

Recreational Boating in NY/NJ

Post Sandy

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Overview

- BoatU.S.'s role in Hurricane prep and response
- Analyzing Lessons Learned to increase marina resiliency
- Sandy's Impacts on Recreational Boating
- Other issues in Recreational Boating



Stuyvesant YC
Betsy Haggerty

Goals of Hurricane Preparation:



Prevent Loss of Life





Stuyvesant YC
Betsy Haggerty

Limit Damage to Boats





Mansion Marina,
Staten Island

Limit Damage to Marina Infrastructure





Mansion Avenue
Staten Island

Limit Damage to Other Infrastructure





Crescent Beach,
Staten Island

Limit Damage to the Environment



Role in Hurricane Prep

Resources

- Planning guidance for boaters and marinas
- Storm tracking and notification

Response

- CAT Team
- Post Storm Management
- Marina Webinars post Sandy

BoatU.S. Hurricane Resource Center

Boat Owners Association of The United States

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Storm Tracking

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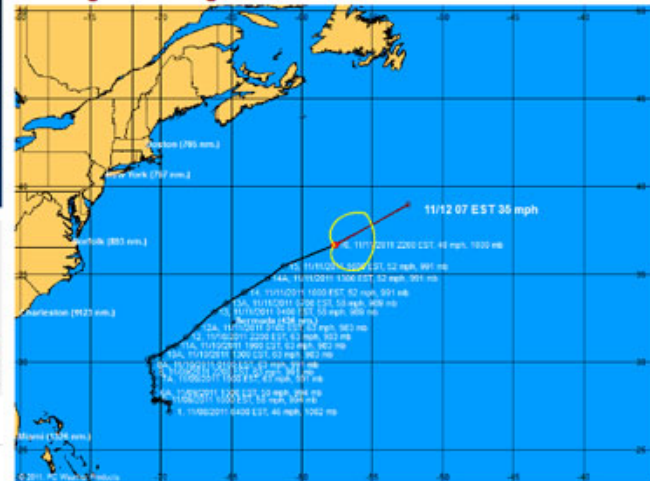
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No longer tracking Sean.



Last Updated: 11/11/2011 9:38:43 PM

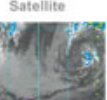
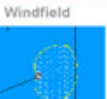
[Click Here for the Latest Public Advisory for Sean](#)

[What is UTC Time? View Converter Here](#)

[NationalData Buoy Center](#)



Forecast



BoatU.S. Catastrophe (CAT) Teams

- First deployed after Hurricane Alicia hit Houston in 1983
- Team of experienced surveyors, salvors, and claims adjustors
- On the ground after every major weather event where large numbers of boats were destroyed for the past 30 years
- Debrief after the fact to develop hurricane preparation best practices
- First members reached marinas in NY and NJ less than 24 hours after Sandy made landfall; CAT Teams in the field through Christmas
- Debrief after each storm to determine what we can learn



VIDEO

• <http://www.youtube.com/watch?v=CI2QZE-mU7v4&feature=c4-overview&list=UUX5uNpKyy9TU6f1tkCYn0L>

What Made Sandy Different?



It was NOT a high wind event

What Made Sandy Different?

Stuyvesant YC
Betsy Haggerty



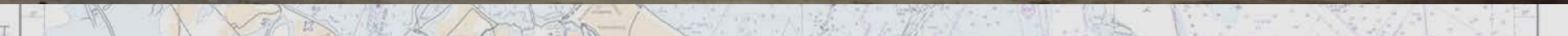
Widespread Surge Damage in an area with older marina infrastructure

