

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/MRSC 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.

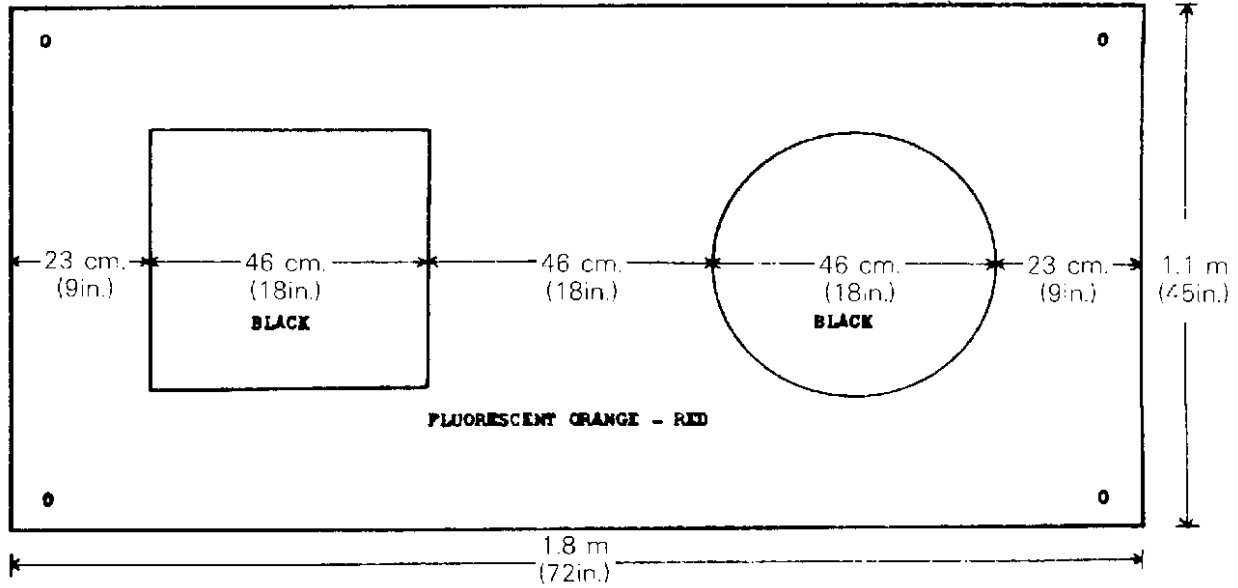


Figure 1 - Canadian Ship-to-Air Distress Signal Diagram

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.

