TOURISM BUSINESS RESILIENCE FOR COASTAL VIRGINIA ASSESSMENT REPORT

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COMMONWEALTH CENTER FOR
RECURRENT FLOODING RESILIENCY

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TOURISM BUSINESS RESILIENCE FOR COASTAL VIRGINIA ASSESSMENT REPORT

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EXECUTIVE SUMMARY

This report summarizes the results of the Tourism Business Resilience Project conducted by the Commonwealth Center for Recurrent Flooding Resiliency and Virginia Sea Grant. This project was a joint effort by faculty and students from the Old Dominion University Resilience Collaborative and the Virginia Coastal Policy Center at the William & Mary Law School.

Researchers interviewed thirty-three participants representing tourism businesses between September 2016 and February 2017.

The project began in the summer of 2016 and concluded in the summer of 2017. Researchers interviewed thirty-three participants representing tourism businesses between September 2016 and February 2017. Fifteen participants represented hotel properties, 11 participants represented restaurants, 4 participants represented retail establishments, and 3 participants represented tourist attractions.

Key Findings and Recommendations:

- The majority of hotel sector participants had strategic, leadership and staff succession, emergency, continuity of operations, and evacuation plans.

- The majority of hotel sector participants had received risk management training.

- The majority of hotel sector participants noted that their employees always had difficulty getting to work during severe weather events.

- Employees of restaurant, retail and attractions

lived closer to the businesses and therefore were able to get to work more easily than hotel employees during severe weather events.

- Hotel sector participants had generators, large fans and other emergency supplies to ensure guest safety and business continuity.

- The majority of restaurant, retail and attraction businesses were independently owned.

- Restaurant, retail and attractions sector participants had fewer emergency plans in place and less risk management and business continuity training than hotel sector participants.

- Restaurant, retail and attractions were primarily concerned with protecting inventory (merchandise, food and beverage) because they do not house tourists and do not have to remain open during severe weather events.

- The City of Virginia Beach has taken steps to increase resilience by conducting beach replenishment and is now developing a Comprehensive Sea Level Rise Plan.

- The City of Virginia Beach has a variety of city codes aimed at protecting the environment and building codes which address flood and wind protection for businesses.

- Recommendations in the report include greater communication between the City and tourism organizations and businesses, as well as increased collaboration between more resilient and less resilient tourism businesses.

- A self-assessment tool for businesses has been developed to assist businesses in determining areas of improvement in resilience planning and provides resources to work towards greater resilience.

- Workshops may be another method to provide assistance in conducting self-assessment, encourage collaboration between businesses and inform business owners and managers of strategies to increase resilience.

INTRODUCTION AND PROJECT BACKGROUND

An increasing number of hazards, disasters and extreme weather events (such as flooding, more severe storms, etc.) highlights the need for businesses to adapt to a changing environment. A significant part of adaptation includes increasing resilience to coastal hazards, disasters, and extreme events. Resilience for businesses is the (1) ability to adequately prepare for both regularly occurring events (such as flooding), and infrequent disasters and extreme events, (2) maintain operations during those events, and (3) resume operations after the events have occurred, which is often referred to as business continuity. Resilient businesses sustain less damage and fewer financial losses.

The focus of this project is on the resilience of the tourism industry in coastal Virginia, and the Virginia Beach Oceanfront businesses were the testbed. The tourism industry has a profound impact in southeastern Virginia. Tourism contributed $1.4 billion to the Virginia Beach economy in 2015, generating 12,924 jobs[1]. The tourism industry is highly vulnerable to recurrent flooding, severe coastal storms and hurricanes due to the infrastructure's proximity to the coast. This project has three parts. First, the project includes an assessment of the level of resilience to coastal hazards of tourism businesses at the Virginia Beach Oceanfront. Second, the project provides a self-assessment tool developed for determining if a tourism business (in Virginia Beach or anywhere throughout Coastal Virginia) is prepared for, and able to maintain operations, during and after coastal hazards, natural disasters, and extreme weather events. Third, the project involves analysis of the legal and policy framework related to tourism resilience in Virginia Beach.

This project was jointly conducted by researchers with the Old Dominion University Resilience Collaborative and the Virginia Coastal Policy Center (VCPC) at the William & Mary Law School. The ODU researchers conducted the resilience assessment components on the project, and the VCPC researchers investigated the public policy aspects of tourism resilience. The project was developed with extensive input from local stakeholders representing both the City of Virginia Beach and the Virginia Beach tourism industry. In February of 2016, ODU researchers began meeting with local stakeholders to (1) explore the need for an assessment of tourism business resilience at the Virginia Beach Oceanfront, (2) determine resilience-related concerns stakeholders may have and questions they would like answered, and (2) identify the best way to conduct the assessment to ensure an adequate representation of different sectors of the tourism industry. The research team met with the director and an emergency planner from the Virginia Beach Office of Emergency Management to discuss the project.

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1. Virginia Beach Convention & Visitors Bureau (2017). "Fact sheet: 2015 Economic impact of tourism." from http://www.visitvirginiabeach.com/about-us/connect/research/.

City staff agreed the project was necessary and expressed their support and willingness to assist in developing the assessment survey. Researchers also met with business stakeholders, including a risk management officer from a local hotel corporation and a restaurant owner who is a member of several professional association boards. Researchers presented the project to the Virginia Beach Resort Advisory Commission's (RAC) Green Committee, which was supportive and eager for the project to begin. The Virginia Beach Hotel Association (VBHA) also provided a letter of support. In July 2016, researchers presented the project at a RAC public meeting to notify business owners and city officials about the project and address any questions. The ODU and VCPC team also met with the director of the Virginia Beach Convention and Visitors Bureau to explain the project and obtain his support. All stakeholders were enthusiastic about, and supportive of, the project.

This report presents the results of our resilience assessment and policy analysis for the City of Virginia Beach. We also discuss the development of a resilience self-assessment tool that businesses across coastal Virginia that utilize to determine their resilience and develop a plan of action for building resilience. A one-page project summary is included as Appendix A.

ASSESSMENT OF RESILIENCE OF TOURISM BUSINESSES AT THE VIRGINIA BEACH OCEANFRONT

Background

In September 2016, the research team obtained a list of hotel managers' and owners' contact information from the VBHA and a list of restaurant owners from the Virginia Beach Restaurant Association (VBRA) and began contacting tourism organizations and businesses to schedule interviews. Other businesses were contacted through the RAC or by directly calling or emailing them. After scheduling the interviews, researchers went to the business locations in Virginia Beach and conducted the interviews through February of 2017.

> The questionnaire was based on the Mississippi/Alabama Sea Grant Tourism Resilience Index (TRI) Self-Assessment[2].

The face-to-face interviews were documented using a Qualtrics online survey-data management system. Researchers also took notes during the interview process to record comments made in addition to the survey questions. Interviews also were digitally recorded to have a complete record of the interview. VCPC provided legal and policy analysis support. VCPC research included internet research, as well as email and phone communications with state and local government employees and employees of business associations.

Survey Instrument: The questionnaire was based on the Mississippi/Alabama Sea Grant Tourism Resilience Index (TRI) Self-Assessment[2]. Additional items were added based on feedback from Virginia Beach tourism stakeholders and Emergency Management to adapt the instrument to the local context. More items focusing on business continuity and recovery were added because the original TRI had a more pronounced focus on disaster preparedness. The survey included open- and close-ended questions organized within five dimensions of business resilience: business planning and operations, vulnerability, preparation and recovery, communications and workforce. Business planning and operations included items related to the size of the business and number of customers as well as strategic planning. Vulnerability addressed the type, frequency and severity of problems the businesses faced, such as flooding and winds. Preparation and recovery addressed planning and tasks participants undertook to ready their business for severe weather events, as well as planning and tasks to get the business open and running after the severe weather had passed. Communications included the ways in which the participants communicated with their staff, guests and the public. Workforce questions related to the level of staffing required by the business and some of the challenges of staffing a business during and after a severe weather event. The survey questionnaire is included as Appendix B.

2. Swann, LaDon, Tracie Sempier, Colette Boehm, Chandra Wright, Jody Thompson. 2015. *Tourism Resilience Index: A Business Self-assessment.* MASGP-15-007-02. Mississippi-Alabama Sea Grant Consortium http://masgc.org/assets/uploads/publications/1142/tourism_resilience_index.pdf

Results

Researchers conducted 33 interviews with business owners and managers in Virginia Beach. Fifteen participants represented hotel properties, 11 participants represented restaurants, 4 participants represented retail establishments, and 3 participants represented tourist attractions (one of the retail businesses was not a business which catered to tourists, however it was a member of a new arts district being developed at the Oceanfront).

Sectors not concerned with housing tourists had different approaches to resilience, mainly because they could tell staff and customers to go elsewhere in the event of a disaster or weather event. Only one attraction required 24/7 staffing in the event of a disaster or weather event because of security concerns and animal husbandry. Their facilities and inventory were the resources requiring protection. Therefore, restaurants, retail and attractions are grouped together for the purposes of this analysis.

In addition to the results discussed in this report, preliminary findings were submitted to the Virginia Beach Office of Emergency Management (VB OEM). The VB OEM was specifically interested in emergency preparedness of the accommodations sector. The report provided to VB OEM summarized the responses of managers and owners in the accommodations sector (in the Virginia Beach Oceanfront area) to the emergency preparedness questions of the survey.

