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Ministry of Agriculture, Food and Fisheries – Resource Development and Sustainability Division

Ministry of Transportation

Ministry of Water, Land and Air Protection

Ministry of Forests

Transport Canada

Canadian Coast Guard

Workers' Compensation Board of British Columbia

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WEBSITE LINKS

<u>www.gov.bc.ca/tran/</u> - Ministry of Transportation

www.gov.bc.ca/wlap/ - Ministry of Water, Land and Air Protection

www.gov.bc.ca/for/ - Ministry of Forests

www.tc.gc.ca - Transport Canada

www.ccg-gcc.gc.ca - Canadian Coast Guard

<u>www.worksafebc.com</u> – Workers Compensation Board of British Columbia

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INTRODUCTION

This Specific Field Operations Manual will be used in conjunction with the Ministry of Agriculture, Food and Fisheries "Core Requirements" and "General Field Operations Manual."

The contents of the "Specific Field Operations Manual" comprise work procedures for those field operations undertaken by the Resource Development and Sustainability Division of the Ministry. The following sections are included:

- Part 1: WCB Regulatory Requirements
- Part 2: First Aid Requirements
- Part 3: Refusal of Unsafe Work
- Part 4: Hypothermia and Cold Related-Injuries
- Part 5: Heat Stress
- Part 6: Marine Vessel Operations
- Part 7: Operating Vessels on Small Lakes
- Part 8: Obtaining Water Samples
- Part 9: Diving Operations
- Part 10: River Swimming
- Part 11: Electro-Fishing
- Part 12: Working Near Water
- Part 13: Working in a Dock Environment
- Part 14: Bio-security Procedures for Fisheries Inspection of Marine Fish Farms
- Part 15: Working on Beaches

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- Part 16: Remote Operated Vehicle Operation
- Part 17: Violence in the Workplace
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Part 1	WCB Regulatory Requirements	Specific Field Operations Manual

PART 1: WCB REGULATORY REQUIREMENTS

The Workers' Compensation Occupational Health and Safety Regulation is designed to promote occupational health and safety and to protect employees and others present in workplaces from work related risks to their health and safety, and well-being. There are many areas of regulation that apply to the activities that Resource Development and Sustainability Division employees are likely to encounter. These include:

- Refusal of Unsafe Work (Reg. 3.12)
- Marine Operations (Reg. 17, 24)
- Working in a Dock Environment (Reg. 24)
- Electro-fishing (Reg. 19)
- Diving Operations (Reg. 24)
- Laboratories (Reg. 30)
- Controlling Exposure to Chemical and Biological Substances (Reg. 5)
- Transportation of Employees (Reg. 17.4 & 17.9)
- Personal Protective Clothing and Equipment (Reg. 8.26 8.30)
- Cold Stress (Reg. 7.63 7.75)
- Heat Stress (Reg. 7.50 7.62)
- Working Alone or in Isolation (Reg. 4.21)
- Emergency Procedures (Reg. 5.97)
- Emergency Preparedness and Response (Reg. 4.13)
- Evacuation and Rescue (Reg. 32)
- Occupational First Aid (Reg. 33)
- UV Solar Radiation: No regulatory requirements

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The Specific Field Operations Manual for the Resource Development and Sustainability Division: Ministry of Agriculture, Food and Fisheries will be reviewed annually by the Manager of Licensing and Compliance Branch and the Manager of Regional Operations, Aquaculture Development Branch.

The original manual and appropriate updates will be retained and administered by the MAFF OSH Representative for the Courtenay Regional Office. Employees can verify and review all information by contacting the OSH Representative.

Copies of the safety program manual will be distributed to all Courtenay staff for their use and reference. Any substantive change(s) to policy will be communicated to staff by the OSH representative.

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Part 2	First Aid Requirements	Specific Field Operations Manual

PART 2: FIRST AID REQUIREMENTS

Policy

All division employees who regularly travel in the field will have WCB First Aid certification Level 1, Transportation Endorsement and CPR training.

For the workplace units that consist of more than 16 FTE's, at least one member of the unit should possess a Level 2 Occupational First Aid Certificate. The current trained office representative for Courtenay is Stephanie Proctor.

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Part 3	Refusal of Unsafe Work	Specific Field Operations Manual

PART 3: REFUSAL OF UNSAFE WORK

Definitions

Reasonable Cause When used in the refusal to do work, reasonable cause

means as a result of information received, or deeply held

beliefs.

Undue Hazard A hazard that would be unusual for that type of occupation.

For example, a vessel may operate in windy conditions. An undue hazard would exist if Environment Canada had given storm force warnings for the planned day of a boat

trip for the area to be navigated.

Mutual Consent Agreed consent among all affected workers relating to the

decision to abort a work task (e.g., aborting a boat trip due

to unsafe work conditions).

Policy

An employee of the Ministry of Agriculture, Food and Fisheries must not carry out any work processes if that person has reasonable cause to believe that by doing so would create an undue hazard to the health and safety of any person.

For marine activities such as operating a boat, diving, river swimming, beach work and electro-fishing, a Ministry employee has the right to refuse work if she/he believes that the weather, water or condition of boat may create an undue hazard to his/her health and safety during the operation.

Employee Responsibility

If an employee refuses to carry out a work activity, operate a tool, appliance or equipment in accordance with the Ministry's policy, the employee must immediately report the circumstances of the unsafe condition to the employee's Program Manager.

Procedures following a Refusal of Unsafe Work

Note: Procedures for refusal of unsafe work, other than for marine activities, are located in the "Core Requirements" Health and Safety

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Part 3	Refusal of Unsafe Work	Specific Field Operations Manual

Manual. The following procedures are relevant for water-related and winter driving activities only.

If the Ministry receives a report of refusal of unsafe work relating to operating or travelling as a passenger on a Ministry vessel, the refusal will be logged by the OSH Office Representative and kept on file in the Courtenay regional office.

If the Ministry receives a report of refusal of unsafe work relating to the condition of marine equipment, the employee's Program Manager will investigate the matter and ensure that any unsafe condition is remedied without delay.

If, in the opinion of the Manager, the report is not valid he or she will inform the person who made the report. Where this does not resolve the matter, procedures documented in the "Core Requirements – Procedures following a Refusal of Unsafe Work" will be followed.

If the Ministry receives a report of refusal of unsafe work due to weather or water conditions relating to river swimming, diving, electro-fishing, beach work, or driving in adverse conditions or on logging roads, the refusal will be logged by the employee's Program Manager and kept on file in the Courtenay regional office.

The program Manager will investigate and resolve the refusal according to the procedures in the core requirements.

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Part 4	Hypothermia & Cold-Related Injuries	Specific Field Operations Manual

PART 4: HYPOTHERMIA AND COLD-RELATED INJURIES

Policy

Ministry of Agriculture, Food and Fisheries will provide Ministry employees with personal protective equipment against the elements, including rain-gear, boots and gloves.

All Ministry employees will carry additional dry clothing or blankets when working in remote locations.

All Ministry employees working in the field will know how to assess hypothermia and cold-related injuries and how to administer appropriate first aid procedures.

Responsibilities

All Ministry employees will wear clothing and personal protective equipment appropriate to the weather conditions when working in the field.

Procedures

Refer to **Appendix A** for signs and symptoms of hypothermia and coldrelated injuries and suggested guidelines for administering first aid treatment.

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Part 5	Heat Stress	Specific Field Operations Manual

PART 5: HEAT STRESS

Policy

All Ministry employees working in the field will know how to assess themselves and other individuals for heat stress, including heat exhaustion and heat stroke and how to administer appropriate treatments.

Responsibilities

All Ministry employees will dress appropriately for weather conditions when in the field.

Procedures

Refer to **Appendix B** for signs and symptoms of heat stress and procedures on its management.

Suggested Guidelines

It is recommended that Ministry employees should wear hats while working for extended periods in direct sunlight.

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Part 6	Marine Vessel Operations	Operations Manual

PART 6: MARINE VESSEL OPERATIONS

Part 6 of this Health and Safety Program covers aspects of work performed by Ministry of Agriculture, Food and Fisheries employees while on board a Ministry vessel.

Definitions

Safe Second Employees of the Ministry of Agriculture, Food and Fisheries

or other personnel accompanying a principal operator, trained in boat operation, navigation, first aid and other aspects of boating, who can safely operate the vessel they

are travelling on in the event of an emergency.

Passenger Employees of the Ministry of Agriculture, Food and Fisheries

travelling on a Ministry vessel.

Ride-Along Persons travelling on a Ministry vessel who do not work for

the Ministry of Agriculture, Food and Fisheries. May include,

but is not limited to, law enforcement officers, customs

officers, external consultants, co-op students.

Lifejacket A type of buoyancy aid capable of keeping a worker's

head/face above water. Must be worn if working alone.

Personal Flotation Device

A type of buoyancy aid that will keep worker afloat but will not keep head/face above water. May only be worn when

working continuously with other workers.

General Policy

Ministry of Agriculture, Food and Fisheries – Resource Development and Sustainability Division will follow specific written procedures for hazardous jobs that are being performed while using a boat. Procedures are documented in this program and are available to all employees.

Ministry of Agriculture, Food and Fisheries employees who are required to operate small marine vessels must complete adequate theoretical and practical training as outlined in this program.

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All activities requiring Ministry use of boats shall employ the use of "safe second", except in situations pre-approved by the Manager, Regional Operations and/or the Manager of Aquaculture, Licensing and Compliance Branch.

All persons travelling on a Ministry marine vessel must wear approved life jackets if working on the deck. If persons are travelling in a covered cabin, sufficient lifejackets must be carried for all persons travelling on board the vessel and must be readily accessible.

All persons travelling on a Ministry marine vessel must receive a brief boat safety orientation prior to commencing sail (see page #3 of this section).

All Ministry personnel will carry emergency food rations when participating in marine operations.

All Ministry employees and ride-alongs must carry a spare change of warm clothing or blankets in a sealed container in the event of an emergency occurring on board Ministry vessels. For Ministry personnel involved in diving procedures, a dry-suit will be an acceptable alternative to carrying a spare change of clothing.

Note: Prior to agreeing to take passengers on board, the Ministry will inform passengers, in advance of the planned day of sailing, of the requirement to bring a spare change of warm clothing. They will also be informed to carry medication that may be required, sunglasses (as required) and wind/waterproof clothing.

The Ministry will ensure that appropriate communication systems are in working order so communications will be possible at any time.

Ministry of Agriculture, Food and Fisheries employees will attend a "Safety Training" session once per year relating to marine safety.

Boat Operator Policy

All Ministry boat operators will:

 Undergo a formalized annual check-out procedure for vessels (outboard and inboard) that they will use during the course of their field work;

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- Complete an annual check-out procedure on boat handling from the Manager of Regional Operations or the Manager of Licensing and Compliance or their approved designate(s);
- Have a "safe second" accompany them on the water;
- Possess a valid Coast Guard personal operator's certificate and a restricted radio operator's licence; and
- Complete an annual refresher course on boat handling from a recognized training establishment if the boat operator does not pass the Ministry annual check-out procedure.

Ride-Alongs Policy

There are two types of "ride-alongs" on Fisheries vessels. The first are "employees" who are performing duties and are covered by WCB Regulations and protection. These may be employees of another Ministry or employees of a tribal council or other group. They must be treated the same as employees of the Ministry and prior approval for transporting is not necessary.

The second group is "non-employees" who wish to take advantage of a ride to a location. The liability for this second group is <u>much higher</u>, as they are members of the public and are not covered by WCB insurance.

Prior to taking members of the public on a fisheries vessel, prior approval must be obtained from employee's Program Manager and an orientation into the hazards of marine vessel operations must be documented.

The person travelling as a ride-along must also complete, sign, and have witnessed the waiver form. Refer to **Appendix V** for the Ride-along Waiver form.

Ride-Alongs on Non-Ministry Marine Vessels

When Ministry workers are travelling as ride-alongs on another employer's vessel, they will follow the procedures outlined by that employer. In the event that the ministry worker believes the procedures or vessel to be unsafe, they will abort the trip.

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Boat Operator's Responsibilities

The operator of a boat has ultimate responsibility for its safety and that of **all** people aboard, The boat operator is responsible for:

- Informing passengers and ride-alongs of the legal requirements under WCB Regulation 17.4. This regulation states that "no employee shall ride in or on any conveyance in a standing position, unless protected against being thrown off balance, or ride with any part of his/her body outside any part of the conveyance";
- Providing the safety orientation to all passengers and ride-alongs travelling on board the boat for that journey;
- Completing the ships' log to record the names of passengers and ridealongs travelling that day and confirm that safety orientation for passengers and ride-alongs has been provided;
- Ensuring that a list of persons on board and contact telephone numbers is left with the Administrative Assistant in the Courtenay office;
- Confirming with his/her passengers (including ride-alongs) that they are confident for the trip to go ahead and she/he must give the passengers/ride-alongs the opportunity to refuse to proceed if they wish; and
- Accountability for any damages or injury caused by their boat, such as:
 - Damage from the boats' wash;
 - Upsetting other boats by passing too close;
 - Collisions; and
 - Personal injuries.

Passenger and Ride-Alongs Responsibilities

All passengers and ride-alongs travelling on Ministry of Agriculture, Food and Fisheries marine vessels must:

- Obey all instructions and orders given by the boat operator;
- Receive and understand the basic safety orientation given to them prior to leaving the dock;

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- Receive a brief orientation of the motor controls for the boat, including basic operation, throttle location, choke, forward and reverse gear;
- Understand how to use the emergency frequency on VHF in the event of an emergency and know the location of emergency equipment on board; and
- Not stand while the boat is underway, unless the boat is designed to accommodate standing passengers.

Safety Orientation and Training Requirements for Boat Operators

All operators of Ministry marine vessels will receive safety orientation and training that includes the following components:

- Relevant Workers' Compensation Board and Transport Canada Regulations;
- Personal protective equipment and emergency equipment requirements;
- Emergency response, first aid procedures;
- Small boat design and handling characteristics;
- Fueling procedures;
- Ropes/lines/knots;
- Boat pilotage principles;
- Trailering/transport and launching procedures;
- General troubleshooting, field and seasonal maintenance; and
- First Aid Level 1 with Transportation Endorsement.

Safety Orientation for Passengers and Ride-Alongs

All passengers and ride-alongs travelling on Ministry marine vessels will receive the following information prior to departing the dock:

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- Location of emergency equipment including pyrotechnic distress signals, first aid, fire bucket and extinguishers, lifebuoy;
- How to use the emergency VHF channel (Channel 16);
- Proper behaviour on board a marine vessel so as not to cause danger to themselves or others:
- The weather conditions for the day;
- The destination of the boat journey; and
- The existence of any flammable or toxic substances being used or carried on board.

The "Passenger and Ride-Along Orientation Checklist" (located in **Appendix C** and on every Ministry vessel) must be completed prior to sailing.

Transport Canada Requirements – Canada Shipping Act

All marine vessel operators must be aware of the Canada Shipping Act and its regulations applicable to the craft that is being operated by the Ministry of Agriculture, Food and Fisheries. The following lists those regulations directly applicable to the operation of small marine vessels used by the Ministry of Agriculture, Food and Fisheries: Resource Development and Sustainability Division:

- 1. Small Vessel Regulations;
- 2. Collision Regulations;
- 3. Boating Restriction Regulations; and
- 4. Charts and Nautical Publications Regulations.

Small Vessel Regulations

The Small Vessel Regulations (Canada Shipping Act) apply to the operation of all marine vessels being used by the Resource Development and Sustainability Division in the Ministry of Agriculture, Food and Fisheries. **Appendix S** (Small Vessel Regulations) at the end of the Health

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and Safety Program lists the safety equipment to be carried on board all marine craft operating in Canadian waterways.

Collision Regulations

Laws Governing Canadian Waters

The Collision Regulations of the Canada Shipping Act apply to every vessel in all navigable waters.

Maintaining a Proper Lookout and Avoiding Collisions

The Collision Regulations require the operator of every vessel to maintain a constant lookout. The operator is required to use every available means, including radar and radio if the vessel is so equipped, to determine whether there is any risk of collision with another vessel.

Safe Speed

The Collision Regulations specify that it is the operator's responsibility to adopt a safe speed. Safe speed is described as one that allows proper and effective action to be taken to avoid collision. The operator must be able to stop the boat within a distance appropriate to the prevailing circumstances and conditions. Generally, the following should be evaluated when operating a vessel:

- Visibility conditions;
- Wind, water conditions and currents;
- Maneuverability of the vessel;
- Traffic density, type of vessels in the area and their proximity; and
- Proximity of any navigational hazards.

Refer to **Appendix T** (Collision Regulations) for a full review of the Collision Regulations.

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Charts and Nautical Publications Regulations

The Charts and Nautical Publications Regulations requires all operators of marine vessels to have on board the latest edition of the largest scale chart, documents and publications for each area they are navigating and to keep these documents up-to-date. Vessels used by the Ministry of Agriculture, Food and Fisheries will be exempt for certain conditions since the vessels operated are less than 100 tonnes.

Refer to **Appendix U** (Charts and Nautical Publications Regulations) for a full review of the Regulations.

Boating Restriction Regulations

The Boating Restriction Regulations regulate the operation of vessels on specific bodies of water in Canada. The regulations include schedules that set out operational restrictions such as speed limits and maximum horsepower. For a full review of the Regulations, refer to Transport Canada's website: www.tc.gc.ca/Actsregs/csa-Immc/Toccsa.html

Ship's Log

The Ministry of Agriculture, Food and Fisheries requires that a ship's log be maintained for every vessel. The log will be used to record the date of each use of the vessel, weather conditions, destination, total hours, passengers and ride-alongs, fuel usage and any mechanical or other problems with the vessel, as well as any incidents that might result in liability.

On-Board Documentation

It is the responsibility of the Ministry of Agriculture, Food and Fisheries to keep specified documentation on board that is available to all crew. The following documentation will be kept on board all ministry vessels:

Engine Instructions

- Procedures for checking engine(s) prior to starting;
- Procedures for starting the engine;
- Putting out engine fires;

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- De-energizing equipment;
- Using the bilge blower (if equipped); and
- Shutting down engine(s).

Vessel Characteristics

- Safe fueling procedures;
- Pumping systems and procedures;
- Procedures for testing equipment;
- Minimum freeboard under loaded conditions; and
- Procedures for towing equipment.

Location and Use of Fire Fighting Equipment

- Operating instructions;
- Records of equipment maintenance and testing;

Location and Use of Emergency Equipment

- How to use flares and EPIRBs (if fitted);
- How to use the radio and send a distress signal; and
- Procedures for dealing with oil spills/gas leaks.

Equipment Required

A plasticized pre-trip checklist, listing equipment required, will be cleared, dated and completed with a wet–erase marker prior to sailing. Every Ministry vessel will carry the checklist. A copy of this checklist is also located in **Appendix D** (Pre-Trip Checklist).

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First Aid Equipment

All Ministry vessels will carry a Level 1 First Aid kit, in accordance with WCB OHS Regulation Part 33.22(3). All items in the kit must be kept in a floatable and weatherproof container to keep items clean and dry. All items must be kept readily accessible. The kit will include the following:

3	Blankets
24	14cm x 19cm antiseptic towelettes individually packaged
60	Hand cleansing towelettes, individually packaged
100	Sterile adhesive dressings, assorted sizes, individually packaged
12	10cm x 10cm sterile gauze dressings, individually packaged
4	10cm x 16.5cm sterile pressure dressings with crepe ties
2	7.5cm x 4.5cm crepe roller bandage
1	2.5cm x 4.5m adhesive tape
4	20cm x 25cm sterile abdominal dressings, individually packaged
6	Cotton triangular bandages, minimum length of base 1.25m
4	Safety pins
1	14cm stainless steel bandage scissors
1	11.5cm stainless steel sliver forceps
12	Cotton tip applicators
1	Pocket mask with a one-way valve
6	Pairs of latex gloves
1	First aid record book, and pencil or pen

General Vessel Equipment

Equipment Requirements for Vessels not over Five Tons

This section applies to vessels that are not over 5 tons gross tonnage and carry not more than 12 passengers, in accordance with the Small Vessel Regulations: Canada Shipping Act. Equipment requirements are listed for the following categories of vessel:

- Under 5 tons gross tonnage and less than 5.5m in length; and
- Under 5 tons gross tonnage and between 5.5m and 8m in length.

Under 5 tons gross tonnage and less than 5.5m (18ft) in length

 One approved standard lifejacket or approved small vessel lifejacket for each person on board;

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- (2) One bailer or manual pump;
- (3) One Class B1 fire extinguisher;
- (4) One of the following throwable devices, namely:
 - i. An approved life-saving cushion;
 - ii. A buoyant heaving line of not less than 15m (50ft) in length, or;
 - iii. An approved 610mm (24") or 762mm (30") lifebuoy; and
- (5) Man overboard ladder;
- (6) Smoke producing flare for daylight hours and launchable flare for dusk/night-time hours; and
- (7) Permanently fitted navigation lights. See separate section on Navigation Light Requirements.

Under 5 tons gross tonnage and between 5.5m (18ft) and 8m (26ft) in length

- (1) One approved standard lifejacket for each person on board;
- (2) Two oars and rowlocks, two paddles, or one anchor with not less than 15m (50ft) of cable, rope or chain;
- (3) One bailer or one manual pump;
- (4) One Class B1 fire extinguisher;
- (5) Six approved pyrotechnic distress signals of which at least three shall be of Type A, B or C;
- (6) One of the following throwable devices, namely,
 - An approved life saving cushion;
 - ii. A buoyant heaving line of not less than 15m (50ft) in length, or;
 - iii. An approved 610mm (24") or 762mm (30") lifebuoy;
- (7) Man overboard ladder; and

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(8) Permanently fitted navigation lights (see separate section on Navigational Lights Requirements).

All ministry vessels must also carry a flashlight, survival pack relevant to the size of vessel and maximum crew size it can carry, compass, relevant nautical charts for the area of water being navigated and chart #1 that lists all the symbols that are used on marine charts.

Navigation Lights and Shapes

This section contains the rules and requirements for navigation lights as specified in the Collision Regulations of the Canada Shipping Act.

Applicable Rules of Collision Regulations Application

The Rules concerning lights must be complied with from sunset to sunrise, and during such times no other lights will be exhibited, except such lights as cannot be mistaken for the lights specified in this Rule or do not impair their visibility or distinctive character, or interfere with the keeping of a proper look-out.

The lights prescribed by this Rule shall, if carried, also be exhibited from sunrise to sunset in restricted visibility and may be exhibited in all other circumstances when it is deemed necessary.

The lights specified in these Rules must comply with the provisions of Annex I to the Collision Regulations. The following lists the requirements of the Collision Regulations:

Rule 21 - Definitions - International

- (a) **Masthead light**: a white light placed over the fore and aft centerline of the vessel showing an unbroken light over an arc of the horizon of 225 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on either side of the vessel.
- (b) Sidelights: a green light on the starboard side and a red light on the port side each showing an unbroken light over an arc of the horizon of 112.5 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on its respective side. In a vessel of less than 20 meters in length the sidelights may be combined in one lantern carried on the fore and aft centerline of the vessel.

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(c) **Sternlight**: a white light placed as nearly as practicable at the stern showing an unbroken light over an arc of the horizon of 135 degrees and so fixed as to show the light 67.5 degrees from right aft on each side of the vessel.

Rule 22 - Visibility of Lights - International

The lights prescribed in these Rules shall have an intensity as specified in section 8 of Annex I to the Collision Regulations so as to be visible at the following minimum ranges:

- (a) In vessels of less than 12 m (40ft) in length:
 - a masthead light, 2 miles;
 - a sidelight, 1 mile; and
 - a sternlight, 2 miles.

Life Jackets

There must be one lifejacket for each person onboard the vessel in accordance with the Small Vessel Regulations. Lifejackets must be worn if a person is on deck.

[Note: Deck is defined as "on board the vessel but not under cover of a canopy or cabin"].

Ministry of Agriculture, Food and Fisheries employees may use automatically inflatable lifejackets on board Ministry vessels. They will be inspected and maintained by the Manager of Regional Operations or a designate in accordance with the manufacturer's instructions and recommendations. Records of all inspections and maintenance will be kept in the Courtenay regional office.

A recharge kit will be kept on Ministry vessels where automatically inflatable lifejackets are being used.

All life jackets will have a whistle attached.

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Clothing to Suit Climate/Weather

Rain pants and rain jacket, provided by the Ministry of Agriculture, Food and Fisheries, will be worn appropriately according to the weather conditions. Rain gear will be carried at all times when employees are involved in marine operations.

Hearing Protection

Every Ministry marine vessel will have a noise survey completed. Where noise levels exceed 85dBA Lex appropriate hearing protection will be selected and worn and an Occupational Noise and Hearing Conservation Program will be implemented.

Eye Protection

Ministry personnel and ride-alongs will wear protective eyewear when hazards exist resulting from glare, wind-blown dust, debris and insects.

It is recommended that all persons involved with marine operations wear sunglasses, when appropriate, to reduce the risk of retina damage from ultra-violet light radiation.

Dry Clothes

Each passenger travelling on a Ministry vessel will carry a set of spare dry clothing and shoes in a waterproof-floating bag in the event of a marine emergency.

Non-Slip Footwear

Employees will wear non-slip footwear. The Ministry of Agriculture, Food and Fisheries provides employees with boots that should be worn to avoid hazards associated with marine operations. It is each employee's responsibility to check hishe/her own boots regularly and obtain replacements when non-slip features are worn out.

Disinfectant Equipment

Each Ministry vessel will carry appropriate disinfectant agents and equipment as identified by the Ministry Fish Health Veterinarian.

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Preparation for Sailing/ Getting Underway

Policy

The decision on whether employees from the Ministry of Agriculture, Food and Fisheries may or may not use the vessel in the prevailing weather on the day of the trip is based upon the weather forecast that must be obtained prior to starting the trip. If strong winds or a small craft warning are forecast in the proposed area of travel, the trip will be aborted if in the opinion of the operator or passengers it is unsafe.

Regardless of whether the operator feels it is safe to proceed with the trip, Ministry employees and ride-alongs who are to travel on the vessel may refuse to travel if she/he believes that by doing so would create an undue hazard to the safety of persons on board. See Part 3 "Refusal of Unsafe Work" for further clarification.

Filing a Trip Plan

Prior to leaving dock, a written trip plan must be submitted to the check-in service, as provided in **Appendix E**. The trip plan will include the following information:

- Time of departure;
- Check-in Procedures for the trip;
- Description of vessel being used;
- Number of people aboard;
- Location where vessel is headed;
- Planned and alternative routes;
- Estimated time of arrival; and
- Designated contacts spouse or otherwise.

The form located in **Appendix E** will be used for logging the trip-plan.

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Check-In Procedures

Prior to setting sail, check-in procedures will be established for the proposed trip and documented on the trip plan. The name of the contact person (Ministry personnel, 1-888 number, neighbors' etc.), telephone numbers and frequency of check-in will be recorded on the Trip Plan. The frequency of checking-in will be determined according to the duration, time (i.e. daylight/night-time), season and number of persons on board.

On return from the trip, the boat operator must follow the check-in procedures in accordance with the requirements of the trip plan.

Refer to the section on "Working Alone or in Isolation" (Part 15) for instructions on check-in procedures.

Pre-Trip Checklist

Before leaving port the vessel operator must ensure that the vessel is ready and capable to travel. A checklist located in Appendix D (Pre-Trip Checklist) and on board all Ministry vessels will be completed prior to sailing. Once the safety check procedure is completed, the procedure will be recorded in the ship's log.

Outboard Motors

Prior to sailing, the outboard motor(s) must be checked. The following will be included in the check:

General

- Screw-clamps or bolts that fasten the motor to the boat's stern must be tight. Ensure there is a safety chain being used to prevent the motor from being lost overboard if the motor is secured by clamps; and
- Ensure the "tilt/trim" angle of the outboard motor is adjusted correctly.
 This may be performed when the vessel is underway.

Pre-Start Engine Check Routine

- Be familiar with the manufacturer's manuals;
- If pre-mixed fuel is required, shake the fuel tank to blend fuels;
- Inspect the condition of the starter rope for fraying;

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- Check oil tank level;
- Check fuel lines for leaks or looseness;
- Check condition of the propeller and the shear-pin or connector (if present); and
- Start the motor (in neutral) and check that water is flowing through exhaust ports.

Fuel Mixture

- When an oil/gas combination is used, ensure that gas tanks are labeled with the contents and record on the tank, the date that the tank was last filled;
- Always use the oil/gas mixture recommended in the manufacturer's manual; and
- When mixing, never pour the oil into an empty tank. With motors having an integrated fuel tank, mix oil and gas in a separate can first, and then pour the mixture into the tank. When using an external fuel tank, first fill one third of it with gas, add all the oil, then pour in the rest of the gas.

Safe Fueling Procedures

Gasoline fumes are explosive and heavier than air. If done improperly, refueling is potentially dangerous. Always use the following precautions when refueling:

For Portable Tanks

- Moor the boat securely;
- Do not smoke, extinguish all open flames;
- Close boat hatches and doors;
- Take portable fuel tanks ashore. Portable fuel tanks must never be refilled on the boat;

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- Use a funnel with a screen to filter out sediment and prevent spilling;
- Do not overfill tank; and
- Wipe up any spilled fuel with liquid detergent.

For Boats with On-Board Fixed Tanks

- Shut off engine(s);
- Send passengers ashore;
- Turn off all electrical switches, including main batteries;
- Hold fueling nozzle firmly against filling pipe to avoid any build-up of static electricity that may cause sparks;
- Open doors and ports for ventilation. Use your nose and/or a bilge sniffer to detect any gas fumes;
- Clean any spillage from around fuel filler and fuel vent;
- Turn electrical system back on;
- Operate the bilge blower for about five minutes before starting engines;
- Check again for the smell of gas vapor;
- Start the engine;
- Allow passengers to come back aboard; and
- Cast off.

During the Trip: Monitoring the Weather

In addition to obtaining current relevant weather reports prior to sailing, the boat operator must obtain updates while out on the water. All vessels are equipped with receivers for continuous marine weather forecasts and will be used for weather updates at appropriate intervals throughout the trip.

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Environment Canada's Atmospheric Environment Program uses the following terminology in marine weather forecasts:

Light winds are winds less than 15 knots.

Moderate winds are winds in the range of 16-19 knots.

Strong winds are sustained wind speeds in the range of 20-33 knots.

Small craft warnings are issued when sustained wind speeds are expected in the range of 20-33 knots.

Gale warnings are issued when sustained wind speeds are expected in the range of 34-47 knots.

Storm warnings are issued when sustained wind speeds are expected in the range of 48-63 knots.

Guidelines for Aborting a Trip

In the event that weather conditions deteriorate during the trip, the operator and passengers will discuss whether the trip should be aborted. The following will be included in the decision-making process on whether to abort the trip:

- Current weather conditions.
- Forecast weather and water conditions.
- Experience and competency of boat operator.
- Local conditions.
- Local knowledge.

Post-Trip Check

When returning to port, a post-trip check will be completed using the post-trip checklist located in **Appendix F** and logbook signed to record the completion of the check. Post-trip checklists will be carried on board all Ministry vessels and will be in a plasticized format for reuse after each trip. The following will be performed on returning to port:

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- Remove all loose equipment;
- Check over the motor;
- Bail out any water;
- Clean vessel thoroughly includes disinfection requirements as outlined in Part 13;
- Fasten and secure convertible top or boat cover where applicable;
- Service trailer appropriately;
- Remove garbage;
- Notify your Program Manager of any damage or problems relating to the vessel; and
- Comply with check-in procedures.

EMERGENCY RESPONSES

What to do in a Marine Emergency

Marine (VHF) Radios

The VHF radio is the recommended means of issuing a distress message. Keep the radio tuned to **Channel 16**. Know where you are at all times and be able to describe your location accurately.

In the case of **grave and imminent danger**, use Channel 16 and repeat "**MAYDAY**" 3 times. Then give the name of your vessel and its position, the nature of your problem and the type of assistance required. In the case of you requiring assistance but **are not in immediate danger** use Channel 16 and repeat "**PAN PAN**" 3 times. Then give the name of your vessel and its position, the nature of your problem and the type of assistance required.

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Channel 16 is used for **EMERGENCY** and **CALLING** purposes only. Once you have called another vessel on channel 16, take your conversation to a working frequency and continue.

- All users of VHF radio must follow the procedures described in the VHF Radiotelephone Practices and Procedures Regulations.
- All VHF radio operators are required to have a restricted operator's certificate (ROC) with maritime qualifications.

