**Day in the Life of the Hudson River 10/20/15 Data**

**RIVER MILE 25E**

**Matthiessen Park, Irvington, NY**

**Joanna Morabito, Irvington High School**

**19 Marine Science Students, 43 AP Environmental Science Students**

**Latitude 41** ͦ **2’ 30” N Longitude 73** ͦ **52’ 32” W**

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| --- | --- |
| **\\irv-vm-fs-02\Teachers$\Joanna.Morabito\My Pictures\IMG_1180.JPG** | **\\irv-vm-fs-02\Teachers$\Joanna.Morabito\My Pictures\IMG_1086.JPG** |
| **\\irv-vm-fs-02\Teachers$\Joanna.Morabito\My Pictures\IMG_1107.JPG** | |

**Area:** Hudson River, grass, rocks bordering (river), mini beach, dock

**Percentages**: 40% grass, 10% beach, 5 % forested, 45% river

**Surrounding Land Use:** Park

**Sampling Site**: Mini beach at Matthiessen Park,

**Plants in area:** Moss, maple tree, oak tree, grass

**Water Depth**: varied; depth increased as the day progressed

**River Bottom**: Rocky close to the beach and muddy farther away

**Weather Conditions:** Sunny

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ITEM** | **Reading 1**  **Time:** **9:24am** | **Reading 2**  **Time: 9:56am** | **Reading 3**  **Time**: **10:26am** | **Reading 4** **Time: 10:56am** |
| Air Temperature | 43 F | 51 F | 51 F | 52 F |
| Wind Speed | 4 (Beaufort #) | 3 | 3 | 2 |
| Cloud Cover | Small Amount | Small Amount | Clear | Clear |
| Current Weather | Partly Cloudy | clear | clear | clear |
| Describe the recent weather over the past TWO days: Cloudy but no Rain | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Currents** | Time of Reading | Length from Start to Finish line (cm) | Amount of time from Start to Finish | Rate (length/time) | Direction of Current |
| Reading 1 | 9:45 am | 1000 | 2 min 47 sec | 5.988cm/sec | South |
| Reading 2 | 10:14 am | 1000 | 3 min 17 sec | 5.154cm/sec | South |
| Reading 3 | 10:40 am | 1000 | 1 min 37 sec | 7.299cm/sec | North |
| Reading 4 | 11:07 am | 1000 | 1 min 29 sec | 7.751cm/sec | North |

Other comments: We had fun throwing oranges into the river.

River Traffic (note time): none

**WATER CHEMISTRY: LaMotte Kit**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Reading 1**  **Time:**  **9:24 AM** | **Reading 2**  **Time:**  **9:51 AM** | **Reading 3**  **Time:**  **10:24 AM** | **Reading 4**  **Time:**  **10:52 AM** |
| Water Surface Temperature (degrees Celsius) | 11 | 8 | 12 | 11 |
| Turbidity  (Use Turbidity Tubes) (centimeters) | 18 | 15.2 | 26 | 24 |
| DO   (tablet kit-PPM)  \*\*This Test was performed incorrectly- students did not place appropriate number of tablets in tube.\*\* | 3 | 2 | 5 | 5 |
| pH (tablet Kit) | 7 | 7 | 7 | 7 |
| Salinity Meter (PPT) | 11 | 6 | 7 | 6 |

**HIGH SCHOOL WATER CHEMISTRY TESTS ONLY**

**CHEMets Kits**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Reading 1**  **Time:**  **9:25**  **9:25** | **Reading 2**  **Time:**  **9:52**  **10:00** | **Reading 3**  **Time:**  **10:09**  **10:25** | **Reading 4**  **Time:**  **10:23**  **11:00** |
| DO  (PPM) | 6 | 10 | 8 | 6 |
| Nitrate  (PPM) | 0 | 0.1 | 0 | 0.1 |
| Phosphate  (PPM) | 1 | 0 | 0 | 1 |
| pH meter | 7.7 | 7.8 | 7.8 | 7.9 |

**FISH ID/ SEDIMENT CORE/ TIDES**

|  |  |  |
| --- | --- | --- |
|  | **Species Caught** | **Number of each Species Caught** |
| **Fish Catch 1**  **Time: 9:06 am** | **Silverside**  **Blue Crab**  **Shiner**  **Shrimp**  **Anchovy** | **6**  **4**  **1**  **2**  **1** |
| **Fish Catch 2**  **Time: 9:20 am** | **Shiner**  **Silverside**  **White perch**  **silverback**  **Blue Crab** | **2**  **3**  **1**  **3**  **2** |
| **Fish Catch 3**  **Time: 9:31 am** | **Shiner**  **Silverside**  **White Perch**  **Silverback**  **Blue crab** | **2**  **3**  **1**  **3**  **2** |
| **Fish Catch 4**  **Time: 10:01 am** | **Small mouth bass**  **flounder**  **silverside** | **1**  **1**  **5** |

**Sediment Core**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Time core was taken** | **Rare components** | **Common components** | **Abundant components** |
| **Core 1** | **9:40 am** | **wood**  **leaves**  **shells** | **pebbles**  **slug** | **mud**  **gravel** |
| **Core 2** | **10:00 am** | **Wood** | **Mud** | **Gravel**  **Sand**  **Mud** |
| **Core 3** | **10:35 am** | **Leaves**  **Wood**  **Shells** | **Mud** | **Gravel**  **Sand**  **Mud** |
| **Core 4** | **11:05 am** | **Wood**  **Shells** | **Pebbles** | **Gravel**  **Sand**  **Mud** |

**TIDES (Multiple groups measured 4 times.)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Reading 1** and **Time** When Taken | **Reading 2** and **Time** When Taken | **Reading 3** and **Time** When Taken | **Reading 4** and **Time** When Taken |
| Right Side Stick | N/A | N/A | N/A | N/A |
| Left Side Stick | 8:30am: 13cm:  9:50am: <13cm  11:10am: <13cm  12:24pm: 33 cm | 8:50am: <13cm  10:10am: <13cm  11:30am: 15cm | 9:10am: <13cm  10:30am: <13cm  11:50am: 27cm | 9:30am: <13cm  10:50am: <13cm  12:10pm: 28cm |

Is it an incoming or outgoing high tide or an incoming or outgoing low tide?

**The high tide was incoming.**