Annie Cox

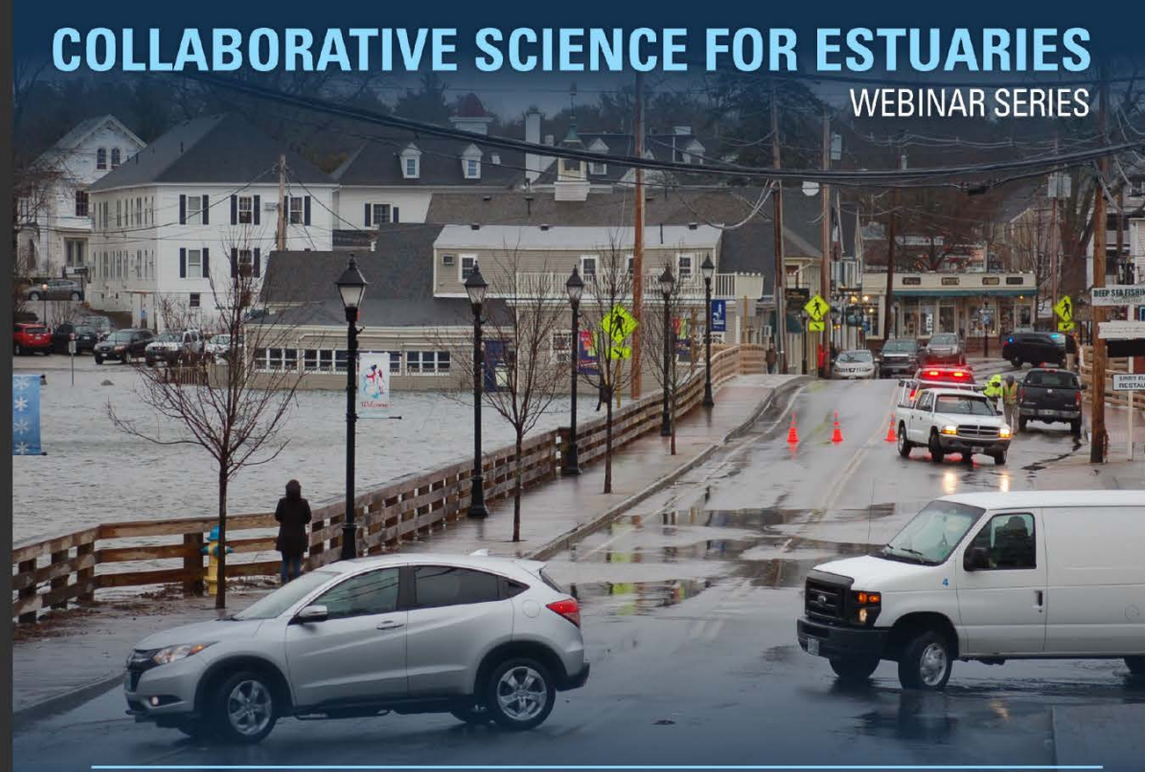
Coastal Training Program Coordinator

Wells National Estuarine Research Reserve

Date: June 21, 2018
Time: 3 – 4 p.m. (Eastern)

National Estuarine Research Reserve System Science Collaborative

COLLABORATIVE SCIENCE FOR ESTUARIES
WEBINAR SERIES



Are small coastal businesses thinking about disaster preparedness?

Summary Points:

Annie Cox is the Coastal Training Program Coordinator at the Wells National Estuarine Research Reserve in Maine. She develops and organizes workshops and trainings for professionals working with and making decisions that affect natural resources in the region.

Annie holds a M.S. in Ecological Design from the Conway School in Easthampton, MA and a B.S. in Biology from the University of Maine at Farmington. She became interested in land use planning issues while teaching sustainable agriculture and aquaculture in rural Zambia during her two years as a Peace Corps volunteer.

Are small coastal businesses thinking about disaster preparedness?

Anne Cox
Wells National Estuarine Research Reserve
NERRS Science Collaborative Webinar Series
June 21, 2018 3:00-4:00 pm EST

Summary Points:

This project sought to help businesses in Kennebunk and Kennebunkport, Maine self-assess their resilience to natural disasters. Annie Cox and the Wells Reserve led the project, which was supported by a Science Transfer grant from National Estuarine Research Reserve System Science Collaborative.

