



Memorial University of Newfoundland

Boating Safety Manual

1st Edition
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Contents

Page			
1		<u>SCOPE AND APPLICATION</u>	
2		<u>INTRODUCTION</u>	
2	1	<u>Scope</u>	
2	1.1	Definition	
3	2	<u>Memorial University Diving and Boating Safety Control Board</u>	
3		2.1	Membership
3		2.2	Responsibility
3		2.3	Terms of Reference
3	3	<u>Boating Safety Officer</u>	
3		3.1	Responsibility
3		3.2	Responsibility and Duties
4		3.3	Authority
4	4	<u>Boating Course Instructors</u>	
4		4.1	Responsibility
4		4.2	Responsibility and Duties
5	5	<u>Organization and Responsibilities of Personnel</u>	
5		5.1	Project Level: Small Boating Project Directors
5		5.2	Operations Level: Boat Operator-in-Charge
5	6	<u>Boat Crew</u>	
5		6.1	Members of the Crew

5		6.2	Crew's Rights and Responsibilities
6		6.3	Emergency Deviation from Standards
6	7		<u>Authorization for Boat Operators</u>
6		7.1	Entry into the Program
7		7.2	Registration and Certification
7		7.3	Age
7		7.4	Policy
7		7.5	Purpose
7	8		<u>Required Safety Equipment</u>
7		8.1	Canoes, Ocean Kayaks, and Rowboats
7		8.2	Personal Safety Equipment
7		8.3	Boat Safety Equipment
7		8.4	Navigation Equipment
8		8.5	Distress Equipment
8	9		<u>Powered Boats Up to Six Metres in Length</u>
8		9.1	Personal Safety Equipment
8		9.2	Boat Safety Equipment
8		9.3	Navigational Equipment
8		9.4	Distress Equipment
8		9.5	Communications Equipment
8	10		<u>Powered Boats Over Six Metres and Up To Eight Metres in Length</u>
8		10.1	Boat Safety Equipment
9		10.2	Navigation Equipment

9		10.3	Distress Equipment
9		10.4	Communications Equipment
9	11		<u>Powered Boats Over Eight Metres and Up to Twelve Metres</u>
9		11.1	Personal Safety Equipment
9		11.2	Boat Safety Equipment
9		11.3	Navigation Equipment
10		11.4	Distress Equipment
10		11.5	Communications Equipment
10	12		<u>Powered Boats Over Twelve Metres and Up to Twenty Metres</u>
10		12.1	Personal Safety Equipment
10		12.2	Boat Safety Equipment
10		12.3	Navigation Equipment
10		12.4	Distress Equipment
11		12.5	Reboarding Device
11		12.6	Communications Equipment
11	13		<u>Special Training Required</u>
11		13.1	Special Equipment Requirements
11	14		<u>Diving and Boating Operations</u>
11		14.1	Classifications
12		14.2	Boat Operators Responsibility
12		14.3	Visual Indicators
13		14.4	Boating Operations
13		14.5	Diver Recall

14	15	<u>Outboard Motors</u>
15	16	<u>Portable Fuel Tanks</u>
15	17	<u>Boat Mooring</u>
15	17.1	Wharves
16	17.2	Beaches
16	17.3	Outcropping
16	17.4	Free Anchorage
16	18	<u>Accident Reporting</u>
16	18.1	Regulation Enforcement
17	18.2	Collision Regulations
17	18.3	The Criminal Code Contraventions Act

APPENDICES

19	Appendix	A	Terms of Reference
22	Appendix	B	Memorial University Boating Safety Administration
24	Appendix	C	Memorial University Boating Information Form
26	Appendix	D	Memorial University Project Form for Boating Operations
28	Appendix	E	Boating Safety Acknowledgment Form
30	Appendix	F	Memorial University Release and Waiver Form

33 General Information

34 References

Memorial University of Newfoundland
Boating Safety Manual
April 1, 2003

Scope and Application

This Boating Safety Manual is designed to provide Memorial University boat operators with standards and procedures for safe boating operations. This manual is a minimum standard. In the case of any omissions or conflict with Canadian Coast Guard and Transport Canada, these standards and regulations must prevail.

This Boating Safety Manual only applies to Memorial University's scientific operations, which includes diving and boating related training by University employees and students as part of their research, occupation or instruction. This Manual does not cover students or staff engaged in boating activities for non-university purposes.

This Boating Safety Manual also does not apply to any boating operations performed as part of a commercial boating contract with Memorial University. Such contracts shall provide for the requirements of the Canadian Coast Guard Regulations and the Newfoundland and Labrador Government's Department of Environment and Labour.

Disclaimer

Memorial University and its Board of Regents or appointees shall NOT be liable for any injury (fatal or otherwise), loss or damage sustained in small boating activities, either directly or indirectly, including injury, loss or damage suffered as a result of Memorial University's negligence.

