Day in the Life of the Hudson River 10/06/2023 Piermont Pier, Piermont, NY RIVER MILE: 25.4

Salt Front: ~ *RM 52*



Spring Valley High School-Shawn Kapusinsky



Pearl River High School-Tom Mullane
Lamont Doherty Earth Observatory- Margie Turrin & Marisa Annunziato
48 students, 11th-12th grade, 12 adults
Latitude 41.043189°N & Longitude -73.895952°W



Location: Piermont Pier, Piermont, Rockland County, NY.

Surrounding Land Use: 80% Urban/Residential & 20% Forested

Sampling Site: Pier, shoreline rip rap, some phragmites along both sides of the pier. Sparkill Creek flows into the Hudson on the south side of pier and Piermont Marsh is directly to the south. At the southern base of the pier sewage outfall piping entering river on the south of sampling site. Today we had the sloop Clearwater at the end of the pier for much of our sampling and so we used it as a platform for currents. We also had two crabbers who dominated both sides of the pier with their traps and their active handling of the traps undoubtedly impacted the turbidity measurements.

Shoreline: NR Water: Calm

River Bottom: Muddy & Rocky **Plants in the water**: Phragmities

*NR = Not read/recorded

Photo of sediment core with clay on bottom, middle section is fully sand and top is mud. Superstorm Sandy layer of sand?

ITEM Time Reading Comments

Refractometer 9:38 AM 5,000 ppm 5 ppt 10:25 AM 5,000 ppm 5 ppt 11:58 AM 5,500 ppm 5.5 ppt 12:45 PM 5,000 ppm 5 ppt	Physical									
9.41 AM 20°C 68°F 60.2°F 11:56 AM 21°C 60.8°F 11:56 AM 21°C 60.8°F 11:56 AM 21°C 71.6°F	Air Temperature	9:04 AM								
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11.56 AM 2.3 mph 1 Southeast				•				Sout	theast	
12:45 PM 10:20 AM 75% Cloud Cover			_					Sout	theast	
Vesterday Nice & Sunny; Rained off and on a lot this fall	Weather today				Cover	Drizzle				
Time						l .	ot this fall			
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Current- Time Cm/sec Knots North/South Ebb/Flood/Slack 9:04 AM 18.34 0.3569 South Ebb 9:11 AM 0.13 0.0052 South Ebb 10:30 AM 13.19 0.2568 North Flood 12:20 PM 24.02 0.4674 North Flood Water Temperature- 8:55 AM 20.4°C 68.7°F 9:38 AM 20.5°C 68.9°F 11:58 AM 21°C 69.8°F 11:58 AM 21°C 69.8°F 11:58 AM 21°C 69.8°F 11:58 AM 21°C 68.9°F 11:58 AM 71°C 9.10°C 48:55 AM 71°C 9.10°C 48:50 AM 9.10°C 9.10°C				-						
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Tube (120 cm) 8:55 AM 64.8 cm Disk 8:55 AM 107 cm *see note in the site description about the impact of the two crabbers on the turbidity data 9:10 AM 65 cm 9:10 AM 87.5 cm 0:18 AM 9:18 AM 90 cm 9:18 AM 90 cm 0:240 AM 54 cm 9:40 AM 87 cm 0:240 AM 9:40 AM 87 cm 9:48 AM 90 cm 0:240 AM 54 cm 9:48 AM 90 cm 90 cm 0:240 AM 54 cm 9:48 AM 90 cm 90 cm 0:240 AM 57 cm 10:00 AM 82 cm 0:240 AM 59.4 cm 10:00 AM 82 cm 0:240 AM 57 cm 10:30 AM 75.6 cm 10:30 AM 57 cm 10:30 AM 75.6 cm 12:20 PM 26.8 cm 12:23 PM 42 cm 12:25 PM 83.8 cm 12:23 PM 60 cm 12:40 PM 49.8 cm 1:00 PM 43.3 cm Chemical Student Salinity-	Turbidity- Long Sight						8:50 AM		117 cm	
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9:15 AM-1:00 PM 55 Atlantic Silverside	9:15 AM-1:00 PM	55	Atlantic Silverside		
8 Striped Bass	, , , , , , , , , , , , , , , , , , , ,				
Fish Totals TOTAL: 63 Diversity: 2	Fish Totals		^		
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Macroinvertebrates Number Name Length of longest Sex	Macroinvertebrates	Number	Name		Sex
10 Blue Crab 5 M, 4 F		10	Blue Crab	iongesi	5 M 4 F
7 Asian Shore Crab					5 171, 1 1
3 Palaemonetes Shrimp					
4 Crangon Shrimp					
Macroinvertebrate Totals TOTAL: 24 Diversity: 4	Macroinvertebrate Totals				
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4	runkion rump				
1 Insect Molt					
1 Ankistrodesmus Sp.		1			
1 Pediastrum Sp.		1			
2 Bosmina longirostris					
Plankton Totals Total: 5 Diversity: 4	DI 14 75 4 3	Lotale 5	Diversity. A	[_

Length	Time	H ₂ S smell	Oil	Oxidized Top	Grain Size	Other Features
16 cm	NR	Y	N	N	Abundant: Mud Common: Clay, Sand, Gravel Rare: Pebbles	Common: Wood 3 cm on top and 13 cm rough material on bottom
17.5 cm	NR	N	N	N	Abundant: Mud Common: Gravel Rare: Clay, Sand, Pebbles	10 cm rough, rocky on top, 5 cm sand, 3.5 cm smooth at base
10 cm	NR	Y	N	N	Abundant: Mud, Sand, Gravel, Pebbles Common: Clay	Common: Brick Rare: Leaves, Macroinvertebrates, Living Vegetation 3.5 cm finer material, 6.5 cm softer sediment on bottom
9 cm	10:40 AM	Y	N	N	Abundant: Clay Common: Mud, Sand, Pebbles Rare: Gravel	Rare: Leaves, Wood, Mussel shells, Living vegetation
19 cm	NR	Y	N	N	Abundant: Clay Common: Mud, Gravel, Pebbles Rare: Sand	Common: Wood Rare: Leaves, Oyster shells, Macroinvertebrates, Brick 4 cm rock, 12 cm smooth gray clay and 3 cm wood bottom
19 cm	9:45 AM	Y	N	N	Abundant: Clay Common: Mud Rare: Sand, Pebbles	Abundant: Wood Common: Slag Rare: Brick 7 cm from bottom a section of wood was wedged
11.3 cm	NR	N	N	N	Abundant: Mud, Sand Common: Pebbles Rare: Gravel	Rare: Oyster Shells, Mussel Shells, Brick
11.5 cm	NR	Y	N	N	Abundant: Clay, Mud Rare: Sand, Pebbles	Abundant: Living Vegetation 10.8 cm clay on bottom
15 cm	NR	faint	N	N	Abundant: Clay	Rare: Leaves, Living Vegetation, Brick, Coal

					Common: Sand, Gravel Rare: Pebbles	
12.6 cm	NR	Y	N	N	Abundant: Clay Common:	Common living: vegetation
					Gravel, Pebbles, mud Rare: Sand	Rock on top (0.5cm) 3.5 cm sandy & mud 7.1 cm mud & clay

Boats-NR									
Commercial/ Recreational	Time	Name	Color	Southbound/ Northbound	Light/ Loaded				