

Day in the Life of the Hudson River 10/05/2023

West Point, Orange County, NY

RIVER MILE: 52

Salt Front: ~ 52

West Point Elementary-Martin Wormsley

West Point Homeschool-Stephanie Powell

Department of Geography and Environmental Engineering, West Point-Lauren Koban

60 students, pre-school to 9th grade, 58 fourth graders & 23 West Point college juniors, 35 adults

Latitude 41.385981°N & Longitude -73.95514°W

Location: West Point South Side of Gee's Point by Duck Island, Orange County, NY

Surrounding Land Use: 60% Urban/Residential, 40% Forested, Military Post

Sampling Site: Forested, grassy area, covered in vegetation, rip rap, and parking lot adjacent.

Shoreline: 90% Rocky, 5% Sandy & 5% Muddy

Water: Choppy

River Bottom: 80% Muddy & 20% Rocky

Plants in the water: No Plants in the Water

*NR = Not read/recorded

<i>ITEM</i>	<i>Time</i>	<i>Reading</i>		<i>Comments</i>
<i>Physical</i>				
<i>Air Temperature</i>	8:30 AM	16.7°C	60°F	
	9:00 AM	16.4°C	61.5°F	
	9:30 AM	17.2°C	63°F	
	10:00 AM	18.9°C	66°F	
	10:28 AM	19.5°C	67°F	
	11:00 AM	20.6°C	69°F	
	11:35 AM	21.1°C	70°F	
	12:05 PM	22.2°C	72°F	
	12:32 PM	22.2°C	72°F	
	1:00 PM	22.2°C	72°F	
	1:30 PM	23.9°C	75°F	
	2:00 PM	23.9°C	75°F	
	2:30 PM	23.9°C	75°F	
<i>Wind Speed: NR</i>		<i>Anemometer</i>	<i>Beaufort</i>	<i>Direction</i>
<i>Weather today</i>	11:00 AM	26-50% Cloud Cover	No Rain	
<i>Weather the past 3 days:</i>	Fog, unusually warm			
<i>Tides- NR</i>	<i>Time</i>	<i>Rising, Falling, Unchanged</i>		<i>Height (cm)</i>
<i>Current-</i>	<i>Time</i>	<i>Cm/sec</i>	<i>Knots</i>	<i>North/South</i>
	9:01 AM	1.1		
	10:01 AM	1.5		
	11:00 AM	2.2		
	12:00 PM	19.2		
	1:00 PM	13.9		
	2:00 PM	10.2		
<i>Water Temperature-</i>	8:30 AM	18.6°C	65.5°F	
	9:03 AM	18.5°C	65.3°F	
	9:30 AM	18.5°C	65.3°F	
	10:03 AM	18.9°C	66°F	
	10:32 AM	19.3°C	66.7°F	
	11:00 AM	19.5°C	67.1°F	
	11:31 AM	21.3°C	70.3°F	

	12:00 PM 12:31 PM 12:58 PM 1:30 PM 2:05 PM 2:31 PM	21°C 22.2°C 21.7°C 21.2°C 21.8°C 21.6°C	69.8°F 72°F 71°F 70.2°F 71.2°F 70.9°F	
Turbidity- Turbidimeter (NTU)	8:33 AM 9:00 AM 9:35 AM 10:00 AM 10:30 AM 10:58 AM 11:34 AM 12:04 PM 12:30 PM 12:57 PM 1:28 PM 2:00 PM 2:29 PM	56.7 NTU 29.4 NTU 27.8 NTU 41.7 NTU 21.6 NTU 16.5 NTU 40.6 NTU 40.97 NTU 33.5 NTU 36.1 NTU 40.8 NTU 29.9 NTU 46.4 NTU		

