**Day in the Life of the Hudson River 10/30/14 Data**

**(Salt Front not recorded for 10/30 – 10/28 it was 61.1 and 11/1 it was RM 59.9)**

**RIVER MILE 5**

**Pier 1 - 59th Street/Riverside Park**

**N 40.76408 W-74.001893**

**Kimberly Schwab, Speyer Legacy School Plus 3 adults**

**50 students - 7th graders sampling and sharing data with 6th graders who are giving tours to 2nd graders - 8 adults**



**Seventh grade sampling team**

Location: Pier i, New York NY

Area: Restored former railroad pier

Surrounding Land Use: Urban/residential 100%

Sampling Site: Except for seining and taking core samples, all sampling took place on pier i.

Plants in area: no submerged aquatic plants in the water but lots of plants on shore

Water depth: Varied by location on the pier and by tide

River Bottom – sandy/muddy bottom

Plants in area: Varied native and introduced plants in Riverside Park South



**Seventh graders sampling with DEC Runners stopping by**



**Speyer students used a niskin bottle to collect samples from the surface and depth to do a comparison in water chemistry**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***ITEM*** | ***Time*** | ***Readings*** |  |  |
| ***Physical*** |   |  |  |  |
| Air Temperature | 10:05 AM | 10°C | 50°F |  |
| Wind Speed | 10:05 AM10:37 AM10:52 AM12:22 PM12:27 PM | Beaufort 3Beaufort 2Beaufort 3Beaufort 3Beaufort 3 |  |  |
| Cloud Cover | clear |  |  |  |
| Weather today | Clear and warm |  | ***Water surface*** |  |
| Weather recently | Cool with rain off and on for last 2 wks |
| ***Water Temperature*** | Forgot thermometer |  |  |  |
| ***Turbidity******Short site tube*** | **Time** | **Reading** | **Average** | **End of Pier** |
|  | 9:20 AM10:15 AM12:48 PM | 404448 | 35.5 cm25.5 cm22.8 cm |  |
| ***Chemical*** | **Time**  | **mg/l** | **Temp** | **% Sat** |
| \*Water sampled at surface and at depth with niskin bottle reported in two separate sets of readings below. Depth for bottom samples ranged from surface to depth |
|  | **TIME** | **SURFACE** | **BOTTOM** |  |
| DO - Hach –  | 9:30 AM10:10 AM10:40 AM12:30 PM1:10 PM | Not read6 mg/l6 mg/L7 mg/L6 mg/L | 6 mg/L6 mg/L6 mg/L6 mg/L6 mg/L |  |
| pHkit as above | 9:30 AM10:00 AM10:30 AM11:30 AM12:00 PM12:30 PM1:00 PM1:30 PM2:00 PM | 6.587.57.588.57.588 | 68.5887.587.587.5 |  |
| Salinity – | SURFACE refractometer (R) | SURFACE Glass Hydrometer (H) | DEPTH refractometer (R) | DEPTH Glass Hydrometer (H) |
| 10:09 AM10:12AM11:10AM12:25 PM12:35 PM12:50 PM12:52 PM12:53 PM12:55 PM1:00 PM1:24 PM2:05 PM | 13 ppt -R14 ppt – Rn/rn/rn/r14 pptn/rn/rn/r14 ppt14 ppt14 ppt | 15 ppt Hn/r17 pptn/rn/rn/rn/rn/r12 ppt13 ppt12 ppt14 ppt | n/rn/rn/r15 ppt22 pptn/r17 pptn/rn/rn/r17 ppt14 ppt | 17 ppt – Hn/r14 ppt20 pptn/rn/rn/r15 pptn/rn/r15 ppt14 ppt |
| ***Fish Catch – minnow traps***  | ***Number*** | ***Species*** | ***Size*** | ***Time*** |
| ***MACROS-*** ***On pier*** | 9  | Snails |  | 10:00 AM |
|  | Many  | Comb Jellies |  |  |
| ***Crab Traps*** | 1 | Blue crab | 70 cm |  |
| ***\*** | 1 | Blue crab | 100 cm |  |
|  | 1 | Blue crab | 110 cm |  |
|  | 2 | Blue crab | 130 cm |  |
|  | 1 | Blue crab | 140 cm |  |
| ***Total Macro***  | ***15 + comb jellies*** | ***Diversity 3*** |  |  |
| ***FISH - Seine – only ¼ unfurled -***  | 100 | Atlantic Silversides |  | 1:00 PM |
| ***Lots of trash washed into net*** | 1 | y-o-y striped bass |  |  |
