

## Local Knowledge – What to Know Before You Go

Boating in New York Harbor provides many unique experiences but also offers unusual challenges and obstacles to the non-motorized vessel operator. This document is designed to help boaters, educators and boating program operators identify the most common challenges in the harbor at large and at their particular launch sites so that boaters can know what to expect and how to prepare for safe boating in our unique environment. This document does not address boating skills per se, but focuses on conditions a boater may encounter in the area. Safe operation of one's vessel is paramount and training is available from a variety of local sources, many free or low-cost, but we always advise people to boat with established organizations and outfitters at least until one is adequately trained in vessel operation and familiar with NY Harbor and its many unusual features.

### General notes:

The harbor is like a busy, multi-laned street with vehicles of all sizes and lots of intersections but no familiar traffic signals or signs to guide you. Learn the Nautical Rules of the Road and follow them. Remember the Law of Gross Tonnage: the larger vessel has the right of way on the water. This is because they are less maneuverable, have trouble seeing smaller boats, and can do more damage when in a collision, and that commercial vessels have the right-of-way over recreational vessels **at all times**. There are many sources of information on Rules of the Road (some are linked at [www.nycwatertrail.org/safety\\_resources.html](http://www.nycwatertrail.org/safety_resources.html)) and NYCWTA periodically offers free classes on this and other navigation and operation topics, so see our events calendar and Google group.

**Traffic:** The most common type of commercial vessels boaters are likely to encounter is ferries. There are multiple ferry lines connecting New York City's 5 boroughs with each other and with surrounding coastal parts of NJ and points north and east. These lines are ever-expanding and ferry terminals proliferate. Boaters should be familiar with ferry lines whose paths they may cross. The largest, busiest ferry terminals at the time of writing are the NY Waterways terminal at West 39<sup>th</sup> street on the Hudson, multiple lines which operate from the Battery including the Staten Island Ferry, Ellis and Liberty Island ferries, the Governor's Island ferry, etc., and pier 11 near the foot of Wall Street on the East River which serves East River Ferry service, water taxis, Sea Streak vessels, etc. For an up to date map with links to the operators visit: [www.panynj.gov/commuting-traveling/ferry-transportation.html](http://www.panynj.gov/commuting-traveling/ferry-transportation.html)

**Communication:** To stay safe amidst the traffic, all boaters operating in the harbor should be familiar with the use of VHF radios and at minimum one member, ideally all members, of a group on the water should be carrying a marine VHF radio and should be monitoring Channel 16 (156.800 MHz) - Distress, safety and calling and monitored by USCG, NYPD Harbor Patrol, and commercial boaters

### Tides and Currents:

New York Harbor is a tidal estuary, and thus a complex system of tides and currents. Water flows in and out of from the Atlantic Ocean every day and this horizontal movement is known as currents. Water coming into the estuary from the Atlantic Ocean is known as the flood or northbound current. Water returning to the Atlantic from the estuary is the ebb or southbound current. Tides are the vertical movement of the water and are caused by the gravitational attraction of the moon. Tidal range in NY

Harbor is about six feet. Times of high and low water refer to vertical tidal movement while maximum ebb and maximum flood refer to corresponding speeds at which the water moves horizontally. The Hudson River's currents max out at three or four knots (1 knot = 1 Nautical Mile / hour. 1 Nautical Mile = 1.15 Statute Mile) while the East River can go as fast as seven or eight knots and the maximum currents and timing of the tides in other parts of the harbor such as the Harlem River and Jamaica Bay are different as well, so it's essential for boaters to consult tide tables and/or current charts for the specific area where they will be paddling or rowing, and to remember that currents are strongest in the middle which is typically the deepest part of the river. Tide tables can be found online (some sources are at [www.nycwatertrail.org/tides](http://www.nycwatertrail.org/tides)) and a useful set of current diagrams from the very handy Eldridge Tide and Pilot Guide for the waters around Manhattan are posted at [www.nycwatertrail.org/current\\_diagrams.html](http://www.nycwatertrail.org/current_diagrams.html) On the Hudson River in NYC, high tide coincides roughly with maximum flood current and low tide with maximum, ebb, but this is not the case elsewhere, in fact there is an offset on the East River between heights of tide and current and as you proceed north on the Hudson the timing varies. NYCWTA has published a trip-planning tool which helps teach users how the tides and currents in adjacent water bodies interact. You can request a copy of download a puff at [www.nycwatertrail.org/tide\\_wheel.html](http://www.nycwatertrail.org/tide_wheel.html)

