



Procedures Manual

Boating and Water Safety

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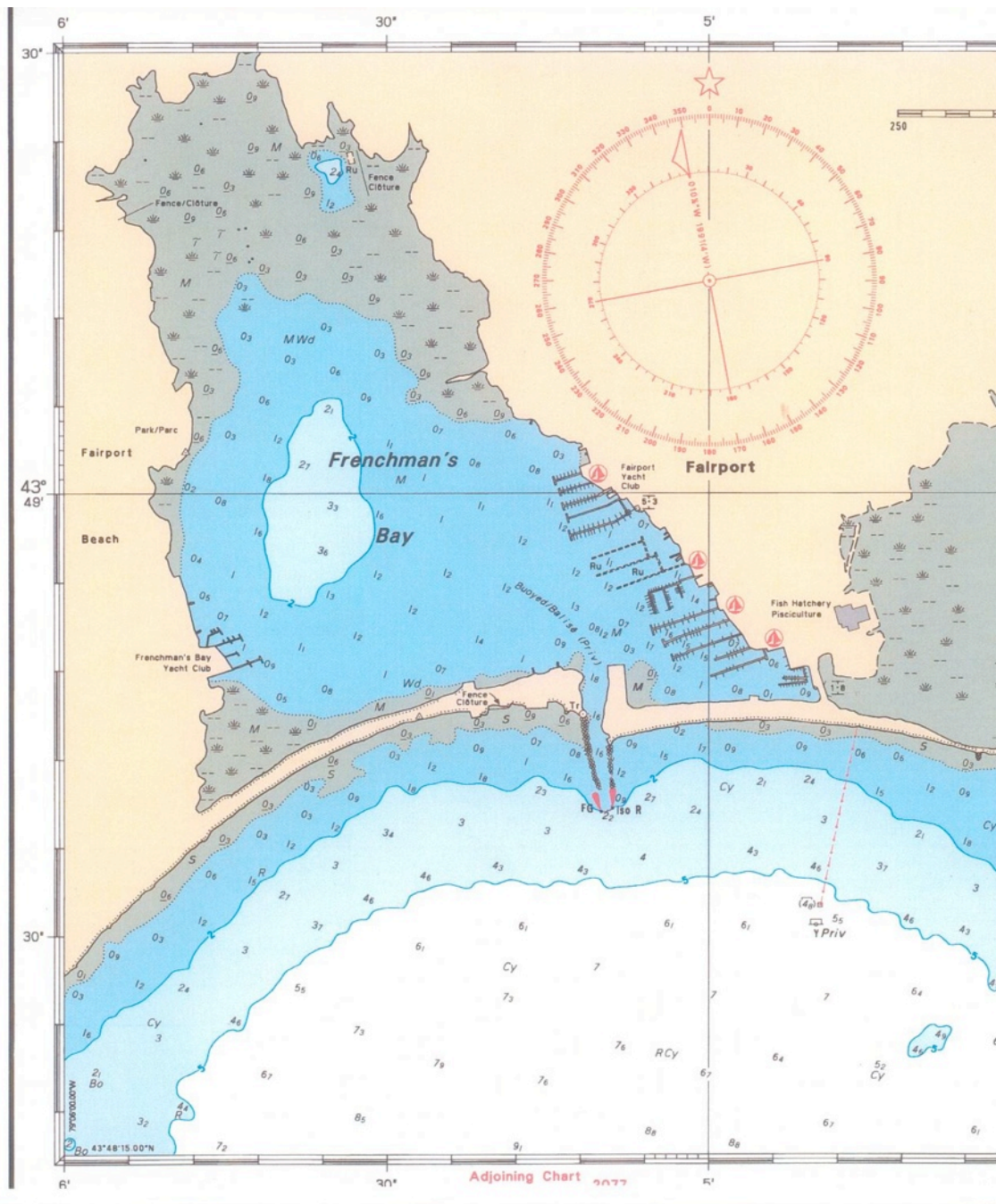
About Frenchman's Bay

About 12,000 years ago as ice that formed Lake Iroquois began to melt and retreat, a lagoon was formed. Today, the lagoon is known as Frenchman's Bay. A 900 metre long narrow sandbar that is 50 metres wide separates the sheltered bay from Lake Ontario. The barrier beach comprised of natural sand and gravel is referred to as Fairport Beach.