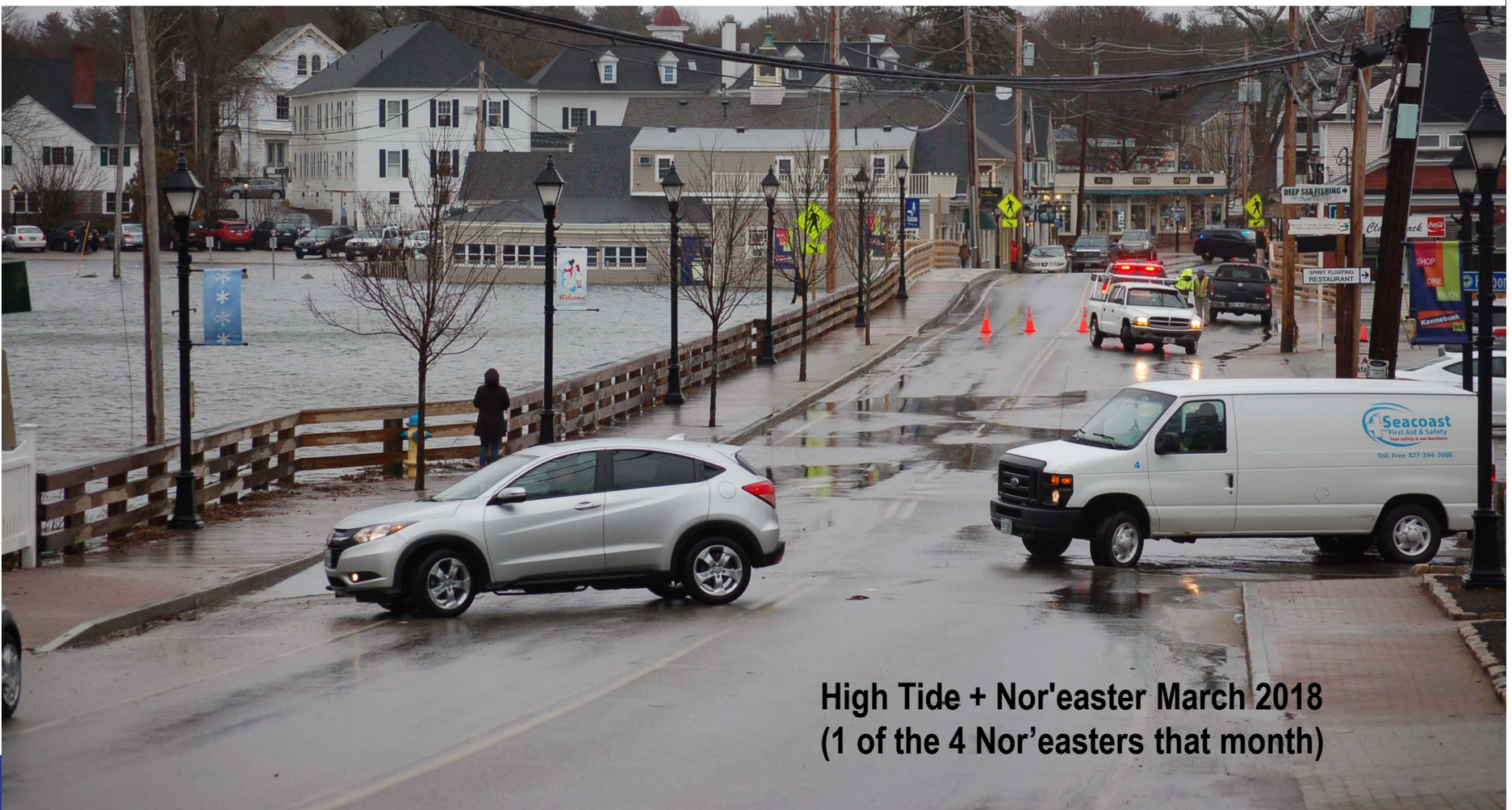
Project Goals:

•Engage business community

•Transfer the Tourism Resilience Index (TRI)

•Use TRI to help businesses assess their ability to maintain operations before, during, and after a natural disaster

•Share findings with business community, climate adaptation professionals



High Tide + Nor'easter March 2018
(1 of the 4 Nor'easters that month)

Summary Points:

The goal of the project was to engage with the business community in Kennebunk and Kennebunkport using the Tourism Resilience Index (TRI) that was developed by Mississippi-Alabama Sea Grant.

The Tourism Resilience Index is a tool that helps businesses assess if they can maintain their operations before, during, and after a natural disaster.

A secondary goal was to engage with the business community in the area so that Annie and the Coastal Training Program at the Wells Reserve could better understand their needs as a target audience.

The Coastal Training Program at the Wells Reserve brings science to the people that make decisions that affect natural resources. Its primary audience is decision makers and prior to this project, the program had not been able to bring in the business audience to participate in much of their programming.

A small walkable downtown lined with shops and restaurants

Summary Points:

Kennebunk and Kennebunkport are two towns in southern, coastal Maine. The Kennebunk River separates them.

Both towns are scenic and quaint but have slightly different socioeconomic characteristics. Kennebunkport is one of the Top 5 wealthiest towns in Maine based on per capita income. Kennebunk is less wealthy, as the 28th wealthiest town in Maine.

Both have large seasonal and tourist populations in May-October. The population in both towns increases by 25% during tourist season.

Both have aging populations and shrinking school enrollments - a problem that all towns in Maine, as the oldest state in the nation, face.

Kennepunkport struggles with providing affordable housing for mid- to low-income residents.

Maine's beaches region is the primary destination for overnight visitors to Maine

Photo credit: David Lounsbury, Flickr Creative Commons

Summary Points:

The project team chose to work with Kennebunk and Kennebunkport on this project because they represent Maine's beaches region, an area where coastal businesses and climate impacts overlap.

The beaches region extends along the southern coast of Maine, from Kittery to Cape Elizabeth, and is popular because it has beautiful, sandy beaches and shops, restaurants, and businesses along the coastline. This makes the region the state's largest economic asset and the biggest draw for tourists of any region in the state.

