

Reed College Boating Safety Manual

June 2023



Emergency and Reference Contacts

Emergency	911
US Coast Guard (USCG)	(888) 427-5662
USCG Emergency VHF Radio	Channel 16
Portland Harbor Patrol	503-988-6788
EHS	503-777-7788
Departmental Contact Names: Chris Koski (Boat Owner) Josh Howe (ES Faculty) Aaron Ramirez (ES Faculty) Noelwah Netusil (ES Faculty) Michael Lombardo (Outdoor Programs Director)	Departmental Phone Numbers: (503) 517-7719 (503) 517-7318 (503)-517-4101 (503) 517-7776 (503) 777-7542



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1.0 Purpose and Acknowledgement

1.1 Purpose

The purpose of this manual is to help minimize risks and establish good boating practices under Reed college. The goal is to also help familiarize participants with the basic procedures. Small boat operations involve risks that need to be addressed prior to operation.

1.2 Contents

This manual will set the basic guidelines to follow for boating operation within its contents:

1. Policies and Procedures relating to Reed boating operations
2. Administrative Procedures for Reed boating operations
3. Operational Procedures

1.3 Applicability

All vessels and equipment that are operated by Reed must comply with this manual, the U.S. Coast Guard, state, and local requirements, and law in international waters. These must be followed whenever any Reed personnel are using a vessel under Reed auspices, regardless of ownership of the vessel.

Vessels use under Reed auspices includes:

1. Vessels owned, supported, or administered by Reed
2. Privately owned boats used by Reed for research or educational purposes
3. Any other vessels used by Reed for research or educational purposes

1.4 Acknowledgement

We would like to acknowledge sources used in the making of this manual:

- University of Washington Boating Safety Manual
- University of California, Berkeley Small Boat Safety Manual
- Oregon State University Small Boat Program



2.0 Responsibilities of Positions in the Boating Program

2.1 Environmental Health and Safety Department (EHS)

EHS will administer, oversee, and maintain Reed's boating safety manual and policies. EHS is thereby responsible for changes made to the Boating Safety Manual. EHS will also review workplace boating accidents involving injury and loss/damage to equipment.

2.2 Department Owner or Operator

This person will ensure that all federal, state, local, and Reed's own safety policies will be fulfilled in regards to user safety and boating safety. Detailed responsibilities include:

1. Assigns personnel to maintain the safety of operations, crew, passengers, and the boat itself
2. Supplies resources to assigned personnel for their work
3. Verifies personnel are trained and competent within their work
4. Authorizes all of the boating program's operation under the department
5. Swiftly takes action to suspend unsafe boating operations
6. Verifies both operator and boating equipment is included on Reed's insurance policy

2.3 Principal Investigator or Supervisor (PI)

The PI is the scientific and technical director for research on the boat. The PI will most likely be assigned through the department but may also be assigned by the school itself and administrative unit. The PI ensures the boat and its facilities are appropriate for research and that those involved with research are properly trained. The PI must remain in compliance with the boating safety manual.

2.4 Boat Operator

A designated boat operator must be on board at all times of boat use. A boat operator doesn't have to steer the ship at all times but the boat operator always retains responsibility for the entire boating operation. The boat operator must be authorized by Reed regardless of whether the boat is Reed owned or not. If the boat does reach foreign waters, the boat operator must make sure the boat has all the required safety and navigational equipment. The boat operator must remain in compliance with the manual, local, state, U.S. Coast Guard and international regulations. If an operation does plan to go into international waters, the boat operator should research that nation's regulations themselves. Other responsibilities include:

1. Safely navigating the boat to various destinations
2. Ensuring that all equipment, data collecting, and handling of the vessel is safely managed



3. Safely moving the boat to and from the launch site.
4. Properly storing all operational and safety equipment on the boat before venture
5. Instructing all crew and passengers on where operational and safety equipment is
6. Requiring that all crew and passengers receive safety training that is documented and reviewing the emergency procedures
7. Reporting any incidents and accidents relating to injury to HR via hr@reed.edu in 24 hours and submit an Accident/Incident form within 3 days:
https://www.reed.edu/human_resources/assets/downloads/AccidentIncidentForm2015.pdf
8. Report any incidents, accidents, citations, and tickets relating to the integrity of the boat via risk@reed.edu

2.5 Passengers

Passengers must follow instructions from the operator and also follow all boating safety requirements. They should also report any potentially unsafe conditions.



