INTRODUCTION

The following document and map designate standards for Charles River traffic patterns, and safety procedures for rowing and sculling shells, and accompanying coaching launches. These safety standards are not intended to constrain workouts, but rather to ensure a safe training and recreational environment for all. It is believed that a common understanding of how rowing shells will use the water sheet will result in calm practices, and the ability of the water sheet to handle increasing volume without incident.

The Charles River Alliance of Boaters committee represents private boat clubs, university and high school rowing organizations, and signals their commitment to maintaining a safe and cordial rowing environment on the Charles. The committee assists in addressing safety issues among constituents, fosters a broader community among the various clubs and programs, and serves as an information-sharing / coordination body for projects affecting the water sheet.

CRAB serves as a coordinating, rather than a governing, body. Rowing organizations on the Charles are expected to train, monitor and enforce these standards with their own crews and scullers on their own honor. The committee provides a mechanism for achieving a common understanding of how to safely use our precious resource together.
I. CHARLES RIVER TRAFFIC PATTERNS FOR ROWERS

This traffic pattern applies to all crews and scullers using the Charles River from the Newton Yacht Club to the Charles River Dam. Refer to the accompanying map for visual representation.

The Rowing Traffic Pattern does not conflict with Coast Guard regulations for water sheet use, but is in fact more strict in its traffic requirements. However, note that other water craft, especially power boats, may follow different traffic patterns as designated by the Coast Guard. Significant differences in the traffic flow exercised by power boats, such as using bridge arches bi-directionally, are noted in this document to make rowers aware of potential conflicts. It is also important to note the difference in rate of speed achievable by each of the different water craft, which results in differing ability to maneuver around each other. Caution in passing recreational craft is recommended.

General Principles
The following general principles apply at all times, in pressure pieces and on the paddle, with coaches and without.

- **Courtesy and civil language** are appropriate at all times.

- **Communication is essential.** Coaches should communicate with other coaches, coxswains and scullers, as well as all other water craft, including dragonboaters, canoers / kayakers / paddleboarders and powerboaters to direct traffic if necessary. Rowers should allow power boats to pass when possible, and communicate as best they can when it would be best to pass.

- **Stay to the right-hand side** of the river at all times, with starboard blades to shore, except in the basin as per below. Keep both boats and blades on the right third of the river as if it were a 3-lane highway. Stay right on turns, and **do not cut corners**.

- **Move to shore to stop or drill**, out of the regular traffic flow. Avoid stopping or turning in designated trouble spots (**see caution symbol on map**).
• Overtaking boats shall pass to port at all times - race rules of choosing the side to pass apply ONLY during a formal race. Boats being overtaken shall move to shore as soon as is safely possible. While both parties are responsible for avoiding contact, overtaking boats may not force other shells to stop, and must be prepared to wait to pass, so as to avoid contact. Boats approaching in opposite directions shall pass port to port.

• Coaching launches shall be aware of traffic in both directions, and shall move to shore to allow overtaking boats to remain on the correct side of the river.

• Turn quickly to rejoin general traffic flow; do not angle across, or stop perpendicular to traffic. Turn only in locations that allow good visibility in all directions; avoid turning near bridges and sharp turns.

• All coaches and rowers are requested to stop and render assistance when there has been an incident. While liability may be decided later, the immediate need is to ensure the safety of all involved.

• All boathouses and coaches are requested to accommodate rowers endangered by extreme weather; rowers shall use good sense, USRowing guidelines or specific boathouse rules to determine safe conditions to launch.

• Rowers shall keep in mind that power boats are constrained by depth. Smaller power boats may stay to the right of the river center, but larger boats must follow the deep water down the middle in both directions. They are also constrained by height at bridges, which varies with the water level, and often use arches bi-directionally. The deep water channel on bridges is marked with navigation lights.

General Traffic Flow
The traffic pattern is described from Watertown to Boston in both directions. For all bridges except two, traffic is limited to one-way only in each individual arch; rowers use right-hand
arches except where noted. Arches are counted in each direction from the shore towards the center of the river. **Note that heavy traffic, bad water or the presence of a launch is no excuse to use the wrong side or arch at any time.**

**Newton Yacht Club Channel:** Upstream crews and scullers shall stay to the north or Watertown side of all channel buoys, being careful of the shallows close to the river’s edge. The channel between the buoys is reserved for downstream traffic, and is used by power boats. Crews and scullers are urged to proceed with caution near the docks for Community Rowing (CRI), the vast majority of whose coxswains and scullers are novices. Coaches are asked to be judicious in their use of power megaphones in the early morning in this residential neighborhood.