Every boat operator shall engage in boating operations strictly voluntarily and shall assume all risks, consequences and potential liability for his/her own actions and the hazards inherent in boating related activities.

Memorial University of Newfoundland

Boating Safety Manual

Introduction

The purpose of this Boating Safety Manual is to set forth policy and standards for the organization and conduct of Memorial University's Boating Safety Program and to establish safety procedures in the University's boating operations.

The objectives of Memorial University's Boating Safety Program are:

- (a) To enhance health and safety in university boating operations by ensuring that all boat operators comply with all applicable regulations, standards and procedures;
- (b) To facilitate use of boating in scientific study and research; and
- (c) To encourage and promote reciprocity nationally and internationally in boating safety programs; and
- (d) To provide training to those wanting to operate boats under university auspices.

1 Scope

1.1 Definition

This manual applies to boat operators for Memorial University, the Marine Institute, Sir Wilfred Grenfell College falling under the following definition:

Boat Operator means any person, student, staff, faculty who have completed and received a certificate from a nationally recognized training agency allowing them to operate boats under university auspices. Any boating privileges sanctioned by Memorial University must first meet the requirements of Recreational Boating.

This manual does not apply to students or staff engaged in operations for non-university purposes nor to any boating operations performed as part of a commercial boating contract with Memorial University.

* Contract meaning, rental of a commercial or private boat with an operator/owner

2 Memorial University Diving and Boating Safety Control Committee

2.1 Membership

The membership of the Diving and Boating Safety Control Committee should consist of a small group that is knowledgeable about boating, boating safety and scientific research. The membership shall include the Diving and Boating Safety Officer and a reasonable number of representatives from university departments.

2.2 Responsibility

The Diving and Boating Safety Control Committee shall act as an advisory committee to the Diving and Boating Safety Officer in matters pertaining to scientific boating operations and boating safety. The committee shall meet at least once every three months and more often as required.

2.3 Terms of Reference

As outlined in the terms of reference in Appendix A attached, the Diving and Boating Safety Control Committee is responsible to do the following:

- (a) issue, reissue or revoke boating privileges;
- (b) review and approve boating projects; and
- (c) review boating practices and to exercise authority to restrict, prohibit, or suspend any boating operations, programs it considers unsafe.

3 Diving and Boating Safety Officer

Memorial University shall appoint a Diving and Boating Safety Officer to supervise and administer the university boating safety program.

3.1 Responsibility

The Diving and Boating Safety Officer shall report to the Diving and Boating Safety Control Committee.

3.2 Responsibilities and Duties

The Diving and Boating Safety Officer shall have experience in and be responsible for:

- (a) The safety of all boating operations;
- (b) The establishment and/or approval of boat operator training programs;

- (c) Providing advice on the suitability of new equipment to be used on university boats;
- (d) Knowledge of boating equipment, safety supplies prior to issuance of purchase orders;
- (e) The general surveillance of all boating projects and the recommendations to the Diving and Boating Safety Control Committee for changes in, and /or additions to, policy to promote boating safety.
- (f) The custody and audit of all boating project records including boating inventory;
- (g) Serving as member of the Diving and Boating Safety Control Committee;
- (h) Providing representation on boating to different government agencies and other institutions;

3.3 Authority

The Diving and Boating Safety Officer shall have authority to restrict, prohibit or suspend any unsafe boating operations, programs, projects or practices.

4 Boating Course Instructors

Instructors of canoe kayak or instructors of motorized boats for research purposes under university auspices are to register with the Office of Diving and Boating Safety before instructional classes begin.

4.1 Responsibility

It is the responsibility of each instructor to provide adequate protection and training to the students in their charge while teaching in accordance with the minimum standards laid down by their certifying agencies.

4.2 Responsibilities and Duties

The boating instructor shall have experience in and be responsible for:

- (a) The safety of all students in their charge;
- (b) That all equipment, boats, personal floatation devices and motors etc. are in good working condition prior to course commencement;
- (c) Notifying the Office of Diving and Boating Safety as to the location of courses the number of students enrolled and the names and qualifications of any assistant instructors;
- (d) Emergency response procedures in the event of an injury or accident;

5 Organization and Responsibilities of Personnel

Responsibility for health and safety on boating programs and projects shall be in accordance with the following organizational plan:

5.1 Project Level: Boating Project Directors

Directors of research or study projects or programs, including instructors of courses, field trips or like instructional components; department heads; and persons in charge of any scientific, research or educational undertaking, any of which utilize or involve boating; shall be responsible for ensuring that all individuals engaging in boating operations and projects are aware of and comply with this manual.

