

**Snapshot Day 10/18/11Data  
(Salt Front RM 35.7)  
RIVER MILE 118**

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43 students 11<sup>th</sup> -12<sup>th</sup> grade, 3 teacher and 1 educator  
Latitude – N 42.233937 Longitude – W -73.799957**



**Location:** Hudson River Waterfront Park, City of Hudson, Columbia County  
**Area:** 1<sup>st</sup> dock in the waterfront property used for fishing, marina, picnics, large grassy area, just north of the old quarry site  
**Surrounding Land Use:** 50% urban/residential, 10% beach, 20% park, 20% Industrial/commercial  
**Sampling Site:** waterfront , banks altered, large riprap on shoreline,  
**Plants in area:**  
**Water depth** – 2.7 meters off dock  
**River Bottom** – sandy, muddy  
**Plants in area** – Grass 60%, dandelions 20%, clover 30%, Maple Trees 10%, willow trees 2%, poison ivy 1% - water Chestnut floating

| <i>ITEM</i>     | <i>Time</i> | <i>Reading 1</i>                               | <i>Reading 2</i> | <i>Comments</i>                                   |
|-----------------|-------------|--|------------------|---|
| <i>Physical</i> |             |  |                  |   |
| Air Temperature | 9:32 AM –   | 11°C<br>52°F<br>Beaufort 0<br>0 km/hr<br>0 kts | 9:55 AM –        | 17.1°C<br>62.6°F<br>Beaufort<br>km/hr<br>0.03 kts |

|   |  |  |  |                   |
|---|--|--|--|-------------------|
|   |  |  |  |                   |
|   |  |  |  |                   |
|   |  |  |  |                   |
| Cloud Cover   | Overcast                                       |  |  |                   |
| Weather today   | No rain, very slight wind but no gusts, chilly |  |  |                   |
| Weather recently  |  |  |  |                   |
| Water calm  | calm   |  |  |                   |
| <b><i>Water Temperature –</i></b>   | 9:19 AM<br>2 ft.                               | 14.4 °C<br>15.2<br>22<br>15.2<br>14.7<br>22.55<br>15.3<br>15.3<br>15.3 | 58°F<br>59<br>58.5<br>59<br>58<br>58.5<br>59<br>59<br>59                       | 15.3°C<br>66°F    |
|   | 10:40-10:55 AM                                 | 15.2°C<br>15.4<br>15.23<br>15.7<br>15.4<br><br>15.7<br>15.8<br>15.72   | 59.36 °F<br>59.72<br>59.54<br>60.86<br>59.9<br>60.08<br>60.2<br>60.44<br>60.35 | 15.5°C<br>60.05°F |
|   |  |  |  |                   |
|   |  |  |  |                   |
|   |  |  |  |                   |
| <b><i>Turbidity – circles long site tube &amp; turbidimeter– varied reporting between NTUs or cms</i></b> | 9:45 AM  | 200 NTUs<br>120 NTUs<br>270 NTUs                                       |  | 196.66 Avg NTUs   |
|   | 10:47 AM                                       | 14.2 cms<br>15.1<br>13.8   |  | 14.36 cm          |
|   | 11:56 AM                                       | 18 NTUs<br>33<br>89  |  | 46.67 NTU         |
| <b><i>Chlorophyll</i></b>   | 10:16 AM                                       | 0.3  | 10:45 AM   | 2.0               |

