

**Snapshot Day 10/12/06 Data  
(Salt Front RM 52.3)  
RIVER MILE 25W  
Piermont Pier**

**Lamont-Doherty Earth Observatory  
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**Latitude N 41 degrees 02.592' Longitude W 73 degrees 53.759" (only 4 satellites)**



**Tappan Zee High School**



**Pearl River High School**

**Location:** Piermont Pier, Piermont NY

**Area:** Fishing/shipping pier at the east end, long pier with paved roadway and vegetation along both sides

**Surrounding Land Use:** Urban/residential 80% , Forested 20%

**Sampling Site:** Pier, roadway in center of whole pier, parking area at end, Plants and trees along side. Shoreline Rip Rap, collected wood in area and piping entering river on the South of sampling site

**Plants in area:** few plants in the water but lots of plants along pier

**Water depth:** 10:50 AM 4.3 meters; 11:20 AM 4.4 meters; 11:46 AM 4.69 meters; 1:00 PM 4.76 meters; 1:40 PM 4.97 meters

**River Bottom** – sandy/rocky bottom with marsh grass growing in or near the water

<i>ITEM</i>	<i>Time</i>	<i>Reading 1</i>	<i>Reading 2</i>	<i>Comments</i>
<i>Physical</i>				
Air Temperature	10:42 AM	18°C		
	1:05 PM	20 °C		
	1:28 PM	22 °C		
Wind Speed	2 knots SW in AM	1 knot SW by noon		

Cloud Cover	overcast			
Weather today	Cloudy/overcast			
Weather recently	Mon – rain; Tues – no rain, nice; Wed. rain and wind			
<b>Water Temperature</b>	10:35 AM	18°C		<b>SURFACE SAMPLE</b>
	11:05 AM	63.5° F 17.5°C		
	11:42 Am	17°C		
	12:45 PM	18°C		
	1:25 PM	18°C		
<b>Water Temperature</b>				<b>BOTTOM SAMPLE</b>
<b>(YSI meter)</b>	12:45 PM	18.38 °C		
<b>(thermometer)</b>	10:30 AM	17°C	17 °C	18 °C
	11:10	17.9 °C	17°C	
	11:50	18°C		
	12:56	18°C		
	1:30 PM	18°C		
<b>Turbidity</b>	10:35 AM	52 cm	52 cm	<b>Secchi</b>
	11:05	50.0 cm	50.2 cm	
	11:42 AM	60 cm		
	12:45 PM	60 cm		
	1:25 PM	60 cm		
<b>Turbidity</b>	10:20 AM	20 JTU		<b>Small site tube</b>
	11:25	20 JTU		
	11:45	20 JTU		
	12:50 PM	15 JTU bottom 10 JTU top	Testing turbidity at different levels – top clearer	
	1:20 PM	15 JTU		
<b>Sediment Core</b>	11:10 AM	7 cm length oxidized top H <sub>2</sub> S smell	Plant layer on bottom – fine texture	Mud- abundant Sand & gravel common Pebbles - rare
<b>Chlorophyll</b>	10:20	2.0		
	11:25	.6		
	11:45	.5		
	1:00 PM	.2 bottom/.1 top		
	1:35 PM	.5 (surface sample)		
<b>Chemical</b>	<b>SURFACE WATER SAMPLES</b>			
DO	10:23	8.0 mg/L	18°C	87%
	11:05	7.0 mg/L	17.5°C	75%