3.0 Administrative Procedures

3.1 Non-Motorized Vessels

Any Reed department that utilizes non-motorized vessels like kayaks, canoes, and rowboats must comply with the following in order to ensure the safety of the craft and the personnel:

1. Operator and passengers have appropriate training for each vessel, environment, and tasks.
2. Operator has up to date Oregon State Marine Board *Oregon Boater Card* Certification or equivalent
3. Each operator and passenger is safety-trained and oriented on emergency procedures
4. All passengers are informed of the locations of emergency equipment
5. Operators has up-to-date CPR and First Aid certifications
6. The owner or operator has performed Maintenance checks of non-motorized vessels
7. A group risk assessment is done before vessel launch, this includes looking at weather, sea/river state, crew readiness
8. Waivers and releases are signed and completed
9. Operators and passengers have required wearable life jackets or personal flotation devices
10. Each boat has sound devices like a whistle or compressed air horn
11. Each boat has navigation lights but only underway or at anchor from sunset to sunrise or during periods of restricted vision
12. Boats that are 10 feet or longer require an Aquatic Invasive Species Prevention Permit, one permit per boat. More information for this permit can be found here:
<https://www.oregon.gov/osmb/boater-info/Pages/AIS-FAQs.aspx>
13. Accidents must be reported to risk@reed.edu and/or hr@reed.edu. More information on reporting Accidents can be found in Section 3.9.

3.2 Motorized Vessels

Motorized vessels will also follow the same rules set for non-motorized vessels with one exception; motorized vessels **do not** need to obtain an individual Aquatic Invasive Species Prevention Permit. The Aquatic Invasive Species Prevention Permit will be included with proper registration. In addition, the following need to be complied with:

1. The boat operator must receive proper training from an Oregon State Marine Board-approved provider and fulfill specific licensing requirements.



2. The boat operator must also supply evidence or documentation of applicable experience in boat operation.
3. The boat operator must also have an adequate understanding of the following: operation's local weather conditions, specialty equipment of the boat, and any safety procedures for the boat.
4. The boating vessel must be on file with Risk Management, risk@reed.edu
5. The boating vessel must be properly registered; the vessel must have a Certificate of Title, Oregon Certificate of Number and validation decals.
6. Proper Boating vessel registration must be on file with Risk Management as well.

3.3 Licensing Requirements for Operators

1. Vessels less than 26 feet: Successful completion of Oregon Boater Education and successful obtainment of a Boater Education Card. More info on this card can be found here: <https://www.oregon.gov/osmb/boater-info/Pages/Boater-Education-Cards.aspx>. In addition, the operator is recommended to have taken a Motorboat Operation Training (MOTC) or Certification (MOCC) course
2. Vessels more than 26 feet: If Reed college ever does require an operator for a vessel this size, the MOTC/MOCC is required

3.4 Boats and Equipment

Boats and Equipment must comply with the standards set forth by this manual, U.S. Coast Guard, Oregon state and any international waters. The boat operator must ensure the stability and weight balance of the boat. Principal Investigators must verify any modification to the boat that may be needed for research with EHS and the department owners. The operator must also ensure the presence and quality of boating equipment. It is most important for the operator to check the functionality of safety equipment like personal floatation devices and communication equipment. If any equipment malfunctions, the boat operator must notify the department owner.

3.5 Float Plan

A float plan and a contact list are required for any venture. Appendix 4 has an outline for a float plan that must be complied to. It will contain the following:

1. The vessel being used with description of its size, appearance, and features
2. The planned time, place, and date of departure and return
3. Planned sites where vessel will travel to, from, and through
4. Principal Investigator
5. Names of everyone on board
6. Communication schedule intervals
7. All emergency equipment and emergency contact information on board



3.6 Communications

Cell phone and radio communications need to be scheduled on an agreed frequency with a responsible person(s) on land. To change the original approved schedule, the on land person needs to be notified and then confirm the changes. Any missed scheduled communications for thirty or more minutes warrant USCG search and rescue inquiry. Once back from arrival, the operator must check in with contact on land.

3.7 Weather

Operator must keep consistent watch over weather conditions before and during operation. If small craft advisories or visibly bad conditions are present, the operation must be postponed. The National Weather Service Marine Forecast has a webpage (<https://w2.weather.gov/?a=marine>) which should be utilized for determining weather circumstances for vessel operations.