Overboard Rescue Procedure

- (1) If someone falls overboard, or you see a victim in the water, the first priority is to throw a line, flotation-ring or lifejacket;
- (2) Where practicable, maintain eye contact with the person in the water at all times. If more than one person aboard, assign a lookout to watch the victim;
- (3) Turn the boat around, slow down and approach the person from downwind side. This tends to bring the victim towards the boat instead of you having to try to overtake him. It will also prevent the boat from drifting over the victim;
- (4) Keep the stern and propeller well away from the victim;
- (5) Shift the motor into neutral;
- (6) If conditions permit, shut off the motor when alongside. Free wheeling props can cause injuries;
- (7) Guide the person with a line or paddle to where they can be most easily brought abroad;
- (8) Avoid reaching out to the person with your hands you could be pulled in. Where practicable, use the man overboard ladder; and
- (9) If the victim is unable to use the ladder, put your hands under the victim's armpits, turn the person's back to the boat and pull the person

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aboard. If it is necessary to lift the person aboard, note the following points:

- Persons in cold water quickly lose their muscle strength and grip, so may be incapable of helping themselves aboard; and
- If the person is fully clothed, the weight of their wet clothing will significantly increase their overall body weight, therefore making lifting more difficult. The use of a rope sling under the arms may make lifting easier.

If YOU Fall Overboard

- (1) Yell, or blow the whistle that is attached to your lifejacket;
- (2) Make yourself visible by splashing or waving your hat or arms;
- (3) Conserve energy: don't swim far unless you must; and
- (4) Try to stay warm. Cover your head and tuck you knees into the HELP position.

Handling Boats in Storms

In the event of being caught in a storm, the boat operator will use the following guidelines to determine appropriate action:

- Small craft warning: Dangerous weather conditions. Use judgment and postpone the remainder of the trip if appropriate.
- Gale Warning: Very dangerous for small boats. Head for shore and safe anchorage if it is safe to do so.
- Storm Warning: Find a safe place to anchor or get ashore and stay there until storm passes.

Running with a Storm

Where possible, outrun a storm and head for shelter. When doing so, take the following precautions:

Sit as low as possible;

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- Shift weight to the rear of the boat, lightening the bow and allowing it to ride up on waves, rather than dig into them;
- Try to stay in the front of the trough of waves and slightly onto the back of a leading wave; and
- If it is safe, steer to the nearest shelter ashore.

Riding out a Storm

If the decision is to ride out a storm, take the following precautions:

- Reduce speed and keep the bow into the waves;
- Put out a sea-anchor to keep the bow into the wind;
- Shift weight to the rear in the boat; and
- If necessary, use steering and throttle to hold boat's bow into the waves/wind.

Towing other Boats

- Ensure that water, weather and other conditions will allow towing to be done safely;
- Always attach lines to the bow eye of the boat being towed rather than to deck hardware. The bow eye can lift 2 ½ times the weight of the boat;
- Never attach towing lines to stanchions or ladders or other weak points;
- Whenever possible, transfer passengers from the boat being towed to the boat doing the towing;
- When underway, any passengers on the towed boat should be kept as far to the stern as possible, well away from the towing ring;
- If towing over a distance, use as long a line as possible;
- Allow a "dip" to form in the line to take advantage of the shock-absorber effect;

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- The boat being towed should be in the "displacement mode" rather than in the "planing mode";
- Position the towing boat and the boat being towed so that both will ride over waves at the same frequency, from one wave-crest to the next;
- Always stop to adjust the length of towlines. Never adjust lines while underway; and
- A second crew-member should be assigned to keep a close watch on the boat being towed.

(Note: Ministry employees are responsible for the boat that they are towing)

Vessel Operation at Night or in Reduced Visibility

Boat operators will follow procedures for using lights and navigation systems in accordance with the Canada Shipping Act when operating a Ministry vessel at night and in reduced visibility.

Operators will operate the vessel at slow speed and will observe for debris and objects (i.e., logs in the water).

No operator will sail in conditions where visibility is less than one mile unless the vessel is equipped with radar and/or GPS.

Procedures for Boat Maintenance

Ministry personnel responsible for marine vessel maintenance will follow the manufacturer's maintenance guide. A pre-sail check will be performed prior to every trip according to manufacturer's instructions.

Procedures for Transporting a Boat

This section outlines procedures to connect a boat trailer to a vehicle safely, tow a boat trailer and load or unload a boat.

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Trailer Safety Checklist

This checklist will be used prior to connecting a boat trailer to a vehicle (note: each trailer must be checked annually by a qualified mechanic):

- Ensure trailer tires are properly inflated and treads in good condition;
- If trailer has a spare tire ensure that it is properly inflated, in good condition and is attached to the trailer correctly;
- Check the spare tire for air-pressure and tread;
- Check that the spare is locked to the trailer, ensuring you have the key first;
- Check that bearings are properly greased;
- Check the condition of the rollers;
- If the trailer is brake equipped, check the level of hydraulic brake fluid in the braking system and lines (N/A);
- Ensure the winch is in good working order;
- Check the cable or rope for condition and ensure it is secured to the bow ring;
- Check to ensure the winch cable and ratchet are engaged securely;
- Check that all lights and reflectors are in working order;
- Inspect the condition of the trailer frame and springs;
- Check that the licence plate is in place and that you have current registration and insurance papers;
- Ensure that the boat is secured at the bow and trailer frame with chain and shackles, at the stern with two proper tie-down straps;
- Check that all equipment in the boat is securely stored and that the canvas top is fastened; and

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Ensure that the side mirrors are mounted and adjusted for good rear vision.

Connecting Boat-Trailer to Vehicle

- Use only an approved frame-type vehicle hitch;
- Ensure that trailer hitch ball matches the trailer coupler and that the coupler is properly adjusted to fit the ball;
- Connect the safety chain for the trailer and hydraulic surge brakes; and
- Connect the trailer signal and brake lights, and check that they work properly.

Precautions while Towing a Boat Trailer

- Drop the antennae prior to towing;
- Do not speed or tailgate. Remember the extra weight of the boat and trailer affects the braking distance;
- When passing another vehicle, remember the boat's weight will slow your rate of acceleration. Because of this and the extra length of the boat, passing will require much more time and space;
- Check the tires and wheel-bearing hubs often for over-heating and keep bearing-buddies topped up with grease. Do not overfill the bearings so that excess grease is coming out all over the back of the hub;
- Frequently check that the canvas top is secured or remove it to prevent it from tearing when travelling at highway speeds;
- If the trailer sways excessively, reduce speed and check the tongue weight. It should be approximately 10 percent of the combined weight of boat and trailer;
- Stow equipment as far forward in the boat as possible to help maintain proper balance;
- A weaving trailer indicates either that the trailer is off balance or the axle is bent. Correct either situation immediately;

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- Pull off the road periodically; walk around both the trailer and the vehicle and ensure everything appears in order. Double-check tires, wheel bearings, tie-downs and any items stowed in the boat; and
- If the trailer has to be detached from the vehicle anywhere on the highway, the wheels must be blocked to prevent it from moving.

Launching from a Trailer

- Check the condition and depth of the ramp and watch for fast drop-offs or changes in the ramp's grade;
- Check the water to ensure there are no logs or debris;
- Untie all transom tie-down straps and other securing lines, except the winch;
- Unplug the trailer lights;
- Make sure the boat's drain plug(s) are in place;
- Remove the leg support;
- Ensure that the outboard motor is in the raised position;
- Do not back trailer into the water if the trailer wheel-bearings are still hot;
- Slowly back the trailer down the ramp into the water. While backing, steer trailer to the left whenever possible, to give you better visibility;
- Back the trailer into water until the boat is floating;
- Never leave the tow vehicle on the ramp with only the parking brake set. Set automatic transmissions to "park". Put manual transmissions in "low gear", turn off engine, set the brake and block the back wheel of the vehicle;
- Ensure the bow line is attached to the bow of the boat and have someone else hold on to the other end of the rope;

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- Disconnect the safety chain from the bow ring and winch cable hook;
- Push the boat off the trailer;
- Tie the boat to the wharf or shore, or have a co-employee hold the boat in position;
- Pull the trailer from the water and reconnect the trailer lights;
- Tow the trailer to a secure parking area; and
- If the trailer is left disconnected from towing vehicle, put a block under tongue support and chocks behind wheels.

Retrieving Boat up a Ramp

- Ensure the trailer lights are unplugged;
- Back the trailer down the ramp and into the water;
- Check that the outboard motor is in the raised position;
- Release the brake on the trailer winch;
- Pull enough cable off the winch to secure it to the bow eye of the boat;
- Make sure the boat is level so it will haul onto the trailer without tilting;
- Put winch ratchet to "on" to prevent the crank handle from reversing dangerously;
- Winch the boat onto the trailer;
- Raise the motor;
- Secure the safety chain from the trailer to the boat eye;
- Tow the boat up the ramp;
- Reconnect the trailer lights and check they are working;

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- Secure all equipment inside the boat;
- Remove drain plugs;
- Turn off batteries and secure motors: and
- Ensure the cover is tightly fastened.

Procedures for Docking a Boat

- Slow down early when approaching shore or dock;
- Observe conditions of wind, water and traffic;
- If possible, head into the wind or into the current, whichever has the most effect on the boat's maneuvering at the time;
- Prepare mooring lines and fenders;
- If possible, approach dock so that the wind or current helps bring the boat alongside;
- Have crew member ready with mooring lines;
- Keep the engine running until the boat has been made fast;
- When making fast at the mooring, always allow enough line for changes in water level or for rough water motion;
- Ensure all lines are tied fast so that they do not jam or slip;
- Adjust fenders for maximum protection of hull and pier;
- Crew members and passengers must wait until skipper gives the okay to step ashore; and
- Attach mooring lines to dock, being careful hands are not between lines and cleats, in case boat moves and pulls lines tight.

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Procedures for Beaching a Boat

- Tilt the motor or leg for shallow running;
- Post a Lookout in the bow;
- Go as slow as possible in the conditions; and
- Watch for following waves.

Safe Boarding and Exiting

Keep these safety steps in mind when boarding or exiting a vessel:

- Use a gangway or ladder whenever necessary. Gangways and ladders used for boarding and exiting must be secured;
- If the vessel has a bulwark, use a ladder or gangway that hooks over the bulwark whenever possible;
- If the vessel is lower than the dock, climb down the dock ladder to the deck. Then step onto the deck, holding a ladder rung with one hand and the vessel railing with the other hand; and
- Never jump from the dock to the vessel or jump between vessels. If transferring between vessels, ensure that the vessels are tied together.

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Part 7	Operating Vessels On Small Lakes	Specific Field Operations Manual

PART 7: OPERATING VESSELS ON SMALL LAKES

Policy

Ministry of Agriculture, Food and Fisheries employees shall meet the same standards of safety with respect to vessel operations on small lakes as when operating in the marine environment. Specific differences in operating procedures are identified below.

Responsibilities

Boat Operators

All boat operators shall comply with all policies and procedures identified for operation of ministry vessels in the marine environment.

"Safe Seconds"

"Safe Seconds", where required, shall comply with all policies and procedures identified for operation of ministry vessels in the marine environment.

"Safe Seconds" shall not be required where a crew consists of two individuals and one is required to move a vehicle from one location to another. In such instances, the operator must maintain the vessel in safe proximity to shore, and where possible, remain in sight of the vehicle driver. At no time can the vessel operator carry out any work other than moving the vessel from the location where he/she has been left to the point where he/she is rejoining the vehicle driver.

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PART 8: OBTAINING SAMPLES

Policy

Ministry of Agriculture, Food and Fisheries employees will follow work procedures to ensure safety when obtaining water samples either from shore or from a boat.

Responsibilities

Ministry employees will identify hazards and risks prior to commencing the task to minimize the risk of injury.

Ministry employees will determine whether conditions are safe to perform water sampling.

Hazards

Falling in the water Sharp rocks Swift currents Foot or leg injury Head injury Hypothermia Drowning

Personal Protective Equipment

Appropriate personal flotation device Throw bag or other rescue line Appropriate footwear Appropriate protective clothing

Procedures

Obtaining a Water Sample from the Lake Shore

- Visually inspect the substrate in which employee will be standing to obtain the sample. Ensure there are no obstructions or drop offs that may increase the likelihood of slipping or falling;
- 2. Ensure proper stance and firm footing before obtaining the sample; and

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3. Obtain the sample and return to shore following the same path that was taken when walking out.

Obtaining a Water Sample from the Bank of a Stream or River

- Perform a visual inspection of the substrate in which employee will be standing to obtain the sample to ensure there are no obstructions or drop offs that may increase the likelihood of slipping or falling;
- 2. Perform a visual inspection upstream to identify possible hazards such as debris that may float down and cause employee to lose hishe/her footing;
- 3. Perform a visual check downstream to look for obstructions or possible hazards in the event that employee is swept in by the current or floating debris;
- 4. Ensure proper stance and firm footing before obtaining the sample;
- 5. Always face upstream or into the current; and
- 6. Obtain the sample and walk back to shore following the same path as walked out on. Regularly observe the current while walking.

Obtaining a Water Sample from a Boat

- 1. Perform a visual inspection of the surroundings paying close attention to wave height and direction;
- 2. Face the boat into the wind over the location where sample is to be collected;
- 3. Ensure appropriate PFD or lifejacket is worn;
- 4. Move in the boat with slow, calculating motions, thereby minimizing risk to oneself as well as others in the boat; and
- 5. Obtain the sample and return to regular position in the boat

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PART 9: DIVING OPERATIONS

Policy

All Ministry of Agriculture, Food and Fisheries employees will follow safe work procedures when performing diving tasks to ensure safe operating conditions and practices in a water environment.

A copy of the WCB Regulation for Diving Operations will be available at every diving operation site.

When hiring a diving contractor for work that will involve both contract divers and Ministry staff, the Program Manager will designate the diving contractor in writing as Prime Contractor as part of the contract.

Responsibilities

Supervisors

A dive site supervisor identified by the Manager of Regional Operations will be responsible for the proper instruction of workers under their direction and control and for ensuring that diving operations are carried out without undue risk.

Divers

All Ministry divers must satisfy the designated diving supervisor (who will always be on site) that she/he fully understands the signals and procedures to be used during the diving operation.

Divers must not remain at any depth longer than the maximum time planned for that dive.

In all diving operations divers must inform the tender or their diving partner and must proceed to the surface under any of the following conditions:

- (a) If any malfunction in diving gear occurs;
- (b) On receipt of any signal which cannot be understood;
- (c) At the onset of any symptoms of physical or psychological distress;

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- (d) On receipt of a recall signal;
- (e) When the main air supply is near depletion;
- (f) If the emergency apparatus/air supply is being used, or;
- (g) In the event of excessive leakage to a dry type of diving suit.

WCB Regulatory Requirements

Notice of Project

The Manager of Regional Operations will submit or have the prime contractor submit a notice of project for diving activity, or notify the Workers' Compensation Board, at least 24 hours before commencing a diving operation that involves the following:

- Engineering inspection diving;
- Diving in a contaminated environment;
- Diving under ice, under or between nets, or into other areas of potential entrapment, or;
- Exceeding the no-decompression limit.

The notice of project must indicate the date, location, diving equipment to be used and the scope of the diving operation.

A copy of the notice of project must be made available to affected employees prior to commencing diving.

If in an emergency it is not practicable to notify the board prior to the start of a diving operation, the board must be notified as soon as possible, but no later then 24 hours after the diving operation has begun.

Medical Certification

Employees of the Ministry who perform diving operations will have current medical certification, in accordance with the WCB OHS Regulation 24.10(2) from a physician knowledgeable and competent in diving medicine before commencing diving operations.

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A copy of each diver's medical and oxygen therapy certification will be kept at the dive site and/or carried on board the Ministry vessel that is involved in the diving operation.

Diver's Fitness

A Ministry diver will not dive if, in the opinion of the diving supervisor, the diver is incapable of functioning safely underwater. A diver will be medically re-examined, as required by the diving supervisor, to ensure that the diver is fit to dive.

Divers, standby divers and divers' tenders must not participate in any diving operation if they are physically or emotionally fatigued or if they have consumed drugs or alcohol that would impair their ability to work safely.

Training

Ministry divers must not dive until she/he has been thoroughly trained in the theory and use of the diving apparatus that she/he will be using. Divers must have completed an occupational scuba course as per *CSA Standard* prior to performing diving operations.

All Ministry divers will be trained in CPR, oxygen therapy and diving accident management.

Evidence of Competency

Employees of the Ministry who perform diving operations will meet the minimum requirements of CSA Standard Z275.4-97 Competency Standard for Diving Operations or other standard acceptable to the board and are competent to use the diving equipment that will be used in the diving operation.

A certified copy of competency documents for each diver will be kept at the Courtenay MAFF office and will be available for inspection from the dive supervisor on site by a board officer.

Diving Logs

Each Ministry diver must have, and keep for 2 years after the last entry, a personal log containing a record of the following:

(a) Dives carried out; and

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(b) Medical recompressions and other exposure to a compressed air/mixed gas environment.

The records in a diver's personal log must be in chronological order. Each dive must be verified and initialed by the designated diving supervisor.

The records for each dive must include:

- (a) The type of diving apparatus used and the gas medium breathed;
- (b) The times the diver left the surface, reached and left the bottom, and returned to the surface:
- (c) The maximum depth attained;
- (d) The surface interval, if a repetitive dive;
- (e) The decompression tables that were used;
- (f) The date the dive was undertaken; and
- (g) Any other remarks (such as unusual incidents).

The designated diving supervisor must keep a separate log of the diving operation containing the information listed above for dive records.

The diving supervisor's log must be filed with the Manager of Regional Operations upon completion of the operation. All current logs will be available at the dive site for inspection by an officer of the board.

Diving Tables

Diving operations, repetitive dives and treatment of Ministry divers will be carried out in accordance with tables and procedures published or approved by the Defense and Civil Institute of Environmental Medicine (Canada) or other standard acceptable to the board.

Sport diving tables must not be used for Ministry diving operations.

Diving computers will not be used in place of primary diving tables.

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Dive Site Equipment

When diving is in progress, the dive site must be provided with the following:

- (a) A current list of facilities with hyperbaric chambers capable of providing emergency treatment;
- (b) The locations and phone numbers of the nearest hospital and available emergency assistance;
- (c) If the no-decompression limit is to be exceeded, a 16mm (5/8 inch) synthetic line, marked at appropriate intervals for decompression stops, weighted and of sufficient length to reach the maximum depth for the dive;
- (d) A Level 1 first aid kit and an oxygen therapy unit with sufficient capacity to reach emergency medical services (refer to Part 6 : Marine Vessel Operations for items to be included in a Level 1 first aid kit);
- (e) One complete set of acceptable dive tables and one copy of the WCB diving regulations;
- (f) An appropriate means for rescuing an incapacitated diver; and
- (g) Equipment to provide voice communication with emergency services personnel.

Lifelines

Divers tended on a lifeline must wear a suitable diver's harness and lifelines must be:

- (a) Securely fastened to the diver's harness, but not attached to the diver's weight belt;
- (b) Free of knots and splices;
- (c) Secured to a permanent fixture at the surface; and
- (d) Tended at all times by a diver's tender.

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Hazards of Diving

Drowning

Foot Entrapment

Entanglement with debris

Hypothermia

Exhaustion/Fatigue

Personal Injury (as a result of accidents in and around the water)

Currents

Backwash off cliffs and shorelines

Fast-changing weather conditions

Sharp/Slippery rocks

Personal Protective Equipment

Appropriate wetsuit/drysuit

Weight belt

Mask, snorkel, buoyancy compensator

Note: All jewelry that may create a hazard must be removed or covered by the drysuit/gloves before diving.

Safe Diving Procedures

- Safe procedures and health requirements will be followed for each type of diving in which Ministry workers may be involved.
- Divers will be knowledgeable on procedures for emergency, evacuation and rescue.

Crew Briefing

Immediately before each dive, the diving supervisor will brief all persons involved in the diving operations on the following:

- (a) Hazards that may be encountered during the dive;
- (b) Intended duration of the dive and the maximum depth to be reached;
- (c) Decompression procedures to be followed;
- (d) Location of other divers;

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- (e) Work to be done;
- (f) Specific recall signals; and
- (g) Emergency procedures to be followed.

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PART 10: RIVER SWIMMING

Policy

All Ministry of Agriculture, Food and Fisheries employees will follow safe work procedures when performing river swimming tasks to ensure safe operating conditions and practices in a water environment.

All employees involved in river swimming will have completed the Swift Water Operations course and be familiar with established river swimming techniques.

A swim supervisor will be designated to supervise all activities associated with a river swim.

Hazards of River Swimming

Drowning

Foot Entrapment

Entanglement with river debris

Entanglement with nets

Hypothermia

Exhaustion/Fatigue

Personal Injury (as a result of accidents in and around the water)

Hooking injuries

Currents

Backwash off cliffs and shorelines

Fast-changing weather conditions

Sharp/Slippery rocks

Use of spearguns or spears

Training Requirements

First Aid and CPR training

Personal Protective Equipment

Properly fitting mask

Snorkel

Dry or Wet Suit with Headpiece

Booties or fins according to the task

Gloves where appropriate

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Knife

Personal Flotation Device for Spotter where appropriate

Throw Rope or Line

Whistle

Helmet (optional)

First aid kit, radio, bear spray for spotter where appropriate

Sampling gear as required by specific trip purpose

Note: All jewelry must be removed before swimming unless covered by suit or gloves.

Procedures

Prior to Departure

- 1. Ensure a remote location plan has been filed and check-in procedures have been established.
- 2. Ensure there are at least two people in the water and where practicable at least one individual on the riverbank as a spotter.
- 3. Ensure the spotter is equipped for, and is capable of rescue. Equipment includes a signaling device and rope with throwing device.

Prior and During Swim

- Check river conditions upon arrival and determine whether water conditions present a significant hazard. Know the international grading standard of the river that you are working in, including the gradient of the river. If it is felt that conditions are hazardous all members of the team must be informed of the hazards and a decision made on whether the swim can proceed safely.
- Check the weather forecast before commencing the planned task. Up-to-date weather reports may be obtained from Environment Canada.
- Be aware of high water levels. These can be caused by spring runoffs or other significant rain events. In British Columbia, these can persist into July and cause rivers to be swift and frequently lethal. If water conditions are considered acceptable then a complete check of all

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equipment must be undertaken. Any equipment malfunctions must be corrected prior to use.

- 4. Review all potential hazards that may be encountered as well as all safety signals that will be utilized by the team during the operation. Scout the affected area for hazards such as fallen trees, log jams, rapids, falls, gravel bars and other hazards.
- 5. Determine the length of the swim times and rest times based on water temperatures and environmental conditions. Cold water (below 15°C/60°F) will affect the body within minutes. Be aware of changing environmental conditions during the swim.
- 6. Establish emergency rescue procedures before entering the water and ensure all swimmers are aware of the procedures.
- 7. If towing sampling equipment in a small boat, ensure all equipment is properly lashed to the boat.
- 8. Enter the water and make any further adjustments to gear while acclimatizing to the water temperature i.e. adjusting mask to ensure proper fit.
- 9. If all equipment is functioning and all swimmers give the O.K begin the swim. Keep abreast of your swim buddy at all times and regular stops will be made to ensure they are safe.
- 10. If sampling is to be performed by spearing fish, all swimmers except the spear-fisher and one assistant must be out of the water. The assistant must stay behind the spear-fisher until the speargun is discharged. The gun is not to be returned from the water in an undischarged state or to be carried loaded when swimming other than when being used.
- 11. If using either seine or gill nets in river, care must be taken to ensure swimmers do not become entangled. All equipment straps must be taped so ends do not protrude.
- 12. If angling for sampling purposes, all swimmers must be kept clear of the area being angled.

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- 13. Do not attempt to stand up in fast flowing water. Your feet may become trapped and the current could force you under.
- 14. It is the responsibility of the spotter to keep all swimmers in sight at all times. If the spotter loses visual contact with a swimmer she/he must give **1 blast** of the whistle to stop the operation until the swimmer is in site and the spotter then gives the signal to resume the swim.
- 15. If the spotter blows **3 repeated blasts** this is an emergency and all members of the team must initiate emergency response actions.
- 16. Before leaving the swim site ensure that all swimmers are accounted for and all equipment is checked and stored properly.
- 17. Hazardous conditions encountered will be recorded on an incident report form (located in Appendix Q: Incident Report Form) for review. Incident report forms are submitted to the Manager of Regional Operations for review and then filing with the Administrative Assistant.

Emergency Response Actions

- Throw line to swimmer;
- Wade into water;
- Grasp hold of swimmer, use lasso rope to secure hold; and
- Pull to safety.

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PART 11: ELECTRO-FISHING

Policy

All Ministry of Agriculture, Food and Fisheries employees will follow safe work procedures when performing electro-fishing to ensure their safety and well being.

All Ministry employees involved in electro-fishing will be certified to do so and will have Industrial first aid level1, CPR and Transportation Endorsement certification. All crew members will have Swift Water Operations certification.

Hazards

Drowning

Electrocution

Hypothermia

Exhaustion/Fatigue

Personal Injury as a result of accidents in or around the water

Planning

- All equipment must be checked prior to departure to ensure that it is in good working order; and
- All staff (minimum crew size of two) involved in electro-fishing will have completed the Electro-fishing course from Malaspina College (or approved equivalent).

Procedures

Prior to Start

- The operator of the backpack will be considered to be the crew leader;
- Check river conditions to determine whether or not prevailing water conditions create a hazard. If the river is hazardous because of the conditions, abort the operation;

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- Check all personal protective equipment including waders and gloves to ensure that they are leak free;
- Perform a pre-job hazard assessment looking at the risks of drowning, electrocution, hypothermia, exhaustion, and slips and falls.
 Determine the proper procedures that must be followed to minimize or eliminate these risks; and
- Determine the signals that will be used during the operation. These
 must include at a minimum the "Power On" sign (employee raises his
 arm in the air and taps his head) and the "Power Off" sign (employee
 draws one hand across his throat).

Electro-Fishing Procedures

- Everyone must wear leakproof insulated waders with non-slip soles;
- Everyone must be equipped with appropriate linesman's rubber gloves;
- No one shall electro-fish unless wearing appropriate linesman's rubber gloves and at no time will they remove the rubber gloves. If the crew leader sees anyone not wearing rubber gloves he must immediately stop the procedure;
- If someone is falling, the crew leader must release the dead man's switch to cut the power and remove the anode from the water;
- If there are persistent spectators or animals who will not leave the area in spite of repeated warnings, abort the operation; and
- Before leaving the site the crew leader must ensure that all personnel are accounted for and all equipment is checked and stored properly.

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PART 12: WORKING NEAR WATER

For policies and procedures relating to the operation of a Ministry marine vessel, refer to Part 6: Marine Vessel Operations of this Health and Safety Program.

Policy

All Ministry of Agriculture, Food and Fisheries employees will follow safe work procedures when performing work near bodies of water to ensure their safety and well being.

Responsibilities

All Ministry employees will ensure that they conduct near water work in accordance with Ministry guidelines and wear appropriate personal protective equipment according to the task.

Hazards

Drowning
Hypothermia
Tensioned cable/rope recoil
Falling/Tripping
Slippery Surfaces

Personal Protective Equipment

Gloves and footwear as required
Personal flotation device as required by WCB Regulation
Eye protection as required

Procedures

- Perform visual inspection of the surrounding area for potential hazards; and
- Use caution when walking on wet or snow covered surfaces;
- Use caution when inspecting in vicinity of rotating equipment (i.e., shafting and pumps). Ensure loose clothing is not worn;

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- Wear an appropriate personal flotation device when working in all water environments if there is a risk of drowning and there are no other measures available for protection against drowning (i.e., use of guardrails on fish farms); and
- Wear non-slip footwear when walking on boardwalks or around floating cage systems.

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PART 13: WORKING IN A DOCK ENVIRONMENT

Policy

All Ministry of Agriculture, Food and Fisheries employees will follow safe work procedures when performing work in a dock environment to ensure their safety and well being.

Responsibilities

All Ministry employees will ensure that they conduct work in a dock environment in accordance with Ministry guidelines and will wear appropriate personal protective equipment according to the task.

Hazards of Working in a Dock Environment

Accessing the Dock

Ministry employees will follow procedures when docking Ministry vessels. These procedures are located in the "Marine Vessel Operations" section of the Ministry of Agriculture, Food and Fisheries Health and Safety Program – Specific Field Operations.

Using Dock Ladders

When disembarking the boat, if the dock is above the level of the boat, employees will use the dock ladders. Care will be taken when using ladders that do not extend up beyond the ground level of the dock. When reaching the top of the ladder, employees will kneel on the dockside before standing upright.

When returning to the boat using ground level dock ladders, employees will sit on the dockside, position one foot on the ladder with toes facing the dock wall. Slowly turn the body so that you are facing the dock and climb down to the boat.

Working Near or Around Mobile Equipment

Working around or near mobile equipment (i.e., forklifts) can be a hazard. Prior to walking through such an area, employees must make eye contact with the operator of the mobile equipment to ensure that their presence is acknowledged in accordance with WCB Regulation

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16.43 (2)(c). Whenever practicable, employees will use walkways that have been designed to separate pedestrian traffic from areas of operation of mobile equipment.

Risk of Overhead Hazards

Where there is a risk of an overhead hazard i.e. equipment/items falling on the employee, an employee will wear a hard hat, in accordance with WCB Regulation Part 8.

Risk of Entrapment

Where there is a risk of entrapment (i.e., during an inspection of a fish hold), the employee will ensure that others are aware of the intention to access the fish-hold. The deck cover to the hold must remain open at all times during the inspection.

Risk of Confrontation

Where there is a risk of confrontation or violence, the employee will perform his/her duties in accordance with written work procedures for handling violence in the workplace. Refer to Part 17: Violence in the Workplace.

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PART 14: BIO-SECURITY PROCEDURES FOR FISHERIES INSPECTION AND SITE VISITS OF MARINE FISH FARMS

Background

The Provincial *Fisheries Act* permits Inspectors to enter premises and/or pass over private property without being held liable for trespass for inspection of farm sites as specified in the Act. Aquaculture biologists and Fish Health personnel also regularly visit fish farms. The purpose of this protocol is to ensure that Inspectors are aware of the fish health and disease implications arising from the movements of personnel, boats, equipment and other materials that could result in the inadvertent transfer of pathogenic agents between fish farm sites and/or companies. The protocol is designed to minimize the risk of compromising the health of farm sites yet enable Inspectors and Biologists to perform inspection duties as required.

Ministry of Agriculture, Food and Fisheries has an obligation to ensure that their actions do not increase the risk of transmission of salmon diseases between farm sites. As such, these criteria should be considered as a minimal standard. Industry may have more stringent or additional protocols to deal with specific concerns that Inspectors or other Ministry staff must follow. Compliance with these additional company procedures will further reduce the risk of disease transmission.

Investigations related to possible violations or complaints require no formal advance notice to the company. In this case, Inspectors should attempt to limit inspection to one site or a limited number of sites thus reducing the potential for disease transmission between sites.

Rationale

Transmission of disease agents can occur through fomites (equipment, boots, boats, sampling gear), personnel visiting the sites or abiotic elements such as air and water. To reduce the risk of transmission of disease agents between sites, strict disinfection procedures and biosecurity protocols will be followed.

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Notification

Routine Site Visits and/or Inspections

For routine site inspections, site visits for collection of samples or other scientific/project-based reason, Ministry staff should provide the company in question 48 hours notice prior to the visit. The employee should ask the appropriate personnel, preferably the Area/Site Manager or Fish Health Manager for that company, if there is a particular order with which sites should be visited. Any particular fish health concerns that a company may have where site access should be limited (example algae bloom, disease concern) can be addressed at this time.

Wherever possible, efforts should be made to attend only sites within one company per day to avoid the potential transfer of disease agents between companies.

Investigations related to possible violations or complaints require no formal advance notice to the company. In this case, Licensing and Enforcement staff should attempt to limit inspection to one site or a limited number of sites thus reducing the potential for disease transmission between sites.

Rationale

Younger fish first introduced to sea sites may be naïve and more susceptible to potential pathogenic agents than older fish. To reduce the potential risk of transfer of disease from older fish to younger naïve stocks or transmission of agents to valuable broodfish stocks, farms will often set out an order in which sites should be inspected. If there is a fish health concern at a particular site (example: an algae bloom or a disease present that has not been identified at another site), staff should ensure that site is inspected last. No additional sites should be visited prior to complete disinfection of the boat and bilge.

Disinfection Procedures

Prior to Site Inspection

All boats, safety gear, personal gear, protective clothing, raingear and boots must be disinfected and clean prior to site visit. Boots and other personal gear should be sprayed or otherwise scrubbed with a clean

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solution of iodine (examples: betadine, ovadine or wescodyne), Savlon, or Virkon diluted in water as per the label instructions for equipment disinfection.

A material safety data sheet that lists the hazards and precautions for use must accompany each of these disinfectants.

Boats and other gear should be free of visible dirt and organic matter. Boats should be cleaned and bilge disinfected with mild chlorine or bleach solution prior to site inspections and, if possible, between companies. Bilge water and pumps should not be operated in the vicinity of farms.

During Site Visits and/or Inspections

Footbaths should be available for disinfecting boots at all sites at designated docking points. In the event no footbath is visible/available, Staff should have on board the boat equipment for disinfection of boots between sites. This should include a spray bottle with a dilute solution of disinfectant or a plastic tote or bucket with scrub brush and disinfectant.

Staff, who are in contact with fish, fish feed, mortalities and related equipment during a site visit should disinfect all personal gear and equipment and wash hands thoroughly.

After Site Visits and/or Inspections

All equipment and personal gear should be thoroughly disinfected, cleaned and dried between inspections with a dilute solution of lodine, Savlon, Virkon or other cleanser recognized as effective against fish pathogens.

