

**coxswain (n.)**

early 14c., "officer in charge of a ship's boat and its crew," from *cock* "ship's boat" (from Old French *coque* "canoe") + *swain* "boy," from Old Norse *sveinn* "boy, servant"

**Job Description:** Steer the boat safely, help rowers to improve their technique, and encourage rowers to pull harder than they would on their own.

A great cox...

- Has confidence, but is not an egomaniac or an arrogant know-it-all
- Can make quick decisions
- Seeks out ways to improve their coxing abilities (learning new drills, listening to recordings of other coxes, practicing, riding in the launch with a coach, etc)
- Takes criticism and uses it to make themselves better
- Knows where they are in coxing development
- Is calm under pressure
- Is a problem solver and doesn't give up when things go wrong
- Comes prepared, mentally and physically
- Returns the crew to the dock on schedule
- Never interrupts or speaks over the coach

A bad cox...

- Is an arrogant know-it-all that thinks they are better than they are
- Bullies or picks on the rowers in a personal way
- Doesn't understand the boat and what the rowers are expecting of them
- Blames everyone else for problems
- Is not a self-starter
- Is a drama queen and freaks out easily
- Doesn't do off-water preparation, physically or mentally
- Is unfocused or unreliable, gets distracted easily
- Doesn't know how to use their voice in the boat
- Doesn't listen to the coach

## **The Coxswain's Responsibilities**

Some of the coxswain responsibilities:

- Decide if conditions are safe for practice
- Sign out your boat in the log book before launching
- Check equipment before launching (rudder, ropes, speaker system)
- Lock the boathouse during and after practice
- Act as a liaison between your coach and crew, or as a coach
- Plan drills for your crew, if you do not have a coach
- Understand the importance of silence
- Know the river/lake and potential hazards
- Learn to look for good (and bad) rowing technique
- Sign in your boat in the log book after practice
- Know your equipment and when it's in need of repair
- Note repairs needed in logbook, with equipment director, and note on equipment
- When loading for travel, check equipment loaded
- Attend coach's and cox's meetings at regattas
- Learn the race course (walk it, run it, observe it)
- Call the race plan to the crew and advise of boat placement

## **Working with a Coach**

Whenever working with a coach it is imperative that you listen to what the coach is communicating to the crew. You need to know what the focus is going to be on and help the crew make any adjustments.

When the coach is speaking be sure to remain silent. If both of you are talking at the same time your crew may get confused...HOWEVER, this rule may be broken if the safety of the boat is at risk. Your #1 priority is the safety of the boat.

## **Weather, Current, Other Conditions**

### Safety

The most important responsibility of coxing is ensuring safety of the crew and equipment. As cox, you need be in control of both the boat and the crew at all times. Remind your crew to not talk whenever the boat is in motion. Also try and keep a 360° awareness of the immediate vicinity on land and on the water. This requires constant observation and thinking ahead.

You, and you alone, can decide if the boat is going to go out if conditions are questionable. Of course the skill level and wishes of your crew should be considered, but don't let the crew talk you into going out if you are uncertain. Always err on the side of safety. Here are some club rules and guidelines:

- **Thunder and/or lightening:** Absolutely do not launch. If you're on the water, come in immediately. Once 30 minutes has passed since the last flash of lightning, you may launch.
- **Fog and dark:** Do not launch if you're uncomfortable with visibility. You must have a light on the bow.
- **Snow and rain:** It's okay to row, if visibility is okay, but see what the crew wants to do.
- **Wind:** Do not row if you see white caps.
- **Ice:** Do not row if there is ice on the river.
- **Debris:** If a lot of debris, trees or ice, is floating downstream, do not launch.
- **Power boats:** Watch for power boats. Stay on the correct side of the river and make sure your bow light is on. If power boats are making rowing unsafe, return to the dock and call the police.

### Current and Water Levels

Consult the USGS website for the readings at at 2nd Avenue and watch for emails during questionable times. If rowing is being suspended for any reason, there will be a club-wide email sent from the board of directors. ([https://waterdata.usgs.gov/nwis/uv?site\\_no=05482000](https://waterdata.usgs.gov/nwis/uv?site_no=05482000))

### Current Guidelines

- Red: Above 13,000 cfs - Rowing suspended for all rowers
- Yellow: 10,000 - 12,999 cfs - Row with caution, not good conditions for novices and inexperienced coxes
- Green: 9,999 cfs and under - Open rowing

### River Level Guidelines

- Above 19 ft - if lots of debris is present, rowing is suspended for all rowers
- Below 14 ft - Rowing suspended for all rowers due to sandbars and other hazards that can damage equipment