5.2 Operations Level: Boat Operator-in-Charge

5.2.1 Personnel in charge at this level shall be designated as Boating Project Director and shall have authority to restrict, prohibit or suspend boating operations under their charge. When such persons do not have the required boating knowledge and experience to perform the duties of Director, the qualified boat operator designated to be in charge shall be the Boating Project Director.

5.2.2 The Boating Project Director or a person appointed by the Boating Project Director shall be designated as the Boat Operator. The Boat Operator must ensure that an operational plan is constructed and has the responsibility for briefing the crew with respect to his/her intentions.

5.2.3 The Boat Operator must also ensure that all necessary equipment is on board and in good condition, and must be familiar with the standards, procedures, regulations that pertain to small boating operations.

5.2.4 The Boat Operator shall have the authority to restrict, prohibit or suspend any unsafe boating procedures, programs, projects or practices under his/her charge.

5.2.5 The Boat Operator must, before every boating operation, inform someone responsible as to their destination and approximate time of return.

6 Boat Crew

6.1 Members of the crew and support personnel selected or approved by the Boating Project Director or designate to be involved in a boating operation shall be considered members of the crew.

6.2 It shall be each crew member's right, responsibility, and duty to refuse to engage in boating support activities if he/she:

- (a) Feels unfit or inadequately trained or unprepared for the activity;

- (b) Judges that the conditions are unsafe; and or
- (c) Feels that engaging in the activity would violate the precepts of his/her training or the requirements set forth in this manual.

6.3 Emergency Deviation from the Standard

The boat operator may deviate from the requirements of this manual to the extent necessary to prevent or minimize a situation which is likely to cause death, injury or minor or major environmental damage. In such cases the boat operator must:

- (a) Notify the Boating Project Director and Diving and Boating Safety Officer as soon as possible after the onset of the emergency situation indicating the nature of the emergency and the extent of the deviation from the prescribed standards, and
- (b) Submit such information in writing as soon as possible thereafter.

7 Authorization for Boat Operators

No person shall operate a boat on any project or operation unless he/she holds a valid authorization issued by the Diving and Boating Safety Officer pursuant to the provisions of this manual or is authorized to engage in training prescribed herein.

7.1 Entry into the Program

The basic requirements necessary for all students and staff of Memorial University to operate boats under university auspices are.

- (a) To attend a basic boating safety course recognized by the Canadian Coast Guard through any of the following sanctioned providers:

Canadian Power and Sail Squadron	Canadian Yachting Association
Canadian Red Cross	International Sail & Power
Lifesaving Society	Drive a Boat Canada
Canadian Coast Guard	Memorial University/Marine Institute

- (a) To attend a one-week course designed for graduate students, researchers and faculty to address boating requirements for industry standards.

* *The basic recreation certificate is a prerequisite for advanced courses that are usually offered by the Marine Institute/Memorial University. Those wishing to operate boats on university projects are advised to take advantage of these programs.*

7.2 Registration and Certification

Prior to acceptance into the University Boating Safety Program and participating in any boating operation, all operators must register with the Diving and Boating Safety Officer by completing the boat operator's information form in Appendix C and must meet the following criteria:

7.3 Age

The applicant for training and certification shall normally be at least eighteen (18) years of age.

7.4 Policy

It is the policy of the Boating Safety Program to teach the fundamentals of boat operations to university students, faculty and staff in the safe and prudent manner in accordance with this manual.

7.5 Purpose

It is the purpose of the boating safety program to provide students, faculty and staff of Memorial University with the means of learning boating safety practices.

8 Required Safety Equipment

8.1 Canoes, Ocean Kayaks, and Rowboats

8.2 Personal safety Equipment

- (a) Personal flotation device of appropriate size for each person on board;
- (b) Buoyant heaving line of fifteen metres in length

8.3 Boat Safety Equipment

- (a) Manual propelling device or anchor with a fifteen metre line;
- (b) Bailer or manual water pump

8.4 Navigation Equipment

- (a) Sound signalling device;
- (b) Navigation lights or watertight flashlight (if operated at night or in times of poor visibility)

8.5 Distress Equipment

- (a) None required

9 Powered Boats up to Six Metres In Length

9.1 Personal Safety Equipment

- (a) A personal flotation device or lifejacket of appropriate size for each person on board;
- (b) Buoyant heaving line of fifteen metres in length

9.2 Boat Safety Equipment

- (a) A manual propelling device or anchor with fifteen metres of line;
- (b) Bailer or manual water pump
- (c) Boat hook
- (d) Sharp knife

9.3 Navigational Equipment

- (a) Sound signalling device
- (b) Navigation lights (if operated at night or in times of poor visibility)

9.4 Distress Equipment

- (a) Water tight flashlight or three flares (Type A, B or C)

9.5 Communications Equipment

- (a) A VHF radio and or a Cellular telephone

10 Powered Boats Over Six Metres and Up to Eight Metres in Length

- (a) A personal flotation device or lifejacket of appropriate size for each person board;
- (b) Buoyant heaving line with life buoy and fifteen metre buoyant line