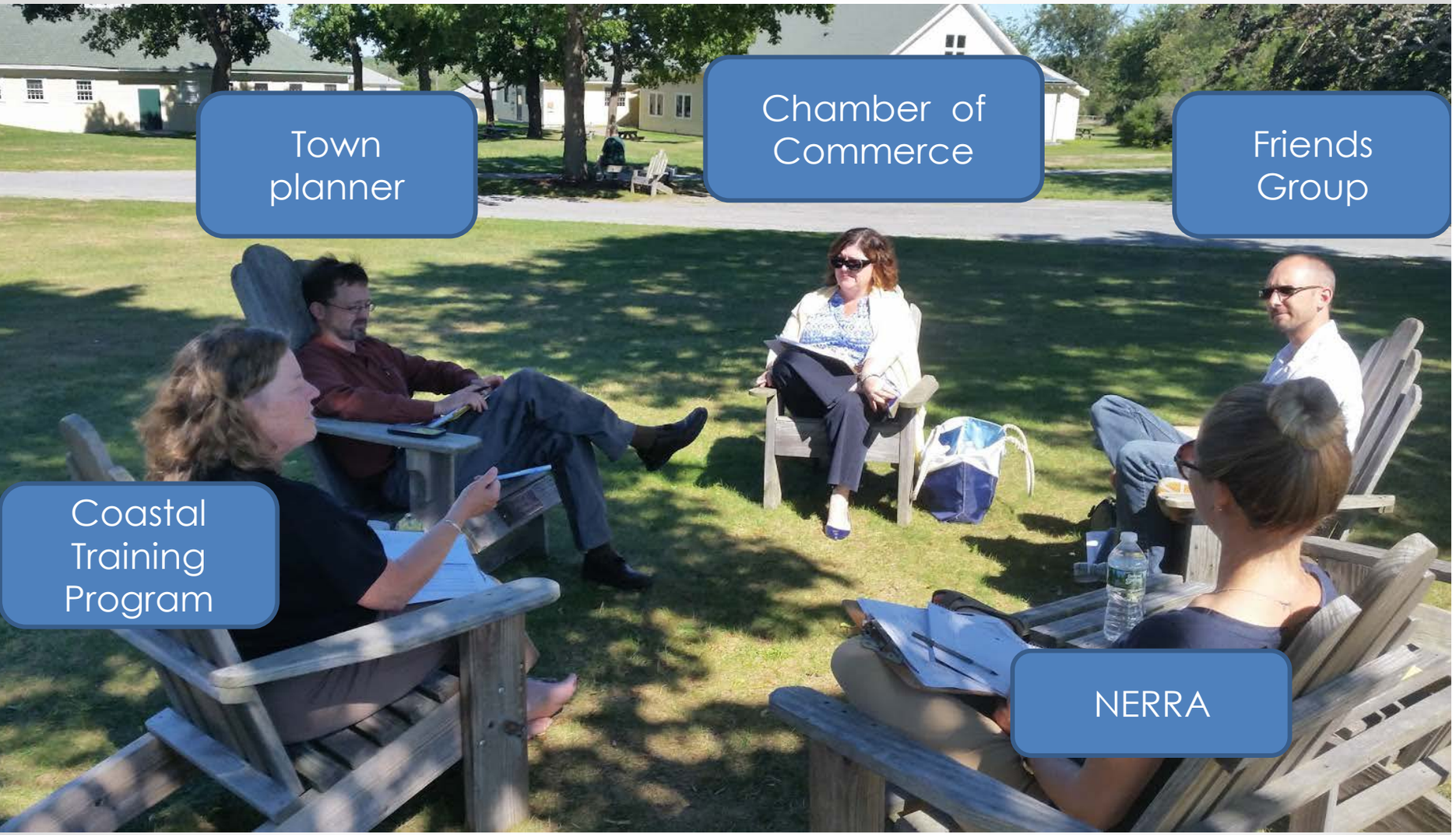
However, its low-lying beaches and coastal businesses make the region particularly vulnerable to sea level rise and extreme weather events, which are becoming increasingly frequent.

". . . significant economic assets in close proximity to a shoreline that will be retreating with sea level rise . . .
Colgan and Merrill 2008

Summary Points:

A 2008 study by Colgan and Merrill at the University of Southern Maine and the New England Finance Center underscores the beaches region's vulnerability. The study specifically identified Kennebunkport as one of the most vulnerable communities to disaster in the state because its economic assets, including jobs, are in close proximity to the Kennebunk River and the ocean.

This study was not front page news and, in fact, the Kennebunkport town planner had not seen it until Annie brought it up to him. This underscored the importance of the project, and the unique role the Coastal Training Program plays in science translation and serving as an intermediary between research and management/decision making.



Summary Points:

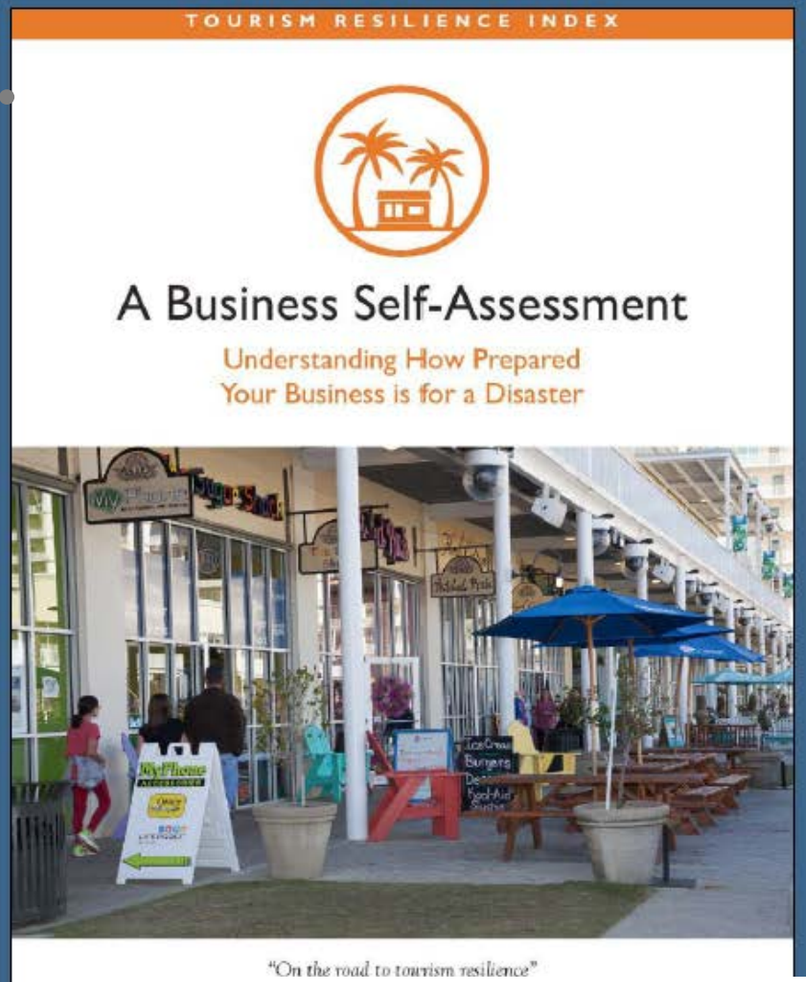
The project team included Kennebunkport's Town Planner, the Kennebunk-Kennebunkport-Arundel Chamber of Commerce, Laudholm Trust, the Wells Reserve, and the National Estuarine Research Reserve Association.