THE FOLLOWING SECTIONS NEED TO BE FLESHED OUT. WE WELCOME YOUR SUGGESTIONS AND INPUT. PLEASE SEND THEM TO [harbor-safety@nycwatertrail.org](mailto:harbor-safety@nycwatertrail.org)

**Hazards:** pier heads, pilings, bridge stanchions, anchored barges, strainers, eddy lines, Submerged objects

Safe and legal egress:

Safe harbor laws:

Security zones

**Weather:**

Wind, Clouds, Storms

### Local Knowledge Quiz Template

Below is a sample local knowledge quiz based on one compiled by Monica Schroeder of the North Brooklyn Boat Club. With some customization, marked with [brackets containing suggestions] it make a great start toward a curriculum for teaching boaters of any NYC harbor based organization about the particularities of their locale and some more general information about conditions in our harbor and then evaluating their knowledge of local conditions to assess their readiness to operate independently on our waterways.

#### **Section 1: Nautical**

##### Equipment

1. Basic gear for [boat type]
2. What safety gear do you need to paddle after dark?
3. What types of clothing / gear best prevent hypo or hyperthermia?

### **Marine Radio**

4. What radio channels are used for boat traffic? Emergency?
5. Demonstrate a security call. When should you make a security call? When should you contact a vessel directly?
6. Which radio channel for NY harbor weather?
7. Name two non-commercial radio channels?

### **Trip Planning**

Propose a float plan for a 3+ hour paddling/rowing trip from a specified launch site in the harbor based on today's currents and forecast weather:

8. At what time would you launch and land?
9. What other condition(s) should you check before heading out and what sources would you use for the information?
10. Would a west wind or a south wind potentially affect you on this route? Why?

### **Nautical Chart**

11. Is the best time to go through Hell Gate [or to pass some other obstacle] ebb, flood or slack?
12. Point to legal launch/landing sites along the proposed route.
13. Point to emergency take-outs along a proposed route.
14. Point to all possible strainers, pier heads, submerged piling fields or other known submerged objects, blind spots, unusual eddies, or shallow water along your route on the chart.
15. Point to permanent security zones along your route.

### **Emergencies**

16. What type of rescue would you use for an uninjured person? An injured or weak person?
17. How can you call for help? What information should you report to rescuers?

### **Rules of the Road and other Trip Concerns**

18. Point out all the Ferry docks within a 3 mile radius of your launch site?
19. What are different ferry situations boaters may encounter and how should you handle them?
20. What other commercial & non-commercial vessel are you likely to encounter and when do you have the right of way?
21. When should you pass in front of another boat and when should you pass behind?
22. What & where are shipping lanes? When is it OK to be inside the shipping lanes?
23. What does one long horn blast mean? 3 short horn blasts mean?

## **Section 2: Environmental**

### **Paddling and Water Quality**

1. What health precautions should you take while boating in the harbor?  
What health precautions should you take when you are done boating?
2. Which types of non-motorized boats put the user at greatest risk for exposure to contaminated

water?

3. What should you do if you see large amounts of oil or other contaminants floating in the harbor or discharge from DEP outfalls in dry weather?
4. How might water quality conditions be different at low tide vs. high tide?

**General Pollution**

5. What is a CSO and why does it affect boaters? Where can one get information on CSO activity?
6. Why are CSOs a bigger concern in more still water bodies (e.g. creeks, canals) vs. the East River or Hudson River?
7. What is a superfund site? Point to 2 Superfund sites on the chart.