10.1 Boat Safety Equipment

- (a) Manual propelling device or anchor with a fifteen metre line;
- (b) Bailer or manual pump;
- (c) One Class 5 BC fire extinguisher if power driven and one Class 5 BC fire extinguisher if equipped with fuel burning appliance;
- (d) A reboarding device if freeboard is greater than 0.5 metres;

- (e) Boat hook
- (f) Sharp knife

10.2 Navigation Equipment

- (a) Sound signalling device;
- (b) Navigation lights (if operated at night or in times of poor visibility)

10.3 Distress Equipment

- (a) Watertight flashlight;
- (b) Six flares (Type A, B or C)

10.4 Communications Equipment

- (a) A VHF radio and or a Cellular telephone

11 Powered Boats Over Eight Metres and up to Twelve Metres

11.1 Personal Safety Equipment

- (a) A personal flotation device or lifejacket of appropriate size for each person on board;
- (b) Buoyant heaving line;
- (c) Life buoy with fifteen metre buoyant line

11.2 Boat Safety Equipment

- (a) Anchor with a thirty-metre line;
- (b) Bailer;
- (c) Manual water pump;
- (d) One Class 5 BC fire extinguisher if power driven **AND** one Class 5 BC fire extinguisher if equipped with fuel burning appliance;
- (e) Reboarding device if freeboard is greater than 0.5 metres
- (f) Boat hook
- (g) Sharp knife

11.3 Navigation Equipment

- (a) Sound signalling device;
- (b) Navigation lights that satisfy Collision Regulations

11.4 Distress Equipment

- (a) Watertight flashlight;
- (b) Six flares (Type A, B, C or D) - maximum six Type D

11.5 Communications Equipment

- (c) A VHF radio and a Cellular telephone

12 Powered Boats Over Twelve Metres and Up to Twenty Metres

12.1 Personal Safety Equipment

- (a) Personal safety device or lifejacket of appropriate size for each person on board;
- (b) Buoyant heaving line;
- (c) Life buoy with fifteen metre buoyant line **AND** self-igniting light

12.2 Boat Safety Equipment

- (a) Anchor with fifty metre line;
- (b) Mechanical bilge pump;
- (c) One Class 10 BC fire extinguisher at each entrance to accommodation space **AND** one Class 10 BC fire extinguisher at entrance to engine room **AND** one Class BC fire extinguisher at entrance to each space with fuel burning appliance;
- (d) Axe;
- (e) Two buckets with minimum ten litre capacity
- (f) Boat hook
- (g) Sharp knife

12.3 Navigation Equipment

- (a) Two sound signalling appliances (bell or mechanical whistle);
- (b) Navigation lights that satisfy Collision Regulations

12.4 Distress Equipment

- (a) Watertight flashlight;
- (b) Twelve flares (Type A, B, C or D) - maximum six Type D

12.5 Reboarding Device

- (a) Boats more than 6 m with a freeboard higher than 0.5 m must carry a boarding ladder to help people from the water (unless the boat has a swim platform).

12.6 Communications Equipment

- (a) A VHF radio and a Cellular telephone

13 Special Communications Training

All university personnel or students operating a university boat of any size in open ocean or coastal waters must be knowledgeable or possess a certificate as a VHF Restricted Radio Operator.

13.1 Special Equipment Requirements and Training

All university boats, without exception, operating in open ocean conditions must comply with Canadian Coast Guard Regulations. Boats must carry communications for the area, such as VHF Radios, Cellular telephones, and a Global Positioning Systems (GPS) if the destination is of a considerable distance, to be able to give a location in the event of breakdown.

The operators of equipment that may pose a hazard to health and safety must have training in the operation of that equipment before they are allowed to conduct operations unsupervised. Special equipment will include but is not limited to: compressors, generators, blocks, pulleys, cables, winches.

14 Diving and Boating Operations

Understanding the role and responsibility of the boat operator when dealing with Scientific Divers.

14.1 Classifications

When operating boats, the operator must come under one of two classifications.

- (a) Surface safety attendant as specified by the Canadian Standards Association Competency Standard for Diving Operations Z275.4-97 and possess a recognized boat operator's proficiency certificate.
- (b) Must be a Scientific Diver with boating experience and training in accordance with this manual.

All operators must be experienced and knowledgeable in recognizing operational deficiencies and indicators associated with the regular routine of handling divers. Under 6.6.3 Performance

Standard for Diving Operations, CSA Z275.4-02, the operator is required to know boating operations. Diving operations for the boat operator require an acute sense for recognizing problems with the environment, the dive plan, and the way the operation is unfolding.