**DCR (CRI) Boat Launch Ramp:** All crews and scullers should be aware of motor boats launching or landing. Downstream crews and scullers shall stay clear of the ramp without interfering with the upstream lane.

**North Beacon Bridge:** Downstream crews and scullers shall use the right-hand arch. Upstream crews and scullers shall prefer the right-hand arch, but may use the center arch if the shore arch is obstructed. Upstream crews and shells using the center arch shall make an immediate course correction back towards the shore upon exiting the bridge to avoid downstream crews.

Smaller powerboats use the right hand arches. Large powerboats use the center arch bi-directionally.

**Arsenal Bridge:** Crews and scullers shall use the right-hand arch in each direction. Upstream crews shall be wary of shallow depths near the marshes just downstream of the bridge.

Powerboats use the right hand arch in either direction, though some larger power boats may need to use the Watertown arch bi-directionally.

**Eliot Bridge:** Upstream crews and scullers shall use the center arch to avoid crews launching from Cambridge Boat Club, BB&N and Belmont Hill. Downstream crews and scullers shall use the right-hand arch.
Smaller powerboats use the right hand arches. Larger powerboats use the center arch bi-directionally.

Just downstream of the bridge is the Eliot turn. Downstream coxswains shall use their rowers to keep a tight course to shore, and exercise extreme caution in multiple boat situations. Upstream crews and scullers shall stay to starboard (Cambridge) to leave room for downstream boats for whom this turn is a challenge.

Anderson: In each direction, crews and scullers shall use the right-hand arch. The center arch is for upstream crews and scullers only to avoid boats launching from Weld Boathouse.

Smaller powerboats use the right hand arches. Larger powerboats use the center arch bi-directionally.

Weeks Footbridge: Downstream crews and scullers shall use the right-hand arch, turning sharply through the bridge to starboard (Boston) to avoid upstream crews. Use care along the Boston shore to avoid rocks when the water level is low. Upstream crews and scullers may use the right-hand or center arches, while not crossing the center line.

Smaller powerboats use the right hand arches. Larger powerboats use the center arch bi-directionally.

Powerhouse Stretch / Western Ave. and River Street Bridges: This area is used heavily by crews racing side-by-side, for high school and club races, and seat racing. Racing crews and scullers have right of way in this stretch. All crews and scullers, upstream and downstream, must use the right-hand arches of both bridges, going single file if not racing. The center arches are two-way to accommodate racing, with one boat in the right-hand arch, and the other to the right-hand side of the center arch. Racing crews and scullers shall use the center arches ONLY if the right hand arches are concurrently used, and preferrably with a coach.
Note that both ends of the race course cross over onto the wrong side of the river. Crews turning shall proceed well into the corners at the Weeks Footbridge (Cambridge) and the Railroad Tracks (Boston), being alert for and notifying approaching crews. Coaches are urged to choose their time openings carefully and proceed expeditiously.

EXCEPTION: From Labor Day through Thanksgiving at all times, the center arches of Western and River Street bridges are upstream only, to accommodate crews and scullers training for the Head of the Charles regatta. However, rowers are discouraged from using the port-most (Boston) side of the center arch.

Smaller powerboats use the right hand arches. Larger powerboats use the center arch bidirectionally.

Riverside Boat Club & Powder House: Upstream crews and scullers shall move slightly off the Cambridge shore to avoid crews launching and landing at Riverside Boat Club, as well as shallow water and rocks. However, use care to avoid crossing the center line of the river.

Downstream crews and scullers shall shift to starboard (Boston) downstream of the River Street bridge in approaching Riverside, to avoid contact with upstream crews passing Riverside dock. Steer parallel to the shore, and exercise extreme caution in multiple-boat situations. Do not cross the center line by cutting the port turn at the Powder House.

