

# Carnegie Lake Rowing Association Safety Manual

Updated: April 24, 2006

## PURPOSE

The purpose of the Carnegie Lake Rowing Association (the Club) Safety Manual is to establish, maintain and disseminate the Club's safety guidelines and ultimately ensure the safe operation of the Club at all times; i.e., all boat handling and on-the-water rowing at any facility that members use while sanctioned by the Club. The Safety Manual is maintained by the Safety Committee. The Policies and procedures in this manual shall be adhered to in all respects nevertheless; blind adherence shall not replace the exercise of sound judgment.

The Safety Committee is composed of a Safety Officer appointed by the Board of Trustees and other members of the Club as named by the Safety Officer and/or the Board.

Carnegie Lake Rowing Association considers safety to be the number one priority of all rowers, coxswains and coaches. The policies and procedures in this Safety Manual are written for everyone's benefit.

Throughout the manual the use of the following terms are as follows:

**Note:** An operating procedure, practice, or condition, etc., that must be emphasized.

**Shall:** A procedure that is mandatory.

**Should:** A procedure that is recommended.

**May or Need Not:** A procedure that is optional.

**Will:** Indicates futurity and never indicates any degree of requirement for application of a procedure.

## RESPONSIBILITIES

**All Members** (who participate in any Club sanctioned rowing activities) and coaches:

- **Shall** familiarize themselves with all the contents of this Safety Manual, the Carnegie Lake Rowing Association Member's Guide and any additional rules, safety guidelines and notices that the Club or Princeton University provides.
- **Shall** follow all of the Club rules and Lake Carnegie traffic patterns at all times.

- **Shall** follow the instructions of the Club coaching staff, coxswains and Safety Committee.
- **Should** consult a physician about engaging in any form of exercise, including rowing.
- **Shall** notify the Safety Committee, coaches and coxswains if they have any medical condition that could impair their ability to row or that requires special attention.
- With special medical/health conditions **shall** take appropriate precautions medications/devices in the boat while rowing (e.g., asthma inhalers).
- **Should** inform the session manager, coaches or a Safety Committee member of any unsafe condition or unsafe equipment they observe.
- Are encouraged to share any safety suggestions they may have with the Safety Committee.
- Who anticipate either rowing indoors or on-the-water during the year **should** attend the annual Safety Meeting.
- **Shall** ensure that rowing sessions do not commence or continue without a launch. No safety launch, no row! No crew/shell **should** be on the water with out a safety launch close by. A coach sitting in the coxswain's seat does not count as a safety launch!

### ***Safety Officer***

- Is responsible for ensuring the policies and procedures of this Safety Manual are followed.
- **Should** conduct an annual "Safety Meeting." Has the authority to cancel rowing activities at any time if it is deemed that policies and procedures are not being followed or if any unsafe condition exists.
- **Shall** ensure all members have acknowledged reading the Safety Manual before participating in on-the-water rowing activities.
- **Should** make sure that for each coach, rower and coxswain that there is on hand at the boathouse a record of the following:
  - Name, and date of birth
  - Address
  - Phone Number
- **Shall** ensure all rowing equipment is maintained with safety in mind and that unsafe equipment be prominently marked and removed from use.

### ***Coaches***

- **Shall** be responsible for knowing the number of boats on the water during a rowing session and that all boats have returned to the dock before ending the session.
- **Should** ensure that a Safety Bag is loaded on each launch.
- Ensure safe conduct of operations during a rowing session and that coxswains are observing the traffic patterns.

- Have the authority to cancel rowing activities at any time if it is deemed that procedures and policies are not being followed or if any unsafe condition exists.
- Are responsible for providing assistance to *any* capsized boat -- even if from another sport or a pleasure boat. Coaches are reminded to stop at a safe distance and offer assistance. Approach with caution and in a controlled manner. Be aware of your prop!

### ***Session Manager***

- **Shall** provide the coaches with a list of the boats scheduled to launch for the rowing session with a list of names of the crew of each boat.
- **Shall** ensure the Safety Bags are loaded on the coaches' launches.

### ***Coxswains***

See the section on Coxing and Boat Handling in the Member's Guide for additional information.

To help ensure the capability of our coxswains (most of whom are rowers rather than dedicated coxes), the Club **shall** hold a mandatory introduction to coxing clinic, emphasizing that a coxswain's first responsibility is safety.

The Coxswain Captain:

- **Should** conduct annual coxing clinics for new members and any continuing members who need a refresher.
- **Shall** review coxing performance to make sure everyone has the basic capabilities and thorough knowledge of safety procedures to keep the crew and boat safe. Occasionally, a coxswain may be relieved of coxing duty if s/he is deemed a threat to safety.
- **Should** ensure that all cox kits are properly equipped.