What worked... and what didn't

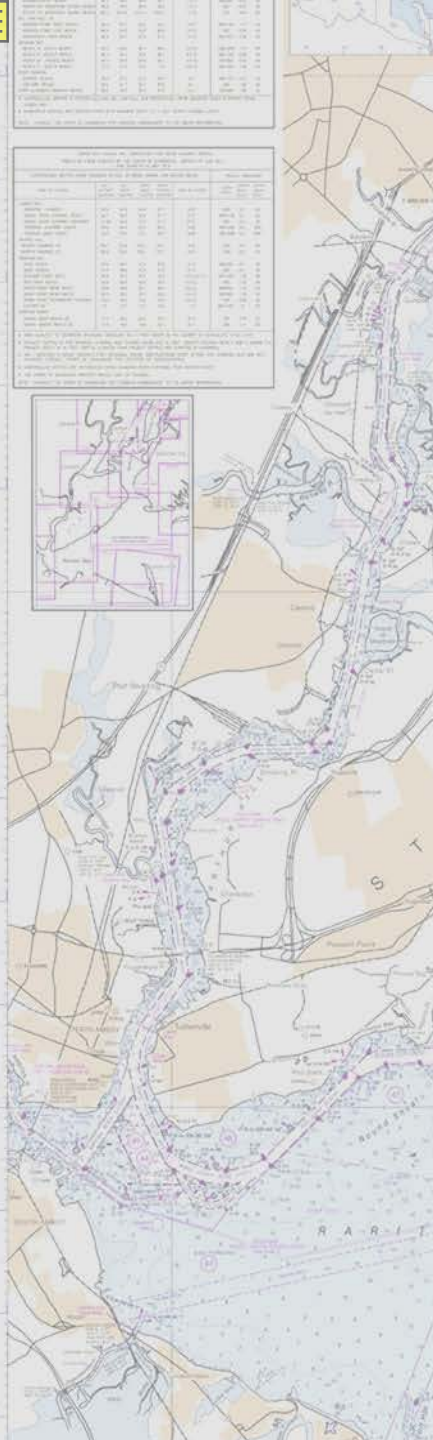
- Hauling boats
- Securing on floating docks
- Securing on fixed docks
- Moorings



