To make a tide wheel, cut out the “clock” dial to the right and attach it to the wheel at the left so the centers line up and the small wheel can turn.

To use it, find the time of high tide at the Battery for the date you're interested in, then spin the inner "clock" wheel until that time lines up with the arrow at the top of the card. The outer rings tell you the direction of flow at any given time on any of Manhattan's three "rivers."

In most places in the world, tidal currents flood (come in) until high tide and then ebb (go out) until low tide. Not so in New York Harbor. Depending on the location, the average tidal current lag—the gap between high or low water and the beginning of the flood or ebb—can be as much as two hours and 45 minutes.

Devised by boatbuilder Don Betts, the tide wheel is a simple means of gauging the tidal current lag on the waterways surrounding Manhattan. To use it, find the time of high tide at the Battery for the date you’re interested in, then spin the inner ‘clock’ wheel until that time lines up with the arrow at the top of card. The outer rings tell you the direction of flow at any given time on any of Manhattan’s three ‘rivers.’

The tide wheel is only an approximate guide. Unusual wind and weather can affect currents, sometimes profoundly, and slack tide times vary widely from one end of the harbor to the other. Above all, you should remember that no tool or navigational aid is a substitute for experience and good judgment. If you have never paddled or rowed in New York Harbor, we strongly urge that you join an established community boathouse or boating program, or hire a professional guide.

The New York City Water Trail Association is an umbrella group representing the interests of more than 20 local paddling, rowing and waterfront advocacy organizations. Its mission is to promote the safe use of the NYC Water Trail, to expand the facilities available to human-powered boaters, and to advance awareness of the public ownership of our urban waterways.