**Day in the Life of the Hudson River 10/20/16 Data**

**(Salt front ~ RM83)**

**RIVER MILE 28**

**Nyack Memorial Park**

**Kirsten Kleinman, Nyack High School - 2 APES Classes 50 students,**

**11-12th graders, 6 adults**

**Latitude 40°05.243’N, Longitude 73°54.988 ‘W**

**Location:** Nyack Park where Nyack Brook feeds in

**Area:** Open and grassy, has a parking lot, used for picnics, fishing

**Surrounding Land Use:** 100% park

**Sampling Site:** beach, banks altered, riprap on shoreline, bulkhead

**Plants in area:** no water plants in area

**Water depth**: varied

**River Bottom** – sandy/muddy bottom , water calm

**The students do their traditional sampling of a transect that runs from Nyack Brook (Station #1) out towards the Hudson River (Station #10)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***ITEM*** | ***Time*** | ***Reading 1*** | ***Reading 2*** | ***Comments*** |
| ***Physical*** |  |  |  |  |
| Air Temperature | 10:15 AM  11:05 AM  12:30 PM | 23.5 ºC  24  26 | 74ºF  76  80 |  |
| Cloud Cover | 11:10 AM | overcast |  |  |
| Wind | 10:25 AM | Beaufort 1 | Anenometer | 2.9 mph East |
| ***Chemistry*** | \* Complete set of DO, Salinity, Water Temp etc. in tables below for the comparative study. | | | |
| Salinity | Low Tide | 8.7 ppt | High Tide | 9.14 ppt |
| Nitrates – API test kit | Station 1 | 5.00 ppm | Station 10 | 5.00 ppm |
| Phosphates | Station 1 | 0.25 | Station 10 | 0.25 |
| ***Turbidity – secchi*** | ***AM Sample*** | ***cm*** | ***PM Sample*** | ***cm*** |
| ***Viewing Platform*** | 9:20 AM | 35 cm | 12:10 PM | 70 cm |
| ***Floating Pier*** | 9:20 AM | 40 cm | 12:10 PM | 120 cm |
| ***Rip Rap*** | 9:20 AM | 30 cm | 12:10 PM | 90 cm |
| ***Fish Catch***  ***Seine 12X4*** | ***Number Caught*** | ***Species*** | ***Length of longest*** | ***TOTALS*** |
| **10:20 AM** | 30 | *Atlantic Silversides* |  | ***FISH DIVERSITY 5*** |
|  | 7 | *Striped Bass* |  | ***FISH TOTALS 42*** |
|  | 3 | *Northern Pipefish* |  |  |
|  | 1 | *White Perch* |  |  |
|  | 1 | *Mummichog* |  |  |
| ***Macro-invertebrates*** | 50 | *Comb Jellies* |  | ***MACRO DIVERSITY 3*** |
|  | 1 | *Blue Crab* |  | ***MACRO TOTALS 7*** |
|  | 6 | *Mud Crab* |  |  |
| ***Tides*** | 9:40 AM  10:10 AM  10:40 AM  11:20 AM  11:40 AM  12:10 PM | 20 cm  36 cm  52 cm  60 cm  80 cm  93 cm |  |  |
| ***Currents*** | 11:17 AM | 181 cm/30 secs | 6.02 cm/sec | 0.12 kts FLOOD |

Sketch Map of Sampling Site

1

2

3

4

Nyack Brook

5

6

7

8

9

10

Hudson River

**Time: \_\_\_9:20 AM\_\_\_ Tide: \_\_Low\_\_\_\_\_ Depth: Surface Sample**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Station #** | **Distance (m)** | **Depth cm** | **Salinity (ppt)** | **Temp (ºC)** | **DO mg/L** | **pH** |
| 1 | 0 | 8 | 0.68 | 16.8 | 9 | 7.5 |
| 2 | 10 | 31.5 | 0.63 | 16.7 | 10 | 7.3 |
| 3 | 20 | 31.5 | 0.86 | 16.7 | 8 | 7.1 |
| 4 | 30 | 56 | 0.92 | 16.7 | 7 | 7.2 |
| 5 | 40 | 59 | 1.05 | 16.8 | 9 | 7.1 |
| 6 | 50 | 18 | 1.08 | 16.8 | 11 | 7 |
| 7 | 60 | 50 | 1.81 | 17 | 9 | 7 |
| 8 | 70 | 27 | 1.33 | 17.3 | 9 | 6.8 |
| 9 | 80 | 8 | 5.9 | 18 | 10 | 6.8 |
| 10 | 90 | 20 | 8.7 | 18.2 | 10 | 6.9 |

**Data Table 2: Time \_12:10 PM Tide \_\_\_High Depth Surface Sample**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **12** | **Distance (m)** | **Depth (cm)** | **Salinity (ppt)** | **Temp (oC)** | **DO (mg/L)** | **pH** |
| 1 | 0 | 59 | 1.22 | 17.1 | 12 | 6.9 |
| 2 | 10 | 66 | 1.3 | 17.1 | 11 | 6.8 |
| 3 | 20 | 94 | 3.86 | 17.1 | 12 | 6.8 |
| 4 | 30 | 200 | 3.77 | 17.3 | 10 | 6.7 |
| 5 | 40 | 140 | 6.21 | 17.6 | 9 | 6.6 |
| 6 | 50 | 110 | 7.13 | 17.7 | 7 | 6.6 |
| 7 | 60 | 40 | 8.27 | 19.3 | 11 | 6.7 |
| 8 | 70 | 34 | 7.95 | 18.9 | 11 | 6.7 |
| 9 | 80 | 30 | 8.27 | 18.9 | 9 | 6.7 |
| 10 | 90 | 50 | 9.14 | 18.7 | 9 | 6.8 |