BU Bridge and Boathouse: Upstream crews and scullers shall use the second arch from (Cambridge) shore, as the shore arch is shallow. Downstream crews and scullers may use the second or third arches from (Boston) shore to avoid sailboats launching from the BU sailing pavilion.

Small powerboats use the second arch from Cambridge while heading upstream, and any of the Boston arches while heading downstream. Larger powerboats use any of the Boston arches bidirectionally due to height / depth restrictions.
Extreme caution is required when approaching the lower basin near the BU Boathouse. This area is the busiest on the river, where Union and MIT lanes cross regular traffic patterns, and crews are turning to begin Head of the Charles pieces or 2000m race pieces in the basin. Crews and scullers pausing in between pieces shall do so downstream of the boathouse where the river widens on both sides, but before the Union and MIT lane crossovers, and pull to shore. Noting that the Head of the Charles course begins at the downstream corner of the BU balcony, racing crews and scullers shall line up at least 50m downstream of the boathouse sufficiently out from shore to have a straight point through the second (Cambridge) arch, to avoid the MIT lane.

Basin and Mass. Ave (Harvard) Bridge:

The basin is divided into unequal thirds, with lanes along both shores designated as upstream only, and the center of the river designated as downstream only.

Upstream crews and scullers shall follow the 6 lanes designated for the 2000m race course along the Cambridge shore, pointing at the targets through the arches that mark lanes 3-4-5. The wide, painted arch (6th arch from Cambridge) comprises lanes 3-4; the narrow arch (7th arch) to its left contains lane 5; the narrow arch (5th arch) to the right of the painted arch contains lane 2, and the next wide arch (4th arch) toward the Cambridge shore marks lanes 0-1.

The two arches to Boston of lane 5 of the race course (8th/9th from Cambridge) remain unused in either direction, to avoid any accidental cross-over of lanes in this area of poor visibility.

Upstream crews and scullers shall not steer further right (Cambridge) than lane 0 to avoid the MIT Lane. Crews and scullers warming up shall restrict themselves to the shore lanes 0, 1 and 2 to let through traffic pass to port in lanes 3, 4 and 5. Crews and scullers doing full 2000m race pieces have right of way over crews and scullers doing shorter pieces on the race course.

Upstream crews and scullers may alternately use the Union Lane along the Boston shore, which runs up the second and third arches from the Boston shore, from the lagoon at the Hatch Shell to the 2000m finish line at the Hyatt. The fourth and fifth arches from the Boston shore remain unused in either direction to avoid accidental cross-over of lanes.
Downstream crews and scullers shall proceed down the center of the basin, using the 8 arches from the 4th arch to the left (Cambridge) through the 4th arch to the right (Boston) side of the lighted platform. Crews and scullers warming up shall keep to the right-(Boston) most of these downstream lanes, leaving the left lanes to port open for through traffic to pass.

Downstream crews and scullers taking extended 2500m pieces shall proceed well into the corner at the Longfellow bridge, and must exercise extreme caution when turning upstream so as to merge properly with other upstream crews emerging from the bridge. Boats must also be alert for Union crews exiting from the lagoon near the bridge.

Small powerboats may use any right hand arch of the Mass Ave bridge. Larger powerboats use the deepest water toward the middle, or use the marked channel at the lighted platform bidirectionally.

**Longfellow (Salt & Pepper):** Both downstream and upstream crews and scullers shall use the arches to the right of the center arch. The center arch between the towers is not used to avoid crews crossing over.

Smaller powerboats may use right hand arches. Larger power boats use the center arch bidirectionally.

**Special Lanes**
Several areas on the river have special traffic patterns to accommodate crew safety, which require special attention by all crews approaching these areas.

**MIT Lane:** The MIT Lane allows crews to launch and land from the MIT Boathouse without crossing the race course. The lane extends out from the Cambridge shore to the outer boundary of the MIT Boathouse, and crews passing upstream on the race course shall stay left outside of the shadow of the building. It extends from the MIT Boathouse to the 2000m finish line at the Hyatt, where MIT crews rejoin the regular traffic patterns. **Crews and scullers in the lower basin must watch for MIT boats crossing in and out of this lane.**
**Union Lane:** The Union Lane allows crews and scullers to head upstream along the Boston shore, to avoid crossing the basin. There are a variety of reasons why this is necessary; thus, this lane is **upstream only at all times.** The lane includes the 2nd and 3rd arches from the Boston shore (the shore arch is impassable), and runs from the lagoon at the Hatch Shell to the 2000m finish line at the Hyatt, where upstream crews and scullers shall cross quickly to the Cambridge shore. Rowers shall be alert for sandbars in this lane at low river levels near the mouth of the Muddy River. **Crews and scullers in the lower basin must be alert for boats crossing out of this lane.**

Note that both the MIT and Union lanes terminate just upstream of the 2000m finish at the Hyatt, with crews crossing out of them at that natural stopping point; all rowers must exercise caution in that area.