Atlantic Highlands Municipal Marina Atlantic Highlands, NJ

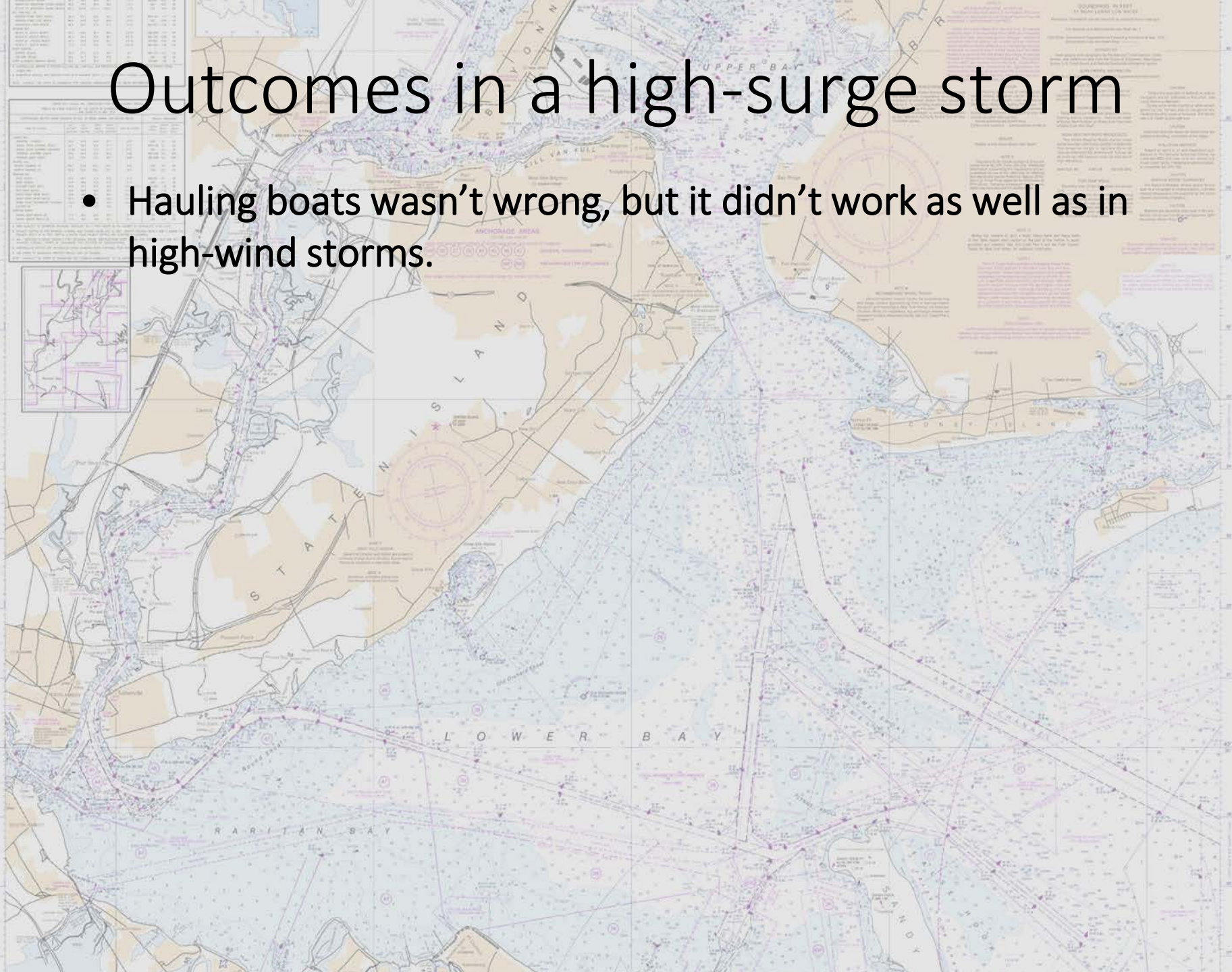


Mansion Marina, Staten Island



Outcomes in a high-surge storm

- Hauling boats wasn't wrong, but it didn't work as well as in high-wind storms.



What worked... and what didn't

- Hauling boats
- Securing on floating docks
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Mansion Marina,
Staten Island