Accommodations

Business Planning and Operations:

Participants from the accommodations sector ranged from independently-owned hotels with less than 50 rooms to international brand hotels owned by local corporations with more than 200 rooms (see *Table 1*). Two participants represented multiple hotel properties. Ten of the fifteen hotel participants had a strategic business plan which included items such as a mission statement, industry analysis, a financial plan and an organizational chart. Ten participants had a leadership and staff succession plan. Ten of the participants said their businesses received support from a parent company, primarily in the form of information or training. Six participants received financial resources from a parent company.

TABLE 1

Number of Respondents by Hotel Size

Size	Number of Rooms	Number of Participants
Small	100 or less	5
Medium	100-200	5
Large	200 or more	3
Multi-Hotel	Multiple small to large facilities	2

Vulnerability: Three participants rated their vulnerability to flooding as high, the other twelve rated their vulnerability as extremely low or neutral. Two participants had experienced flooding of their properties. The wind and rain brought about by Northeasters (coastal storms that occur throughout the year) had posed problems for 13 participants. Specifically, wind-blown rain would seep through roofs, windows and damage ceilings, walls and carpet.

Preparation and Recovery: All but one of the participants or their administrators had experience with disaster recovery in recent years. Several had been through major hurricanes either in Virginia Beach or other places. The participant who had not been through a major disaster had experience with smaller storms and power outages. All participants had been affected by Hurricane Matthew and Tropical Storm Hermine in fall of 2016, but not everyone sustained damage to their facilities during those storms. In terms of disaster preparedness, 11 participants had emergency or disaster preparedness plans and eight had continuity of operations plans (a plan detailing operations during severe weather and procedures for getting the business up and running as soon as possible after the weather threat had passed). Eight participants said they were required to have a continuity of operations plan by either a parent company, their insurance company or some other entity. Six participants had business continuity training, and 12 had received risk management training. Nine participants said they encouraged or required their employees to do disaster preparedness training. Eleven participants had an evacuation or shelter-in-place plan that included staff and guests. Six participants had a re-entry plan or strategy, however, three of these

strategies were informal and not formally written. All participants were members of the VBHA, which was an important local network for them. The VBHA sends out emergency preparedness information they receive from the City to all VBHA members in advance of impending disasters (such as hurricanes). Twelve participants worked with other businesses, including other VBHA members, to maintain continuity of operations. Participants who were part of a local corporation worked with the other hotels in the corporation to maintain continuity. The primary way businesses worked together was to provide rooms to guests if one hotel could not accommodate them during a storm or power outage. Four participants had arrangements with inland hotel properties to assist guests in the event of a disaster.

All accommodations participants said they had basic emergency supplies on site, such as first aid kits, blankets, bottled water and flashlights. Nine participants had generators on site. One participant had just purchased a large generator because of the power outage the hotel had experienced during Hurricane Matthew. Four participants had transportation for guests or staff. Sandbags and flood shields were common storm preparation protection measures and several participants would put up plywood over windows and glass panels; however, most would simply bring equipment inside. One participant said that "constant caulking" helped to keep water out of the facility. Another participant noted that the facility had hurricane curtains. To maintain continuity, thirteen participants had Uninterrupted Power Supply (UPS) battery back-up for their computers and eleven had off-site data back-up. One participant had neither. Other equipment commonly used to maintain continuity included large fans to dry wet areas.

Communications: During storm events, participants communicated with their employees in a variety of ways: in-person meetings, phone calls or texts, and email were the most common. One participant used an intranet system to communicate disaster-preparedness information to employees. Participants communicated emergency planning information with guests by calling them ahead of their visit or during their visit. They also placed letters under guests' doors to alert them about incoming storms or events. Social media was the primary method of communication with the public. All but two participants had two-way radios or access to them, in the event that cell service became unavailable.

Workforce: Twelve participants had enough staff under normal working conditions. The majority of the participants said their employees "always" had a problem getting to work in the case of inclement weather. Three said their employees "almost never" had problems getting to work. Five participants provided resources for their employees to prepare their homes and families for an incoming weather event. All accommodations had to remain open and staffed during a disaster because of the guests (mandatory evacuations in Virginia Beach were extremely rare). Therefore participants would offer hotel rooms for employees to stay to work, if they could not get home, or if their home was not safe.

Restaurants, Retail and Attractions

Business Planning and Operations:
Two participants reported receiving support from a parent company, primarily in the form of information, financial resources and training. A majority of the participants operated businesses that are independently owned and operated. Several restaurant and retail owners had multiple locations in Virginia Beach, but all are owned by the same person or corporation. Six participants had formal strategic business plans. The majority had informal, written or unwritten, strategic plans. Four participants had no strategic plan. Seven participants did not have a business leadership and staff succession plan.

Vulnerability: Three participants said their businesses had high or extremely high vulnerability to flooding, the majority perceived their vulnerability to be low or extremely low. Eight participants had occasional flooding on their property or flooding during major storms. Eleven participants experienced problems from Northeasters when wind-blown rain came in through the roofs or doors, requiring efforts to keep them dry.

Preparation and Recovery: All but one participant had some experience with disaster recovery. Ten participants had an emergency or disaster preparedness plan for their business. Nine had continuity of operations plans, although all those plans were informally written or unwritten (in the owner or manager's head). Four participants had an evacuation or shelter-in-place plan for their business, however three of them were only for staff, and one was for staff and guests. The majority of participants did not have a plan or strategy for re-entry to their business after a disaster. Two participants had informal re-entry strategies. Two participants had received business continuity training.

No participants had received formal risk management training, although four participants had some background or training in risk management in other contexts outside the tourism industry. The majority of participants did not encouraged their employees to do disaster preparedness training. In fact, only two participants had encouraged such training.

All restaurant participants were members of the VBRA. Several retail and attractions participants were members of the RAC, the Hampton Roads Chamber of Commerce, or the VBHA. Some participants belonged to the Virginia Restaurant, Lodging & Travel Association. Seven participants worked with other businesses to maintain continuity of operations. This was primarily in the form of maintaining a relationship with contractors who could assist with recovery. Several restaurant participants had contracts with food distributors who could provide a refrigerated truck to save food if the power was out. Sixteen participants said they had three months of emergency funds either held by the business or personally. One did not have emergency funds. Several participants commented that their personal funds and business funds were one in the same.

Eight participants had generators on site, although they were generally smaller generators than those maintained by the hotels. Thirteen participants had emergency supplies on site. Putting up plywood over windows and sandbagging were the most common ways participants prepared for weather events. Attraction participants put tarps over immovable objects and brought equipment inside. Nine participants had transportation to assist staff in getting to work or home from work. To maintain business continuity, twelve participants had UPS battery backup for their computers and fifteen had off-site data storage. Seven participants had

large coolers to store food (all restaurants) and six participants had large fans to dry wet areas. One participant had no added measures or equipment to ensure business continuity.

Fourteen participants understood the limits of their insurance coverage, but two participants did not. Six participants were concerned about their ability to maintain their insurance coverage in the future. Nine participants said they had not made flood insurance claims in the past three to five years. One participant had made a claim, the other eight provided no answer. Five participants (all restaurants) thought flood insurance premiums had increased, the majority of participants were not able to provide an answer. Eleven participants felt they knew how to obtain information about disaster recovery assistance programs.

Communications: Social media, websites, and signage were the most common methods participants used to communicate with customers and the general public. In terms of communicating with staff regarding impending severe weather, most communicated using text messages or email. Some used phone calls and one participant used a scheduling application. Four participants had two-way radios they could use in the event that cell phone towers went out of service.

Workforce: Fifteen participants had enough staff under normal operating conditions. The majority of participants said their employees had few problems coming to work during severe weather events. One participant said employees always had problems getting in during severe weather, but others reported that their employees' ability to get to work was only sometimes impeded.

Several participants mentioned that employees lived near the business and, therefore, could walk if roads were flooded or impassable. Three businesses provided resources for employees to prepare their own homes and families for severe weather or disasters.

Conclusions

Most accommodations, no matter the size, were vulnerable to similar problems. Wind-driven rain was a constant problem for most businesses (during regularly-occurring northeasters and larger tropical storms) because ceilings, walls and carpets would get damaged and employees would have to close off rooms to guests until they could be dried or repaired. The majority of the hotels had employees who lived in other areas of Hampton Roads or relied on public transportation. As a result, all had employees who had problems getting to work during severe weather events.

Smaller or franchise hotels were less resilient than corporate hotels. They had less formal business planning, as well as less training on risk management and business continuity. Participants also had more informal means of communication with staff than large corporate brand hotels. Larger brand hotels that were part of local corporations were more resilient. These hotels had risk managers within the company, staff and managers received risk management and disaster preparedness training, and they received financial and informational resources from the parent company.

Restaurants, retail businesses and attractions had more of a reactive instead of proactive approach to disaster planning and resilience. Businesses in these sectors were less prepared for disasters and recovery than hotels because most of them were independently owned and had fewer resources.

Therefore, they were more concerned with day-to-day operations as opposed to future disaster planning and maintaining continuity. Owners, managers, and employees in all three sectors had less training on risk management and business continuity than the hotel sector. However, they also did not house tourists. Many of the protections hotels had to take were not necessary for other sectors. Many businesses in these sectors had employees who lived locally, therefore they did not have problems with staff getting to work during severe weather as hotels did. However, many businesses often ceased operations during severe weather or impending disasters, therefore, staffing was not a great concern during those times. For restaurants, the primary concern was protecting food and beverage resources. Many participants managed to do this effectively by having contracts with food distributors that could provide a refrigerated truck. Once power was restored, they could recover their food and beverages and continue operations.

