

**Day in the Life of the Hudson River 10/12/17 Data**  
**(Salt front ~ RM65)**  
**RIVER MILE 28**  
**Nyack Memorial Park**  
**Kirsten Kleinman, Nyack High School – 3 APES Classes 80 students,**  
**11-12<sup>th</sup> 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

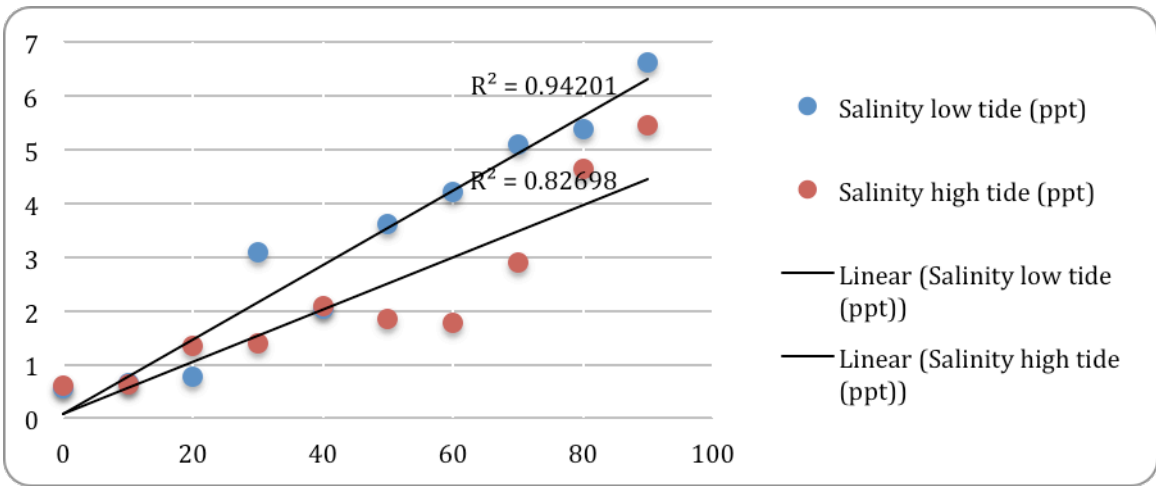
**Water depth:** varied

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

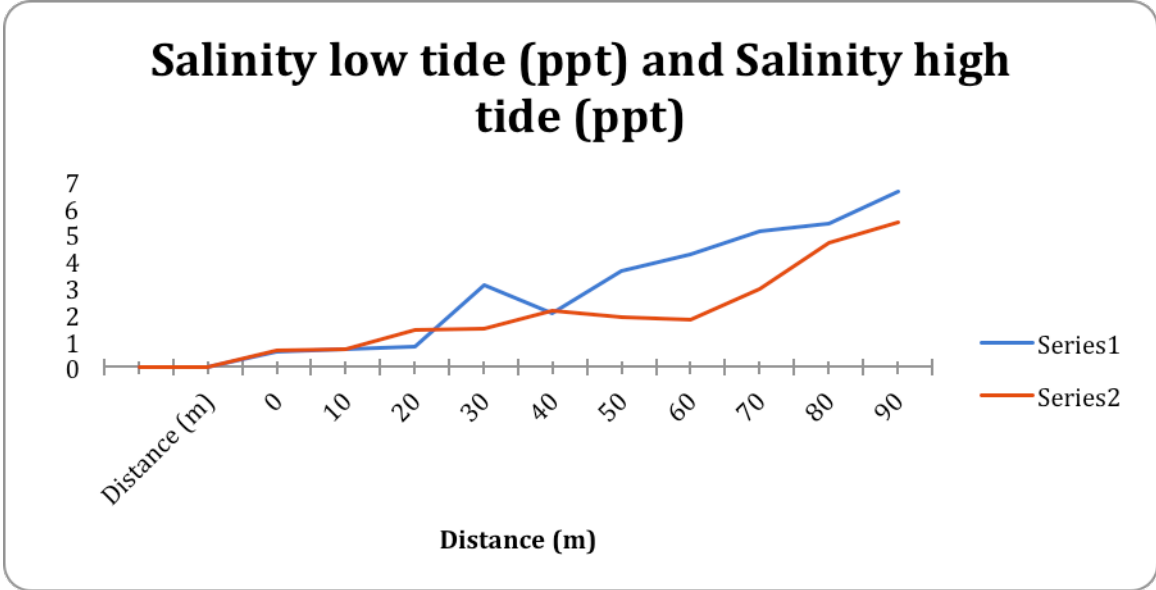
**The students do their traditional sampling of a transect that runs from Nyack Brook (Station #1) out towards the Hudson River (Station #10)**

