



# UNIVERSITY OF MARYLAND

## SAFE BOATING MANUAL

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University of Maryland’s Safe Boating Manual

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## **Authority**

The University of Maryland Department of Environmental Safety has adopted guidelines for vessels used by employees. The Diving Safety Officer (DSO) or an appointee determined by the Diving Control Board shall oversee the safe boating program. In 2007 the DSO was designated as the Safe Boating Officer (SBO). The Diving Control Board may be involved in review of safe boating guidelines and programs. Membership of the committee should be comprised of faculty, students, or staff with knowledge of boating procedures. UM may also use qualified persons for boat handling check outs.

## **I. Purpose and Applicability**

A variety of boats may be used by UM employees to conduct research on water. The purpose of this policy is to ensure that operators meet certain safety guidelines and standards before being allowed to operate any boat under the auspices of UM.

## **II. General**

- A. Prior to operating any UM vessel, individuals are required to be qualified as an operator.
- B. Since there may be many different size boats used in research, each with different equipment, prospective operators must be checked out and demonstrate skills in the operation of any size boat. This requirement may be waived by SBO after review of operator's experience and credentials.

The prospective operator should be able to demonstrate knowledge of the following to the Boating Officer or his/her designee:

1. An understanding of the vessel, its systems, and equipment
2. Trailer procedure and checklist
3. Perform a pre-cruise/field trip check (complete appropriate checklist)
4. Knowledge and use of installed safety and emergency equipment
5. VHF-FM radio operation and protocol; distress procedures
6. Fire, emergency and man overboard procedures
7. Docking and undocking the vessel
8. Boat handling skills and judgment while underway
9. An understanding of the Navigation Rules
10. Recognition of the Aids to Navigation
11. Anchoring the vessel
12. Post-cruise/field trip obligations, fueling and log book entries

- C. For any size boat primarily launched from a trailer, individuals should demonstrate knowledge and proficiency in hook-up, over-the-road operations, and launch and recovery. The UM does not provide training for trailered boats.

D. These requirements are intended to qualify operators for boat operation during daylight hours. Projects which require boat operation at night will be determined by the UM SBO on a case by case basis.

### **III. Certification**

A. The Maryland Boating Safety Education Act requires that any person born after July 1, 1972, who operates a numbered or documented vessel on Maryland waters, be in possession of a Certificate of Boating Safety Education. Prospective boat operators born after July 1, 1972 are required to obtain this Certificate prior to the Demonstration of Skills portion of the UM certification process.

Prospective operators can obtain the Maryland Boating Safety Education Certificate online. Go to <http://www.boat-ed.com/md/index.htm> for course information.

Those persons born after July 1, 1972, are exempted from the above requirements if they are licensed by the U.S. Coast Guard to operate a commercial vessel.

B. Prospective operators who currently possess the necessary certification and who have had previous experience may qualify as an operator immediately.

C. Prospective operators who do not have the necessary certification and boat experience are responsible for making their own arrangements for obtaining boating safety instruction and on the water practice.

### **IV. Motorized Vessel Operations**

Ultimate responsibility for safe operation rests with the boat operator. It is his/her duty to refuse to operate a vessel if in his/her judgment, conditions are unsafe or if he/she would be violating the precepts of his/her training or the rules of the UM.

Federal and state laws require operator responsibility for making sure all gear, vessel systems, and equipment required by federal and/or state regulation, or that directly affect personal or vessel safety, are working properly before departure.

The equipment required for all classes of vessels is available from the Maryland Natural Resource Police at: <http://www.dnr.state.md.us/boating/safety/sfrequire.html>

The US Coast Guard Auxiliary shall inspect all motorized vessels annually. The USCG Auxiliary provides this service for the purpose of inspecting all safety and emergency equipment to insure compliance with USCG safety regulations. Equipment will be checked for quantities, condition, expiration dates, accessibility, and operation. Equipment found in unsatisfactory condition or out of date shall be removed and replaced. A copy of this report shall be kept on file with SBO.