Mansion Marina,

Staten Island



Crescent Beach, Staten Island



Staten Island

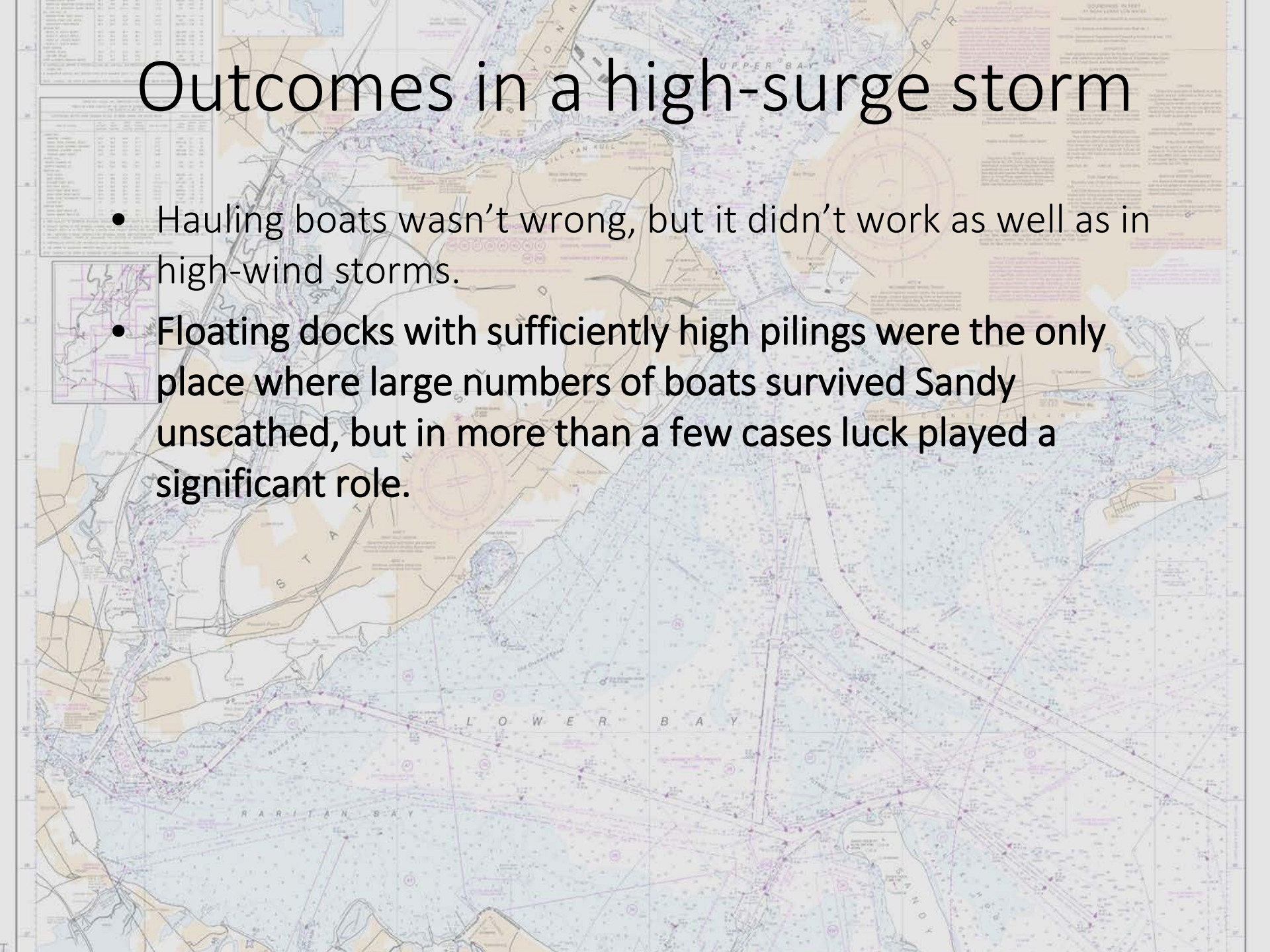


Staten Island Yacht Sales Staten Island



Outcomes in a high-surge storm

- Hauling boats wasn't wrong, but it didn't work as well as in high-wind storms.
- Floating docks with sufficiently high pilings were the only place where large numbers of boats survived Sandy unscathed, but in more than a few cases luck played a significant role.



What worked... and what didn't

- Hauling boats
- Securing on floating docks
- Securing on fixed docks
- Moorings



Piermont Marina
Piermont, NY
Larry Wilson





Piermont Marina
Piermont, NY
Larry Wilson





Diermont Marina

Private residence
Bayville, NJ





Diermont Marina

Good Luck Point Marina
Bayville, NY





Diermont Marina

Nelson Marine Basin
Tom's River, NJ



Outcomes in a high-surge storm

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- A higher percentage of boats survived on fixed docks than in high-wind storms, but where they didn't they were often wrecked completely and recovery was harder than from hardstand areas.

What worked... and what didn't

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- Securing on floating docks
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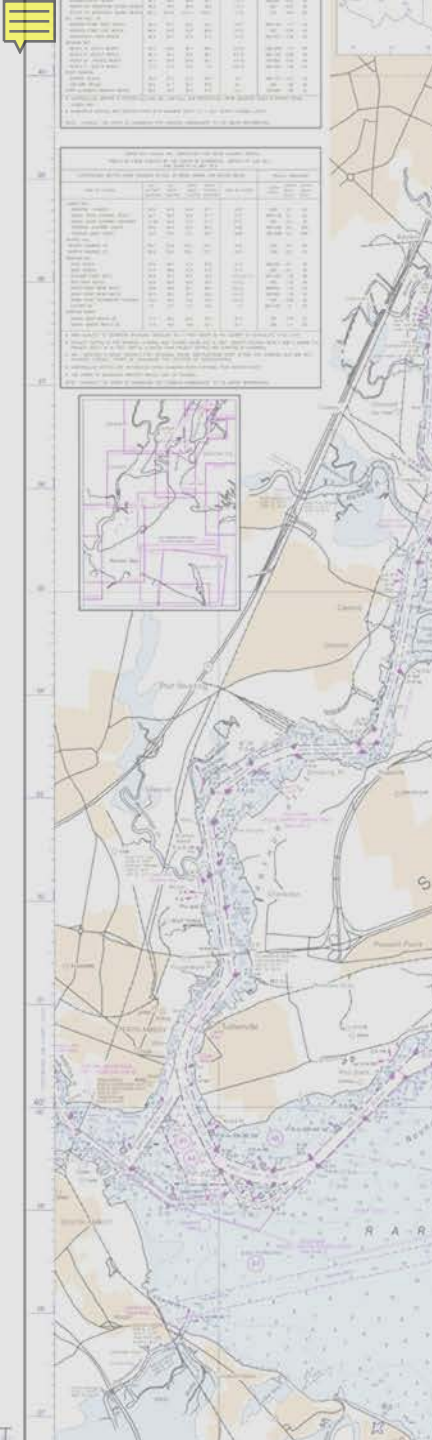
Nyack Boat Club
Larry Wilson





Courtesy Warren Frerichs
Nyack Boat Club





Courtesy Warren Frerichs
Nyack Boat Club



The background of the slide is a detailed nautical chart of the Upper Bay and Raritan Bay area. The map shows various water depths, navigational markers, and landmasses. Labels like 'UPPER BAY' and 'RARITAN BAY' are visible. There are also some smaller text boxes and symbols scattered across the map, typical of a nautical chart.

