

OHIO SEA GRANT AND STONE LABORATORY

Preparing Marinas for the Next Super Storm: Addressing the Social Challenges Posed By Coastal Storms

Sarah A. Orlando¹, Joseph E. Lucente¹, Eric Toman², Alexander Heeren², Emily G. Hutchins²

¹Ohio Sea Grant College Program, 1314 Kinnear Road, Area 100, Columbus, OH

² The Ohio State University, School of Environment and Natural Resources, 316C Kottman Hall, 2021 Coffey Road, Columbus, OH 43210



Outline

- Why coastal storms?
 - and marinas?
 - and social science?
- Project overview and methodology
- Results
- Next steps and ways to get involved

Why focus on coastal storms?

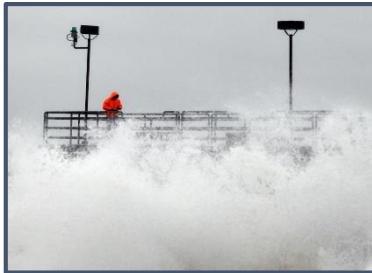
Superstorm Sandy – October 2012



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 (Coast Guard News, November 2012)



Credit: Ohio Sea Grant



Credit: ODNR Office of Coastal Management

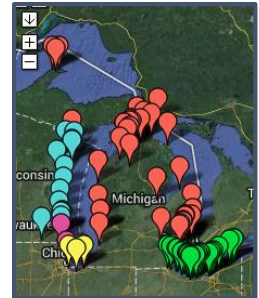
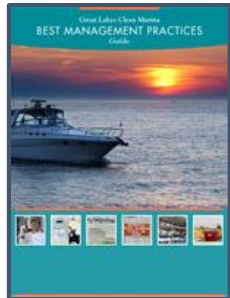


Great Lakes Clean Marina Network



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



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

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

Thank you for participating in this project. This project is funded by The National Oceanic and Atmospheric Administration and is designed to develop a better understanding of conditions and challenges that marina managers are currently facing. There are no right or wrong answers; I am interested in your ideas.

Each of you has valuable information to share and we appreciate your participation with us today. What we hope to accomplish today is to have a discussion about regional coastal storm issues. I have a series of open-ended questions that I will ask to help guide the discussion. While you are welcome to respond to one another, please remember to be respectful in your interactions.

If you agree to participate further, please indicate that you understand the purpose of this research and that you are a willing participant by answering "yes". In order to have a record of this discussion to accompany my notes, I would like to audiotape this discussion. We will remove any personal or identifying information from any transcripts that we produce. Is it okay if I audiotape our discussion? If so, please indicate consent by answering "yes."

For questions about the intent of the research and how information gathered today will be used please contact Eric Toman at (614) 292-7113. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6245.

Opening Questions

1. Let's start with some quick introductions just to everyone knows everyone else. [Facilitator and note-taker introduce themselves]. Let's just start at this end of the table and go around and say your first name, how long they've operated a marina and the typical clientele of their marina?

2. Now that we've talked a little about the types of marinas each other operate, what are some of the biggest challenges you are facing as marina operators?

[Allow a few minutes for general discussion, then if necessary move on to the following questions to target discussion on challenges related to coastal storms]

Outreach Plan



Credit: Ohio Sea Grant

- 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
- 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



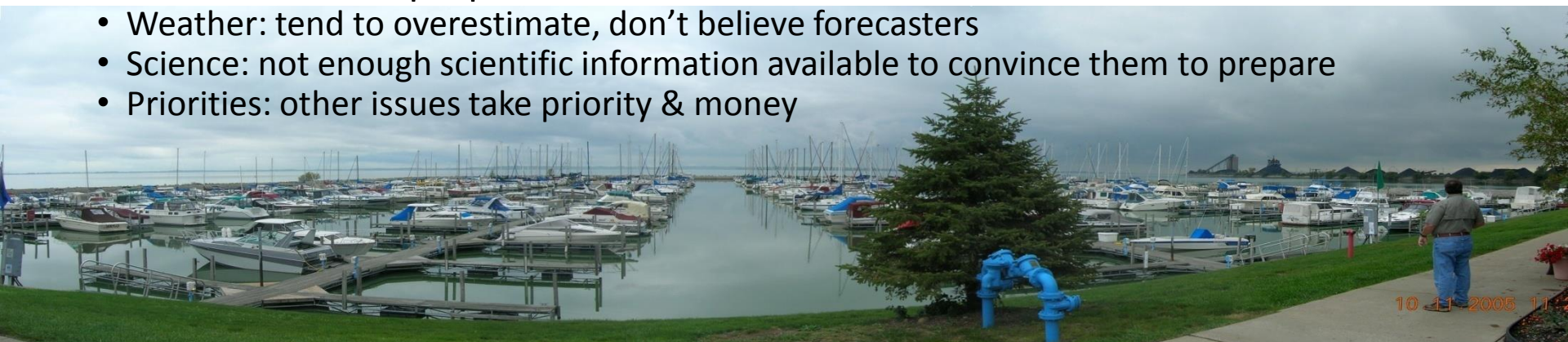
Credit: Ohio Lake Erie Commission

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



Credit: Ohio Sea Grant

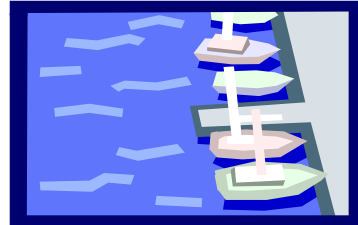


Preliminary Results

- 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



Next Steps and Ways to Get Involved!



- Currently assembling literature review of coastal storms resources (Fall/Winter 2015)
 - Need Great Lakes resources on coastal storms
- Developing outreach materials (Spring 2016)
 - Need assistance in disseminating outreach materials
- Assembling workshops and promoting tool (Summer 2016)
 - Need subject matter experts to present at workshops/webinars

Ohio Clean Marinas Program

OHIO SEA GRANT AND STONE LABORATORY

CONTACT

Sarah Orlando
Ohio Clean Marinas Program
Manager
Ohio Sea Grant
orlando.42@osu.edu
419-609-4120

FIND OUT MORE

www.ohiocleanmarina.osu.edu

www.csc.noaa.gov/csp/greatlakes.html

www.glcleanmarina.org