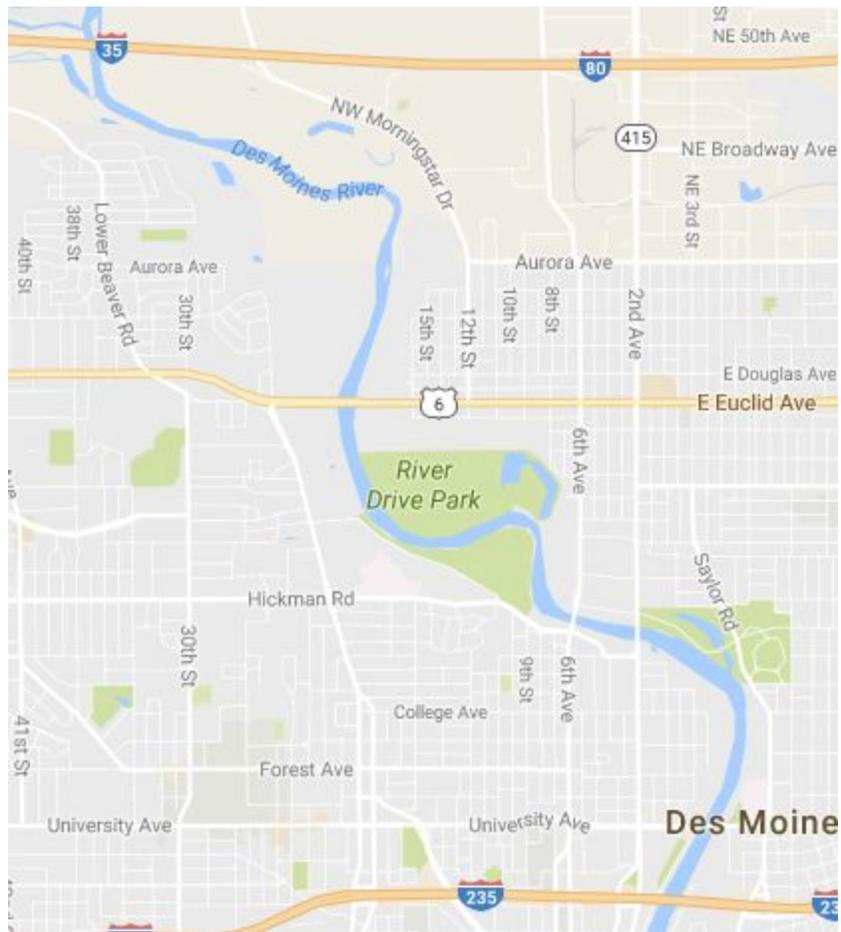
### River Traffic Pattern

- Follow the river rowing pattern. Row upstream on the east side (boathouse side) and downstream on the west side (opposite boathouse).
- At bridges, use the right span. However, at the Second Avenue bridge, some crews use the center, so be aware of boats coming from the other direction. **Downstream boats have the right of way.**
- Always dock going upstream
- Talk to other coxes and observe the water to learn of snags and shallow spots

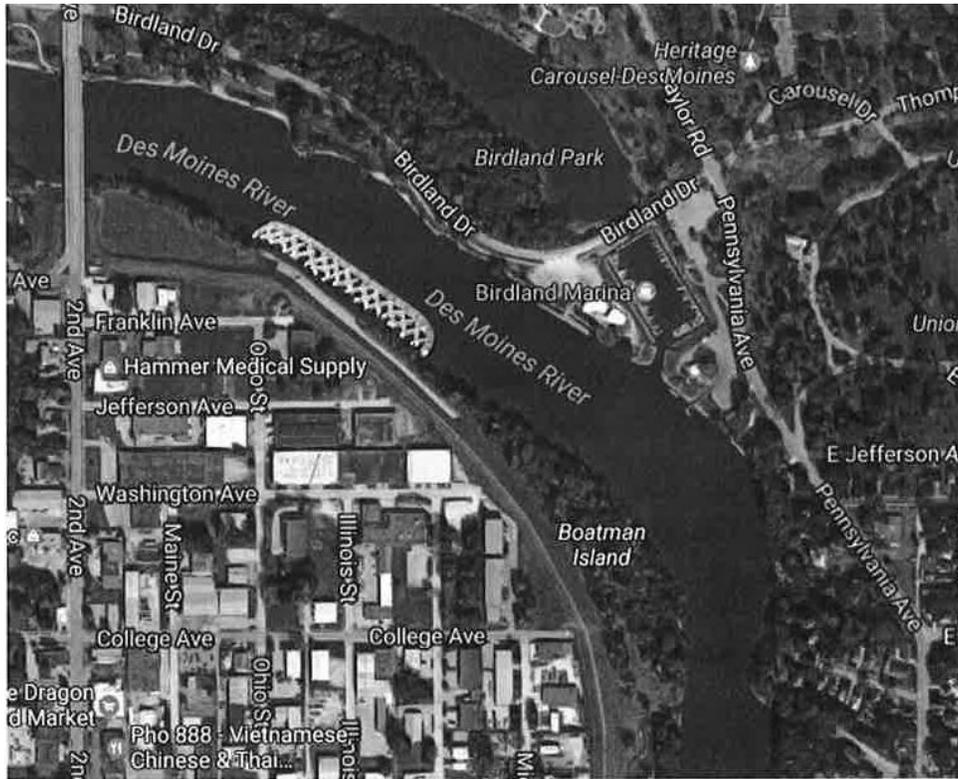
- Do not go below the I-235 bridge - ever

#### The Des Moines River

- Safe up to the railway bridge @ 13 feet (if you know the sandbar locations)
- Safe up to Euclid @ 14 feet
- Safe up to The Nude Beach @ 15 feet
- Safe up to Highway 80 @ 16 feet (if you know how to get through the dead heads just upstream of the Nude Beach)