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PART 15: WORKING ON BEACHES

Policy

All Ministry of Agriculture, Food and Fisheries employees will follow safe work procedures when performing work in a beach environment to ensure their safety and well being.

Responsibilities

All Ministry employees will ensure that they conduct work on a beach in accordance with Ministry guidelines and will wear appropriate personal protective equipment according to the task.

Personal Protective Equipment

Appropriate non-slip footwear

Protective clothing appropriate to the climate/weather conditions

First Aid Kit

Hazards

Falling/tripping
Slippery surfaces
Surge
Hypothermia
Drowning
Heat Stress
Reduced visibility
Rising tides
Infection through cuts and abrasions

Procedures

Ministry employees will be aware of the possibility of surge while working on the shoreline and will take necessary precautions to prevent being swept into the water.

If conditions make a walking surface very slippery, a walking stick may be used to reduce the risk of falling.

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PART 16: REMOTE OPERATED VEHICLE OPERATION

Policy

Ministry of Agriculture, Food and Fisheries employees will follow work procedures to ensure safety when operating ROV's from either boat or floating structures.

Responsibilities

Ministry employees will identify hazards and risks prior to commencing the task to minimize the risk of injury.

Hazards

Falling in the Water
Hypothermia
Drowning
Personal Injury (e.g. slipping on boat deck)
Muscle strain
Electrical Shock

Personal Protective Equipment

Appropriate PFD
Appropriate rescue equipment
Appropriate footwear
Appropriate protective clothing

Procedures

- Operators must familiarize themselves with operating manual(s) before use;
- A ground fault interrupter circuit should be used;
- Appropriate gloves should be worn when handling cables;
- Cables should be checked for cuts, breaks or any defects before use;
- All operating systems should be tested as per operating manual before lowering ROV into water:

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- The system should never be used if any defects are detected;
- Lights or lasers should not be used above water for extended periods of time;
- Only qualified technicians should perform maintenance or open any electrical component;
- Power should always be disconnected before servicing by unplugging the system;
- When lifting, recovering or moving a ROV weighing more than 22 kg (50 lbs.), always use davit or two or more people – one person should not lift by him/herself;
- All components should be securely stowed/tied down when transporting ROV;
- Care should be taken to keep clear of thruster propellers when the system is powered up; and
- Operators must complete certification on ROV operation.

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PART 17: VIOLENCE IN THE WORKPLACE

Definitions

Violence

Any physical force causing injury and any incident that results in the employee's belief that she/he is at risk of injury. Verbal abuse or harassment may not be violent. It becomes violent if it includes threats and the employee has reasonable cause to believe that they or their family is at risk of injury.

Policy

The Ministry of Agriculture, Food and Fisheries will eliminate or minimize the risk of violence to employees in the Resource Development and Sustainability Division. The Ministry will ensure that:

- A violence risk assessment has been completed;
- Procedures and policies are in place to reduce the risk of violence to employees;
- Employees have been instructed;
- Violent incidents in the workplace are reported and investigated;
- Follow-up corrective action is taken on all violent incidents;
- Affected employees receive counseling; and
- Family members and visitors are instructed to wait in reception until informed that entry into the department is permitted.

Responsibilities

Managers, supervisors and staff all play an important role in preventing, reporting, investigating and managing both violence and abusive/harassing incidents in the workplace.

Managers & Supervisors

Ensure that employees are aware of Ministry policy and procedures

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- Make supplementary instructions such as how to avoid/respond to incidents readily available to employees;
- Ensure a risk assessment(s) meeting Ministry and WCB standards is undertaken as and when required by incidents or emerging risks;
- Inform affected employees of the nature and extent of any risks or incidents of violence in the workplace including notifying all affected employees of any risk of violence by a specific client;
- Inform affected employees of actions taken by the Ministry to be followed in response to incidents of violence;
- Ensure that training/education is provided to those employees at risk;
- In consultation with the Joint Occupational Health and Safety Committee, ensure effective preventive measures, response, reporting, investigation and monitoring procedures are in place; and
- In consultation with the Joint Occupational Health and Safety Committee, review the workplace violence prevention program at least annually or when required by incidents or emerging risks.

Employees

- Report all incidents of violence/threats or abuse/harassment to your supervisor or program manager;
- In conjunction with the Joint Occupational Health and Safety Committee, assist in the identification of risks and the development of preventive measures;
- Follow safe work procedures, preventive measures and documentation requirements;
- Cooperate with the Ministry in:
 - Any legal actions taken as a result of acts or threats of violence directed against you or other Ministry employees;

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- Any accident/incident investigations involving the Joint Occupational Health and Safety Committee as required under Section 6 of the WCB Regulations; and
- Seek first aid/medical attention including critical incident/trauma services and/or the government Employee and Family Assistance Program when appropriate.

Reporting Incidents of Violence

The Ministry of Agriculture, Food and Fisheries defines violence as any physical force causing injury and any incident that results in the employee's belief that she/he is at risk of injury.

Verbal abuse or harassment may not be violent. It becomes violent if it includes threats and the employee has reasonable cause to believe that they or their family is at risk of injury. Whenever employees have cause to believe that they are at risk, they must report the incident.

Violence Prevention Process

There are eight steps in the violence prevention process:

- 1. Involve the Joint Health and Safety Committee.
- 2. Identify hazards through risk assessment or reports of incidents.
- 3. Rate the severity of the risk as low, moderate or high.
- 4. Identify possible solutions that will eliminate or minimize the risk.
- 5. Choose the most appropriate solution.
- 6. Implement the solution.
- 7. Instruct employees on the procedures or work arrangements that have been implemented.
- 8. Document the process.

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Violence Hazard Identification and Risk Assessment

Ministry of Agriculture, Food and Fisheries will perform violence risk assessments to determine the risk of violence to employees. Typical examples of risk may include, but are not limited to:

- Risk of assault:
- Encountering hostility at any commercial fish or aquaculture worksite;
- Enforcing Regulations;
- Encountering illegal activities in the workplace;
- Telephone threats; and
- Bomb threats

Using workplace history of violence, information obtained from other workplaces and information from hazard identification and risk assessments the employee's supervisor or manager will:

- 1. Identify hazards that present the possibility of violence.
- 2. Determine the level of risk to employees.
- 3. Determine the potential solutions that can be put in place.

The worksheets that are required for completing the hazard identification and risk assessment procedure are located in the following appendices:

- Appendix G: Overview of Violence Hazard Identification and Risk Assessment
- Appendix H: Violence Risk Assessment Worksheet
- Appendix I: Violence Risk Assessment Sample
- Appendix J: Violence Rating Score

Managers/Supervisors, working with other trained employees (these should be members of the JOHS Committee or Employee Health and

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Safety Representative) and affected employees will perform hazard identification and risk assessments on the risks of potential violence.

Eliminating or Minimizing Risk

When it is impossible to eliminate the risk of violence, we must try to minimize the risk. This is done through policies, procedures, and work environment arrangements. When minimizing the risk it is important to follow a hierarchy of solutions:

Eliminate

First, look at the possibility of eliminating the task completely.

Substitute

If elimination is not possible, try to substitute either a different procedure or changes to the procedure in order to minimize the risk.

Engineer

If it is not possible to substitute, try to implement engineering controls. These include technological changes as well as guards, barriers, changes to counter heights etc.

Administer

If engineering controls cannot solve the problem, the next possible solution is administrative controls. Administrative controls include changes to the way the staff are scheduled and located.

Personal protective equipment

Finally, look at personal protective equipment. Mace or pepper spray may be used if the situation requires it.

<u>Implementation</u>

When the most appropriate solution has been identified, it must be implemented. Proposed solutions should be documented on the form located in **Appendix K** (Procedures for Preventing Violence in the Workplace).

The proposed policy, procedure or work arrangement is then forwarded to the Joint Health and Safety Committee and then to management for their review and approval. Once approved, the procedure will be implemented, and a copy of the completed procedure will be maintained as part of this program.

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Informing and Instructing Employees

It is very important for managers to ensure that all employees be aware of the risk of violence in the workplace. The results of violence hazard identification and risk assessments will be shared with all affected employees.

Knowledge about the existence of potentially violent clients/field location activities must be shared with all employees who may be affected. There will be a communication system in place between government agencies to provide information on clients of other agencies that are known to have a violent history. Any work location or any individual with a history of violence, must be identified for staff who may come in contact with that location/individual.

Whenever possible, detailed descriptions of potentially violent clients will be developed and circulated to affected employees.

Response to Violence

The Ministry of Agriculture, Food and Fisheries has a policy for zero tolerance for violence against employees. If an employee is involved in a violent incident the first step is to inform the client that the behavior is not acceptable.

Employees should follow effective defusing techniques and violence prevention techniques. Employees must remove themselves from the violent situation and are encouraged to call the police whenever they feel a situation is threatening to escalate to violence.

Post Incident Investigation

- An immediate initial incident investigation/debriefing will be conducted by the Program Manager to determine if the incident was or was not violent in nature as defined by WCB Regulations;
- The employee(s) should be assured that the Ministry does not tolerate either threats/acts of violence against staff, or staff being verbally harassed/abused by the public;

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- The employee's supervisor or manager will immediately report any incident clearly involving act(s) or threat(s) of violence against staff to the police. Obtain a police file # and follow any directions provided by the police;
- Promptly provide the details of the incident, presence of any residual risk(s) and the appropriate corrective actions taken/proposed to the following people:
 - All other "at risk" employees;
 - Members of the Joint Occupational Health and Safety Committee (who will monitor and commence their review/investigation of the incident); and
 - Accident Prevention Section, Human Resources Branch.
- Advise the incident victim(s) to seek first aid, medical assistance for treatment or referral; and
- The supervisor or manager will contact the Ministry's CISM Program 1-800-661 CISM (2476) to determine if critical incident stress defusing/debriefing is required, where appropriate.

Work Procedures for Violence in the Office Environment

Bomb Threats

Bomb threats are usually received by telephone or sometimes by a note or letter. Most bomb threats are made by callers who want to create an atmosphere of general anxiety or panic, but all such calls must be taken seriously and are handled as though an explosive is in the workplace.

Bomb Threat by Phone

If you receive a bomb threat by phone try to remain calm and:

- (a) If possible, get the attention of a co-employee who should contact one of the managers or a supervisor.
- (b) Write down the exact wording of any threat.

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- (c) If possible, ask the caller the following questions:
 - When is the bomb going to explode?
 - Where is the bomb right now?
 - What does the bomb look like?
 - What will cause it to explode?
 - Did you place the bomb?
 - Why did you place the bomb?
 - What is your address/location?
 - What is your name?
- (d) Prepare a written report of the incident using the Bomb Threat Report Form located in **Appendix L** (Bomb Threat Report Checklist) and submit it to the Manager and MAFF OSH Representative. It will be used by the police and the Joint Occupational Health and Safety Committee in their investigation.

Bomb Threat by Mail

If you receive a bomb threat by mail:

- (a) Avoid further, unnecessary handling of the correspondence (as the document may be subject to finger print analysis);
- (b) Immediately contact your supervisor or manager;
- (c) The appropriate Manager will inform the police. Follow the police instructions; and
- (d) Prepare a written report of the incident to you manager who will use it as a basis for informing the police and subsequent internal investigation involving the Joint Occupational Health and Safety Committee.

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Written Bomb Threat at Home

- (a) Avoid further unnecessary handling of the correspondence, as the document may be subject to finger print analysis;
- (b) Inform the police immediately and follow their instructions;
- (c) Notify your supervisor or manager as soon as possible; and
- (d) Prepare a written report of the incident to the manager and OSH representative and assist in the subsequent internal investigation involving the Joint Occupational Health and Safety Committee.

Suspicious Object

If you receive in the mail or see an unusual or suspicious package or an unknown object in an unusual place DO NOT TOUCH IT.

- (a) Survey your immediate area to see if it could belong to someone, if not, immediately contact your supervisor or manager;
- (b) Advise other staff in the immediate area. Do not pull the building fire alarm;
- (c) The supervisor or manager will immediately call the police to report the device. The police will advise if evacuation will be necessary. Follow their instructions:
- (d) Advise other building occupants and security of these instructions; and
- (e) Prepare a written report of the incident to your manager and OSH representative. It will be used in the subsequent internal investigation involving the safety committee.

Note: The local **Building Evacuation Plan** includes provisions for an evacuation due to a bomb threat. Building Fire/Evacuation Wardens should be prepared to change normal exit routes if necessary. Evacuation Plans must be coordinated with other building occupants.

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Telephone Threats

Telephone Abuse/Harassment at Work or Home

- (a) Politely advise the caller that you find their manner unacceptable and not conducive to business, and if she/he continues in this manner, you will hang up. Don't "escalate" the exchange by arguing about the subject matter or the caller's behavior;
- (b) If the caller is anonymous, try to determine the caller's identity i.e. "call-display, voice or speech patterns, accent, speed, tone, diction, male/female, young/old, background noises. Ask caller their name;
- (c) If the caller persists, quietly tell the caller that you are discontinuing the call and quietly hang up;
- (d) Report the incident to your supervisor or manager;
- (e) Make a written note of the conversation;
- (f) If this is a recurring incident (harassment) or if you expect it to be so, the police should be contacted. The police may investigate but they will make a detailed report. Ask the police for their case file #; and
- (g) The Manager will contact Ministry Voice Communications staff for advice on other possible telephone security measures/features involving the BC Telephone System or Government Telephone System.

Telephone Threats at the Office

- (a) If anonymous, keep the caller talking to determine identity and other characteristics i.e. listen to speech, accent, speed, tone, diction, male/female voice, young/old, background noises. If possible, have another employee listen in to confirm the threat;
- (b) If possible, suggest to the caller that speaking with your supervisor is the proper way of handling this call. The employee's supervisor or manager should then make every effort to confirm the identity of the caller:
- (c) Report the incident to the appropriate manager;

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- (d) The supervisor or manager will immediately inform the police. Follow the police instructions. Obtain a police report #;
- (e) Each employee who listened to the conversation should immediately record in writing, the content of the conversation. If possible, each report should include an opinion, with supporting reasons, on the caller's identity. The report will assist in the police investigation and subsequent actions; and
- (f) The Manager will contact Ministry Voice Communications staff to obtain information on other possible security measures involving BC Telephone System/Government Telephone System.

Telephone Threats at Home

- (a) Try to identify the caller by extracting as much information and personal identifiers as possible (i.e. knowledge of topic, listen to speech, accent, speed, tone, diction, male/female voice, young/old, background noises);
- (b) If possible, have someone listen on an extension phone or "record" the conversation;
- (c) Call the local police immediately. Provide details and if necessary, request protection. Follow their advice. Obtain a police case file #;
- (d) Advise your supervisor or manager of the situation as soon as possible;
- (e) You and any other person listening to the call should write separate, detailed reports of the events as son as possible. Include an opinion, with supporting reasons, on the individual's identity. Give the written report to the police and your manager and OSH representative;
- (f) The Manager will contact Ministry Voice Communications staff to obtain information on other possible security measures/features available from the BC Telephone System or Government Telephone System; and
- (g) Assist in the subsequent internal investigation involving the Joint Occupational Health and Safety Committee.

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Threatening Correspondence

Threatening Correspondence at the Office

- (a) Avoid further, unnecessary handling of the correspondence. It may be subject to finger print analysis;
- (b) Inform your supervisor or manager as soon as possible who will immediately inform the police;
- (c) Follow police instructions; and
- (d) Prepare a written report of the incident and forward your report to your manager and OSH representative. It will be used in the police investigation/file and subsequent internal incident investigation involving the Joint Occupational Health and Safety Committee.

Threatening Correspondence at Home

- (a) Avoid further unnecessary handling of the correspondence as it may be subject to finger print analysis;
- (b) Inform the police immediately and follow their instructions;
- (c) Notify your supervisor or manager as soon as possible; and
- (d) Prepare a written report of the incident and forward your report to your manager and OSH representative. It will be used as a basis for the police investigation and subsequent internal incident investigation involving the Joint Occupational Health and Safety Committee.

Work Procedures for Violence in the Field Environment

Threatening or Abusive Interviews/Meetings Outside a Ministry Office

Specific preventive and response measures must be developed if any employee anticipates problems at a meeting. The following includes some preventive measures:

- Acquire/enhance skills in defusing hostile situations.
- Do not work alone if there is a risk of violence.

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- If travelling by car, have immediate access to assistance via a cell phone.
- If travelling by boat, have access to assistance via a cell phone, satellite phone or VHF frequency.
- If meeting out of town and staying overnight, do not have the business meeting in the same facility as you are staying.
- Know where you are going to meet and if possible set the meeting in an area/room which can be visually monitored by an outside colleague or hotel security where assistance can be readily available if needed.
- Schedule the meeting so that assistance from colleagues/security would be available (i.e., not before or after regular work hours or during lunch breaks).
- Let the building/hotel security know that there may be trouble during the meeting and make arrangements with them for assistance if necessary.
- Set up the meeting room so that the client is not situated between you and the room exit. Always be nearest to the exit or have a separate exit available.
- Establish a physical barrier (i.e. desk) between yourself and the client.
- The client's chair should not be equipped with wheels but your chair should. (You are able to move away faster and your chair can also be used as a "movable barrier" if needed).
- Remove all objects which could be used as a weapon or thrown.
- Know your escape routes (i.e. fire exits).

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- During the meeting reduce the risks for violence by:
- (a) Personalizing Yourself
 - Position "you" and "them" together working on a problem
 - You are "neutral"
 - Respect is not optional
- (b) Depersonalizing the Problem
 - Acknowledging emotions
 - Assure listening
 - Rephrase the problem
 - Get agreement
 - Look for solutions
 - (c) Connect to the Environment
 - Listen for "This is the final straw" statements or "First my wife/husband left me, then my dog died..."
 - Probe for connections friends, family, crisis line, counselors
 - Recommend contact
 - (d) Signs to Look Out for
 - Red Face
 - Clenched Hands
 - White Lips
 - Tension
 - Voice cracked or raised

If an individual's language or behavior becomes offensive, abusive, intimidating or threatening and the business purpose of the meeting cannot be reasonably achieved:

- Calmly end the meeting, leave the area quickly;
- Notify security, the police if warranted and your supervisor or manager;
- Follow security/police instructions; and
- Prepare a written report of the incident to your manager and OSH representative and assist in the subsequent internal investigation involving the Joint Occupational Health and Safety Committee.

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Physical Assault While in the Field

If an individual becomes violent and your safety is at risk:

- (a) Do not try to restrain or apprehend the individual unless you are trained and authorized to do so; and
- (b) Leave the area immediately if there is a safe way out. If unable to leave, use your judgment on how to best secure a safe departure. You may use force to defend yourself against an assault as long as you use no more force than is necessary to prevent the assault or protect yourself.

Following the Incident, you should immediately:

- (a) Call the police and follow their instructions
- (b) Obtain first aid treatment and/or a medical examination from a qualified physician if you have been assaulted/injured;
- (c) Inform your supervisor or manager as soon as possible;
- (d) Protect and preserve any physical evidence (i.e. weapon, finger prints, clothing);
- (e) Write a report of what you experienced and forward your report to your manager and OSH representative. Use the "Violence Incident Report Form" located in **Appendix M**. The report will be used by the police and subsequent internal investigation involving the Joint Occupational Health and Safety Committee as required by WCB Regulations; and
- (f) Seek medical referral for Critical Incident Distress where appropriate.

Handling Situations Involving Weapons

Visible Weapons in a Ministry Building

Without direct personal intervention, it is difficult to assume what business purpose a weapon may serve in a public building or what the intent or attitude is of that person. All weapons sightings should be treated seriously.

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Response

If you see a member of the public in a Ministry building who is carrying a firearm, **do not** try to investigate or interfere with the individual. You should immediately:

- (a) Secure your immediate area (i.e. lock access doors to the office);
- (b) Notify your supervisor or manager and other staff/building tenants if possible;
- (c) Phone* or have a co-worker, supervisor or manager phone the police; and
 - Identify yourself Ministry, address, floor and room number
 - Explain briefly, in sufficient detail, the situation giving the exact location and follow the police instructions
- (d) Notify building security if applicable/possible;
- (e) Get out of sight leave the room or immediate area if possible; and
- (f) When situation is "all clear", prepare a written report of the incident and forward to the manager and OSH representative and assist in any subsequent police and internal investigation involving the Joint Occupational Health and Safety Committee as required by WCB Regulations.
- *Stickers with these numbers should be maintained on all phones.

Visible Weapons in the Field

Employees who feel threatened or are threatened by an armed person should:

- (a) Leave the area as soon as possible;
- (b) Immediately report the matter to your supervisor or manager and police. The manager will notify other staff in the area of the risk; and

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(c) Prepare a written report of the incident and forward to the manager and OSH representative. Assist in any subsequent police and internal investigation involving the Joint Occupational Health and Safety Committee as required by WCB Regulations.

Hostage Taking

Hostage takers vary widely in motive, type of hostage taking, nature and complexity of demands and content. As a result it is difficult to prepare a set of guidelines that will apply and have utility in every situation. The behavior of the hostage can strongly influence the actions of the hostage taker.

The following guidelines are offered as general suggestions for hostage behavior. Building on these guidelines the victim of a hostage taking should use common sense and self discipline to construct a coping strategy.

If you witness a hostage taking, or think you have witnessed a hostage taking:

- (a) Do not attempt to defuse the situation;
- (b) Leave the area;
- (c) Call your manager;
- (d) Call the police; and
- (e) Obey instructions.

If You Are Taken Hostage

- Don't be a hero. Don't fight back. No matter how reasonable they seem, your captors are dangerous and unpredictable;
- Accept your situation and be prepared to wait. Time is on your side;
- Do as you are told. The initial phase (alarm) of this incident is extremely dangerous;
- Rest and exercise as appropriate to the circumstances;

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- Do not make suggestions;
- Do or don't escape, depending on clear opportunity and other circumstances;
- Notify your need for special medication;
- Stay calm and be observant;
- Do not argue or make provocative remarks;
- Treat hostage taker with respect;
- Portray yourself as a human being first and foremost;
- Eat what you are offered;
- Try to keep track of time;
- Maintain a sense of humor (it promotes objectivity);
- Maintain comfortable, dignified, non-threatening behavior as an insulator to the hostile surroundings; and
- Do not turn your back on an armed hostage taker. Face to face you remain a person.

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PART 18 WORKING ALONE OR IN ISOLATION

Policy

The Ministry will avoid having employees work alone or in isolation whenever possible. Where this is not practicable, the Ministry will develop and implement a written procedure for checking the well-being of any employee assigned to work alone or in isolation under conditions that present a risk for disabling injuries or violence.

All Ministry work sites will evaluate their operations for employees performing their jobs either alone or in isolation. Risk assessment of these jobs shall indicate if a risk of disabling injury exists and if the employee may be unable to secure assistance.

Responsibilities

Each Ministry employee will be responsible for checking in with their named contact, where appropriate, to ensure their safety and well-being while working alone.

Initial Risk Assessment

Not all working alone or isolation activities require check-in and rescue procedures. Check-in procedures will be required where there is a significant chance of the employee sustaining a disabling injury and the injury or work location will make summoning assistance difficult. The greater the probability of injury or the potential consequence of injury, the more frequent should be the check-in intervals.

Check-in procedures will be determined according to the level of risk to the employee when working alone or in isolation.

Level 1 Risk

Employee is:

- Travelling on paved roads;
- Land-based; or
- Office-based.

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For Level 1 activities, there is no requirement to initiate check-in procedures.

Level 2 Risk

Employee is:

- Travelling out of office hours i.e. between 16:30 and 08:30;
- Conducting Warehouse/Laboratory activities;
- Water-based; and/or
- Working on weekends.

For Level 2 activities, the Ministry is required to implement an appropriate check-in procedure. See next section on Risk Assessment to determine appropriate time intervals for check-in.

Level 3 Risk

Employee is out of radio range. For level 3 activities, a regular check-in procedure must be implemented. See section on Risk Assessment to determine appropriate time intervals for check-in.

Formal Risk Assessment

A more formal risk assessment will be conducted if employees are performing tasks where a Level 2 or Level 3 risk exists. Worksheets located in the following Appendices will be used for the formal risk assessment:

- **Appendix N** Instructions for the Completion of Check-In Assessment Worksheet for Working Alone or in Isolation.
- Appendix O Check-In Assessment Worksheet for Working Alone or in Isolation.
- Appendix P Risk Assessment Tables for Working Alone or in Isolation.

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Check-In Procedures for Level 2 and Level 3 Risk

Check-in procedures will be developed in consultation with the Joint Health and Safety Committee. Where a level 2 or level 3 risk exists, the following procedures will be followed:

- (a) Conduct a formal risk assessment to establish check-in intervals and procedures appropriate to the task. The more hazardous the task the frequent the interval of check-ins must be;
- (b) During regular office hours, establish a check-in schedule with a designated local office person or the 1-888 phone number. When working outside regular office hours (8:30am to 4:30pm, Monday – Friday), establish a check-in system with the service provider at 1-888-413-7919 instead of the local office personnel. Use the Check-In Log located in **Appendix Q** if local office personnel are used as the designated contact person;
- (c) Provide to the contact personnel three local emergency response contact numbers, the site location(s), site details and any other unique job details. Prearrange local emergency response contacts and search procedures prior to the start of work;
- (d) Establish rescue procedures in the event that an employee fails to check-in:
- (e) Provide car or portable radios, cell phones etc. that may be used for communication. When working away from vehicle radio consider the use of portable communication;
- (f) Provide training for employees and contact personnel relating to responsibilities in any emergency;
- (g) Conduct an annual review and evaluation of the working alone program; and

Under no circumstances will employees work alone or in isolation without these procedures.

Failure to Return/Check-in Procedure

In the event that a Ministry employee fails to check-in, the appropriate manager will instigate a search in accordance with the information provided by the employee on his/her trip plan.

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Training

Any employee required to work alone or isolation when there is risk of disabling injury, and any person assigned to check on that employee must be trained in the written procedures. This training is to include roles and responsibilities, how to respond to persons failing to call in and how to initiate emergency procedures.

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PART 19 DRIVING ON LOGGING ROADS

Policy

All Ministry of Agriculture, Food and Fisheries employees will follow safe work procedures to prevent collisions with logging vehicles.

Responsibilities

Loaded logging trucks cannot leave the center of the road and cannot stop quickly. It is the responsibility of Ministry of Agriculture, Food and Fisheries employees to follow the Traffic Control Procedures for each logging firm when use of their logging roads is required for access to Fish Farms or other areas of Ministry work.

Equipment Required

WCB Level 1 First Aid Kit; Emergency food rations; Emergency clothing for protection against cold stress; Means of communication; and High Visibility apparel

Procedures

Upon entering a logging area, Ministry of Agriculture, Food and Fisheries employees will follow the respective Traffic Control Procedures for each logging company. The following is one set of procedures that may be followed when driving on logging roads:

- If employees have VHF radios they will be used to advise the logging company of their presence on their logging routes and take directions from the company;
- Logging trucks call out their kilometers both "loaded" (travelling out of the woods) and "empty" (travelling into the woods). Ministry employees will pull over to give right of way to both "loaded" and "empty" trucks;
- If employees do not have VHF radios they must stop at the site office and take direction from the logging company on site. Ministry vehicles

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will wait for and follow a radio-equipped logging vehicle when practicable; and

 Drivers of Ministry vehicles will be observant for trucks/vehicles that are not carrying radio equipment i.e. members of the public using their private vehicles.

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PART 20 APPENDICES

Appendix A – Management of Hypothermia and Cold-Related Injuries

Appendix B – Management of Heat Stress

Appendix C – Passenger and Ride-Along Orientation Checklist

Appendix D – Pre-Trip Checklist

Appendix E – Trip Plan

Appendix F – Post-Trip Checklist

Appendix G – Overview of Violence Hazard Identification and Risk Assessment

Appendix H – Violence Risk Assessment

Appendix I – Violence Risk Assessment - Sample

Appendix J – Violence Rating Score

Appendix K – Procedures for Preventing Violence in the Workplace

Appendix L – Bomb Threat Report Checklist

Appendix M – Violence Incident Report Form

Appendix N – Instructions for the Completion of Check-In Assessment for Working Alone or in Isolation

Appendix O – Check-In Assessment for Working Alone or in Isolation

Appendix P – Risk Assessment Tables for Working Alone or in Isolation

Appendix Q – Check-In Log for Working Alone or in Isolation

Appendix R – Incident/Near Miss Report Form

Appendix S – Small Vessel Regulations

Appendix T – Collision Regulations

Appendix U – Charts and Nautical Publications Regulations

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MANAGEMENT OF HYPOTHERMIA AND COLD-RELATED INJURIES

Hypothermia

A combination of cool/cold temperatures and water can be particularly dangerous. Hypothermia occurs when the body loses heat faster than it can produce it. Body cells can function only within a narrow range of temperature. If this falls below a critical point, severe organ damage may occur. Hypothermia can occur in waters of 22°C (72°F) or less.

Critical Areas of Body Heat-Loss

Some areas of the human body are particularly susceptible to rapid heatloss: the head, neck, sides of chest and the groin. To increase the chances of survival, these areas should be protected to conserve body heat when in cold water.

Management of Mild Hypothermia

- (1) Assess and correct the "ABCs" i.e.
 - Maintain an adequate airway;
 - Maintain adequate breathing ventilation; and
 - Support the circulation as necessary.

Patients with mild hypothermia alone should not have abnormalities of the ABCs. At any sign of deterioration – decreased level of consciousness, respiratory distress, decreased peripheral pulses – the attendant must consider the presence of other injuries that may not have been apparent at first. The victim should get immediate medical attention.

- (2) Minimize further heat-loss. Remove all wet clothes and replace with dry clothing. Wrap the patient in blankets and/or sleeping bag. The patient should be removed to a warm environment as soon as possible.
- (3) Handle the patient gently. Do not allow exertion by the patient.
- (4) Do not suppress shivering, even if it appears violent. This is the most effective way that a body has to generate heat. Reassure patient.

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- (5) Do not give patient any stimulants, such as coffee, tea or alcohol. Other hot fluids may be given only if the patient is fully alert, orientated and not showing any sign of confusion.
- (6) Do not massage the extremities or the trunk.
- (7) Do not put the patient in a warm bath or shower.

Management of Moderate and Severe Hypothermia

Patients with moderate and severe hypothermia, by definition, have abnormalities of their level of consciousness and variable changes in the heart and respiratory rate. The attendant's first priority is correction of the ABCs and a careful search for other injuries.

- (1) Clear and stabilize the airway, maintain adequate ventilation and support the circulation.
- (2) All patients with moderate or severe hypothermia must get professional medical aid as soon as possible.
- (3) Remove all of the patient's wet clothing and replace with dry clothing. Wrap patient in blankets or sleeping bag.
- (4) Heated, humidified oxygen, if available, should be provided by mask.
- (5) If assisted ventilation is required, the patient must not be hyperventilated.
- (6) CPR must be initiated if and only after the first aid attendant makes a careful and lengthy search for evidence of a pulse or respirations.
- (7) Handle the patient gently. Move the patient on a stretcher, do not allow to walk.
- (8) Do not suppress shivering even if it appears violent.
- (9) Move patient to a warm environment as soon as possible while awaiting transport to hospital or during transport.
- (10) Do not give patient anything by mouth, not even warm fluids.

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- (11) Do not massage the extremities or trunk.
- (12) Do not put patient in a warm bath or shower.
- (13) Do not apply hot packs or hot-water bottle.
- (14) Patients with moderate and severe hypothermia must be frequently reassessed. The first aid attendant must look for changes in the cardiovascular status as well as looking for evidence of other injuries that were not apparent initially.

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Stages and Signs/Symptoms of Hypothermia

Stage of	Temperature	Signs and Symptoms
Hypothermia		
MILD	35°C	Hypothermia occurs with a core temperature below this point.
	34°C	Shivering is present to maximize heat production.
	33°C	Vasoconstriction of the peripheral arteries (decreased pulse) in an attempt to minimize further heat loss and protect the core.
MODERATE	32°C	Confusion, decreased level of consciousness. Shivering is inhibited.
	31°C	Progressive decrease in the level of the heartbeat may be detected. Respiratory rate falls.
	30°C	Heart rate slows, irregularities of the heartbeat may be detected. Respiratory rate falls.
	29°C	Pulse may become difficult to palpate. High risk of developing cardiac arrest, especially with rough handling. Pupils are dilated.
SEVERE	28°C	Coma may develop, increased muscular rigidity. Slow heart rate. Pupils may be dilated and poorly reactive. Further decrease in respiratory rate.
	27°C	Patient may appear to be in cardiac arrest with absent pulses and no respirations. There may be no response to painful stimuli.
	26°C	Victims are usually comatose. Cardiac arrest may develop spontaneously.
	24°C	Frothy sputum may become apparent representing fluid congestion in the lungs.
	22°C	Maximum risk of cardiac arrest.

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Cold-Related Injuries

"Cold Injury" is caused by prolonged exposure to cold, though not necessarily freezing temperatures.