	11:42	8.0 mg/L	17°C	85%
	12:45	8.0 mg/L	17°C	85%
	1:25 PM	6 mg/L	18°C	70%
pH	10:20 AM	7.3	7.6	7.6
	11:05	7.5		
	11:42 AM	7.5		
	12:45 PM	7.6		
	1:25 PM	7.6		
Phosphate				
Nitrate	11:05	0.44 mg/L		
	11:42	0.44 mg/L		
Alkalinity	10:30	110 ppm		
	11:05 AM	64 ppm		
	11:42 AM	160 ppm		
	12:45 PM	90 ppm		
	1:25 PM	90 ppm		
<i>Salinity</i>	10:23 AM	5.184 ppt		Conductivity meter conversion
	11:05	6 ppt		refractometer
	11:42	5 ppt		
	12:45 PM	6.5 ppt		
	1:25 PM	6 ppt		
<b>Chemical</b>	<b>BOTTOM WATER SAMPLES</b>			
DO	12:45 PM	8.52mg/L	18.39°C	94.3% (YSI)
	10:30	6.0 mg/L	17°C	65%
	11:30	7.0 mg/L	17 °C	75%
	11:51	7.0 mg/L	17°C	75%
	12:50	8.0 mg/L	17°C	85%
	1:30 PM	6 mg/L	18°C	65%
pH	12:45 PM	7.73		YSI
	10:30 AM	7.8		Drop Counts
	11:10	7.9		
	11:50 AM	7.8		
	12:50 PM	7.8		
	1:30 PM	7.8		
Phosphate				
Nitrate	11:30	.44 ppm		
Alkalinity	10:30	80 ppm		
	11:30	80 ppm		
	11:50	80 ppm		
	12:50	75 ppm		

	1:30	70 ppm		
<b>Salinity</b>	12:45 PM	5.74 ppt		YSI
	11:10 AM	5 ppt		refractometer
	11:51	5ppt		
	12:50	5ppt		
	1:30	5 ppt		
<b>Tides</b>	11:50 AM	35 cm		
<i>Setting a tide stick</i>	12:10 PM	42 cm	rising	
	1:05 PM	67 cm	rising	
	1:13 PM	70 cm	rising	
	1:34 PM	76 cm	rising	
<i>Measuring down with tape at end of pier</i>	11:26 AM	140 cm	rising	
	12:01 PM	118 cm	rising	
	1:00 PM	.95 cm	rising	
	1:40 PM	.83 cm	rising	
<b>Currents</b>	10:50 AM	2780 cm/60 secs.	46.33 cm/sec	.93 knots N
	11:26 AM	3300 cm/60 secs	55 cm/sec	1.1 knots N flood
	12:01 PM	3100 cm	51.6 cm/sec	1.032 knots N
	1:00 PM	2015 cm	33.35 cm/sec	.667 knots N
	1:40 PM	1407 cm	23.4 cm/sec	.46 knots N
<b>Fish Catch</b>	<b>Number Caught</b>	<b>Species</b>	<b>CPUE</b>	<b>Seine 30 m</b>
<i>Northside of pier</i>	9 (9cm)	Atlantic Silverside		10:40 AM
	1 (14cm)	White Perch		
	4	Blue Crab		
	1	Comb jelly		
	14 (10cm)	Atlantic Silverside		11:20 AM
	1 (4cm)	Menhaden (Bunker)		11:50 AM
	14	Atlantic Silverside		
	2	Comb Jellies		
	2 (8cm)	Atlantic Silverside		12:50 AM
	38 (11cm)	Atlantic Silverside		1:20 PM
	2	Blue Crabs		
<b>Macroinvertebrates</b>	11:15	Blue crab 40mm span	Blue crab 40 mm span	seiners

		20 mm body		
	11:30	2 Blue crab 2 Chironomids 4 brown worm		Under rocks/waterline
	12:01	Eteone heteropoda Hartman 2 worms	26 mm	
	1:00 PM	1 Eteone Heteropoda	15 mm	
	1:30 PM	1 clear worm	13 mm	
<b>Traffic</b>	2:24 PM	Barge in front of orange tugboat		
	1:13 PM	White passenger boat going South – 3 stories high. 1:24 turning around towards North and then 1:40 moving South again.		
<b>Other Items</b>	Large amounts of Monarch butterflies are on the pier today.			