In front of the boathouse



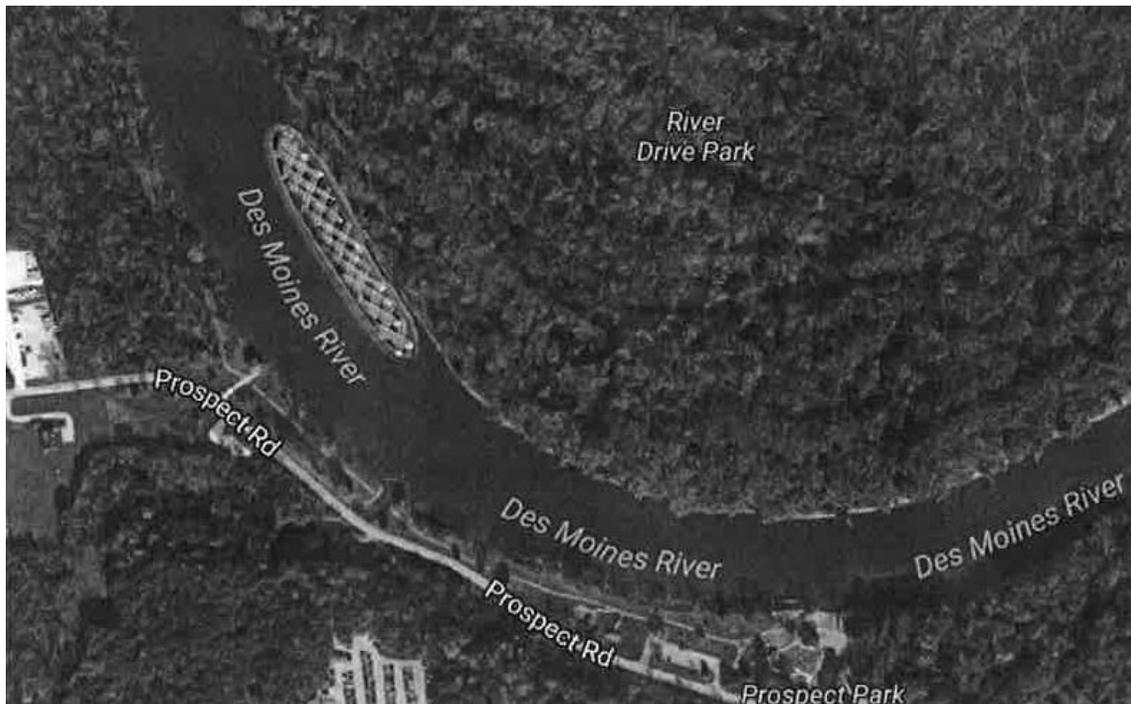
2nd and 6th Ave bridges



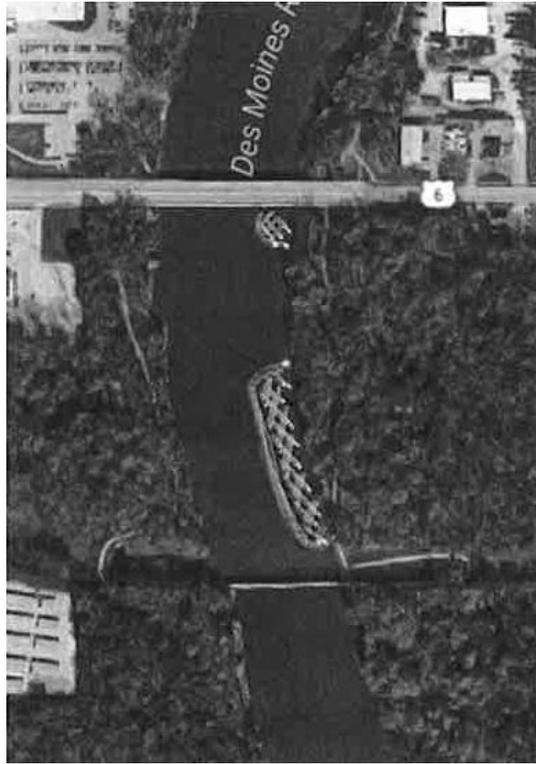
The Gut



Prospect Park



Railroad and Euclid Bridges



"Nude Beach"



### The Coxswain's Tool Kit

There are a few essentials that will help make you a prepared cox. The following can be hung on a lanyard around your neck:

- Boathouse keys (lock up during and after row)
- Rower's Wrench (available at WinTechRacing.com) or Standard wrench for your boat (usually 7/16ths) and/or a small adjustable wrench
- Cox box (or stroke meter and megaphone)
- Bow marker or pin-on number (for racing)

### **Cox Box**

Your cox box should have a head strap. Boxes without head straps can still be used, the mic will have to be either held or tucked into your hat comfortably.

Once in the boat, slide the Cox box into the circular holder and plug it into the hanging wire (boat's wire harness). Make sure that the plugs inside the connector line up with the holes in the cox box. Test for sound and adjust the volume so that the whole boat can hear you. Please be considerate of the ears of those rowers sitting next to the speakers, but speak loudly enough so that 7 seat (who doesn't have a speaker) can hear you.

In addition to allowing you to talk to the boat easily, it also gives you important information:

- Strokes Per Minute (SPM) or stroke rating - this number is generated by a magnet on the underside of the stroke's seat
- Stroke Counter - how many strokes have been taken since it was last zeroed out
- Timer - this is the amount of time that has elapsed since it was last zeroed out

### Cox Box Do's and Don'ts:

- Don't carry the cox boxes by the microphone cords
- Don't adjust the microphone by bending it - adjust headband
- Do recharge the box after you use it - every time
- Do make sure the cox box is being charged when plugged in
- Do return the cox box to the hooks in the office
- Do report any malfunctioning cox boxes to the equipment manager

The microphone is the most sensitive component of the Cox Box assembly. If it is mishandled and the permeable membrane is damaged, the entire microphone is no longer functional. Stress on the connections can also render the microphone headset inoperable.

### **Stroke Coach/Speed Coach**

Stroke Coaches and Speed Coaches have the same functionality as the cox box and erg readouts. They show splits, ratings, time and have recall functions that will allow you to review the workouts. Those with GPS will also send this information to a computer for further analysis.