Frostnip

Frostnip is a mild form of frostbite without soft tissue damage

Frostbite

Frostbite is a serious cold injury with damage to soft tissues. Frostbite occurs when skin and flesh is subjected to freezing temperatures. Tissue injury results when its temperature falls below a critical point. Frostbite most typically affects the ears, cheeks, nose, fingers and toes though any part of the body is vulnerable.

	First Aid Treatment for Frostbite		
Stage of Frostbite	Signs and Symptoms	First-Aid Treatment	
Frostnip Superficial Frostbite	 Freezing of the top layers of skin tissue Skin appearance: white, waxy, To touch: top layer of skin feels hard & rubbery Deep tissue is still soft Numbness Skin appearance: white To touch: wooden feeling 	 Rewarm the area gently, generally by blowing warm air on it or placing the area against a warm body part Do not rub the area – this causes damage to skin and tissue Rewarm as for frostnip if affected area is only small. 	
	 throughout affected area All layers of skin affected Numbness, sensation may be absent 	 If area is large, use immersion method Transport to hospital if necessary. 	
Deep Frostbite	 Skin appearance: white To touch: wooden feeling throughout affected area Includes all layers of the skin May include freezing of muscle and/or bone. 	 Begin rewarming techniques using immersion method. Transport to hospital as soon as possible 	

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MANAGEMENT OF HEAT STRESS

Heat Exhaustion and Heat Stroke

High temperatures and the sun's reflection off the water can increase the possibility of heat exhaustion or heat-stroke. Always wear a hat during hot weather, drink plenty of fluids (not coffee or tea) and wear layered clothing. Over-heating of a person's body can cause dehydration and loss of salt, causing deterioration of brain functions.

Heat Exhaustion

This condition is caused by depletion of body water and salt associated with sweating during prolonged periods of exertion and hot weather. Normal replacement of body fluids has not been sufficient to match the loss.

Signs and Symptoms of Heat Exhaustion

Victims may experience some or all of the following:

- Weakness or fatigue
- Skin pale, cool and clammy
- Dizziness
- Headache
- Nausea
- Weak, rapid pulse
- Shallow, rapid breathing
- Fainting (less frequent occurrence)
- Muscle cramps (less frequent occurrence)

Note: Check the skin and armpits for sweat. Heat exhaustion victims continue to sweat. Heat stroke victims do not.

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Treatment of Heat Exhaustion

- Remove the patient out of direct sunlight and into the shade if possible
- Lay the patient down
- Remove or loosen any heavy or tight clothing
- Cool the patient by sponging with cold water or fanning
- If the patient is fully alert and not nauseated, give a cool drink (fruit juice, soft drinks or salt-water solution of 1-teaspoon salt in one pint (500ml) of water). Do not give salt tablets, alcohol, tea or coffee

Heat Stroke

Heat stroke is a life-threatening emergency. It occurs when the body's ability to dissipate heat fails and is overwhelmed. As a result, core body temperature rises to a critical level of 41°C (106°F). At this temperature, the brain, heart and kidneys can no longer survive.

Signs and Symptoms of Heat Stroke

Victims may show some or all of the following:

- Hot, dry flushed skin
- Absence of sweating
- Agitation, confusion, irrational behavior
- Decreased level of consciousness
- Headache
- Nausea and vomiting
- Seizures, convulsions
- Faster breathing rate

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- Irregular pulse (strong and rapid)
- Shock
- Cardiac arrest

Treatment of Heat Stroke

- Move patient into the shade
- Remove all outer clothing
- Lay the patient down. If there is active vomiting or seizures, lay the patient in a ¾ prone position or on hishe/her side
- Supply oxygen (10 lit/min) if available
- Douse the patient with cold water or apply wet sheets, or sponge entire body
- Fanning the patient helps to increase the cooling rate
- If the patient is not nauseated, give water or fruit juice. Do not give tea, coffee or alcohol
- Transport the patient to hospital as quickly as possible
- Check the patient regularly during transport to hospital/medical aid

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PASSENGER AND RIDE-ALONG ORIENTATION CHECKLIST

	Passenger & Ride-Along Orientation Checklist	
	Item	Completed
•	Location of emergency equipment including pyrotechnic distress signals, first aid, fire bucket and extinguishers, lifebuoy	
•	Orientation of motor controls:	
-	Throttle location	
-	Choke	
-	Forward and reverse gear	
•	How to use the emergency VHF channel (Channel 16)	
•	Proper behavior on board a marine vessel so as not to cause danger to themselves or others	
•	Wearing and carrying suitable clothing, appropriate to the weather	
•	Be informed on the destination of the boat journey	
•	Be informed of any flammable or toxic substances being used or carried on board	
•	Be informed of the right to refuse to participate in the trip	

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Appendix D	Pre-Trip Checklist	Specific Field	
1.1.		Operations Manual	

PRE-TRIP CHECKLIST

Pr	e-Trip Vessel Checklist	
Operator Name:		
Date:		
Vessel Name:		
Pre-Trip Planning		Complete/Safe
Trip itinerary/float plan filed with mess	sage centre	
Weather and water conditions safe fo	r planned trip	
Current and forecast weather reports	obtained	
Trailer		
Ball and hitch in good order, properly	secured	
Safety chains attached		
Bearing lubricated		
Tire pressure checked		
Signal lights working properly	Signal lights working properly	
Bunks and rollers properly positioned and in good condition		
Tie-down straps secured, in good condition		
Winch secured, cable or strap in good condition		
Spare tire secured to trailer, properly inflated		
Boat – Hull		
Hull sound		
Fittings and cleats secured		
Canvas buttoned down		
Boat – Fuel, Fuel Systems, Lubric	cants and Fluids	
Main engine(s) oil level suitable		
Auxiliary engine oil level suitable (4-stroke only)		
Main fuel tanks full (or containing sufficient fuel for trip)		
Auxiliary fuel tanks full and pre-mixed (if required)		
Fuel filters and water separators checked		
Fuel lines and auxiliary tanks checked	d for soundness, proper connections	
Battery fluid levels checked		
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Appendix D	Pre-Trip Checklist	Specific Field
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Boat – Electrical Systems and Electronics	Complete/Safe
Electrical system charged and functioning	
All electrical accessories (bilge pumps, wipers, navigation lights) tested	
All electronic equipment (depth sound, radio, radar) tested	
Boat – Navigation	
All necessary charts for trip aboard	
Compass functional	
Boat – Tools and Spares	
Spare boat plugs of appropriate sizes	
Spare propeller(s) of correct size and pitch	
Spare propeller nut and washer	
Tools; including: Propeller wrench Tire iron Hammer Sparkplug wrench Socket set Adjustable wrench Vice grips Multi-bladed screwdriver Boat - Safety Equipment Safety kit (yellow bag) containing: Flashlight Sunscreen Blankets First aid kit Air horn Hearing protection Proper tie-up and bow lines	
Fenders	
Heaving line	
Life ring (if required)	
Flares	
Fire extinguisher (2 aboard Surveyor)	
Bailing bucket	
Paddle or oars	
Overboard ladder (if not part of boat)	
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Appendix D	Pre-Trip Checklist	Specific Field
		Operations Manual

Boat - Safety Equipment - continued	Complete/Safe
Properly secured anchor with chain and rope	
Power-driven or manual bilge pump	
Boat – Electrical Systems and Electronics	
Life jackets (one per each person aboard)	
Waterproof survival packs (individuals responsibility)	
Completed passenger log (if ride-alongs or observers aboard)	
Log book (relevant sections completed prior to sailing)	
Ride-along orientation check list completed	

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Appendix E	Trip Plan	Specific Field
		Operations Manual

TRIP-PLAN

MINISTRY OF AGRICULTURE, FOOD AND FISHERIES

TRIP ITINERARY / FLOAT PLAN

TO BE COMPLETED AND SUBMITTED PRIOR TO DEPARTURE

FAX TO ANSWER PLUS COMMUNICATIONS @ 250-753-0266 OR CALL ANSWER PLUS COMMUNICATIONS @ 1-888-221-5568

.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,		@ : ccc ==: cccc	
Name of employee travelling (filing the trip plan):				
Branch: Licensing and Compliance Branch A	quaculture Development Branch			
raveling by: ☐ Vehicle ☐ Vessel ☐ Float plane/ch	arter			
ndicate name of vehicle:	Plate Number:		Autotel #:	
ndicate name of vessel:	Trailer plate number:		CALL #:	
indicate name of float plane/charter service and phone nu	umber:			
Travelling alone? ☐ YES ☐ NO If No, state who	you are travelling with:			
ndicate name of "Safe Second" if traveling by vessel:				
T " (- · ·		
Planned and alternate route:				_
Patura Dagtingtion				
Do you have a cell or sat phone with you? ☐ YES ☐ N	NO If yes, provide number(s):			
Approximate start departure date and time:	Date Time	Trip end date and time:	Date	Time
List pre-determined check in time(s) (ETA):				
Designated Contact (Spouse) phone number(s):				
	Signature of pers	on filing trip plan:		
	Date signed:			
Note: The encurating continuouill start colling	ministry, and other contests if smale.	vaa haanit aallad in within 20 min.	uton of anhadylad twin and	l data /tima

Note: The answering service will start calling ministry and other contacts if employee hasn't called in within 30 minutes of scheduled trip end date/time.

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Appendix F	Post-Trip Checklist	Specific Field
		Operations Manual

POST-TRIP CHECKLIST

Post-Trip Vessel Checklist	
Operator Name:	
Date:	
Vessel Name:	
Concluding Trip	Complete/Safe
Trip itinerary/float plan closed with message centre	
Boat properly position on trailer	
Boat secured with tie-down straps	
All plugs removed to allow bilges to drain	
All batteries switched off	
All loose items secured and stowed properly	
Boat top or cover secured (if applicable)	
Boat log completed	
Prior to Storing Boat	
Boat cleaned and washed thoroughly	
Trailer serviced and washed (including brakes)	
All mechanical faults rectified after approval given by relevant manager	
Boat fueled	
Oil levels checked and oil replenished if necessary	

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Appendix G	Overview of Violence Hazard Identification	Specific Field
• •	& Risk Assessment	Operations Manual

OVERVIEW OF VIOLENCE HAZARD IDENTIFICATION & RISK ASSESSMENT

These instructions and worksheets are designed to help determine whether or not a risk of violence to Ministry employees exists. The worksheets will first take the user through identification of possible hazards. Once the hazards are identified for an individual employee or group of employees, the risk can be identified. Once the risk is identified, it can be assessed as to its severity.

From here decisions can be made as to the best method for correcting or minimizing the risk.

Finally, determine the priority for potential risks and possible corrective actions.

Document the proposed corrective action using the form in Appendix K (Procedures for Preventing Violence in the Workplace) and forward it to management for implementation.

How to Complete the Risk Assessment Worksheet

Identify at the top of the form, the employee or employees whose risk of violence is being assessed.

Using knowledge of the workplace, statistics from other corporate workplaces, hazards related to the location of the workplace and the circumstances of the workplace to identify specific risks of the task or procedure or job position that is being examined.

For each of the hazards and examples listed in Column A and Column B, on the worksheet, list the threat or violence that would occur in the workplace in Column C.

Ask the question:

"Has violence happened in your workplace as a result of this hazard?"

Look at first aid records, and violence reports. Talk to employees about their experiences. Ask about the number and severity of the incidents.

Ask the question:

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Appendix G	Overview of Violence Hazard Identification	Specific Field
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"Has violence happened in similar work environments as a result of the hazard?"

Ask the question:

"Does the location of your workplace and this hazard cause a risk of injury?"

Is there something about your location that increases the risk of violence? Consider the access to the building and parking, clients of adjoining buildings or offices, street people, location of liquor stores and bars, isolation at night, lack of street lighting, and police reports of violence in the area.

Finally, ask the question:

"Do the circumstances of your workplace and this hazard cause a risk of injury?"

Consider the organization in terms of isolation of front line employees, staff scheduling, requirements to work alone and procedures to check on others. Consider the age and gender of employees. Consider the types of clients. Consider the layout of the workplace in terms of sight lines between employees and the ability to monitor interview rooms. Consider décor, furniture, barriers and fences, lighting, glass partitions, and hiding places for assailants.

Once you have identified the risk of threat or injury, turn to Appendix I (Violence Rating Score) and establish the scores under each of the headings for Consequence, Exposure and Likelihood. Remember that likelihood includes the incident and its consequence.

Multiply the scores from Columns D, E and F (D x E x F) to determine a risk score. Enter the risk score in Column G. The risk scores for corrective action are listed at the bottom of the worksheet.

Evaluation

Based on the outcome of the risk assessment and the risk score for each identified hazard, priorities can be set for dealing with the hazards.

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Solutions

Now it is time to brainstorm solutions, beginning with the issues with the highest risk score.

You want to determine the practicability of the solution. Solutions should be addressed in this order:

- Eliminate (Start by trying to eliminate the task);
- Substitute (if you cannot eliminate the task, try to substitute a different way of doing it);
- Engineering controls (Changing the physical environment to protect the employee);
- Administrative controls (Changing work organization); and
- Personal protective equipment (to be used as a last resort).

Now evaluate each of the solutions based on cost, effectiveness, and negative impacts to other programs in your organization.

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Appendix H	Violence Risk Assessment	Specific Field
		Operations Manual

VIOLENCE RISK ASSESSMENT

Completed by:	_ Date:
Individual or Group of Employees Affected: _	

Nature of threat of violence	Threat or Violence resulting from:	Probable violence that could happen in this, or similar workplaces due to location or circumstances	(D) Consequen ce	(E) Exposure	(F) Likelihood	(G) Risk Score
Rebellion against authority	Inspection duties, Regulation enforcement					
Against the organization	Bomb threats, phone threats, security breaches					
Against a representative of the organization	Fish Farm inspection, fish catch inspections					
Against individuals	Alcohol and drugs, harassment, travel					
Opportunistic	Working alone, working in isolation					
Other						

Instructions and Score Sheet:

- 1. Complete this worksheet for each situation where an employee or group of employees may be at risk of violence.
- 2. Review the types of threats from column (A) and the examples in column (B)
- 3. In column (C) list the type of violence that could occur.
- 4. Turning to Appendix I, list the score for the probable violence under column (D) consequence, column (E) exposure and column (F) likelihood.
- 5. Multiply the numbers in column (D), (E), and (F) and put the resulting number in column (G) under risk score.
- 6. For values of (G) lower than 1 the risk is acceptable. Between 1 and 100, the score indicates potential problems that must be examined. Between 100 and 250, the score indicates problems that must be corrected. Scores higher than 250 indicate a problem that must be dealt with immediately.

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Appendix I	Violence Risk Assessment - Sample	Specific Field	
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VIOLENCE RISK ASSESSMENT - SAMPLE

Completed by:	Date:
Individual or Group of Employees Affected:	Fish Farm Inspector

Nature of threat of violence	Threat or violence resulting from:	Probable violence that could happen in this, or similar workplaces due to location or circumstances	(D) Consequen ce	(E) Exposure	(F) Likelihood	(G) Risk Score
Rebellion against authority	Inspection duties, Regulation enforcement	Argument escalating to shouting as a result of issuing orders against the operation of the fish farm	2	2	6	24
Against the organization	Bomb threats, phone threats, security breaches					
Against a representative of the organization	Fish Farm inspection, fish catch inspections	Discharge of firearms on approach to fish farm	10	6	1	60
Against individuals	Alcohol and drugs, harassment, travel					
Opportunistic	Working alone, working in isolation					
Other						

Instructions and Score Sheet:

- 1. Complete this worksheet for each situation where an employee or group of employees may be at risk of violence.
- 2. Review the types of threats from column (A) and the examples in column (B)
- In column (C) list the type of violence that could occur.
 Turning to Appendix I, list the score for the probable violence under column (D) consequence, column (E) exposure and column (F) likelihood.
- 5. Multiply the numbers in column (D), (E), and (F) and put the resulting number in column (G) under risk score.
- 6. For values of (G) lower than 1 the risk is acceptable. Between 1 and 100, the score indicates potential problems that must be examined. Between 100 and 250, the score indicates problems that must be corrected. Scores higher than 250 indicate a problem that must be dealt with immediately.

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Appendix J	Violence Rating Score	Specific Field	
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VIOLENCE RATING SCORE

Consequences	
Degree of Severity of Consequences	Rating
Catastrophic: numerous fatalities	100
Several fatalities	75
Fatality	50
Extremely serious injury or occupational disease (permanent disability)	30
Disabling injuries, reversible tissue damage, post traumatic stress	10
Minor cuts, bruises, irritations, minor damage, feeling of intimidation	2

EXPOSURE	
The hazard event occurs:	Rating
Continuously (or many times daily)	10
Frequently (approximately once daily)	6
Usually (from once per week to once per month)	3
Occasionally (from once per month to once per year)	2
Rarely (it has been known to happen)	1
Very rarely (not known to have occurred but considered remotely possible)	0.5

LIKELIHOOD	
The likelihood of violence or threat of violence, including the consequences:	Rating
Is the most likely and expected result if no changes are made	10
Is quite possible, would not be unusual, has an even 50/50 chance	6
Would be an unusual sequence or coincidence	3
Would be a remotely possible coincidence, it has been known to happen	1
Extremely remote but conceivably possible, has never happened after many years of exposure	0.5
Practically impossible sequence or coincidence, a "one in a million" chance, has never happened in spite of exposure over many years	0.1

RISK SCORE	
Consequences X Exposure X likelihood	Score
High – must be corrected immediately	>250
Medium – must be corrected	101 – 250
Low – Indicator – situation must be examined and may have to be corrected	1 – 100
Risk Acceptable – no change required	<1

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Appendix K	Procedures for Preventing Violence in the Workplace	Specific Field Operations Manual

PROCEDURES FOR PREVENTING VIOLENCE IN THE WORKPLACE

Hazard Identified:	
Level of Risk: High	☐ Medium ☐ Low
Corrective Actions:	
List the actions that will be	taken to prevent violence in the workplace
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Appendix L	Bomb Threat Report Checklist	Specific Field
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BOMB THREAT REPORT CHECKLIST

Time:	Date:			
Name of Person Making Threat/assault if known:	Location:			
Use exact wording and actions of person maki	Jse exact wording and actions of person making threat:			
Bomb Threat Questions				
When is the bomb going to explode?				
Where is the bomb right now?				
What does the bomb look like?				
What will cause it to explode?				
Did you place the bomb?				
Why did you place the bomb?				
What is your location/address?				
What is your name?				

Personal Characteristics of person making threat:

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Appendix L	Bomb Threat	Report Checkl	ist			pecific Field ons Manual
					Ореган	Olis Maliuai
Male/Female:		Voice/speech	patterns:			
Young/Old:		Accent:				
Tone/Diction.		background i	noises:			
Other:						
Language of perso	n making threat					
Language of poloc	ir making anoat.					
Foul		☐ Well Spo	oken			
Irrational		Incohere				
Message was a "ta	ape recording"		e was "read"			
Remarks:						
Voice Characteris	tice Note the foll	owing characteris	tice:			
Voice Characteris	iics. Note the foil	owing characteris	ucs.			
Calm] A	Angry			Nasal	
Excited		Slow			Rapid	
Soft [] L	.oud			Normal	
Laughter		Crying			Deep	
Distinct	_	Slurred			Stutter	
Lisp		Clearing Throat			Ragged	
Disguised		Deep Breathing			Raspy	Ц
Familiar		Cracked Voice			Accent	
If the voice is familia	ar, who did it sou	nd like?				
Talanhana Baakar	ound Coundo					
Telephone Backgr	ouna Sounas:					
Static] (Clear		Street N	Voises	
Music	N	/lotor		Animal	Noises	
Voices] F	PA System		House	noises	
Booth] L	.ocal		Long D	istance	
Factory machin	nery					
Office machine	ery					
Other:						
· · · · · · · · · · · · · · · · · · ·						

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Reported by: Job Position/Job Title:

Report Submitted on:

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Appendix M	Violence Incident Report Form	Specific Field Operations Manual	

VIOLENCE INCIDENT REPORT FORM

Identifying Informa	tion			
Complainant			Job Title	
Contact Number			Ministry of Agriculture, Food Tracking Number	and Fisheries
Incident Location	Parking Lot	Marine Craf	t 🔲 Fish Farm 🚨	Office
	Other (please specify	')		
Type of Assault	Verbal \Box	Struck	☐ Bitten ☐	Pushed
	Threat	Kicked		
	Scratched			
	Other (please specify	<u> </u>		
Medical attention/First	aid obtained □Yes	□No	WCB forms completed	⊒Yes □ No
Investigation conducted			Police called	□ No
Reported to Superviso	or □ Yes □ No			
Action taken:				
Assailant				
☐ Delivery person	☐ Ex-employee ☐	I Fish Farm E	Employee	loyee
☐ Guest/Visitor				
☐ Other (please speci				
Description Male	☐ Female			
Age	Complexion		Height	Weight

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Appendix M	Violence Incident Report Form	Specific Field Operations Manual	

Violence Incident Report Form (continued)

Incident and Injury Information					
Date of Incident					
		Time	a.m./p.m.		
Other Information					
Was the assailant involved in any	previous violent incidents	s with staff?			
□Yes					
□ No					
Give brief details if applicable:					
Have measures been implement	ed to prevent any similar in	ncidents in the	future? 🗆 Yes 🕒 No		
Please provide any other informa	tion you think is relevant:				
General Appearance	Sex male fer	nale	Age		
	Height		Weight		
	Race		Hair		
Eyes Glasses					
	Eyes		Glasses		
	Eyes Complexion		Glasses Jewelry		
	-				
	Complexion		Jewelry		
	Complexion Scars/Marks		Jewelry Tattoos		

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Appendix M	Violence Incident Report Form	Specific Field Operations Manual	

Violence Incident Report Form (continued)

Facial Appearance		Specific faci	al details that you re	call
skin/hair color				
wrinkles				
eyebrow shape				
size/shape of eye		What did the	suspect say?	
mouth & lips				
mustache or beard				
hair style				
hair texture		Description (of tool or weapon se	en
ear size & shape				
cheeks (full or sunken)				
neck & adams apple				
Vehicle		1		
☐ Sedan ☐ Sport	□ Van	□ SUV	☐ Pickup ☐ Lu	uxury
Color	Make		Model	License No.
Body Style			Damage/Rust	
Antenna	Bumper Stick	er		Wheel Covers
Direction of travel				

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Appendix N	Instructions for the Completion of Check-in	Specific Field		
• •	Assessment for Working Alone or in	Operations Manual		
	Isolation			

INSTRUCTIONS FOR THE COMPLETION OF CHECK-IN ASSESSMENT FOR WORKING ALONE OR IN ISOLATION

- 1. Complete this worksheet with the employee for each situation where a employee is working alone and may be at risk of an injury that would prevent him/her from obtaining help.
- 2. Consider which hazards in column (A) might apply and specify the injury in column (C).
- 3. For column (D), assess the probability of the accident, using Table 1.
- 4. For column (E), assess the likelihood that the accident would result in an injury serious enough to be disabling, using Table 2.
- 5. For column (F), assess the likelihood of help being available to the employee, using Table 3.
- 6. Rate the requirement for check-in by multiplying the number in Column (D) by the number in column (E) by the number in Column (F) and enter the number in Column (G).

Interpretation of Results

- For values of (G) up to 200 (low) no further action is required
- For values of (G) between 200 and 400 (moderate) a check-in procedure must be instituted
- For values of (G) higher than 400 (high) the checks must be frequent

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Appendix O	Check In Assessment for Working Alone or in Isolation	Specific Field Operations Manual		

CHECK-IN ASSESSMENT FOR WORKING ALONE OR IN ISOLATION

Job Title:		Assessment Done By:				
Description of Task:		Date:				
(A) Kinds of Hazard (Based on History)	(B) Examples	(C) Worst probable accident that could happen to employee	(D) Likelihood of the accident happening See Table 1	(E) Likelihood of Disabling Injury See Table 2	(F) Likelihood of Help Available See Table 3	(G) Rating D x E x F If above 250 check-in required
Stored Energy	Bins, chutes, elevated equipment, pressurized vessels or pipes, volumes of liquid, stacked materials					
Mechanical Energy	Hydraulic, air valving or operation, tools, equipment					
Energy Inadequate Or Stopped	Failure of part or linkage, external influence, fuel sources, spills, lack of ventilation, blocked exits, lighting					
Kinetic Energy	Struck by, struck against, pinch points, falling – same level, falling to lower level, high angle work, animal attack					
Chemical Energy	Corrosion, oxidation, asphyxiation, poisoning, explosion, infection, drowning					
Thermal Energy	Fire, ultra-violet & infrared radiation, steam, hot materials, cold, freezing					
Electrical Energy	Power lines, step potential, static, grounding, lighting					
Nuclear Energy	Radioactive isotopes, microwave sources, X-ray, laser light					
Social Energy	Violence, bomb threats, terrorism, assaults, vandalism, sabotage					
Other						

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Appendix P	Risk Assessment Tables for Working	Specific Field	
	Alone or in Isolation	Operations Manual	

RISK ASSESSMENT TABLES FOR WORKING ALONE OR IN ISOLATION

These tables should be used in conjunction with the Check-in Assessment Worksheet for Working Alone or in Isolation

Table 1 – Likelihood of an Accident Occurring

The risk factors for performing this task mean that an accident	Value
Is the most likely outcome in this situation	10
Has a very high likelihood of occurring	8
Is quite possible, would not be unusual	6
Would be an unusual sequence or coincidence	4
Would be a remotely possible coincidence	2
Extremely remote but conceivably possible	0.5
Practically impossible sequence or coincidence; a "one in a million" possibility. Has	0.1
never happened in spite of exposure over many years	

Table 2 – Likelihood of a Disabling Injury

The seriousness of a likely accident mean that a disabling injury (one that would prevent calling for help)	Value
Would be the expected result of an accident	10
Would be the probable result of an accident	8
Would be an unusual result of an accident	6
Would be the remotely possible result of an accident	4
Would be the practically impossible result of an accident	2

Table 3 – Likelihood of Help being Available for Injured Employees

Work Situation	Availability	Value
Employee is in an isolated area with no one likely to pass by or see the employee (over a bank, in the forest)	Never	12
Employee is working at night or in areas where there is occasional traffic (residential area, urban area at night)	Rare	8
Employee is in isolated area where there is regular traffic (rural road, industrial road)	Occasionally	6
Employee is out of site or isolated, but any delay in returning would be noted and commented on, and action taken (site inspections)	Usual	4
Employee is in an area used by other people who pass by often enough that there is a high likelihood of witnesses (Docks)	Frequently	2
Employee is in an area surrounded by potential assistants (driving on highway or main arterial road)	Continuous	1

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CHECK-IN LOG FOR WORKING ALONE OR IN ISOLATION

(Log to be completed by the pre-determined contact person during government office hours and Answer Plus Communications after government working hours).

Name of Contact Person:			Date	Date:					
Name of Employee	Destination or Location	Task	Designated Contact Person	Phone Number	Initial Check-in time	Time check-out required	Check-out completed	End of Shift required	End of shift completed

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Appendix R	Incident/Near Miss Incident Report Form	Specific Field Operations Manual

INCIDENT/NEAR MISS INCIDENT REPORT FORM

Injured Employee(s): Last Nam	e First Name	Occupation/Job Title	
Branch/Region/District	Address Tel #	Date of Report	
Date Employee Started	Date Employee Started This Job	Hours Worked in	
Employment with You		Previous 24-Hour Period	
Accident/Near Miss Location	Date of Accident/Near-Miss	Time of Accident/ Near- Miss	
Severity of Injury or Occupation No Injury / Near-Miss	nal Disease (check) ☐ First Aid Only ☐ Medical Tre	atment □Fatal	
	Il Disease (type & affected body part)		
Diagram/Photographs (use sep	pational Disease or Near-Miss occurre parate sheet if necessary) and the Miss occurre the state of the state		
sheet if necessary)			
Were Written Safe Work Procedures/Rules Established and Known by Employees?	Was Supervisor Knowledgeable in Work Performed? (If "No", explain in the comments section)	Was Personal Protective Equipment Required?	
☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
If "Yes", were they adequate? ☐ Yes ☐ No	Were Periodic Checks made by Supervisor to determine if Safe Work Procedures were being followed? (If "No", describe in	Was it adequate, available and worn? (If "No" explain)	
	comments section)	∐ Yes ∐ No	
If "Voo" word the set follows 10	Yes No		
If "Yes" were they followed?	Was the employee adequately trained and able to perform the job		
☐ Yes ☐ No	safely? (If "No" describe in		
If "No" why not?	comments section)		
	│		

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Incident/Near Miss Incident Report Form (continued)

Comments or Observations: Where applicable, give details of makes and models of				
machines, equipment, tools, structures etc., involved in this accident/near-miss (Use separate				
sheet if necessary)				
List Doot Course and Contribution Fostors (In		-tion 474 -f\MO A -t\		
List Root Causes and Contributing Factors (In	accordance with Se	ction 1/4 of vvc Act)		
List and explain and unsafe conditions, proced	lures or equipment. I	dentify vvny these factors		
were in place.				
List initial Corrective Actions Taken by Supervi	icor/Managor	Date sent to Employer for		
and/or Recommendations to the Employer on		Review/Consideration of		
reduce/eliminate the risk of recurrence.	now to enectively	further action:		
reduce/eliminate the risk of recurrence.		iuitilei action.		
		Target Date for Response:		
		Target Bate for Response.		
Employer Review of Actions Taken/Recomme	ndations	Date Reviewed by		
Employer Review of Rottono Fakeri/Recomme	naationio	Employer:		
		Implementation Date(s):		
Implementation of Additional Corrective Action	s Assigned to:			
Names & Occupations of Investigators				
Print Name of Employees' Representative	Print Name of Emp	loyer Representative		
		,		
Phone #	Phone #			
Occupation/Classification	Occupation/Classif	ication		
Signature of Employees' Representative Signature of Employer Representative				
Name(s) of Witness(es) (include phone number)				

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SMALL VESSEL REGULATIONS

CANADA SHIPPING ACT

REGULATIONS RESPECTING SMALL VESSELS

Short Title

1. These Regulations may be cited as the Small Vessel Regulations.

Interpretation

2. The definitions in this section apply in these Regulations.

"Act" means the Canada Shipping Act. (Loi)

"approved" means approved in accordance with these Regulations. (approuvé)

"bailer" means a container capable of removing water from a pleasure craft that meets the applicable standards set out in Schedule III. (écope)

"boat safety equipment" includes a manual propelling device, anchor, bailer, water pump, fire extinguisher, line, cable, rope, chain, bilge-pumping arrangement, axe, bucket and fire pump. (équipement de sécurité de bateau)

"capacity plate" means a plate issued in respect of a serially produced vessel that is marked in the manner and indicates the information described in paragraph 23(1)(b). (plaque de capacité)

"conformity plate" means a plate that is marked in the manner described in paragraph 23(1)(a). (plaque de conformité)

"construction standards" means *Construction Standards for Small Vessels*, TP 1332, published by the Department of Transport and the Department of Fisheries and Oceans, as amended from time to time. (normes de construction)

"design waterline", in respect of a pleasure craft, means the waterline at the recommended maximum gross load capacity. (*ligne de flottaison en charge*)

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"distress equipment" includes a watertight flashlight and pyrotechnic distress signals. (équipement de détresse)

"engine power" means the engine power, in kilowatts, calculated in accordance with ISO 8665, *Marine Propulsion Engines and Systems* — *Power Measurements and Declarations*. (puissance de moteur)

"final preparation", in respect of an official competition, means activities to prepare for the competition that take place at the competition venue and during the times specified by the organizer of the competition. (derniers préparatifs)

"formal training" means practice for an official competition under the supervision of a coach or official certified by a governing body. (entraînement officiel)

"freeboard" means the minimum vertical distance at side between the gunwale and the design waterline. (*franc-bord*)

"governing body" means a national water sport governing body

- (a) that publishes written rules and criteria respecting conduct and safety requirements during skill demonstrations, formal training or official competitions; and
- (b) that
 - (i) certifies coaches and coaching programs,
 - (ii) certifies officials and programs for officials, or
 - (iii) recommends training and safety guidelines for certified coaches or officials. (fédération sportive)

"length", except in Part III, means

- (a) in the case of a registered vessel, the length shown in the Certificate of Registry;
- (b) in the case of a licensed vessel, the length from the fore part of the head of the stem to the after part of the head of the stern post; and
- (c) in the case of a vessel that is not registered or licensed, the horizontal distance measured between perpendiculars erected at the extreme ends of the outside of the hull. (*longueur*)

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"lifejacket" means a small vessel lifejacket, a standard lifejacket or a SOLAS type lifejacket. (gilet de sauvetage)

"manual propelling device" means a set of oars, a paddle or any other apparatus that can be used manually by a person to propel a vessel. (dispositif de propulsion manuelle)

"mile" means the international nautical mile of 1852 m. (mille)

"navigation equipment" includes a sound-signaling appliance, a sound-signaling device and navigation lights. (équipement de navigation)

"official competition" means a competition or regatta organized by a governing body or by a club or an organization that is affiliated with a governing body. (compétition officielle)

"owner", in respect of a small vessel, means a person who owns the small vessel. (*propriétaire*)

"personal flotation device", except in paragraph 16.08(*b*), means a buoyant life-saving apparatus other than a lifejacket, that is intended to be worn by a person and that meets the standards set out in section 1.3 of Schedule III. (*vêtement de flottaison individuel*)

"personal protection equipment" includes a lifejacket, lifebuoy, personal flotation device, buoyant heaving line, reboarding device and lifting harness. (*équipement de protection individuelle*)

"personal watercraft" means a water-jet driven vessel with an enclosed hull and no cockpit and a maximum length of 4 m, that is designed to be used by one or more persons while straddling, sitting, standing or kneeling. (motomarine)

"plate" means a capacity plate, conformity plate or single vessel plate. (plaque)

"power-driven vessel" means a vessel that is propelled by machinery, the hull of which is designed by means of transom cut-outs, V-sterns or engine wells so that the vessel can be propelled by machinery or that is otherwise designed to be propelled by machinery. (*bâtiment à propulsion mécanique*)

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"reboarding device", in respect of a small vessel, means a ladder, lifting harness or other apparatus that does not include any part of the vessel's propulsion unit and that assists persons in gaining access to the vessel from the water. (dispositif de remontée à bord)

"recommended", in respect of maximum gross load capacity, maximum number of persons or safe limits of engine power of a pleasure craft, means calculated in accordance with the applicable formula set out in the construction standards. (recommandé)

"safety craft" means a boat, aircraft or other means of transport with a crew on board that is used for surveillance and life-guarding activities during formal training or official competitions. (*véhicule de secours*)

"sailboard" means a pleasure craft that has a totally enclosed hull fitted with a free-standing mast that attaches to the hull through a universal joint and that is propelled by sail and not machinery. (*planche à voile*)

"serially produced", in respect of a pleasure craft, means constructed as one of at least five pleasure craft of identical dimensions by a boat builder or manufacturer within a period of five years. (*produit en série*)

"single vessel plate" means a plate that is issued in respect of a vessel not serially produced and that is marked in the manner and that indicates the information described in paragraph 23(1)(c). (plaque de bâtiment hors série)

"small vessel" means a vessel in respect of which these Regulations apply, as set out in section 3. (petit bâtiment)

"small vessel lifejacket" means a lifejacket that meets the standards set out in section 1 of Schedule III. (*gilet de sauvetage pour petit bâtiment*) "SOLAS type lifejacket" means a lifejacket that meets the standards set out in section 1.1 of Schedule III. (*gilet de sauvetage SOLAS*) "sound-signaling appliance" means a sound-signaling appliance that meets the applicable standards set out in the *Collision Regulations*. (*appareil de signalisation sonore*)

"sound-signaling device" means a pealess whistle or a compressed gas or electric horn. (dispositif de signalisation sonore)

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"standard lifejacket" means a lifejacket that meets the standards set out in section 1.2 of Schedule III. (gilet de sauvetage normalisé)

Application

- **3.** (1) Subject to subsection (2), these Regulations, except Part I, apply in respect of the following small vessels:
 - (a) a pleasure craft;
 - (b) a vessel, other than a pleasure craft, that does not exceed 5 tons gross tonnage and that does not carry more than 12 passengers; and
 - (c) a power-driven vessel that does not exceed 15 tons gross tonnage, that does not carry passengers and that is neither a pleasure craft nor a fishing vessel.
 - (2) These Regulations do not apply to floating devices that measure less than 2 m in length and that are not designed to be fitted with a motor.