14.2 Boat Operator's Responsibility

- (a) The operator must at all times devote his /her undivided attention to operating the boat.
- (b) It is the responsibility of the operator to terminate diving operations if environmental conditions turn unfavourable or the dive plan in progress has changed.
- (c) It is the responsibility of the operator to put in place contingency plans in the event of an emergency.
- (d) The operator must have up-to-date certification in First Aid, CPR and O₂ provider.
- (e) The operator does not necessarily have to be the dive supervisor.
- (f) The operator must display a dive flag when diving operations are being conducted.
- (g) The operator must suspend all diving operations if and when any mechanical problems or deficiencies exist with the running of the boat.
- (h) When diving in inlets, canals, or harbours, the boat operator must inform and be in continuous contact with harbour authorities (traffic) or Coast Guard.

14.3 Visual Indicators

- (a) By keeping in visual contact with the diver's bubbles or identification markers, the operator can determine a safe and reasonable distance to monitor their activities.
- (b) The distance of the bubbles from two divers can indicate whether they have become separated and a recall notification should be given.
- (c) An excess of bubble formation in one location or separate locations can indicate regulator malfunctions due to freezing conditions or the return of the divers to the surface. The operator must stand off from the site but be able to render assistance at a moment's notice.
- (d) Winds and sea conditions can change on short notice. Winds can change direction and speed, creating conditions unfavourable for the operator with a risk also to the divers upon reaching the surface and trying to reboard the boat. Such conditions require an immediate response from the operator to retrieve the divers and seek immediate shelter.
- (e) Operators must take precautions when shore line surf poses a threat to the boat. The operator must stand off and avoid contact with the shoreline or being caught in surf or tide. The operator does not venture to the shoreline to collect the divers

except in an emergency. The divers instead swim out to the boat operator.

14.4 Boating Operations

- (a) When approaching divers in the water, the operator should approach up wind when possible. If there is a tide, the approach should be into the tide at a slow speed and disengage the motor when contact is made with the divers. At no time does the operator reverse engines when overshooting, but continues on and circles for another try.
- (b) When at anchor, the operator should have a standby floating line attached to the stern of the boat of not less than 15 metres in length or trailing behind the boat when surface tides or moderate winds exist. This will ensure that if the divers are swept beyond the boat, they can use the line to secure their return.
- (c) Dive flags are not an insurance that other boats will stay clear during diving operations. If the boat operator suspects that another boat is encroaching on the dive location, the operator should proceed as closely as possible to the divers and indicate by using hand signals to approaching boats to stay clear.
- (d) When operating boats such as a 12' Zodiac, it is important that weight is distributed evenly along its length and that the operator creates a low centre of gravity. This situation exists when there is only one person on board. There should always be weight situated forward whether it is an anchor or fuel tank to counteract the effects of strong wind and wave action. Even though Zodiacs are very stable, they have been known to capsize.
- (e) Outboard motors should not be idling for long periods of time; possible fouling of spark plugs could occur.
- (f) When in the vicinity of ice cover, ice flows and icebergs, the boat operator should proceed with extreme caution, especially if the boat is constructed of anything but steel.

14.5 Diver Recall

There will be times when the boat operator is required to recall the divers. It could be because of changing weather and sea conditions to a change in the dive plan, or the divers obviously moving in a direction that the dive plan did not allow for (going in the wrong direction). Recall procedures may be in many forms especially when sound travels through water four times faster than in air.

Outboard motors transmit sound through water very well, thereby allowing communications to the diver. Outboard motors usually transmit a steady rhythm when operated normally, but when the operator increases and decreases the rhythm of the engine continuously, it is not a normal

sound to the divers, and usually indicates a problem on the surface. The divers are to surface immediately. Other sounds can be transmitted to the divers. Tapping on the hull, inside or out, and the bottom of the outboard motor gear case.

- (a) It is recommended that dive teams carry with them a line that has a float to the surface, that is usually attached to a small buoy or dive flag, for easy location of the divers and allowing for an easy recall. It is understandable that such a device cannot be used in areas where there is chance of entanglement, around wharves and boat basins.
- (b) Explosive devices such as waterproof firecrackers are also known to be used. The military and the fishing industry also use them extensively. These small sticks do not create concussion waves but only loud noises that can carry for miles. These sticks can be dangerous and must be treated with respect.
- (c) Underwater voice communication systems either between divers and the boat operator are the best way to keep in touch. Vocal sounds from the divers can be picked up using transducers hung over the side of the boat. These systems provide continuous communications between operator and diver.