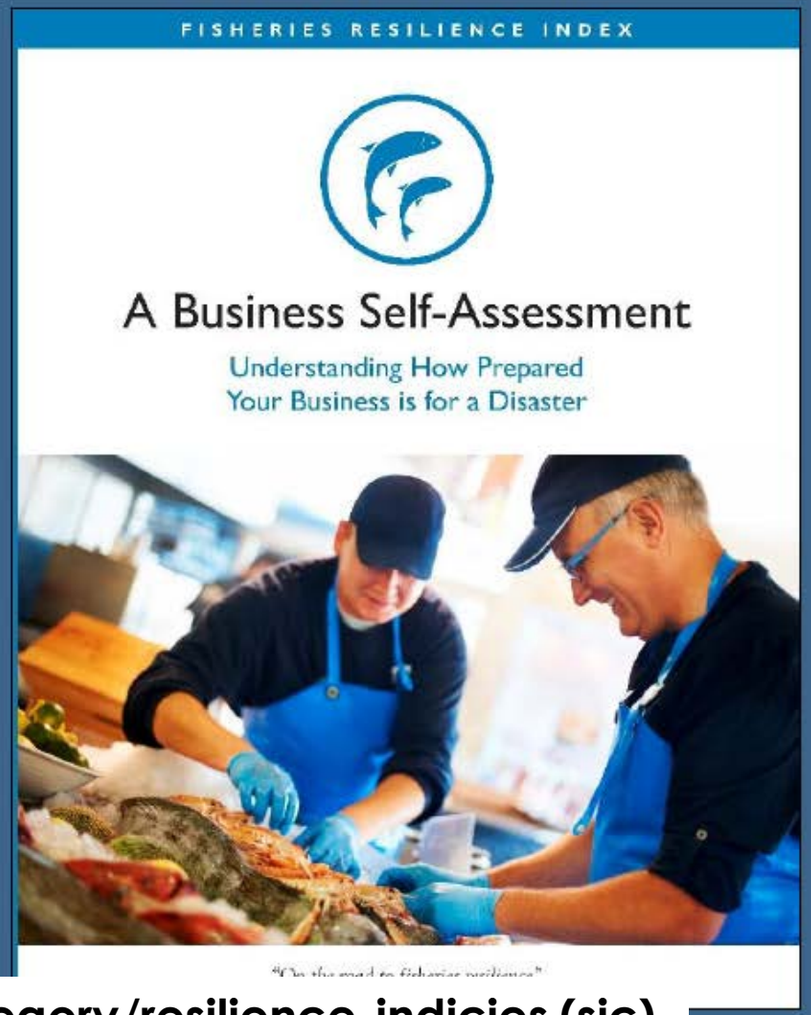
Laudholm Trust, the Wells Reserve's Friends Group who raises money for one-third of the reserve's operating budget, connected Annie with the Chamber of Commerce. The Chamber of Commerce then connected Annie to local businesses.

The meeting pictured here was to develop a list of businesses Annie should interview about resilience. The Town Planner was helpful because he knew which businesses were experiencing flooding, while the Chamber of Commerce Director was helpful in navigating the business landscape and suggesting who might be receptive to participating in the project.

Project end users were small business owners in Kennebunkport and Kennebunk lower village.

Mississippi Alabama Sea Grant developed a series of resilience indices: tourism, fisheries, ports, coastal communities





masgc.org/publications/category/resilience-indicies (sic)

Summary Points:

The project team engaged businesses in using an adapted version of **Mississippi-Alabama Sea Grant's Tourism Resilience Index**, which is a self-assessment tool for small businesses that allows them to develop a tourism resilience score.

wellsreserve at laudholm

A PLACE TO DISCOVER

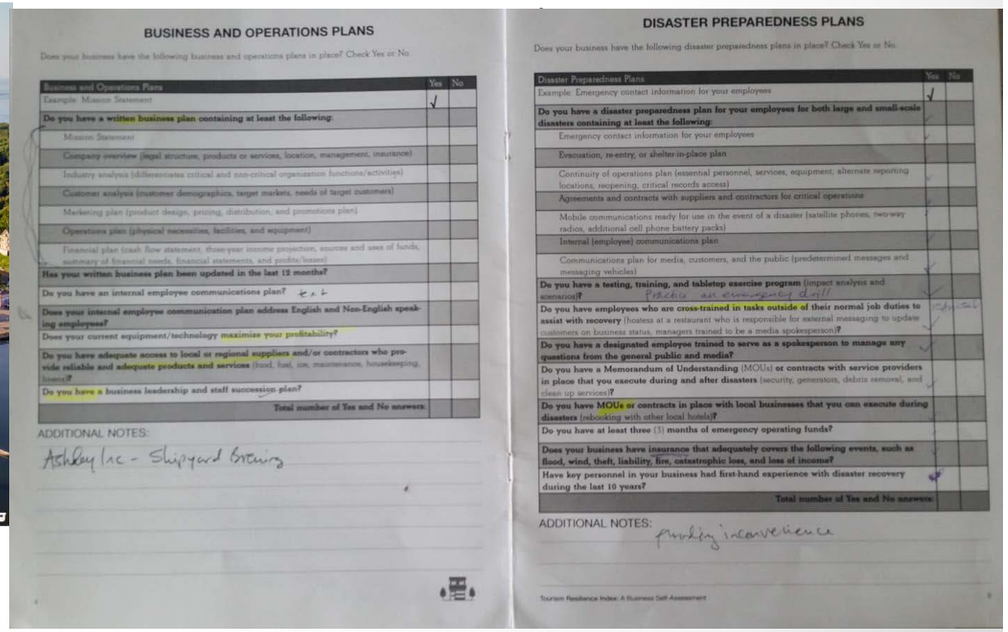
Tourism Resilience Index

A Business Self-Assessment

Asked 40 questions based on their :