Note that the Esplanade lagoon, which is generally accessible only to single sculls, is a **no pressure zone.** Scullers must be constantly alert for scullers and other recreational craft approaching in the opposite direction.
Launching and Landing at Boathouses

All crews and scullers must launch and land following the procedures listed below, designated as the safest for that particular location. Note that in all cases, through traffic has the right of way over launching and landing craft.

**Community Rowing:** Crews and scullers launch and land heading downstream; a few docks involve turning perpendicular to shore. Landing crews shall proceed upstream to the blue buoy at the top of the Newton Yacht Club, and turn downstream to land.

**Henderson (Northeastern) Boathouse:** Crews and scullers launch heading downstream, and may land heading upstream or downstream, taking care to cross over expeditiously.

**Belmont Hill Boathouse:** Crews launch and land heading upstream.

**BB&N Boathouse:** Crews and scullers launch perpendicular to shore.

**Cambridge Boat Club:** Crews and scullers launch and land heading upstream, with a few perpendicular slots. Boats landing after coming downstream through Eliot Bridge must be alert for crews heading upstream before crossing to land.

**Newell (Harvard) Boathouse:** Crews and scullers launch and land heading upstream or downstream, taking care to cross over expeditiously.

**Weld (Radcliffe) Boathouse:** Crews and scullers launch and land heading upstream. Boats launching to go downstream shall pass expeditiously through Anderson Bridge and turn at Newell for best visibility.

**Riverside Boat Club:** Crews and scullers launch and land heading upstream.

**BU Boathouse:** Crews and scullers launch and land heading upstream. When basin traffic is heavy, boats launching to head downstream are encouraged to proceed expeditiously through the BU Bridge and turn at Magazine Beach.

**MIT Boathouse:** Crews and scullers launch heading upstream, and must proceed upstream through the MIT lane to the finish line before turning downstream, to avoid crossing the race course. Crews and scullers land heading downstream using the MIT lane.

**Union Boat Club:** Crews and scullers launch from the dock in either direction, exit the lagoon from the downstream opening, STOP to check for oncoming traffic, and cross the basin expeditiously to lanes 0-2 to head upstream. Boats landing enter the lagoon from either opening and land in either direction.
Charles River Race Courses

The following race courses are used regularly by crews and scullers throughout the rowing seasons. As racing crews and scullers have priority on the courses on race day, hosting programs are urged to post, and crews and scullers are urged to consult, the race schedule, and must assume that any of the available racing lanes may be used.

Race hosts are urged to forward copies of the Charles River Traffic Standards to race participants, and are strongly urged to designate formal warm-up patterns that conform to these standards. Race hosts are also encouraged to buoy their race courses to assist in communicating their presence. Local crews and scullers are particularly urged to be aware of visiting crews on race days; visiting crews are requested to respect local traffic patterns.

Visiting crews are requested to schedule their practice outside of the 3:00 – 5:30 pm window during which sailing practices utilize the first 1000m of the 2000m race course.

Collegiate 2000m Course: The 2000m race course is used extensively by college crews on Saturday and Sunday mornings from March through May, with races beginning as early as 6 am and continuing through the morning, followed by extensive collegiate sailboat racing. The race course allows for 6 lanes, described above as Lanes 0 – 5, running upstream on the Cambridge side of the basin.

The starting line is marked by orange stripes on the overpass on the Cambridge side, roughly 100m upstream of the Longfellow Bridge. On the starting line, crews shall position themselves by pointing at the orange targets through their designated arch on the Mass Ave Bridge, to ensure a straight course. Note that on race days, stake boats are anchored here to facilitate fair starts. Painted stripes on the Cambridge wall at the MIT sailing pavilion (500m), the Mass. Ave Bridge (1000m) and MIT boathouse (1500m) mark the 500’s. The finish is marked by white stakes on the Cambridge shore just downstream of the Hyatt hotel. On race days, finish line personnel use red flags to mark boat finishes.

