

**Day in the Life of the Hudson River 10/16/14 Data
(Salt Front RM 69.5)
RIVER MILE 118**

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40 students 11th -12th grade, 7 adult helpers
Latitude – N 42.253830 Longitude – W -73.800476**

Location: Hudson River Waterfront Park, City of Hudson, Columbia County

Area: 1st dock in the waterfront property used for fishing, marina, picnics, large grassy area, just north of the old quarry site, has a parking lot

Surrounding Land Use: 60% urban/residential, 20 % forested, 20% Industrial/Commercial

Sampling Site: waterfront with banks altered to include wooden & concrete bulkheads and large riprap on shoreline,

Plants in area: 15% water chestnut

Water depth – ~ 1 foot

River Bottom – muddy, rocky

Plants in area – Grass, Water Chestnut, trees

	<i>Time</i>	<i>Reading 1</i>	<i>Reading 2</i>	<i>Comments</i>
<i>Physical</i>				
Air Temperature	9:20 AM	24.4°C	75.9°F	
	9:28 AM	25.5	78	
	9:34 AM	24.3	76	
	9:46 AM	23.4°C	75.2°F	
	10:00 AM	23.5	74.3	
	10:15 AM	24	75.2	
	10:30 AM	24°C	75.2°F	
	10:37AM	23.8	74	
	12:05 PM	24.7 °C	76.46°F	
	12:15 PM	23.5	74.3	
	12:22 PM	23.2	73.7	
	12:37 PM	23°C	73.4 °F	
	12:41	23.8	74.8	
	12:50	25.7	78.3	
Cloud Cover	9:22 AM >75%	9:44 AM >75%	10:35 AM >75%	12:50 PM >75%
Wind – wind picked up during day	Time 9:21 AM 9:44 AM 10:30 AM 12:13 PM 12:50 PM	MPH 0.4; 1.1; 1.3 m/s 2.0 m/s 3.1 m/s 4.6 m/s 3.1 m/s	Average 0.7 m/s	Direction W SE SE NE ?
Weather today	9:23 AM Rain	9:44 AM Rain	12:00 PM Rain	

Weather recently	Rained/pour all night -	Rainy & Windy	Last 3 days humid	
Water	calm			
Water Temperature –	9:54 AM 1 m depth	19°C 19 19		19°C
Taken in full sun, water still	10:10 AM 1 m depth	20 °C 20 20		20°C
Full sun	10:21AM 1 m depth	20 °C 20 20		20°C
In shade	10:36 AM 1 m	17.1 °C	62.78 °F	17.1°C
In shade	10:46 AM 1 m.	19 °C	66.20 °F	19°C
In shade	10:56 AM 1 m	19.1°C	66.38°F	19.1°C
	12:10 PM 3 m	19.2 °C 19.2	66 °F	19.2°C
	12:20 PM 2 m	19.8°C 19.6	67.6 °F 67.3	19.7°C
	12:30 PM 1.8 m	19.7°C 19.4	67.4°F 66.9	19.55°C
	12:40 PM 3 m	19 °C		
	12:50 PM 1.5 m	20°C 19.5 19.75		
	1:00 PM 1m	19.5°C 19.5		
Turbidity – secchi–	9:23 AM	114 cm		Yes the water was very turbid
	9:45 AM	100 cm		
	10:30 AM	100 cm		
	11:00 AM	100 cm		Chocolate milk look
	12:48PM	417 cm		Water clear and yellowish
Chlorophyll	9:23 AM	0.1	10:35 AM	0
	12:00 PM	0		
Chemical	Time	Temp	DO	% sat.
DO	9:20 AM	17.6 C	8.0	83%
	9:34 AM	17.5 C	9.3	95%
	9:48 AM	17.7°C	7.1 ppm	74 %

	10:01 AM 10:16 AM	17.7°C 17.8°C	7.3 7.2	76 % 78 %
	10:31 AM 10:41 10:51	17.7 °C 17.8 17.8	8.6 ppm 7.3 7.2	87% 75% 76%
?	10:50 AM 11:00 AM 11:12 AM	17.6 17.1 17.1	10.5 ppm 13.3* 11.6	108% 135 105
*air bubble	12:05 PM 12:15 12:25	17.8 °C 17.7 17.7	9.6 ppm 8.1 14.4	100% 85 151 *expect airbubble
air bubble	12:35 PM 12:45 12:55	17.9°C 17.9 17.9	13 ppm 12.1 15.3*	138% 122 152 *expect airbubble
pH – <i>probe was broken</i>				
Salinity	Time	Total Salinity/conductivity?? But		Average
<i>Meter - conductivity</i>	9:33 AM	34.0 µs/cm 28.1 28.1		30.1 µs/cm
	10:28 AM 10:31 10:35 10:44	29 µs/cm 29 28 28		28.5 µs/cm
	11:00 AM	28.7 µs/cm 29.5 29.7		29.3 µs/cm
	12:05 12:14 12:23	29 µs/cm 29 28		28.9 µs/cm
	12:48 PM 12:57 PM	28.6 µs/cm 29.5		29.1 µs/cm
Conductivity Meter	9:30 AM 9:33 AM 10:38 PM 12:00 PM 12:40 PM	29.05 us/cm 30 us/cm 28.5 us/cm 29.3 us/cm 28.6 us/cm		
<i>Fish Catch</i> Seine net 20 feet X 4 ft., 1.4	<i>Time</i>	<i>Species</i>	<i>number</i>	<i>Size of largest</i>