- Business and operation plans
- Disaster preparedness plans
- Marketing
- Workforce
- Federal, state and local resources
- Resource access and knowledge

- Provided incentive, waived Chamber fee or provided gift card



BUSINESS AND OPERATIONS PLANS

Does your business have the following business and operations plans in place? Check Yes or No.

Business and Operations Plans	Yes	No
Example: Mission Statement	✓	
Do you have a written business plan containing at least the following:		
Mission Statement		
Company overview (legal structure, products or services, location, management, insurance)		
Industry analysis (differentiates critical and non-critical organization functions/activities)		
Customer analysis (customer demographics, target markets, needs of target customers)		
Marketing plan (product design, pricing, distribution, and promotions plan)		
Operations plan (physical necessities, facilities, and equipment)		
Financial plan (cash flow statement, three-year income projection, sources and uses of funds, summary of financial needs, financial statements, and profits/losses)		
Has your written business plan been updated in the last 12 months?		
Do you have an internal employee communications plan? ex. t		
Does your internal employee communication plan address English and Non-English speaking employees?		
Does your current equipment/technology maximize your profitability?		
Do you have adequate access to local or regional suppliers and/or contractors who provide reliable and adequate products and services (food, fuel, ice, maintenance, housekeeping, linens)?		
Do you have a business leadership and staff succession plan?		
Total number of Yes and No answers:		

ADDITIONAL NOTES:

Ashbey Inc - Shipyard Brewing

DISASTER PREPAREDNESS PLANS

Does your business have the following disaster preparedness plans in place? Check Yes or No.

Disaster Preparedness Plans	Yes	No
Example: Emergency contact information for your employees	✓	
Do you have a disaster preparedness plan for your employees for both large and small-scale disasters containing at least the following:		
Emergency contact information for your employees		
Evacuation, re-entry, or shelter-in-place plan		
Continuity of operations plan (essential personnel, services, equipment, alternate reporting locations, reopening, critical records access)		
Agreements and contracts with suppliers and contractors for critical operations		
Mobile communications ready for use in the event of a disaster (satellite phones, two-way radios, additional cell phone battery packs)		
Internal (employee) communications plan		
Communications plan for media, customers, and the public (predetermined messages and messaging vehicles)		
Do you have a testing, training, and tabletop exercise program (impact analysis and scenarios)?		
Do you have employees who are cross-trained in tasks outside of their normal job duties to assist with recovery (hostess at a restaurant who is responsible for external messaging to update customers on business status, managers trained to be a media spokesperson)?		
Do you have a designated employee trained to serve as a spokesperson to manage any questions from the general public and media?		
Do you have a Memorandum of Understanding (MOUs) **or contracts with service providers in place that you execute during and after disasters** (security, generators, debris removal, and clean up services)?		
Do you have MOUs or contracts in place with local businesses that you can execute during disasters (rebooking with other local hotels)?		
Do you have at least three (3) **months of emergency operating funds?**		
Does your business have insurance that adequately covers the following events, such as flood, wind, theft, liability, fire, catastrophic loss, and loss of income?		
Have key personnel in your business had first-hand experience with disaster recovery during the last 10 years?		
Total number of Yes and No answers:		

ADDITIONAL NOTES:

parking inconvenience

Tourism Resilience Index: A Business Self-Assessment

www.wellsreserve.org/tourismresilience

Summary Points:

The Tourism Resilience Index contains 55 questions across six categories:

- Business and operations plans;
- Disaster and preparedness plans;
- Marketing;
- Workforce;
- Federal/state/local resources; and
- Resource access and knowledge.

Mississippi-Alabama Sea Grant developed the questions with industry leaders and focus groups. The project team used these same questions for their project. However, they adapted the resources at the end of the Index with New England-specific resources.

The project team used their grant money to provide an incentive for businesses that agreed to be interviewed and complete the Tourism Resilience Index. Businesses could elect to receive a Chamber of Commerce fee waiver or a gift card.

Over 30 businesses assessed if they can maintain operations before, during, and after a storm

Summary Points:

To engage businesses, the project team initially visited the towns' business association to let them know about the incentive, sent out an email blast, and made cold calls to businesses they identified as a team. These tactics were not particularly successful.

The project team pivoted and asked the Chamber of Commerce to send an email or text message to businesses notifying them that the project team wanted to talk to them about resilience. This proved succesful. The team interviewed 22 business owners or managers who represented 30 businesses, including shopping and specialty retail, lodging, restaurants, finance and insurance, real estate, ports, and recreation.

Interviews lasted 30-90 minutes, during which time the interviewees completed their questionnaire, calculated their score, and discussed resources available to increase their resilience with the project team.

Interviewees exhibited a range of attitudes about the interview. Some were excited, but others were distrustful and thought that their answers would be used against them. This made it important that interviewees were allowed to keep their index scores and resources book, and the project team only took their notes from the interviews with them.

Reviewing resource section was a way to talk about sea level rise and climate change impacts

Ready: www.ready.gov
A program of the Department of Homeland Security and FEMA, Ready is a national campaign designed to educate and empower Americans to prepare for and respond to emergencies including natural and man-made disasters. The goal of the campaign is to get the public involved and ultimately to increase the level of basic preparedness across the nation.