Prohibition

- **4.** (1) No person shall operate a small vessel unless
 - (a) it carries the type and quantity of personal protection equipment, boat safety equipment, distress equipment and navigation equipment that are required by these Regulations; and
 - (b) the equipment is in good working order.
 - (2) No owner or person entrusted by an owner with the care and operation of a pleasure craft shall allow another person to operate it unless
 - (a) it carries the type and quantity of equipment referred to in paragraph (1)(a); and
 - (b) the equipment is in good working order.

Standards and Approval

(1) Any lifejacket, lifebuoy, life-saving cushion, personal flotation device, bailer, fire extinguisher or pyrotechnic distress signal referred to in Part II, IV or V that must be carried on a small vessel in accordance with these Regulations shall meet the applicable standards set out in

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Schedule III or such other standards that provide a level of safety that is equivalent to or higher than those standards.

- (2) Any buoyant apparatus referred to in Part V that must be carried on a small vessel in accordance with these Regulations shall meet the applicable standards set out in the *Life Saving Equipment Regulations*.
- **6.** (1) The Minister of Transport may approve a lifejacket, lifebuoy, lifesaving cushion or pyrotechnic distress signal that is shown to meet the applicable standards referred to in subsection 5(1).
 - (2) The Minister of Fisheries and Oceans may approve a personal flotation device that is shown to meet the applicable standards referred to in subsection 5(1).
 - (3) Every personal flotation device that was approved by the Director of Ship Safety, Department of Transport before the coming into force of these Regulations and that bears a label indicating that it was approved by the Department of Transport, is deemed to be approved by the Minister of Fisheries and Oceans under subsection (2).
 - (4) Every lifejacket, personal flotation device other than a personal flotation device referred to in subsection (3), lifebuoy, life-saving cushion or pyrotechnic distress signal that has been approved in accordance with this section shall bear a stamp or label indicating that it has been so approved.
 - (5) Every buoyant apparatus that meets the applicable standards set out in the *Life Saving Equipment Regulations* and that is on a vessel that is subject to inspection shall bear, as the mark indicating that it complies with those standards, the name or permit number of the vessel, the name of the ship inspector who verified the compliance, and the date of the verification.

PARTI

LICENSING OF VESSELS

Application

- 7. (1) Subject to subsection (2), this Part applies to every vessel principally maintained or operated in Canada that
 - (a) does not exceed 15 tons gross tonnage; and

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- (b) is equipped permanently or temporarily with a motor of 7.5 kW or with more than one motor, the aggregate power of which motors is 7.5 kW or more.
- (2) This Part does not apply to a vessel described in subsection (1) that is
 - (a) registered under the Act;
 - (b) registered or licensed in accordance with the laws of another country and not principally maintained or operated in Canada;
 - (c) a life boat or other survival craft that is part of the equipment of a ship; or
 - (d) an amphibious vehicle for which a provincial automobile licence for highway travel is required.

Vessels to be Licensed

- 8. (1) No person shall operate a vessel unless a licence has been issued under this Part for that vessel.
 - (2) In any prosecution for a violation of subsection (1) it shall be presumed until otherwise proven that no licence has been issued under this Part for the vessel in respect of which the prosecution is brought.

Issue of Licences

- 9. (1) A customs officer shall on request provide the owner of a vessel with a form of application for a vessel licence and, on receipt of such form completed, shall issue to the owner of the vessel without charge a licence in the form set out in Schedule II.
 - (2) The tonnage of a vessel that is not required to be registered under section 16 of the Act is determined in accordance with
 - (a) Schedule I or Schedule IV if it is 12 m in length overall or less; and
 - (b) Schedule I if it is over 12 m in length overall.

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Voluntary Licensing

The owner of any vessel not required to be licensed by these Regulations may obtain a licence for that vessel from a customs officer in the manner set out in section 9.

Transfer of Licences

- 11. The number allotted to a vessel when it is first licensed shall be the permanent licence number of that vessel and shall be retained for the vessel throughout any subsequent transfer of ownership.
- **12**. (1) When the ownership of a licensed vessel is transferred, the transferor shall forthwith
 - (a) sign and deliver to the new owner the transfer form that is printed on the reverse side of the licence; and
 - (b) give notice in writing of the transfer of ownership to the customs house from which that licence was issued specifying the licence number and the name and address of the new owner.
 - (2) The new owner of a vessel for which a licence has been issued under this Part shall
 - (a) complete the transfer form that is printed on the reverse side of the licence and send it to the customs house from which the licence was issued; or
 - (b) complete an application for transfer of the licence in the form provided by a customs officer and send it to the customs house from which the licence was issued.
 - (3) A customs officer who receives a licence with the transfer form completed or a completed application for transfer shall issue to the new owner a new licence for that vessel, which licence shall bear the original licence number.

Marking of Vessels

- 13. (1) No person shall operate a vessel that is licensed under this Part unless that vessel is marked with the licence number of the vessel in block characters not less than 75 mm high and in a colour that contrasts with their background
 - (a) on each side of the bow of the vessel; or

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- (b) on a board permanently attached to the vessel as close to the bow as practicable so that the number is clearly visible from each side of the vessel.
- (2) Subject to subsection (3), no person shall operate a vessel marked with a number that is so similar to the marking required by subsection (1) as to be capable of being mistaken for the licence number.
- (3) Subsection (2) does not apply in respect of a commercial fishing licence number marked on a vessel pursuant to regulations made under the Fisheries Act.

Dealer's Licence

- 14. (1) Every person carrying on the business of selling vessels (hereinafter called a "dealer") may obtain a dealer's licence from a customs officer for use in connection with the operation of vessels that may from time to time be demonstrated by him.
 - (2) A dealer's licence shall be substantially in the form set out in Schedule II but shall be clearly marked "Dealer's Licence for Demonstrators".
 - (3) The licence number issued to a dealer shall be marked in block characters, not less than 75 mm high and in a colour that contrasts with their background, on a board or boards firmly attached to the vessel so that the number is clearly visible from each side of the vessel.
 - (4) A vessel that is being demonstrated by a dealer and is marked in accordance with subsection (3) shall be deemed to be a vessel licensed under this Part and marked as required by this Part.

Production of Licence

15. Every person who has the care or control of a vessel that is licensed under this Part shall at the request of a peace officer produce the licence for that vessel within a reasonable time.

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PART II & III are not revelvant to this manual.

PART IV

REQUIREMENTS FOR PASSENGER CARRYING VESSELS NOT OVER FIVE TONS

Application

26. This Part applies to vessels other than pleasure craft, if such vessels are not over 5 tons gross tonnage and carry not more than 12 passengers.

Not over 5.5 m in Length

- **27**. (1) Every vessel not over 5.5 m in length shall carry
 - (a) one approved standard lifejacket or approved small vessel lifejacket for each person on board;
 - (b) two oars and rowlocks or two paddles;
 - (c) one bailer or one manual pump;
 - (d) one Class B I fire extinguisher; and
 - (e) one of the following throwable devices, namely,
 - (i) an approved life-saving cushion,
 - (ii) a buoyant heaving line of not less than 15 m in length, or
 - (iii) an approved 610 mm or 762 mm lifebuoy.
 - (2) The permanently fitted navigation lights on every vessel not over 5.5 m in length shall meet the requirements of the Collision Regulations for those lights.

Over 5.5 m and not over 8 m in Length

- **28**. (1) Every vessel over 5.5 m and not over 8 m in length shall carry
 - (a) one approved standard lifejacket for each person on board;
 - (b) two oars and rowlocks, two paddles, or one anchor with not less than 15 m of cable, rope or chain;
 - (c) one bailer or one manual pump;

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- (d) one Class B I fire extinguisher; and
- (e) six approved pyrotechnic distress signals of which at least three shall be of Type A, B or C; and
- (f) one of the following throwable devices, namely,
 - (i) an approved life saving cushion,
 - (ii) a buoyant heaving line of not less than 15 m in length, or
 - (iii) an approved 610 mm or 762 mm lifebuoy.
- (2) The permanently fitted navigation lights on every vessel over 5.5 m and not over 8 m in length shall meet the requirements of the Collision Regulations for those lights.

Over 8 m in Length

- 29. (1) Every vessel over 8 m in length shall carry
 - (a) one approved standard lifejacket for each person on board;
 - (b) one approved 762 mm diameter lifebuoy with not less than 9 m of rope attached;
 - (c) one bailer and one manual pump;
 - (d) six approved pyrotechnic distress signals of any type and six approved pyrotechnic distress signals of Type A, B or C;
 - (e) one anchor with not less than 15 m of cable, rope or chain;
 - (f) one Class B II fire extinguisher
 - (2) Every vessel over 8 m in length shall be fitted with navigation lights and sound-signaling appliances that permit the vessel to comply with the *Collision Regulations*.

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PART V

REQUIREMENTS FOR POWER-DRIVEN VESSELS NOT OVER FIFTEEN TONS THAT DO NOT CARRY PASSENGERS AND ARE NOT PLEASURE CRAFT OR FISHING VESSELS

Application

30. This Part applies to power-driven vessels not over 15 tons gross tonnage if such vessels do not carry passengers and are not pleasure craft or fishing vessels.

Not over 5.5 m in Length

- **31**. (1) Every vessel not over 5.5 m in length shall carry
 - (a) one approved standard lifejacket or approved small vessel lifejacket for each person on board;
 - (b) two oars and rowlocks or two paddles;
 - (c) one bailer or one manual pump;
 - (d) one Class B I fire extinguisher; and
 - (e) one of the following throwable devices, namely,
 - (i) an approved life-saving cushion.
 - (ii) a buoyant heaving line of not less than 15 m in length, or
 - (iii) an approved 610 mm or 762 mm lifebuoy.
 - (2) The permanently fitted navigation lights on every vessel over 5.5 m and not over 8 m in length shall meet the requirements of the Collision Regulations for those lights.

Over 5.5 m and not over 8 m in Length

- **32**. (1) Every vessel over 5.5 m and not over 8 m in length shall carry
 - (a) one approved standard lifejacket or approved small vessel lifejacket for each person on board;
 - (b) two oars and rowlocks, two paddles, or one anchor with not less than 15 m of cable, rope or chain;

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- (c) one bailer or one manual pump;
- (d) one Class B I fire extinguisher; and
- (e) six approved pyrotechnic distress signals of which at least three shall be of Type A, B or C; and
- (f) one of the following throwable devices, namely,
 - (i) an approved life saving cushion,
 - (ii) a buoyant heaving line of not less than 15 m in length, or
 - (iii) an approved 610 mm or 762 mm lifebuoy.
- (2) Every vessel over 8 m and not over 12 m in length shall be fitted with navigation lights and sound signaling apparatus that permit the vessel to comply with the Collision Regulations.

Over 8 m and not over 12 m in Length

- 33. (1) Every vessel over 8 m and not over 12 m in length shall carry
 - (a) one approved standard lifejacket or approved small vessel lifejacket for each person on board;
 - (b) one approved 762 mm diameter lifebuoy with not less than 9 m of rope attached;
 - (c) 6 approved pyrotechnic distress signals of any type and six approved pyrotechnic distress signals of Type A, B or C;
 - (d) one bailer and one manual or power-driven bilge pump;
 - (e) one anchor with not less than 15 m of cable, rope or chain;
 - (f) one fire bucket;
 - (g) one Class B I fire extinguisher;
 - (h) if equipped with a cooking or heating appliance that burns liquid or gaseous fuel, one additional Class B I fire extinguisher; and

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(2) Every vessel over 8 m and not over 12 m in length shall be fitted with navigation lights and sound-signaling appliances that permit the vessel to comply with the *Collision Regulations*.

Over 12 m in Length

- **34**. (1) Every vessel over 12 m in length shall carry
 - (a) one approved standard lifejacket or approved small vessel lifejacket for each person on board;
 - (b) one approved 762 mm diameter lifebuoy with not less than 9 m of rope attached;
 - (c) buoyant apparatus that meet the applicable standards set out in the *Life Saving Equipment Regulations*, sufficient to support all of the persons on board;
 - (d) six approved pyrotechnic distress signals of any type and six approved pyrotechnic distress signals of Type A, B or C;
 - (e) one anchor with not less than 15 m of cable, rope or chain;
 - (f) two fire buckets;
 - (g) one manual or power-driven pump located outside the machinery space with one fire hose and nozzle whereby a jet of water can be directed into any part of the vessel;
 - (h) two Class B II fire extinguishers, one of which shall be located adjacent to the entrance to the accommodation space, if any, and the other adjacent to the entrance to the machinery space;
 - (i) if equipped with a cooking or heating appliance that burns liquid or gaseous fuel, one additional Class B II fire extinguisher;
 - (j) one fire axe; and
 - (k) efficient bilge pumping arrangements.
 - (2) Every vessel over 12 m in length shall be fitted with navigation lights and sound-signaling appliances that permit the vessel to comply with the *Collision Regulations*.

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Additional Requirements for Vessels Built or Converted for Pushing or Pulling any Floating Object

- 35. (1) Subject to subsection (2), in addition to the other requirements of this Part, a vessel of more than 5 tons, gross tonnage, built or converted for the purpose of pushing or pulling any floating object shall carry,
 - (a) where the vessel is fitted with a wheelhouse, two approved standard lifejackets or two approved small vessel lifejackets in the wheelhouse; and
 - (b) where the number of persons on board the vessel is two or more, one approved inflatable life raft of sufficient capacity to accommodate all the persons on board.
 - (2) Subsection (1) does not apply to a vessel that, when used for pushing or pulling any floating object, is so used only for the purpose of salvaging logs.
 - (3) Notwithstanding section 34, a vessel over 12 m in length that carries an inflatable life raft of the kind described in paragraph (1)(b) is not required to carry a buoyant apparatus of the kind described in paragraph 34(1)(c).

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COLLISION REGULATIONS

CANADA SHIPPING ACT

REGULATIONS FOR THE PREVENTION OF COLLISIONS

Short Title

1. These Regulations may be cited as the Collision Regulations.

Interpretation

2. (1) In these Regulations,

"Act" means the Canada Shipping Act; (Loi)

"air cushion vessel" means a machine designed to derive support in the atmosphere primarily from reactions against the earth's surface of air expelled from the machine; (navire à coussin d'air)

"Annex" means an Annex to Schedule I; (appendice)

"approved signal" means a distress signal recognized internationally by organizations concerned with radio communications and maritime safety; (signal approuvé)

"barge" means a non-self-propelled barge, scow, dredge, pile-driver, hopper, pontoon or houseboat; (chaland)

"Canadian ODAS" means an ODAS which is owned by

- (a) a person who is a Canadian citizen or a permanent resident of Canada, or
- (b) the Government of Canada, the government of a province, a corporation resident in Canada or a Canadian university; (ODAS Canadien)

"Canadian vessel" includes

- (a) any vessel that is licensed or registered in Canada, and
- (b) any vessel that is Canadian owned and not licensed, registered or otherwise legally documented by another state; (navire Canadien)

"Canadian waters" means the territorial sea of Canada and all internal waters of Canada; (eaux canadiennes)

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"composite unit" means a pushing vessel and an associated pushed vessel that are rigidly connected and that are designed as a dedicated and integrated tug and barge combination; (unité composite)

"Department" means the Department of Transport; (ministère)

"direction of traffic flow" means the direction for traffic in a route that is indicated by arrows on a reference chart; (direction du trafic)

"exploration or exploitation vessel" means a vessel engaged in the exploration or exploitation of the non-living natural resources of the sea bed; (navire d'exploration ou d'exploitation)

"fishing zones" means the fishing zones of Canada prescribed pursuant to the Territorial Sea and Fishing Zones Act; (zones de pêche)

"give-way vessel" means a vessel that is required by these Regulations to keep out of the way of another vessel; (navire non privilégié)

"Great Lakes Basin" means Lakes Ontario, Erie, Huron (including Georgian Bay), Michigan and Superior, their connecting and tributary waters and the Ottawa and St. Lawrence Rivers and their tributaries as far east as the lower exit of St. Lambert Lock; (Bassin des Grands lacs)

"inconspicuous, partly submerged vessel or object" means a raft or any other floating vessel or object that is low in the water and is generally difficult to see; (navire ou objet peu visible, partiellement submergé)

"inshore traffic zone" means a routing measure that is a designated area between the landward boundary of a traffic separation scheme and the adjacent coast that is intended for local traffic; (zone de navigation côtière)

"mile" means the international nautical mile of 1,852 metres; (mille)
"Notice to Mariners" means a weekly and annual publication by the
Department to provide marine information; (Avis aux navigateurs)

"Notice to Shipping" means an urgent release by the Department to provide marine information; (Avis à la navigation)"

"ODAS" means an ocean data acquisition system that consists of any object on or in the water that is designed to collect, store or transmit

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samples or data relating to the marine environment or the atmosphere or to the uses thereof; (ODAS)

"Organization" means the International Maritime Organization; (Organization)

"proof of compliance" means a document or a label that states that a light, shape, sound-signaling appliance or radar reflector meets the standards referred to in section 4 and that is issued by

- (a) a government that is a party to the Convention on the International Regulations for Preventing Collisions at Sea, 1972,
- (b) a society or association for the classification and registry of ships recognized by a government referred to in paragraph (a), or
- (c) an independent testing establishment recognized by the Chairman or by a government referred to in paragraph (a): (preuve de conformité)

"route" means an area within which there are at any point, one or two directions of traffic flow and that is delineated on two sides by separation lines, separation zones, natural obstacles or dashed tinted lines except that the continuity of such lines or zones may be interrupted where the route merges with, diverges from or crosses another route; (route)

"routing system" means any system of one or more routes or routing measures which systems may include traffic separation schemes, two-way routes, recommended tracks, areas to be avoided, inshore traffic zones, roundabouts, precautionary areas and deep water routes; (système d'organisation du trafic)

"Rule" means a provision in Schedule I under a heading that consists of the word "Rule" followed by a number; (règle)

"seaplane" includes any aircraft designed to manoeuvre on the water; (hydravion)

"separation zone or line" means a zone or line separating routes in which ships are proceeding in opposite or nearly opposite directions, or separating a route from the adjacent inshore traffic zone; (zone ou ligne de séparation)

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[&]quot;raft" includes a boom; (radeau)

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"traffic lane" means a route within which there is one direction of traffic flow; (voie de circulation)

"traffic separation scheme" means a routing measure that provides for the separation of opposing streams of traffic by appropriate means and by the establishment of traffic lanes; (dispositif de séparation du trafic)

"trawling" means fishing by dragging through the water a dredge net or other fishing apparatus. (chalutage)

(2) In these Regulations, every reference to a vessel includes a reference to an air cushion vessel when it is over or on the water and a seaplane when it is on the water.

Application

- **3.** (1) Subject to subsection (4), these Regulations apply to every
 - (a) Canadian vessel or Canadian ODAS located within any waters;
 - (b) vessel or ODAS, other than a Canadian vessel or Canadian ODAS, located within
 - (i) Canadian waters or fishing zones, or
 - (ii) a shipping safety control zone prescribed pursuant to the Arctic Waters Pollution Prevention Act; and
 - (c) exploration or exploitation vessel that is engaged in exploration or exploitation activities pursuant to a licence issued by the Government of Canada.
 - (3) Where there is any inconsistency between a provision of the Rules and a provision of the Rules that falls under the heading "Canadian Modifications", the latter provision prevails to the extent of the inconsistency.
 - (4) Where the laws of a state other than Canada are applicable to a Canadian vessel or Canadian ODAS within the territorial sea, inland waters or fishing zones of that state, and those laws are inconsistent with these Regulations, the laws of that state prevail to the extent of the inconsistency in respect of the Canadian vessel or Canadian ODAS.
 - (5) Where special rules are made with respect to additional station or signal lights, shapes or whistle signals for ships of war and vessels proceeding under convoy, or with respect to additional station or signal lights, shapes or whistle signals for fishing vessels engaged in fishing as a fleet, the special rules shall operate so as to take precedence over any

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other portion of the Rules with respect to which there is an inconsistency and these additional station or signal lights, shapes or whistle signals shall, so far as possible, be such that they cannot be mistaken for any light, shape or signal authorized elsewhere under these Rules.

(6) Where there is any inconsistency between a provision of Rule 1 and a provision of this section, the provision of this section prevails to the extent of the inconsistency.

Standards

- 4. Each light, shape, sound-signaling appliance and radar reflector required by these Regulations to be carried or exhibited on a vessel shall meet as a minimum the standards set out in
 - (a) Annexes I and III to Schedule I; and
 - (b) Transport Canada Standards for Navigation Lights, Shapes, Sound Signal Appliances and Radar Reflectors, 1983, TP 1861, as amended from time to time.

Proof of Compliance

- **5.** (1) A proof of compliance for each light, shape, sound- signaling appliance and radar reflector on board a vessel shall
 - (a) where the proof of compliance is in the form of a document, be carried on board the vessel; and
 - (b) where the proof of compliance is in the form of a label, be securely affixed to the light, shape, sound-signaling appliance or radar reflector.
 - (2) A proof of compliance issued in a language other than English or French shall be accompanied by an English or French translation.

Inspection Certificates

- **6.** A steamship inspector may withhold the issuance of an inspection certificate or a Safety Convention certificate where
 - (a) the equipment referred to in section 5 does not meet the requirements of these Regulations or has no proof of compliance; or
 - (b) in the opinion of the steamship inspector, a proof of compliance has been improperly issued or contains incorrect information.

SCHEDULE I (Sections 3 & 4)

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INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA, 1972 WITH CANADIAN MODIFICATIONS

PART A--GENERAL Rule 1 Application--International

- (a) These Rules shall apply to all vessels upon the high seas and in all waters connected therewith navigable by seagoing vessels.
- (b) Nothing in these Rules shall interfere with the operation of special rules made by an appropriate authority for roadsteads, harbours, rivers, lakes or inland waterways connected with the high seas and navigable by sea-going vessels if such special rules conform as closely as possible to these Rules.
- (c) Nothing in these Rules shall interfere with the operation of any special rules made by the government of any state with respect to additional station or signal lights, shapes or whistle signals for ships of war and vessels proceeding under convoy, or with respect to additional station or signal lights or shapes for fishing vessels engaged in fishing as a fleet. These additional station or signal lights, shapes or whistle signals shall, so far as possible, be such that they cannot be mistaken for any light, shape or signal authorized elsewhere under these Rules.
- (d) Traffic separation schemes may be adopted by the Organization for the purpose of these Rules.
- (e) Where the Government concerned determines that a vessel of special construction or purpose cannot comply fully with the provisions of any of these Rules with respect to the number, position, range or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signaling appliances, the vessel shall comply with such other provisions in regard to the number, position, range or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signaling appliances as the Government determines to be the closest possible compliance with these Rules in respect of that vessel.

Application--Canadian Modification

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- (f) Where it is necessary to make any determination referred to in paragraph (e) in respect of a Canadian vessel, the determination shall be made by the Chairman.
- (g) Each determination referred to in paragraph (e) shall be evaluated to ensure that there will be no reduction in safety taking into account such factors as the following:
 - (i) in the case of lights,
 - (A) any impairment of the visibility or distinctive character of the lights,
 - (B) glare or back-scatter in the navigation or working areas,
 - (C) vulnerability of the lights to damage, or
 - (D) difficult or dangerous access to the lights for maintenance purposes, and
 - (ii) in the case of sound-signaling appliances,
 - (A) any impairment of audibility or other characteristics of the sound-signaling appliances,
 - (B) excessive sound pressure levels at listening posts or in navigation or working areas,
 - (C) vulnerability of the sound-signaling appliances to damage, or
 - (D) difficult or dangerous access to the sound-signaling appliances for maintenance purposes.

Rule 2 Responsibility

- (a) Nothing in these Rules shall exonerate any vessel, or the owner, master 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.
- (b) In construing and complying with these Rules due regard shall be had to all dangers of navigation and collision and to any special circumstances, including the limitations of the vessels involved, which may make a departure from these Rules necessary to avoid immediate danger.

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Rule 3 General Definitions

For the purpose of these Rules, except where the context otherwise requires:

- (a) The word "vessel" includes every description of water craft, including non-displacement craft and seaplanes, used or capable of being used as a means of transportation on water.
- (b) The term "power-driven vessel" means any vessel propelled by machinery.
- (c) The term "sailing vessel" means any vessel under sail provided that propelling machinery, if fitted, is not being used.
- (d) The term "vessel engaged in fishing" means any vessel fishing with nets, lines, trawls or other fishing apparatus which restrict maneuverability, but does not include a vessel fishing with trolling lines or other fishing apparatus which do not restrict maneuverability.
- (e) The word "seaplane" includes any aircraft designed to maneuver on the water.
- (f) The term "vessel not under command" means a vessel which through some exceptional circumstance is unable to maneuver as required by these Rules and is therefore unable to keep out of the way of another vessel.
- (g) The term "vessel restricted in her ability to maneuver" means a vessel which from the nature of her work is restricted in her ability to maneuver as required by these Rules and is therefore unable to keep out of the way of another vessel.

The term "vessels restricted in their ability to maneuver" shall include but not be limited to:

- (i) a vessel engaged in laying, servicing or picking up a navigation mark, submarine cable or pipeline,
- (ii) a vessel engaged in dredging, surveying or underwater operations,
- (iii) a vessel engaged in replenishment or transferring persons, provisions or cargo while underway,

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- (iv) a vessel engaged in the launching or recovery of aircraft,
- (v) a vessel engaged in mineclearance operations,
- (vi) a vessel engaged in a towing operation such as severely restricts the towing vessel and her tow in their ability to deviate from their course.
- (h) The term "vessel constrained by her draught" means a powerdriven vessel that, because of the vessel's draught in relation to the available depth and width of navigable water, is severely restricted in the vessel's ability to deviate from the course the vessel is following.
- (i) The word "underway" means that a vessel is not at anchor, or made fast to the shore, or aground.
- (j) The words "length" and "breadth" of a vessel mean her length overall and greatest breadth.
- (k) Vessels shall be deemed to be in sight of one another only when one can be observed visually from the other.
- (I) The term "restricted visibility" means any condition in which visibility is restricted by fog, mist, falling snow, heavy rainstorms, sandstorms or any other similar causes.

PART B--STEERING AND SAILING RULES SECTION I--CONDUCT OF VESSELS IN ANY CONDITION OF VISIBILITY

Rule 4 Application

Rules in this Section apply in any condition of visibility.

Rule 5 Look-out

Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

Rule 6 Safe Speed--International

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Every vessel shall at all times proceed at a safe speed so that she can take proper and effective action to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions. In determining a safe speed the following factors shall be among those taken into account:

- (a) By all vessels:
 - (i) the state of visibility,
 - (ii) the traffic density including concentrations of fishing vessels or any other vessels,
 - (iii) the maneuverability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions,
 - (iv) at night the presence of background light such as from shore lights or from back scatter of her own lights,
 - (v) the state of wind, sea and current, and the proximity of navigational hazards,
 - (vi) the draught in relation to the available depth of water.
- (b) Additionally, by vessels with operational radar:
 - (i) the characteristics, efficiency and limitations of the radar equipment,
 - (ii) any constraints imposed by the radar range scale in use,
 - (iii) the effect on radar detection of the sea state, weather and other sources of interference.
 - (iv) the possibility that small vessels, ice and other floating objects may not be detected by radar at an adequate range,
 - (v) the number, location and movement of vessels detected by radar,
 - (vi) the more exact assessment of the visibility that may be possible when radar is used to determine the range of vessels or other objects in the vicinity.

Safe Speed--Canadian Modifications

(c) In the Canadian waters of a roadstead, harbour, river, lake or inland waterway, every vessel passing another vessel or work that includes a dredge, tow, grounded vessel or wreck shall proceed with caution at a speed that will not adversely affect the vessel or work being passed, and shall comply with any relevant instruction or direction contained in any Notice to Mariners or Notice to Shipping.

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- (d) For the purpose of paragraph (c), where it cannot be determined with certainty that a passing vessel will not adversely affect another vessel or work described in that paragraph, the passing vessel shall proceed with caution at the minimum speed at which she can be kept on her course.
- (e) In the Canadian waters of a roadstead, harbour, river, lake or inland waterway, every vessel shall navigate with caution and shall comply with any relevant instruction or direction contained in any Notice to Mariners or Notice to Shipping where abnormal water levels, ice conditions or a casualty to a vessel or aid to navigation may
 - (i) make navigation difficult or hazardous,
 - (ii) cause damage to property, or
 - (iii) block the navigational channel.

Rule 7 Risk of Collision

- (a) Every vessel shall use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. If there is any doubt such risk shall be deemed to exist.
- (b) Proper use shall be made of radar equipment if fitted and operational, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observation of detected objects.
- (c) Assumptions shall not be made on the basis of scanty information, especially scanty radar information.
- (d) In determining if risk of collision exists the following considerations shall be among those taken into account:
 - (i) such risk shall be deemed to exist if the compass bearing of an approaching vessel does not appreciably change,
 - (ii) such risk may sometimes exist even when an appreciable bearing change is evident, particularly when approaching a very large vessel or a tow or when approaching a vessel at close range.

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Rule 8 Action to avoid Collision

- (a) Any action taken to avoid collision shall, if the circumstances of the case admit, be positive, made in ample time and with due regard to the observance of good seamanship.
- (b) Any alteration of course and/or speed to avoid collision shall, if the circumstances of the case admit, be large enough to be readily apparent to another vessel observing visually or by radar; a succession of small alterations of course and/or speed should be avoided.
- (c) If there is sufficient sea room, alteration of course alone may be the most effective action to avoid a close-quarters situation provided that it is made in good time, is substantial and does not result in another close-quarters situation.
- (d) Action taken to avoid collision with another vessel shall be such as to result in passing at a safe distance. The effectiveness of the action shall be carefully checked until the other vessel is finally past and clear.
- (e) If necessary to avoid collision or allow more time to assess the situation, a vessel shall slacken her speed or take all way off by stopping or reversing her means of propulsion.
- (f) (i) A vessel which, by any of these Rules, is required not to impede the passage or safe passage of another vessel shall, when required by the circumstances of the case, take early action to allow sufficient sea room for the safe passage of the other vessel.
 - (ii) A vessel required not to impede the passage or the safe passage of another vessel is not relieved of this latter obligation if approaching the other vessel so as to involve risk of collision and shall, when taking action, have full regard to the action which may be required by the rules of this Part.
 - (iii) A vessel the passage of which is not to be impeded remains fully obliged to comply with the rules of this Part when the two vessels are approaching one another so as to involve risk of collision.

