

Day in the Life of the Hudson River 10/4/12 Data
RIVER MILE 118
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60 students 10th -12th grade, 4 teachers and 1 educator
Latitude – N 42.255 Longitude – W -73.8

Location: Hudson River Waterfront Park, City of Hudson, Columbia County

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

Surrounding Land Use: 100% urban/residential

Sampling Site: waterfront , banks altered, large riprap on shoreline,

Plants in area:

Water depth – ~ 1 foot

River Bottom – sandy, muddy, rocky

Plants in area – Grass 90%, Water Chestnut 1%, Trees 5%, Bushes 4%, duck weed

| <i>ITEM</i> | <i>Time</i> | <i>Reading 1</i> | <i>Reading 2</i> | <i>Comments</i> |
|----------------------------|--|-----------------------------|------------------------------------|---|
| <i>Physical</i> | | | | |
| Air Temperature | 9:20 AM 9:29 AM 9:36 AM | 19.4°C 19.1 19.6 | | |
| | 9:55 AM 10:05 AM 10:15AM | 19.4°C 19.5 19.2 | 67.1 °F 66.9 66.6 | |
| | 10:42 AM 10:50 AM 11:02 AM | 22.2°C 21.2 21.6 | | |
| | 12:50 PM 1:00 PM 1:10 PM | 21.0 °C 20.4 21 | 69.8 °F 68.72 69.8 | |
| Cloud Cover | Foggy* It was really foggy but once it started raining the fog went away | *Beaufort 0 most of the day | *every now and then a gust of wind | Gust at 1:00 PM Beaufort #2 0 – wind meter 2.8 - 5.44 kts. - East |
| Weather today | Lots of rain at start then inconsistent went from showers, to drizzle, to fog with periods of pouring rain | | | |
| Weather recently | Monday cloudy, Tuesday rainy, foggy, humid, Wednesday drizzle, foggy, humid | | | |
| Water calm | Calm – very still | | | |
| <i>Water Temperature</i> – | 9:34 AM 2.5 m depth | 19.4°C 19.3 19.35 | | 19.35°C |

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|--|-------------------------|-------------------------|-------------------------|---------------|
| *depth reported in both ft. & meters | 9:55 AM 0.1 m depth | 19.8 °C 19.8 | | 19.8°C |
| | 10:52 AM 1 ft. | 19.5 °C | 67.1 °F | |
| | 11:02 AM 2 ft. | 19.3 °C | 66.74 °F | |
| | 11:12 AM 6 ft. | 19.3°C | 66.74 °F | |
| | 12:04 PM 1 ft. depth | 19.7 °C 19.4 | | 19.6°C |
| | 12:14 PM 3 ft. depth | 19.4 °C 19.4 | | 19.4°C |
| | 12:28 PM 4 ft. depth | 19.4 °C 19.5 | | 19.5°C |
| | 12:44 PM 1 ft. | 19.8 °C 19.4 19.6 | 69.1°F 66.9 67 | 19.6°C |
| | 1:04 PM 2 ft. | 19.4°C 19.4 19.4 | 66.9 °F 66.9 66.9 | 19.4°C |
| | 1:14 PM 3 ft. | 19.6°C 19.6 19.6 | 67 °F 67 67 | 19.6°C |
| <i>Turbidity – short site tube</i> | 9:22 AM | 0 JTU 40 40 | Avg. 26.7 | |
| - | 9:58 AM | 20 JTU | Avg. 20 | |
| <i>extremely turbid, churned up by storm -& boats</i> | 12:04 PM | 0 JTU 40 40 | Avg. 26.7 | |
| | 12:50 PM | 0 JTU 40 40 | Avg. 26.7 | |
| <i>Chlorophyll</i> | 9:30 AM | 0 | 10:05 AM | 0.3 |
| | 12:08 PM | 0.6 | 12:50 AM | 2.0 |
| <i>Chemical</i> | Time | Temp | DO | % sat. |
| DO | 9:25 AM | 18°C | 4 ppm | 38 % |
| | 9:30 AM | 18°C | 4 | 38 % |
| | 9:37 AM | 18°C | 4 | 38% |
| | 9:52 AM | 18.5 °C | 4.7 ppm | 23% |
| | 10:20 AM | 19.5 | 3.0 | 31 |

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|--|--|------------------------------|----------------------------|-------------------------------|
| | 11:16 AM 11:26 AM 11:36 AM | 19.7 19.6 19.6 | 5.2 ppm 7.6 7.4 | 65% 80 77 |
| | 12:35 PM 12:45 12:46 | 18.1 °C 18.5 18.6 | 5.5 ppm 5.6 5.7 | 58% 58 60 |
| pH – meter | 9:21 AM 9:31 AM 9:41 AM 9:51 AM | 7.46 7.58 7.64 7.61 | | |
| | 10:48 10:58 11:08 11:18 | 7 7.61 7.72 7.74 | | |
| | 12:04 PM 12:15 PM 12:26 PM | 7.05 7.64 7.62 | | |
| | 12:44 PM 12:54 1:04 1:14 | 7.63 7.6 7.59 7.61 | | |
| Salinity | Time | Chloride | Total Salinity | Average |
| Quantabs | 9:27 AM 9:37 AM 9:47 AM | 28 ppm Cl- 31 31 | 51 ppm 36 ppm 36 ppm | 41 ppm |
| | 10:48 AM 10:58 11:08 11:18 | 28 ppm Cl- 28 30 30 | 51 ppm 51 54 54 | 52.5 ppm |
| | 12:04 PM 12:15 PM 12:26 PM | 28 ppm Cl- | 51 ppm | 51 ppm |
| | 12:44 PM 12:54 PM 1:04 PM 1:14 PM | 26 ppm Cl- 27 27 29 | 47 ppm 49 49 52 | 49 ppm |
| | | 28 ppm Cl- | 51 ppm total salinity | |
| | | | | |
| <i>Fish Catch</i> | <i>Time</i> | <i>Species</i> | <i>number</i> | <i>Size of largest</i> |
| Seine net 30 feet X 4 ft., 1.4 inch mesh | 9:52 AM | <i>White Perch</i> | 2 | 3.5 inch |