The boat operator of a vessel is liable for violations. The operator of a vessel is ultimately responsible for his/her own safety and the safety of the vessel and its crew. Therefore, boat operators are responsible for understanding and abiding by Federal, State, local and UM

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regulations concerning safety, rules of the road, vessel usage, certification and required equipment.

An unsafe condition is grounds to cancel an operation or discontinue an operation in progress. No person shall alter any vessel safety system or lifesaving apparatus.

In emergencies or other cases where it is necessary to deviate from accepted procedures, boat operators may use their own discretion, but may be required to justify their actions in a written report to the SBO Office.

Boat operators must assure that trailers used on UM operations meet all Federal, State, local, and UM requirements for safety.

Boat operators are required to follow legal limits set forth on the boat's capacity plate.

Boat operators must report accidents to the SBO office as soon as possible after occurrence. An accident form must be filed with the SBO within 24 hours of the accident. See definitions.

Boat operators are required to file a float plan in accordance with this document prior to boating operations. The purpose of a float plan is to have a shore-based person who knows the identity of those persons on the water, where they are going, and when they are coming back. If the persons on the water become overdue, the shore-based contact is responsible for notifying proper authorities.

Boat operators are required to check weather forecasts for the operating area before beginning operations.

Operators are required to share information related to safety equipment with everyone on board prior to departure. This information includes location of safety equipment, wearing of safety equipment, safety concerns while underway, location of accident procedures checklist, and any information relative to safety and the vessel mission.

Boat operators must be certain that prior to boarding, all passengers have signed the required waiver of liability/indemnity agreement form, unless prior approval is obtained from the SBO office.

UM boats are "DRUG FREE VESSELS" as defined by the Coast Guard. Illegal substances are not permitted nor tolerated aboard. It is the operator's responsibility to assure as best as possible, that there are no illegal drugs on board and that all passengers and crew are free of the effects of any drugs that may cause impairment in judgment critical to the safe operation on an UM vessel. Any person found to be in possession of illegal substances aboard an UM boat would be permanently denied access, in any capacity, to UM vessels. UM alcohol policies shall be adhered to on all vessels.

Vessels shall be operated at a safe speed to avoid collision, property damage and passenger injury. In determining safe speed factors to be considered are: weather, vessel maneuverability,

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visibility, traffic, sea state, current, navigation hazards, draft, depth of water, the possibility of floating objects and other factors relative to safety.

It is the responsibility of the boat operator to use every reasonable means to become familiar with the intended areas of operation. This may include requesting review of charts, Coast Guard NOTAMS, Coast Guard radio advisories, local information and any other means available. All persons on UMCP vessels shall wear appropriate protective clothing and safety equipment for the conditions. Including but not limited to: Life Jackets, gloves, a hard hat, hearing protection, safety glasses, deck shoes and/or steel toed shoes.

### Procedures

Daily operating procedures such as scheduling and equipment checkout should be established to accommodate the needs of units. All UM units must adhere to the basic operating procedures:

1. Provide a universal or boat specific pre-cruise/field trip checklist that must be completed prior to each cruise. Establish protocol to review the checklist to ensure follow-up to correct deficiencies.
2. Establish protocol for mechanical breakdown or other circumstances where nonemergency assistance is needed during operations. For example, contract with marine towing service to provide assistance.
3. Establish a procedure to follow up on accident reports (copy of this report to be forwarded to UM Safe Boating Officer.
4. Provide instructions for fueling each boat to include fuel tank capacity, fuel type/octane rating and lube oil requirements.
5. Implement a preventative maintenance schedule for each boat and motor.
6. Establish a reporting system utilizing a simple Float Plan to designate a shore contact to monitor cruise/field trip activities. The boat operator will contact this individual when:
  - a. A cruise/field trip is delayed beyond its expected time of return
  - b. To close out the float plan at the end of the day's activities
  - c. If the boat operator does not report a safe return and two hours have elapsed beyond the return time designated on the Float Plan, the contact will initiate emergency response activities
  - d. A Float Plan should include the following information and must be filed electronically or by other means with the shore person and at least one other responsible individual (e.g. project PI)
    - i. Date(s) of cruise/field trip
    - ii. Boat name
    - iii. Name of operator and cell phone number
    - iv. Departure Time
    - v. Return Time
    - vi. Destination and Sampling Plan
    - vii. Names of other persons on board
    - viii. Shore contact name and phone number