The experience of participants representing all business sectors led them to believe that Virginia Beach had not been severely affected by severe hurricanes or flooding. Virginia Beach rarely receives direct hits from hurricanes (due to geographic position) and much of the rain water flooding is controlled by pumping stations that direct floodwater into the ocean. The recent beach nourishment has also created a larger barrier between the Oceanfront and the ocean, adding to their sense of security. These adaptation measures contributed to the sense of security many participants expressed, especially in their responses to their businesses' vulnerability to flooding. Most participants on the Oceanfront had not had to deal with significant rainwater flooding in several decades since the installation of the pumping stations.

Despite this confidence, some participants did experience damage to their businesses during recent tropical storms, especially Hurricane Matthew, which had not been predicted to affect the area. The failure of a pumping station resulted in the flooding of some homes and cars. These recent events prompted conversations about better planning for some businesses.

All sectors were heavily reliant on insurance. For most participants who did have business continuity plans, the insurance company had provided them with the plans. If businesses did not have plans, many said they could call the insurance company and their agent would direct the participants about the actions they should take. Participants were also confident in the continued existence and availability of insurance. The majority were not concerned about their ability to maintain insurance coverage in the future.

All types of businesses derived significant benefits from their professional associations. Hotels that were a unit of a local corporation relied on other hotels within the corporation, but managers also worked with other member hotels in the VBHA. Smaller hotels and smaller businesses in other sectors relied on long-standing relationships with people in the community, such as family members and friends who were contractors, to help them with clean-up and recovery after severe weather or a disaster. One restaurant participant mentioned that she and a nearby restaurant owner had considered jointly contracting with a food distributor so that they would have priority access to a refrigerated truck during the next power loss. Many Virginia Beach Oceanfront business owners and managers are already well-networked and connected to one another. Their relationships, organizations and networks increase individual business resilience.

SELF-ASSESSMENT TOOL FOR COASTAL VIRGINIA TOURISM BUSINESSES

Background

The assessment of the resilience of tourism businesses at the Virginia Beach Oceanfront provides a basic understanding of businesses' vulnerabilities and the key elements of preparedness and recovery. The in-depth interviews surfaced knowledge important for developing a framework for the state of resilience of the tourism industry. However, the researchers did not interview all businesses in the Virginia Beach Oceanfront, nor did the assessment include other areas in coastal Virginia where resilient tourism businesses are crucial for the local economy.

The ODU research team developed a self-assessment tool to be used by tourism businesses in coastal Virginia.

To expand the project's usefulness and relevance for building resilience, the ODU research team developed a self-assessment tool to be used by tourism businesses in coastal Virginia. This self-assessment tool was intended to be a simple and inexpensive method for businesses to determine if they are prepared for, and able to maintain operations, during and after coastal hazards, natural disasters, and extreme events. Completing the self-assessment would assist tourism businesses in developing actions for building resilience. The self-assessment tool would be made available for tourism business owners and managers throughout coastal Virginia.

Tool Development

The self-assessment was modeled after the Tourism Resilience Index developed by the Mississippi-Alabama Sea Grant Consortium[3].

It also incorporated questions asked during interviews conducted as part of the Virginia Beach Oceanfront resilience assessment. In the resulting self-assessment tool, businesses determine their resilience by answering questions organized into six broad categories:

1. Vulnerability

2. Business planning

3. Disaster preparedness and planning

4. Continuity of operations planning

5. Communication

6. Resources and assistance

Once the self-assessment questions are answered, businesses are asked to identify elements of the self-assessment that they may want to work on over the next year.

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3. Swann, LaDon, Tracie Sempier, Colette Boehm, Chandra Wright, Jody Thompson. 2015. Tourism Resilience Index: A Business Self-assessment. MASGP-15-007-02. Mississippi-Alabama Sea Grant Consortium http://masgc.org/assets/uploads/publications/1142/tourism_resilience_index.pdf

For each category in the self-assessment, the tool also provides suggestions and resources for improving resilience. By completing the self-assessment tool, businesses can determine their resilience, develop a resilience-building plan of action for the next year, and have resources as a starting point for taking action.

The complete 'Business Resilience Self-assessment for Tourism-related Businesses in Coastal Virginia' is provided in Appendix C. An electronic PDF version is also available.

POLICY ANALYSIS

Introduction

VCPC researched the legal and policy framework related to tourism resilience in Virginia Beach. While Virginia Beach does not have a law or policy geared specifically toward tourism resilience, there are a variety of plans and ordinances in place that impact either resilience or tourism.

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The following section summarizes existing plans and ordinances, as well as provides a brief discussion of the use of "gap financing" to encourage economic development.

VCPC researched the legal and policy framework related to tourism resilience in Virginia Beach.

Hampton Roads Hazard Mitigation Plan

A hazard mitigation plan enables a community to identify the risks and vulnerabilities associated with natural disasters and establish a comprehensive approach to reduce the impact of hazards[4]. Under Section 322 of the Disaster Mitigation Act of 2000[5], state and local governments are required to develop a hazard mitigation plan to remain eligible for certain types of non-emergency disaster assistance.

In early 2017, Hampton Roads localities adopted

the Hampton Roads Hazard Mitigation Plan (HMP)[6]. Many of the hazards identified and analyzed in the HMP – such as flooding, sea level rise and land subsidence, tropical/coastal storm, and shoreline erosion – relate to resilience[7]. The HMP includes a Capability Assessment for Virginia Beach that identifies the existence of plans, ordinances, and programs[8]; staff and personnel resources[9]; fiscal resources[10]; and political capability[11].

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4. *See generally,* FEMA, *Hazard Mitigation Planning,* https://www.fema.gov/hazard-mitigation-planning (last visited June 5, 2017).

5. Disaster Mitigation Act of 2000, Pub. L. No. 106-390, 114 Stat. 1552 (2000).

6. Hampton Roads Hazard Mitigation Plan 2017, http://www.hrpdcva.gov/uploads/docs/December%202016%20Draft%20Hampton%20Roads%20 Hazard%20Mitigation%20Plan%20update.pdf [hereinafter HMP].

7. HMP, p. 4:1.

8. HMP, p. 6:3, tab. 6.1.

9. HMP, p. 6:12, tab. 6.4.

10. HMP, p. 6:14, tab. 6.5.

11. HMP, p. 6:16, tab. 6.6.

Additionally, the HMP identifies recent mitigation measures taken in Virginia Beach, including:

- changing the floodplain management ordinance to adopt two feet of freeboard for structures built or substantially improved in flood hazard areas,

- aggressively tackling enforcement issues in the floodplain, and

- recognizing the importance of sand management strategies for maintaining beaches[12].

The HMP Mitigation Strategy identifies both Regional Mitigation Actions and locality-specific Mitigation Actions designed to achieve the mitigation goals and priorities established in the HMP. Virginia Beach Mitigation Actions that could increase the resilience of tourism-related businesses include:

- creating a coalition of business owners, including some who have implemented mitigation actions in the past, to promote the value of hazard protection and help identify and implement retrofit/elevation/acquisition projects in the business community, and

- protecting the Atlantic Ocean and Chesapeake Bay shorelines from storm damage, by continuing to work with the Army Corps of Engineers and other federal agencies to ensure ongoing maintenance of the Hurricane Protection Project[13] and other maintained beaches within the city[14].

Comprehensive Plan

The Comprehensive Plan is a long-range planning tool a locality uses to guide future development in the community. It enables a locality to consider risks such as sea level rise and recurrent flooding and plan for them in the best manner to protect the health, safety, and welfare of its individual and corporate citizens. Virginia localities are required to prepare and adopt a comprehensive plan and review it every five years[15]. Additionally, the Code of Virginia (the "State Code") requires that Tidewater Virginia localities incorporate Virginia Institute of Marine Science guidance on coastal resources management[16] and that Hampton Roads Planning District Commission localities include strategies to combat sea level rise and recurrent flooding in their comprehensive plans[17]. Virginia Beach adopted its current comprehensive plan, *It's Our Future: A Choice City*, in May 2016[18]. The 2016 comprehensive plan discusses sea level rise as a major concern and highlights planning efforts taken at the state, regional, and local levels. Examples of local efforts include beach replenishment projects, floodplain ordinance updates, critical public infrastructure inventories, and the development of a comprehensive sea level rise and recurrent flooding response plan (see description below)[19]. Additionally, the comprehensive plan maintains the "green line", originally established in the City's 1979 comprehensive plan[20]. The green line is part of a growth management strategy that limits development density in the southern part of the City.

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12. HMP, p. 6:21 to :22.

13. The Hurricane Protection Project is discussed in more detail under the "Beach Replenishment" heading.

14. HMP, p. 7:135 to :150.

15. Va. Code Ann. §§ 15.2-2223 (2014) & -2230 (1997).

16. Va. Code Ann. §§ 15.2-2223.2 (2011), 28.2-1100(9) (2011) (stating that such guidance "shall identify preferred options for shoreline management and taking into consideration the resource condition, priority planning, and forecasting of the condition of the Commonwealth's shoreline with respect to projected sea-level rise").