|                     |                                     |                              |                    |             |
|---------------------|-------------------------------------|------------------------------|--------------------|-------------|
|                     | 12:03 PM                            | 2.0                          |                    |             |
| <b>Chemical</b>     | <b>Time</b>                         | <b>Temp</b>                  | <b>DO</b>          | <b>Avg.</b> |
| DO *not realistic   | 9:35 AM<br>9:39<br>9:40             | 15.3<br>15.3<br>15.3         | 7.1<br>7.2<br>8.4  | 7.56 ppm    |
|                     | 10:45 AM<br>10:50 AM<br>10:55 AM    | 15.3°C<br>15.2<br>14.9       | 10.0<br>8.4<br>7.7 | 8.7 ppm     |
|                     | 12:05 PM                            | 13.7°C<br>15.2<br>14.6       | 6.9<br>9.5<br>11   | 9.1 ppm     |
|                     |                                     |                              |                    |             |
|                     |                                     |                              |                    |             |
| pH – meter          | 9:15 AM                             | 7.4<br>7.78<br>7.75          | 7.64 avg           |             |
|                     | 10:30 AM<br>10:52<br>10:55<br>11:00 | 7.83<br>7:36<br>7.96<br>7:36 | 7.63 avg.          |             |
|                     | 12:12<br>12:15<br>12:23<br>12:31    | 7.6<br>7.6<br>7.7<br>7.5     | 7.6 avg            |             |
|                     |                                     |                              |                    |             |
| Salinity - Quantabs | 10:13 AM –<br>11:25 AM              | .005                         | <29 ppm<br>CL-     |             |
| Salinity meter      | 9:15 AM                             | 20 ppm<br>17.5<br>22         | Avg 19.8<br>ppm    |             |
|                     | 9:20 AM                             | 29<br>16<br>22               | Avg 22.3<br>ppm    |             |
|                     | 9:33 AM                             | 20<br>20<br>21               | Avg 20.3<br>ppm    |             |
|                     | 9:42 AM                             | 21<br>22<br>20               | Avg 21 ppm         |             |
|                     | 12:10 PM                            | 25 ppm<br>25<br>24<br>24.5   | Avg 24.7<br>ppm    |             |
| Nitrates            | 9:35 AM-9:40                        | *5.35 avg                    |                    | Test seems  |

|  |                    |  |                                |                               |
|--|--------------------|--|--------------------------------|-------------------------------|
|  | AM                 |  |                                | too high                      |
| <b><i>Fish Catch</i></b>                 | <b><i>Time</i></b> | <b><i>Number Caught</i></b>  | <b><i>Species</i></b>          | <b><i>Size of largest</i></b> |
| Seine net 30 feet X 4 ft., 1.4 inch mesh | 9:33 AM            | 3  | <i>Banded Killifish</i>        |                               |
|  |                    | 8  | <i>American shad (herring)</i> |                               |
|  |                    | 2  | <i>White perch</i>             |                               |
|  |                    | 49   | <i>Spottail shiner</i>         |                               |
|  | 10:30              | 2  | <i>Pumpkinseed sunfish</i>     | 5.5 inch                      |
|  |                    | 7  | <i>Bluegill sunfish</i>        | 4 inch                        |
|  | 12:29 pm           | 2  | <i>Banded Killifish</i>        |                               |
|  |                    | 26   | <i>American (Shad Herring)</i> |                               |
|  |                    | 20   | <i>White Perch</i>             |                               |
|  |                    | 3  | <i>Bluegill Sunfish</i>        |                               |
|  |                    | 11   | <i>Spottail Shiner</i>         |                               |
|  |                    | 1  | <i>Pumpkinseed sunfish</i>     |                               |
| *8 reported as striped                   | 1:08 PM            | 9  | * <i>Banded Killifish</i>      |                               |
|  |                    | 1  | <i>Smallmouth Bass</i>         |                               |
|  |                    | 5  | <i>Golden Shiner</i>           |                               |
|  |                    | 1  | <i>American Shad</i>           |                               |
|  |                    |  |                                |                               |
| <b><i>Macro invertebrates</i></b>        | During day         | *Paramercium<br>*Spirostomum<br>* Lacrymaria<br>• Flagellates<br>• Dinoflagellates<br>• Alga (Green, | <i>Protozoa</i>                | Multiple types                |