<i>ITEM</i>	<i>Time</i>	<i>Reading 1</i>	<i>Time</i>	<i>Reading 2</i>
<b><i>Physical</i></b>				
Air Temperature	9:15 AM	°C	12:30 PM	°C
Cloud Cover	9:15 AM	overcast		
Water Temperature	9:15 AM	19.2 °C	12:30 PM	20.2 °C
<b><i>Chemistry</i></b>	* Complete set of DO, Salinity, Water Temp etc. in tables below for the comparative study.			
Salinity	9:15 AM Low Tide	6.61 ppt	12:30 PM High Tide	5.44 ppt
QUANTAB reading 7.8	3416 ppm Cl-	6171ppm TS	NOTE that students used Ohaus pen meter	recording 4.9 ppt or 4900 ppm
Nitrates – API test kit	Station 1 furthest inland	8.8 ppm	Station 1 furthest inland	0 ppm
	Station 10 at the Hudson	2.2 ppm	Station 10 at the Hudson	2.2 ppm
Phosphates	Station 1 furthest inland	0.5	Station 1 furthest inland	0.5 ppm
	Station 10	0.7	Station 10 at	0.8 ppm

	at the Hudson		the Hudson	
Dissolved Oxygen	9:15 AM	7 ppm	12:30 PM	5.5 ppm
pH	9:15 AM	7.6	12:30 PM	7.5 ppm
<b><i>Turbidity – secchi</i></b>	<b><i>AM Sample</i></b>	<b><i>cm</i></b>	<b><i>PM Sample</i></b>	<b><i>cm</i></b>
<b><i>7 meters off new pier</i></b>	9:15 AM	37 cm	12:30 PM	33 cm
<b><i>Station 7</i></b>	9:15 AM	40 cm	12:30 PM	50 cm
<b><i>End of Boat Launch</i></b>	9:15 AM	20 cm	12:30 PM	30 cm
<b><i>Fish Catch Seine 12X4</i></b>	<b><i>Number Caught</i></b>	<b><i>Species</i></b>	<b><i>Length of longest</i></b>	<b><i>TOTALS</i></b>
<b>20 hauls</b>	50	<i>Atlantic Silversides</i>		<b><i>FISH DIVERSITY 4</i></b>
	4	<i>Striped Bass</i>		<b><i>FISH TOTALS 58</i></b>
	2	<i>mummichog</i>		
	2	<i>White Perch</i>		
<b><i>Macro-invertebrates</i></b>	20	<i>Comb Jellies</i>		<b><i>MACRO DIVERSITY 3</i></b>
	5	<i>Blue Crab</i>		<b><i>MACRO TOTALS 30</i></b>
	5	<i>Mud Crab</i>		
<b><i>Tides</i></b>	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		
<b><i>Currents</i></b>	11:17 AM	181 cm/30 secs	6.02 cm/sec	0.12 kts FLOOD

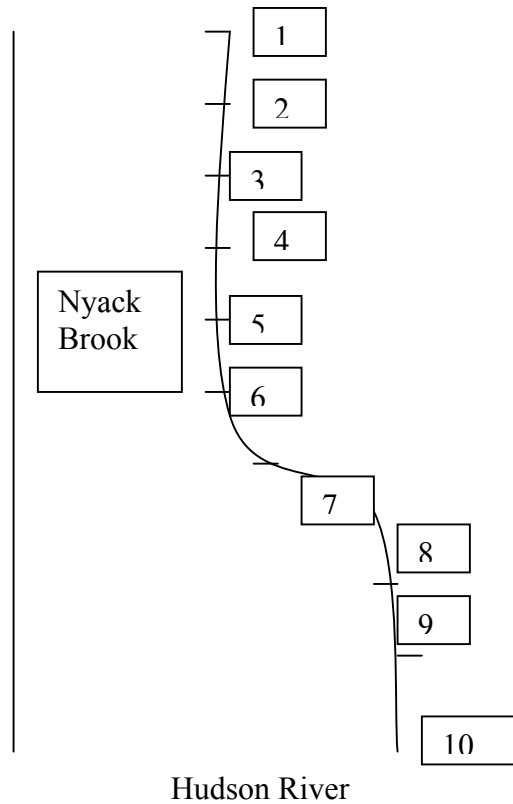


COMPARISON OF THE SALINITY IN THE AM (LOW TIDE) AND PM (HIGH TIDE)



DIFFERENT WAY TO LOOK AT THE SAME DATA. SERIES 1 IS AM LOW TIDE  
 SERIES 2 IS PM HIGH TIDE

Sketch Map of Sampling Site



**Time:** 9:15 AM **Tide:** Low **Depth:** Surface Sample

<u>Station #</u>	<u>Distance (m)</u>	<u>Depth cm</u>	<u>Salinity (ppt)</u>	<u>Temp (°C)</u>	<u>DO mg/L</u>	<u>pH</u>
1	0	8	0.55	17.1	7	8
2	10	10	0.66	16.7	6	7.6
3	20	37.5	0.77	16.9	6	7.5
4	30	60	3.09	17.9	5.5	7.3
5	40	55	2.03	17.5	5	7.6
6	50	35	3.61	18	6	7.3
7	60	48	4.21	19.6	4	7.4
8	70	45	5.1	19.2	4	7.5
9	80	42.5	5.39	19	6	7.4
10	90	35	6.61	19.2	7	7.6

**Data Table 2: Time 12:30 PM Tide High Depth Surface Sample**

<u>Station #</u>	<u>Distance (m)</u>	<u>Depth cm</u>	<u>Salinity (ppt)</u>	<u>Temp (°C)</u>	<u>DO mg/L</u>	<u>pH</u>
1	0	9	0.61	16.7	5.5	7.8
2	10	30	0.63	16.8	7	7.7
3	20	46.5	1.36	17	5.5	7.6
4	30	97	1.4	17.4	8	7.3
5	40	84	2.1	17.3	4.5	7.5
6	50	52	1.85	17.9	5	7.5
7	60	64	1.78	17.7	7	7.5
8	70	72	2.91	18.1	6	7.4
9	80	56	4.65	19.4	5.5	7.4
10	90	57	5.44	20.2	5.5	7.5