### **Boat types**

#### Stern Loaded Boat

This is the most common type of boat used in the Des Moines Rowing Club. In this style of boat, the cox sits in front of the Stroke seat. The boat is steered by using two strings that are attached to the rudder.

### Bow Loaded Boat

Bow loaded boats only exist in 4+, not 8+. In this style of boat, the cox lays in the bow of the boat in back of the Bow seat, under the bow deck. The boat is steered by moving a handle that is attached to the rudder. The cox can sit up during practices and warm ups, but should lay down with every body part except their head inside the boat.

Since the cox can't see what the rowers are doing in bow loaded boats, it is best used when there is a coach in a launch out with it.

### Coxing Procedures Log book

Always sign in and out in the crew log book. This includes your stroke, which boat you are taking, what cox box you are taking. Note any equipment problems or river notes in the log book.

If there are equipment problems, note equipment problems in the log book and email [repairs@desmoinesrowing.org](mailto:repairs@desmoinesrowing.org) to notify of broken equipment. Put a sign on the equipment indicating what is broken so no one else takes it out on the water.

### **Boating Your Crew**

#### Know your crew & your Stroke

It's very good at times to communicate with your stroke off mic. The stroke plays such a key role for the crew, much like that of a quarterback on a football team. When you want additional information on how the crew is doing, a good stroke can tell you what's going on inside the boat. When you are just starting out, the stroke can help you with your commands. They may also question your commands if they don't make sense (which can happen when you are still learning).

The first step in steering happens before you ever leave the dock. You have to assign the right seats to the right rowers. If you are working with a coach or an established crew, you will not have to worry about this part.

First, find out if crew members have preferences or skill strengths on port or starboard. Estimate whether you will have a good balance of power between the two sides. If you think the boat will not have a good balance of power, see if people can switch sides to balance out the power.

Next, assign seats using the following points as a guide:

*Eight:* Your most technically correct rower (quick catches, slow slide, level oar handle, sense of timing).

All things being equal, choose the tallest rower to get the most reach in the boat.

*Seven:* Also good technical skills. Able to transfer stroke timing and technique to the starboard side. Good oar handle height. A taller person is a plus here too.

*Six:* Your most powerful port rower.

*Five:* Your most powerful starboard rower.

*Four:* Your alternate stroke. This person moves to stroke if stroke has a sub. (A sub should not stroke the boat, unless it's a more experienced rower in a novice boat.) This rower should have good technique and a sense of timing.

*Three:* Able to follow four when bow four is rowing.

*Two:* Lighter weight, quick responder, often needs to steer the boat on a quick command.

*Bow:* Light weight, quick responder, often needs to steer the boat on a quick command.

*Substitutes:* Let regular crew members sit in their normal seats, however, if you see an imbalance of power, make some changes in the line-up. Move 4 to stroke if stroke has a sub.

## Coxing Commands

Most coxswains give their commands “in two”. When calling commands on land, do so with a definite cadence which makes it easy for the crew to anticipate when they are going to do something. Example: “up-over-head-in-two-one-two”, kind of like a song.

### On Land

It is your job to make sure the equipment isn't damaged and people don't get injured, so make sure you have your crew's attention. You may want to go over the plan for what is about to happen so your crew can anticipate your commands. When giving your commands, make sure you say them LOUDLY. Be polite, but almost obnoxious...again, it is your job to make sure everyone (on and off the boat) hears what your crew is about to do.

### On the Water

You will generally give two strokes prep time, calling the cadences at the Stroke's catch. For example, "Add the bow pair in two: one, two - bow pair you're in." As you know, rowing has its own vocabulary of commands. “stop” does not exist, only “weigh enough” or “let it run”. The basic commands are those which should be memorized as they are essential for you to communicate with your crew.

### Personality and Style

Don't be afraid to let your personality shine. Rowers tend to enjoy it when their coxswain shows a bit of personality. This is especially true during long practice sessions. While you still need to be serious most of the time (you have important work to do), feel free to mix in some fun and a sense of humor whenever you can.

Style points count. Style is what you say and how you say it. Remember your voice is projected through an onboard PA, for the rowers it's very like listening to someone on the radio. Style is entirely up to you, but changing vocal pitch or inflections helps keep your crew engaged. Don't go all monotone for the whole session. However, do not overthink this! You will naturally find your own style. Go with what you're comfortable with.

### Examples:

- Give the instruction, then two-part command:
  - Command: Ready to lift in 2: one, two
- Say to whom you are speaking first:
  - Command: Two seat: dip blades just beneath the surface
- Be specific about who does what:
  - Command: Ports: get the oars. Starboards: wipe the boat

Basic rowing commands:

- **Add in** - when rowers that are sitting out will “add in” when you are ready for them to start rowing again : “Bow and 2 will add in in 2, one, two”
- **Check It** or **Hold Water** - to stop the boat, blades are perpendicular in the water. If you need the boat to stop NOW, add the word HARD. (“Hold Water HARD!!”)
- **Ease up** or **Paddle (it Out)** - paddle lightly
- **Hands On** - Cox speak for “Stop talking and pay attention to me because it is time to get this boat on the water”
- **Let her run** - stop rowing with all blades in the air
- **One Foot In...And Down** - What you say to get your rowers in the boat
- **One Foot Out...And Up** - What you say at the dock to get your rowers out of the boat
- **Power 10** - 10 hard long strokes
- **Ready (All), Row** - start rowing
- **Run the Blades/Oars Out** - Run the oars through the oarlock and onto the water
- **Touch It** - When you are stopped, this command is given to a single rower to help get a point. Usually a single stroke with arms and back only. “Bow, touch it for me”
- **Weigh enough** - stop rowing