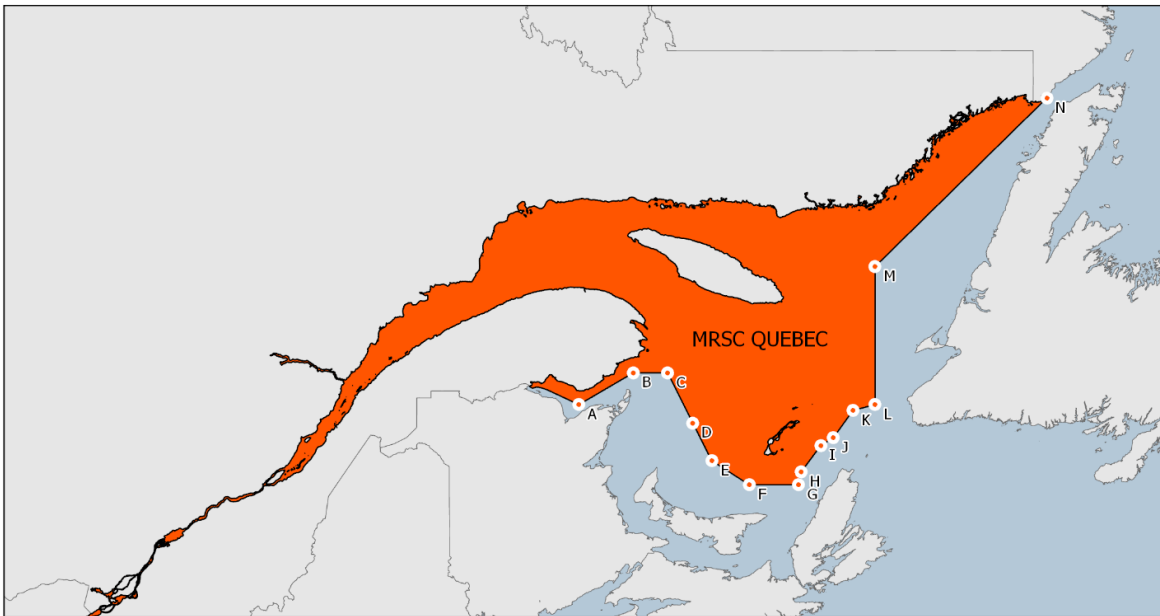
Trenton SRR

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

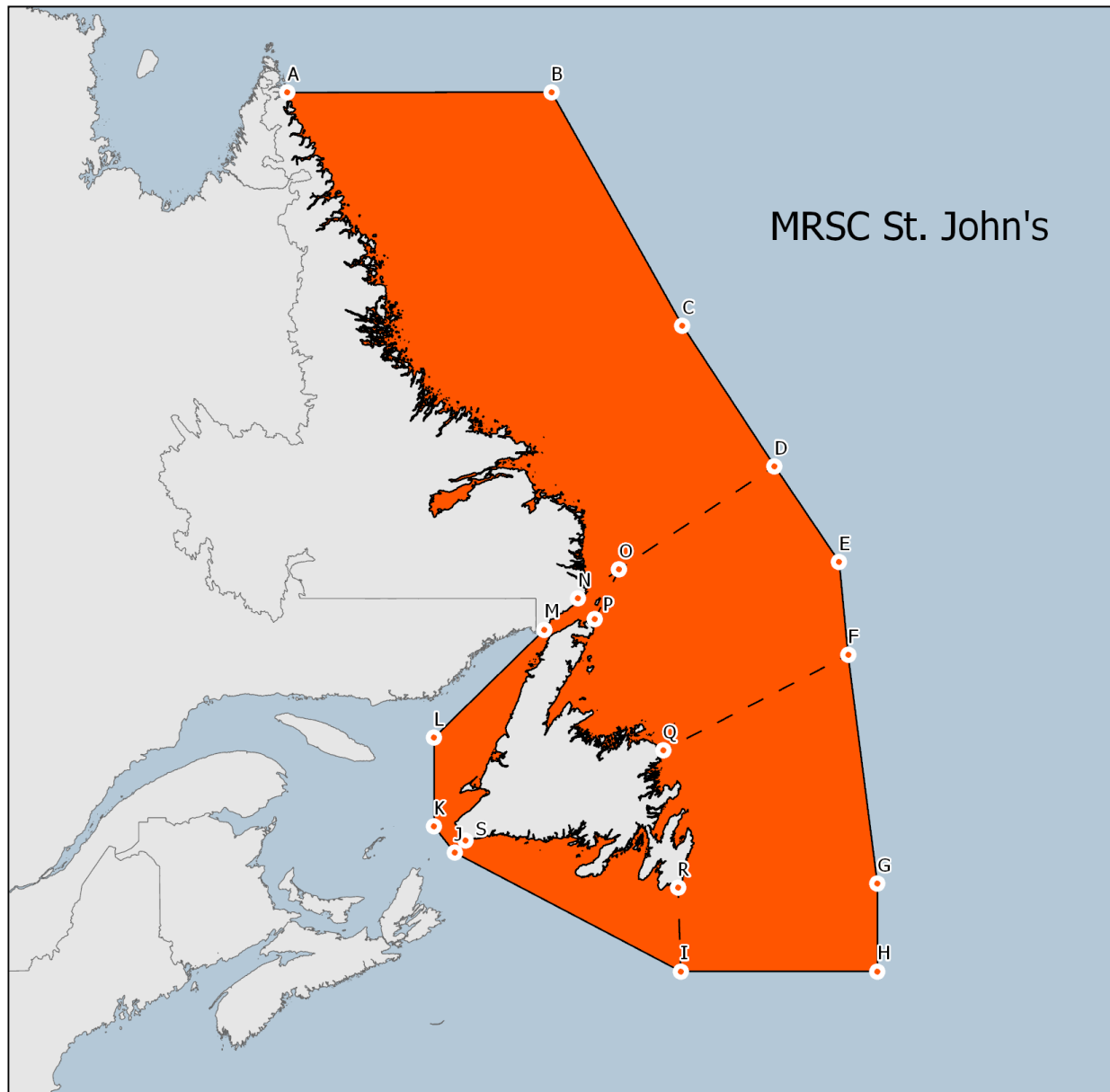
64°00'N 080°00'W, 70°00'N 080°00'W, 70°00'N 063°00'W, 65°30'N 058°39'W, 58°30'N 050°00'W, 58°30'N 030°00'W, 45°00'N 030°00'W, 45°00'N 053°00'W, 43°36'N 060°00'W, 41°52'N 067°00'W, 44°30'N 067°00'W, north to the Canada – United States border, westerly along the Canada – United States border to the 70th 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' W	N	52° 00.0' N	55° 55.0' W
E	52° 38.0' N	48° 30.0' W	O	52° 30.0' N	54° 45.0' W
F	51° 00.0' N	48° 15.0' W	P	51° 38.0' N	55° 26.0' W
G	46° 44.0' N	47° 25.0' W	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