e. Float Plans are available as pdf documents on the web through DES

7. At a minimum, UM vessels must carry the following USCG approved safety equipment

- a. A Type I or Type II personal floatation device (PFD) for each person on board
- b. A Type II or Type V float coat or anti-exposure coverall for each person carried on board while operations are conducted when water temperatures are below 60°F
- c. One TYPE IV throw able device (Cushion or Ring Buoy)
- d. Sufficient Type III or Type V floatation vest to don when working over the side
- e. Fire extinguisher of type appropriate to length of boat
- f. Three combination day/night visual distress flares
- g. Permanently installed or hand held air horn or whistle
- h. Permanently installed or hand held VHF-FM radio

8. Charts for the area of operation and/or GPS device are strongly recommended

9. Each UM boat operator is to have a personal or lab issued cell phone on board and turned on during vessel operations

## **V. Use of Third Party Vessels For Department Research**

At-sea activities may require larger, different, or more specialized vessel support and capability than is available through UM. Examples are research with large or heavy in-water equipment, research sponsors chartering third party vessels, or research conducted in off-site locations that require the charter or lease of outside vessels.

Outside vessel charters are considered on a case-by-case basis. The operation of, and operational responsibility for, these vessels is outside the auspices of the UM Boating Safety Manual.

However, PIs and other UM users are encouraged to use outside vessels only after considering insurance, liability, and other aspects. PIs and researchers are not permitted to use privately owned vessels without review and approval of the UM Office of General Counsel.

There is no requirement to invoke the policies and procedures of the UM Boating Safety Manual in cases where a grant sponsor or outside agency independently provides a platform or vessel for supporting UM research activities. UM may require that PIs involved in the cruise provide their own safety devices as outlined in the UM Float Plan.

## **VI. Vessel Staffing**

### **Manning Documentation Requirements**

All persons authorized to operate motorized vessels under the auspices of UM shall have a copy of their USCG Masters or Operators license or approved Safe Boating Course Certificate on file. This documentation and information shall be retained on file by SBO.

## VII. Non-motorized Vessels

Non-motorized boats belonging to UM, as well as those owned personally by an employee or student, or rented or chartered must adhere to the following requirements:

Each person must wear a Coast Guard approved Personal Floatation Device (PFD).

At least one kayak/canoe/small boat in the group must be equipped with a means of communication such as a cell phone or handheld radio. These items should be stored in waterproof floating containers when not in use.

Kayaking/Canoeing or small boating alone is prohibited. The "buddy system" is to be employed in all boating activities conducted under the auspices of UM.

Prior to each cruise, a float plan, submitted to the DSO or a delegated authority, must be completed including the names of all participants. Float plan forms can be found either in Appendix D of this manual or website under the "Diving and Boating Safety Program" link.

Kayaks/Canoes/small boats should be equipped with a bow and/or stern line to aid in docking or towing. Lines should be properly stowed when not in use.

In the event that your kayak/canoe/small boat capsizes, account for your safety and the safety of others before attempting to recover equipment.

Offer your assistance to any other capsized boats.

Always remain within sight and voice contact of your group.

A first aid kit should be carried on each trip, and should contain, but not be limited to, sunscreen, insect repellent and basic first aid supplies.

Do not overload kayaks/canoes, small boats. If not stated on the boat, contact the manufacturer for weight capacity.

Get off the water as soon as possible when a storm threatens.

Inspect kayaks/canoes/small boats frequently to identify cracks or leaks. Damage to a kayak's bulkheads can severely hinder the vessel's buoyancy.

Use of kayaks/canoes/small boats while under the influence of alcohol or drugs is prohibited.

### Definitions

1. Boat. As used in this manual, refers to craft less than 300 gross registered tons propelled by any means and used to carry people on a body of water, but does not include sea planes.
2. Overall Length (or length overall - LOA) as used in this manual, and as defined in 46 CFR



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69.203, means the horizontal distance between the outboard side of the foremost part of the stem and the outboard side of the aftermost part of the stern, excluding rudders, outboard motor brackets, and other similar fittings and attachments.