|                    |   |   |                     |                            |
|--------------------|---|---|---------------------|----------------------------|
|                    |   | Pond scum and a non-branching form of alga) |                     |                            |
|                    |   | Mosquito                                    | <i>Anthropods</i>   |                            |
|                    |   | Fresh water shrimp                          |                     |                            |
| <b>Tides</b>       | 9:22 AM   | 58 cm                                       |                     | <i>Tide stick</i>          |
|                    | 9:48 AM   | 46 cm                                       | Falling             |                            |
|                    | 10:21 AM  | 32.5 cm                                     | Falling             |                            |
|                    | 10:30 AM  | 32 cm                                       | Falling             |                            |
|                    | 10:35 AM  | 31 cm                                       | Falling             |                            |
|                    | 10:39 Am  | 28 cm                                       | Falling             |                            |
|                    | 10:44 AM  | 24.5 cm                                     | falling             |                            |
|                    | 1:03 PM   | 11 cm                                       |                     |                            |
|                    | 1:15 PM   | 8.75 cm                                     |                     |                            |
|                    | 1:20 PM   | 7.5 cm                                      |                     |                            |
|                    | 1:30 PM   | 6.5 cm                                      |                     |                            |
| <b>Currents</b>    | Time  | Cm/60 secs                                  | Cm/sec              | Knots E/F/S                |
|                    | 9:40 AM.  | 1125  | 18.75               | 0.36 Ebb                   |
|                    | 10:35 AM  | 1828.8 cm                                   | 30.48               | 0.59 Ebb                   |
|                    | 10:44 AM  | 2133.6                                      | 35.56               | 0.69 Ebb                   |
|                    | 10:52 AM  | 3048  | 50.5                | 0.99 Ebb                   |
|                    | 11:15 AM  |   |                     |                            |
|                    | 11:28 AM  |   |                     |                            |
|                    | 3:37 PM   | 333/60 sec                                  | 5.6 cm/sec          | 0.11 Ebb                   |
| <b>Core Sample</b> | <b>Length/Grain size/H<sub>2</sub>S</b>   | <b>Abundant</b>                             | <b>Common</b>       | <b>Rare</b>                |
| <b>10:15 AM</b>    | 7 inches - Fine grain, H <sub>2</sub> S smell   | Clay, Mud                                   | Sand, Pebbles       | Gravel, leaves, wood, slag |
| <b>10:45 AM</b>    | 3 inch – layered 1 inch top & 2 inch bottom – large grain mix<br>H <sub>2</sub> S smell | Gravel, Pebbles                             | Clay, mud           | brick                      |
| <b>11:56 Am</b>    | 5 in – 2 in top, 3 in bottom- fine grain  | Clay, Mud (dense, smooth and gritty feel)   | Macro invertebrates | Sand, living vegetation    |
| <b>1:00 PM</b>     | 3.5 inches  | Mud   | Clay, sand          | Gravel, shells, coal       |
| <b>Traffic</b>     | 10:00 AM  | Tug boat                                    | Blue/white          | South/full                 |

|                           |   |                                |                      |                    |
|---------------------------|---|--------------------------------|----------------------|--------------------|
|                           | 10:15 AM  | Barge                          | Red                  | South, empty       |
|                           | 11:09 AM  | Margot - Barge<br>(Cargo ship) | Blue/grey            | South, Empty       |
|                           | 11:40 AM  | Boat                           | White,<br>black, red | South, people      |
|                           | 11:44 AM  | American Spirit<br>ship        | White                | South, full        |
|                           | 12:16 PM  | Edwin A Poling<br>Barge        | Teal, white          | South, Empty       |
|                           |   |                                |                      |                    |
|                           | 12:30 PM  | Water taxi                     | White                | South, full        |
|                           | 1:07 PM   | American Spirit                | white                | Northbound<br>full |
| <b><i>Other Items</i></b> | Lot of seagulls, small fox seen across the Hudson! Found iron ore slag on the shore. Dead fish on shoreline. Water chestnut is an invasive species. |                                |                      |                    |