Chemical

Student Salinity- Meter/Probe (conductivity)	8:37 AM 9:04 AM 9:31 AM 10:00 AM 10:30 AM 11:00 AM 11:00 AM 11:31 AM 12:00 PM 12:30 PM 12:59 PM 1:30 PM 2:05 PM 2:31 PM	369.7 μS/cm 427.7 μS/cm 374.7 μS/cm 371 μS/cm 371 μS/cm 371.7 μS/cm 374 μS/cm 350.7 μS/cm 347 μS/cm 346.3 μS/cm 348.3 μS/cm 347 μS/cm 344.3 μS/cm 335.7 μS/cm	203.3 ppm 235.2 ppm 206 ppm 204 ppm 204 ppm 204.4 ppm 205.7 ppm 192.9 ppm 190.9 ppm 190.5 ppm 191.6 ppm 190.9 ppm 189.4 ppm 184.6 ppm	(Total Salinity- ppm)
DO – Meter/Probe	<i>Time</i>	<i>Temp</i>	<i>ppm DO</i>	<i>% saturation</i>
	8:30 AM 9:03 AM 9:30 AM 10:03 AM 10:32 AM 11:00 AM 11:31 AM 12:00 PM 12:31 PM 12:58 PM 1:30 PM 2:05 PM 2:31 PM	18.6°C 18.5°C 18.5°C 18.9°C 19.3°C 19.5°C 21.3°C 21°C 22.2°C 21.7°C 21.2°C 21.8°C 21.6°C	7.81 ppm 8.33 ppm 8.06 ppm 8.14 ppm 8.25 ppm 8.29 ppm 8.22 ppm 8.23 ppm 8.75 ppm 8.22 ppm 8.10 ppm 8.11 ppm 7.90 ppm	83% 81% 85.4% 86.9% 83.9% 89.6% 91% 91.9% 98.1% 93.1% 90.8% 92.2% 89.5%
pH – pH pen	8:31 AM 9:01 AM 9:33 AM 10:04 AM 10:30 AM 11:01 AM 11:01 AM	7.85 7.94 7.86 7.6 7.84 7.73 7.89		

	11:30 AM 12:01 PM 12:32 PM 12:57 PM 1:28 PM 2:03 PM 2:29 PM	7.99 7.93 8 7.9 7.86 7.96 7.81	
Fish-Seine (6 Hauls)			
Fish-Seine (6 Hauls)	Number	Name	Length of longest Notes
8:00 AM-2:00 PM	11 25 15 5 2 7 3 4	Atlantic Silverside White Perch Spottail Shiner Alewife Channel Catfish Hogchoker Striped Bass American Eel	35 cm
Fish Totals	TOTAL: 72	Diversity: 8	
Macroinvertebrates	Number	Name	Length of longest
	14	Blue Crab	
Macroinvertebrate Totals	TOTAL: 14	Diversity: 1	
Sediment Core -NR	Time	Oxid Top	H₂S Smell Oil Grain Size Other Features

Boats					
Commercial/ Recreational	Time	Type	Color	Southbound/ Northbound	Light/ Loaded
Commercial	10:36	Habor Patrol	White	Southbound	Light
Commercial	13:05	Barge	Green/White	Northbound	Loaded
Commercial	13:09	Barge	Red	Northbound	Loaded
Commercial	13:32	Barge	Red	Northbound	Loaded
Commercial	13:49	Barge	Black & White	Northbound	Loaded
Commercial	14:42	Barge	Red	Northbound	Loaded
Commercial	14:42	Barge	Black	Northbound	Loaded
Recreational	8:20	Sailboat	White	Southbound	Light
Recreational	9:08	Sailboat	White	Southbound	Light
Recreational	9:08	Cabin Cruiser	White	Southbound	Light
Recreational	9:14	Sailboat	Grey/Green	Southbound	Light
Recreational	9:17	Crab Boat	Black	Southbound	Light
Recreational	10:41	Sailing Vessel	Light Blue	Southbound	Light
Recreational	11:12	Speedboat	Grey	Northbound	Light
Recreational	11:37	Pleasure Craft	White	Southbound	Light
Recreational	11:38	Pleasure Craft	White	Northbound	Light
Recreational	11:49	Kayak	White	Southbound	Light
Recreational	12:12	Fishing Boat	White	Southbound	Light
Recreational	12:40	Speedboat	White	Northbound	Light
Recreational	13:07	Sail Boat	White	Southbound	Light
Recreational	13:07	Speedboat	White/Brown	Southbound	Light
Recreational	13:05	Speedboat	White	Northbound	Light
Recreational	13:10	Sailboat	White/Blue	Southbound	Light
Recreational	13:10	Yacht	White	Northbound	Light

Recreational	13:14	Sailboat	Blue/White	Southbound	Light
Recreational	13:16	Speedboat	White	Northbound	Light
Recreational	13:17	Dredger	Silver	Southbound	Light
Recreational	13:20	Jet Ski	Black	Northbound	Light
Recreational	13:21	Troller	White	Southbound	Light
Recreational	13:25	Speedboat	White	Northbound	Light
Recreational	13:58	Speedboat	Red/Black	Northbound	Light
Recreational	14:01	Jet Ski	Black/Blue	Southbound	Light
Recreational	14:10	Yacht	White	Northbound	Light
Recreational	14:10	Yacht	White	Northbound	Light
Recreational	14:13	Sailboat	White with Blue	Southbound	Light