17. Va. Code Ann. § 15.2-2223.3 (2015).

Beach Replenishment

Beach sand replenishment projects serve to protect Virginia Beach's shoreline from erosion. For example, four beach nourishment projects took place from 1998 to 2013 under the Beach Erosion Control and Hurricane Protection Project at Sandbridge Beach. Continued beach profile monitoring assists in determining when the next nourishment may be required[21]. Shoreline management projects of this nature providing flood protection for both public infrastructure and private businesses.

Comprehensive Sea Level Rise Plan

In the fall of 2014, Virginia Beach began the development of its Comprehensive Sea Level Rise and Recurrent Flooding Response Plan. The plan, expected to be complete in 2018, will analyze major Virginia Beach watersheds, determine a timeline to investigate the impacts of sea level rise, determine which potential storm scenarios to study, provide information regarding projected impacts to assets in each watershed, and develop response strategies for each impacted area[22]. This plan may increase tourism resilience, to the extent that the projected impacts and response strategies address the tourism industry.

City Code

Virginia Beach has enacted a variety of local ordinances aimed at protecting the natural environment. While the overarching purpose of such ordinances is to protect, preserve, and/or enhance natural resources, many have the additional benefit of serving to increase the community's resiliency – for both residential and commercial properties.

The Commonwealth's Tidal Wetlands Act, enacted in 1972, established a permitting system for wetlands protection and authorized localities to adopt wetlands zoning ordinances[23]. Virginia Beach adopted a Wetlands Zoning Ordinance[24] to regulate the use and development of wetlands within the City. Similar to the beach replenishment projects, the protection of wetlands provides flood protection for both public infrastructure and private businesses.

The Commonwealth's Coastal Primary Sand Dune and Beach Act (Dune and Beach Act) authorizes Tidewater localities which adopted a wetlands zoning ordinance to also adopt a coastal primary sand dunezoning ordinance[25]. Virginia Beach adopted a Coastal Primary Sand Dune Zoning Ordinance[26] to regulate the use and development of coastal primary sand dunes and beaches within the City.

18. Virginia Beach, *Comprehensive Plan*, https://www.vbgov.com/government/departments/planning/2016ComprehensivePlan/Pages/Comprehensive%20Plan.aspx (last visited June 5, 2017).

19. Virginia Beach Comprehensive Plan, *Environmental Stewardship Framework*, p. 2-54 to -55, https://www.vbgov.com/government/departments/planning/2016ComprehensivePlan/Documents/Section%202.2_%20Environmental%20Stewardship_Final_5.17.16.pdf.

20. *Supra* note 15, at ES-3 to -4, https://www.vbgov.com/government/departments/planning/2016ComprehensivePlan/Documents/ExecSum_Final_5.17.16.pdf.

21. See Virginia Beach, *Sandbridge Beach Replenishment*, https://www.vbgov.com/government/departments/public-works/coastal/Pages/sb-bch-replenish-5-5-17.aspx (last visited June 5, 2017), and United States Army Corps of Engineers, Norfolk District, *Sandbridge Hurricane Protection and Beach Renourishment Project,* http://www.nao.usace.army.mil/About/Projects/SandbridgeHurricaneProtection.aspx (last visited June 5, 2017).

22. Virginia Beach, Coastal, https://www.vbgov.com/government/departments/public-works/coastal/Pages/pw-slr-8-2015.aspx (last visited June 5, 2017).

23. Va. Code Ann. §§ 28.2-1300 et seq.

24. Va. Beach, Va., Code App. A, Art. 14.

25. Va. Code Ann. §§ 28.2-1400 et seq.

26. Va. Beach, Va., Code App. A, Art.16.

As noted with the beach replenishment projects, shoreline management provides flood protection for both public infrastructure and private businesses.

The Commonwealth's Chesapeake Bay Preservation Act (CBPA), enacted in 1988 to enhance water quality while still allowing reasonable development to continue, requires Tidewater localities to adopt a CBPA program[27]. Virginia Beach's Chesapeake Bay Preservation Area Ordinance (CBPAO)[28] designates Chesapeake Bay Preservation Areas including Resource Protection Areas (RPA) and Resource Management Areas (RMA). The RPAs, defined as "lands adjacent to waterbodies with perennial flow which have an intrinsic water quality value"[29], protect and benefit water quality and improper management of the RMAs has the potential to damage water quality[30]. While the purpose of the program is to enhance water quality in the Chesapeake Bay Watershed by protecting environmentally sensitive areas, such protection has the additional benefit of controlling or restricting development in floodplain areas and thus increasing a community's resilience.

Finally, Chapter 6 of the Virginia Beach City Code – *Beaches, Boats, and Waterways*[31] – includes permitting requirements for certain activities that may impact water resources. Section 6-13 requires a permit to alter, or cause to be altered, the contours of sand by removing, grading, or carrying away sand from shores, beaches, dunes, or highlands along dunes. Section 6-136 *et seq*. requires a permit to build, erect, construct, alter, extend, or repair certain structures in waters, adjacent marshlands, and lowlands in the city. Section 151 *et seq*. requires a permit to dredge or conduct any landfill operation or to extend any real estate into waters, marshlands, or lowland in the city. By protecting beaches, dunes, and wetlands, these City Code provisions increase the community's resilience to storm impacts, sea level rise and recurrent flooding.

Building Design and Construction

The Virginia Uniform Statewide Building Code (USBC)[32] sets forth design and construction standards for new construction and building alterations. The Virginia Board of Housing and Community Development adopts and amends the USBC, and enforcement of the USBC is the responsibility of the local government's building inspections department[33]. While the USBC includes many basic requirements to address flood protection, localities may implement more stringent requirements in special flood hazard areas[34] – such as increased freeboard, setbacks, and buffers. Virginia Beach has adopted and incorporated the USBC into City Code[35]. Additionally, Virginia Beach participates in the National Flood Insurance Program and has adopted more stringent requirements for special flood hazard areas through its Floodplain Ordinance[36].

27. Va. Code Ann. §§ 62.1-44.15:67 et seq. "Tidewater" localities are defined within the Act.

28. Va. Beach, Va., Code App. F.

29. Va. Beach, Va., App. F § 102 (2013).

30. Id.; HMP, p. 6:6.

31. *See generally*, Virginia Beach, City Code, https://www.municode.com/library/va/virginia_beach/codes/code_of_ordinances?nodeId=CO_CH6BEBOWA.

32. 13 Va. Admin. Code §§ 5-63-10 to -540.

33. Virginia Department of Housing and Community Development, *Virginia Uniform Statewide Building Code (USBC)*, http://www.dhcd.virginia.gov/index.php/va-building-codes/building-and-fire-codes/regulations/uniform-statewide-building-code-usbc.html (last visited June 5, 2017).

34. 13 Va. Admin. Code § 5-63-20(B) (2014).

35. Va. Beach, Va., Code § 8-26 (1986).

36. Va. Beach, Va., Code App. K.

For example, new construction or substantial improvement of a residential building requires that the lowest floor be elevated a minimum of two feet above base flood level, while commercial buildings have the option of flood proofing instead of meeting the elevation requirement[37].

Tourism Zones and Gap Financing

State Code enables localities to establish tourism zones by ordinance. Localities may grant tax incentives and provide regulatory flexibility within the established zone[38]. The Tourism Development Financing Program, also known as "Gap Financing", permits the locality to dedicate local tax revenues toward projects within the tourism zone[39]. Gap Financing is a two-tiered program for qualified tourism projects in Virginia that compensates for a shortfall in the project's funding. Qualified projects must fill a tourism deficiency, or void, in the established tourism zone. Under the two-tiered system, projects in the amount of $100 million or more receive financing for up to 20% of the total project costs and projects less than $100 million receive financing for up to 30% of the total projects costs[40]. This program takes into account tourism voids identified in local plans[41] but does not consider exposure to sea level rise, recurrent flooding, or other natural hazards[42]; so this is an area where the legislature could amend the program to take these risks into account and thus assist localities in becoming more resilient. Virginia Beach established the Resort Area Tourism Zone by ordinance in 2012.[43] The tourism zone was established in the Resort Strategic Growth Area and in areas identified as needing tourism in the Resort Area Strategic Action Plan[44]. An example of Virginia Beach's use of Gap Funding is the Cavalier Hotel Tourism Project, the purpose of which is to renovate the historic Cavalier Hotel[45].

Communication

The Virginia Beach Strategy, Transparency, Innovation, and Resiliency (STiR) Office website provides information to the public regarding City Council goals, transparency and open data, and resiliency[46]. The website's "resiliency" information notes that the City had adopted "the STAR Community Rating System to evaluate initiations toward local sustainability and resiliency [,]"[47] and

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37. Va. Beach, Va., Code App. K § 4.3(A)&(B) (2015). Base flood level, or base flood elevation, is "[t]he computed elevation to which floodwater is anticipated to rise during the base flood" and is shown on Flood Insurance Rate Maps and flood profiles. FEMA, *Base Flood Elevation*, https://www.fema.gov/base-flood-elevation (last visited June 5, 2017). See, 13 Va. Admin. Code § 5-63-30(K)(4) (2014) (incorporating flood load and flood-resistant construction requirements of the International Building Code and the International Residential Code into the USBC).

38. Va. Code Ann. § 58.1-3851 (2013).

39. Va. Code Ann. § 58.1-3851.1 (2015).

40. *See generally,* Virginia Tourism Corporation, Tourism Development Financing Program, https://www.vatc.org/uploadedFiles/Partnership_Alliance_Marketing/Tourism_Development_Financing_Plan/TDFP2017FullGuidelines.pdf.