Rule 9

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Narrow Channels--International

- (a) A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable.
- (b) A vessel of less than 20 metres in length or a sailing vessel shall not impede the passage of a vessel which can safely navigate only within a narrow channel or fairway.
- (c) A vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway.
- (d) A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within such channel or fairway. The latter vessel may use the sound signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.
- (e) (i) In a narrow channel or fairway when overtaking can take place only if the vessel to be overtaken has to take action to permit safe passing, the vessel intending to overtake shall indicate her intention by sounding the appropriate signal prescribed in Rule 34(c)(i). The vessel to be overtaken shall, if in agreement, sound the appropriate signal prescribed in Rule 34(c)
 - (ii) and take steps to permit safe passing. If in doubt she may sound the signals prescribed in Rule 34(d).
 - (ii) This Rule does not relieve the overtaking vessel of her obligation under Rule 13.
- (f) A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e).
- (g) Any vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.

Narrow Channels--Canadian Modifications

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- (h) Notwithstanding paragraph (d), in the waters of the Great Lakes Basin, a vessel that can safely navigate only within a narrow channel or fairway shall, if a crossing vessel impedes her passage, use the sound signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.
- (i) Notwithstanding paragraph (e), in a narrow channel or fairway in the waters of the Great Lakes Basin, a vessel shall indicate its intention to overtake, or its agreement to being overtaken, as the case may be, by sounding the whistle signals prescribed in Rule 34(j).
- (j) In the Canadian waters of a narrow channel or fairway a barge or an inconspicuous, partly submerged vessel or object shall not be navigated, moored or anchored so as to impede the safe passage of any other vessel or object using those waters.
- (k) Notwithstanding paragraph (a) and Rule 14(a), in the Canadian waters of a narrow channel or fairway where there is a current or tidal stream and two power-driven vessels are meeting each other from opposite directions so as to involve risk of collision,
 - (i)the vessel proceeding with the current or tidal stream shall be the stand-on vessel and shall propose the place of passage and shall indicate the side on which she intends to pass by sounding the appropriate signal prescribed in Rule 34(a) or (g),
 - (ii) the vessel proceeding against the current or tidal stream shall keep out of the way of the vessel proceeding with the current or tidal stream and shall hold as necessary to permit safe passing,
 - (iii) the vessel proceeding against the current or tidal stream shall promptly reply to the signal referred to in subparagraph (i) with the same signal, if she is in agreement, and with the sound signal prescribed in Rule 34(d), if she is in doubt.

Rule 10 Traffic Separation Schemes--International

- (a) This rule applies to traffic separation schemes adopted by the Organization and does not relieve any vessel of her obligation under any other rule.
- (b) A vessel using a traffic separation scheme shall:
 - (i) proceed in the appropriate traffic lane in the general direction of traffic flow for that lane,

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- (ii) so far as practicable keep clear of a traffic separation line or separation zone,
- (iii) normally join or leave a traffic lane at the termination of the lane, but when joining or leaving from either side shall do so at as small an angle to the general direction of traffic flow as practicable.
- (c) A vessel shall, so far as practicable, avoid crossing traffic lanes but, if obliged to do so, shall cross on a heading as nearly as practicable at right angles to the general direction of traffic flow.
- (d) (i) A vessel shall not use an inshore traffic zone when it can safely use the appropriate traffic lane within the adjacent traffic separation scheme. However, vessels of less than 20 metres in length, sailing vessels and vessels engaged in fishing may use the inshore traffic zone.
 - (ii) Notwithstanding subparagraph (i), a vessel may use an inshore traffic zone when en route to or from a port, an offshore installation or structure, a pilot station or any other place situated within the inshore traffic zone or to avoid immediate danger.
- (e) A vessel other than a crossing vessel or a vessel joining or leaving a lane shall not normally enter a separation zone or cross a separation line except
 - (i) in cases of emergency to avoid immediate danger, or
 - (ii) to engage in fishing within a separation zone.
- (f) A vessel navigating in areas near the terminations of traffic separation schemes shall do so with particular caution.
- (g) A vessel shall so far as practicable avoid anchoring in a traffic separation scheme or in areas near its terminations.
- (h) A vessel not using a traffic separation scheme shall avoid it by as wide a margin as is practicable.
- (i) A vessel engaged in fishing shall not impede the passage of any vessel following a traffic lane.
- (j) A vessel of less than 20 metres in length or a sailing vessel shall not impede the safe passage of a power-driven vessel following a traffic lane.

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- (k) A vessel restricted in her ability to maneuver when engaged in an operation for the maintenance of safety of navigation in a traffic separation scheme is exempted from complying with this Rule to the extent necessary to carry out the operation.
- (I) A vessel restricted in her ability to maneuver when engaged in an operation for the laying, servicing or picking up of a submarine cable, within a traffic separation scheme, is exempted from complying with this Rule to the extent necessary to carry out the operation.

Traffic Separation Schemes--Canadian Modifications

- (m) Traffic separation schemes adopted by the Organization shall be described in Notices to Mariners or Notices to Shipping.
- (m.1) Subject to paragraphs (o) and (p), paragraphs (a) to (l) apply to any routing system described in Notices to Mariners or Notices to Shipping.
- (n) Every power-driven vessel of more than 20 metres in length shall use the route within a traffic separation scheme or a routing system by which it can safely proceed to its destination.
- (o) Paragraphs (b), (c) and (h) do not apply to a vessel engaged in fishing with nets, lines, trawls, trolling lines or other fishing apparatus in or near a routing system located in Canadian waters or fishing zones.
- (p) Paragraphs (b), (c), (e) and (h) do not apply to a vessel engaged in laying, servicing or picking up a navigation mark, submarine cable or pipeline, dredging, surveying, underwater operations or launching or recovering aircraft in or near a routing system located in Canadian waters or fishing zones, where that vessel
 - (i) does not prevent other vessels that use the route from navigating safely,
 - (ii) identifies herself to approaching vessels and informs them of the location and nature of the operation and of her intentions, and
 - (iii) informs the Department, as soon as possible before the commencement of the operation of
 - (A) the nature, location and duration of the operation, and
 - (B) any cautionary advice necessary concerning the operation.

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(q) A vessel making a transatlantic voyage shall, as far as practicable, avoid crossing the Grand Banks of Newfoundland north of latitude 43° north.

SECTION II--CONDUCT OF VESSELS IN SIGHT OF ONE ANOTHER

Rule 11 Application

Rules in this Section apply to vessels in sight of one another.

Rule 12 Sailing Vessels

- (a) When two sailing vessels are approaching one another, so as to involve risk of collision, one of them shall keep out of the way of the other as follows:
 - (i) when each has the wind on a different side, the vessel which has the wind on the port side shall keep out of the way of the other.
 - (ii) when both have the wind on the same side, the vessel which is to windward shall keep out of the way of the vessel which is to leeward.
 - (iii) if a vessel with the wind on the port side sees a vessel to windward and cannot determine with certainty whether the other vessel has the wind on the port or on the starboard side, she shall keep out of the way of the other.
- (b) For the purposes of this Rule the windward side shall be deemed to be the side opposite to that on which the mainsail is carried or, in the case of a square-rigged vessel, the side opposite to that on which the largest fore-and-aft sail is carried.

Rule 13 Overtaking--International

(a) Notwithstanding anything contained in the Rules of Part B, Sections I and II, any vessel overtaking any other vessel shall keep out of the way of the vessel being overtaken.

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- (b) A vessel shall be deemed to be overtaking when coming up with another vessel from a direction more than 22.5 degrees abaft her beam, that is, in such a position with reference to the vessel she is overtaking, that at night she would be able to see only the sternlight of that vessel but neither of her sidelights.
- (c) When a vessel is in any doubt as to whether she is overtaking another, she shall assume that this is the case and act accordingly.
- (d) Any subsequent alteration of the bearing between the two vessels shall not make the overtaking vessel a crossing vessel within the meaning of these Rules or relieve her of the duty of keeping clear of the overtaken vessel until she is finally past and clear.

Overtaking--Canadian Modification

- (e) Notwithstanding paragraph (b), in the waters of the Great Lakes Basin, a vessel shall be deemed to be overtaking another vessel when at night she would be able to see
 - (i) the sternlight of the other vessel, or
 - (ii) in the case of a power-driven vessel lighted in accordance with Rule 23(c) or (e), the all-round white light or lights of the other vessel but not her sidelights.

Rule 14 Head-on Situation

- (a) When two power-driven vessels are meeting on reciprocal or nearly reciprocal courses so as to involve risk of collision each shall alter her course to starboard so that each shall pass on the port side of the other.
- (b) Such a situation shall be deemed to exist when a vessel sees the other ahead or nearly ahead and by night she could see the masthead lights of the other in a line or nearly in a line and/or both sidelights and by day she observes the corresponding aspect of the other vessel.
- (c) When a vessel is in any doubt as to whether such a situation exists she shall assume that it does exist and act accordingly.

Rule 15

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Crossing Situation--International

(a) When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel.

Crossing Situation--Canadian Modification

(b) Notwithstanding paragraph (a), in Canadian waters, a vessel crossing a river shall keep out of the way of a power-driven vessel ascending or descending the river, except on the St. Lawrence River northeast of "Île Rouge."

Rule 16 Action by Give-way Vessel

Every vessel which is directed to keep out of the way of another vessel shall, so far as possible, take early and substantial action to keep well clear.

Rule 17 Action by Stand-on Vessel

- (a) (i) Where one of two vessels is to keep out of the way the other shall keep her course and speed.
 - (ii) The latter vessel may however take action to avoid collision by her maneuver alone, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action in compliance with these Rules.
- (b) When, from any cause, the vessel required to keep her course and speed finds herself so close that collision cannot be avoided by the action of the give-way vessel alone, she shall take such action as will best aid to avoid collision.
- (c) A power-driven vessel which takes action in a crossing situation in accordance with subparagraph (a)(ii) of this Rule to avoid collision with another power-driven vessel shall, if the circumstances of the case admit, not alter course to port for a vessel on her own port side.

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(d) This Rule does not relieve the give-way vessel of her obligation to keep out of the way.

Rule 18 Responsibilities between Vessels

Except where Rules 9, 10 and 13 otherwise require:

- (a) A power-driven vessel underway shall keep out of the way of:
 - (i) a vessel not under command,
 - (ii) a vessel restricted in her ability to maneuver,
 - (iii) a vessel engaged in fishing,
 - (iv) a sailing vessel.
- (b) A sailing vessel underway shall keep out of the way of:
 - (i) a vessel not under command,
 - (ii) a vessel restricted in her ability to maneuver,
 - (iii) a vessel engaged in fishing.
- (c) A vessel engaged in fishing when underway shall, so far as possible, keep out of the way of:
 - (i) a vessel not under command.
 - (ii) a vessel restricted in her ability to maneuver.
- (d) (i) Any vessel other than a vessel not under command or a vessel restricted in her ability to maneuver shall, if the circumstances of the case admit, avoid impeding the safe passage of a vessel constrained by her draught, exhibiting the signals in Rule 28.
 - (ii) A vessel constrained by her draught shall navigate with particular caution having full regard to her special condition.
- (e) A seaplane on the water shall, in general, keep well clear of all vessels and avoid impeding their navigation. In circumstances, however, where risk of collision exists, she shall comply with the Rules of this Part.

SECTION III--CONDUCT OF VESSELS IN RESTRICTED VISIBILITY Rule 19 Conduct of Vessels in Restricted Visibility

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- (a) This Rule applies to vessels not in sight of one another when navigating in or near an area of restricted visibility.
- (b) Every vessel shall proceed at a safe speed adapted to the prevailing circumstances and conditions of restricted visibility. A power-driven vessel shall have her engines ready for immediate maneuver.
- (c) Every vessel shall have due regard to the prevailing circumstances and conditions of restricted visibility when complying with the Rules of Section I of this Part.
- (d) A vessel which detects by radar alone the presence of another vessel shall determine if a close-quarters situation is developing and/or risk of collision exists. If so, she shall take avoiding action in ample time, provided that when such action consists of an alteration of course, so far as possible the following shall be avoided:
 - (i) an alteration of course to port for a vessel forward of the beam, other than for a vessel being overtaken,
 - (ii) an alteration of course towards a vessel abeam or abaft the beam.
- (e) Except where it has been determined that a risk of collision does not exist, every vessel which hears apparently forward of her beam the fog signal of another vessel, or which cannot avoid a close-quarters situation with another vessel forward of her beam, shall reduce her speed to the minimum at which she can be kept on her course. She shall if necessary take all her way off and in any event navigate with extreme caution until danger of collision is over.

PART C--LIGHTS AND SHAPES Rule 20 Application

(a) Rules in this Part shall be complied with in all weathers.

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- (b) The Rules concerning lights shall be complied with from sunset to sunrise, and during such times no other lights shall be exhibited, except such lights as cannot be mistaken for the lights specified in these Rules or do not impair their visibility or distinctive character, or interfere with the keeping of a proper look-out.
- (c) The lights prescribed by these Rules shall, if carried, also be exhibited from sunrise to sunset in restricted visibility and may be exhibited in all other circumstances when it is deemed necessary.
- (d) The Rules concerning shapes shall be complied with by day.
- (e) The lights and shapes specified in these Rules shall comply with the provisions of Annex I to these Regulations.

Rule 21 Definitions--International

- (a) "Masthead light" means a white light placed over the fore and aft centreline of the vessel showing an unbroken light over an arc of the horizon of 225 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on either side of the vessel.
- (b)"Sidelights" means a green light on the starboard side and a red light on the port side each showing an unbroken light over an arc of the horizon of 112.5 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on its respective side. In a vessel of less than 20 metres in length the sidelights may be combined in one lantern carried on the fore and aft centreline of the vessel.
- (c) "Sternlight" means a white light placed as nearly as practicable at the stern showing an unbroken light over an arc of the horizon of 135 degrees and so fixed as to show the light 67.5 degrees from right aft on each side of the vessel.
- (d) "Towing light" means a yellow light having the same characteristics as the "sternlight" defined in paragraph (c) of this Rule.
- (e) "All-round light" means a light showing an unbroken light over an arc of the horizon of 360 degrees.

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(f) "Flashing light" means a light flashing at regular intervals at a frequency of 120 flashes or more per minute.

Definitions--Canadian Modification

- (g) "Special flashing light" means a yellow light flashing at regular intervals at a frequency of 50 to 70 flashes per minute, placed as far forward and as nearly as practicable on the fore and aft centreline of a vessel and showing an unbroken light over an arc of the horizon of not less than 180 degrees nor more than 225 degrees and so fixed as to show the light from right ahead to abeam and not more than 22.5 degrees abaft the beam on either side of the vessel.
- (h) "Blue flashing light" means a blue all-round light flashing at regular intervals at a frequency of 50 to 70 flashes per minute.

Rule 22 Visibility of Lights--International

The lights prescribed in these Rules shall have an intensity as specified in section 8 of Annex I to these Regulations so as to be visible at the following minimum ranges:

- (a) In vessels of 50 metres or more in length:
 - --a masthead light, 6 miles,
 - --a sidelight, 3 miles,
 - --a sternlight, 3 miles,
 - --a towing light, 3 miles,
 - --a white, red, green or yellow all-round light, 3 miles.
- (b) In vessels of 12 metres or more in length but less than 50 metres in length:
 - --a masthead light, 5 miles; except that where the length of the vessel is less than 20 metres, 3 miles,
 - --a side light, 2 miles,
 - --a sternlight, 2 miles,
 - --a towing light, 2 miles,
 - --a white, red, green or yellow all-round light, 2 miles.
- (c) In vessels of less than 12 metres in length:
 - --a masthead light, 2 miles,
 - --a sidelight, 1 mile,

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- --a sternlight, 2 miles,
- --a towing light, 2 miles,
- --a white, red, green or yellow all-round light, 2 miles.
- (d) In inconspicuous, partly submerged vessels or objects being towed:
 - --a white all-round light, 3 miles.

Visibility of Lights--Canadian Modification

- (e) In vessels being pushed ahead, irrespective of length:
 - --a special flashing light, 2 miles.
- (f) In any government or police vessel:
 - --a blue flashing light, 2 miles.

Rule 23

Power-driven Vessels Underway--International

- (a) A power-driven vessel underway shall exhibit:
 - (i) a masthead light forward.
 - (ii) a second masthead light abaft of and higher than the forward one; except that a vessel of less than 50 metres in length shall not be obliged to exhibit such light but may do so,
 - (iii) sidelights,
 - (iv) a sternlight.
- (b) An air cushion vessel when operating in the non-displacement mode shall, in addition to the lights prescribed in paragraph (a) of this Rule, exhibit an all-round flashing yellow light.
- (c) (i) A power-driven vessel of less than 12 metres in length may in lieu of the lights prescribed in paragraph (a) of this Rule exhibit an all-round white light and sidelights,
 - (ii) a power-driven vessel of less than 7 metres in length whose maximum speed does not exceed 7 knots may in lieu of the lights prescribed in paragraph (a) of this Rule exhibit an all-round white light and shall, if practicable, also exhibit sidelights,
 - (iii) the masthead light or all-round white light on a power-driven vessel of less than 12 metres in length may be displaced from the fore and aft centreline of the vessel if centreline fitting is not

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practicable, provided that the sidelights are combined in one lantern which shall be carried on

the fore and aft centreline of the vessel or located as nearly as practicable in the same fore and aft line as the masthead light or the all-round white light.

Power-driven Vessels Underway--Canadian Modifications

- (d) Rule 23(c)(ii) does not apply to a Canadian power-driven vessel in any waters or to a non-Canadian power-driven vessel in the Canadian waters of a roadstead, harbour, river, lake or inland waterway.
- (e) In the waters of the Great Lakes Basin, a power-driven vessel when underway may, instead of the second masthead light and sternlight prescribed in paragraph (a), carry, in the position of the second masthead light, a single all-round white light or two such lights placed not over 800 millimetres apart horizontally, one on either side of the keel and so arranged that one or the other or both shall be visible from any angle of approach and for the same minimum range as the masthead lights.

Rule 24 Towing and Pushing--International

- (a) A power-driven vessel when towing shall exhibit:
 - (i) instead of the light prescribed in Rule 23(a)(i) or (a)(ii), two masthead lights in a vertical line. When the length of the tow, measuring from the stern of the towing vessel to the after end of the two exceeds 200 metres, three such lights in a vertical line,
 - (ii) sidelights,
 - (iii) a sternlight,
 - (iv) a towing light in a vertical line above the sternlight,
 - (v) when the length of the tow exceeds 200 metres, a diamond shape where it can best be seen.
- (b) When a pushing vessel and a vessel being pushed ahead are rigidly connected in a composite unit they shall be regarded as a power-driven vessel and exhibit the lights prescribed in Rule 23.

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- (c) A power-driven vessel when pushing ahead or towing alongside, except in the case of a composite unit, shall exhibit:
 - (i) instead of the light prescribed in Rule 23(a)(i) or (a)(ii), two masthead lights in a vertical line,
 - (ii) sidelights,
 - (iii) a sternlight.
- (d) A power-driven vessel to which paragraph (a) or (c) of this Rule applies shall also comply with Rule 23(a)(ii).
- (e) A vessel or object being towed, other than those mentioned in paragraph (g) of this Rule, shall exhibit:
 - (i) sidelights,
 - (ii) a sternlight,
 - (iii) when the length of the tow exceeds 200 metres, a diamond shape where it can best be seen.
- (f) Provided that any number of vessels being towed alongside or pushed in a group shall be lighted as one vessel,
 - (i) a vessel being pushed ahead, not being part of a composite unit, shall exhibit at the forward end, sidelights,
 - (ii) a vessel being towed alongside shall exhibit a sternlight and at the forward end, sidelights.
- (g) An inconspicuous, partly submerged vessel or object, or combination of such vessels or objects being towed, shall exhibit:
 - (i) if it is less than 25 metres in breadth, one all-round white light at or near the forward end and one at or near the after end except that dracones need not exhibit a light at or near the forward end,
 - (ii) if it is 25 metres or more in breadth, two additional all-round white lights at or near the extremities of its breadth,
 - (iii) if it exceeds 100 metres in length, additional all-round white lights between the lights prescribed in subparagraphs (i) and (ii) so that the distance between the lights shall not exceed 100 metres.
 - (iv) a diamond shape at or near the aftermost extremity of the last vessel or object being towed and if the length of the two exceeds 200 metres an additional diamond shape where it can best be seen and located as far forward as is practicable.

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- (h) Where from any sufficient cause it is impracticable for a vessel or object being towed to exhibit the lights or shapes prescribed in paragraph (e) or (g) of this Rule, all possible measures shall be taken to light the vessel or object towed or at least to indicate the presence of such vessel or object.
- (i) Where from any sufficient cause it is impracticable for a vessel not normally engaged in towing operations to display the lights prescribed in paragraph (a) or (c) of this Rule, such vessel shall not be required to exhibit those lights when engaged in towing another vessel in distress or otherwise in need of assistance. All possible measures shall be taken to indicate the nature of the relationship between the towing vessel and the vessel being towed as authorized by Rule 36, in particular by illuminating the towline.

Towing and Pushing--Canadian Modifications

- (j) Notwithstanding paragraphs (e) and (h), within Canadian waters or fishing zones, where it is impracticable for a barge being towed to comply with paragraph (e) the barge shall exhibit the lights prescribed in paragraph (k) to (m).
- (k) Subject to paragraphs (I) to (n), every barge shall carry one all-round white light at each end of the barge.
- (I) Where two or more barges are grouped together, the group may be lighted as a single barge.
- (m) Subject to paragraph (n), where two or more barges are grouped together, the total length of the group exceeds 100 metres and the group is lighted as a single barge, the group shall carry an all-round white light located as closely as possible at the middle point of the group, in addition to the lights prescribed in paragraph (k).
- (n) A barge being pushed ahead shall carry, instead of the all-round white lights prescribed in paragraphs (k) and (m), white lights that show an unbroken light over an arc of the horizon of 225 degrees and are fixed so as to show the light from right ahead to 22.5 degrees abaft the beam on either side of the barge.
- (o) Notwithstanding paragraph (c), in the waters of the Great Lakes Basin, a power-driven vessel when pushing ahead or towing

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alongside shall exhibit two towing lights in a vertical line instead of the sternlight prescribed in paragraph (c).

(p) In the waters of the Great Lakes Basin, a special flashing light shall be exhibited at the forward end of a vessel or vessels being pushed ahead, in addition to the lights prescribed in paragraphs (f) and (n).

Rule 25 Sailing Vessels Underway and Vessels Under Oars--International

- (a) A sailing vessel underway shall exhibit:
 - (i) sidelights,
 - (ii) a sternlight.
- (b) In a sailing vessel of less than 20 metres in length the lights prescribed in paragraph (a) of this Rule may be combined in one lantern carried at or near the top of the mast where it can best be seen.
- (c) A sailing vessel underway may, in addition to the lights prescribed in paragraph (a) of this Rule, exhibit at or near the top of the mast, where they can best be seen, two all-round lights in a vertical line, the upper being red and the lower green, but these lights shall not be exhibited in conjunction with the combined lantern permitted by paragraph (b) of this Rule.
- (d) (i) A sailing vessel of less than 7 metres in length shall, if practicable, exhibit the lights prescribed in paragraph (a) or (b) of this Rule, but if she does not, she shall have ready at hand an electric torch or lighted lantern showing a white light which shall be exhibited in sufficient time to prevent collision.
 - (ii) A vessel under oars may exhibit the lights prescribed in this Rule for sailing vessels, but if she does not, she shall have ready at hand an electric torch or lighted lantern showing a white light which shall be exhibited in sufficient time to prevent collision.
- (e) A vessel proceeding under sail when also being propelled by machinery shall exhibit forward where it can best be seen a conical shape, apex downwards.

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Sailing Vessels Underway and Vessels Under Oars--Canadian Modification

(f) Notwithstanding paragraph (e), in the Canadian waters of a roadstead, harbour, river, lake or inland waterway, a vessel of less than 12 metres in length proceeding under sail when also being propelled by machinery is not required to exhibit a conical shape, apex downwards, but may do so.

Rule 26 Fishing Vessels--International

- (a) A vessel engaged in fishing, whether underway or at anchor, shall exhibit only the lights and shapes prescribed in this Rule.
- (b) A vessel when engaged in trawling, by which is meant the dragging through the water of a dredge net or other apparatus used as a fishing appliance, shall exhibit:
 - (i) two all-round lights in a vertical line, the upper being green and the lower white, or a shape consisting of two cones with their apexes together in a vertical line one above the other,
 - (ii) a masthead light abaft of and higher than the all-round green light; a vessel of less than 50 metres in length shall not be obliged to exhibit such a light but may do so,
 - (iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.
- (c) A vessel engaged in fishing, other than trawling, shall exhibit:
 - (i) two all-round lights in a vertical line, the upper being red and the lower white, or a shape consisting of two cones with their apexes together in a vertical line one above the other,
 - (ii) when there is outlying gear extending more than 150 metres horizontally from the vessel, an all-round white light or a cone apex upwards in the direction of the gear,
 - (iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.
- (d) The additional signals described in Annex II apply to a vessel engaged in fishing in close proximity to other vessels engaged in fishing.

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(e) A vessel when not engaged in fishing shall not exhibit the lights or shapes prescribed in this Rule, but only those prescribed for a vessel of her length.

Fishing Vessels--Canadian Modification

- (f) Notwithstanding paragraph (d), a vessel engaged in fishing in Canadian waters and fishing zones in close proximity to another vessel or vessels engaged in fishing
 - (i) may, if it is less than 20 metres in length or fishing with purse seine gear, and
 - (ii) shall, if it is 20 metres or more in length and fishing other than with purse seine gear,
 - exhibit and sound the appropriate signals prescribed in Annex II.

Rule 27 Vessels not under Command or Restricted in their Ability to Maneuver

- (a) A vessel not under command shall exhibit:
 - (i) two all-round red lights in a vertical line where they can best be seen.
 - (ii) two balls or similar shapes in a vertical line where they can best be seen.
 - (iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.
- (b) A vessel restricted in her ability to maneuver, except a vessel engaged in mineclearance operations, shall exhibit:
 - (i) three all-round lights in a vertical line where they can best be seen. The highest and lowest of these lights shall be red and the middle light shall be white,
 - (ii) three shapes in a vertical line where they can best be seen. The highest and lowest of these shapes shall be balls and the middle one a diamond.
 - (iii) when making way through the water, a masthead light or lights, sidelights and a sternlight, in addition to the lights prescribed in subparagraph (i),

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- (iv) when at anchor, in addition to the lights or shapes prescribed in subparagraphs (i) and (ii), the light, lights or shape prescribed in Rule 30.
- (c) A power-driven vessel engaged in a towing operation such as severely restricts the towing vessel and her tow in their ability to deviate from their course shall, in addition to the lights or shapes prescribed in Rule 24(a), exhibit the lights or shapes prescribed in subparagraphs (b)(i) and (ii) of this Rule.
- (d) A vessel engaged in dredging or underwater operations, when restricted in her ability to maneuver, shall exhibit the lights and shapes prescribed in subparagraph (b)(i), (ii) and (iii) of this Rule and shall in addition, when an obstruction exists, exhibit:
 - (i) two all-round red lights or two balls in a vertical line to indicate the side on which the obstruction exists.
 - (ii) two all-round green lights or two diamonds in a vertical line to indicate the side on which another vessel may pass,
 - (iii) when at anchor the lights or shapes prescribed in this paragraph instead of the lights or shape prescribed in Rule 30.
- (e) Whenever the size of a vessel engaged in diving operations makes it impracticable to exhibit all lights and shapes prescribed in paragraph (d) of this Rule, the following shall be exhibited:
 - (i) three all-round lights in a vertical line where they can best be seen. The highest and lowest of these lights shall be red and the middle light shall be white,
 - (ii) a rigid replica of the International Code flag "A" not less than 1 metre in height. Measures shall be taken to ensure its all-round visibility.
- (f) A vessel engaged in mineclearance operations shall, in addition to the lights prescribed for a power-driven vessel in Rule 23 or to the lights or shape prescribed for a vessel at anchor in Rule 30 as appropriate, exhibit three all-round green lights or three balls. One of these lights or shapes shall be exhibited near the foremast head and one at each end of the fore yard. These lights or shapes indicate that it is dangerous for another vessel to approach within 1 000 metres of the mineclearance vessel.

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- (g) Vessels of less than 12 metres in length, except those engaged in diving operations, shall not be required to exhibit the lights and shapes prescribed in this Rule.
- (h) The signals prescribed in this Rule are not signals of vessels in distress and requiring assistance. Such signals are contained in Annex IV.

Rule 28 Vessels Constrained by their Draught--International

(a) A vessel constrained by her draught may, in addition to the lights prescribed for power-driven vessels in Rule 23, exhibit where they can best be seen three all-round red lights in a vertical line, or a cylinder.

Vessels Constrained by their Draught--Canadian Modification

(b) Notwithstanding paragraph (a), in the Canadian waters of a roadstead, harbour, river, lake or inland waterway, no vessel shall exhibit three all-round red lights in a vertical line or a cylinder.

Rule 29 Pilot Vessels

- (a) A vessel engaged on pilotage duty shall exhibit:
 - (i) at or near the masthead, two all-round lights in a vertical line, the upper being white and the lower red,
 - (ii) when underway, in addition, sidelights and a sternlight,
 - (iii) when at anchor, in addition to the lights prescribed in subparagraph (i), the light, lights or shape prescribed in Rule 30 for vessels at anchor.
- (b) A pilot vessel when not engaged on pilotage duty shall exhibit the lights or shapes prescribed for a similar vessel of her length.

Rule 30 Anchored Vessels and Vessels Aground--International

(a) A vessel at anchor shall exhibit where it can best be seen:

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- (i) in the fore part, an all-round white light or one ball,
- (ii) at or near the stern and at a lower level than the light prescribed in subparagraph (i), an all-round white light.
- (b) A vessel of less than 50 metres in length may exhibit an all-round white light where it can best be seen instead of the lights prescribed in paragraph (a) of this Rule.
- (c) A vessel at anchor may, and a vessel of 100 metres and more in length shall, also use the available working or equivalent lights to illuminate her decks.
- (d) A vessel aground shall exhibit the lights prescribed in paragraph
- (a) or (b) of this Rule and in addition, where they can best be seen:
 - (i) two all-round red lights in a vertical line,
 - (ii) three balls in a vertical line.
- (e) A vessel of less than 7 metres in length, when at anchor, not in or near a narrow channel, fairway or anchorage, or where other vessels normally navigate, shall not be required to exhibit the lights or shape prescribed in paragraphs (a) and (b) of this Rule.
- (f) A vessel of less than 12 metres in length, when aground, shall not be required to exhibit the lights or shapes prescribed in subparagraphs (d)(i) and (ii) of this Rule.

Anchored Vessels and Vessels Aground--Canadian Modifications

- (g) In the Canadian waters of a roadstead, harbour, river, lake or inland waterway, a barge or an inconspicuous, partly submerged vessel or object may, when at anchor, exhibit the appropriate allround white lights prescribed by paragraphs 24(g) and (k) to (m) instead of the lights prescribed by paragraphs (a) to (c) of this Rule.
- (h) Notwithstanding this Rule, in the Canadian waters of a roadstead, harbour, river, lake or inland waterway, a barge or an inconspicuous, partly submerged vessel or object, when at anchor, is not required to exhibit any light while located within a recognized mooring, storage or booming area that is not an area in or near a narrow channel or fairway or where other vessels normally navigate.

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Rule 31 Seaplanes

Where it is impracticable for a seaplane to exhibit lights and shapes of the characteristics or in the positions prescribed in the Rules of this Part she shall exhibit lights and shapes as closely similar in characteristics and position as is possible.

PART D--SOUND AND LIGHT SIGNALS Rule 32 Definitions

- (a) The word "whistle" means any sound signaling appliance capable of producing the prescribed blasts and which complies with the specifications in Annex III to these Regulations.
- (b) The term "short blast" means a blast of about one second's duration.
- (c) The term "prolonged blast" means a blast of from four to six seconds' duration.

Rule 33 Equipment for Sound Signals--International

- (a) A vessel of 12 metres or more in length shall be provided with a whistle and a bell and a vessel of 100 metres or more in length shall, in addition, be provided with a gong, the tone and sound of which cannot be confused with that of the bell. The whistle, bell and gong shall comply with the specifications in Annex III. The bell or gong or both may be replaced by other equipment having the same respective sound characteristics, provided that manual sounding of the prescribed signals shall always be possible.
- (b) A vessel of less than 12 metres in length shall not be obliged to carry the sound signaling appliances prescribed in paragraph (a) of this Rule but if she does not, she shall be provided with some other means of making an efficient sound signal.