Outcomes in a high-surge storm

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- Floating docks with sufficiently high pilings were the only place where large numbers of boats survived Sandy unscathed, but in more than a few cases luck played a significant role.
- A higher percentage of boats survived on fixed docks than in high-wind storms, but where they didn't they were often wrecked completely.
- **Moorings offer a viable alternative for keeping boats safe in high-surge storms, but only if ALL moorings in the basin are properly constructed, maintained, and prepared for the actual conditions.**



Limit Damage to Boats



A high-angle photograph of a marina filled with numerous sailboats. The boats are mostly white with various colored accents like blue and red. Their masts and rigging create a complex web of lines against the sky. In the background, a body of water stretches to a distant shoreline with some buildings under a cloudy sky.

Impacts on Recreational Boating

- 65,000 boats damaged or destroyed
- BoatU.S. alone worked at over 500 marinas and boat clubs.
- \$ needed for home repairs, loss of income
- Loss of access and infrastructure
- Great Kills

Two Improvements

A surge model that shows the worst case on an easy to access interface like Google maps.

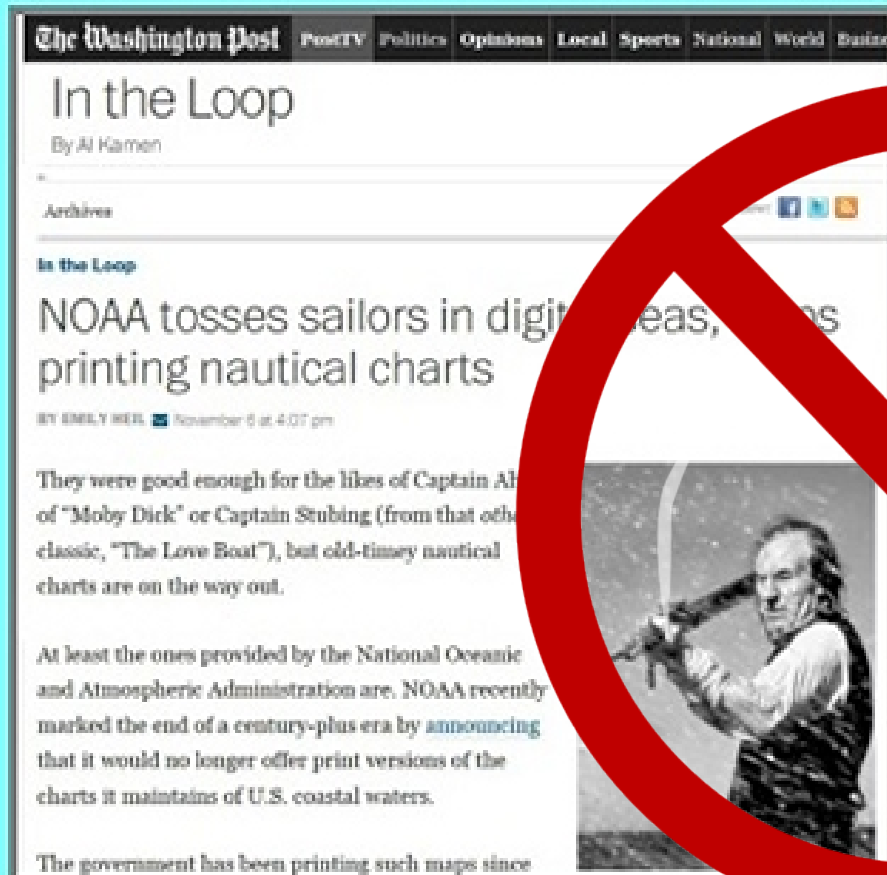
- inundation above ground level not sea level.
- historical data and predictive

Better communicate the warning and risk so that people will understand and do the right thing.