Coxswains:

- Are responsible for the safety of the crew, the shell and others around the shell from the moment the shell is lifted from the racks until it is returned to the racks.
- **Shall** ensure bow and stern ports/hatches are secure before launching.
- Ensure that a properly outfitted cox kit is in the boat when it leaves the dock.
- Ensure that heel tie-downs are in place and the heel of shoes can not be raised more than three inches.
- Are responsible for following the traffic pattern at all times. The coxswain is responsible for being aware of and avoiding other traffic, which may or may not be following the traffic pattern.

- When rowing at facilities other than Lake Carnegie, become thoroughly familiar with and adhere to the local traffic patterns and safety procedures.

### **Crew**

- **Should** not talk while the boat is moving: it makes it harder to hear commands and distracts the coxswain from their primary job: the safe guidance of the boat.
- **Shall** notify the coxswain immediately if they see a hazard or possible collision that they believe the coxswain does not see, or if the coxswain is in violation of adhering to the standard traffic pattern without explaining to the crew their intentions. An emergency supersedes the rule for a crew member not to speak in a moving boat!
- **Shall** inform the coxswain or coach if they believe they hear thunder or see lightning.

### **Rowing Shell Equipment**

It is the coxswain's responsibility that their shell **should** not leave the dock unless the following equipment is either installed or onboard:

- Bow ball.
- Coxswain kit bag.
- Quick-release shoes with Velcro closure and heel tie-downs.
- A sound making device (i.e. horn or whistle).

It is the coxswain's responsibility that their shell **shall** not leave the dock unless the following equipment is either installed or onboard:

- Working bow and stern light if launched in hours of darkness or the possibility exists the shell might not return to the dock before dark.

### **Lost Skeg**

If a shell has lost a skeg while on the water return to the dock immediately.

## **LIABILITY**

Liability insurance **shall** always be in force; if for any unforeseen circumstance there is a lapse in coverage all club activities are to be suspended. The Safety Officer is responsible for ensuring that the policy is in force.

Every member, guest and coach who participates in club-sponsored on-the-water rowing or erg sessions **shall** sign a USRowing-developed "**Release of Liability**"

every year (see <http://www.clra.com/memberinfo/experiencedmembership.htm>). The Club maintains a log of signed forms and the original signed copies.

## **WEATHER & OUTDOOR CONDITIONS**

The greatest danger while rowing is collision caused by limited vision or carelessness. Great care **should** be taken when rowing in darkness, near darkness or fog. Take extra care to look and listen. Minimize conversation. Be careful not to get too close to shore or known hazards. Since morning rowing activities often begin in the dark:

- We encourage all rowers to walk with a buddy and a flashlight from the parking lot to the boathouse.
- All boats launching during hours of darkness **shall** launch with a working bow and stern light.

When there is inclement weather or debris (e.g., lightning, wind, fog, cold, flotsam/jetsam), the Club conforms to USRowing standards as to whether it is safe to go on the water. Decisions to launch are made by the coach in consultation with the session manager.

### ***Cold Weather Rowing***

- Rowing when the water temperature is below 50F **should** be done with great consideration. Hypothermia is a swift and incapacitating killer that strikes when the combination of cold weather and moisture work to decrease the body temperature. It can take mere minutes before an adult is incapable of helping themselves once hypothermia has set in. Keep in mind you don't have to fall in the water to get hypothermia! Cold air temperatures and any moisture on the body (from being splashed, rain, sleet, snow) can lead to hypothermia (see Appendix A).
- The only true safety device or practice other than common sense is a support/coaching launch. In the event of an emergency a well-prepared safety launch can assist the individuals in question and transport them to safety. Even then hypothermia is an issue. All individuals should ask themselves before launching if being on the water is the best and only way to train. See Appendix A for information on hypothermia and other weather-related emergencies.

### ***Fog***

- Obviously limits visibility, but also mutes sounds. If caught in fog it is recommended that crews proceed with extreme caution and appropriately slower speeds in the direction of the boathouse. Be prepared to stop quickly. If the fog is too extreme it may be better to sit still. Be sure to

make some noise so that others on the lake can be alerted to your presence. Do not assume fog that appears to be thinning **will** continue to do so!

### ***Lightning/Thunderstorms***

- Very dangerous. Crews **shall** return immediately to the dock, or proceed immediately to shore if the boathouse is too distant. There does not have to be rain or thunder to have lightning. If the sky begins to look bad, it probably is.