High School Varsity Course: The Varsity High School course is used Wednesday afternoons and Saturdays throughout the spring. The race course allows for 3 lanes running downstream on the Boston side of the Powerhouse Stretch. The starting line is marked by florescent orange stakes
on both the Cambridge and Boston side of the river, roughly 100 meters downstream of the Weeks footbridge, with a floating start for racing crews. The course proceeds downstream to the finish line, roughly 500 meters downstream of the Riverside Boat Club dock on the Cambridge shore, near the upstream side of the stone wall along the Magazine Beach Powder House. Riverside Boat Club uses a similar course for summer regattas.

Note that the high school race course follows a straight line downstream through the Powerhouse Stretch, thereby crossing the center line of the river downstream of the River Street bridge. All non-racing crews and scullers must use extreme caution in passing through this area during races.

**High School Junior Varsity Course:** This course begins slightly downstream of the Northeastern Boathouse. The start is marked by a fluorescent orange stake on the Boston/Brighton side of the river about twenty-five meters from the Northeastern Boathouse. From the start, the course runs approximately 700 meters downstream to slightly above the Belmont Hill Boathouse. On race days the finish line will be marked with a floating flag. Crews and scullers shall use extreme caution approaching this race course, as all racing boats are novice rowers and coxswains.

**Head of the Charles Regatta 5000m Course:** Crews interested in the Head of the Charles Regatta course are referred to the regatta website for detailed specifications: [www.hocr.org](http://www.hocr.org). Given the vast numbers of participants, crews and scullers shall closely observe the designated warm-up and warm-down procedures set forth in regatta documentation, in particular in the days just preceding the regatta. Note that the official HOCR race pattern, which takes effect on a designated day prior to the regatta, may differ from standards set forth in this document, and are valid ONLY during the specified dates of the regatta.

**Tail/Foot of the Charles Regatta 2.5 Mile Course:** Novice crews participate in their own head-style race in the middle two Saturdays in November. The start is marked by an orange buoy at the MIT Boathouse, to be passed on the port side, and proceeds upstream using the standard traffic patterns described above, including a buoy which must be passed on port at the Weeks Footbridge. The finish is marked by another orange buoy at Newell Boathouse, to be passed on
the port side. Specific warm-up and warm-down rules ensure the safety of the large number of novice participants; these are provided to crews upon entering the regatta.
ROWING EQUIPMENT

Blades
All organizations shall paint blades in their designated pattern, and require that private equipment owners follow suit, to make a crew’s affiliation known to others.

Shell Lights
Appropriate lighting for shells is essential for safety, as practice hours are constrained much of the year to dawn, dusk and darkness. Shells launching before or after sunrise must be properly illuminated in a manner consistent with MDC and Coast Guard regulations.

Two lights – marking bow and stern – are necessary for proper illumination of all shells, including single sculls, to ensure visibility by approaching crews from either direction. Lights shall be attached to the boat rather than the crew to ensure constant visibility. Clubs or university programs must provide lights on club equipment, but may require that private shell owners provide their own.

- **Bow light** should be red / green (port / starboard), and be attached to the bow marker clip or forward point of bow washbox well in front of the bowman. Flashing or strobe lights are NOT as visible as solid lights, and are not acceptable, except as a secondary source of illumination.
- **Stern light** should be white, and be mounted aft of stern washbox or mounted above stern of boat.

Clothing
Rowers are urged to wear high visibility clothing with reflective strips to enhance visibility to others. In foggy conditions, darker clothing is more visible, while at dawn or dusk, lighter clothing is best.
The table below indicates **daylight times** for the calendar year. Crews on the water before or after these times must be properly illuminated.

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<thead>
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<th>Date</th>
<th>1st-10th</th>
<th>11th-20th</th>
<th>21st-31st</th>
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- End / beginning of daylight savings time
I. COACHING LAUNCHES

The following guidelines pertain to coaching launches on the Charles River. Each rowing organization is responsible for ensuring that all coaches comply with them. *These guidelines supplement, but do not replace, US Coast Guard Regulations for small boats.*

**General Launch**

It is the responsibility of each program to be sure that all launches have current registration, and display the registration numbers and up-to-date stickers in the appropriate places. As for shells, launch affiliations must be clearly marked by name or blade pattern.