## Launching at the River Boathouse

To remove from MID-RACK:

Note: Place the boat above your boat on the pegs in the rack to lift it up

Command: Shortest rowers to bow, tallest to stern

Command: Arms across and hands on

Command: Ready to lift on two: one, two

Command: Back it out, watching riggers

Command: Bow, under boat (cox may help)

Command: Three, under boat

Command: Five, under boat

Command: Seven, under boat

Command: Hands to sides

Note: remove foam protectors from oar locks as necessary

Command: To shoulders in two: one, two

To remove from ROLLERS/SLINGS:

Command: Shortest rowers to bow, tallest to stern. Everyone opposite a rigger.

Command: Hands on

Command: Ready to lift to waist in two: one, two

Note: remove foam protectors from oar locks as necessary

Command: To shoulders in two: one, two

### To walk it onto the dock:

Command: Walk it out of the boathouse  
Command: Watch riggers, bow, and stern  
Command: Stern is clear  
Command: Weigh enough  
Command: All face the stern  
Command: Walk it down

### To put the boat into the water:

Command: Toes to the edge  
Command: Roll gently onto the water in two: one, two (cox watches keel and rudder)  
Command: Bow and stroke, hold the boat and secure plugs  
Command: Everyone else, get the oars (cox checks oarlock positions)  
Command: Set your stretchers (cox offers tool, inserts cox box, signs out, locks boathouse)  
Command: Count up from bow when ready  
Command: Ports, run the oars out, one foot in, and in  
Command: Cox getting in (cox gets in)  
Command: Starboards, one foot in, and in  
Command: Tie in and count up from bow when ready  
Command: Bow only, pull in blade and push away, taking strokes when clear  
Command: Bow pair, row

Note: When clear of dock, turn the boat to position it parallel to the current

Command: Weigh enough  
Command: Make any needed adjustments, count up from bow when ready

### Docking at the River

- Always approach the dock from downstream.
- Approach the dock slowly.
- Position your boat to come from a 30 to 45° angle downstream in mid river. (If you try to approach the dock from the marina, the current can push the stern into the shore.)
- Point the bow above the dock, start all rowers rowing lightly.
- As you approach the dock, drop out rowers in pairs or fours.
- Bring stern pair in rowing arms and back, then just arms.
- Have bow watch the bow ball and the dock.
- Just before the boat comes to the dock, tell the stern pair to let it run and the boat should gently glide to the dock. If the bow is heading directly into the dock, ask your crew to “lean river” The bow of the boat will swing out toward the river, bringing the entire boat alongside the dock.
- If necessary, be prepared to ask stroke to hold water or scull in order to bring the stern in closer to the dock.
- Have starboards grab the dock; ports keep leaning river to keep the riggers from hitting the dock.
- If necessary, and someone is on the dock to help, have them grab starboard blades and pull, keeping blades low.
- If you miss the approach, do not try to back the stern in because this can damage the boat. Instead, move away from the dock and back downstream, and try your landing again.

### Taking the Boat from Dock to Boathouse at River

You are safely docked with crew members holding the dock. To ensure the boat doesn't flip, make sure all rowers are out of the boat before any of the oars are pulled across.

Command: Starboards, one foot up and out

Command: Cox is getting out (get out of the boat, making sure to remove the mic headband from your head first)

Command: Ports, bringing your blades with you, one foot up and out

Command: Bow and stroke hold the boat and open portholes

Note: Make sure to remove all of your equipment from the boat, including the cox box

Command: Inside rowers remove oars

Command: Cox is going to unlock boathouse (and do, placing slings or rollers where they will be needed when the boat arrives)

Command: Tall rowers to stern, less tall to bow

Command: Hands on (remind rowers to use their legs, not backs, to lift the boat.)

Command: Ready to lift in two: one, two (cox may help if needed)

Command: Up and overhead in two: one, two

Command: To shoulders in two: one, two

Command: Walk it up into the parking lot

Command: Weigh enough

Command: Turn and face the boathouse

Command: Walk it into the boathouse

Command: Watch riggers and bow and stern

Command: (in boathouse) Down to waist in two: one and two.

Command: Lower the boat onto slings. Ports get the oars, Starboards wipe it down. (Or whatever you would like)

Remember to replace the foam oar lock protectors as necessary. Boats stored on rollers do not need foam oar lock protectors.

Put the boat away on the same rack, reversing the technique you used to remove it from its rack (rollers, overhead slings, or rack). Make sure no riggers hit anything and that both gunwales are supported on the racks. Watch, too, that riggers on the boat above don't scratch your boat as it's moved onto the rack.

## Steering

Once you're away from the dock, the workout has started and you're calling the shots. Your most important job on the water is to steer clear of any hazards, maintain a safe distance from shore and to maintain as straight of a course as possible. Assuming you have rowing power equally distributed between port and starboard, the rest should be easy. You'll need to practice getting your point, steering with rowers, steering with the rudder, and learning to navigate an efficient course.

One important thing to remember is to know what is going on behind you. The easiest way to do this is to either turn and look behind you from time to time, or to have the stroke watch and alert you to any events of importance.

### Get your point

To steer a straight course, get a point. Look ahead of the boat and pick a target, such as a tall tree or other easily distinguishable stationary feature. By keeping that point ahead of you, you will avoid carving serpentine down the river. Always make sure you are aiming correctly before giving the command to row. At a standstill, you can adjust your position by asking the bow or 2 seat to "touch it," or to take a light stroke.