Equipment for Sound Signals--Canadian Modification

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- (c) Notwithstanding paragraph (b), in the Canadian waters of a roadstead, harbour, river, lake or inland waterway, a vessel that is
 - (i) less than 12 metres in length,
 - (ii) built or converted for the purpose of pushing or pulling any floating object, and
 - (iii) not solely employed in yarding or warping operations, shall carry the sound signal appliances prescribed in paragraph (a) for a vessel of 12 metres or more in length.

Rule 34 Maneuvering and Warning Signals--International

- (a) When vessels are in sight of one another, a power-driven vessel underway, when maneuvering as authorized or required by these Rules, shall indicate that maneuver by the following signals on her whistle:
 - --one short blast to mean "I am altering my course to starboard",
 - --two short blasts to mean "I am altering my course to port",
 - --three short blasts to mean "I am operating astern propulsion".
- (b) Any vessel may supplement the whistle signals prescribed in paragraph (a) of this Rule by light signals, repeated as appropriate, whilst the maneuver is being carried out:
 - (i) these light signals shall have the following significance:
 - --one flash to mean "I am altering my course to starboard",
 - --two flashes to mean "I am altering my course to port",
 - --three flashes to mean "I am operating astern propulsion".
 - (ii) the duration of each flash shall be about one second, the interval between flashes shall be about one second, and the interval between successive signals shall be not less than ten seconds.
 - (iii) the light used for this signal shall, if fitted, be an all-round white light, visible at a minimum range of 5 miles, and shall comply with the provisions of Annex I.
- (c) When in sight of one another in a narrow channel or fairway:
 - (i) a vessel intending to overtake another shall in compliance with Rule 9(e)(i) indicate her intention by the following signals on her whistle:

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- --two prolonged blasts followed by one short blast to mean "I intend to overtake you on your starboard side",
- --two prolonged blasts followed by two short blasts to mean "I intend to overtake you on your port side",
- (ii) the vessel about to be overtaken when acting in accordance with Rule 9(e)(i) shall indicate her agreement by the following signal on her whistle;
- --one prolonged blast, one short, one prolonged and one short blast, in that order.
- (d) When vessels in sight of one another are approaching each other and from any cause either vessel fails to understand the intentions or actions of the other, or is in doubt whether sufficient action is being taken by the other to avoid collision, the vessel in doubt shall immediately indicate such doubt by giving at least five short and rapid blasts on the whistle. Such signal may be supplemented by a light signal of at least five short and rapid flashes.
- (e) A vessel nearing a bend or an area of a channel or fairway where other vessels may be obscured by an intervening obstruction shall sound one prolonged blast. Such signal shall be answered with a prolonged blast by any approaching vessel that may be within hearing around the bend or behind the intervening obstruction.
- (f) If whistles are fitted on a vessel at a distance apart of more than 100 metres, one whistle only shall be used for giving maneuvering and warning signals.

Maneuvering and Warning Signals--Canadian Modifications

- (g) Notwithstanding paragraph (a), in the waters of the Great Lakes Basin, when power-driven vessels are in sight of one another and meeting or crossing at a distance within half a mile of each other, each vessel underway, when maneuvering as authorized or required by these Rules
 - (i) shall indicate that maneuver by the following signals on her whistle:
 - --one short blast to mean "I intend to leave you on my port side",
 - --two short blasts to mean "I intend to leave you on my starboard side", and

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- --three short blasts to mean "I am operating astern propulsion", and
- (ii) shall, upon hearing the one or two blast signal, referred to in subparagraph (i), of the other vessel indicate her agreement by sounding the same whistle signal and taking the steps necessary to effect a safe passing. If, however, for any cause, a vessel on hearing a one or two blast signal referred to in subparagraph (i) doubts the safety of the proposed maneuver, she shall sound the signal specified in paragraph (d) and each vessel shall take appropriate precautionary action until a safe passing agreement is made.
- (h) Notwithstanding paragraph (b), in the waters of the Great Lakes Basin, a vessel may supplement the whistle signals prescribed in paragraph (g) by light signals
 - (i) that have the following significance:
 - --one flash to mean "I intend to leave you on my port side",
 - --two flashes to mean "I intend to leave you on my starboard side".
 - --three flashes to mean "I am operating astern propulsion", and
 - (ii) the duration of which shall be about one second for each flash.
- (i) The light used for a signal referred to in paragraph (h), shall, if fitted, be one all-round white or yellow light, visible at a minimum range of 2 miles, synchronized with the whistle signal referred to in paragraph (g), and shall comply with section 12 of Annex I.
- (j) Notwithstanding paragraph (c), in the waters of the Great Lakes Basin, when power-driven vessels are in sight of one another in a narrow channel or fairway,
 - (i) the vessel intending to overtake another shall, in compliance with Rule 9(i), indicate her intention by the following signals on her whistle:
 - --one short blast to mean "I intend to overtake you on your starboard side",
 - --two short blasts to mean "I intend to overtake you on your port side",
 - (ii) the vessel about to be overtaken when acting in accordance with Rule 9(i) shall, if in agreement, sound the same signal as given by the other vessel. If in doubt, she shall sound the signal prescribed in paragraph (d).

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- (k) In the Canadian waters of a roadstead, harbour, river, lake or inland waterway, a power-driven vessel that is leaving a dock or berth shall give a signal of one prolonged blast.
- (I) Notwithstanding this Rule and Rule 9, in the Canadian waters of a roadstead, harbour, river, lake or inland waterway, a vessel may use a bridge-to-bridge radiotelephone instead of the prescribed whistle signals to reach agreement in a meeting, crossing or overtaking situation. If agreement is not reached, then whistle signals shall be exchanged in a timely manner and shall prevail.

Rule 35 Sound Signals in Restricted Visibility--International

In or near an area of restricted visibility, whether by day or night, the signals prescribed in this Rule shall be used as follows:

- (a) A power-driven vessel making way through the water shall sound at intervals of not more than 2 minutes one prolonged blast.
- (b) A power-driven vessel underway but stopped and making no way through the water shall sound at intervals of not more than 2 minutes two prolonged blasts in succession with an interval of about 2 seconds between them.
- (c) A vessel not under command, a vessel restricted in her ability to maneuver, a vessel constrained by her draught, a sailing vessel, a vessel engaged in fishing and a vessel engaged in towing or pushing another vessel shall, instead of the signals prescribed in paragraphs (a) or (b) of this Rule, sound at intervals of not more than 2 minutes three blasts in succession, namely one prolonged followed by two short blasts.
- (d) A vessel engaged in fishing, when at anchor, and a vessel restricted in her ability to maneuver when carrying out her work at anchor, shall instead of the signals prescribed in paragraph (g) of this Rule sound the signal prescribed in paragraph (c) of this Rule.
- (e) A vessel towed or if more than one vessel is towed the last vessel of the tow, if manned, shall at intervals of not more than 2 minutes sound four blasts in succession, namely one prolonged followed by

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three short blasts. When practicable, this signal shall be made immediately after the signal made by the towing vessel.

- (f) When a pushing vessel and a vessel being pushed ahead are rigidly connected in a composite unit they shall be regarded as a power-driven vessel and shall give the signals prescribed in paragraphs (a) or (b) of this Rule.
- (g) A vessel at anchor shall at intervals of not more than one minute ring the bell rapidly for about 5 seconds. In a vessel of 100 metres or more in length the bell shall be sounded in the forepart of the vessel and immediately after the ringing of the bell the gong shall be sounded rapidly for about 5 seconds in the after part of the vessel. A vessel at anchor may in addition sound three blasts in succession, namely one short, one prolonged and one short blast, to give warning of her position and of the possibility of collision to an approaching vessel.
- (h) A vessel aground shall give the bell signal and if required the gong signal prescribed in paragraph (g) of this Rule and shall, in addition, give three separate and distinct strokes on the bell immediately before and after the rapid ringing of the bell. A vessel aground may in addition sound an appropriate whistle signal.
- (i) A vessel of less than 12 metres in length shall not be obliged to give the above-mentioned signals but, if she does not, shall make some other efficient sound signal at intervals of not more than 2 minutes.
- (j) A pilot vessel when engaged on pilotage duty may in addition to the signals prescribed in paragraphs (a), (b) or (g) of this Rule sound an identity signal consisting of four short blasts.

Sound Signals in Restricted Visibility--Canadian Modification

- (k) Notwithstanding paragraph (i), in the Canadian waters of a roadstead, harbour, river, lake or inland waterway, a vessel that is
 - (i) less than 12 metres in length,
 - (ii) built or converted for the purpose of pushing or pulling any floating object, and

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(iii) not located within a recognized mooring, storage or booming area

shall sound the signals prescribed for a vessel of 12 metres or more in length.

Rule 36 Signals to Attract Attention

If necessary to attract the attention of another vessel any vessel may make light or sound signals that cannot be mistaken for any signal authorized elsewhere in these Rules, or may direct the beam of her searchlight in the direction of the danger, in such a way as not to embarrass any vessel. Any light to attract the attention of another vessel shall be such that it cannot be mistaken for any aid to navigation. For the purpose of this Rule the use of high intensity intermittent or revolving lights, such as strobe lights, shall be avoided.

Rule 37 Distress Signals

When a vessel is in distress and requires assistance she shall use or exhibit the signals described in Annex IV.

PART E--EXEMPTIONS Rule 38 Exemptions--International

Any vessel (or class of vessels) provided that she complies with the requirements of the International Regulations for Preventing Collisions at Sea, 1960, the keel of which is laid or which is at a corresponding stage of construction before the entry into force of these Regulations is exempted from compliance therewith as follows:

- (a) The installation of lights with ranges prescribed in Rule 22, until four years after the date of entry into force of these Regulations.
- (b) The installation of lights with colour specifications as prescribed in section 7 of Annex I to these Regulations, until four years after the date of entry into force of these Regulations.
- (c) The repositioning of lights as a result of conversion from Imperial to metric units and rounding off measurement figures, permanent exemption.

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- (d) (i) The repositioning of masthead lights on vessels of less than 150 metres in length, resulting from the prescriptions of section 3(a) of Annex I, permanent exemption.
 - (ii) The repositioning of masthead lights on vessels of 150 metres or more in length, resulting from the prescriptions of section 3(a) of Annex I, until nine years after the date of entry into force of these Regulations.
- (e) The repositioning of masthead lights resulting from the prescriptions of section 2(b) of Annex I, until nine years after the date of entry into force of these Regulations.
- (f) The repositioning of sidelights resulting from the prescriptions of sections 2(g) and 3(b) of Annex I, until nine years after the date of entry into force of these Regulations.
- (g) The requirements for sound signal appliances prescribed in Annex III, until nine years after the date of entry into force of these Regulations.
- (h) The repositioning of all-round lights resulting from the prescription of section 9(b) of Annex I, permanent exemption.

Exemptions--Canadian Modifications

- (i) For the purposes of paragraphs (d), (e), (f) and (g), the nine years referred to therein shall be considered to commence on July 15, 1977.
- (j) Notwithstanding paragraph (i), the nine years referred to in paragraphs (d), (e), (f) and (g) shall be considered to commence on March 1, 1983 for vessels exclusively engaged in inland voyages.
- (k) In the case of a vessel not required to be inspected under the Canada Shipping Act, the lights are exempted from compliance with these Regulations if they were,
 - (i) before July 15, 1981, where the vessel is 20 metres or more in length, or
 - (ii) before June 1, 1984, where the vessel is less than 20 metres in length,

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constructed and installed in accordance with the Collision Regulations, as those Regulations read on July 31, 1974, or the Small Vessel Regulations, as those Regulations read on May 31, 1984.

PART F--ADDITIONAL CANADIAN PROVISIONS Rule 39 Special Signals for Dangerous Goods

In the Canadian waters of a roadstead, harbour, river, lake or inland waterway, a vessel that is taking in, discharging or carrying dangerous goods shall,

- (a) when not underway, exhibit where it can best be seen, an all-round red light or the International Code flag "B"; and
- (b) when underway, exhibit where it can best be seen, the International Code flag "B" but not an all-round red light.

Rule 40 Radar Reflectors

- (a) Subject to paragraph (b), a vessel that is less than 20 metres in length or is constructed primarily of non-metallic materials shall be equipped with a passive radar reflector.
- (b) Paragraph (a) does not apply where
 - (i) a vessel operates in limited traffic conditions, daylight, and favorable environmental conditions and where compliance is not essential for the safety of the vessel, or
 - (ii) the small size of the vessel or its operation away from radar navigation makes compliance impracticable.
- (c) The radar reflector prescribed in paragraph (a) shall,
 - (i) be capable of performance through 360 degrees of azimuth and responsive to a radar frequency of 9.3 GHz (corresponding wave length 3.2 centimetres),
 - (ii) have an equivalent echoing area of 10 square metres measured perpendicularly to the main radar lobes,
 - (iii) be mounted or suspended higher than the superstructures and, if practicable, at a height of not less than 4 metres above the water.
 - (iv) be positioned and painted so as not to be visually prominent,

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- (v) be capable of maintaining its performance under the conditions of sea states, vibration, humidity and change of temperature likely to be experienced in the marine environment, and
- (vi) be clearly marked so as to indicate any preferred orientation of mounting.
- (d) The azimuthal polar diagram of the radar reflector prescribed in paragraph (a) shall have a response not less than minus 6 dB with reference to the maxima of the main radar lobes
 - (i) over a total angle of 240 degrees, and
 - (ii) within any arc of more than 10 degrees.

Rule 41 Transponders

- (a) No vessel shall be fitted with a transponder that can transmit radar responder signals or radar beacon signals in the 3 or 10 centimetres marine radar bands unless the use of the transponder is authorized in writing by the Chairman.
- (b) The Chairman may authorize the use of a transponder referred to in paragraph (a) if he is satisfied that the transponder will be used in a manner that will not interfere with or degrade the use of radar in navigation.
- (c) An authorization referred to in paragraph (a) may contain such conditions as the Chairman considers necessary to ensure that the transponder will be used as described in paragraph (b).
- (d) No person shall operate a transponder on a vessel except in accordance with the conditions, if any, contained in the authorization prescribed in paragraph (a).

Rule 42 Additional Requirements for Exploration or Exploitation Vessels

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- (a) An exploration or exploitation vessel shall display identification panels bearing the name, identification letters or numerals of the vessel so that at least one panel is visible in any direction.
- (b) The name, identification letters or numerals referred to in paragraph (a) shall be
 - (i) black.
 - (ii) not less than 1 metre in height,
 - (iii) displayed on a yellow background, and
 - (iv) easily visible in daylight and at night by the use of illumination or retro-reflecting material.
- (c) Subject to paragraph (h), an exploration or exploitation vessel, when stationary and engaged in drilling or production operations, shall, in lieu of the lights or shapes required by these Rules, exhibit where it can best be seen from any direction a white light or a series of white lights located at an equal height above the water and operating in unison, which light or lights shall
 - (i) flash the Morse letter "U" at intervals of not more than 15 seconds.
 - (ii) be installed at a height above the water of not less than 6 metres and not more than 30 metres so that at least one light shall remain visible to within 15 metres of the vessel,
 - (iii) be visible all round the horizon at a nominal range of 15 miles,
 - (iv) be powered by a reliable power source,
 - (v) be equipped with an auxiliary power source, and
 - (vi) be exhibited from 15 minutes before sunset until sunrise and at all times when the visibility in any direction is 2 miles or less.
- (d) The horizontal and vertical extremities of an exploration or exploitation vessel that is stationary and engaged in drilling or production operations shall be adequately marked in compliance with the requirements set out in Transport Canada Standards Obstruction Markings (2nd ed.), 1987, TP 382, as amended from time to time.
- (e) An exploration or exploitation vessel, when stationary and engaged in drilling or production operations, shall be equipped with a sound-signaling appliance that
 - (i) is powered by a reliable power source,
 - (ii) is provided with an auxiliary power source,
 - (iii) when operating, emits a rhythmic blast corresponding to the Morse letter "U" every 30 seconds,

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- (iv) has its maximum intensity at a frequency between 100 and 1 000 Hertz.
- (v) has a usual range of at least 2 miles,
- (vi) is installed at a height above the water of not less than 6 metres and not more than 30 metres, and
- (vii) is so placed that the sound emitted is audible, when there is no wind, throughout the required range in all directions in a horizontal plane from the vessel.
- (f) An exploration or exploitation vessel, when stationary and engaged in drilling or production operations, shall, whenever the visibility in any direction is 2 miles or less, operate the sound-signaling appliance described in paragraph (e) in lieu of the sound signal described in Rule 35.
- (g) Every exploration or exploitation vessel shall comply with the relevant technical requirements contained in the Recommendations for the marking of offshore structures, November 1984, published by the International Association of Lighthouse Authorities (IALA), as amended from time to time, and the nominal range of lights shall be computed in accordance with Appendix II of Recommendation for the Notation of Luminous Intensity and Range of Lights, 1967, published by the International Association of Lighthouse Authorities (IALA), as amended from time to time.
- (h) In the Canadian waters of the Great Lakes Basin, the white light or series of white lights exhibited by an exploration or exploitation vessel when stationary and engaged in drilling or production operations shall have a range of visibility of between 8 and 15 miles.

Rule 43 Safety Zones Around Exploration or Exploitation Vessels

(a) For the purpose of this Rule, with respect to an exploration or exploitation vessel that is in position for the purpose of exploring or exploiting the non-living natural resources of the sea bed, a safety zone is the area that extends from the outer extremities of the exploration or exploitation vessel to the greater of

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- (i) 500 metres in all directions, and
- (ii) 50 metres beyond the boundaries of the anchor pattern of the vessel.
- (b) The Chairman may establish a safety zone greater or smaller than the safety zone referred to in paragraph (a), where such a zone is reasonably related to the nature and function of the exploration or exploitation vessel.
- (c) No vessel shall navigate within a safety zone.
- (d) Paragraph (c) does not apply to a vessel that
 - (i) is in distress,
 - (ii) is attempting to save life or provide assistance to a vessel in distress.
 - (iii) is operated by or on behalf of the state having jurisdiction over the exploration or exploitation operations, or
 - (iv) has received permission from the person in charge of the exploration or exploitation vessel to enter the safety zone around that vessel.
- (e) All vessels shall comply with any relevant instruction or direction with respect to a safety zone contained in a Notice to Mariners or Notice to Shipping.

Rule 44 Ocean Data Acquisition Systems (ODAS)

- (a) Every Canadian ODAS shall clearly display its identification number on an exterior surface where it can be clearly seen and, if practicable, shall display the name and address of the owner of the ODAS.
- (b) Subject to paragraph (f), every ODAS shall be constructed or fitted with a passive radar reflector that has a radar response at least equivalent to a radar reflector required by Rule 40.
- (c) Every ODAS that is designed to operate while floating with part of its structure extending above the water shall
 - (i) be coloured yellow,
 - (ii) have a shape that cannot be confused with the shape of a navigational mark, and

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- (iii) where technically practicable,
- (a) have a topmark consisting of a yellow "X" shape,
- (b) exhibit a yellow light visible at a minimum range of five miles that gives a group of five flashes every 20 seconds, and
- (c) be equipped with an appliance that emits a sound signal at intervals of not more than two minutes, which sound signal cannot be confused with any other signal prescribed by these Rules or with the sound signal of any aid to navigation in the vicinity of the ODAS.
- (d) Subject to paragraph (f), every ODAS designed to operate under water, other than an ODAS referred to in paragraph (e), shall
 - (i) be escorted by a surface vessel that gives warning of the presence of the ODAS in accordance with Rule 27, or
 - (ii) have tethered to it a surface float that is marked, provides the radar response, is lighted and sounds the signals specified in paragraph (a) to (c).
- (e) Every ODAS designed to operate when resting on the bottom of sea, lake or river with part of its structure extending above the water shall be marked, with exhibit lights and shapes, and sound signals used in the same manner as an exploration or exploitation vessel.
- (f) Paragraphs (b) and (d) do not apply to an ODAS where
 - (i) the Chairman has determined that the ODAS does not constitute a potential danger to navigation by reason of
 - (A) it size, material, construction, area or method of operations,
 - (B) the nature and condition of the waters in the area of operation of the ODAS, and
 - (C) the use that is or might reasonably be expected to be made of those waters, and
 - (ii) the Chairman has given the owner of the ODAS notice in writing of that determination."

Rule 45 Blue Flashing Light

(a) For the purposes of this Rule, "government ship" means a ship or vessel that is owned by and in the service of Her Majesty in right of Canada or of a province and any ship that is owned or operated by a

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federal, provincial, harbour, river, county or municipal police force. (navire d'État)

- (b) Any government ship may exhibit as an identification signal a blue flashing light where it
 - (i) 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
 - (ii) is engaged in law enforcement duties in Canadian waters.

Rule 46 Alternate System of Navigation Lights

- (a) For the purposes of this Rule, "alternate system of navigation lights" means a system that includes masthead lights, sidelights, a sternlight and anchor lights. (système de feux de navigation de relais)
- (b) Subject to paragraph (d), every ship built on or after January 1, 1991 that is required to be inspected under the Act shall be fitted with an alternate system of navigation lights.
- (c) Subject to paragraph (d), every ship built before January 1, 1991 that is required to be inspected under the Act shall, before January 1, 1996.
 - (i) if it is of 500 tons gross tonnage or more, be fitted with an alternate system of navigation lights, or
 - (ii) if it is of less than 500 tons gross tonnage, be fitted with or carry on board an alternate system of navigation lights.
- (d) Paragraph (b) and subparagraph (c)(ii) do not apply to a vessel of less than 15 metres in length.
- (d.1) For a ship referred to in paragraph (b) or subparagraph (c)(i), the alternate system of navigation lights shall be supplied by the main source of electric power of the ship and one other source of electric power with which the ship is required to be supplied by section 15 of Annex I.
- (e) For a ship referred to in subparagraph (c)(ii), the alternate system of navigation lights shall
 - (i) be supplied by a source of electrical power with which the ship is required to be supplied by section 15 of Annex I, other than the main source of power of the ship, or

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- (ii) subject to paragraph (f), consist of non-electric lights.
- (f) Non-electric lights shall not be used as alternate lights on
- (i) a ship or barge whose cargo has volatile or explosive properties that could endanger the ship or barge and its crew, or
- (ii) a ship engaged in towing or pushing a ship or barge whose cargo has volatile or explosive properties that could endanger the ships or barge and their respective crews.

ANNEX I POSITIONING AND TECHNICAL DETAILS OF LIGHTS AND SHAPES

1. Definition--International

(a) The term "height above the hull" means height above the uppermost continuous deck. This height shall be measured from the position vertically beneath the location of the light.

Definition--Canadian Modification

- (b) The term "practical cut-off" means the point on an arc around a source of light at which the intensity of the light is reduced as follows:
 - (i) for vessels of less than 20 metres in length, where the intensity is reduced to 67 per cent of the minimum required intensity within 3 or 5 degrees as appropriate, outside the horizontal sectors referred to in section 9 of this Annex and described in Rule 21, practical cut-off occurs at the point at which the intensity is reduced to 10 per cent of the minimum required intensity within 20 degrees outside the horizontal sectors referred to in section 9 of this Annex and described in Rule 21,
 - (ii) for vessels of 20 metres or more in length, practical cut-off occurs at the point at which the intensity is reduced to 12.5 per cent of the minimum required intensity within 3 or 5 degrees, as appropriate, outside the horizontal sectors referred to in section 9 of this Annex and described in Rule 21.

2. Vertical positioning and spacing of lights--International

- (a) On a power-driven vessel of 20 metres or more in length the masthead lights shall be placed as follows:
 - (i) the forward masthead light, or if only one masthead light is carried, then that light, at a height above the hull of not less than 6 metres, and, if the breadth of the vessel exceeds 6 metres, then at a height above the hull not less than such breadth, so however

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that the light need not be placed at a greater height above the hull than 12 metres,

- (ii) when two masthead lights are carried the after one shall be at least 4.5 metres vertically higher than the forward one.
- (b) The vertical separation of masthead lights of power-driven vessels shall be such that in all normal conditions of trim the after light will be seen over and separate from the forward light at a distance of 1 000 metres from the stem when viewed from sea level.
- (c) The masthead light of a power-driven vessel of 12 metres but less than 20 metres in length shall be placed at a height above the gunwale of not less than 2.5 metres.
- (d) A power-driven vessel of less than 12 metres in length may carry the uppermost light at a height of less than 2.5 metres above the gunwale.
- (d.1) Where a masthead light is carried in addition to sidelights and a sternlight or where the all-round light described in subparagraph (c)(i) of Rule 23 is carried in addition to sidelights, the masthead light or the all-round light shall be carried at least 1 metre higher than the sidelights.
- (e) One of the two or three masthead lights prescribed for a powerdriven vessel when engaged in towing or pushing another vessel shall be placed in the same position as either the forward masthead light or the after masthead light, provided that, if carried on the aftermast, the lowest after masthead light shall be at least 4.5 metres vertically higher than the forward masthead light.
- (f) (i) The masthead light or lights prescribed in Rule 23(a) shall be so placed as to be above and clear of all other lights and obstructions except as described in subparagraph (ii),
 - (ii) When it is impracticable to carry the all-round lights prescribed by Rule 27(b)(i) or Rule 28 below the masthead lights, they may be carried above the after masthead light(s) or vertically in between the forward masthead light(s) and after masthead light(s), provided that in the latter case the requirement of section 3(c) of this Annex shall be complied with.
- (g) The sidelights of a power-driven vessel shall be placed at a height above the hull not greater than three-quarters of that of the forward

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masthead light. They shall not be so low as to be interfered with by deck lights.

- (h) The sidelights, if in a combined lantern and carried on a powerdriven vessel of less than 20 metres in length, shall be placed not less than 1 metre below the masthead light.
- (i) When the Rules prescribe two or three lights to be carried in a vertical line, they shall be spaced as follows:
 - (i) on a vessel of 20 metres in length or more, such lights shall be spaced not less than 2 metres apart, and the lowest of these lights shall, except where a towing light is required, be placed at a height of not less than 4 metres above the hull,
 - (ii) on a vessel of less than 20 metres in length, the lights shall be spaced not less than 1 metre apart and the lowest of the lights shall, except where a towing light is required, be placed at a height of not less than 2 metres above the gunwale,
 - (iii) when three lights are carried they shall be equally spaced.
- (j) The lower of the two all-round lights prescribed for a vessel when engaged in fishing shall be at a height above the sidelights not less than twice the distance between the two vertical lights.
- (k) The forward anchor light prescribed in Rule 30(a)(i), when two are carried, shall not be less than 4.5 metres above the after one. On a vessel of 50 metres or more in length this forward anchor light shall be placed at a height of not less than 6 metres above the hull.

Vertical Positioning and Spacing of Lights--Canadian Modifications

- (I) Notwithstanding paragraph (a), in the waters of the Great Lakes Basin, on a power-driven vessel of 20 metres or more in length the masthead lights may be placed as follows:
 - (i) the forward masthead light, or if only one masthead light is carried, then that light, at a height above the hull of not less than 5 metres, and, if the breadth of the vessel exceeds 5 metres, then at a height above the hull of not less than such breadth, but the light need not be placed at a greater height above the hull than 8 metres,
 - (ii) where two masthead lights are carried, the after one shall be at least 2 metres vertically higher than the forward one.

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- (m) Notwithstanding paragraph (d), in the Canadian waters of a roadstead, harbour, river, lake or inland waterway, the masthead light or the all-round white light referred to in Rule 23(c), for a power-driven vessel of less than 12 metres in length shall be carried at least 1 metre higher than the sidelights.
- (n) Notwithstanding paragraph (e), in the waters of the Great Lakes Basin, one of the two or three masthead lights prescribed for a power-driven vessel when engaged in towing or pushing another vessel shall be placed in the same position as the forward masthead light or the after masthead light, but where the light is carried on the aftermast the lowest after masthead light shall be at least 2 metres vertically higher than the forward masthead light.
- (o) Notwithstanding paragraph (g), in the waters of the Great Lakes Basin, the sidelights of a power-driven vessel may be placed at least 1 metre lower than the forward masthead light but shall not be so low as to be interfered with by deck lights.
- (p) Notwithstanding subparagraph (i)(i), in the waters of the Great Lakes Basin, where a vessel of 20 metres in length or more is required to carry two or three lights in a vertical line, these lights may be spaced not less than 1 metre apart, and the lowest of these lights shall, except where a towing light is required, be placed at a height of not less than 4 metres above the hull.
- (q) The all-round white lights prescribed for an inconspicuous, partly submerged vessel or object or a barge in Rules 24(g) and (k), respectively, shall be carried at the same height and shall be placed at a height of not less than 2 metres above the water.
- 3. Horizontal Positioning and Spacing of Lights--International
 - (a) When two masthead lights are prescribed for a power-driven vessel, the horizontal distance between them shall not be less than one-half of the length of the vessel but need not be more than 100 metres. The forward light shall be placed not more than one-quarter of the length of the vessel from the stem.

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- (b) On a power-driven vessel of 20 metres or more in length the sidelights shall not be placed in front of the forward masthead lights. They shall be placed at or near the side of the vessel.
- (c) When the lights prescribed in Rule 27(b)(i) or Rule 28 are placed vertically between the forward masthead light(s) and the after masthead light(s) these all-round lights shall be placed at a horizontal distance of not less than 2 metres from the fore and aft centreline of the vessel in the athwartship direction.
- (d) When only one masthead light is prescribed for a power-driven vessel, that light shall be exhibited forward of amidships, except that a vessel of less than 20 m in length need not exhibit that light forward of amidships but shall exhibit it as far forward as is practicable.

Horizontal Positioning and Spacing of Lights--Canadian Modification

- (e) Notwithstanding paragraph (a), in the waters of the Great Lakes Basin, where two masthead lights are prescribed for a power-driven vessel,
 - (i) the horizontal distance between them shall be not less than one-quarter the length of the vessel but need not be more than 50 m, and
 - (ii) the forward light shall be placed not more than one-half the length of the vessel away from the stem.
- 4. Details of location of direction-indicating lights for fishing vessels, dredgers and vessels engaged in underwater operations
 - (a) The light indicating the direction of the outlying gear from a vessel engaged in fishing as prescribed in Rule 26(c)(ii) shall be placed at a horizontal distance of not less than 2 metres and not more than 6 metres away from the two all-round red and white lights. This light shall be placed not higher than the all-round white light prescribed in Rule 26(c)(i) and not lower than the sidelights.
 - (b) The lights and shapes on a vessel engaged in dredging or underwater operations to indicate the obstructed side and/or the side on which it is safe to pass, as prescribed in Rule 27(d)(i) and (ii), shall be placed at the maximum practical horizontal distance, but in no case less than 2 metres, from the lights or shapes prescribed in Rule 27(b)(i) and (ii). In no case shall the upper of these lights or

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shapes be at a greater height than the lower of the three lights or shapes prescribed in Rule 27(b)(i) and (ii).

5. Screens for Sidelights--International

The sidelights of vessels of 20 metres or more in length shall be fitted with inboard screens painted matte black and shall meet the requirements of section 9 of this Annex. On vessels of less than 20 metres in length the sidelights, if necessary to meet the requirements of section 9 of this Annex, shall be fitted with inboard Matt black screens. With a combined lantern, using a single vertical filament and a very narrow division between the green and red sections, external screens need not be fitted.

5.1 Screens for Lights Other than Sidelights--Canadian Modification On power-driven vessels of less than 12 metres in length, constructed after July 31, 1983, the masthead light or the all-round light referred to in

Rule 23(c), shall be screened to prevent direct illumination of the vessel forward of the operator's position.

6. Shapes

- (a) Shapes shall be black and of the following sizes:
 - (i) a ball shall have a diameter of not less than 0.6 metre,
 - (ii) a cone shall have a base diameter of not less than 0.6 metre and a height equal to its diameter,
 - (iii) a cylinder shall have a diameter of at least 0.6 metre and a height of twice its diameter,
 - (iv) a diamond shape shall consist of two cones as defined in (ii) above having a common base.
- (b) The vertical distance between shapes shall be at least 1.5 metres.
- (c) In a vessel of less than 20 metres in length shapes of lesser dimensions but commensurate with the size of the vessel may be used and the distance apart may be correspondingly reduced.

7. Colour Specification of Lights - International

The chromaticity of all navigation lights shall conform to the following standards, which lie within the boundaries of the area of the diagram

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specified for each colour by the International Commission on Illumination (CIE).

The boundaries of the area for each colour are given by indicating the corner co-ordinates, which are as follows:

(i) White

x 0.525 0.525 0.452 0.310 0.310 0.443

y 0.382 0.440 0.440 0.348 0.283 0.382

(ii) Green

x 0.028 0.009 0.300 0.203

y 0.385 0.723 0.511 0.356

(iii) Red

x 0.680 0.660 0.735 0.721

y 0.320 0.320 0.265 0.259

(iv) Yellow

x 0.612 0.618 0.575 0.575

y 0.382 0.382 0.425 0.406

Colour Specification of Lights - Canadian Modification

(v) Restricted Blue

x 0.136 0.218 0.185 0.102

y 0.040 0.142 0.175 0.105

8. Intensity of lights

(a) The minimum luminous intensity of lights shall be calculated by using the formula:

$$I = 3.43 \times 106 \times T \times D2 \times K-D$$

where I is luminous intensity in candelas under service conditions,

T is threshold factor 2 X 10-7 lux,

D is range of visibility (luminous range) of the light in nautical miles,

K is atmospheric transmissivity.