Communication between all launches and crews or coxswains is essential, particularly when overtaking others or turning. Coaches and coxswains should not be shy, when safety is in question, in communicating their position to other crews and coaches.

**Launch Traffic Pattern**

Coaching launches shall follow the same traffic pattern as the crews being coached. When traffic or river depth necessitate moving to the left side of the river, coaches must exercise extreme caution and concentrate on the traffic ahead rather than on coaching. Coaches must be aware at all times of traffic approaching from either direction, and shall move to shore to allow overtaking boats to remain on the correct side of the river.

Coaching launches approaching crews in either direction shall reduce large wakes and give other crews sufficient clearance. Coaches are urged to be especially sensitive about waking single sculls.

**Lighting**

As with shells, launches must display **two lights**, with the bow light marked red / green (port / starboard) and the stern light white. It is recommended that launch lights use re-chargeable batteries, or be wired into the launch’s electrical system.
Safety Equipment

Safety equipment must be carried at all times, and should be checked periodically to be sure it is still operable, legal and most importantly, accessible. Safety equipment must include:

- Approved life jacket or floatable cushions or inflatable life vests for at least 1 crew
- First aid kit
- Space blanket for hypothermia
- Spare line
- Paddle and boathook
- Megaphone
- Fire extinguisher
- Horn or whistle
- Spare flashlight
- Mobile communication to shore (*recommended)

Launch Design

Launches should be designed so as to allow the proper conduct of and provide the necessary safety for crews being supervised. Additionally, launches should be operated so as to minimize the disturbance and potential damage to other boats and individuals on the river. Factors to be considered in the design include:

- A wakeless launch is beneficial on this busy river. Launches that are balanced fore and aft cause less wake than those that have stern drag. If a launch must be driven from the motor in the stern, there must be adequate counter ballast in the bow to allow for proper trim, to minimize wake and ensure better visibility.

- Launches must not have sharp edges or corners, protruding objects or pointed bows that might cause harm to an individual or shell. All of these areas must be covered by rudder rails, bow balls, or soft covering. Remember to consider the variety of shell height off the water – from a few inches for singles to several feet for an eight – and be sure that launches have adequate protection through this full range.
• Launches shall have extra capacity for several rowers in the event of an emergency. The coach must know the proper technique for pulling a person out of the water into their specific launch (i.e. over the side, over the stern, over the bow).

• Whenever possible, launches should have steering mechanisms that are separate from the motor. A steering wheel and throttle controls located in the middle of the launch ensure proper visibility and hearing in all directions, as well as minimize wake.
II. SAFETY EDUCATION AND TRAINING

It is the responsibility of each organization on the Charles River to ensure that all aspects of their program are operated in a safe and sportsman-like manner. In order to achieve this basic level of safe conduct, all rowing programs are urged to abide by the following guidelines for preparing all members to use the Charles River.

- At the beginning of each rowing season, and periodically during each season as well, coaches and rowing committees shall review the guidelines set forward in this document. All rowing organizations are responsible for ensuring that all participants know and agree to abide by the rules of the river, as well as other aspects of safe rowing.

- Every boathouse has unique aspects that must be identified and communicated to all participants, such as launching and landing procedures, shell supervision, etc. Each boathouse is responsible for making all members aware of these specifics.

- Rowing organizations are urged to require that members certify a minimum swimming ability. Rowing organizations may choose to implement further safety procedures, such as four-oared rule – crews of no fewer than four combined oars allowed to launch – for extreme weather. Refer to USRowing posters to educate athletes on proper clothing and hydration during strenuous exercise.

- Rowing organizations shall educate all staff and athletes – especially coxswains and single scullers – as to basic emergency procedures for extreme weather or in the event of capsizing or swamping. Refer to USRowing posters and videos for techniques.

- All coaches shall have a current CPR certification, and are encouraged to take the Coast Guard Course in Boating Safety (required for the USRA Coaching Level I Certification or Power Squadron Course).