### Steer toward your point

If your crew is seated correctly, the boat should move directly to that point. If the boat is veering to one side or the other or if you need to make a turn, you can steer either by using your rowers or the rudder. If you are veering wildly off course, you may actually need to stop the boat and have either bow or two row until you regain your point. In extreme situations, you can have seven or eight hold water to turn the boat. You can also instruct crew members to back to get the boat away from a hazard.

### Steering by rower strength

If you find yourself moving slightly off course to starboard, call for starboards to pull harder. You may also want starboards to pull harder if you are trying to make a turn to port. However, if the crew is already rowing at full pressure, be sensitive to that and ask for the ports to ease off. Likewise, if you're veering slightly to port or want to make a turn to starboard, ask the ports to pull harder or for the starboards to ease off. It is best when turning corners to ask for more pressure from either ports or starboards to help get you around as efficiently as possible. Remember to ask for equal pressure again when you have your new point.

### Steering by the rudder

You'll discover a line running along both sides of the boat to which are attached two toggles. If you crane your neck, you'll find the rope is attached to a rudder in the stern of the boat. By pushing the right side forward, you cause the shell to move toward the right or starboard side and conversely, by pushing left side forward, the boat will move toward the left or port.

## Rudder points

- The better the coxswain, the less they yank on the rudder. The secret lies in only using the rudder to keep the boat aimed at your point.
- Push on the toggles only when the oars are in the water. Using the rudder when the oars are out of the water will throw the boat off keel, causing it to pitch to one side, which will draw angry looks from the eight rowers facing you. Ideally, you will steer only when the oars are in the water, not on the recovery.
- Turn a small amount in "pulses" with each stroke, rather than by holding one hand forward throughout the turn. Steering this way takes practice, but it will affect the set of the boat less.
- Well-liked coxes warn rowers when rudder steering is causing the boat to go "off keel." They appreciate knowing what's causing the change in the set of the boat.
- The faster a boat is going, the greater the effect of the rudder. In other words, at high speeds, a small steering correction is all that is needed. When the boat is going very slowly, you won't be able to steer with the rudder and will have to have the rowers adjust your direction by pulling harder.

## Over Steering

The beginning coxswain's major mistake in steering is the tendency to use the rudder too much, to over steer and thus to leave a string of "S-es" in the boat's wake. It takes practice to learn how a boat will react to steering. A useful hint to the novice coxswain: ignore the toggles for the first few days of practice and try pinching each side, instead of holding the toggles. Then when you pull on the rudder line you will tend to exert only enough countering effect to bring the boat back on course when it has strayed 5 to 10 degrees off the point you have picked overhead. Even though the "light touch" cox may use the rudder more frequently, her boat stays closer to the ideal course, thus traveling a shorter distance off the course.

Note: Many novice coxes also seem to dislike wearing the cox box headband. Please wear the headband to keep your hands free. Pulsing on each stroke means that your hands need to be on your rudder strings, not holding your microphone.

## Turning

Choosing when and how to turn depends on water conditions and the skill of your crew. Generally, make your turns in as wide a body of water as you can. Turn into the most amount of water that you can—on the Des Moines river, that usually means you'll be making a starboard turn. Once you have started your turn, move quickly through it so the boat will not float sideways in the river, exposed to current and river traffic.

### Turning Safety Points:

- Before you stop, take a 360 degree look around. Make sure you are aware of everything around you, including other boats.
- Don't sit in the middle of the traffic pattern. Turn the boat as quickly as possible.
- Get your position for the next piece before you take a break.
- **DO NOT STOP OR TURN IN DANGEROUS PLACES.** This includes in the way of other boats, in hidden or low visibility areas and under or on the upstream side of a bridge.

### Standard Turn

The fastest turn relies on one side backing and one side rowing. Generally on our river, you will be making a starboard turn with ports backing and starboards rowing. No matter which direction you're turning, always call for the backing first. You may have to remind crews not to use their legs on the turn.

For the backing position, make sure the blades are flipped in reverse (the concave side of the blade is meant for pushing the most water.)

Command: Using arms and backs only, ports to back, starboards to row. Ready ports and back.  
And starboards row.

Watch to see that one side is recovering on the water while the other side is taking the stroke. You may have to teach rowers how to angle their blade so it rests on the surface on the recovery. And make sure blades are just beneath the surface and oar handles are kept low.

### Novice Turn

If you have lots of room in which to turn and if your crew is inexperienced, the easiest way to turn is to have one side row, while the other side sets the boat.

For a starboard turn, ask the ports to row; for a port turn, ask the starboards to row. So, if you are on the east side of the river and wish to head downstream on the west side you would give the command:

Command: Starboards to row in two: one, two

The rowers can pull the boat around slowly with full-side strokes or a bit more quickly with short, sideless strokes. To decrease the radius of the turning circle, you can have the side not rowing keep their blades squared up in the water during the turn. In such a case, before giving the order for starboard to row, you would command: Ports, square blades and hold water in two: one, two

### Sculling Turn

It can be used to nudge the boat in toward the dock, when you're just inches away. This is a method that moves the bow from side to side without pulling the boat forward. The person in front of bow or two takes the oar handle from the rower behind them and moves the blade until it is parallel to the boat. They then take short strokes with the blade (now parallel to the boat) until the point is regained.

Command: Bow (or two), give your oar handle to two (or three)

Command: Two (or three), row

## **Emergency Stop**

As noted earlier, the command for stopping is "weigh enough" or "let it run". However, there will come a time when you need to bring the boat to a quick stop to avoid hitting another boat, rocks, floating debris, etc..

