

**Day in the Life of the Hudson River 10/12/17 Data
(Salt Front ~RM 65)
RIVER MILE 25.4W
Piermont Pier**

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Jen Mazza, Clarkstown South High School, 13 students
Tom Mullane, Brenda King, Eileen McCaffrey, Will McKerrell, Pearl River High School, 46 students
Shawn Kapusinsky, Spring Valley High School, 14 students
Brian Newburger, Patti Kilkelly, Kristen Driscoll, Tappan Zee HS, 45 students
Latitude N 41 degrees 02'592 Longitude W 73 degrees 53'789**



Clarkstown High School



Tappan Zee School



Spring Valley School



Pearl River School

Location: Piermont Pier, Piermont NY

Area: Man made fishing/shipping pier at the east end, long pier with paved roadway and vegetated strip 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: no submerged aquatic plants in the water

Water depth: Varied by location on the pier and by tide

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

Plants in area: sumac and other plants 15%; phragmites 85%

<i>ITEM</i>	Group A		Group B	
<i>Physical</i>	Weather Today	Weather		

		Last 3 Days			
	Cool, damp, windy, chilly	Rainy and muggy Hurricane approaching			
Time	Cloud Cover	Air Temp °C			
9:56 AM	75%	16.3 C			
10:42	75%	16.1			
11:59	75%	16.8			
12:26 PM	75%	17.7			
1:20 PM	50%	27.6			
Time	Wind Beaufort	Direction	Wind Max Anemometer		
9:56 AM	2.5	NE	5.9		
10:42	3.5	NE	6.6 m/s		
11:59	5	NE	4.9		
12:26 PM	4	NE	9.1		
1:20 PM	2.5	NE	3.7		
Turbidity –	Group A				
Long Site Tube <i>All average 4 readings</i>	Time	Long Site Tube	Secchi		
	9:15 AM	35 cm	62.5 cm		
	9:45 AM	38 cm	76 cm		
	10:30 AM	38 cm	59 cm		
	12:00 PM	30.5 cm	54 cm		
<i>*Note turbidity drop during last rotation</i>	12:45 PM	16.8 cm	30.2 cm		
Chemical					
DO	TIME	DO Reading	Water Temp °C	% Saturation	
Group A	9:00	NR ppm	17.2	118%	
Group B		3 ppm	20	33%	
Group C		7 ppm	20	80%	
	10:00	14 ppm	20	140	
		8 ppm	19	86%	
		7 ppm	20	80	
* tested 3 times and got 2 ppm on southside of pier	10:40 AM	2 ppm	19	20%	
		southside	20	75%	
		7 ppm northside	20	17%	
		*2 ppm			

		southside		
	12:05	9 ppm southside 2 ppm northside 8 ppm southside	20 22 20	96% 75% 85%
	13:00	10 ppm 5 ppm 8 ppm	20 21 20	100% 50% 85%
<i>pH</i>	TIME	Group A	Group B	Group C
	9:00	7.2	7.5	7.8
	10:00	7.5	NR	NR
	10:40	8	7.25	8.1
	12:05	7.5	7.0	8.2
	13:00	7.3	7.25	8.2
Phosphates	TIME	Group A	Group B	
	9:00	0.62 ppm		
	10:00	0.8 ppm		
	10:40	0.35 ppm		
	12:05	0.9 ppm		
	13:00	0.7 ppm		
Nitrates	TIME	Group A	Group B	
	9:00	0.44 ppm		
	10:00	NR		
	10:40	0.1 ppm		
	12:05	0.1 ppm		
	13:00	0.1 ppm		
Alkalinity	TIME	Group A	Group B	
<i>Drop count</i>	9:00	84 ppm	82 ppm	
	10:00	81 ppm		
	10:40	85 ppm		
	12:05	180 ppm		
	13:00	44 ppm		
*Salinity	Group 1 Refractometer	Group 2 Refracto meter	Group 3 Glass Hydrometer	
	9:00	10 ppt	12 ppt	11.4 ppt
	10:00	13 ppt	12 ppt	9.36 ppt
	10:40	12 ppt	12 ppt	8.8 ppt
	12:05	14 ppt	10 ppt	10.1 ppt
	13:00	13 ppt	12 ppt	10.1 ppt
Tides- Time	Pier to water surface	Flood/Ebb	Rate of Change cm/min	

