

SAFETY

The Lake Guardian carries four 16-person life rafts located on the bridge deck. There are life jackets and survival suits in all berthing areas. Work vests or other approved PFDs, hard hats and steel-toe shoes are mandatory when working on decks. The Master is responsible for the safety of all personnel on board and may curtail, delay or cease all operations if, in his judgment, the vessel, personnel or equipment are in jeopardy. His rules and instructions must be followed by all personnel aboard.

Each stateroom and bunk contains a station bill which designates the emergency mustering location and duties for the persons in that stateroom. Located on the back of each stateroom door is a diagram showing the occupants of that room the quickest means of egress. You should become familiar with this diagram soon after being assigned your stateroom. Walk through all possible escape routes from your cabin, work area, and the lounge/galley areas when you arrive on the vessel.

Prior to every departure, the Master or First Mate along with the Chemical Hygiene Officer conduct abandon ship drills for all personnel on board. You will be instructed on how to abandon ship, how to "muster" in one location should a fire or emergency occur (in order to account for everyone), how to report a man overboard, how to operate a hand-portable fire extinguisher, how to deploy a life ring and how to don a survival suit and life jacket. For your safety, you are required to ensure that your life jacket and survival suit are in place near your bunk. You will also be required to watch a safety video,

Safety Rule: One hand for you, and one hand for the ship. This means that when carrying large or bulky items, you should always have one hand available and ready to grab a safe handhold in case the vessel suddenly rolls, or if you lose your balance. This may mean making several trips with your gear or asking a shipmate to help you. Similarly, keep safe handholds in mind so you can grab for them automatically if you must clutch for support.

The Chief Scientist or his designated representative will advise the Master of any sampling, launching, and streaming or retrieval activity required. The ship's cranes, winches, tools, rigging, etc. are to be operated **by ship's crew only**. Scientific personnel should direct all inquiries to the Master through the Chief Scientist in matters concerning work on deck, navigation, safe working parameters, use of ship's equipment, etc. In addition, the Chemical Hygiene Officer must be informed of all chemicals brought on board and all necessary Material Data Safety Sheets (MSDS's) must be provided.

Be aware! There are three emergency signals from the ship's whistle and general alarm:

FIRE EMERGENCY:	1 continuous blast of the alarm (10 seconds or longer) All scientists muster in the Lounge/Galley area and await further instructions.
ABANDON SHIP:	7 or more short followed by 1 long blast of the alarm All scientists will muster behind the Pilot House next to the rescue boat on the O-2 deck
MAN OVERBOARD:	3 prolonged blasts of the alarm (4-6 seconds each)

All scientists muster on the behind the Pilot House next to the rescue boat O-2 deck

DISMISSAL:

3 short blasts (1 second each)

Fire Emergency: If you discover a fire, notify the bridge immediately by dialing 300 on the intercom.

Abandon Ship: Drills are held before departure from port and are taken seriously. Scientific personnel are to muster on the O-2 deck during Abandon Ship and Man Overboard drills. For Abandon Ship drills, muster at the raft you were assigned; bring your survival suit and life jacket from your stateroom, as well as a hat and long-sleeved shirt and any medications you need to sustain life. Review your muster locations before the first drill and know how to reach them in the dark, using more than one route.

Man Overboard: Should you observe someone falling overboard, toss a lighted life ring or any other object that will float over the side and get word to the bridge. Located on the aft outside wall of the Wet Lab on the fantail is an emergency all-stop button, in the case of a man overboard. This button is directly wired to the bridge. If possible, try to maintain visual contact with the victim AT ALL TIMES; this will help the recovery effort.

The following are not permitted while on board the Lake Guardian:

SMOKING

Smoking is not permitted inside the ship. Smoking is only permitted in designated outside areas.

ALCOHOLIC BEVERAGES AND ILLEGAL DRUGS

Alcoholic beverages and illegal drugs in any form will not be consumed or brought aboard by any persons. Any personnel found to be in violation of this regulation will have the substance confiscated and upon arrival at the next port will be discharged from the vessel. Further, any person found to be in violation shall be reported to the local authorities and prosecuted to the full extent of the law.

FIREARMS

Firearms are prohibited onboard the R/V Lake Guardian at all times.

FUELING

There is absolutely no smoking allowed when we are taking on fuel. Whenever the vessel is taking on fuel, as evidenced by the red "bravo" flag flying by day, or by a red light on the mast at night, the smoking lamp shall be extinguished throughout the vessel. Announcements shall be made to further warn personnel when fueling operations are being conducted. When completed, the smoking lamp will be re-lit.

MEDICAL EMERGENCY

The Lake Guardian has a contract with George Washington Department of Emergency Medicine through the Maritime Medical Access (MMA) program to provide 24/7 access to physicians for consultations. When there is a medical emergency on board, the staff who tends to the emergency must notify the Master and he/she initiates a call to MMA via phone, fax, email and video. A board certified emergency physician is available on a twenty-four hour a day, seven-day a week basis to respond to medical advice

calls. The MMA physician provides consultation, assessment, and recommendation for treatment, determination of level of service and whether an evacuation is deemed necessary. The Lake Guardian has a medicine cabinet located in the Wet Lab that stores medications required for on board treatment by the MMA physicians. There are medically trained personnel (Mates, Chief Scientist, Marine Technicians) aboard the ship to deal with most emergencies and illnesses.

LAKE GUARDIAN SAFETY DRILL PROCEDURES

Prior to leaving dock, the following ship safety procedures will be performed...

- Captain will sound the signal indicating a safety drill.
- All hands will report to O2 deck with safety vest and survival suit from their room.
- Day visitors will report to O2 deck next to safety vest cabinet.
- All hands mean all ship crew, CHM, EPA personnel/contractors/grantees, and other visitors.
- First mate will lead safety drill:
 - All vests will be put on;
 - All ship's crew (including medical responders and CHM) will be identified by position and responsibilities in emergency;
 - Personnel will be assigned to life rafts;
 - All personnel will be instructed to review station bill;
 - Ship's signals will be tested (important because safety video is incorrect).
- Official drill is finished and ship can depart port.

Within 1 hour of leaving port the following safety procedures will be performed...

- New visitors will try on survival suit either on O2 deck or in wet lab depending on weather.
- EPA Chief Scientist will lead science meeting (safety will be emphasized).
- CHM will play safety video for new visitors and collect medical forms.

On a monthly basis, the following safety procedures will be performed...

- Man overboard drill.
- Periodic medical emergency practice exercises by trained responders with Marine Medical Access.
- Other drills (fire, chemical spill).

Protocol for when drill should occur...

- Anytime ship leaves port for a multi-day survey/trip.
- Anytime ship leaves the dock for a short trip with visitors.
- NOT needed for moving from dock to dock within a port for purposes of refueling, sewage, and/or safety – as long as all personnel aboard have experienced at least one ship drill.