3.8 Trailering

A designated driver or operator must demonstrate the proper towing and trailing procedures for the boat to the departmental boat owner. The driver must also demonstrate an understanding of launching and retrieving the boat from the trailer into the water. The driver must be able to do the following:

1. Secure the vessel with straps
2. Raise and lock the motor
3. Make sure backup motor is secured, if applicable
4. Remove boat drain plugs when the boat is out of the water
5. Remove or secure loose items
6. Turn off all batteries
7. Turn off all fuel flow to the outboard.
8. Lower protruding items like fishing poles, antennas, and backup lifeboats when going below overpasses

3.9 Record Keeping

1. The department or owner must keep a file on usage of boats which includes a log of scheduled and unscheduled maintenance for each boat, boat trailer, and outboard engine.



2. The department must maintain records for training and certification of personnel and operators. Operator files must also include copies of time underway, location, vessel, and any other information the department thinks is necessary.

3.10 Accident and Incident Reporting

All accidents and incidents should be reported to risk@reed.edu, hr@reed.edu, the department, and the vessel owner as soon as possible. Accidents can be defined as events that result in a serious injury that goes beyond basic first aid and serious damage to the boat that goes beyond cosmetic issues. Incidents are events that only result in minor injuries (cuts and scrapes) and cosmetic damage to vessels (damage that does not affect the operation of the boat). Near misses of accidents or incidents should also be reported as an incident.

Accident/Incidents should be reported within 24 hours by emailing risk@reed.edu and either emailing hr@reed.edu or calling HR through x7255. Accidents/Incidents dealing with boat damage should be reported to risk@reed.edu and accidents/incidents dealing with injury reported to hr@reed.edu.

In addition, HR requires an Accident/Incident Report form within 3 days of the accident/incident which can be found here:

https://www.reed.edu/human_resources/assets/downloads/AccidentIncidentForm2015.pdf

Accidents will most likely also need to be reported to the **U.S. Coast Guard**. The U.S. Coast Guard defines these accidents as anything that involves loss of vessel, grounding, collision, loss of propulsion, loss of life, serious injury, extensive property damage, or serious environmental harm. The U.S. Coast Guard report form and more information can be found here:

<https://www.dco.uscg.mil/Our-Organization/Assistant-Commandant-for-Prevention-Policy-CG-5P/Inspections-Compliance-CG-5PC-/Office-of-Investigations-Casualty-Analysis/2692-Reporting-Forms-NVIC-01-15/>



4.0 Emergency Procedures

4.1 Vessel Breakdown

Before an emergency call is conducted for a vessel breakdown, first attempt plausible repairs to the vessel by adjusting the vessel's speed to accommodate circumstances, try to find the root cause of the problem, and, if possible, repair the problem as safely as possible. If you cannot repair the vessel, use the vessel's emergency signals such as horn and lights to attract attention while radioing for help.

4.2 Grounding, Striking, and Boat Leaks

If the vessel begins to run aground, strikes a submerged object, or develops a leak, the following should be performed:

1. Everyone should wear an immersion suit or life jacket
2. Everyone should be accounted for and then move to one area
3. Begin bilge-pumping operation
4. Assess boat damage
5. Attempt to stop or reduce the flow from the leak
6. If leak cannot be stopped, try to reach a safe location and use distress signals and radio for contact

4.3 Vessel Capsizing or Sinking

If the vessel does completely sink, try to remain as calm as possible and perform the following:

1. Put on all safety gear that is available
2. If no survival boat is available, try to stay on top of the vessel as long as possible; rescuers will be able to see easier
3. Use any possible emergency signaling and radio to help attract other boats' attention
4. Check for hypothermia if entered into water

4.4 Overboard Person

1. Shout "person overboard" and what side they fell over
2. Mark your position on GPS
3. Instruct others to watch the person and indicate or point to the overboard person
4. Throw floatation objects to the overboard person
5. Slow down the vessel and turn it toward the side the person went over
6. Maneuver the vessel to recover the person



7. Do not propell in close proximity to the overboard person
8. Try to recover person and then treat for hypothermia
9. Make a distress call if the person cannot be located or the operator has doubts about recovery