Being able to bring the boat to a quick stop should be practiced with your crew so everyone understands the command and can execute it when needed. The command might be "weigh enough and all hold now!" or "hold water hard now!". To execute, all rowers will hold water together by rolling their oar handles firmly

forward until the blades are almost completely square in the water. Practice this move with your crew so you are confident they can execute a quick stop in an emergency situation.

## Drills

As a warm-up, you will usually call for a series of drills. In all drills, be sure the rowers do not rush the slide after a pause. Remind them of the required pressure frequently. In counting power 10's and 20's, make your diction crisp and sharp. In 20's and 30's, count by series of 10's.

**Pick Drill:** A common drill often used during a warm-ups. Half boat setting, half drilling. All square blades: quick pick- arms only, swing pick- arms and back, 1/4 slide, 1/2 slide, 3/4 slide, full slide, then add the feather. Allows crew to focus on the individual elements of the stroke.

**Pause drills:** Do repeated pause drills every 'x' strokes, pausing at various positions, depending on the portion of the recovery needing the most attention. For example, pause at the finish, arms away, body over, half slide 3/4 slide. Works set, timing, and slide control.

**Cut the Cake:** Blades feather and recover to either hands away, body prep, 1/4 slide, or 1/2 slide before returning to the finish a second time, then continuing to normal recovery—blade height remains constant. This will help with all aspects of the set, as well as working quick hands away, stroke length, and rate.

**Air Shots:** Have your rowers come up the slide with blades feathered and do not square up and do not catch water. Just air. Return to the finish then back up the slide, roll up, and then grab water. Repeat every x strokes. Great drill for handle height and swinging together.

**Eyes Closed (Zen rowing):** Continuous rowing with eyes closed (please, rowers only). Forces crew to listen for slide and catch timing, and to feel body positioning. Helps timing, slide rush, catch, and the set.

**Square Blades:** Regular rowing on the square, with all rowers if possible, or dropping pairs out through the boat. Teaches handle height control, aggressive catches, clean releases.

**Pressure Pyramids:** Row with alternating full pressure and half pressure in a counting pyramid, starting with one on, one off, two on, two off, all the way up to ten or twenty. Teaches how to control the rating while alternating power. The rating should remain the same throughout the drill. Also teaches the cox to concentrate on counting and the crew to focus.

**Outside Arm Rowing:** Pairs or fours row with inside arm behind their backs, on the square. Teaches how the outside arm controls oar handle and how the outside arm pulls hard. Inside arm rowing: Pairs or fours row with outside arm behind their backs, with a feather, using light pressure. Teaches how the inside arm is used for feathering and rolling up, not for pull.

**Wide Grip:** All rowers position inside arm down shaft of oar and rowing. Teaches body position, especially dropping the inside shoulder to the rigger.

**Rating Drill:** Using your cox box or a stroke meter, have the stroke pick a comfortable steady-state rating. Keep the crew there for 10 to 20 strokes. Call the rating up by 2 in 2 strokes and hold it there for 10 to 20 strokes. Keep increasing the rating until crew cannot hold the rate. Bring the rating back down by 2 in 2 strokes and hold for 10 to 20 strokes. Take it all the way down to 14 or 16 strokes per minute in increments of 2, then bring it up to the comfortable steady-state rating in increments of 2. This teaches rate control and slide control.

**Shoes Off:** Have all rowers row with their feet out of their shoes. Teaches slide control and lay back position. Also helps rowers achieve cleaner releases.

**Head Position:** Have all rowers focus on chins up and eyes ahead, pretending they have a book on their heads and a string running from head to head, with noses over the center of the boat. Teaches body position, keeping head straight, eyes ahead, and not looking at blade.

**Sprint Racing Starts:** If you are anticipating a sprint race, make it a point to practice starts with your crew. Sprint starts are usually started at the catch, with a half stroke, three-quarter-stroke, three-quarter stroke, then full stroke, followed by a quick 10 or 20.

**Head Racing Starts:** If you are planning a head race, practice starting by building pressure approaching the start to be a full pressure for 20 strokes crossing the line, then lengthen or settle into your agreed upon rating and pressure.

## **Troubleshooting Technique Problems**

There is a tremendous amount of information a coxswain can see and feel from the cox seat. Blades moving in perfect unison, drive and recovery speed, oar heights, oar depths, roll ups, catches and releases, and appropriate puddles. Additionally, feel how the boat lifts at the catch and runs at the release. The coxswain, who is the only crew member not in constant motion, has a unique ability to diagnose performance.

Reminding rowers of problems is a good thing if done appropriately. Be positive about it and try not to fall into the role of a coach in the cox seat. Correction-type commands should be avoided completely when you are working with an actual coach. Also, constant or repeated reminders tend to cause rowers to tune you out, or become frustrated. So be careful.

Positive reinforcement is best so use it early, use it often!

One of the most difficult jobs for a cox is figuring out why a boat isn't set or why it won't go faster. There are some things that you cannot see from the cox's seat: body position and hand position, for example. Encourage your crew to hire a coach on a periodic basis to help them with the finer points of rowing. They and you will learn. That being said, there are some technique flaws you can spot by watching blades, feeling the balance of the boat, and the rhythm of the boat. It's best to issue positive reminders to the whole crew, although sometimes you need to correct an individual. Just make sure there is a consistent problem first.

