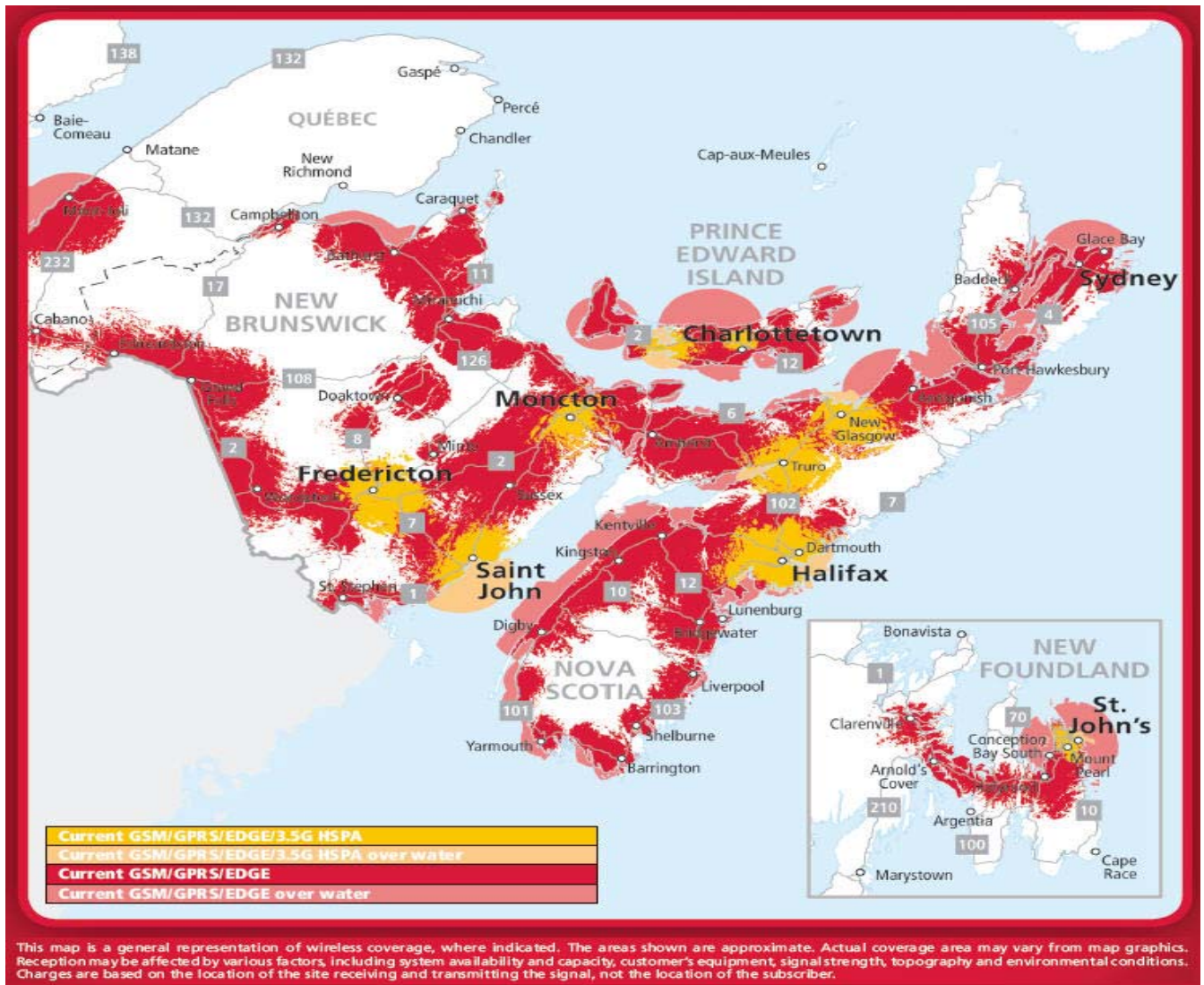
- Aliant CDPD
- Aliant Digital
- Rogers Wireless GSM
- Telus Mobility