41. Virginia Beach, *Tax Incentives*, http://www.visitvirginiabeach.com/about-us/invest/tax-incentives/ (last visited June 5, 2017).

42. Per telephone communication with Virginia Tourism Corporation employee and Tourism Development Financing Program website, https://www.vatc.org/TDFinancingProgram/ (last visited June 5, 2017).

43. Va. Beach, Va., Code §§ 35.4-10 to -11.

44. Virginia Beach, *Resort SGA,* https://www.vbgov.com/government/departments/sga/strategic-growth-areas/Pages/resort.aspx (last visited June 5, 2017).

45. Virginia Resources Authority, *Cavalier Hotel Tourism Project,* https://www.virginiaresources.org/news/article/april/01/2016/cavalier-hotel-tourism-project (last visited June 5, 2017).

46. Virginia Beach, *STiR,* https://www.vbgov.com/government/departments/stir/Pages/default.aspx (last visited June 5, 2017).

47. Virginia Beach, *STiR - Resiliency,* https://www.vbgov.com/government/departments/stir/resiliency/Pages/default.aspx (last visited June 5, 2017).

that "a baseline assessment is underway."[48] The STAR Community Rating System is a framework and certification program for evaluating local sustainability that encompasses economic, environmental, and social performance measures[49]. The website also includes information on two emergency alert applications – the Virginia Department of Emergency Management's "Ready Virginia" app and the City's "VBAlert" system.[50] Although these applications are included under resources for residents, such emergency alert and warning systems are useful for the business community as well.

Case Studies

In addition to evaluating the local and state framework for tourism resilience, VCPC examined resilience initiatives across the country to determine policy recommendations for the Virginia Beach tourism industry. Studying other communities and their strategies for preparing and responding to natural disasters may provide a useful starting point for advising local businesses on improving their resilience.

Florida

Businesses would likely benefit from a regional coalition that brings together a wide range of partners to advocate for and implement preventative climate change measures.[51] In Florida, an example of this type of coalition is the Southeast Florida Regional Climate Change Compact, a collaboration between four counties that succeeded in petitioning the Florida Legislature to designate Adaptation Action Areas[52]. This designation addresses coastal hazards and potential impacts of sea level rise in a specific location by implementing adaptation plans for the area and prioritizing funding for infrastructure development.[53] Identifying areas most threatened by sea level rise provides a legal foundation for counties to prevent land use that would create flood risks to buildings[54]. This Compact allows local governments to spearhead planning efforts for their communities. The annual Climate Leadership Summit that the Compact organizes facilitates relationships and knowledge sharing among representatives from business, academia, government, and the nonprofit community.[55]

48. *Id.*

49. *S*tar Communities, *Our Framework,* http://www.starcommunities.org/about/framework/ (last visited June 5, 2017).

50. Virginia Beach, *STiR – Resiliency – Residents*, https://www.vbgov.com/government/departments/stir/resiliency/Pages/residents.aspx (last visited June 5, 2017).

51. Sea Grant Delaware, *Coastal Delaware Resiliency Cases*, https://www.deseagrant.org/sites/default/files/product-docs/Coastal_DE_Resiliency_Cases_0.pdf (last visited June 4, 2017).

52. Southeast Florida Regional Compact, *Climate Change*, https://southeastfloridaclimatecompact.files.wordpress.com/2014/05/compact-1-page-flyer-ia-final-sa.pdf (last visited June 4, 2017).

53. Florida Institute of Technology, A*daptation Action Areas: Policy Options for Adaptive Planning For Rising Sea Levels* 11 (November 6, 2013), http://research.fit.edu/sealevelriselibrary/documents/doc_mgr/449/SFRPC._2013._Adaption_Action_Areas_Policy_Options_for_SLR.pdf.

54. Sea Grant Delaware, Kirsten Wakefield & Jim Falk, *Coastal Delaware Resiliency Report* 17 (February 2017), https://www.deseagrant.org/sites/default/files/product-docs/Coastal_DE_Resiliency_Report.pdf.

55. Southeast Florida Regional Compact, *2017 9th Annual Summit*, http://www.southeastfloridaclimatecompact.org/the-summit/2017-9th-annual-summit/ (last visited June 4, 2017).

Gulf of Mexico

The Gulf of Mexico Alliance (GOMA) is a non-profit partnership of the five states of Alabama, Florida, Louisiana, Mississippi, and Texas, with the goal of significantly increasing regional collaboration to enhance the ecological and economic vitality of the Gulf of Mexico[56]. The Alliance partners with federal agencies, academic organizations, businesses, and other non-profits in the region[57]. The Business Advisory Council of the Alliance includes two voting members from the tourism industry[58]. GOMA has identified coastal resilience as a priority, and through a grant from NOAA, the coastal resiliency team has awarded funds to several communities which submitted a project proposal addressing a resilience need[59]. For example, the City of Ocean Springs, Mississippi identified the need to develop a business continuity plan[60]. The city will work with the local Chamber of Commerce to identify appropriate standards for these continuity plans and will offer grants to businesses to share the cost of preparation[61]. South Padre Island, Texas identified a need to expand public access to ecotourism attractions, increase public education programming, and set aside low-lying vulnerable lands for conservation[62]. South Padre Island will also use the grant funds to create a Master Plan to identify and protect coastal habitats from sea level rise and storm surge[63]. Rockport, Texas will address a weakness in coordinated, county-wide communication, and plans to develop a multi-jurisdictional Program for Public Information (PPI) plan[64].

Myrtle Beach, South Carolina

Myrtle Beach has taken proactive measures to improve its resiliency. The city hosts an annual Area Business Disaster Recovery Symposium where emergency management officials and business owners meet to discuss how to improve the community's resiliency[65]. Myrtle Beach has also partnered with the National Weather Service to make sure all hotels have special evacuation notifications, and the city has a TV channel that runs in all hotels 24/7 providing information on evacuation[66]. Additionally, Horry County obtained the resources to hire a business continuity staff person that assists businesses in creating these plans[67]. The city's Chamber of Commerce also supported the tourism industry by contracting with the Resiliency Institute to help develop business continuity plans[68]. The Resiliency Institute is a company based in New Orleans, Louisiana that offers business continuity services[69].

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56. Gulf of Mexico Alliance, http://www.gulfofmexicoalliance.org/about-us/organization/ (last visited June 4, 2017).

57. *Id.*

58. Gulf of Mexico Alliance, http://www.gulfofmexicoalliance.org/about-us/alliance-partnerships/business-advisory-council/ (last visited June 4, 2017).

59. Gulf of Mexico Alliance, http://www.gulfofmexicoalliance.org/our-priorities/priority-issue-teams/community-resilience-team/ (last visited June 4, 2017).

60. Gulf of Mexico Alliance, Marian Hanisko, *Regional Coastal Resilience Grant – 2017 Community Projects,* http://www.gulfofmexicoalliance.org/wp-content/uploads/2015/03/RCRG-Community-Projects_for-Press-Release.pdf (last visited June 4, 2017).

61. *Id.*

62. Id.

63. *Id.*

64. Id.

65. Per telephone communication with Myrtle Beach city government official in the Planning Department, JUNE 2017.

66. *Id.*

67. *Id.*

68. *Id.*

69. The Resiliency Institute, *About,* https://www.theresiliencyinstitute.com/about_us/ (last visited June 19, 2017).

Finally, the South Carolina Small Business Chamber of Commerce (SCSBCC) does extensive work on educating coastal small businesses on resiliency, and encouraging community-led planning[70].

Lessons Learned

Strong regional or state partnerships establish lines of communication between communities, which enable the sharing of knowledge regarding resilience efforts. These partnerships allow communities to implement more comprehensive plans than they could individually, which increases the political power of the communities. Bringing together representatives from various sectors promotes finding creative solutions to resilience planning, and facilitates collaboration in the community. Additionally, providing education and support to the tourism industry on business continuity and emergency planning will increase the resilience of the industry. Business owners must develop plans that are tailored to their businesses since they will be the ones implementing these plans[71]. Incentives should be created to encourage businesses to take the time to adequately prepare for coastal emergencies.

Allowing voices from the tourism industry to be heard is essential for creating effective resilience initiatives. Organizational bodies such as the Chamber of Commerce or the regional tourism office should provide more support to local tourism businesses to ensure that they have a seat at the table for resilience planning. Creating regional or state partnerships such as those in Florida and the Gulf of Mexico will enable the tourism industry to recover more quickly from climate change and disasters.

70. South Carolina Small Business Chamber of Commerce, *South Carolina Businesses Acting on Rising Seas (SCBARS.org),* http://scsbc.org/south-carolina-businesses-acting-rising-seas-scbars-org/ (last visited June 15, 2017).

71. Per telephone communication with Resiliency Institute, JUNE 2017.

RECOMMENDATIONS

Based on the information from the policy analysis, it is apparent that Virginia Beach has taken significant steps to incorporate resilience into its local laws and plans. Additionally, plans and incentives exist to promote tourism in the City. However, there is no existing law, plan, or policy that connects the two goals by specifically addressing tourism resilience.

Workshops on planning and business continuity could support businesses in becoming more resilient.