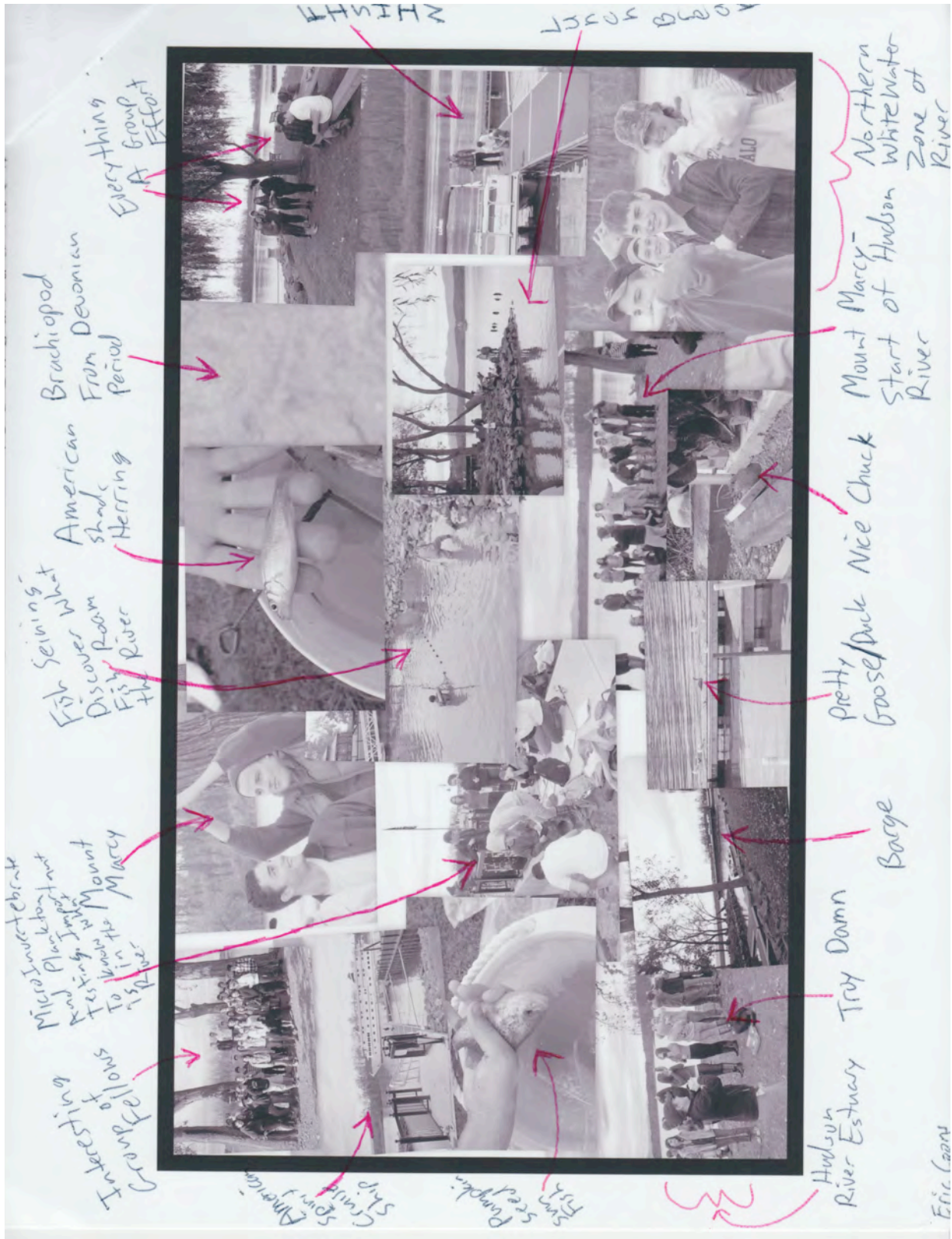


Photo Collage by Eric Coons 10/18/11