### ***Alternative Docking Sites***

In the event of a sudden weather or other emergency, rowers and coaches should know where there are alternative docking sites on Lake Carnegie, including Jim Millar's dock at the 2500 meters to go mark on the race course and the sailboat house dock at the 250 meters to go mark.

## **ROWING SESSIONS**

The Club will schedule rowing on Lake Carnegie from late March through Thanksgiving.

**All sessions** – indoor and outdoors – **shall** be scheduled, organized and supervised.

Club members **should** only use the ergs and rowing tanks at the Princeton University boathouse during supervised rowing sessions.

### **During rowing sessions on Lake Carnegie:**

The ratio of boats per coach **should** be no more than three, but **shall** never exceed four boats per coach.

All boats **should** remain with the responsible coach/safety launch at an appropriate distance so that they can be supervised/observed and immediate assistance can be rendered if required; **USE SOUND JUDGMENT.**

Normally there **will** not be more than six sweep boats on the water during a regular session.

The Club **will** follow Princeton University's traffic patterns (described elsewhere in the Member's Guide) on the lake.

Members and guests (who are high school age or older) who have signed a waiver may ride in a launch with the coach's permission. Riders **shall** carry a life preserver.

### ***Safety in the Boat***

- Before entering the boat ensure all outboard oars are on the water.
- Rowers **should** be quiet and attentive to the coxswain or coach.
- Rowers **shall** comply with instructions given by the coxswain or coach.
- Rowers normally **should** keep at least one hand on the oar while on the water.
- After docking do not pull an outboard oar in until everyone is out of the boat.
- Oarlocks **shall** remain locked until everyone is out of the shell.

### ***Man Overboard***

- Anyone can give the command: "Weigh enough, hold water!"
- The stroke removes their oar and gets it to the person in the water.
- Crew **should** try to ascertain if the "man overboard" needs immediate assistance. Another rower may be required to enter the water to assist the "man overboard".
- Person in the water **should** lie across the oar and remain close to the shell.
- The launch picks up the person and the coach determines if the rower returns to the shell.

### ***Rower Injured/Equipment Broken***

- Anyone give the command: "Weigh enough, hold water!"
- Coxswain signal launch for help if assistance is needed.

## **SAFETY MATERIALS, PRACTICES & PREPAREDNESS**

The Club owns Safety Bags that **shall** go out on the coaches' launches at each session. Each bag contains:

- Mobile 911 Phone
- First Aid Kit in Waterproof Box
- 11 USCG-Approved Personal Flotation Devices Type II
- Hand Bilge Pump
- Rescue Throw Bag
- Waterproof High Intensity Flashlight
- Air Horn
- 10 Emergency Mylar Rescue Blankets

- Fire Extinguisher
- Safety Whistle

*The session manager **shall** be responsible for ensuring the bags are loaded onto the coaches' launches prior to an on-the-water session.*

If someone's health or life is in danger on the water, coaches or anyone **shall** call **911**, using either their own cell phone or the 911-phone in the Safety Bag.

On land, use the nearest available phone. There is a blue-light campus security phone (by the boathouse shop door) that is used for emergencies.

The Club maintains **CPR-AED** certification for our coaches and a select group of active members. There is a defibrillator in the erg room available for use in the case of an emergency.

The Club maintains a first aid kit in the boathouse bays in our cox box area.

All members **should** be cognizant of basic safety practices – including hydration, blood on the oar handles, dressing appropriately for the weather. The Club recommends that rowers and ergers warm-up and stretch before indoor or on-the-water rowing, especially in the morning.

The Safety Committee **should** provide a safety tip of the month in our electronic newsletter, *LakerNotes*. These tips are also available on our website.

In the event of emergency on the water, we follow the procedures on the USRowing safety video (which all members **should** view):

- Swamping: stay with the boat (See appendices B&C)
- Use oars as flotation devices

All members who participate in any on-the-water rowing **shall** complete a **swim test**, certified by an accredited lifeguard. The Safety Committee is responsible for ensuring currency.

Individual members are responsible for their own **medical clearance**; the Carnegie Lake Rowing Association waiver clears the Club of liability for individual members.

## **COMMUNICATIONS & COMPLIANCE**

Our **safety procedures and policies are documented** on the Club website [www.clra.com](http://www.clra.com) and in the Member's Guide also available on the website.

**Members are required to comply** with the procedures and policies in this Safety Manual. Failure to comply **may** result in: a warning, possible suspension of rowing privileges or, in extreme cases, revocation of membership.