15 Outboard Motors

- (a) All boat operators of Memorial University must be familiar with the operations of all outboard motors under their charge. Before any boat is used on a University project, the operator must be familiar with that particular motor, its unique characteristics, history, power and weaknesses. Outboard motors are not all designed the same. Each manufacturer has a specific design, with different controls, weight, starting instructions and performance.
- (b) At the beginning of every working season, every outboard motor is to be tested before any functional operation begins.
- (c) At the end of every season, motors are to be stored in accordance with the manufacturer's instructions.
- (d) Operators or assistants handling motors must be very careful when picking up and installing motors on boats. Care and caution must be displayed in lifting and carrying of motors because of the heavy weight factor. When lifting heavy objects, that person should bend at the knees with back straight before picking up an outboard motor.
- (e) When motors are lowered over wharves to a boat, a line has to be secured to that motor to help create a safer deployment. The same applies to retrieving the motor.
- (f) When outboard motors are transported to work sites, care and caution must be

taken to ensure that the motors are secure to prevent movement and possible damage to transport and passengers.

- (g) When outboard motors can not operate at full capacity and are showing deficiencies, projects are to be terminated immediately until those deficiencies are rectified.

16 Portable Fuel Tanks

- (a) Fuel tanks must contain enough fuel to complete a project with at least one-third contents remaining upon completion of the project.
- (b) All connections must be inspected before departure to ensure that there are no fuel leaks and the lines maintain a positive pressure and connection to the motor.
- (c) The fuel tank and fuel lines must be secured in such a position so as to prevent entanglement, obstruction and free of contamination to equipment and clothing.
- (d) All fuel tanks are to be filled with the appropriate ratio of fuel/oil mixture and fuel recommended by the manufacturer's specifications for the outboard motor in use.
- (e) Depending on the size of the boat, the fuel tank should be positioned in accordance with the boat's highest level of stability and performance.
- (f) The storage of all fuel containers for outboard motors must be in storage containers that are outside university buildings and are designed to contain any contamination and injury due to fire or explosion.

* *Occupational Health and safety Regulations under the Occupational Health and Safety Act (O.C.96-478)*

17 Boat Mooring

17.1 Wharves

When boats are secured to wharves and left unattended for long periods of time, four-point mooring is required, bow stern and spring lines. Attention must be paid to rising and falling tides so as not to flounder or suspend the boat.

17.2 Beaches

Boats that are beached must be secured by line or anchor to prevent the boat from slipping back into the surf. These boats must not be left unattended due to rising and falling tides that could strand or take the boat out to sea and leave its crew stranded or could cause damage to the boat.

17.3 Outcropping

When boats are moored to outcropping with a stern anchor and bowline, the boat should not be left unattended due to fluctuations in tide levels. As tide falls, the boat can run ashore causing damage. Conversely, as the tide rises, the boat will distance itself from the shoreline leaving its occupants stranded.

17.4 Free Anchorage

When a boat is anchored free from land, continual monitoring is required to ensure that the boat does not slip its anchorage. The operator must stay with the craft at all times.

18 Accident Reporting

This section applies in a province where the government of the province has reached an agreement with the Minister of Fisheries and Oceans in respect of a craft accident reporting procedures and where a notice confirming that agreement has been published in the Canada Gazette.

If a craft is involved in an accident that results in injury to a person who requires medical treatment beyond first aid but not admittance to a hospital, or that causes property damage estimated at more than \$2,500, the person responsible for the care and control of the craft shall complete an Accident Report Form and forward it to the Office of Boating Safety of the Canadian Coast Guard not later than 14 days after the accident. All other boating accidents and injuries must be reported to the Office of Diving and Boating Safety, Memorial University.

If a craft is involved in an accident that results in a fatality, injury to a person that requires admittance to a hospital, or property damage greater than \$5,000 resulting from fire, an explosion or collision with another vessel or other floating or fixed structure, the person responsible for the care and control of that craft shall report the accident to the local police authority as soon as possible and with the appropriate accident report forms for Memorial University.

18.1 Regulation Enforcement

The following persons are designated as enforcement officers in respect of craft for the purpose of the Coast Guard Regulations:

- (a) a member of the Royal Canadian Mounted Police;

- (b) a member of any harbour or river police force;
- (c) a member of any provincial, county or municipal police force; and
- (d) any person designated as an enforcement officer for the purposes of these Regulations by the Minister of Fisheries and Oceans.

18.1.1 An enforcement officer may, in order to verify and ensure compliance with Coast Guard Regulations:

- (a) examine a craft and its equipment, ask any pertinent questions of, and demand all reasonable assistance from, the owner or master (operator) or any person who is in charge or appears to be in charge of the pleasure craft; and
- (b) require that the owner or master (operator) or other person who is in charge or appears to be in charge of the craft produce
 - (i) personal identification, and
 - (ii) any licence, document or plate required Coast Guard Regulations

(1) Subject to subsection (2) of the Small Boating Safety Regulations, an enforcement officer may, in order to ensure compliance with these Regulations and in the interests of public safety, direct the movement of a craft or direct the operator of a craft to stop it.

