

**Snapshot Day 10/2/07 Data
(Salt Front RM 78.2)
RIVER MILE 28**

Nyack Memorial Park

**Tom Perry & Dinorah Hudson - Nyack High School APES Class & Earth Science –
53 students**

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

<i>ITEM</i>	<i>Time</i>	<i>Reading 1</i>	<i>Reading 2</i>	<i>Comments</i>
<i>Physical</i>				
Air Temperature				
Wind Speed	1 knot			
Cloud Cover	Partly cloudy changing to mostly sunny			
Weather today				
Weather recently	Clear & warm ~ 74°F			
<i>Water Temperature</i>	9:30 AM	18.2°C ramp	16.4 °C top	17.9 °C bottom
<i>Turbidity</i>		<i>Lower Tide</i>	<i>Higher Tide</i>	
<i>secchi</i>	<i>Floating Dock</i>	60 cm	59 cm	
	<i>Rocks (Pier)</i>	55 cm	53 cm	
<i>Chlorophyll</i>	Nyack Brook	0.1	At Hudson River	0.9
<i>Chemical</i>				
DO	SEE BELOW			
pH	SEE BELOW			
<i>Phosphate</i>	Nyack Brook	1.0 mg/L	At Hudson River	1.0 mg/L
9:30 AM				
12:15 PM		0 mg/L		1.0 mg/L
<i>Nitrate</i>	Nyack Brook	1.1 ppm	At Hudson River	1.1 ppm
9:30 AM				
12:15 PM		1.1 ppm		1.1 ppm
Alkalinity				
Salinity (meter)	SEE			

	BELOW						
Fish Catch Seine 12X4	Number Caught	Species	CPUE	Seine			
Station #8 (near Hudson)	74	<i>Atlantic Silversides</i>	<i>Menidia menidia</i>				
Station #8	41	<i>Comb Jellies</i>	<i>Ctenophora</i>				
Station #7	4	<i>Blue-Claw Crabs</i>	<i>Callinectes Sapidus</i>				
Station #7	1	<i>American Shad</i>	<i>Alosa Sapidissima</i>				
Station #1 (Nyack Brook)	4	<i>American Eel</i>	<i>Anguilla rostrata</i>				
Tides	9:45 AM	0 cm depth	rising				
	1:00 PM	84 cm	rising				
Currents							
Sediment Cores Station #10 Sandy Beach	21 cm core	Sandy, Rocky Sediment					
Other Side Mud Flat	15 cm core	Muddy, smelly, slimy sediment (anaerobic respiration)					
Other Items STRATIFICATION ON STUDY							
		Did a transect study from Nyack Brook out to the Hudson River. Found a stratification in the “Zone of Mixing” – an estuary within an estuary. Found colder fresher water moving toward the river on the surface (See results above), with warmer saltier water pushing in along the bottom.					
TRANSECT STUDY NYACK BROOK OUT TO HUDSON RIVER measured every 20 meters	9:45 AM Distance		Salinity (ppt)	Temp °C	DO mg/L	pH	
	0		0.5	17.0	7.0	7	
	20		0.6	17.0	7.3	7	
	40		0.6	0.6	7.6	7	
	60		8.3	17.6	6.8	7	
	80		6.9	20.7	5.5	7	
	100		1.7	20.5	9.7	6	
	120		1.3	19.3	8.7	6	
	140		1.5	20.1	7.6	7	
	160		6.4	19.8	7.9	6.5	
	180		9.1	20.4	8.2	6	
	12:15 PM Distance	Dept h Cms	Salinity Top/Bot ppt	Temp °C Top/Bottom		DO mg/L	pH
	0	3	.5	18.4	17.5	7.8	7.5

	20	47	.5		17.9	19.4	6.1	8
	40	87	.3	8.7	18.0	21.1	7.7	8
	60	67	.3	9.5	19.5	21.4	9.3	7
	80	52	.5	6.3	20.6	22.0	9.2	6.5
	100	66	10.0		22.2	22.0	8.1	7.5
	120	76	10.8				8.0	6
	140	80	10.7				8.6	7.5
	160	88	10.7				8.4	7.5
	180	100	10.8		21.7	21.6	8.0	7.5