Open communication between City departments tasked with implementation of these laws and plans should be maintained to ensure consistency between the goals of improving resilience and promoting tourism. Additionally, the Commonwealth's Gap Funding program does not take site resilience or vulnerability to flooding into account when selecting economic development projects for funding. Virginia Beach could pursue legislation to amend the program so that state funding efforts are not undermining the City's efforts to channel new development to non-flooding areas.

The results of the policy analysis and the tourism resilience assessment demonstrate that the City of Virginia Beach should focus on increased communication with the tourism industry. The City should encourage businesses to communicate with one another about best practices in preparing for and recovering from natural disasters. Existing networks and organizations, such as the Resort Advisory Commission, the VBHA and the VBRA, could be used to encourage collaboration between more resilient and less resilient businesses. Despite the fact that larger businesses have more resources, smaller businesses and franchises could still learn

from them. Businesses that do not belong to any of the above organizations should be encouraged to join them. The tourism organizations could explore incentives to increase membership or lower barriers for small businesses to join. There are simple ways small business owners could increase their resilience without a large financial commitment. For example, making an emergency preparedness list, having emergency contact information for staff, and partnering with other businesses to purchase equipment or negotiate contracts to maintain continuity are some of the steps they could take.

An additional approach to fostering a more resilient tourism industry is the development of educational outreach materials. Such materials serve to increase the tourism sector's knowledge regarding the importance of resilience and steps the businesses could take to improve their resilience. One way in which Virginia Beach could distribute materials would be by providing the information with business license applications and renewals. The research team has developed a self-assessment tool (similar to the Mississippi/Alabama Sea Grant TRI) for businesses in coastal Virginia. Business owners and managers will have online access to this tool

to evaluate their own level of resilience. For areas in which they are less resilient, web resources and contact information are provided so that business owners and managers have the information needed to improve their resilience. Workshops on planning and business continuity could also support businesses in becoming more resilient. Businesses that are leaders in resilience could work with smaller businesses to improve their planning. Also, business owners from areas recently affected by large disasters, such as New Orleans or New Jersey, could also be a resource by providing helpful information on improving business resilience and continuity.

Appendix A:

One-page Project Summary

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Tourism Resilience Project

The tourism industry has a profound impact in southeastern Virginia. According to the Virginia Beach Convention & Visitors Bureau (2017), tourism contributed $1.4 billion to the Virginia Beach economy in 2015, generating 12,924 jobs and $256 million in salaries. Increasing flooding, extreme precipitation events and the threat of severe coastal storms and hurricanes, highlight the need for business owners to become more resilient. The study assessed the level of resilience of tourism businesses in Virginia Beach to coastal hazards with a goal of using that information to build resilience moving forward.

In early 2016 the research team met with key stakeholders including the Virginia Beach Office of Emergency Management, the Resort Advisory Commission Green Committee, and the Virginia Beach Hotel Association to assess the need and support for the project. The research team from ODU conducted 33 in-person interviews with business owners and managers representing hotels, restaurants, retail establishments and attractions between September 2016 and February 2017. The Virginia Coastal Policy Center (VCPC) at William and Mary provided legal and policy analysis support.

Key findings

➢ Most accommodations, no matter the size, were vulnerable to similar problems. Wind-driven rain from coastal storms was a problem for most hotel properties.
➢ The majority of hotel sector participants had strategic, leadership and staff succession, emergency, continuity of operations, and evacuation plans. Smaller or franchise hotels were less resilient than larger brand hotels. They had less formal business planning, as well as less training on risk management and business continuity.
➢ The majority of the hotels had employees who relied on public transportation. As a result, all had employees who had problems getting to work during severe weather events.
➢ Restaurants, retail businesses and attractions were less prepared for disasters and recovery than hotels because most of them were independently owned and had fewer resources. Owners, managers, and employees in all three sectors had less training on risk management and business continuity than the hotel sector.
➢ All tourism businesses were reliant on insurance and the resources that came with coverage, and most were not concerned about their ability to maintain insurance coverage in the future.
➢ The City of Virginia Beach has taken steps to increase resilience by conducting beach replenishment and is now developing a Comprehensive Sea Level Rise Plan.
➢ The City of Virginia Beach has a variety of city codes aimed at protecting the environment and building codes which address flood and wind protection for businesses.

Recommendations

❖ Greater communication between the City, tourism organizations and businesses.
❖ Increased collaboration between more resilient and less resilient businesses.
❖ Implementation of a self-assessment tool for businesses to assist businesses in determining areas of improvement in resilience planning and provides resources to work towards greater resilience.
❖ Workshops to provide assistance in conducting self-assessment, encourage collaboration between businesses and inform business owners and managers of strategies to increase resilience.

Appendix B:

Tourism Resilience Survey Questionnaire

Q1 Business name _____

Q2 What is the physical address of the business? _____

Q3 What is your phone number? _____

Q4 What is your email address? _____

Q5 Is there any other contact information to provide?
❍ Yes
    Q6 Extra contact info: _____
❍ No

Q7 What type of business are you/what service do you provide?
❍ Accommodations → Go to Q8
❍ Restaurant → Skip to Q11
❍ Attractions → Skip to Q11
❍ Tour/activity provider → Skip to Q11
❍ Retail → Skip to Q11
❍ Other _____ → Skip to Q11

Q8 What is the best way to "count" your guest capacity?
❑ Number of rooms _____
❑ Total guest capacity _____
❑ Number of housing units (i.e. condos) _____
❑ Other _____

Q9 What type of accommodations?
❑ Hotel rooms
❑ Timeshare
❑ Condo/house rental
❑ Other _____

Q10 What amenities are available to your guests?
- ❑ Indoor Pool area
- ❑ Outdoor Pool area
- ❑ Fitness center
- ❑ Tennis courts
- ❑ Business center
- ❑ In-house restaurant
- ❑ Bar
- ❑ Other _____

Q11 Is any part of your facility or business contracted/rented out/managed by another business? (For example: restaurant in a hotel) If so, please explain.
- ❍ Yes _____ → Go to Q12
- ❍ No → Skip to Q14

Q12 Number of seats_____

Q13 What is your occupancy maximum? _____

Q14 What is the square footage of your facility? _____

Q15 How much outdoor space does your business cover? (in square feet, acres, etc.)
_____

Q16 What year was your facility constructed?
_____

Q17 When was your last major renovation (e.g. addition, 50% or more reconstruction)?
_____

Q18 Have you put in place any structural additions to improve building resistance to the elements (i.e., wind, rain, flooding)?
- ❍ Yes
   Q19 Please describe: _____
- ❍ No

Q20 What is the windloading limit of your buildings and structures?
_____

Q21 Do you have large meeting areas that are not surrounded by glass?

❍ Yes

Q22 What is its approximate capacity? _____

❍ No

Q23 How many employees do you have?

Peak full-time

Off-season full-time

Peak part-time

Off-season part-time

Q24 What is your estimated number of customers?

Peak Monthly

Off-season Monthly

Annual

Q25 What is your legal structure?

❍ National Corporate Owned

❍ Local Franchise

❍ Local corporation, cooperative, or partnership

❍ Solely or family owned

❍ Other _____

Q26 Are you part of any of the following networks? (select all that apply) If so, please tell us which ones you belong to.

❑ Local or regional chamber of commerce _____

❑ Local professional industry association _____

❑ Regional or national professional industry association _____

❑ Tourism/destination marketing organization _____

❑ Other _____

Q27 Do you have a strategic plan for your business?

❍ Yes

    Q28 What is the current form of this plan?

        ❍   Unwritten or in your head → Skip to Q30

        ❍   Informally written → Go to Q29

        ❍   Formally prepared Go to Q29

❍ No

Q29 Does your written business plan contain any of the following? Select all that apply.

❑ Mission statement
❑ Company overview
❑ Industry analysis
❑ Customer analysis
❑ Marketing plan
❑ Operations plan
❑ Financial plan
❑ Organizational chart

Q30 Do you have a business leadership and staff succession plan?

❍ Yes
❍ No

Q31 Do you have an emergency or disaster preparedness plan for disasters or weather events?

❍ Yes, for large and small scale disasters or weather events → Go to Q32
❍ Yes, for large scale only → Go to Q32
❍ Yes, for small scale only → Go to Q32
❍ No → Skip to Q33

Q32 Are all of your employees familiar with this emergency plan?

❍ Yes, all employees
❍ Yes, some employees
❍ No

Q33 Do you have a continuity of operations or recovery plan that addresses essential personnel, services, equipment, alternate reporting locations, reopening, and access to critical records?

❍ Yes → Go to Q34
❍ No → Skip to Q37

Q34 Are all of your employees familiar with this continuity of operations or recovery plan?
❍ Yes, all employees
❍ Yes, some employees
❍ No

Q35 What is the current form of this plan?
❍ Unwritten or in your head
❍ Informally written
❍ Formally prepared
    Q36 When was the plan last updated? _____

Q37 Are you required to have a continuity of operations or recovery plan? If yes, by whom or what organization?
❍ Yes _____
❍ No

Q38 Would you be willing to provide a copy of your continuity of operations or recovery plan?
❍ Yes
❍ No

Q39 Do you have at least 3 months of emergency operating funds? If yes, are they personal or held by the business?
❍ Yes _____
❍ No

Q40 Do you have any of the following measures in place for ensuring business continuity and recovery?
❑ Off-site data (contacts, transactions, documents, etc.) storage (physical server or cloud)
❑ UPS- battery power backup for computer equipment
❑ On-site weather proof storage
❑ Water filters/filtration system
❑ Large coolers
❑ Adequate fans to dry wet areas
❑ Other _____

Q41 Do you have a plan for evacuation or sheltering-in-place in the event of disasters or extreme weather events?
❑ Yes, for staff
❑ Yes, for guests
❑ No

Q42 Do you have a plan or strategy for re-entry to your physical location following disasters or extreme weather events? If yes, please describe.