At different times, approximately 4,000 years ago, Huron and Five Nations Iroquois peoples established villages on the Bay. During the 1850s, sawmills and grain elevators surrounded the east and west shores of the Port of Liverpool, now referred to as Frenchman's Bay. The average depth of water in the bay during this period was 9 feet. A long wharf projected from the north part of the bay into the deeper water to support shipping activity. During the 1940s, summer cottages were erected along the shore.

Today, Frenchman's Bay extends over some 85 hectares and has about 85 hectares of open water. Due to erosion and increased sediment build-up over the years the bay is a shallow lagoon with numerous sandbars. The bay also contains a provincially significant coastal wetland.

A dredged 6 foot channel through the barrier beach allows boats to enter the protected bay. Swan's Marina, Frenchmen's Bay Marina, Wharf Street Marina, and East Shore Marina serve resident and transient power and sail boats. Frenchman's Bay is also home to the Frenchman's Bay Yacht Club, Pickering Yacht Club, Fairport Aquatic Club and the Pickering Dragon Boat Club.



Boating Safety

1. The conditions

The wind predominantly blows from the northwest. While a breeze makes dragon boating more comfortable in the summer, a strong wind can create rough water. Dense fog can also suddenly appear over the bay at any time during the boating season. Boating traffic is a major factor. Sailboats under sail, power boats heading for the channel, anglers in fishing boats, personal water craft outrigger canoes and dragon boats interact across the bay. Due to the shallowness of Frenchman's Bay, powerboats do not create large wakes. Wakes are therefore relatively small and require no special strategy.

2. Avoiding other watercraft

a) Sailboats

Sailboats can turn quickly, but can't stop. A dragon boat can stop very quickly, but requires a large radius to turn. Sailboats under sail cannot go directly upwind; they drift to a stop if they sail directly into the wind. They tack (zig zag) to catch the wind in their sails which propels the sailboat forward. Due to the shallow depths, larger sailboats will keep to the deeper channels under power with their sails 'furled.' Larger sailboats have poor visibility due to the length of the hull, the mast, rigging, the position of the helm at the stern, and items (e.g. bumpers) on the deck railing. If you are 'close at hand' and ahead of a large sailboat, do not assume that they are aware of your presence.

Small dingy type sailboats from the local sailing club also practice during times dragon boats are on the water. These agile sailboats will make very sharp turns (tacking) or will run quickly downwind. There will be several small sailboats in close quarters sailing across Frenchman's Bay. Sudden capsizing by one or more sailboats is common. A coach in a committee/safety power boat will likely be instructing the inexperienced students in sailing maneuvers. Give them an extra wide berth.

b) Power Boats

Small recreational powerboats, personal watercraft and sailboats under power will generally yield to a dragon boat underway, but there is technically no 'right of way' that gives a dragon boat any privileges over these vessels. The Inland Rules require *all vessels* to take timely action to avoid risk of collision.

Larger power boats have several decks and are high above the waterline. A dragon boat is very low to the water and therefore relatively invisible, especially around the channel opening leading to Lake Ontario and alongside the boat slips in the marina.

When altering course to avoid another vessel it is extremely important to make the course or speed change quickly. An emphatic course or speed change is the most effective way to communicate to the other boat that you see them that you are aware of the risk of collision, and that you intend to stay clear.

c) Rules of the Road

The Office of Boating Safety, Transport Canada is responsible for small vessel regulations on navigable waters in central Canada.

For steering a dragon boat, there are only a few rules you need to know.

- In nearly all cases, a boat overtaking another boat has to keep clear regardless of the type of boat.
- A boat is considered 'underway' unless it is tied to a dock, moored, anchored or aground, or disabled in some way. A dragon boat at rest is still considered 'underway' as far as the navigation rules are concerned. This means you might have to start paddling to avoid another boat, even if you are stationary in the water as the other boat approaches. Only if the other boat is approaching from astern, and therefore overtaking, do the small vessel regulations place the responsibility to keep clear primarily on the other boat.
- Boats under power must keep clear of boats under sail, except when the sailboat is overtaking or when the powerboat is limited in its ability to maneuver.
- The navigation rules do not give human-powered boats (i.e. dragon boats, outrigger canoes, etc.) any special rights or obligations with respect to sailboats or power boats. All boats, including dragon boats have a general obligation to take whatever action is necessary to avoid collisions. The exception is an overtaking situation: A dragon boat overtaking a sailboat or a powerboat must keep clear.

3. Conduct on the water

Always exercise consideration and good manners towards other boats, and never hesitate to 'hold the boat hard' for a quick stop if in doubt about a possible collision.

Dragon boating is a relatively new activity in the Frenchman's Bay boating community, and good diplomacy is crucial to the continuing use of the marina and to the growth of the dragon boat program.