3. Small Boat - Any non motorized boat, canoe, kayak etc

4. Qualified Operator- A qualified operator is defined as one who possesses the proper certification, and who can demonstrate to the UM Boating Safety Officer (BSO) or his designee, required boat handling skills and procedures.

5. Motorboat Classifications. USCG vessel classifications are as follows:

- a. Class A - less than 16 feet length overall;
- b. Class I - 16 feet but less than 26 feet length overall;
- c. Class II - 26 feet but less than 40 feet length overall;
- d. Class III - 40 feet but not more than 65 feet length overall; and
- e. Small Research Vessel (SRV)

6. Area of operation - Boating activities under the auspices of UMCP shall be restricted to Maryland, Delaware, and Virginia inland waters for vessels of Class A through II.

**APPENDIX 1: VESSEL FLOAT PLAN**

Vessels operated by UM employees for work on behalf of the university shall file a Float Plan ([www.essr.umd.edu](http://www.essr.umd.edu)) prior to the start of a cruise. All required safety equipment shall be on board and operator(s) of the vessel shall have the necessary operator safety certificate on file.

Name & phone of operator \_\_\_\_\_

2. Description of boat:

Type \_\_\_\_\_ Color \_\_\_\_\_ Trim color(s) \_\_\_\_\_

Registration No. \_\_\_\_\_ Length \_\_\_\_\_

Vessel name \_\_\_\_\_ Make \_\_\_\_\_ Other \_\_\_\_\_

3. Engine type \_\_\_\_\_ H.P. \_\_\_\_\_

No. of engines \_\_\_\_\_ Fuel capacity \_\_\_\_\_

4. Minimum Safety Equipment required:

PFDs Throw Device Visual distress signals First aid kit Fire extinguishers

Paddles Anchor Other \_\_\_\_\_

5. Radio hand fixed Working Channel \_\_\_\_\_ GPS hand fixed horn \_\_\_\_\_

6. Mobile phone: Yes No Phone number \_\_\_\_\_

7. Towing vehicle license number \_\_\_\_\_

Type \_\_\_\_\_ Trailer license \_\_\_\_\_

Vehicle color \_\_\_\_\_ Make \_\_\_\_\_

Where parked \_\_\_\_\_

8. Persons on board: *(Add a second page if necessary)*

Name Age Address & phone

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_

f. \_\_\_\_\_

9. Do any of those on board have a medical problem or condition? Yes No

If yes, describe \_\_\_\_\_

10. Trip plan: Depart from \_\_\_\_\_ Time \_\_\_\_\_

Destination points \_\_\_\_\_ Return time \_\_\_\_\_

11. Purpose \_\_\_\_\_

12. Name of vessel monitor \_\_\_\_\_ Phone \_\_\_\_\_

13. Emergency Vessel assistance (*Sea Tow*) (*BoatUS*) Phone \_\_\_\_\_

NOTE: If the vessel monitor has not been notified of the return of the vessel two hours after projected return time, he or she is to notify:

US Coast Guard (Phone) \_\_\_\_\_

or MD Natural Resources Police (Phone) \_\_\_\_\_

**\* NOTICE:** "Persons on board" does not govern the number of people that an uninspected vessel may legally carry. The capacity plate attached to each vessel guides the captain in determining safe limits. The weight of all equipment plus passengers and crew should be taken into consideration.

**APPENDIX 2: ACCIDENT REPORT FORM**

(Water related accidents ONLY. Keep a copy of this form on the vessel)

Accidents, whether involving injury or not, must be reported to the Department of Environmental Safety as soon as possible after the event. This report form is to be filed with the Safe Boating Officer / DSO within 24 hours after an accident.

NAME \_\_\_\_\_ DATE \_\_\_\_\_

LOCATION \_\_\_\_\_

ACTIVITY \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CAUSE OF ACCIDENT \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CORRECTIVE MEASURES \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

INJURIES (DETAIL) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FIRST AID \_\_\_\_\_  
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DISPOSITION OF VICTIM \_\_\_\_\_  
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