

**Snapshot Day 10/12/06 Data
(Salt Front RM 52.5)
RIVER MILE 28
Nyack Memorial Park**



**Tom Perry Nyack High School APES Class
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	9:30 AM	18°C °F		
Wind Speed	1 knot	South	Light breeze	
Cloud Cover	overcast			
Weather today	drizzle			
Weather recently	Heavy rain last night			
<i>Water Temperature</i>	9:30 AM	18.2°C ramp	16.4 °C top	17.9 °C bottom
<i>Turbidity</i>	9:30 AM	30.25 cm	Old pier	secchi
		50.0 cm	Boat launching ramp	
<i>Chlorophyll</i>	9:30 AM	0.5		
<i>Chemical</i>				

DO	9:30 AM	6.8 mg/L	18.2°C	70%
pH	9:30 AM	7.0	pH paper	
Phosphate	9:30 Am	<1.0 mg/L ramp	<1.0 mg/L top	<1.0 mg/L bottom
Nitrate	9:30 AM	0.15 mg/L (ramp)	0.04 mg/L (top)	0.02 mg/L (bottom)
Alkalinity				
Salinity (meter)	9:30 AM	3.6 ppt ramp	0.4 ppt top	1.6 ppt bottom
<i>Fish Catch @ mouth of Nyack Brook & Hudson River</i>	<i>Number Caught</i>	<i>Species</i>	<i>CPUE</i>	<i>Seine</i>
	21	Atlantic Silversides	Menidia menidia	
	1	Banded Killifish	Fundulus diaphanus	
<i>Other Catch</i>		Glass Shrimp		
<i>Tides</i>	9:30 AM	20 cm depth		
	10:00 AM	29 cm	rising	
	10:30 AM	50 cm	rising	
	11:00 Am	65 cn	rising	
<i>Currents</i>				
<i>Sediment Cores Pier description</i>	14 cm core	7 cm Top layer Light & liquidy	1 cm Second layer dark brown and sandy	5.5 cm 3 rd layer most carbonated, black
Mud description	Very carbonated, dark, decomposing, liquidy. Came out easily			
Sand Description	Very compact, rocky, big chunks of gravel, difficult to get out, many air bubbles			
<i>Other Items STRATIFICATION ON STUDY</i>	<p>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.</p> <p>HEADING EAST FROM THE BROOK OVER TOP 16.6 °C and 16.8 °C temp. 0.5 ppt and 0.5 ppt salinity</p> <p>HEADING WEST FROM THE HUDSON BELOW 17.9 °C and 17.2 °C temp. 2.1 ppt and 2.2 ppt salinity</p>			

TRANSECT STUDY NYACK BROOK OUT TO HUDSON RIVER measured every 10 meters	Distance	Salinity	Temp °C	DO mg/L
	0	0.4	16.4	8.25
	10	0.4	16.4	7.9
	20	0.5	16.4	7.1
	30	0.5	16.4	6.8
	40	0.5	16.4	6.8
	50	0.5	16.4	7.15
	60	0.5	16.5	7.7
	70	0.5	16.6	7.3
	80	0.6	17.1	7.5
	130	7.6	17.9	8.2
	RAMP	3.6	18.2	6.8