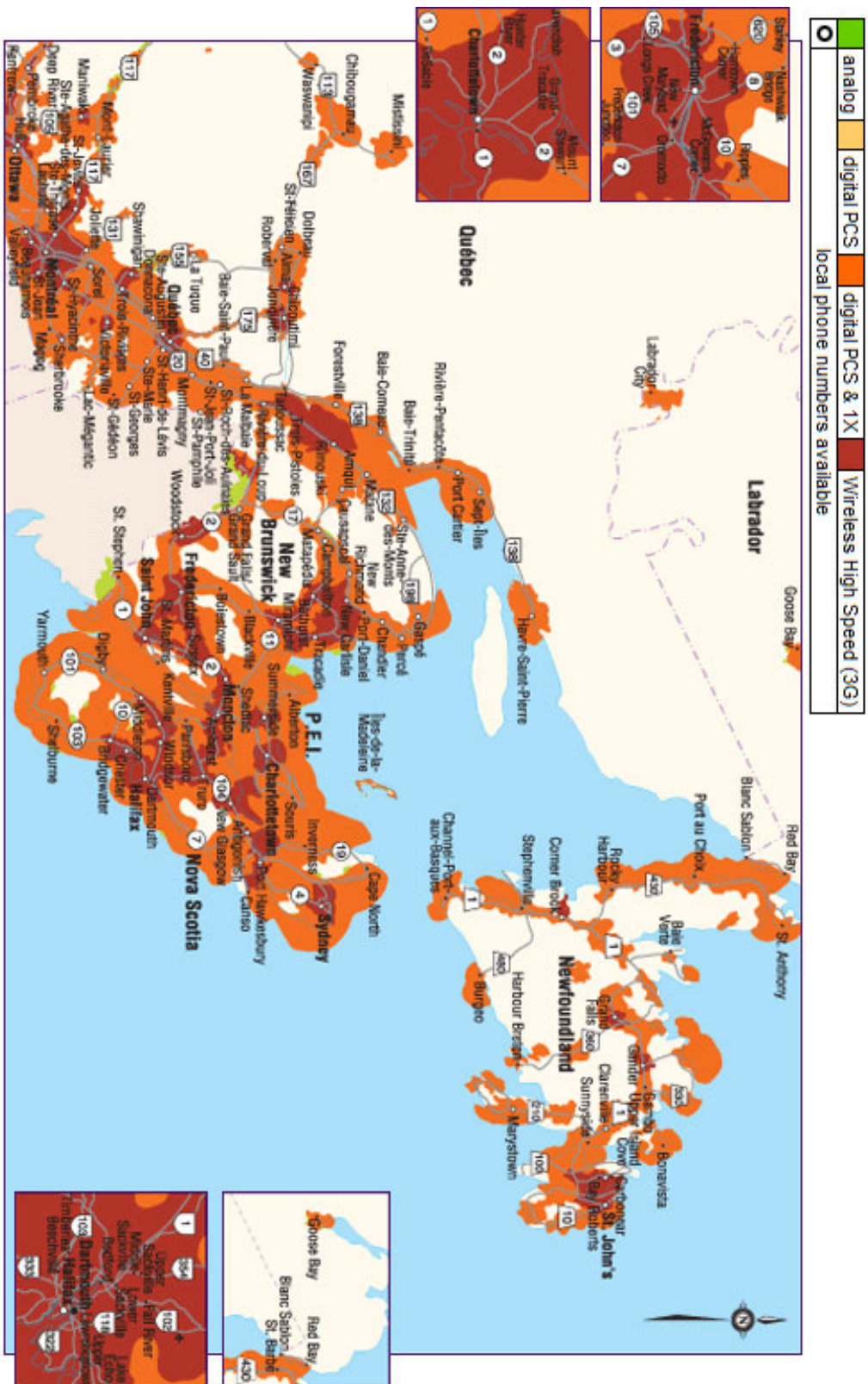
VHF DSC Radio Coverage Prediction Map

ATLANTIC CDPD COVERAGE

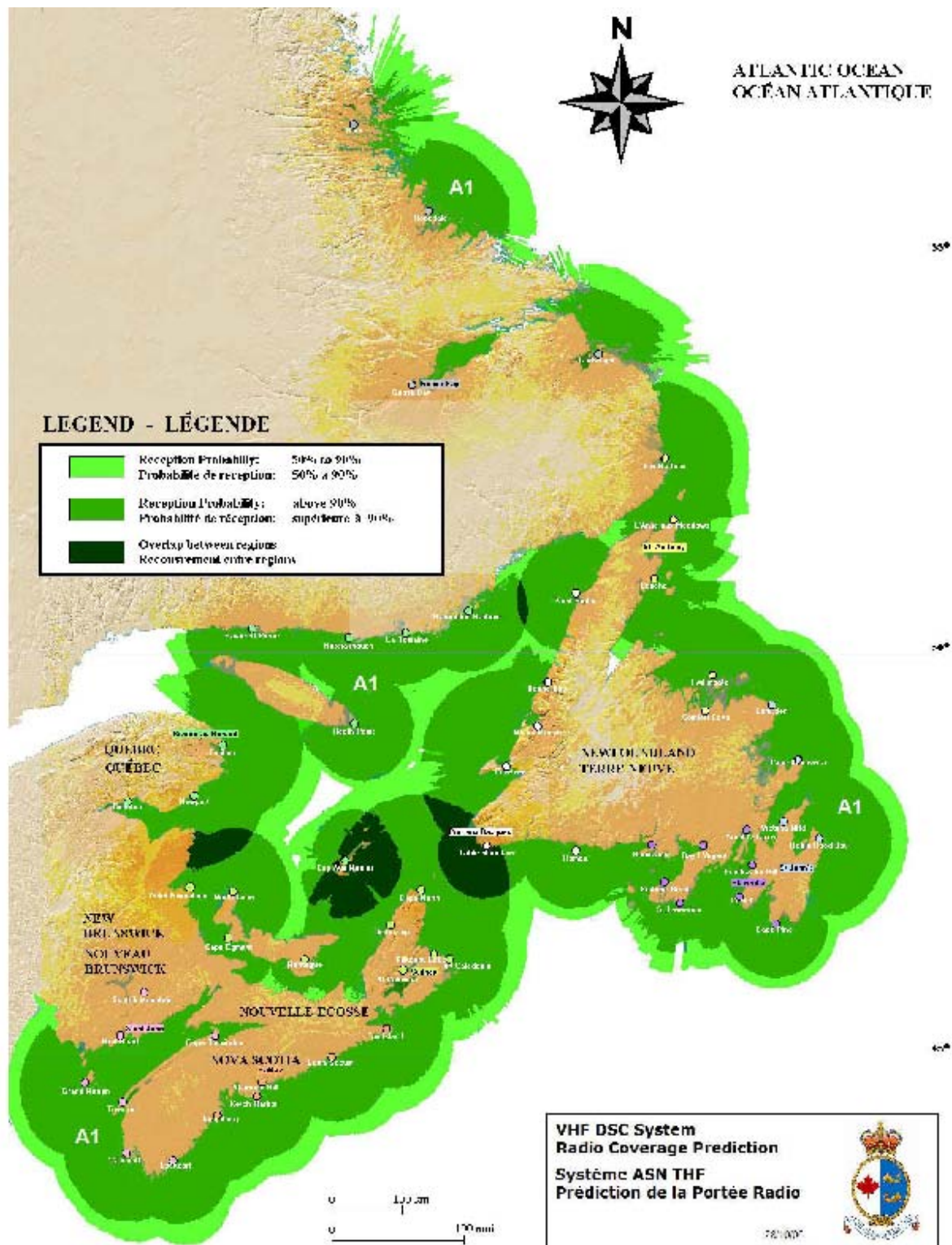








Note: Coverage areas are approximate. Actual coverage and network service may vary and are subject to change.



SECTION 6

IMO Resolution A 949.(23) “Guidelines on Places of Refuge For Ships in Need of Assistance” is available at the following link;

http://www.imo.org/TCD/mainframe.asp?topic_id=875

IMO Resolution A 950.(23) “Maritime Assistance Services” is available at the following link;

http://www.imo.org/TCD/mainframe.asp?topic_id=875

SECTION 7

Atlantic Region – Places of Refuge Contingency Plan Checklist

Date Started: _____ Date Completed: _____

YYYY-MM-DD

YYYY-MM-DD

Ship's Name: _____ IMO#: _____

Official #: _____ Call-sign: _____ Flag: _____

Step	Action	Yes	No
1	Obtain Situation Report and/or Information from the ship, MCTS, agent or other sources. Commence the <i>Annex 1</i> form.		
2	Summarize TCMS's concerns on hazards and associated issues. Complete <i>Annex 1</i> form.		
3	Identify possible risk assessment team members (TC, CCG, EC, USCG, etc.) Identify other interested stakeholders Review potential assessment team members and stakeholders on <i>Annex 2</i> .		
4	Preliminary analysis of current situation with the assessment team. Identify the risks, hazards, immediate action needed for POR request. Decide if an inspection team needs to be deployed. Complete <i>Annex 3</i> form.		
5	Identify feasibility of each of the potential POR locations using information available <i>Annex 3</i> form. Review members of risk assessment team and interested stakeholders.		
6	Estimate the risks and hazards for each option for POR. Use <i>Annex 4</i> to assist in process. Estimate the risk level using <i>Annex 5</i> . Identify risk control measures and their impact. Evaluate and compare POR options.		
7	Evaluate and compare the options for POR. Complete <i>Annex 6</i> form.		
8	Decision – grant or deny access to a POR with control measures.		
9	Review and agree on ship's proposed action plan. Monitor implementation of action plan.		
10	Debrief POR process with assessment team and stakeholders. Obtain feedback from assessment team on process.		
	<i>Ensure that the entire process for application for places of refuge has been documented thoroughly</i>		

