

Day in the Life of the Hudson River 10/16/18 Data
HENRY HUDSON RIVERFRONT PARK, RIVER MILE: 117
Hudson, Columbia County, NY

Salt Front: ~RM 24

Chatham High School- Sandra Fischer

30 students 10th -12th grade Environmental Science, AP Biology & Ecology Club , 7 adults

Latitude 42.25 N & Longitude - 73.80 W

Location: Henry Hudson Riverfront Park, City of Hudson, Columbia County, NY

Area: 1st dock in the waterfront property used for fishing, marina, picnics, large grassy area with parking lot, just north of the old quarry site

Surrounding Land Use: 50% Industrial/Commercial; 50% Urban/Industrial

Sampling Site: Waterfront with banks 100% altered to include wooden & concrete bulkheads and large riprap on shoreline; pier, grassy, parking

Shoreline: 30% Muddy; 70% Rocky; Riprap

Water: Choppy

Plants in area: 0.5% water chestnut; 0.1% water celery, 1% milfoil

River Bottom description: Muddy, Rocky

| <i>ITEM</i> | <i>Time</i> | <i>Reading</i> | | <i>Comments</i> |
|--|--|-----------------------------------|------------------------------|--|
| Physical | | | | |
| <i>Air Temperature:</i> | 8:30 AM | 9.9 °C | 49.82 °F | |
| | 10:30 AM | 11.5 °C | 52.7 °F | |
| | 12:30 PM | 15.6 °C | 60.08 °F | |
| <i>Wind Speed:</i> | 12:15 PM | 5 Beaufort Force | 5 m/s | East |
| <i>Weather Today:</i> | Partly cloudy (26-50%) Overnight rain | | | |
| <i>Weather Previous:</i> | Warm day, cold nights, rain earlier in the weekend | | | |
| Water Temperature | 9:24 AM | 17.4 °C | 63.32 °F | |
| | 11:17 AM | 17.4 °C | 63.32 °F | |
| | 12:25 PM | 16.3 °C | 61.34 °F | |
| Turbidity - 11:30 AM | <i>Secchi Disk</i> 150 cm | <i>Long sight tube</i> 85.8 cm | <i>Colorimeter</i> 74 NTU | Not very turbid-surprising given how choppy it was |
| Chemical | | | | |
| <i>Salinity- LR Quantabs</i> | 9:31 AM | 76 ppm Cl ⁻ | 137 ppm total sal. | |
| | 11:25 AM | 34 ppm Cl ⁻ | 61 ppm total sal. | |
| | 12:20 PM | 29 ppm Cl ⁻ | 52 ppm total sal. | |
| <i>DO –</i> | <i>Time</i> | <i>Temp</i> | <i>ppm DO</i> | <i>% saturation</i> |
| | 9:30 AM | 14 °C | 10.6 | 101 |
| | 10:59 AM | 16.9 °C | 10.5 | 110 |
| | 12:25 PM | 16.3 °C | 10.63 | 109 |
| <i>pH –</i> 9:31 AM 10:56 AM 12:38 PM | <i>pHydrion strip</i> 5 | <i>Aquacheck strip</i> 6 | <i>PASCO pH probe</i> 6.5 | |
| | 5 | 6 | 6.8 | |
| | 6 | 6 | 6.8 | |
| | | | | |
| <i>Nitrates</i> | 10:10 AM | Low | | |
| <i>Phosphates</i> | 10:30 AM | Low | | |
| Fish | Number | Name | Length of longest | |
| | 12 | Spottail Shiner | 6.8 cm | |
| | 52 | Banded Killifish | 9 cm | |
| | 31 | Mummichog | 9.5 cm | |

| | | | | | |
|-------------------------------------|---------------------------------------|-----------------------------------|--------------------------|--------------------------------------|------------------------|
| | 9 | Herring (YOY) | 7.5 cm | | |
| | 2 | Striped Bass | 11.5 cm | | |
| | 1 | White Perch | 9.3 cm | | |
| | 1 | Bluegill | 9.1 cm | | |
| Fish Totals | TOTAL: 108 | Diversity: 7 | | | |
| Macroinvertebrates | Number | Name | Length of longest | | |
| | 10 | Blue Crab | | | |
| Macroinvertebrate Totals | TOTAL: 10 | Diversity: 1 | | | |
| Tides- Tide stick | Time | Rising, Falling, Still | Height (cm) | Rate of Tidal Change (cm/min) | |
| | 8:55 AM | Rising | 163 | - | |
| | 9:15 AM | Rising | 178 | 0.75 | |
| | 10:34 AM | Falling | 145 | 1.74 | |
| | 10:57 AM | Falling | 130 | 0.65 | |
| | 12:02 PM | Falling | 110 | 0.31 | |
| | 12:10 PM | Falling | 107 | 0.375 | |
| | 12:18 PM | Falling | 95 | 1.5 | |
| Current- *measured in a cove | cm/second | Rising, Falling, Unchanged | Height (cm) | Rate of Change (cm/min) | |
| Currents Flow | Cm/second | Knots | North/South | Ebb/Flood/Still | |
| *very choppy & fast moving | | | | | |
| 9:00 AM | 47 | 0.91 | North | Flood | |
| 11:00 AM | 35 | 0.68 | South | Ebb | |
| 12:20 PM | 30 | 0.58 | South | Ebb | |
| Sediment Core | Time | Description | Common | Abundant | |
| 0.5 m water depth | 12:15 PM | 5 cm | Brick | Clay Mud | |
| Boats | Time | Name | Color | North or South | Loaded or Light |
| Commercial | 9:59 AM | GM6508 ZEVS | Black/blue | North | Loaded |
| Commercial | 11:00 AM | DEC | White | North | Light |
| Commercial | 12:19 AM | Intermarine | Black/white | North | Light |
| Other Observations | Seagulls, cormorant, eagle, woodchuck | | | | |