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| | | <i>Spottail Shiner</i> | 56 | 4.5 inch |
| | 10:35 AM | <i>North American Common Shiner</i> | <i>Not given</i> | |
| | | <i>Spottail Shiner</i> | <i>Not given</i> | |
| | | <i>White perch</i> | <i>Not given</i> | |
| | 10:45 AM | Banded Killifish | 11 | 2.5 inch |
| | | Bluegill Sunfish | 6 | 2.5 inches |
| | | Spottail Shiner | 44 | 3.5 inches |
| | | N. Am. Common Shiner | 2 | 2.25 inches |
| | | Unknown fish | 2 | 1 inch |
| | | Mudfish (?) | 2 | 1 inch |
| | Last Seine | Spottail Shiner | 20 | 3 inch |
| | | Sunfish | 13 | 4 inches |
| | | N. Am. Common Shiner | 6 | 3 inches |
| | | Smallmouth Bass | 1 | 4 inches |
| Macro invertebrates | Rotation #1 | Rotation #2 | Rotations #3 | Rotation #4 |
| | Duck weed Water mite Worm larva Daphnia Copepod Amphipod Mosquito larva Blood worm Ostracod | Ostracod Dafnia Worm Damsselfly Waterfleas Watermites Shrimp Caddisfly Copepod | Mosquito Larva Nematoad Ostracod Back Swimmer Copepod Daphnia Cyclops | Water flea Caddisfly larva Ostracod Backswimmer larva Water bear |
| Tides | 10:02AM 10:10 AM 10:15 AM 10:20 AM 10:25 AM | 39 cm 39 cm 40 cm 40 cm 40 cm | Set Unchanged Rising Unchanged Unchanged | <i>Tidestick Set</i> |
| | 10:44AM 10:50 AM 10:59 AM 11:08 AM | 43 cm 39 cm 31 cm 39 cm | Falling | <i>Tidestick Set</i> |
| | 10:39 AM 10:44 AM | 28 cm 24.5 cm | Falling | <i>Tidestick Set</i> |
| | 1:03 PM 1:15 PM | 11 cm 8.75 cm | Falling | <i>Tidestick Set</i> |

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| | 1:20 PM 1:30 PM | 7.5 cm 6.5 cm | | |
| | 12:50 PM 1:00 PM 1:10 PM 1:20 PM 1:30 PM | 40 cm 37 cm 35 cm 35 cm 35 cm | Set stick Falling Falling Unchanged unchanged | <i>Tidestick set</i> |
| Currents | Time | Cm/60 secs | Cm/sec | Kts - E/F/S |
| | 9:29 AM. | 62 | 2.62 | Ebb |
| | 9:38 AM | 625 | 27 | Ebb |
| | 9:48 AM | 843 | 14 | Ebb |
| | 10:00 AM | 538.5 | 8.945 | |
| | 10:10 AM | 228 | 3.81 | |
| | 10:15 AM | 706 | 12.29 | |
| | 10:20 AM | 883 | 14.5 | |
| | 10:44AM | 518 | 8.6 | 0.168 |
| | 10:53 AM | 930 | 15.5 | 0.3 |
| | 11:00 AM | 1173 | 19.5 | 0.38 |
| | 11:10 AM | 1132 | 18.8 | 0.36 |
| | 12:50 PM | 243 | 4.5 | 0.79 – Ebb |
| | 1:00 PM | 548 | 9.13 | 0.1778 – Ebb |
| | 1:10 PM | 365 | 6.08 | 0.1184 - Ebb |
| | 1:20 PM | 365 | 6.08 | 0.1184 - Ebb |
| Observations: Currents are faster in the center of the river than on the shoreline, tide was going down. | | | | |
| Core Sample | Length/Grain size/H2S | Abundant | Common | Rare |
| Traffic - commercial | 8:30-1:30 AM | Black Ship | Sitting in the industrial area next to park | Stationary, loaded |
| | | | | |
| Recreational | 9:31 AM | Yacht | White | South, Empty |
| | 10:05 AM | | Camo | North, light |
| | 11:14 AM | | White/black | South, light |
| | 11:08 & 11:50 Am | 2 sailboats & speedboat | White | South |
| | | | | |
| | 12:18 PM | Barge | Red | Not moving, loaded |
| | | | | |
| | 12:30 PM | Water taxi | White | South, full |
| | 1:07 PM | American Spirit | white | Northbound full |
| Other Items | Water chestnut seeds, shell pieces. Great blue heron, 'urban | | | |

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| | white fish', barge being loaded. |
| 9:32 AM | Blue heron feeding in the water |
| 9:38 AM | Water Chestnut plant on the shore |
| 11:51 AM | Bald Eagle |
| <i>Journal Item</i> | <p>We caught a lot more fish at the fish seining than we had expected. All of the stations were fun and I learned new things at all the stations. Everything went well except the core sampling equipment wasn't working. We saw a variety of wildlife including a bald eagle, a rat, fish, etc. We also saw different boats. Our group only saw one reading for salinity and pH. There were a lot of spider webs on the railings of the docks – they looked really cool when they were wet.</p> <p>I thought the trip was fun and interesting. I think it would have been funner if it wasn't raining but at the same time the rain made our findings more interesting. I really liked going into the water with the waders. I don't think the data collection was very valuable because it was done by HS students with little experience.</p> |