4.5 Oil/Fuel Spills

1. Identify and stop the source of the leak
2. Notify the marina for assistance
3. Call the U.S. Coast Guard National Response Center at 1-800-424-8802; report the location of the incident, the cause of the spill, the type of fuel spilled, the amount of fuel spilled, level of danger, and weather conditions
4. Call Oregon Emergency Management Division at (503) 378-2911 and 911
5. Notify risk@reed.edu

4.6 Distress Call

Ultimately, the operator decides whether or not to make a distress call. Common reasons for a distress call are a disabled vessel, serious injury, vessel is likely to sink or ship evacuation needs to take place. For a distress call, the operator should remain calm and state:

1. The reason for calling
2. The vessel name or description
3. The vessel location
4. Urgency

4.7 Physical, Slip, Trip and Fall Hazards

Watch out for oncoming vessels; always give way to vessels that intercept your course. Watch out for swimmers and divers; not all diving flags will be properly used. Watch out for wet surfaces on ship floors and especially on stairs, ladders and uneven surfaces. Maintain surfaces as dry as possible



Appendix 1: Checklist of Safety Equipment and PPE

Vessels must carry the following items while operating in coastal waters:

- One VHF radio or agency radio or cell phone
- Class I, II, III or V PFD, depending on the operation, for each person on board
- One throwable PFD for possible overboard person
- Signal flares, smoke flares and more than 3 day/night signaling devices
- Fire extinguisher
- Horn, whistle or any other audible signaling device
- Proper registration and documentation for the vessel
- Emergency Repair Kit and tools for required vessel
- First aid kits
- Navigational items - Compass, GPS and Depth Sounder
- Drinking Water

Vessels must carry the following items in exposed waters in addition to the previous items:

- 406Mhz EPIRB and satellite phone
- Immersion suits and exposure work suits
- Life raft
- Second engine/Kicker motor

Suggested Equipment as needed for operations:

- Alternate method of communication
- Personal locator beacon or a comparable emergency signaling device
- Anchors, Anchor line, and Sea anchor
- Oars or paddles
- Running and RAM lights as needed
- Bilge pumps, manual and electric if feasible
- Dock lines
- Boat hook
- Spare fuel and oil
- Spare parts including prop, nut, etc,
- Extra lines and tow harness
- Extra food rations
- Spare key and deadman clip



Appendix 2: Boating Management Emergency Procedures

General Procedures for Personnel Injury

1. Make contact with or rescue injured personnel
2. Establish ABC's: airway, breathing, circulation
3. Apply basic first aid
4. Determine severity and select the mode of transport whether that be self-transported, USCG or EMS
5. As applicable, contact land base, USCG Channel 16 VHF-FM or 911

General Procedures for Non-urgent Disabled or Damaged Vessel

Operator should suspend the mission and assess all conditions, then take appropriate action. The operator needs to communicate the situation to the on-land contact and maintain a routine communication schedule to monitor the situation.

1. If possible, try to minimize or correct the situation
2. Contact land base and describe current location, nature of problem, type of assistance needed, number of persons on board, and establish a communication schedule based on severity.
3. Contact USCG or other local assistance if needed. Inform them of previous information and also request notification of the land base that is holding your float plan.

Emergency Procedures: Collision, Fire, Flooding, Grounding or Crew Overboard

1. Operator must initiate any control measures to help prevent or minimize loss of life and the vessel
2. Contact USCG or local authorities through Channel 16 VHF and say the following:
 - MAYDAY, MAYDAY, MAYDAY
 - Location
 - Nature of distress
 - Vessel name, ID number and description
 - Number of people on board



Appendix 3: Training Sign in Sheet

Date: _____

Instructor: _____

Operators or Personnel: _____

Training Materials Used:

	Printed Name	REED ID	Signature
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Appendix 4: Float Plan

Name of Vessel and description:

Operator's Name: _____

Telephone #: _____

Local address: _____

Principal Investigator's Name: _____ # Passengers on board: _____

Passenger Names:

Contact #:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Area of Operations: _____

Type of Activity: _____

Point of departure: _____

Description of Tow Vehicle if applicable: _____

Departure Time: _____ Estimated Return : _____

Notification:

On Land Contact: _____

Telephone #: _____

If no contact is made with On Land Contact by: _____ (time) call the Coast Guard at _____ (number or VMF channel 16) or _____ (local authority, EMS, etc.) at _____ (number or VMF channel).