Ready Business: **www.ready.gov/business**
Ready Business will assist businesses in developing a preparedness program by providing tools to create a plan that addresses the impact of many hazards. This website and its tools utilize an "all hazards approach."

American Red Cross: www.redcross.org
The American Red Cross exists to provide compassionate care to those in need. The Red Cross responds to approximately 70,000 disasters in the United States every year, ranging from home fires that affect a single family to hurricanes that affect tens of thousands, to earthquakes that impact millions. In these events, the Red Cross provides shelter, food, health, and mental health services to help families and entire communities get back on their feet.

US Army Corps of Engineers: www.usace.army.mil
Coastal Risk Reduction and Resilience: Using the Full Array of Measures discusses the U.S. Army Corps of Engineers capability to assist in reducing risks posed to coastal areas and improve resilience to coastal hazards through an integrated planning approach. These include natural or nature-based features (e.g., early warning and evacuation plans), and structural interventions (e.g., seawalls and breakwaters). The document can be found on their Climate Change Adaptation website: **www.corpsclimate.us/ccacrrr.cfm**

New England State Resources:
Websites provided here act as a clearing house and will direct you to state-specific, regional, and federal resources, projects, tools, and trainings.

Maine
- Maine Climate Change Adaptation Toolkit: **maine.gov/dep/sustainability/climate/adaptation-toolkit/index.html**
- Maine Prepares: **maine.gov/mema/prepare/business/index.shtml**

New Hampshire
- New Hampshire Climate Adaptation Workgroup: **www.nhcaw.org**
- New Hampshire Climate Adaptation Toolkit: **des.nh.gov/organization/divisions/air/tsb/tps/climate/toolkit/adaptation.htm**

Vermont
- Flood Ready Vermont: **floodready.vermont.gov**
- Environmental Public Health Tracking of Climate Change: **healthvermont.gov/tracking/enviro_climate.aspx**

Massachusetts
- Massachusetts Energy and Environmental Affairs Climate Action: **www.mass.gov/eea/agencies/massdep/climate-energy/climate**

Rhode Island
- Rhode Island's Climate Challenge: **www.riclimatechange.org**
- Rhode Island Coastal Resource Management Council: **www.beachsamp.org**

Connecticut
- Connecticut Institute for Resilience and Climate Adaptation: **circa.uconn.edu**
- Connecticut Department of Energy and Environmental Protection: **www.ct.gov/deep/cwp/view.asp?a=4423&q=521742&deepNav_GID=2121**
- Connecticut Sea Grant: **web2.uconn.edu/seagrant/index.php**

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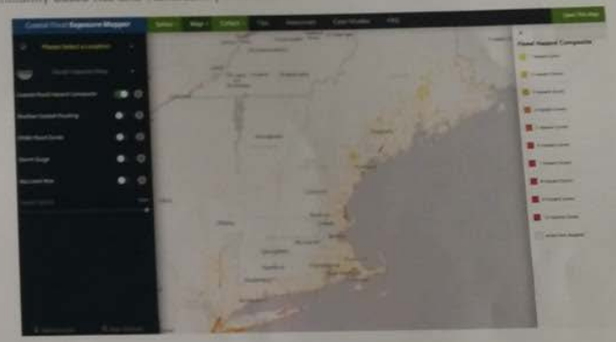
TOOLS

NOAA Office for Coastal Management Digital Coast: coast.noaa.gov/digitalcoast
A website focused on helping communities address coastal issues.

Coastal Flood Exposure Mapper: coast.noaa.gov/digitalcoast/tools/flood-exposure
This tool supports users undertaking a community-based approach to assessing coastal hazard risks and vulnerabilities by providing maps that show people, places, and natural resources exposed to coastal flooding. This product is based on knowledge and experiences the Office for Coastal Management has in community based risk and vulnerability assessments.



TRAINING

National Estuarine Research Reserve Coastal Training Program: coast.noaa.gov/nerrs
The Reserves' Coastal Training Program helps decision makers make informed choices by empowering them to bring relevant science to bear on urgent environmental challenges and works with them to develop solutions. Through a combination of training, professional sharing, and technical assistance, training coordinators at each reserve help planners, municipal officials, natural resource managers, business owners, and many others address a range of issues, including planning for climate change, water conservation, stormwater management, living shorelines, and natural hazard preparedness. The Coastal Training Program serving your area can work with you to develop technical assistance or trainings to address your needs.

NOAA Office for Coastal Management: coast.noaa.gov/digitalcoast/training/home.html
Find scheduled classroom and online trainings, self-guided resources, case studies and more designed for the coastal management community.

FOR MORE INFORMATION:

Annie Cox
Coastal Training Program Coordinator
Wells National Estuarine Research Reserve
(207) 646-1555 ext. 157
acox@wellsnerr.org

Laura Dolce
Executive Director
Kennebunk-Kennebunkport-Arundel Chamber of Commerce
(207) 967-0857 ext. 13
director@gokennebunks.com

Summary Points:

Lessons learned from engaging with businesses:

- Work with a trusted contact(chamber of commerce)
- Have an incentive
- Go to them, or go where they go (business association meetings, chamber meeting)

Summary Points:

Key lessons the project team learned from engaging with the business community:

1. Find a trusted contact to connect you with businesses, such as a Chamber of Commerce.
2. Have some type of way to incentivize businesses to meet with you.
3. Meet businesses on their time and in their space rather than asking them to come to you.
4. Engender trust by allowing businesses to take their index scores and resources book with them with they leave the interview.

Collectively businesses have much experience with disaster response

Nuisance flooding of parking lot, Kennebunkport Oct 2016

Summary Points:

Interviews revealed that collectively, small businesses have a lot of experience with disaster and do think about disasters somewhat frequently. Disasters can include flooding, hail, fire, or even sinkholes in the parking lot.