| ***Total Fish***  | **101**  | ***Diversity 2*** |  |  |
| ***Tides (from pier to water)***  | ***Total Depth (Meters)***  | ***Distance to water surface*** | ***Tide Depth*** | ***Flood or Ebb***  |
| 9:39 AM | 13.54 | 4.52 | 9.32 | ebb |
| 10:05 AM | 11:40  | 4:52 | 6.88 | ebb |
| 10:19 AM | 11.53 | 4.52 | 7.01 | still |
| 10:38 AM | 11.51 | 4.52 | 6.99 | still |
| 11:00AM | 11.53 | 4.52 | 7.01 | still |
| 12:07 PM | 10.62 | 3.61 | 7.01 | Flood |
| 12:45 PM | 10.9 | 3.61 | 7.29 | Flood |
| ***Currents*** | ***Time*** | ***Meter/sec*** | ***Cm/sec*** | ***Ebb/Flood*** |
| 9:36 AM | 1858 | 61.93 cm/sec | 1.2038 | Ebb |
| 10:05 AM | 2043 | 68.1 cm/sec | 1.3238 | Ebb |
| 10:14 AM | 2072 | 69.07 cm/sec | 1.3424 | Ebb |
| 10:16 AM | 1920 | 64 cm/sec | 1.2441 | Flood |
| 10:50 AM | 1066 | 35.53 cm/sec | 0.6907 | Still |
| 12:00 AM | 44 | 1.23 cm/sec | 0.0239 | Still |
| 12:15 PM | 305 | 10.17 cm/sec | 0.1976 | Flood |
| 12:27 PM | 610 | 23.33 cm/sec | 0.4535 | Flood |
| 12:40 PM | 450 | 15 cm/sec | 0.2916 | Flood |
| 1:42 PM | 915 | 30.5 cm/sec | 0.5929 | Flood |
| **Sediment Cores** | **Length** | **H2S smell/oil** | **Rare** | **Common** | **Abundant** |
| **1:30 PM****location 1** | 4 cm – hard to penetrate | No |  | Mud, pebbles | Sand, gravel, pebbles |
| **1:30 PM****location 2** | 4 cm – hard to penetrate | No | Glass | Pebbles | Sand |
| **SHIPPING** | **Time** | **Name** | **Color** | **North/South** | **Full/Empty** |
|  | 9:42 Am | Motorboat | Yellow | Southbound | full 2 people |
|  | 9:45 AM | Ferry NY Waterway | White | Southbound | Unknown |
|  | 9:47 AM | Yacht | White | Southbound | unknown |
|  | 9:51 AM | Ferry NY Waterway | White, blue | Southbound | Passengers |
|  | 9:55 AM | Ferry NY Waterway | White | Northbound | Passengers |
|  | 9:56 AM | Sailboat “Salsa” | Red w. black sail | Northbound | Passenger  |
|  | 10:01 AM | Ferry NY Waterway | White | Northbound | Passengers |
|  | 10:03 AM | Ferry NY Waterway | White, blue | Southbound | Passengers |
|  | 10:05 AM | Speedboat | Red, white,black | Northbound | 1 passenger |
|  | 10:07 AM | Cargo“Hunts Point” | White, black | Northbound | Full |
|  | 10:10 AM | Tugboat | Blue | Southbound |  |
|  | 10:10 AM | Barge pulled by tug above | Brown | Southbound | Lots of garbage/cargo |
|  | 10:37 AM | Ferry NY Waterway | White | Northbound | Passengers |
|  | 10:40 AM | SpeedboatVery fast! | White | Northbound | Passenger |
|  | 10:45 AM | Cargo boat | White | Northbound | Full |
|  | 12:05 PM | Sailboat  | Green | Northbound | Passengers |
|  | 12:06 PM | Ferry NY Waterway | White | Southbound | Passengers |
|  | 12:20 PM | Ferry NY Waterway | White | Northbound | Passengers |
|  | 12:24 PM | Circle Line | White | Southbound | Passengers |
|  | 12:31 PM | Ferry NY Waterway | White | Northbound | Passengers |
|  | 12:42 PM | NYPD Boat | White, blue | Northbound | Passengers |
|  | 1:01 PM | Cruise | White | Southbound | Passengers |
|  | 1:20 PM | Cruise | White | Southbound | Passengers |
|  | 1:30 PM | Cargo | Black & white | Northbound | Full |
|  | 2:04 PM | Tugboatno barge | White | Northbound |  |

HRECOS SCREEN CAPTURES FROM PIER 84 SITE

During Sampling time salinity on 10/30/14 ranged between 10 and17 ppt (psu)



During Sampling time DO ranged from 6.75 to 8 ppm

During Sampling time Turbidity ranged from 0 to 4 NTU

Wind During Sampling Time

Tides During Sampling Time