

Day in the Life of the Hudson River:
October 18, 2011



Green Island, Troy Dam



Norrie Point



THANK YOU!

Riverdale

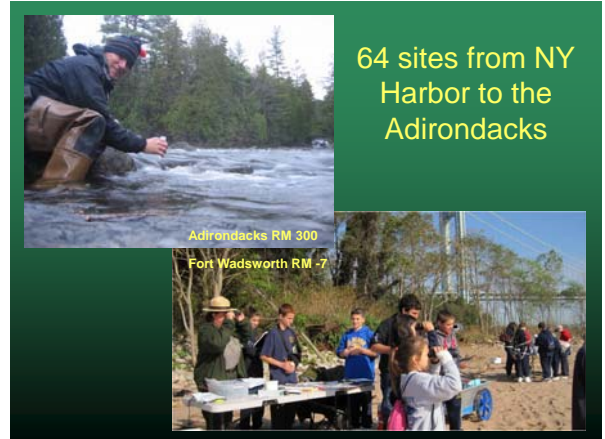
Approximately 3200 participants!



Green Island



Yonkers



64 sites from NY Harbor to the Adirondacks

Adirondacks RM 300

Fort Wadsworth RM -7

We saw the effects of Hurricane Irene more than a month after the storms...



Stuyvesant



Verplanck

Her impact showed up in several parameters!



Core from Nyack Beach RM 31 2010 filled with layers of muds and clays – standard for this wide, shallow, quiet slow moving stretch of the Hudson.



Core from 2011 in the same area is filled with rough sands and gravels, a result of a very different movement in the river – rapid and churned.

Loss of submerged plant beds & turbidity still moving down from upriver



Fishy Findings

Expanded range and numbers of herring



We netted over a dozen Gizzard Shad; (first time at Inwood)



Inwood, NYC

A noted reduction in Blue Crabs



Swindler Cove



The salinity was low throughout the whole system!



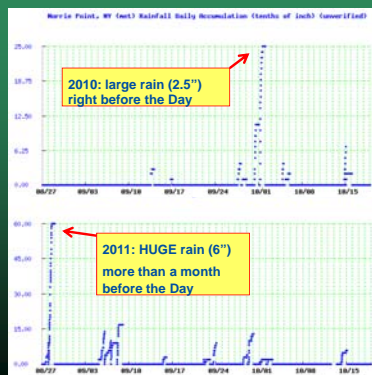
Canarsie Pier

How does this year compare to previous years?



RM 60 in 2009

RM 36 in 2010 and 2011



Doing Math With Shipping Data

American Cruise Lines' Independence

Site	HRM	Time	Direction
Coxsackie	123	11:05 AM	Southbound
Quiet Cove	78	12:50 PM	Southbound



Traveled 45 miles in 1 hour, 45 minutes, at a rate of 25.7 mph.
Did tidal currents speed it up or slow it down?



Bouchard Transportation Co. (Light) Oil Barge

Site	HRM	Time	Direction
Bezczak/Yonkers	18	10:20 AM	Southbound
Ft. Washington	12	11:00 PM	Southbound

Traveled 6 miles in 40 minutes at a rate of 9 mph.
Did tidal currents speed it up or slow it down?

Doing Math With Tide Data

Site	HRM	Time	Reading	Rising/Falling	Estimated time of change
Norrie Pt	84	10:54 AM	103 cm	falling	12:00 AM
		12:17 PM	105 cm	rising*	
Waryas Pk	76	11:30(7) AM	-	falling	11:45 AM
		12:05 PM	-	rising	
Beacon	61	10:30 AM	20 cm	still	11:00 AM
		10:45 AM	20 cm	still	
		11:15 AM	35 cm	rising	

Beacon to Waryas: traveled 15 miles in 45 minutes, a rate of 20 mph.
 Waryas to Norrie: traveled 8 miles in 15 minutes, a rate of 32 mph.
 Beacon to Norrie: traveled 23 miles in 60 minutes, a rate of 23 mph.

The actual speed of the tidal wave is about 18 mph.

Doing Math With Tide Data

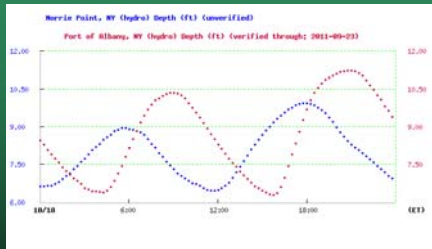
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		12:05 PM	-	rising	
Beacon	61	10:30 AM	20 cm	still	11:50 AM
		10:45 AM	20 cm	still	
		11:15 AM	35 cm	rising	

Beacon to Waryas: traveled 15 miles in 55 minutes, a rate of 16.4 mph.
 Waryas to Norrie: traveled 8 miles in 25 minutes, a rate of 19.2 mph.
 Beacon to Norrie: traveled 23 miles in 80 minutes, a rate of 17.3 mph.

The actual speed of the tidal wave is about 18 mph.

Doing Math With Tide Data

(uses HRECOS data)



Low tides: Norrie Pt (HRM 84) - 11:45 AM; Albany (HRM 140) - 3:45 PM
 Traveled 56 miles in 3 hours, at a rate of 18.7 mph.

"Anything Goes" Give us your feedback



Features This Year

- Photo instruction sheets
- Classroom Workshops
- Post Day worksheets (fish & salinity)
- Almanac
- New lesson plans online
- Other?



Next Year (the 10th !) Next Steps





Thank You

"A Day in the Life of the Hudson River"

<http://www.dec.ny.gov/lands/47285.html>

http://www.ldeo.columbia.edu/edu/k12/snap_shotday/

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EARTH OBSERVATORIES

NYS Department of Environmental Conservation