Watching the blades, good blade work means:

- Catch: blades going in together, back splash from entry, just beneath the surface
- Pull through: blades moving through the water at the same angle, just the blade covered, not the shaft
- Release: blades coming up square, all together, puddles swirling from blades (power)
- Feather: blades feathering together after the release
- Recovery: all blades at the same height above the water
- Roll-up: during recovery, blades starting to roll up gradually, so they're square before the catch

Problems to watch for:

- Blades not square at the catch
- Blades not square at the release
- Feathering under the water before the release
- Blades at uneven height on the recovery
- Blades too deep in the water on the pull through
- Blades not starting to roll up soon enough
- Blades skying at the catch
- Blades washing out or coming up too early at the release

Solutions: There are many drills for the different problems that may occur. Please reference one of the sources listed at the end of this guide for help.

### Setting the boat

If oar handles are the same height and everyone is catching/releasing together, the boat should be set.

Problems to watch for:

- Uneven blade height at the catch: higher blades mean hands dropping at catch, dips boat to that side
- Uneven blade height at the finish: higher blades mean pulling in too low to the lap, dips boat to that side
- Uneven blade height during the recovery: higher blades mean hands close to gunwales, dips boat to that side
- Uneven blade depth while pulling through: lower blades mean high hands, dips boat to other side
- Blades releasing early: throws boat to that side
- Blades catching early: throws boat to other side
- Heads out of alignment: leaning to a side can cause a dip to that side

Solutions: Choose a pause drill that focuses on the area where you see the problem. If a blade is too high consistently, tell the rower to raise their hands. If a blade is too low consistently, tell the rower to lower their hands. The Open Hand Drill may also help with blade levels.

### Boat rating and rhythm

This is something you develop a feel for when coxing. You want to feel the boat gliding through the water, not moving backwards and forwards. On the power, you want to feel a definite smooth surge, not a jerky one.

Problems to watch (or feel) for:

- Boat check: Your back bumping against the back of the boat. This means that slides are rushed and rowers are slamming the stops, which stops the boat.
- Rowers having difficulty following the stroke, either catching early or late
- The boat feels sluggish
- Movement of the oars is like a sawing motion, rather than a waltz

Solutions: Work with your stroke on rhythm, getting the right ratio of drive to recovery, and being consistent. Do counting drills to slow the slide, and rating drills to develop consistency.

Encourage the crew to slow the wheels into the catch. Some rowers may hit their stops if their stretchers set too far away. Have them move their stretchers closer to their bodies.

## Racing

Your job on race day is to be the eyes and ears of your crew, because chances are they will be too nervous to be thinking logically. Keep them calm, focused, and thinking positively. Here's your job from start to finish. US Rowing racing rules can be found at [www.usrowing.org](http://www.usrowing.org)

### Loading:

- Be sure all equipment and tools are loaded, including the cox box.

### Pre-race preparation:

- Attend the coaches and coxes meeting
- Study the map and, if possible, the actual course
- Learn what penalties may be assessed
- Advise rowers of schedule and rules
- Pick up your bow marker and pin it on yourself or rowers, as required by local rules.
- Fix your bow marker to the boat.
- When launching, be sure you have tools and cox box
- Launch on time, keeping your dock time to a minimum

### Warm-up and start:

- Adhere to the warm-up traffic pattern. Do not enter your race lane until you are called or have asked the starting judge for permission.
- For sprint races, know which lane you are in and be sure you are locked onto your correct stake boat more than 2 minutes ahead of the official start time
- For head races, make sure you are in the correct numerical sequence
- If you are not ready, raise your hand. Under normal starting conditions, the race won't start until you lower your hand. In case of poor conditions, a countdown start may occur, which does not recognize hands. Watch for the aligner to raise the white flag, indicating alignment has been reached. Wait for the start official to say "attention," lower the red flag, and say "go" to start your crew. If you are not ready to start and have your hand up, do not start. You may get a false start. At the start, call out the racing start procedure your crew has practiced and try not to use the rudder.

### During the race:

- If you have equipment breakage in the first 100 meters, stop rowing, the officials will stop the race.
- When racing, it's best to stay in your lane. If you leave your lane and interfere with another boat, you could be penalized. If a boat enters your lane and interferes with you, they could be penalized.
- Tell your crew where they are in the race, relative to other crews
- Follow the race plan with rating and power
- Steer a straight and efficient course
- Listen or watch for any instructions from officials
- Watch for hazards and other crews ahead and behind
- Be encouraging and focus on the positive
- Only if you see opportunity to pass, stray from the race plan
- At the final leg of the race, tell the crew the number of strokes to the finish and be correct



After the race:

- Make sure your rowers are okay, have water etc.
- Be alert for any instructions from officials
- Watch for a white flag to know the race is fair and final
- When your rowers are ready, move quickly back to the finish dock, following the traffic pattern

After docking:

- Make sure oars and all belongings get returned to your crew staging area
- Only if you have a big concern over fairness, make a protest with chief official according to local rules
- If you're in a heat or semi final, find out when you need to race again and prepare your crew
- Find out final standings and if you have won an award
- Return bow markers to local organizers
- Oversee boat derigging when you know they will not be raced again
- Cox boats onto trailer

## **Resources**

*The Down and Dirty Guide to Coxing*, by George D. Kirschbaum, Jr.

*The Short and Snarky Guide to Coxing & Rowing* by the Short and Snarky Coxswains

*The Coxswain Encyclopedia* by Laura Simon, Stew Stokes and Margot Zalkind

USRowing Rules of Rowing, current edition (revised every year) USRowing web site: [www.usrowing.org](http://www.usrowing.org).  
Look for coxing information.