For prescribed lights the value of K shall be 0.8, corresponding to a meteorological visibility of approximately 13 nautical miles.

(b) A selection of figures derived from the formula is given in the following table:

Range of visibility

(luminous range) of Luminous intensity of

light in nautical light in candelas for

miles K = 0.8

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DΙ

10.9

2 4.3

3 12

4 27

5 52

6 94

NOTE: The maximum luminous intensity of navigation lights should be limited to avoid undue glare. This shall not be achieved by a variable control of the luminous intensity.

9. Horizontal Sectors--International

- (a) (i) In the forward direction, sidelights as fitted on the vessel shall show the minimum required intensities. The intensities shall decrease to reach practical cut-off between 1 degree and 3 degrees outside the prescribed sectors.
 - (ii) For sternlights and masthead lights and at 22.5 degrees abaft the beam for sidelights, the minimum required intensities shall be maintained over the arc of the horizon up to 5 degrees within the limits of the sectors prescribed in Rule 21. From 5 degrees within the prescribed sectors the intensity may decrease by 50 per cent up to the prescribed limits; it shall decrease steadily to reach practical cut-off at not more than 5 degrees outside the prescribed sectors.
- (b) (i) All-round lights shall be so located as not to be obscured by masts, topmasts or structures within angular sectors of more than 6 degrees, except anchor lights prescribed in Rule 30, which need not be placed at an impracticable height above the hull.
 - (ii) If it is impracticable to comply with subparagraph (i) by exhibiting only one all-round light, two all-round lights shall be used suitably positioned or screened so that they appear, as far as practicable, as one light at a distance of one mile.

Horizontal Sectors--Canadian Modification

(c) Notwithstanding paragraph (b), in the waters of the Great Lakes Basin, the all-round white light or lights referred to in Rule 23(e) shall not be obscured.

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10. Vertical Sectors--International

- (a) The vertical sectors of electric lights as fitted, with the exception of lights on sailing vessels underway, shall be such that
 - (i) at least the required minimum intensity is maintained at all angles from 5 degrees above to 5 degrees below the horizontal,
 - (ii) at least 60 per cent of the required minimum intensity is maintained from 7.5 degrees above to 7.5 degrees below the horizontal.
- (b) In the case of sailing vessels underway, the vertical sectors of electric lights as fitted shall be such that
 - (i) at least the required minimum intensity is maintained at all angles from 5 degrees above to 5 degrees below the horizontal,
 - (ii) at least 50 per cent of the required minimum intensity is maintained from 25 degrees above to 25 degrees below the horizontal.
- (c) In the case of lights other than electric these specifications shall be met as closely as possible.

Vertical Sectors--Canadian Modification

(d) Notwithstanding paragraph (a), in the Canadian waters of a roadstead, harbour, river, lake or inland waterway, electric lights on unmanned barges need not comply with the vertical sector requirements but shall maintain the required minimum intensity on the horizontal.

11. Intensity of non-electric lights

Non-electric lights shall so far as practicable comply with the minimum intensities, as specified in the Table given in section 8 of this Annex.

12. Maneuvering Light--International

(a) Notwithstanding the provisions of paragraph 2(f) of this Annex the maneuvering light described in Rule 34(b) shall be placed in the same fore and aft vertical plane as the masthead light or lights and, where practicable, at a minimum height of 2 metres vertically above the forward masthead light, provided that it shall be carried not less

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than 2 metres vertically above or below the after masthead light. On a vessel where only one masthead light is carried the maneuvering light, if fitted, shall be carried where it can best be seen, not less than 2 metres vertically apart from the masthead light.

Maneuvering Light--Canadian Modification

(b) Notwithstanding paragraph (a), in the waters of the Great Lakes Basin, the maneuvering light referred to in Rule 34(h) shall be placed in the same fore and aft vertical plane as the masthead light or lights at not less than 1 metre vertically above or below the after masthead light and, where practicable, shall be placed at the minimum height of 1 metre vertically above the forward masthead light. On a vessel where only one masthead light is carried, the maneuvering light, if fitted, shall be carried where it can best be seen and shall be located not less than 1 metre vertically apart from the masthead light.

13. High Speed Craft

The masthead light of high speed craft with a length-to-breadth ratio of less than 3.0 may be placed at a height related to the breadth of the craft lower than that prescribed in subparagraph 2(a)(i) of this Annex, provided that the base angle of the isosceles triangles formed by the sidelights and the masthead light, when seen in end elevation, is not less than 27 degrees.

14. Approval-International

(a) The construction of lights and shapes and the installation of lights on board a vessel shall be to the satisfaction of the appropriate authority of the State whose flag the vessel is entitled to fly.

Approval-Canadian Modifications

(b) For the purpose of paragraph (a), the appropriate Canadian authority is the Chairman.

15. Electric Power Supply

Electric power supplied to any navigation lights shall be in compliance with the provisions of the Transport Canada Ship Safety Electrical Standards, 1987, TP 127, as amended from time to time.

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ANNEX II

ADDITIONAL SIGNALS FOR FISHING VESSELS FISHING IN CLOSE PROXIMITY--INTERNATIONAL

1. General

The lights mentioned herein shall, if exhibited in pursuance of Rule 26(d), be placed where they can best be seen. They shall be at least 0.9 metre apart but at a lower level than lights prescribed in Rule 26(b)(i) and (c)(i). The lights shall be visible all round the horizon at a distance of at least 1 mile but at a lesser distance than the lights prescribed by these Rules for fishing vessels.

2. Signals for trawlers

- (a) Vessels of 20 m or more in length when engaged in trawling, whether using demersal or pelagic gear, shall exhibit
 - (i) when shooting their nets: two white lights in a vertical line,
 - (ii) when hauling their nets: one white light over one red light in a vertical line.
 - (iii) when the net has come fast upon an obstruction: two red lights in a vertical line.
- (b) Each vessel of 20 m or more in length engaged in pair trawling shall exhibit
 - (i) by night, a searchlight directed forward and in the direction of the other vessel of the pair,
 - (ii) when shooting or hauling their nets or when their nets have come fast upon an obstruction, the lights prescribed in 2(a) above.
- (c) A vessel of less than 20 m in length engaged in trawling, whether using demersal or pelagic gear or engaged in pair trawling, may exhibit the lights prescribed in paragraph (a) or (b), as appropriate.

3. Signals for purse seiners

Vessels engaged in fishing with purse seine gear may exhibit two yellow lights in a vertical line. These lights shall flash alternately every second and with equal light and occultation duration. These lights may be exhibited only when the vessel is hampered by its fishing gear.

Additional Signals for Fishing Vessels Fishing in Close Proximity--Canadian Modifications

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4. Special visual signals

In Canadian waters and fishing zones, a vessel engaged in pair--trawling shall exhibit at the foremast the International Code flag "T" during the daylight hours.

5. Special sound signals

- (a) In Canadian waters and fishing zones, a vessel engaged in fishing as described in Rule 26(f) shall, in any condition of visibility, sound the following signals on her whistle:
 - (i) 4 blasts in succession, namely, 2 prolonged blasts followed by 2 short blasts when shooting a net or gear,
 - (ii) 3 blasts in succession, namely, 2 prolonged blasts followed by 1 short blast when hauling a net or gear, and
 - (iii) 4 blasts in succession, namely, 1 short blast followed by 2 prolonged blasts, followed by 1 short blast when a net or gear is fast to an obstruction.
- (b) When in or near an area of restricted visibility, the signals described in paragraph (a) shall be sounded 4 to 6 seconds after the sound signal prescribed in Rule 35(c).

ANNEX III TECHNICAL DETAILS OF SOUND SIGNAL APPLIANCES

1. Whistles--International

(a) Frequencies and range of audibility

The fundamental frequency of the signal shall lie within the range 70-700 Hz.

The range of audibility of the signal from a whistle shall be determined by those frequencies, which may include the fundamental and/or one or more higher frequencies, which lie within the range 180-700 Hz ("1 per cent) and which provide the sound pressure levels specified in paragraph 1(c) below.

(b) limits of fundamental frequencies

To ensure a wide variety of whistle characteristics, the fundamental frequency of a whistle shall be between the following limits:

- (i) 70-200 Hz, for a vessel 200 metres or more in length,
- (ii) 130-350 Hz, for a vessel 75 metres but less than 200 metres in length,
- (iii) 250-700 Hz, for a vessel less than 75 metres in length.

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(c) Sound signal intensity and range of audibility

A whistle fitted in a vessel shall provide, in the direction of maximum intensity of the whistle and at a distance of 1 metre from it, a sound pressure level in at least one 1/3rd-octave band within the range of frequencies 180-700 Hz ("1 per cent) of not less than the appropriate figure given in the table below.

1/3rd-octave band Length level at 1 metre Audibility of vessel in dB referred to range in in metres 2x10-5 N/m2 nautical miles

200 or more 143 2 75 but less than 200 138 1.5 20 but less than 75 130 1 Less than 20 120 0.5

The range of audibility in the table above is for information and is approximately the range at which a whistle may be heard on its forward axis with 90 per cent probability in conditions of still air on board a vessel having average background noise level at the listening posts (taken to be 68 dB in the octave band centered on 250 Hz and 63 dB in the octave band centered on 500 Hz).

In practice the range at which a whistle may be heard is extremely variable and depends critically on weather conditions; the values given can be regarded as typical but under conditions of strong wind or high ambient noise level at the listening post the range may be much reduced.

(d) Directional Properties

The sound pressure level of a directional whistle shall be not more than 4 dB below the prescribed sound pressure level on the axis at any direction in the horizontal plane within "45 degrees of the axis. The sound pressure level at any other direction in the horizontal plane shall be not more than 10 dB below the prescribed sound pressure level on the axis, so that the range in any direction will be at least half the range on the forward axis. The sound pressure level shall be measured in that 1/3rd-octave band which determines the audibility range.

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(e) Positioning of whistles

When a directional whistle is to be used as the only whistle on a vessel, it shall be installed with its maximum intensity directed straight ahead.

A whistle shall be placed as high as practicable on a vessel, in order to reduce interception of the emitted sound by obstructions and also to minimize hearing damage risk to personnel. The sound pressure level of the vessel's own signal at listening posts shall not exceed 110 dB (A) and so far as practicable should not exceed 100 dB (A).

(f) Fitting of more than one whistle

If whistles are fitted at a distance apart of more than 100 metres, it shall be so arranged that they are not sounded simultaneously.

(g) Combined whistle systems

If due to the presence of obstructions the sound field of a single whistle or of one of the whistles referred to in paragraph 1(f) above is likely to have a zone of greatly reduced signal level, it is recommended that a combined whistle system be fitted so as to overcome this reduction. For the purposes of the Rules a combined whistle system is to be regarded as a single whistle. The whistles of a combined system shall be located at a distance apart of not more than 100 metres and arranged to be sounded simultaneously. The frequency of any one whistle shall differ from those of the others by at least 10 Hz.

Whistles--Canadian Modifications

- (h) Notwithstanding paragraph (a), in the Canadian waters of a roadstead, harbour, river, lake or inland waterway, the upper limit of the frequency range referred to in that paragraph may be expanded to be within the range of 180-2 100 Hz ("1 per cent).
- (i) Notwithstanding paragraph (c), in the Canadian waters of a roadstead, harbour, river, lake or inland waterway, the whistle on a vessel of 12 metres or more in length but less than 20 metres in length may provide, in the direction of the forward axis of the whistle and at a distance of 1 metre from it, a sound pressure level in at least one 1/3rd-octave band of not less than the appropriate figure shown below within the frequency range of 250-2 100 Hz ("1 per cent):
 - (i) 250-450 Hz--120 dB
 - (ii) 450-800 Hz--115 dB

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(iii) 800-2 100 Hz--111 dB

(j) In the Canadian waters of a roadstead, harbour, river, lake or inland waterway, a power-driven vessel that is normally engaged in pushing ahead or towing alongside may, at any time, use a whistle whose characteristic falls within the limits prescribed in paragraph (b) for the longest normal length of the vessel and its tow.

2. Bell or gong

(a) Intensity of Signal

A bell or gong, or other device having similar sound characteristics shall produce a sound pressure level of not less than 110 dB at a distance of 1 metre from it.

(b) Construction

Bells and gongs shall be made of corrosion-resistant material and designed to give a clear tone. The diameter of the mouth of the bell shall be not less than 300 mm for vessels of 20 metres or more in length, and shall be not less than 200 mm for vessels of 12 metres or more but less than 20 metres in length. Where practicable, a power-driven bell striker is recommended to ensure constant force but manual operation shall be possible. The mass of the striker shall be not less than 3 per cent of the mass of the bell.

3. Approval--International

(a) The construction of sound signal appliances, their performance and their installation on board a vessel shall be to the satisfaction of the appropriate authority of the State whose flag the vessel is entitled to fly.

Approval--Canadian Modification

(b) For the purpose of paragraph (a), the appropriate Canadian authority is the Chairman.

ANNEX IV DISTRESS SIGNALS--INTERNATIONAL

- 1. The following signals, used or exhibited either together or separately, indicate distress and need of assistance:
 - (a) a gun or other explosive signal fired at intervals of about a minute;

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- (b) a continuous sounding with any fog-signaling apparatus;
- (c) rockets or shells, throwing red stars fired one at a time at short intervals;
- (d) a signal made by radiotelegraphy or by any other signaling method consisting of the group ...--... (SOS) in the Morse Code;
- (e) a signal sent by radiotelephony consisting of the spoken word "Mayday";
- (f) the International Code Signal of distress indicated by N.C.;
- (g) a signal consisting of a square flag having above or below it a ball or anything resembling a ball;
- (h) flames on the vessel (as from a burning tar barrel, oil barrel, etc.);
- (i) a rocket parachute flare or a hand flare showing a red light;
- (j) a smoke signal giving off orange-coloured smoke;
- (k) slowly and repeatedly raising and lowering arms outstretched to each side;
- (I) the radiotelegraph alarm signal;
- (m) the radiotelephone alarm signal;
- (n) signals transmitted by emergency position-indicating radio beacons;
- (o) approved signals transmitted by radio communication systems including survival craft transponders.
- 2. The use or exhibition of any of the foregoing signals except for the purpose of indicating distress and need of assistance and the use of other signals which may be confused with any of the above signals is prohibited.
- 3. Attention is drawn to the relevant sections of Transport Canada International Code of Signals, 1987, TP 2323, as amended from time to

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time, and Transport Canada Merchant Ship Search and Rescue Manual (CANMERSAR), 1986, TP 7085, as amended from time to time, and the following signals:

(a) a piece of orange canvas with either a black square and circle or other symbol appropriate for identification from the air; and (b) a dye marker.

Distress signals--Canadian Modifications

- 4. In Canadian waters or fishing zones, in addition to the signals described in section 1, the following signals may be used or exhibited either together or separately to indicate distress and need of assistance:
 - (a) a square shape or anything resembling a square shape; and
 - (b) a high intensity white light flashing at regular intervals of 50 to 70 times per minute.
- 5. Notwithstanding section 2 and paragraph 4(b), a North Cardinal Buoy may use a quick flashing white light flashing at regular intervals of 60 times per minute.

Established by the CONSOLIDATED REGULATIONS OF CANADA, 1978.

amended by

SOR/78-528 16 June, 1978 pursuant to sections 635 and 730 of the Canada Shipping Act

Section 17 of Schedule II; subsection 3(3) of Schedule V; and subsection 1(2) of Schedule VII.

SOR/79-238 6 March, 1979 pursuant to sections 635 and 670 of the Canada Shipping Act

The definition «ODAS» in the French version of section 2; Rule 1(b) of the French version of Schedule I; Rule 20(e) of the French version of Schedule I; paragraph 1(g) of the French version of Annex III to Schedule I; subsection 5(3) of Schedule II preceding paragraph (a); subsection 6(3) of Schedule II; subsection 6(4) of Schedule II preceding paragraph (a); section 10 of the French version of Schedule II preceding paragraph (a); section 10 of Schedule II by adding heading and section 10.1; section 15 of Schedule II by adding heading and section 15.1; the heading preceding section 19 of the French version of Schedule II; subsection 19(4) of the French version of Schedule II; section 20 of Schedule II by adding heading and section 20.1; subsection 21(1) of Schedule II; Items 1 to 5 of Part II of Schedule IV; Item 6 of Part II of Schedule IV by adding Item 6.1; Column I of Items 13 and 14 of Part II of

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Schedule IV; Item 27 of Part II of Schedule IV by adding Item 27.1; Items 30 to 32 of Part II of Schedule IV; Part III of Schedule IV by adding Item 5; Item 1 of Part IV of Schedule IV by adding Item 1.1; Item 1 of Part V of Schedule IV in column II; Item 4 of Part V of Schedule IV; Item 5 of Part V of Schedule IV in columns II and III; Item 6 of Part V of Schedule IV in columns II and III; Part VI of Schedule IV by adding Part VII.1; Schedule IV by adding Part VIII; the heading of the French version of Schedule V; subsection 1(1) of the French version of Schedule V; subsection 1(2) of Schedule V preceding paragraph (a); paragraph 1(2)(b) of the French version of Schedule V preceding subparagraph (i); the heading preceding section 2 of the French version of Schedule V; and paragraph 2(1)(c) of Schedule V.

SOR/80-742 12 September, 1980 pursuant to sections 635 and 730 of the Canada Shipping Act

Section 17 of Schedule II; paragraph 2(1)(c) of Schedule V; section 3 of Schedule V; and section 1 Schedule VII.

SOR/81-831 15 October, 1981 pursuant to sections 635 and 730 of the Canada Shipping Act, effective January 1, 1982 Schedule III.

SOR/83-202 25 February, 1983 pursuant to sections 443, 635 and 730 of the Canada Shipping Act, to revoke the Rules of the Road for the Great Lakes, C.R.C, c.1464, effective March 1, 1983 and to amend the Collision Regulations, effective March 1, 1983 in Lakes Ontario, Erie, Huron (including Georgian Bay), Michigan and Superior, their connecting and tributary waters and the Ottawa and St. Lawrence Rivers and their tributaries as far east as the lower exit of St. Lambert Lock and effective June 1, 1983 in all other waters to which these Regulations apply.

This amendment incorporates:

- (a) amendments to the Convention on the International Regulations for Preventing Collisions at Sea, 1972; and
- (b) Canadian modifications to the Convention.

SOR/85-397 25 April, 1985 pursuant to sections 443, 635 and 730 of the Canada Shipping Act

Rule 24(p) of Schedule I; Rule 34(i) of Schedule I; paragraph 12(b) of Annex I of Schedule I; the heading preceding paragraph 1(o) and paragraphs 1(o) and (p) of Annex IV of Schedule I are revoked; and Annex IV of Schedule I by adding heading and sections 4 and 5.

SOR/87-25 18 December, 1986 pursuant to sections 635 and 730 of the Canada Shipping Act

Rule 38(j) of Schedule I.

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SOR/88-10 12 December, 1987 pursuant to sections 635 and 730 of the Canada Shipping Act

Rule 21 of Schedule I by adding paragraph 21(h); Rule 22 of Schedule I by adding paragraph 22(f); Part F of Schedule I by adding the heading and Rule 45; the heading of section 7 of Annex I to Schedule I; and section 7 of Annex I to Schedule I by adding heading and paragraph (v). SOR/88-322 16 June, 1988 pursuant to sections 635 and 730 of the Canada Shipping Act

Paragraph 12(b) of Annex I of Schedule I.

PLEASE NOTE THAT THE CANADA SHIPPING ACT IS NOW CHAPTER S-9 OF THE REVISED STATUTES OF CANADA, 1985.

SOR/90-702 11 October, 1990 pursuant to sections 382, 562.1 and 562.11 of the Canada Shipping Act

The definition "exploration or exploitation vessel" in subsection 2(1); subsection 2(1) by adding the definitions "Act", "approved signal", and "proof of compliance"; subsection 3(2) is revoked; section 3 by adding the heading and sections 4 to 6: the reference to (Section 3) after the heading "Schedule I"; paragraph (e) of Rule 1 of Schedule 1; Rule 1 of Schedule I by adding paragraph (g); paragraph (h) of Rule 3 of Schedule I; paragraph (c) of Rule 6 of Schedule I; paragraph (e) of Rule 6 of Schedule I; Rule 8 of Schedule I by adding paragraph (f); paragraph (a) of Rule 10 of Schedule I; paragraph (c) of Rule 10 of Schedule I; paragraphs (m) and (n) of Rule 10 of Schedule I; paragraph (b) of Rule 15 of Schedule I; paragraph (h) of Rule 21 of Schedule I; paragraph (f) of Rule 22 of Schedule I; Rules 42 and 43 of Schedule I; paragraph (a) of Rule 44 of Schedule I; subparagraph c(vi) of Rule 44 of Schedule I; Rule 45 of Schedule I; Schedule I by adding Rule 46; paragraph 2(d) of Annex I of Schedule I; subparagraph 2(i)(ii) of Annex I of Schedule I; paragraph 10(a) of Annex I of Schedule I preceding subparagraph (i):

paragraph 10(b) of Annex I of Schedule I preceding subparagraph (i); paragraphs 13(b) and (c) of Annex I of Schedule I; Annex I of Schedule I by adding section 14; paragraph 3(b) of Annex III of Schedule I; section 1 of Annex IV of Schedule I by adding paragraph (o); section 3 of Annex IV of Schedule I; and Schedules II and III are revoked.

SOR/91-275 18 April 1991, pursuant to section 562.11 of the Canada Shipping Act

Paragraph (d) of Rule 10 of Schedule I; and paragraphs (g) and (h) of Rule 30 of Schedule I.

SOR/93-112 9 March, 1993 pursuant to section 562.11 of the Canada Shipping Act

Rules 45 and 46 of Schedule I and section 3 of Annex I of Schedule I by adding paragraphs (e) and (f).

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SOR/94-611 29 September, I994 pursuant to sections 562.11(1) of the Canada Shipping Act

Paragraph (b) and (c) of Rule 46 of Schedule 1; and paragraph (d) of Rule 46 of Schedule I.

SOR/96-145 12 March, 1996 pursuant to subsection 562.11(1) of the Canada Shipping Act

Subparagraph (b)(i) and (c)(i) of Rule 26 of Schedule I; paragraph (d) of Rule 26 of Schedule I; paragraph (c) of Rule 44 of Schedule I; paragraph (d.1) of Rule 46 of Schedule I; subparagraph (e)(i) of Rule 46 of Schedule I; the heading preceding paragraph 3(d) and paragraphs 3(d) to (f) of Annex I of Schedule I; paragraph 9(b) of Annex I of Schedule I is renumbered 9(b)(i) and subparagraph (ii) is added; sections 13 and 14 of Annex I of Schedule I; paragraph 2(a)of Annex II od Schedule I preceding subparagraph (i); paragraph 2(b)of Annex II of Schedule I preceding subparagraph (i); paragraph 2(b) of Annex II of Schedule I by adding paragraph (c); and paragraph 1(o) of Annex IV of Schedule I.

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CHARTS AND NAUTICAL PUBLICATIONS REGULATIONS

CANADA SHIPPING ACT ARCTIC WATERS POLLUTION PREVENTION ACT

Charts and Nautical Publications Regulations, 1995

REGULATIONS REQUIRING THE PRESENCE ON BOARD SHIPS OF APPROPRIATE

CHARTS, TIDE TABLES AND OTHER NAUTICAL DOCUMENTS OR PUBLICATIONS AND RESPECTING THEIR MAINTENANCE AND USE

Short Title

1. These Regulations may be cited as the Charts and Nautical Publications Regulations, 1995.

Interpretation

- 2. In these Regulations,
- "chart" means a nautical chart; (carte)
- "nautical mile" means the international nautical mile; (mille marin)
- "reference catalogue", in respect of an area to be navigated by a ship, means
 - (a) for waters under Canadian jurisdiction, the Catalogue of Nautical Charts and Related Publications, published by the Canadian Hydrographic Service, and
 - (b) for waters outside Canadian jurisdiction, the Catalogue of Admiralty Charts and Other Hydrographic Publications, published by the Government of the United Kingdom, or the Catalog of Charts and Publications, published by the Government of the United States of America; (catalogue de référence)
- "tons" means gross tons; (tonneaux)
- "waters under Canadian jurisdiction" means
 - (a) Canadian waters,
 - (b) fishing zones of Canada prescribed pursuant to subsection 4(2) of the Territorial Sea and Fishing Zones Act, and
 - (c) shipping safety control zones prescribed pursuant to section 11 of the Arctic Waters Pollution Prevention Act. (eaux de compétence canadienne)

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Appendix C – Charts and Nautical Publications Regulations (continued)

Application

3. These Regulations apply to Canadian ships in all waters and to all ships in waters under Canadian jurisdiction.

Carriage of Charts and Publications

- 4. (1) Subject to subsection (2), the master and owner of every ship shall have on board, in respect of each area in which the ship is to be navigated, the most recent editions of the charts, documents and publications that are required to be used under sections 5 and 6.
- (2) The master and owner of a ship of less than 100 tons are not required to have on board the charts, documents and publications referred to in subsection (1) if the person in charge of navigation has sufficient knowledge of the following information, such that safe and efficient navigation in the area where the ship is to be navigated is not compromised:
 - (a) the location and character of charted
 - (i) shipping routes,
 - (ii) lights, buoys and marks, and
 - (iii) navigational hazards; and
 - (b) the prevailing navigational conditions, taking into account such factors as tides, currents, ice and weather patterns.

Use of Charts

- 5. (1) Subject to subsection (2), the person in charge of the navigation of a ship shall use the most recent edition of a chart that
 - (a) is published by the government of a country;
 - (b) applies to the immediate area in which the ship is being navigated;
 - (c) is, for that area,
 - (i) the largest scale chart according to the reference catalogue, or
 - (ii) of a scale that is at least 75 per cent of the scale of the chart referred to in subparagraph (i) and is as complete, accurate, intelligible and up-to-date as that chart.
- (2) The person in charge of the navigation of a ship may use the most recent edition of a chart that is the second-largest scale chart for an area according to the reference catalogue where
 - (a) the scale of the chart is at least 1:400,000 (2.16 nautical miles to the centimetre); and
 - (b) the ship is

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- (i) more than five nautical miles from any charted feature or charted depth of water that represents a potential hazard to the ship, or
- (ii) within an area for which the largest scale chart, according to the reference catalogue, is primarily
 - (A) a chart intended for the use of pleasure craft, or
 - (B) a chart of an anchorage, a river or a harbour that the ship will not transit or enter.

Use of Documents and Publications

- 6. (1) Subject to subsection (3), the person in charge of the navigation of a ship in waters under Canadian jurisdiction shall use, in respect of each area to be navigated by the ship, the most recent edition of
 - (a) the reference catalogue;
 - (b) the annual edition of the Notices to Mariners, published by the Department of Transport;
 - (c) the following publications, namely,
 - (i) sailing directions, published by the Canadian Hydrographic Service.
 - (ii) tide and current tables, published by the Canadian Hydrographic Service,
 - (iii) lists of lights, buoys and fog signals, published by the Department of Transport, and
 - (iv) where the ship is required to be fitted with radio equipment pursuant to any Act of Parliament or of a foreign jurisdiction, the Radio Aids to Marine Navigation, published by the Department of Transport; and
 - (d) the documents and publications listed in the schedule.
- (2) Subject to subsection (3), the person in charge of the navigation of a Canadian ship in waters outside Canadian jurisdiction shall use, in respect of each area to be navigated by the ship, the most recent edition of
 - (a) the reference catalogue;
 - (b) the annual edition of the Notices to Mariners, published by the Department of Transport;
 - (c) the following publications referred to in the reference catalogue, namely,
 - (i) sailing directions,
 - (ii) tide and current tables,
 - (iii) lists of lights, and

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- (iv) where the ship is required to be fitted with radio equipment pursuant to an Act of Parliament, the list of radio aids to navigation; and
- (d) the documents and publications listed in the schedule.
- (3) The documents and publications referred to in paragraphs (1)(c) and (d) and (2)(c) and (d) may be replaced by similar documents and publications issued by the government of another country, if the information contained in them that is necessary for the safe navigation of a ship in the area in which the ship is to be navigated is as complete, accurate, intelligible and up-to-date as the information contained in the documents and publications referred to in those provisions.

Maintenance of Charts, Documents and Publications

7. The master of a ship shall ensure that the charts, documents and publications required by these Regulations are, before being used for navigation, correct and up-to-date, based on information that is contained in the Notices to Mariners, Notices to Shipping or radio navigational warnings.

Exclusions

- 8. (1) No master of a ship shall be held liable for contravening these Regulations where, having been informed of the prospective area in which the ship will be navigating,
 - (a) the master is unable to obtain the charts, documents or publications, required by these Regulations in respect of that area, at any place at which the ship calls; or
 - (b) the charts, documents or publications required by these Regulations in respect of that area are unobtainable without endangering the ship, contravening applicable regulations or requiring the ship to make a substantial detour.
- (2) No master of a ship shall be held liable for contravening these Regulations where the circumstances of the voyage are such that it is impracticable to receive a Notice to Shipping or a radio navigational warning containing information with respect to the safe navigation of the ship.

SCHEDULE

(Section 6)
DOCUMENTS AND PUBLICATIONS

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- 1. Regulations 1, 7 and 8 of Chapter II, and Resolutions 1, 3 and 6, of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, published by the International Maritime Organization and reprinted as the Code of Nautical Procedures and Practices, 1985, by the Department of Transport.
- 2. Ice Navigation in Canadian Waters, published by the Department of Transport, where the ship is making a voyage during which ice may be encountered.
- 3. Table of Life-Saving Signals, published by the International Maritime Organization and reprinted by the Department of Transport, where the ship is making a foreign voyage, a home-trade voyage, Class I, II or III, or an inland voyage, Class I.
- 4. The Merchant Ship Search and Rescue Manual (MERSAR), published by the International Maritime Organization, where the ship is making a foreign voyage or a home-trade voyage, Class I or II.
- 5. Where the ship is required to be fitted with radio equipment and is making a foreign voyage or a home-trade voyage, Class I or II, the following publications, published by the International Maritime Organization and reprinted by the Department of Transport:
 - (a) the International Code of Signals; and
 - (b) the Standard Marine Navigational Vocabulary.

Established by the CONSOLIDATED REGULATIONS OF CANADA, 1978.

amended by SOR/79-585 10 August, 1979 pursuant to sections 400 and 730 of the Canada Shipping Act

Substitution of the word "catalogue" for the words "Information Bulletin" wherever the latter words occur in section 2, paragraph 5(1)(c), subsection 5(2) and paragraph 6(1)(b); and in the French version substitution of the words "Avis aux navigateurs" for the words "Avis aux marins" wherever the latter words occur in paragraphs 6(1)(c) and 14(1)(b).

SOR/79-731 11 October, 1979 pursuant to sections 400 and 730 of the Canada Shipping Act Section 2 by adding the definition "nautical mile"; subsection 5(2) following subparagraph (b)(ii); and subsection 13(2) following subparagraph (b)(ii).

SOR/85-1042 31 October, 1985 pursuant to sections 400 and 730 of the Canada Shipping Act Subparagraph 6(1)(a)(v); and subparagraph 14(1)(b)(ii).

SOR/95-149 21 March, 1995 pursuant to paragraph 562.1(1)(a) of the Canada Shipping Act and subparagraph 12(1) (a) (viii) of the Arctic

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Waters Pollution Prevention Act Appendix C – Charts and Nautical Publications Regulations (continued)

Revoked and replaced.

SOR/95-536 7 November, 1995 pursuant to paragraph 562.1(1)(a) of the Canada Shipping Act and subparagraph 12(1) (a) (viii) of the Arctic Waters Pollution Prevention Act Subsection 6(3).

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Appendix V	Ride-along Waiver Form	Specific Field
		Operations Manual

- 1. The Waiver Form must be **fully completed and signed**.
- 2. Specify the known hazards to which the non-worker or unregistered person may be exposed on the trip.
- 3. Be conscientious of literacy or communications barriers and ensure person understands the waiver.
- 4. Keep the waiver for a minimum of three years in a "known" central location where it can be easily retrieved.

WAIVER AND ACKNOWLEDGMENT OF RISK

WAIVER AND ACKNOWLEDGMENT OF RISK				
I,				
Known Hazards:	Date of Travel:			
☐ Traveling in open waters on ministry vessel(☐ Driving in ministry vehicle(s)☐ Visit at finfish aquaculture facility☐ Other - Specify:				
I,identified by ministry personnel are not to be public nature.	, also agree that by attend cly reported and are to be treated	ling as a guest, any issues as strictly confidential in		
Signing of this waiver also confirms that		has received		
from Branch personnel an orientation into the hazards	s of marine vessels operations.			
(Print Name)	(Signature)	Date		
Witness:				
(Print Name)	(Signature)	Date		

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Approved By:	Ministry of Agriculture, Food and Fisheries
	Resource Development and Sustainability Division