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
Goals of Hurricane Preparation:
Prevent Loss of Life
Limit Damage to Boats
Limit Damage to Marina Infrastructure
Limit Damage to Other Infrastructure
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. 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=CIZQZEmUZv4&feature=c4-overview&list=UX5uNpKyy9TU6f1tkCYn0L
What Made Sandy Different?

It was NOT a high wind event
What Made Sandy Different?

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
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

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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

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Piermont Marina
Piermont, NY
Larry Wilson
Private residence
Bayville, NJ
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 and recovery was harder than from hardstand areas.
What worked... and what didn’t

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Courtesy Warren Frerichs
Nyack Boat Club
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• 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
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