

**Day in the Life of the Hudson River 10/10/13 Data
(Salt Front RM 69.3)**

RIVER MILE 28

Nyack Memorial Park

Tom Perry - Nyack High School APES Class 40 students, 11-12th graders

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

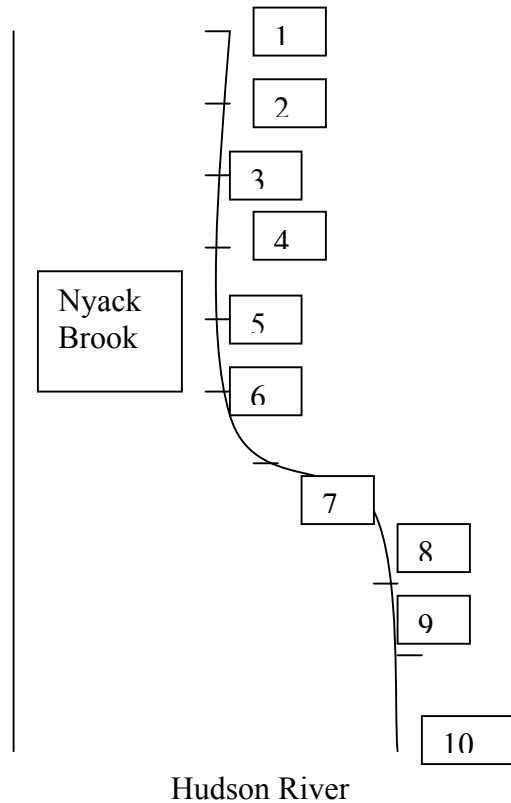
A Comparison between two stations, at surface & depth: Surface and Bottom Samples were taken at Station #6 (closer to the Hudson River) and Station #3 (closer to the Nyack Brook inlet) to compare salinity & temperature at surface and depth & close to the Hudson and closer to

the freshwater tributary (Nyack Brook).

The Hudson water is from the estuary and so is saltier and denser so it rides underneath the freshwater water entering from the Nyack Brook. It might seem surprising that the surface water is cooler than the bottom water, but the water on the surface is fresher so it seems to come in from Nyack Brook. If you follow the water from Nyack Brook from station #1 down towards Station #10 it appears is cooler than the Hudson River water.

<i>ITEM</i>	<i>Time</i>	<i>Reading 1</i>	<i>Reading 2</i>	<i>Comments</i>
<i>Physical</i>				
Air Temperature				
Wind Speed				
<i>Chlorophyll</i>				
<i>Fish Catch Seine 12X4</i>	<i>Number Caught</i>	<i>Species</i>	<i>CPUE</i>	<i>Seine</i>
Div = 4 Totals = 111	75	<i>Atlantic Silversides</i>	<i>Menidia menidia</i>	<i>Station 10</i>
	3	<i>Striped Bass</i>	<i>Morone Saxatilis</i>	<i>Station 10</i>
	1	<i>White Perch</i>		<i>Station 10</i>
	2	<i>Bay Anchovy</i>		<i>Station 10</i>
	3	<i>Blue Crab</i>	<i>Monroe Americana</i>	<i>Station 10</i>
		<i>Sand Shrimp</i>		
		<i>Comb Jellies</i>		
		<i>Rock Crabs</i>		
<i>Sediment Cores</i>				
<i>Tide</i>				

Sketch Map of Sampling Site



Time: 9:30 am Tide: Low Depth: Surface Sample

<u>Station #</u>	<u>Distance (m)</u>	<u>Salinity (ppt)</u>	<u>Temperature (°C)</u>	<u>DO mg/L</u>	<u>pH</u>	<u>Nitrate</u>	<u>Phosphate</u>
1	0	0.4	15.5	6.2	7.5	8.8	<1
2	10	0.5	15.4	6.7	7.5		
3	20	0.7	15.5	6.2	7.5		
4	30	0.7	15.6	8.4	7.6		
5	40	0.8	15.6	6.2	7.6		
6	50	1.5	15.7	6.1	7.6		
7	70	2.1	15.9	6.3	7.6		
8	80	2.5	16.3	6.3	7.6		
9	90	4.5	16.5	6.8	7.6		
10	120	9.0	17.2	6.5	7.7	4.4	0

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

<u>Station #</u>	<u>Distance (m)</u>	<u>Salinity (ppt) #1</u>	<u>Salinity (ppt) #2</u>	<u>Temperature (°C)</u>	<u>DO mg/L</u>	<u>pH</u>	<u>Nitrate</u>	<u>Phosphate</u>
1	0	1.1	1.6	15.7	8.4	7.8	8.8	<1
2	10	6.0	8.6	16.2	8.0	7.8		
3	20	6.3	8.5	16.1 17.1	8.3	7.9		
4	30	6.7	8.4	16.5 17.1	8.2	7.7		
5	40	7.3	8.7	15.6 17.1	9.4	7.8		
6	50	6.9	8.4	16.1 17.1	7.5	7.8		
7	70	7.0	8.6	16.8	7.0	7.8		
8	80	7.1	8.7	17.6	7.2	7.9		
9	90	7.3	8.8	17.7	8.6	7.8		
10	120	7.7	8.9	17.7	10.2	7.9	4.4	0