(2) Except in an emergency, an enforcement officer shall not give a direction under subsection (1) of the Small Boating Safety Regulations in respect of any craft in a public harbour for which a harbour master is appointed without the prior consent of the harbour master.

Every person shall comply with the requirements of an enforcement officer in the course of carrying out duties and functions under these Regulations.

18.2 Collision Regulations

Boat operators must understand and be able to apply basic understanding of the *Collision Regulations* which outline the “rules of the road” to prevent collision on the water. Among other things, the *Collision Regulations* outlines which vessel has the right-of-way over another, safety procedures in day, night or restricted visibility, and use of both sound and light signals. *Collision Regulations* Rules are clear, specific and apply to operators of any boat from canoe to ocean liner.

18.3 The Criminal Code Canada Shipping Act and Contraventions Act

Small boat operators can be charged with the following criminal offences:

- (a) operating a craft in a manner dangerous to the public
- (b) operating a vessel while impaired by alcohol or drugs
- (c) failing to keep an eye on people aboard the boat
- (d) failing to stop and offer assistance at the scene of an accident (hit and run)
- (e) sending false distress signals (e.g., firing off expired flares)
- (f) interfering with navigation aids (e.g., buoys) by concealing, altering, removing or tying up to them.
- (g) operating a craft known to be unseaworthy (e.g., serious leaking problems)

Appendix A

Terms of Reference

Terms of Reference

The purpose of the University Diving and Boating Safety Control Committee is to:

- (a) Promote safe diving practices within the University.
- (b) Write and periodically update University Diving and Boating Regulations. Such regulations should be written in a manner compatible with standards and regulations of the Canadian Standards Association, the Canadian Association for Underwater Science, and the Academy of Underwater Science and with regulations and standards legislated federally and provincially. Submit regulations for approval to the Senior Executive Committee.
- (c) Keep current on legislation and standards related to diving, especially those relevant to scientific diving and advise accordingly the University and its employees, faculty and students involved with diving.
- (d) Upon request, serve as University representation to government and other agencies involved in formulating regulations or standards as they relate to University diving operations.
- (e) Advise the President, through his delegate, on matters related to University diving.
- (f) Investigate alleged violations of University Diving Regulations.
- (g) Participate in the investigation of any accidents, near accidents, alleged unsafe practices, employee or student concerns and any other incidents related to diving under the auspices of the University which may have implications for safety.
- (h) Review periodic reports and recommendations from the University Diving Officer concerning diving operations and practice.
- (i) Promote safe boating practice within the University.
- (j) Write and periodically update University Boating regulations.
- (k) Advise the President, through his delegate, on matters related to boating.
- (l) Report to the President and the Senior Executive Committee through the Director of Facilities Management.
- (m) Investigate alleged violations of University Boating Regulations.

- (n) Participate in the investigation of any accidents or other concerns related to boating safety authority and function:
- (o) The Committee will have full authority to suspend any diving or boating operations under University auspices which it believes to be unsafe or in violation of University Diving regulations or University Boating Regulations.
- (p) The Committee will have authority to call for any documents or reports necessary to fulfill its purpose and to summon witnesses if required.
- (q) The University Diving Officer will be delegated by the Committee to review, assess, prohibit or approve any proposals involving diving activities to ensure compliance with University Diving regulations.
- (r) The Committee will have authority to prohibit any individual from diving under university auspices who does not meet the terms and conditions of (and subject to the appeals procedure specified in) the University Diving Regulations.
- (s) The Committee may require any individual in particular or divers in general, to undergo further training, medical evaluation, or assessment of knowledge and skills prior to any University diving in order to ensure safe diving practices.
- (t) The Committee will advise on the need for additional or “refresher” training of divers and may (subject to funding restrictions) arrange periodic courses, meetings or lectures for this purpose.
- (u) The University Boating Officer will be delegated by the Committee to oversee safety aspects of all boating under University auspices.
- (v) The Committee will submit an annual report to the President, through his delegate, on its activities.

APPENDIX B

Memorial University Boating Safety Administration

President of Memorial University



Vice-President of Research



Director of Facilities Management



Diving and Boating Safety Control Committee



Boating Safety Officer



Boating Project Director



Boat Operator



Boat Crew

APPENDIX C

Memorial University Boating Information Form

Memorial University Boating Information Form

Name: _____

Address

(Office): _____

(Home): _____

Tel. No. (Office): _____ Home _____

Fax No.: _____ E-Mail _____

Faculty: _____ Staff _____ Student _____

Year of Small Boating Safety Course: _____

Instructor: _____

Certifying Agency: _____

Boating Experience:

Vessel Type

Canoe _____ Sea Kayak _____ Open 6 m _____ Open 8 m _____ 12 m _____ + m _____

Operational Years:

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____ 9 _____ 10 _____ + _____

Safety Courses (Date of completion): CPR _____ First Aid _____ O₂ Provider _____

Other boating specialty courses or skills: _____

Signature _____

Date _____

APPENDIX D

Memorial University Project Form for Boating Operations

APPENDIX E

Boating Safety Acknowledgment Form

**Memorial University of Newfoundland
Guide to Boating Safety Acknowledgment Form**

I, _____, have fully reviewed Memorial University of Newfoundland's Guide for Boating Safety and do acknowledge and understand its contents and having full awareness of the hazardous risks of boating operations, will abide by the policies laid down in this document.