Few businesses actually have an actionable plan in place that they test annually.

Since businesses have many experiences dealing with and recovering from disasters, they could benefit from sharing their experiences and lessons learned with each other.

Nuisance flooding ? Kennebunkport Jan 2018

Summary Points:

“I had to call the fire department because the water was over the (electrical) outlets and (there was) some smoking and sparking,” Luanne MacDonald, Portland Press Herald, Jan 4, 2018

Summary Points:

This is a business owner standing in ankle-deep water after a major snowstorm in 2018. One adaptation this business used is to place indoor/ outdoor carpeting in the restaurant so that they are more resilient to flooding.

Small Business Best Practices for Disaster Preparedness

Middle Beach, Kennebunk, Maine

Photo credit: InAweofGod'sCreation, Flicker Creative Commons

Summary Points:

After the interviews, the project team took the lessons they learned and combined them with recommendations from a post-Hurricane Sandy assessment and the New England Climate Preparedness Conference Business Panel to develop a list of best practices for disaster preparedness for small businesses. They included:

1. **Diversify your suppliers and contractors**. For example, the Brattelboro Savings Bank was not directly affected by Hurricane Sandy, but the people who managed their servers were affected. This meant the bank went out of service for a week while their providers were trying to recover and get their business operations back online.
2. **Develop a succession plan**. Many business owners have an informal plan in their heads but if they pass away or someone else takes over the business, they may face a steep learning curve.
3. **Develop a continuity of operations plan**. It may be particularly helpful to store hard copies of critical records, payroll information, etc. in a separate location (a theme heard from businesses post-Sandy).
4. **Know what your insurance covers and adjust it annually**. Businesses that have been through a disaster are often surprised to find that their insurance doesn't cover smaller expenses, which can add up quickly.

Summary Points:

Initially, the team hoped that in their interviews, each business would identify one item they would tackle to increase their resiliency (e.g., create a staff succession plan), and the team would check in on the business one year later to see if they had completed it. However, it quickly became apparent that this would not happen over the course of the interviews.

Annie surveyed the businesses after the interviews to see if they found the index helpful, what other information they might need to develop new disaster management strategies, and in what format they wanted the information (e.g., a workshop, one-page document, etc.).

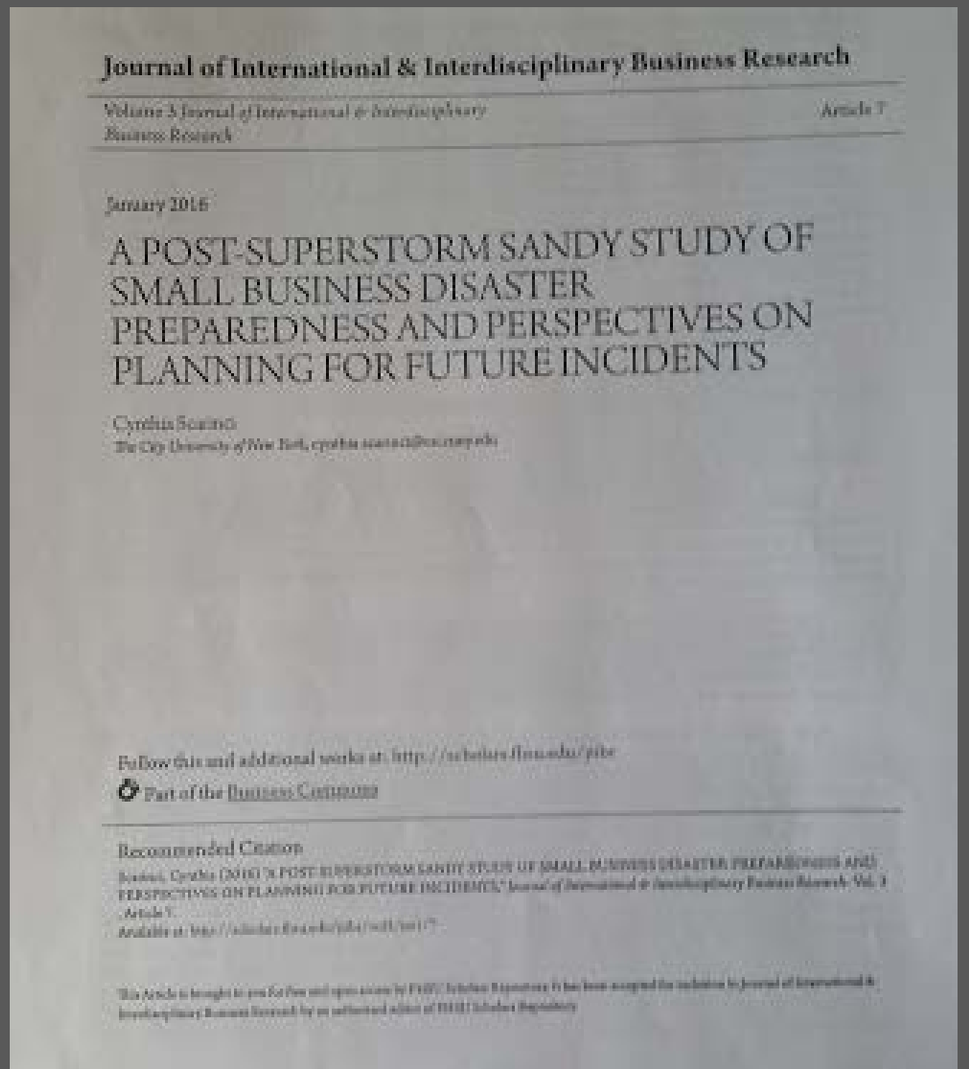
For next steps, the project team is hoping to scale up the project by engaging more stakeholders, such as the state tourism office, towns, local banks, and more Chambers of Commerce. They recognize that having each business draft individual plans may not be practical and that they need to think creatively about how to engage with businesses effectively to promote and increase tourism resilience.

