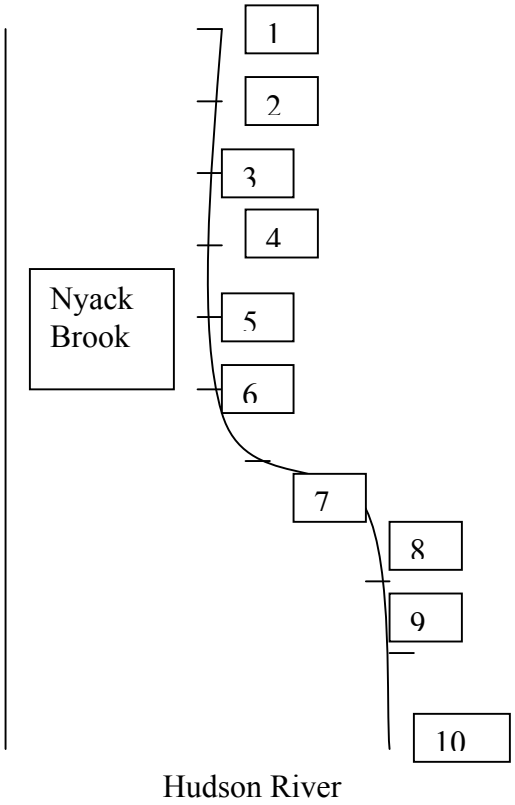
Day in the Life of the Hudson River 10/5/12* Data
RIVER MILE 28
Nyack Memorial Park
Tom Perry - Nyack High School APES Class 50 students, 11-12th graders
Latitude 40°05.243'N, Longitude 73°54.988 'W
**Sampling a day late due to weather issues*

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

ITEM	***Time***	***Reading 1***	***Reading 2***	***Comments***
Physical				
Air Temperature				
Wind Speed				
Cloud Cover	Clear			
Weather today				
Weather recently	Clear & warm			
Turbididty	Lower tide	50 Pier	Higher Tide	70 Pier
Chlorophyll	***Station #1***	0.1 High tide 0.3 Low tide	***Station #10***	0.2 High Tide 2.0 Low Tide
Fish Catch Seine 12X4	***Number Caught***	***Species***	***CPUE***	***Seine***
Div = 4 **Totals = 111**	97	*Atlantic Silversides*	*Menidia* menidia	*Station 10*
	6	*Striped Bass*	*Morone Saxatilis*	*Station 10,9,8*
	5	*Mummichog*	*Fundulus Heteroclitus*	*Station 8*
	3	*Blue Crab*	*Monroe Americana*	*Station 10,9,8*
Sediment Cores *Station #10* *Sandy Beach*		Sandy, Pebbly Sediment		
Tide	10:00	1:00PM	66 cm rise/3 hrs.	

Sketch Map of Sampling Site



Time: ___9:30 am___ Tide: __Lower_____ Depth: Surface Sample

Station #	Distance (m)	Salinity (ppt)	Temperature (ºC)	DO mg/L	pH	Nitrate	Phosphate
1	0	0.4	18.2	7.2	8.1	0	0
2	10	0.4	18.2	7.3	8.0		
3	20	0.4	18.2	7.2	8.0		
4	30	0.5	18.2	7.3	7.9		
5	40	0.4	18.3	7.1	8.0		
6	50	0.4	18.4	7.3	7.9		
7	70	0.5	18.8	6.7	7.9		
8	80	0.7	18.9	6.6	7.9		
9	90	1.0	19.3	6.3	7.9		
10	120	1.5	20.1	6.3	7.7	0	0

Data Table 2: Time _11:30 AM Tide ___Higher_ Depth Surface Sample

Station #	Distance (m)	Salinity (ppt)	Temperature (ºC)	DO mg/L	pH	Nitrate	Phosphate
1	0	0.5	18.4	8.5	7.8	0	0
2	10	0.7	18.4	8.3	8.0		
3	20	0.5	18.5	7.6	8.0		
4	30	0.7	18.6	7.8	8.1		
5	40	0.5	18.8	7.6	7.6		
6	50	Meter failed	19.2	7.2	7.7		
7	70	Meter failed	21.5	6.2	7.8		
8	80	Meter failed	21.5	6.9	7.8		
9	90	Meter failed	21.5	6.5	7.8		
10	120	Meter failed	21.7	6.3	7.8	0	0

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).

This comparison focuses on the freshwater input in temperature and salinity.

Station 6 (HR) Surface	Salinity 0.9 ppt	H20 Temp 19.2 ºC	Station 3 (NB) Surface	Salinity 0.5 ppt	H20 Temp 18.5 ºC
Bottom	5.5 ppt	20.2 ºC	Bottom	4.5 ppt	20.5 ºC

←----------Nyack Brook

Hudson River ----------→

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.