inch mesh				
Diversity 1 Total Catch 2	9:30 AM	<i>American Shad</i>	2	small
Diversity 0 Total Catch 0	10:15 AM	0	0	
Diversity 0 Total Catch 0	11:00 AM	0		
Diversity 1 Total Catch 1	12:00 PM	<i>American Shad</i>	1	4 inch
Diversity 1 Total Catch 22	1:00 PM	<i>American Shad</i>	22	3.5 inches
	For the Day	Total Diversity 1	Total Catch 25	
Macro invertebrates				
Rotation #1 9:30 AM	Rotation #2 10:15 AM	Rotation #3 11:00 AM	Rotations #4 12:00 PM**	Rotation #5 1:00 PM
Unknown protist	Algae 20+ Red algae	Algae 20 + Eucoppeoda 3 Daphnia 1	Daphnia (2) 2 copepods	Stylaria (worm) Diatoms Scenedusmus Scud
Tides	9:15 AM 9:24 AM 9:32 AM 9:38 AM	45cm 47.5 cm 49 cm 50 cm	Set Rising Rising Rising	<i>Tidestick Set</i>
	9:45 AM 9:50 AM 9:55 AM 10:00 AM 10:05AM 10:10 AM 10:15 AM	52 cm 54 cm 56 cm 58 cm 57 cm 56 cm 55cm	Rising Rising Rising Rising Falling (maybe waves action)	
	10:30 AM 10:37 AM 10:45 AM 10:53 AM 10:58 AM 11:03 AM 11:08 AM	60cm 60 cm 61 cm 61 cm 59 cm 60 cm 60 cm	Appears to be holding steady for this period	
	12:05 PM 12:12 PM 12:18 PM 12:26 PM 12:30 PM	42 cm 42 cm 39 cm 37 cm 34 cm	Falling	
	12:40 PM 12:25 PM	35 cm 33 cm	Falling	

	12:50 PM 12:56 PM 12:59 PM	29 cm 31 cm 27 cm		
<i>Currents</i>	<i>Time</i>	<i>Cm/30 secs</i>	<i>Cm/sec</i>	<i>Kts - E/F/S</i>
	9:19 AM.		19.5	0.37
	9:26 AM		11.7	0.23
	9:32 AM		18.28	0.35
	9:49 AM		32.3	0.6
	9:56 AM		28.4	0.5
	10:15 AM		7.3	0.14
	10:30 AM		7.5	0.197
	10:37 AM		8.1	0.158
	10:45 AM		4.2	0.082
	10:53 AM		2.79	0.059
	12:09 PM		8.12	0.159
	12:23 PM		5.46	0.107
	12:29 PM		12.2	0.239
	12:30 PM		18.2	0.36
	12:40 PM		20.7	0.402– Flood
	12:47PM		24	0.461 – Flood
	12:51 PM		11.7	0.227 Flood
	12:57PM		6.7	0.130 - Flood
<i>Core Sample</i>	<i>Length/Grain size/H2S</i>	<i>Abundant</i>	<i>Common</i>	<i>Rare</i>
9:25 AM	4-5 inches – oil and oxidized top	Clay, Mud, Sand, Gravel, Pebbles, macroinvert, brick, slag, living things	Wood, Shells	Leaves, coal, zebra mussels
10:45 AM	No length - Oxidized top	Clay, Mud		coal
12:10 PM	2 inches	Mud	Gravel, Pebbles	Brick, Living Vegetation
12:16 PM	None listed	Clay		Mud, gravel, pebbles
12:40 PM	None listed	Clay	Mud	pebbles
<i>Traffic - commercial</i>	<i>Time</i>	<i>Name</i>	<i>Color</i>	<i>Direction/Loaded or Light</i>
	10:32 AM	Mobile Pearl	Red & Black	Northbound, loaded
	10:37 AM	Riverkeeper	White	North
	11:16 AM	Bouchard	Black & Red	North/loaded
	11:45 AM	Barge	Black	North/light

	12:20 PM		Black	South
	12:31 PM	Barge	Red & Black	North/loaded
	12:53 PM	Pretty Lamb	Black & Red	South/ light
<i>Recreational</i>	10:10 AM	sailboat	White	southbound
	10:25 AM	Sadie	Blue	Docked/light
	10:37 AM		White	southbound
	10:46 AM		White	southbound
	12:21 PM		Black	Southbound/loaded
<i>Other Items</i>	Water chestnut seeds	Ore pieces in rocks	Clay	Bald eagle, seagulls, bees