Completed by:

Sighted by:

(Print Name: _____)
Marine Safety Inspector

(Print Name: _____)
Manager, Compliance and Enforcement

Annex 1 Part 1

Information on the Ship and Its Current Status

Information on the Request

Information on the Ship Request (as per A.949(23))	
Information Provided by the Ship	Marine Safety's Comments
What assistance is required from Canada? (for example; lightering, pollution combating, towage, stowage, salvage, storage, repairs...)	
State the reasons for the ship's need for assistance. Cause and extent of damage or problem (for example; fire, explosion, damage to ship, including mechanical or structural failure, collision, pollution, impaired stability, grounding...)	
What are the hazards and associated risk and estimated consequences of potential casualty if the ship: remains in the same position, continues on its voyage, reaches a place of refuge, is taken out to sea.	
Describe the Problem and Associated Issues: (Briefly summarize the problem and issues, from Canada's perspective)	

Annex 1 Part 2

Information on the Ship and Its Current Status

ADDITIONAL SHIP INFORMATION

Ship Contact Information

- Ship Identity – name, flag, identity/IMO/MMSI number
- Master's name and nationality – Still on board?
- Name of person on the ship making the request, date and time
- Last port of call
- Working language on board
- Security (certificate, level)
- Local representative of the company (name, address, telephone number, email address)
- Registered owner (name, address, telephone number, email address)
- Registered company (name, address, telephone number, email address)
- If bare-boat charterer (name, address, telephone number, email address)
- Classification society local representative (name, address, telephone number, email address)
- Is the ship insured? Ship's insurers and limits of liability available (name, address, telephone number, email address)
- Local P&I Club representative (name, address, telephone number, email address)

Ship Particulars

- Type of ship
- Size (tonnage), length, beam and draft of ship, air draft
- Year constructed
- Propulsion, thrusters
- Anchoring gear
- Towing Gear
- Fuel (type, quantity)
- Nature and condition of cargo, stores, bunkers, in particular hazardous goods, (type, quantity, condition)
- Ballast

Current Status

- Position of ship (and how determined)
- Course and speed (making way, adrift or at anchor) and route information
- Weather, sea and ice conditions, and forecast weather conditions
- Status of crew/salvors/other (number on board and assessment of human factors, including fatigue)
- Details of any casualties on board or in the vicinity of the ship
- Actual pollution or potential for pollution
- What is the urgency of the situation and the likelihood of the potential casualty
- Sea room (depth, drift, traffic density)
- Has the Classification Emergency Response Unit been contacted and supplied with information?

Ship Condition (damage/defects/deficiencies)

- Seaworthiness of the ship (buoyancy, stability, list, trim)
- Status of propulsion and power generation, and steering
- Status of essential shipborne navigational aids
- Details of changes in ship condition since initial event

Assistance Information

- Master's/Salvor's intentions
- Names of vessels in vicinity or assisting in situation
- Response actions taken by a ship (i.e., salvors contacted, engaged, at scene)
- Distance and time to a place of refuge
- Details of what is required from a place of refuge
- Docking ability
- Is anchoring possible
- Can the ship be accessed by helicopter

Annex 2

LIST OF POTENTIAL RISK ASSESSMENT TEAM MEMBERS AND STAKEHOLDERS

- TC Marine Safety (Ship Rapid Assessment Team, ship technical and operational expertise, routing)
- DFO – CCG (response, spill and clean-up expertise)
- DFO (scientific and operational expertise on fisheries, ocean, habitat)
- Environment Canada (Regional Environmental Emergency Team input, weather forecast)
- Ship Inspection Team
- TC Legal Services
- TC Security
- TC Communications
- Provincial authorities
- Municipal authorities
- Port authorities/harbour master
- Classification society
- Emergency services (police, fire)
- Response organization
- Pilots
- Salvage companies
- Shipyards
- Surveyors
- Cargo handling facilities
- Health officials
- Chemical industry
- Canada Customs and Revenue Agency (CCRA)
- Seafarer associations
- Search and Rescue (SAR)
- Department of National Defense (DND)
- Foreign Affairs Canada (FAC)
- US/French/Danish authorities
- Flag State
- Parks Canada (marine parks)
- Aboriginal groups
- Fishing industry
- Recreational Boating industry