Dated this _____ day of _____ 20_____

Witness _____

Signature _____

APPENDIX F

Memorial University Release and Waiver Form

**THE BOARD OF REGENTS OF MEMORIAL UNIVERSITY OF NEWFOUNDLAND
RELEASE OF LIABILITY, WAIVER OF CLAIMS
ASSUMPTION OF RISKS AND INDEMNITY AGREEMENT**

WARNING: BY SIGNING THIS DOCUMENT, YOU WILL WAIVE CERTAIN LEGAL RIGHTS, INCLUDING THE RIGHT TO SUE.

PLEASE READ CAREFULLY!

TO: THE BOARD OF REGENTS OF MEMORIAL UNIVERSITY

NAME OF PARTICIPANT: _____

ADDRESS OF PARTICIPANT: _____

ASSUMPTION OF RISK

I am aware that participating in the **Boating Operations and Activities** either as an operator, crew member or passenger (student, external contract user, etc.), has many inherent risks, including but not limited to:

Any manner of injury resulting from falls on boats, docks, transferring from shore to boats, and boats to shore. Any injury or illness resulting from exposure to cold or heat, wet or windy weather and strong winds. Any manner of injury resulting from use, misuse, non use and failure of any equipment including but not limited to ropes, cables, nets, winches or blocks. The possibility of becoming lost, detained or unable to access medical help in an emergency. There is possibility of sudden immersion in water as a result of winds, choppy waves, ocean swell, tidal currents, making contact with rocks, ice, trees, other boats, floating logs or other debris. There is risk of hypothermia, shock or drowning from any immersion. In addition, there is a risk of becoming entangled in ropes or boat lashings.

I freely accept and fully assume all such risks, dangers and hazards and the possibility of personal injury, death, property damage or loss, resulting therefrom.

RELEASE OF LIABILITY, WAIVER OF CLAIMS AND INDEMNITY AGREEMENT

In consideration of the Board of Regents of Memorial University allowing my participation in **Boating Operations and Activities**, I agree as follows:

- (a) TO WAIVE ANY AND ALL CLAIMS that I have or may have in the future against the Board of Regents of Memorial University, and its members, officers, employees, students, agents, volunteers and independent contractors (all of whom are hereinafter collectively referred to as (“the Releasees”));

General Information

Below you will find useful contact information.

Environment Canada
Weather information
351 St Joseph Boulevard
Hull, Quebec
K1A 0H3
Phone: 1-800-668-6767
Fax: 919-2225
<http://www.ec.gc.ca/>
Email: environmentinfo@ec.gc.ca

Canadian Hydrographic Services
Department of Fisheries and Oceans
Chart Distribution Office
615 Booth Street
Ottawa, Ontario
K1A 0E6
Phone: 613-998-4931
Fax: 613-947-4369
<http://www.chshq.dfo.ca>

Accessing Search and Rescue

Canadian Coast Guard
Northwest Atlantic Fisheries Centre
White Hills, St. John's
Regional Operation Centre
Marine Communications
and Traffic Centre, 709-772-2083
VHF Channel 16

Eastern Canada
Rescue Coordination Centres (RCC) Halifax
902-427-1582
1-800-563-2444

Accessing Compliance Plates

Canadian Coast Guard
Office of Boating Safety
200 Kent Street, 5th floor
Ottawa, Ontario
K1A 0E6
Phone: 800-267-6685
<http://www.ccg-gcc.gc.ca/>
Email: obs@ccgrser.org

Newfoundland
Office of Boating Safety
Northwest Atlantic Fisheries Centre (NAFC)
East White Hills Road
P. O. Box 5667
St. John's Newfoundland
A1C 5X1

Accessing weather forecasts

Channel 21B, 25B and 83B on Atlantic Coast and Great Lakes
Channel 21B, and Wx1, 2, 3 on the Pacific Coast
In Vancouver, Toronto, Montreal and Halifax, VHF broadcasts from
Weatheradio Canada (Environment Canada)
Internet: http://www.ec.gc.ca/weather_e.html

References

Transport Canada, Canada Shipping Act, Small Vessel Regulations

On Board with the Canadian Red Cross
A complete Study Guide and Boating Safety Resource

Canadian Coast Guard

Canadian Standards Association, Z275.4-02, Competency Standard for Diving operations

