OHIO SEA GRANT AND STONE LABORATORY

Increasing Marina Resiliency to Coastal Storms in the Great Lakes

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Outline

- Project Overview
 - why coastal storms?
 - ...and marinas?
 - ...and social science?
- Project Methodology and Outreach
 - Great Lakes Clean Marina Network
- Results
 - Current and new tools
- Next Steps





NOAA Coastal Storms Program (CSP)

NOAA Great Lakes Coastal Storms Program FOSTERING COMMUNITY RESILIENCE TO COASTAL HAZARDS



- Federal funding from NOAA
 - Match required by states
- Focused on regions throughout the U.S.

"Development of a Coastal Storms Preparation, Adaptation, and Response Tool for Great Lakes Marinas"



Why focus on coastal storms? Superstorm Sandy – October 2012





Credit: Ohio Sea Grant



Credit: Lisa DeJong, The Plain Dealer



- Estimated cost of more than \$17 million in damages in Great Lakes Region (Coast Guard News, November 2012)
- Coastal communities endured waves of over 20 feet during storm
- Coastal storms most frequent natural disaster from 1980 -2011 (Smith and Katz, 2012)





Why focus on marinas?

A single marina experienced over \$2.7 million in damages from Superstorm Sandy in 2012 (Coast Guard News, November 2012)



Credit: Ohio Sea Grant



Credit: ODNR Office of Coastal Management





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IT'S ABOUT THE **PEOPLE!**

Project Objectives

- Understand local drivers and barriers to behavior change
- Engage stakeholders in discussion around coastal storms impacts in Great Lakes region
- Increase likelihood of stakeholders preparing/adapting/responding properly to coastal hazards



Credit: ODNR Office of Coastal Management





Project Methodology

- Develop a needs assessment utilizing industry, agency, and university input
- Conduct focus groups with marinas in 3 Great Lakes states: OH, PA, WI
- Use focus group data to inform development of tool for Great Lakes marinas
- Disseminate tool and coastal storms education via workshops



Project Methodology

Needs Assessment

- Specific impacts associated with coastal storms
- Current preparedness for coastal storms
- Reasons for lack of preparedness
- Awareness of existing tools
- Sources of information for preparedness and response
- Barriers to meeting needs
- Types of tools desired





Credit: Ohio Sea Grant

Outreach Plan

- Develop specific, local guidance on how to prepare, adapt, and respond in coastal storms situations
- Tool published in print and online
 - Shared with over 200 marinas through Great Lakes Clean Marina Network



Credit: Ohio Lake Erie Commission

 Education on best practices for coastal storms and climate impacts for marinas and boaters

- Preparedness, adaptation, and response
- Shared with Great Lakes marinas through a workshop (and potential webinar) at the end of the project





Great Lakes Clean Marina Network



To ensure the Lakes provide high quality of life, economic prosperity, and environmental quality for current and future generations by increasing participation in Clean Marina efforts by marinas and boaters on the Great Lakes.

• Representatives from private industry, government agencies, universities, and non-profit organizations



Promote environmentally-sound, economically-feasible practices that protect the Great Lakes and benefit the boating industry









Great Lakes Clean Marina Network

- Resources for Great Lakes Marinas
 - Great Lakes Clean Marina Best Management Practices Guide
 - Clean Marina Online Classroom
 - Archived Educational Webinars
 - Great Lakes Clean Marina Map

















Preliminary Results

- Impacts associated with coastal storms
 - Dredging
 - Flooding/debris
 - Abandoned and derelict vessels
 - Lake level changes
 - Structural damage/aging infrastructure
- Current preparedness for coastal storms
 - Have an emergency flood plan, but no plan for storms
- Reasons for lack of preparedness
 - Weather: tend to overestimate, don't believe forecasters
 - Science: not enough scientific information available to convince them to prepare
 - Priorities: other issues take priority & money

"Even if we were told by the weatherman, I doubt we would have believed it because they tend to overestimate." Focus Group Participant

What kind of information is out there scientifically that says "hey this is what's going to happen?" I mean what do we need from that standpoint as far as, coming up with a plan to try and prepare ourselves for those such events?" Focus Group Participant





Preliminary Results

- Awareness of existing tools
 - Little-to-no awareness
- Sources of information for preparedness and response
 - Word of mouth
 - Local organizations (fire department, city council, etc.)
 - NOAA
- Barriers to meeting needs
 - Money
 - Lack of centralized information
- Types of tools desired
 - Case studies
 - Multiple options: webinar/in-person training/workshop
 - Education publications for boaters

THE OHIO STATE UNIVERSITY

"All the resources are great, but if you don't attach funding to it they're just something to read for the most part." Focus Group Participant





- Currently assembling literature review of coastal storms resources (Spring/Summer 2016)
 - Need Great Lakes resources on coastal storms
- Developing outreach materials (Fall 2016)
 - Need assistance in disseminating outreach materials
- Assembling workshops and promoting tool (Winter/Spring 2017)
 - Need subject matter experts to present at workshops/webinars



Thank You!

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FIND OUT MORE

www.ohiocleanmarina.osu.edu www.csc.noaa.gov/csp/greatlakes.html www.glcleanmarina.org

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