Planning Barriers

Barriers to developing or maintaining disaster preparedness plans (from interviews):

- Time
- Relevance

Scarinci 2016:
58% of survey participants revealed that they still did not have a plan in place after their Sandy experience
Of the 42% with a plan, only 13% were formalized



Journal of International & Interdisciplinary Business Research

Volume 3 Journal of International & Interdisciplinary Business Research — Article 7

January 2016

A POST-SUPERSTORM SANDY STUDY OF SMALL BUSINESS DISASTER PREPAREDNESS AND PERSPECTIVES ON PLANNING FOR FUTURE INCIDENTS

Cynthia Scarinci
The City University of New York, cynthia.scarinci@live.mercy.edu

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Summary Points:

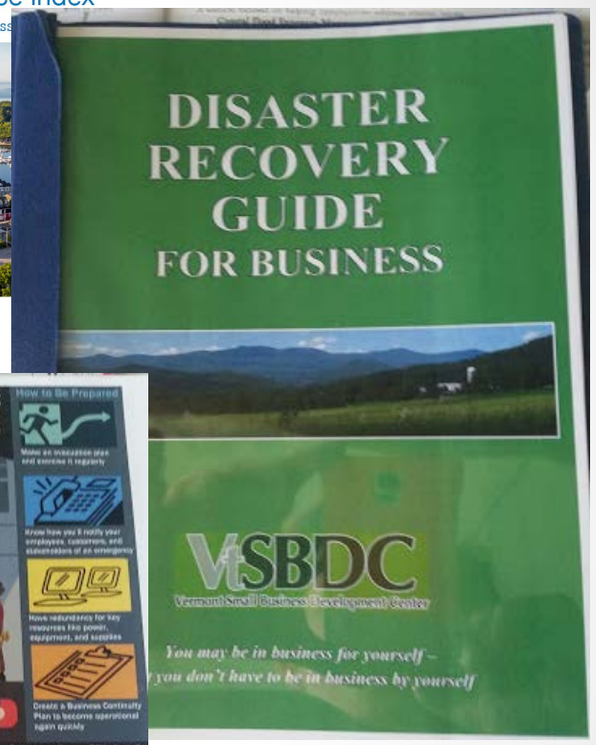
Interviewees most frequently cited time and relevance as barriers to resilience planning. Many said that planning does not seem relevant if you are not worried about a disaster coming. For instance, one interviewee stated that their business had weathered storms for 38 years and that nothing bad had happened yet.

A post-Sandy study looked at businesses after the hurricane to see if the business owners found the disaster to be a learning experience and if it would incite them to take more preparedness planning procedures. Generally, businesses stated that the hurricane would not change their behavior.

The study highlights the psychology of learned helplessness and amnesia, showing that the prevalent mindsets towards small business disaster preparedness are often “If I can survive Sandy, I can survive anything” or “Chances of another Sandy happening are so slim that I’m not going to waste my time preparing for it.”

next steps for anyone

- Start the conversation
- Use existing resources
- Build off previous work
- Work with partners to incentivize action



Summary Points:

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A PLACE TO DISCOVER

Tourism Resilience Index

A Business Self-Assessment

Questions?

acox@wellsnerr.org

wellsreserve.org/

tourismresilience

This work was sponsored by the National Estuarine Research Reserve System Science Collaborative, which supports collaborative research that addresses coastal management problems important to the reserves. The Science Collaborative is funded by the National Oceanic and Atmospheric Administration and managed by the University of Michigan Water Center (NA14NOS4190145).

Questions:

Which aspects of the Tourism Resilience Index were adapted from the Gulf to Maine?
None of the questions were changed or removed, but the project team did change the resources section so that it was applicable for New England.

Have you connected with FEMA or the Small Business Administration about your project or future efforts? They both have a lot of experience with incentivizing hazard preparedness.
Yes. The team has tried to engage Maine's Small Business Administration in an event with the beaches region Chambers of Commerce to share lessons learned about surving disasters, but the workshop ended up not being offered due to low enrollment. Finding a way to work with them differently will be part of the project's next scaling up effort.

Do you find peer-to-peer exchange is challenging among businesses in competition with one another? Does that competition seep into disaster preparedness?
Absolutely, the businesses are competitive, and they are a different audience than the people who the Coastal Training Program typically works with (i.e. managers, decision makers), who love sharing best practices. That being said, the businesses we interviewed often said that when a disaster occurs, the whole community pitches in to help each other. But there is definitely a hesitancy from the businesses to share their mistakes or things that haven't worked well for them with competitors.

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A PLACE TO DISCOVER

Tourism Resilience Index

A Business Self-Assessment

Questions?

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Questions:

Did you get a sense for how much of an incentive small businesses need to develop a continuity plan?
No, our project was only giving businesses an incentive to participate in the interviews. I would direct you to Mississippi-Alabama Sea Grant (http://masgc.org/) with questions about continuity plan incentivization, because they have funding to incentivize actions in the Tourism Resilience Index.

Who has been your most effective partner? Have you discovered new partners who have been helpful in extending your work?
The Chamber of Commerce was our most effective partner, but it was also fun to work with the Volunteer Coordinator at Wells, with whom the Coastal Training Program does not typically cross paths. The project certainly strengthened our partnership with the Kennebunkport Town Planner, who we have worked with on other projects. Next, we would like to work with the Maine Tourism Office, more Chambers of Commerce, and the Small Business Administration to expand the scope of our project.

You said this was an entry point for you in terms of working with local businesses. Did you find this was an effective topic for engaging businesses and building those new relationships?
I think disaster preparedness was an amibitious topic to begin with, since it's a topic that really scares some people. The area has regular high tides with flooding, so some people do lose sleep thinking about it, while others are just used to it.