4. Precautions

a) Fog

Practices should cease during dense fog. Dense fog is when the 'channel' in the sandbar is not visible from the launching dock. If a dragon boat is on the water when dense fog develops, return to the dock along the shoreline. If the dragon boat has to cross the channel then extra precautionary steps should be taken if visibility is extremely poor. Hold the boat and cease all noise on the boat. Listen for boats coming through the channel or about to enter the channel. When no noise is heard, sound a warning. If a horn is aboard, give one long blast. Otherwise use a whistle to sound a warning. Listen for a response. If the situation is deemed safe, take the boat away and hard.

b) Lightning.

Practices will be cancelled if a lightning storm is imminent. If on the water when lightning occurs, even at distance, return to the dock immediately, or take cover on the nearest shore.

c) Water conditions

If the bay is deemed 'treacherous' due to significant whitecaps with little protected areas along the shore, then practices should be curtailed until conditions improve. If a dragon boat is on the water when a strong wind suddenly appears, then the boat should return to the dock. The boat should be steered at an angle into the oncoming waves to prevent the boat from 'broaching' and capsizing

d) Darkness

When paddling in pre-dawn darkness, dragon boats must have appropriate portable lighting (red and green) on the bow and the stern (white light) of the boat. At least two powerful waterproof flashlights with fresh batteries should be carried on board. Darkness is defined as more than 30 minutes prior to sunrise. After sunset, the same rules apply. Boats may not be on the water more than 30 minutes after sunset.

e) Coach/safety boat

When water temperatures are cooler during the months of May and October and during adverse summer weather conditions the safety boat should accompany dragon boats. Should a boat capsize during the darkness or during a sudden storm rescue operations will be difficult due the absence of other watercraft in the vicinity. Crews training without the provision of a safety boat will be deemed to training 'unescorted.'

The operator of the safety boat must have a Pleasure Craft Operator Card. The operator must wear an approved PFD and a whistle on a lanyard at all times. If the motor is equipped with a kill switch, the switch lanyard must be attached to the operator. The boat should be equipped with bow lights and stern lights as required by Transport Canada.

Dragon Boat Canada recommends that each safety boat:

- Has designated 'safety' duties, such as remaining within a certain distance of the boats it is accompanying, and must carry specific safety equipment, even if it is acting as a coach boat.
- Be equipped with safety equipment in accordance with Coast Guard rules as well as such items as a medical kit, thermal blanket, and hand pump.
- Provide easy entry from the water (e.g. step ladder or handhold).
- Engines should be properly maintained since failure, particularly at a crucial time could have serious consequences.

The safety boat should also carry a suitable tow line for use in securing and towing swamped/capsized dragon boats.

Note of Importance

The steersperson (coxswain), coach, and operator of the coaching/safety boat are responsible for understanding the applicable navigation rules.

Water Safety

1. Safety Plan

The emergency plan must be reviewed annually by all coaches and steerspersons. The plan outlines the rescue procedures to be undertaken if a boat capsizes, obtaining emergency medical attention for a crew member during a practice on water or on land, or seeking assistance if a boat is disabled due to a collision with another boat or has taken on water. The safety plan also outlines the safety instructions (i.e. buddy system, swimming ability, recommended use of PFDs, staying with a buoyant capsized boat, etc) that need to be conveyed to dragon boat crews.

2. Liability Waiver

All crew members must be given a waiver to review prior beginning the boating season. It is imperative that they fully understand the purpose the waiver and the ramifications of not signing the waiver. Any person who refuses to sign a waiver must sign a 'memorandum of understanding' that indicates that they are aware of the consequences of not signing a waiver. If a crew member refuses to sign either document they will not be allowed to board a dragon boat.

3. Leadership

The steersperson (coxswain) is the most important person in the boat. Unless a coach is aboard while underway, the steersperson is in charge of the vessel outranking all other people on board. This person is the boat's captain and is ultimately responsible for every 'soul' on board.

The steersperson is responsible for:

- The safety of the crew.
Every crew person is 'fit to paddle' both medically and physically. The steersperson should be aware of any medical conditions (e.g. heart condition, asthma, epilepsy, etc.) that may affect the safety of the individual and the crew.
- The safety of the boat.
The steersperson will ensure that the safety equipment is on board, there are no leaks, bow and stern ropes are securely fastened, and buoyancy compartments are intact and will function as intended.
- The safety of other boaters.
- The image the crew presents to the public.