## Appendix A: Weather Related Health Emergencies

### Hypothermia

Hypothermia is a condition that occurs when the temperature of the human body is lowered to a dangerous point due to exposure to cold and/or wet conditions. Cold temperatures and wet conditions work together to pull heat away from the body lowering the body's core temperature. Even in mild conditions, the addition of rain or submersion in cold water and can sufficiently reduce body warmth to trigger hypothermic conditions in the body. A person's condition can degrade rapidly impairing breathing and coordination making it impossible to swim or keep one's head above water. Emergency action needs to be taken no matter what the level of hypothermia.

#### Early Hypothermia

Symptoms: rapid shivering, numbness, loss of strength and coordination, semi-consciousness.

Action: Maintain open airway. Transfer to a warm environment as soon as possible. Remove wet clothing. Use blankets to help warm individual or if available a warm shower. Warm torso area first. Seek medical attention

#### Profound Hypothermia

Symptoms: Person will be pale, stiff, and cold. Unresponsive to stimuli, and possibly unconscious. Little or no cardiac or respiratory activity will be present.

Action: Move or manipulate as gently as possible. Prevent further heat loss, but Do Not attempt to rewarm. Maintain open airway, and activate EMS procedures. Call for emergency help immediately!

### Heat-Related Emergencies

Higher temperatures and high humidity can lead to heat-related illnesses that coaches and rowers need to keep in mind. As humidity rises, the body's ability to cool off through sweating is diminished since evaporation is limited. The best way to avoid heat-related injuries is to practice at cooler times of the day: early morning or late afternoon. The body needs time to acclimate to increased temperatures. Intake of fluids is also key and **should** be encouraged. Dehydration further impairs the body's ability to cool off. There are two major heat-related illnesses to be aware of: heat exhaustion and heat stroke.

#### Heat Exhaustion

Early Symptoms: heavy sweating, cramps, tiredness, weakness, malaise, mild decrease in performance.

Action: rest and fluid replacement.

Advanced Symptoms: profuse sweating, impaired judgment, emotional changes.  
Action: If there is mild temperature elevation, an ice pack may be used to help cool the body to normal temperatures. Several days rest may be necessary and rehydration is a priority.

### **Heat Stroke**

Symptoms: confusion, nausea, vomiting, seizures. The victim loses consciousness. Body temperature rises as high as 106. Skin is dry and clammy.  
Action: Get medical help immediately! Lower body temp by immersing in water, maintain horizontal position of victim. Stop treatment when victim is conscious.

## **Appendix B: Capsize Procedures & Person Overboard**

**NOTE**: It is the responsibility of any coach boat to provide assistance to any capsized boat -- even if from another sport or a pleasure boat. Coaches are reminded to stop at a safe distance and offer assistance. Approach with caution and in a controlled manner. Be aware of your prop!

All crew members **should** be fully aware of what actions to take when a crew swamps, flips or capsizes.

### **NOTE**

**If rowers egress from a swamped boat -- STAY WITH THE BOAT.**

Shell Damaged and NOT Sinking

- Immediate command: "Weigh Enough!"
- Make adjustments and signal launch for assistance.

Shell Swamped

A shell is swamped when the interior water reaches the gunwales. If rowers stay in the boat, the floatation ends (bow and stern) may cause the boat to break apart.

If the shell is swamped or taking excessive water, with rescue imminent:

- Immediate command: "Weigh Enough!"
- Coxswain directs rowers to untie, signals launch and unloads rowers by pairs -- starting in the middle of the boat -- as soon as possible in order to avoid damage to the boat.
- Pairs **should** form "buddies" and keep a watch on each other. The coxswain **should** buddy with the stern pair.

- Until otherwise directed by the coach in the launch, **STAY WITH THE BOAT!**

If rescue is not imminent, take the following steps:

- Remove oars or place them parallel to the shell. The bow four **should** move to the bow of the boat and the stern four with the coxswain **should** move to the stern of the boat (it is dangerous to roll a shell when near the riggers).
- Attempt to roll the boat in order to form a more stable floatation platform so that rowers can either lie on top of the hull or buddies can hold each other across the hull.
- **DO NOT** attempt to roll the boat if rescue is on the way. However, be aware that body heat loss occurs as much as 25 times faster in the water.
- The launch **should** shuttle rowers to the nearest shore. Be careful not to overload the launch.

