**Day in the Life of the Hudson River 10/10/13**

**(Salt Front RM 69.3)**

**RIVER MILE 85**

**Mills Mansion, Staatsburgh, NY, Dutchess County**

**Maribel Pregnall, Arlington High School**

**Sara (Orange County), Christine (SCA), Marshall Pregnall (Vassar College)**

**23 High School 11-12th graders, 4 adults**

**N41.8566°N W73.9299°W (iphone coordinates)**

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**Location:** Sampling done on beach at Northside of the pumphouse at Mills Mansion

**Area:** pastoral setting, clean no houses except mansion and pumphouse, Forested; grassy; beach

**Surrounding Land Use:** picnics, fishing, sight seeing

**Sampling Site:** *Physical station:* on beach at Northside of the pumphouse at Mills Mansion;

*Fish Station: off beach area, ebb tide, sandy, made our way over riprap rocks with fencing (erosion control), sandy/rocky and then muddy*

*Chemistry: near beach at mansion – at pumphouse/icehouse*

**Shoreline:** sandy and rocky close to shore, further out it gets muddy

**Plants in area:** none in water

**River Bottom** –

|  |  |  |  |  |  |  |
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| ***ITEM*** | ***Time*** | ***Reading 1*** | | | ***Reading 2*** | ***Comments*** |
| ***Physical*** | Time |  | | |  |  |
| Air Temperature | 10:20 AM  11:30 AM  11:34 AM | 10.6°C  11.1  11.7 | | | 51°F  52  53 |  |
| Wind Speed | 11:18 AM | Beaufort #2 | | | 0.9m/sec on meter | N/NE |
| Cloud Cover | 11:19 AM | Overcast >75% | | |  |  |
| Weather today | Cloudy and threat of rain but @ 11:32 AM no rain | | | | | |
| Weather recently | Mon 10/7 strong winds and heavy precip (~2/3 inch in afternoon, Tues 10/8 ~2/3 in precip in afternoon, Wed. 10/9 partly sunny | | | | | |
| Water | choppy | | | | | |
| ***Water Temperature 9:36 1 ft. water***  ***11:40 0-6 inch water*** | 9:36 AM  11:40 AM | | 17.8°C  17.4 | 17.1°C  17.1 | | Avg. 17.5°C  Avg. 17.3 |
| ***Turbidity*** | 10:45 AM | | 56.4 cm  63.9 cm  60.2 cm |  | | ***Average 60.2 cm*** |
|  | 11:50 AM | | 63.6 cm  62.6 cm  66.8 cm |  | | ***Average 64.4 cm*** |
| ***Chemical*** |  | |  |  | |  |
| DO  (drop count) | 10:08 AM  10:08 AM | | 8.6 mg/L  8 mg/L | 17.6 °C  17.6 °C | | 90% sat  85% sat |
|  | 11:54 AM  11:54 AM | | 8.1 mg/L  8.4 | 17.1°C  17.1°C | | 82.5 % sat  85 % sat |
| pH | Time | | Hach kit | meter | |  |
|  | 9:51 AM  11:49 AM  11:49 AM | | 8.3  8.2  8.2 | 8.39  7.95  7.91 | |  |
| **Salinity** | **Time** | | **PPT** | **PPM** | | **Conductivity** |
| YSI | 9:36 AM  11:44 AM | | 0.1  0.1 | 100 ppm  100 ppm | | 263.8  255.6 |
| Refractometer | 9:36 AM  11:44 AM | | 0  0 |  | |  |
| **Fish – seine ~30 ft. net** |  | |  |  | |  |

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| ***FISH TOTALS*** | **Species** | **Number** | **Size** | **Totals** | |
| ***9:15-10:30 AM*** | Banded Killifish | 1 | 4 inch | **DIVERSITY**  **6 species** | |
|  | Spottail Shiner | 7 | 2 inch | **TOTALS** | |
|  | Striped Bass | 1 | 3 inch | **27 fish** | |
|  | Bay Anchovy | 1 | 3 inch |  | |
|  | Shiner | 16 | 3 inch |  | |
|  | YOY Sunfish | 1 | 1 inch |  | |
| ***11:30-12:15 PM*** | Shiner | 3 | 3 inch | **DIVERSITY**  **3 species** | |
|  | Banded Killifish | 2 | 2 inch | **TOTALS**  **8 total** | |
|  | Bay Anchovy | 3 | 2 inch |  | |
| ***GRAND TOTALS*** | **DIVERSITY** | **SPECIES #6** | **TOTALS** | **FISH #35** | |
| **Tides** | ***time*** | ***cm*** | **Rate of change** | | ***Rising/Falling*** |
|  | 10:09 AM | 54.5 cm |  | |  |
|  | 10:37 AM | 47 cm | 7.5cm/26 min | | F |
|  | 11:09 AM | 36.5 cm | 10.5cm /29 min | | F |
|  | 11:36 AM | 29 cm | 7.5 cm/25 min | | F |
|  | 12:09 AM | 27 cm | 2 cm/33 min | | F |
| ***Currents*** | 11:24 AM | 91cm/30 sec | 3.03 cm/sec | | Ebb |
|  | 11:28 AM | 70 cm/30 sec | 2.33 cm/sec | | Ebb |
|  | 11:30 AM | 70 cm/30 sec | 2.33 cm/sec | | Ebb |
| ***Sediment Core*** | 6 inch core | H2S smell | | | Dark core |
| ***Shipping*** | Saw no commercial boats |  | | |  |
|  | 11:30 AM | Recreational sailboat | | | southbound |
| ***Observations*** | At Mills Mansion there are no water chestnuts which makes it unique – other sites in this area have lots of water chestnut  Lots of Canadian geese and vultures (birds of prey) | | | | |