Inexperienced steerspersons should not be allowed out in boats unless accompanied by an experienced coach or monitored by a coach in the safety boat. The steersperson should wear a PFD at all times. Since steerspersons are in the stern of the boat, the possibility of going overboard during a quick start, a sudden turn, or during windy conditions is a possibility. The steersperson should wear a waterproof sound device (e.g. FOX whistle) to attract the attention of crew members during an emergency.

4. Crew responsibility

When they are on the water, each crew member is responsible for being adequately dressed for the weather conditions and complying with all instructions given to them. Crew members must not put the safety of the whole crew in jeopardy through thoughtlessness or horseplay. Each paddler, drummer, and steersperson must take responsibility for their own safety. Safety is the concern of every crew member and is largely a matter of common sense.

Swimming Ability

Ideally all crew members should be able to swim 50 metres in light clothing, unaided. Crew members should be 'water competent' by being able to swim and hold a position by treading water and remaining afloat, unaided, for a least three minutes.

Emergency Preparedness

Each crew member must know who their 'buddy' is before boarding the boat; they will be called upon to report the whereabouts of their 'buddy' if a boat capsizes or is swamped (see Appendix). A crew member in the front seat and in the rear seat will also be the 'buddy' of the drummer or the steersperson. Crew members should also wear appropriate protective clothing for the weather conditions while practicing.

Personal Buoyancy

Steerspersons and drummers are advised to wear a personal flotation device (PFD). Juniors shall wear a PFD at all times when not involved in an organized race. All crew members not involved in race preparation or a race are deemed to be involved in recreational activities; they will wear a PFD, irrespective of their swimming ability or their experience in the sport of dragon boating.

5. Safety Equipment

According to Transport Canada's Regulations 'a pleasure craft that is a racing canoe or kayak is not required to carry personal protection equipment, boat safety equipment and distress equipment in accordance with the Act if it and its crew are engaged in formal training, in an official competition or in final preparation for an official competition and,

- A. It is attended by a safety craft carrying personal flotation device or lifejacket of appropriate size for each member of the crew:
 - i) of the pleasure craft, if the safety craft is only attending the pleasure craft, or
 - ii) of the largest vessel being attended, if the safety vessel is attending more than one vessel, and
- B. It carries:
 - i) a personal flotation device or lifejacket of appropriate size of each member of the crew,
 - ii) a sound-signaling device, and
 - iii) if it is operated after sunset and before sunrise, a watertight flashlight.

The above description applies to dragon boats. If a dragon boat crew is not practicing for a race or involved in a race then the participants would be involved in recreational boating, then each dragon boat is required to carry:

- One approved PFD of appropriate size for each person on board,
- One sound signaling device,
- Throw line,
- Navigational lights

In addition to the above safety equipment, it is also highly recommended that a cell phone in a buoyant waterproof container be carried on board. Two 5 gallon bailing buckets should be attached to the boat with lanyards. Each dragon boat should also carry a red flag that can be held above the head and waved in a vigorous manner by a crew member to attract the attention of the safety boat or other boaters during an emergency.

Other Considerations

1. Incident Reports

All accidents involving injury or equipment damage must be reported on an incident form. Follow all instructions on the form. The coach who is present during the accident should initiate the report. If no coach was present, a crew member can complete the report.

2. Equipment

a) Dragon Boats

The dragon boat and all related gear must be inspected before the crew boards the boat. The following areas need to be checked:

- Buoyancy tank hatches; they need to be secured and if damaged they need to be repaired.
- Buoyancy tank drain plugs. If missing, replace them. The plugs should be removed to permit any water in the tanks to be released.
- Condition of steering oar and paddles.
- Bailing buckets in boat.

The equipment (i.e. paddles, PFDs, etc) should be rinsed once every week and only if the sun is out; dampness will contribute to mildew. Boat interiors should be bailed out and the floor/seats cleaned. Debris (i.e. water bottles, etc.) should be removed after each practice.

After practice, the dragon boat closest to the dock must be secured to the dock cleats with forward and aft dock lines. Use proper cleat hitches to secure the boat, and don't leave any slack in the dock lines that will permit the boats to shift position and make contact with the dock that lacks bumpers. Fenders are to be used between boats rafted together.

b) Safety boat

The first aid kit should be checked for appropriate items (i.e. thermal blanket, bandages, etc.). The boat's equipment (i.e. paddle, hand pump, navigational lighting, boarding ladder/hand-hold, throw line, tow line anchor, etc.) must be checked for compliance and condition.