- surge vs. wind
- terminology use of the term “hurricane”

Other Boating Issues

Move to Print On Demand Charts



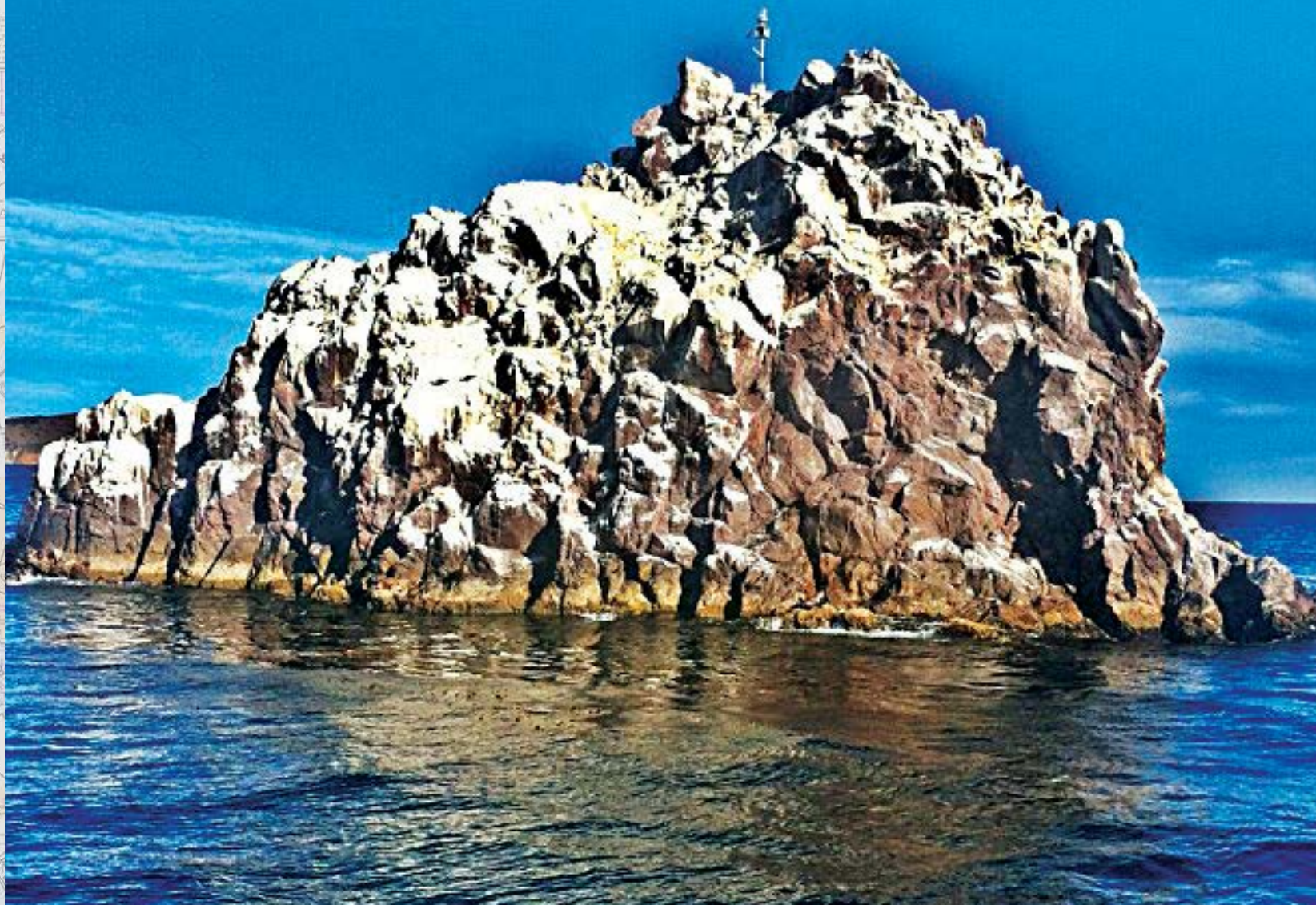
Other Boating Issues

Magenta Line and ICW



Other Boating Issues

Aids to Navigation and Lighting obstacles





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<http://www.boatus.com/hurricanes/>