Annex 3

CRITERIA FOR SELECTING A SUITABLE PLACE OF REFUGE

What is needed by the ship to address the problem?		Suitability of Options		
Potential Requirements	Details	Refuge A	Refuge B	Refuge C
– Shelter (weather, sea, swell, ice)				
– Safe anchorage (holding ground, depth)				
– Facilities/Equipment – reception facilities, transfer facilities i.e., pumps, hoses, barges, lightering				
– Repair facilities – shipyard, cranes, cargo gear, personnel				
– Salvage and Towage				
– Emergency facilities – fire fighting				
– Docking requirements (draught, length, availability)				
– Sea room to manoeuvre				
– Other				
Other Place of Refuge Considerations				
– Navigation (traffic, unobstructed approach, pilots, tides, currents, ice, anchorage)				
– Assistance nearby, if needed (Oil and chemical response, salvage, towage)				
– Distance to refuge versus urgency				
– Accessibility by land, sea, and air				
– Ability of refuge to contain or limit the spread of pollution				
– Characteristics of refuge that would reduce the impact of pollution or facilitate clean-up				
– Emergency Response Capabilities (i.e., SAR, evacuation, medical, HAZMAT)				
– Is there a site suitable for beaching the problem ship if necessary.				
– Security, ability to restrict area, access				
– Weather and Sea Conditions (prevailing wind, tide, current, ice, weather, sea)				

Annex 4

AREAS THAT COULD BE PUT AT RISK IN THE EVENT OF A CASUALTY

Health, Safety and Security

Public safety/security – consider distance to populated areas, size

- Persons on board
- Responders
- Salvors
- Persons in vicinity of ship
- Other ships – collision
- Air quality, contamination

Environmental

- Sensitive areas (habitat, species), ecological reserve or protected area,
- Wildlife (marine, terrestrial, avian)
- Waters in vicinity of ship
- Adjacent coastlines
- Neighboring countries (US, Denmark, France)

Socio-Economic

- Communities and business interests – consider distance to communities and industrial area
- Impact on fisheries – offshore, approaches, shellfish
- Tourism – coastline, beaches, sightseeing, hotels, waterfront activities
- Public and private property
- Infrastructure – bridges, channels, blockage, dock facilities, other installations
- Port delays/disruption
- Costs – i.e., salvage, environmental clean up, transport, cargo handling/lightering, surveying, pilotage, towage, moorage, harbour dues, specialists, special measures, waste disposal, material damage, personal damage, repatriation of crew/passengers, emergency services, repair and shipyard, removal of wreck
- Marine transportation system
- Offshore oil and gas activities
- The ship and its cargo

Annex 5

PROBABILITY AND SEVERITY OF ADVERSE CONSEQUENCES AND THE OVERALL RISK LEVEL

Estimate Severity of Adverse Consequences:

The severity of the overall consequences associated with a risk scenario can be categorized as follows:

<i>Catastrophic:</i>	multiple deaths, multiple major injuries, extreme property or environmental damage, extreme negative impact on the economy, major national or long term impact.
<i>Severe:</i>	death, major injuries, severe property or environmental damage, loss of the ship, major risk to safety or restriction to shipping, regional impact.
<i>Significant:</i>	many injuries, significant property or environmental damage, short-term consequences, local impact
<i>Minor:</i>	some minor injuries, some property or environmental damage, minor short-term consequences.

Estimate Probability of Adverse Consequence:

The overall probability associated with a risk scenario can be categorized as follows:

<i>Highly probable:</i>	almost certain the accident will occur.
<i>Probable:</i>	accident likely to occur.
<i>Unlikely:</i>	accident could occur.
<i>Improbable:</i>	accident not likely to occur.

Estimate the Overall Risk Level

The following risk matrix can be used to help determine and categorize the overall risk level for each option. This estimate can then be used to help compare one option with another.

<i>Severity of Adverse Consequence</i>	<i>Probability of Adverse Consequences</i>			
	<i>Over Time</i>			
	HIGHLY PROBABLE	PROBABLE	UNLIKELY	IMPROBABLE
CATASTROPHIC	9	8	7	5
SEVERE	8	7	6	3
SIGNIFICANT	7	6	4	2
MINOR	5	3	2	1

Risk Level: Low (1-3) Medium (4-6) High (7-9)

Annex 6

ASSESSMENT DETAILS

What is the problem and associated issues: (Step 1 and 2, Annex 1):			
Option (i.e., port / place / at sea in position / continues voyage / taken out to sea): (Step 5)			
Describe what could happen (risk scenarios, hazards, risks): (Step 6)			
Potential Consequences: (Step 6, Annex 4)			
Risk Estimation: (Step 6, Annex 5)	Consequence category: Specify:	Probability category: Specify:	Risk Level:
Control Measures: (Step 6)			
Risk Evaluation: (Step 7)	Advantages:	Disadvantages:	