9:28 AM	198 cm		NR	
9:45 AM	210 cm	Ebb	8.34	
10:57 AM	184 cm	Flood	0.44	
12:14 PM	167 cm	Flood	0.6	
1:20 PM	137 cm	Flood	0.22	
Currents	Group A		Group B	
Time	Rate of Flow	Type	Rate of Flow	Type
9:11 AM	11.67 cm/sec	Ebb South	13.6	Ebb South
10:07 AM	23.33	Ebb South	13.3	Ebb South
10:30 AM	121.66	Ebb South	0.6	Flood North
12:40 PM	32.8	Flood North	35.6	Flood North
1:14 PM	52.2	Flood North	NR	
Fish Catch	Number Caught	Species	Measure of largest	TIME & CATCH
Rotation #1 - 9:25 AM 3 groups in 3 areas	38	Atlantic Silverside	9.5cm	DIV 1 TOTAL 38
MACRO	6	Blue Crab	4 cm	DIV 3
	257	Ctenophore	3.5 cm	TOTAL 264
	1	Sand Shrimp	2.5 cm	
Rotation #2 10:06 AM - FISH	9	Atlantic Silverside	9 cm	DIV 1 TOTAL 9
MACRO	1	Blue Crab	5 cm	DIV 3
	74	Ctenophore	3 cm	TOTAL 77
	2	Moon Jelly		
Rotation #3 10:30 AM	43	Atlantic Silverside	9 cm	DIV 2
FISH	4	Striped Bass	11 cm	TOTAL 47
MACRO	23	Ctenophore	3 cm	DIV 3
	12	Blue Crab	4 cm	TOTAL 37
	2	Moon Jelly	1 cm	
Rotation #4 12:30 PM	2	Atlantic Silverside	7.5 cm	DIV 4
FISH	4	White Perch	20 cm	TOTAL 9
	2	Striped Bass	9 cm	
	1	Bluefish	17 cm	
MACRO	4	Blue Crab	7 cm	DIV 3 TOTAL 47
	38	Ctenophore		
	5	Moon Jelly		
Rotation #5 12:52 PM	10	Atlantic Silverside	9.5 cm	DIV 4
FISH	1	Striped Bass	9cm	TOTAL 14
	1	Menhaden	7 cm	

	1	Bay Anchovy	3.8 cm		
MACRO	307	Ctenophore	6 cm	DIV 2	
	1	Sand Shrimp	2 cm	TOTAL 308	
GRAND TOTAL	FISH MACRO	TOTAL TOTAL	117 >733	F - DIV 6 M - DIV 4	
Sediment Cores	Time	Length	Oxid Top	Grain Size	Other Items
<i>Group: Yellow Perch</i>	9:00	10.795cm	NO	Finer near the bottom, larger pebbles near top	Brick
<i>Group: Unnamed 1</i>	9:50	11.5cm	YES 1.5cm	Leaves and pebbles near top, larger rocks and roots near bottom	Roots Coal
<i>Group: Rough silverside</i>	10:01	21.5cm	NO	Clay, mud, sand, gravel, some pebbles	Shells Oysters Brick
<i>Group: Banded Killifish</i>	11:45	17cm	NO	Clay, mud, sand, gravel, some pebbles, leaves, and wood	H ₂ S smell Oil Macroinvertebrates Shells Oysters
<i>Group: Atlantic Menhaden</i>	1:00	10cm	NO	Sand, gravel, some mud and pebbles	Coals
<i>Group: Unnamed 2</i>		11.43cm	NO	Clay, mud, sand, some gravel and pebbles, leaves and wood	Slag
<i>Group: Unnamed 3</i>		5cm			Macroinvertebrates
<i>Group: Unnamed 4</i>		13.97cm	NO	Clay, mud, pebbles, gravel, some sand, leaves, wood	Slag
<i>Group: Unnamed 5</i>			YES	Clay, mud, sand	Brick Coal
<i>Group: Unnamed 6</i>			NO	Sand, gravel, pebbles, some clay and mud.	Lat 41°N, Lon 73°54W
Other Observations	Overcast day that ended with rain just as students were leaving.				