In any of these events the crew **should** remain with the shell! The shell normally will float (an important reason to close bow and stern ports before going on the water). Furthermore the oars will act as flotation devices. If for some reason the shell sinks below the surface, the shell **should** be rolled so the bottom is facing the sky, as this traps air underneath the shell and increases buoyancy. At no time **should** any crew member leave the boat to swim to shore! A short swim can be far longer than it appears due to currents, wind, water temperature, or personal fatigue.

Stay calm. The first thing that **should** be done in a team boat is for the coxswain or bow person to get a head count and make sure all rowers are accounted for. The crew, while holding onto the shell, **should** attempt to get the attention of other crews or coaches on the water. Wave and make as much noise as is necessary to attract attention. If no crews or launches are on the water nearby, the next step is to attract the attention of people on shore.

If the water and air temperatures are low, then the crew members **should** move along the shell and huddle together in pairs near the middle of the shell. Effort **should** be made to keep as much of the body out of the water as possible. This can include draping ones' self over the top of the hull. A minimum of movement is the key to retaining body heat. Constantly check on crew mates and keep up one-on-one communication.

To recap procedures:

1. Stay calm.
2. Stay with the shell.
3. Take a head count.
4. Pair up and keep communicating with each other.

5. Attract attention of launches, crews or people on shore.
6. If need be, roll shell over and drape the body across the hull (sinking shell or cold conditions).
7. Wait for help.

### Person Overboard

All crew members **should** be fully aware of what actions to take when there is a person overboard.

A violent crab by an oarsmen can throw him/her out of the boat. In this situation, it is up to the ejected rower to stay below the surface of the water till the shell has passed (this avoids getting hit in the head by a fast moving rigger(s)). The crew **should** stop rowing and hold water immediately so they can lend assistance. The crew **should** get the attention of the coaches' launch while the rower treads water. In the event that a launch is not nearby the crew can back up to the rower in question so the rower can use the shell as a floatation device. It is also feasible to pass an oar to the ejected rower, using the oar as a floatation device. Once removed from the water, the rower **should** be evaluated to determine if the rower is fit to continue or if a medical emergency is present.

## Appendix C: Recovery of a Flipped Shell

Once all rowers who were involved in a capsize or swamping incident are accounted for and properly taken care of, the next step is to recover the shell. Not only is this a valuable piece of gear, but it also creates a traffic hazard for other users of the lake. There are very definite steps to go about getting a shell back to the house and out of the water without creating additional damage. First and foremost, slow down and assess the situation. One person needs to be in charge of the operation and give out direction to other helping parties. Then identify approximate wind speed and direction, current speed and direction, and other hazards. Once these details are in hand, decide how best to move into position to work on the shell. Move slowly! First, recover all gear that has floated away from the shell (e.g., loose oars, coxboxes, speed coaches, etc.), because recovery at a later time can be difficult. Clothes from the crew are secondary unless needed for emergency survival. An 8 or possibly even a 4 may require two launches and experienced coaches. Determine if the shell is in danger of fully sinking due to damage. Then proceed: If the shell is not already keel down, roll it so it is. Before doing so, remove the oars unless they are acting as floatation for a severely damaged shell. Loop a line through the bow or stroke seat foot stretcher and fasten securely. Alternatively, a line can be attached to the stern- or bow-most riggers (i.e., bow pair). Next, equalize and center the line by looping it around the bow or stern (depending on which foot stretcher you tied off to) and secure. Do this several times. Lead the remaining tow line out and attach to the stern of a launch. At a slow and controlled pace move the launch

away and towards the destination. As the launch gets underway make sure that the prop is clear of the tow line.

Once the shell is back at the dock, the real work begins. Get as many people along the shell as possible as this will be heavy work. Make sure that everyone lifts from the legs and not from the lower back. Everyone will lay hands on the shell and lift very slowly so that the dock side gunnel tilts up and the water side gunnel tilts towards the water. The idea here is to slowly drain as much water out of the shell as possible before attempting to lift the shell out of the water all the way. The water side gunnel will still be in contact with the water. As people lift, the keel will be oriented so it is parallel to the dock. Once a significant amount of water has been drained in this manner, the shell can be lifted in a regular fashion. Alternatively, the shell can be placed back in the water and a water pumping device can be used to remove more excess water. The shell will still be heavy with water! Be careful. The shell must now be lifted over heads. First open the bow and stern deck ports. Alternating bow and stern, drop one end as low as possible while keeping the other end at heads. This will drain any excess water that is trapped in the boat. People will definitely get wet during this process, so make sure they have rain gear or extra clothing to change into during cold weather times. The same basic procedures for towing the shell can be used for moving a slightly swamped shell (gunnels above water), or dry shell as well.