❍ Yes _____

❍ No

Q43 What are some ways you ensure you have access to supplies or services needed for business continuity or recovery? For example, Memoranda of Understanding (MOUs) or contracts with service providers in place that you can execute during and after a disaster, such as debris removal, generator placement, etc.?

_____

Q44 Do you have generators on site?

❍ Yes- Diesel → Go to Q45

❍ Yes- Natural Gas → Go to Q45

❍ No → Skip to Q49

Q45 How many? What are the wattage of them?

Number of generators _____

Wattage _____

Q46 What major systems do the generators support?

❍ HVAC

❍ Alarms

❍ Emergency Lighting

❍ Kitchen

❍ Other _____

Q47 Do you have certified technicians to wire or operate the generators?

❍ Yes

❍ No

Q48 Do you test your generators?

❍ Yes, before each storm

❍ Yes, periodically regardless of use

❍ No

Q49 Do you have emergency supplies on site? (e.g., first aid items, water, blankets, storm supplies, etc.)

❍ Yes

    Q50 Can you describe these supplies and how you use them? For example, do staff know where the supplies are located and can they access the supplies? _____

❍ No

Q51 Do you have transportation to assist staff and customers during disasters or weather events? For example, to get staff home or to work, get people to safety. If yes, please describe.

❍ Yes _____ → Go to Q52

❍ No → Skip to Q54

Q52 Does the transportation have 4x4 or off-road capabilities?

❍ Yes

❍ No

Q53 Do you have a motorized boat or other form of water transportation?

❍ Yes

❍ No

Q54 How do you decide when it is time to prepare for a weather event or disaster?

❍ City of Virginia Beach Alert

❍ Local News Station

❍ My friends and neighbors

❍ Other _____

Q55 How do you prepare your facility for an incoming weather event or disaster? Select all that apply.

❑ Plywood over windows

❑ Flood shields on doors or windows

❑ Tape over windows

❑ Sandbags

❑ Bring equipment inside

❑ Stock up batteries and flashlights

❑ Other _____

❑ Do nothing

Q56 Do you have any alternate preparations specifically for winter weather? Select all that apply.

❑ Plow available/service contract to clear snow from parking lot/walkways
❑ Salt walkways and parking areas
❑ Maintain water drip to prevent frozen pipes
❑ Other _____

Q57 Do you feel you have enough information about the insurance coverage your business should have? If not, please explain what you would want to learn more about.

❍ Yes
❍ No _____

Q58 Are you concerned about your ability to maintain (or obtain) insurance coverage in the future? If yes, please explain.

❍ Yes _____
❍ No

Q59 Do you understand what your insurance coverage includes and does not include?

❍ Yes
❍ No

Q60 Does your business have any of the following insurance? Select all that apply.

❑ Flood → Go to Q61
❑ Wind → Skip to Q63
❑ Fire → Skip to Q63
❑ Catastrophic loss → Skip to Q63
❑ Loss of income → Skip to Q63
❑ No insurance → Skip to Q63
❑ Other _____ → Skip to Q63

Q61 Have your flood insurance premiums changed in the past 3 years?

❍ Yes
❍ No

Q62 Have you made any flood insurance claims in the last 3-5 years?

❍ Yes
❍ No

Q63 Do you know where or how to obtain information about recovery assistance programs? If yes, please explain, e.g. where would you go for information?

❍ Yes _____
❍ No

Q64 How would you rate your organization's vulnerability to flooding?

○ Extremely low
○ Low
○ Neutral
○ High
○ Extremely high

Q65 Is there flooding on your property?

○ Yes, on a regular basis → Go to Q66
○ Yes, occasionally → Go to Q66
○ Yes, during major storms → Go to Q66
○ No → Skip to Q67

Q66 Please explain. Has your business been damaged by flooding? How much damage? How often does it occur?

_____

_____

Q67 Is there flooding on major roads adjacent to your property?

○ Yes

    Q68 Please explain. Which roads? What type of flooding?

    _____

○ No

Q69 How quickly can you dry water-logged areas (due to flooding or wind/rain) enough to resume business?

_____

Q70 Are strong Northeasters' winds a problem for your business? (i.e.- blowing rain inside windows)

○ Yes

    Q71 How do the winds affect your business? _____

○ No

Q72 How do you deal with water-logged areas (from flooding/wind-blown rain)? Select all that apply.

❑ Fans
❑ Open windows/encourage natural air flow
❑ Drainage system to prevent water logging
❑ Mop and bucket/shop-vac
❑ Other _____

Q73 Do you work with other local businesses to maintain continuity of operations during disaster or extreme weather events?

❍ Yes

    Q74 Please elaborate on how you work with other businesses.

    _____

❍ No

Q75 Do you have arrangements with inland businesses (in Chesapeake, Suffolk, Richmond, etc.) to maintain continuity of service during disaster or extreme weather event?

❍ Yes

    Q76 Please elaborate on these arrangements and provide the locations of the inland businesses. _____

❍ No

Q77 Do you get support from a parent company or headquarters for addressing business continuity?

❍ Yes

    Q78 What types of support are provided? Select all that apply.

        ❍ Information

        ❍ Financial Resources

        ❍ Training

        ❍ Other _____

❍ No

Q79 Have you received any training on business continuity?

❍ Yes → Go to Q80

❍ No → Skip to Q82

Q80 What was the source of this training? _____

Q81 Would you recommend the training to other business owners or employees?

❍ Yes

❍ No

Q82 Have you received any training on risk management?

❍ Yes

    Q83 What was the source of this training? _____

❍ No

Q84 How do you communicate with internal employees about issues such as emergency preparedness, inclement weather, potential for evacuation, or continuity of operations?

Before an event _____

During an event _____

After an event _____

In general _____

Q85 How do you communicate with non-English speaking employees?

_____

Q86 How do you communicate with customers/guests/clients about issues such as emergency preparedness, inclement weather, and evacuation?

_____

Q87 What types of mobile communication do you have ready for use in the event of a disaster or weather event? Select all that apply:

❑ Satellite phones

❑ Two-way radios

❑ Additional cell phone battery packs

❑ Other _____

❑ None

Q88 How do you communicate with the public about your operations before, during, and after a weather event or disaster? Select all that apply:

❑ Local news media

❑ Social media

❑ Physical signage

❑ Press release

❑ Designated spokesperson

❑ Predetermined messages via text, voicemail, etc.

❑ Other _____

Q89 What kinds of interaction do you have with the City of Virginia Beach Office of Emergency Management? Select all that apply.

❑ Receive information only

❑ Look for information on the department website

❑ Actively engage with staff

❑ No interactions

❑ Other (please be descriptive) _____

Q90 What kind of information about/from the Office of Emergency Management would benefit you? _____

Q91 Have you identified the appropriate public or private resources to obtain up-to-date disaster information?
❍ Yes

    Q92 What are these resources? (i.e. News, weather service, OEM)
    _____

❍ No

Q93 Have you coordinated your emergency management or disaster-preparedness plan with local officials?
❍ Yes
❍ No

Q94 Do you have enough staff for normal operations under regular working conditions?
❍ Yes
❍ No

Q95 Does your business require 24 hour staffing, even during a weather event?
❍ Yes

    Q96 What is the critical number of employees that must be on-site 24 hours, even during a weather event?
    _____

❍ No

Q97 Have you identified essential personnel who need to remain on-site during and after disasters?
❍ Yes

    Q98 What type of employees are necessary to business continuity during a weather event?
    _____

❍ No

Q99 Have you identified outside volunteers (non-employees) willing to work during and after disasters?
❍ Yes

    Q100 What procedures do you have in place to work with non-employees during disasters or weather events?
    _____

❍ No

Q101 How frequently do employees have problems getting to work during weather events?

❍ Never
❍ Almost never
❍ Sometimes
❍ Most of the time
❍ Always

Q102 Do you have emergency contact information for your employees?

❍ Yes
❍ No

Q103 Do you encourage your employees to participate in emergency or disaster preparedness training?

❍ Yes, verbally → Go to Q104
❍ Yes, with incentives → Go to Q104
❍ No → Skip to Q105

Q104 What types of training do you encourage? _____

Q105 Do you provide resources (information) for your employees to prepare for their personal safety?

❍ Yes
❍ No

Q106 Have any of your organization's leaders had first-hand experience with disaster recovery?

❍ Yes, during the last 20 years
❍ Yes, during the last 10 years
❍ Yes, during the last 5 years
❍ No

Q107 What kind of damage have you sustained from recent storms/tropical storms/hurricanes?

Appendix C:

Business Resilience Self-Assessment for Tourism-related Businesses in Coastal Virginia

Introduction

This self-assessment tool has been developed for tourism industry organizations as a simple and inexpensive method of determining if tourism businesses are prepared for and able to maintain operations during and after coastal hazards, natural disasters, and extreme events. Completing the self-assessment will assist businesses in developing actions for building resilience.

