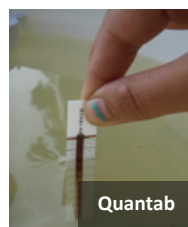
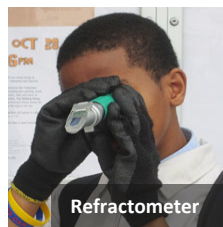
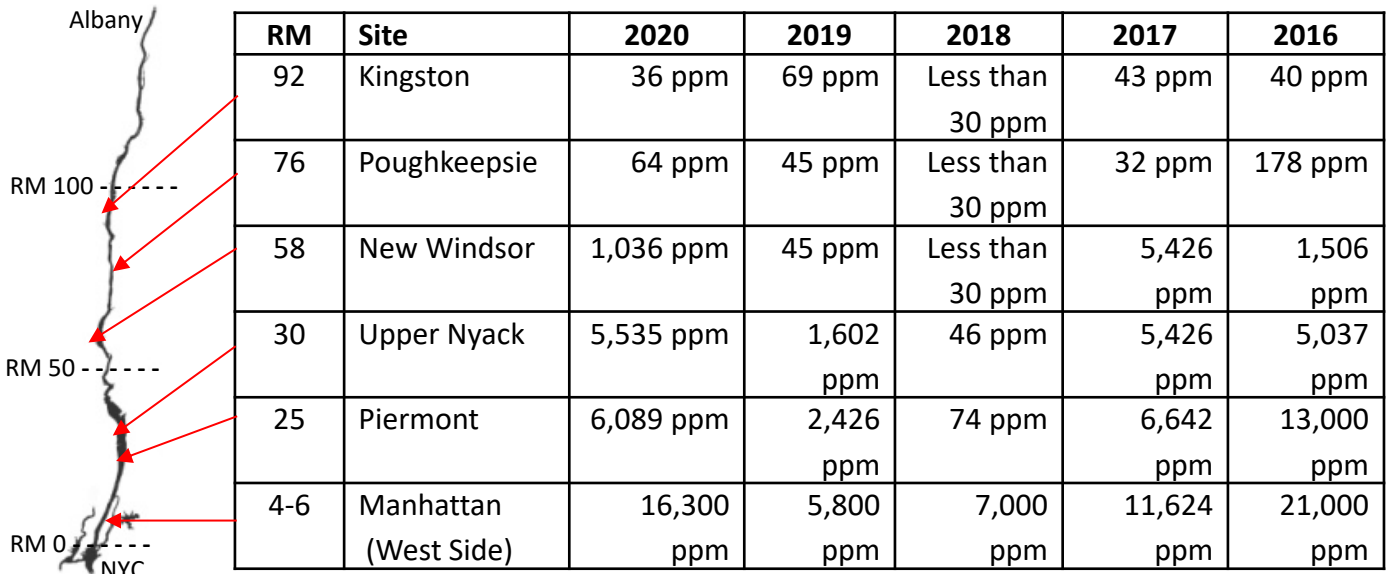


A Day in the Life of the Hudson and Harbor 2020: Salinity

Salinity Data Table

Salinity can be reported in many different units. Here the units are **parts per million (ppm)** of chloride (Cl⁻) to help compare results from sites far apart on the estuary. In saltier areas, like New York City, salinity is usually measured in **parts per thousand (ppt)**. **River miles (RM)** are measured north from the Battery in NYC.



People use different tools to measure salinity. Hydrometers and refractometers are best used in saltier water, while quantabs are best for fresh and slightly salty water.

1. The salt front (the leading edge of dilute sea water entering the Hudson) is located where salinity reaches 100 ppm.

- Which sites from the table were considered freshwater in 2020?
- In what year shown did the salt front reach the farthest north? Why might this be? Hint: How might weather affect salinity?
- In what year shown was the salt front the farthest south? What conditions would cause this?

2. Where was the salt front on October 22, 2020?

Use a pencil to plot salinity readings for 2020 (found in the table above) on the graph on the next page.

- Place a point for salinity readings from Piermont to Kingston directly above the listed river mile.
- Using a ruler, draw a line from one point to the next. Start at the point for the lowest river mile and continue to the highest.
- The salt front is located in the area where salinity equals 100 ppm of chlorides. Using your graph plot and the horizontal line at 100 ppm, estimate (in river miles) the position of the salt front on October 22.

River Mile _____