3. Staging Area Conduct

Team assembly and exercises should be conducted on the pad adjacent to the storage locker and not on the dock. Noise should be kept to a minimum, especially in the early morning and evenings. There are people in the marina who live on the boats or are staying aboard overnight. It is important to respect their privacy and security.

When boat crews assemble in the recommended staging area or on the dock, athletes should not block the passage of boat owners and guests who are heading to or departing from their boat. Athletes must yield right-of-way to boat owners using the boat launch.

Personal belongings should not clutter up the staging area or the dock during practice. They can be left in the dock box or in the athlete's car. Car break-ins are not common but have occurred at times. Valuables should be secured out of site in a locked vehicle. The dock storage box should be locked when athletes are involved in 'on-water' practices.

4. Risk Assessment

Coaches and/or steerspersons must carefully assess potential hazards that could cause harm, great or small, to people and equipment. Hazards could involve equipment, procedures, tasks, and the physical aspects of the environment in which dragon boating activity is taking place on Frenchman's Bay. Coaches and/or steerspersons should assess the risk level and determine if the hazard can be eliminated or controlled. Assessment need to be suitable and adequate, nor more no less.

APPENDIX

Swamped or Capsized Dragon Boat Action Plan

a) What to do if the dragon boat swamps or capsizes.

Swamping is rare, but can be dangerous if it happens. An unbalance crew over-reacting to conditions (i.e. large waves, boat wakes, etc.) can swamp their own boat. A dragon boat could capsize due to sudden movement of crew members in the boat, a collision with another boat or object (e.g. channel buoy), or through contact with an underwater object.

If the boat is in motion then the crew should be directed to 'stop the boat' then 'brace the boat.' The steersperson should steer the boat 'downwind' while crew members take turns bailing out the boat. If the boat has taken on a significant amount of water then crew members should jump in the water and float beside the boat; crew members can touch the side of the body for stability but not hang onto the boat. Although the boat has buoyancy compartments, this flotation feature will only hold up the boat, not the crew. Three crew members should remain in the boat to bail out the water; these crew members should be the weakest swimmers. The person in charge might direct some of the people in the water to move towards the bow or stern in order to help turn the boat so that the bow or stern is pointing into the waves. This action will help reduce the number of waves coming over the sides, which might make it difficult to bail.

If the safety boat is operating it should be 'hailed' by one of the dragon boat crew members on board to lend assistance by providing extra bailers. If the boat is capsized, all crew members will be in the water while the safety boat uses a righting line to pull the boat upright. The safety boat will 'stand by' in a position 'upwind' from the dragon boat as a means to reduce the wave action against the dragon boat and the crew members in the water.

As the boat is bailed out it will support more people. Those who are having trouble staying afloat or are having serious problems with the cold should be the first to get out of the water.

If a dragon boat is swamped or capsizes the following actions should take place.

- Each crew member should account for their 'buddy.'
- The coach or steersperson must remain in control of the crew at all times and ensure that all the crew members are accounted for.
- When a boat is capsized (over-turned) crew members should not swim under the boat to try to 'right' the boat; wait for assistance to turn the boat over.
- Crew members should space themselves in the water around the boat. A fully swamped or capsized boat will float and remain stable if the crew is spaced evenly around the boat. Crew members should not use the boat for support, only for stability.
- Crew members should not let go of the boat. It is important not to be separated from the boat. If the paddles are floating nearby, crew members should retrieve them. Paddles will be needed to paddle the boat back to shore.
- If the boat is upright, a number of crew members can enter the boat and begin paddling.
- Once the boat is bailed of water and all crew members are aboard, then the boat should proceed immediately to the dock.

- If the boat is capsized and there isn't any boat available to lend assistance, the person in charge will make a decision as to swimming to the nearest shore. If a decision is made to abandon the boat, the crew will swim to the nearest shore as a group. Any crew member not wearing a PFD should 'buddy' with a person wearing a PFD. Crew members should swim to shore rather than trying to climb out of the water on a dock. All crew members should be accounted for during the swim to shore. Climbing onto a dock when a swimmer is tired and cold is very difficult to accomplish. Once on land, all crew members must be accounted for and any injuries dealt with immediately.
- A submerged boat should not be pulled through the water or pulled up on dragged onto shore as this puts a considerable strain on the hull of the boat. The dragon boat should be righted and the water bailed out until the boat is almost empty of water before towing the boat to the dock. The boat should be lifted to check for damage.
- The safety boat should make every effort to retrieve missing equipment (e.g. paddles, steering oar, bailers, safety equipment, etc.).