As you complete the self-assessment, you should consider your business' level of preparedness for both large and small-scale events. Being able to withstand and adapt to change has become a focal point for businesses and industries. Resilient businesses recognize the vital role that planning, preparation, and collaboration play in developing and executing an ability to respond to challenges, adapt to changes, and thrive.

The self-assessment is organized into six broad categories: (1) vulnerability, (2) business planning, (3) disaster preparedness and planning, (4) continuity of operations planning, (5) communication, and (6) resources and assistance. This self-assessment is designed to provide an initial indicator of your business' ability to maintain an acceptable level or operations during and after coastal hazards, natural disasters, and extreme weather events. For each category in the self-assessment, we offer suggestions for improving your organization's resilience and include additional resources.

This self-assessment is modeled after the 2015 Tourism Resilience Index developed by industry leaders in the Gulf of Mexico, the National Oceanic and Atmospheric Administration and the Mississippi-Alabama Sea Grant.

Instructions

Below is a sample worksheet similar to what you will see as you complete the self-assessment on the following pages.

Need to address…		Self-assessment (circle your answer)		
☐	**How would you rate your organization's vulnerability to flooding?**	High	Medium	Low
☐	**Is there flooding on your property?**	Yes, on a regular basis	Yes, occasionally or during major storms	No
☐	**Is wind-driven rain a problem for your business?**	Yes		No
☐	**Are strong winds a problem for your business?**	Yes		No
☐	**How frequently do employees have problems getting to work during weather events?**	Most of the time	Sometimes	Never

The first step is to complete the worksheet by circling the answers that apply to your business. Do this for each category of the self-assessment.

Need to address…		Self-assessment (circle your answer)		
☐	**How would you rate your organization's vulnerability to flooding?**	High	(Medium)	Low
☐	**Is there flooding on your property?**	(Yes, on a regular basis)	Yes, occasionally or during major storms	No
☐	**Is wind-driven rain a problem for your business?**	Yes		(No)
☐	**Are strong winds a problem for your business?**	(Yes)		No
☐	**How frequently do employees have problems getting to work during weather events?**	Most of the time	(Sometimes)	Never

Once you have completed all six sections, think about what the self-assessment, as a whole, says about your organization's resilience. Then, go back to the self-assessment worksheets and identify elements that you may want to work on over the next year. Check the 'Need to address' box next to the element(s) you want to address.

Need to address…		Self-assessment (circle your answer)		
☐	**How would you rate your organization's vulnerability to flooding?**	High	(Medium)	Low
☑	**Is there flooding on your property?**	(Yes, on a regular basis)	Yes, occasionally or during major storms	No
☐	**Is wind-driven rain a problem for your business?**	Yes		(No)
☑	**Are strong winds a problem for your business?**	(Yes)		No
☐	**How frequently do employees have problems getting to work during weather events?**	Most of the time	(Sometimes)	Never

Now you have an assessment of your organization's resilience in the face of coastal hazards, natural disasters, and extreme weather events. You also have a resilience-building plan of action for the next year, in addition to resources to help you get started.

Vulnerability

Need to address…		Self-assessment (circle your answer)		
☐	**How would you rate your organization's vulnerability to flooding?**	High	Medium	Low
☐	**Is there flooding on your property?**	Yes, on a regular basis	Yes, occasionally or during major storms	No
☐	**Is wind-driven rain a problem for your business?**	Yes		No
☐	**Are strong winds a problem for your business?**	Yes		No
☐	**Is there flooding on major roads adjacent to your property?**	Yes		No
☐	**Do you have enough staff for normal operations under regular working conditions?**	Yes		No
☐	**Does your business require 24 hour staffing, even during a weather event?**	Yes		No
☐	**How frequently do employees have problems getting to work during weather events?**	Most of the time	Sometimes	Never

> To be resilient, you must understand the risks that threaten your organization and employees, and how vulnerable you are to these risks. In Coastal Virginia, flooding can be a major threat to tourism businesses as well as hurricanes and associated strong winds. Assessment of vulnerability is an important first step to being resilient. You can then focus your efforts on reducing your vulnerability or mitigating the risks and/or impacts.

Don't know your flood risk? **Assess your vulnerability to flooding and sea level rise.**

There are several tools available for assessing your vulnerability to flooding and sea level rise
- Sea Level Rise Viewer - https://coast.noaa.gov/digitalcoast/tools/slr.html
- FEMA Flood Map Service Center - https://msc.fema.gov/portal/
- Climate Central's Surging Seas Risk Zone Map - http://sealevel.climatecentral.org/
- Hurricane Storm Surge Maps from the Virginia Dept. of Emergency Management http://www.vaemergency.gov/prepare-recover/threats/hurricane-storm-surge-maps/

Think more broadly beyond just flooding. **Is your business vulnerable to other hazards that you should plan for?**

You may want to consider hazards such as natural disasters (hurricanes, ice or snow, tornadoes, etc.), man-made disasters (beach closures, transportation breakdowns), and economic challenges (shortage of qualified staff).

- Identify additional possible threats to your visit from this list by the Virginia Dept. of Emergency Management (VDEM) http://www.vaemergency.gov/prepare-recover/threats/
- Use this worksheet from the American Red Cross to assess hazards and vulnerability: http://www.readyrating.org/Resource-Center/Emergency-Planning/hazard-and-vulnerability-assessment
- Use this risk assessment checklist to identify and rate risks that may threaten your organization and employees: http://www.agilityrecovery.com/assets/SBA/riskassmtsba.pdf
- If you want to take the next step, this Risk Assessment Table from Ready.gov helps you list your organization's assets and possible actions to mitigate risks and/or impacts https://www.fema.gov/media-library-data/1389015304392-877968832e918982635147890260624d/Business_RiskAssessmentTable_2014.pdf

Business Planning

Need to address…		Self-assessment (circle your answer)		
☐	**Do you have a strategic plan for your business?**	No	Yes, unwritten or in my head	Informally written or formally prepared
	Does your written business plan contain any of the following?			
☐	Mission statement	No		Yes
☐	Company overview	No		Yes
☐	Industry analysis	No		Yes
☐	Customer analysis	No		Yes
☐	Marketing plan	No		Yes
☐	Operations plan	No		Yes
☐	Financial plan	No		Yes
☐	Organizational chart	No		Yes
☐	**Do you have a business leadership and staff succession plan?**	No		Yes

Strategic business planning provides a road map for your organization. The strategic or business plan generally projects 3-5 years ahead and outlines how the organization will reach its milestones. A well thought out plan also helps you to step-back and think objectively about the key elements of your business and can inform your decision making regarding preparedness and recovery. Succession planning helps your organization develop employees to ensure it has the right talent for key positions. It enhances resilience by helping your organization remain successful even after a disaster or extreme event that may lead to loss of staff.

Need a business plan?
- The Small Business Administration (SBA) Business Plan Tool that provides a step-by-step guide to creating a business plan. (https://www.sba.gov/tools/business-plan/1)
- Business plan worksheets also available from Hal Shelton, author of *The Secrets to Writing a Successful Business Plan.* (https://www.score.org/resource/secrets-writing-successful-business-plan)
- SCORE provides a business plan template as a starting point for drafting a plan for an established business. (https://www.score.org/resource/business-plan-template-established-business)

Need a succession plan?

Here are 5 steps for succession planning (more resources: https://www.albertacanada.com/files/albertacanada/successionplanning.pdf):

1. Create a demographic profile of your employees, including ages, roles, and skills
2. Identify key positions to determine the roles and skills that keep your organization going
3. Build job profiles for the key positions to document required knowledge, skills, and qualities
4. Identify and assess potential candidates to decide who could advance to the key positions
5. Implement employee development plans to create learning and knowledge transfer

Disaster Preparedness

Need to address…		Self-assessment (circle your answer)		
☐	**Do you have a plan for preparing your facility for an incoming weather event or disaster?**	No	General idea of actions to take	Have detailed list of actions to take
☐	**Have you received any training on risk management?**	No		Yes
☐	**Do you have reliable information sources for forecasts and alerts about natural disasters or extreme weather events?**	No		Yes
☐	**Do you know where to find information about local shelters, evacuation procedures, and other needs in the event of extreme weather or a natural disaster?**	No		Yes
☐	**Do you encourage your employees to participate in emergency or disaster preparedness training?**	No		Yes
☐	**Do you have supplies to prepare your facility for a weather event or disaster?**	No		Yes

Disaster preparedness means knowing how your facility, employees, and customers/guests will be able to weather an extreme event or disaster. Disaster preparedness may require upfront planning, training and investment in supplies and equipment. However, failing to prepare can mean millions of dollars in losses and major headache during (and in the wake of) an extreme event or disaster.

General emergency management websites and contacts
- Virginia Department of Emergency Management http://www.vaemergency.gov/
- Virginia Emergency Management Association http://www.vemaweb.org/
- Local Emergency Managers Directory (from the Virginia Department of Emergency Management) https://lemd.vdem.virginia.gov/Public/Default.aspx/
- Local government emergency management contact information and other information http://www.readyhamptonroads.org/communities/

Some quick and easy preparedness actions and information sources:

- Identify your evacuation route (http://www.vaemergency.gov/hurricane-evacuation-zone-lookup http://www.virginiadot.org/travel/hurricane_defauLT.asp
- Identify shelters in your areas (http://www.public.navy.mil/usff/Documents/Emergency_Evacuation_Shelters.pdf)
- Create an emergency supplies kit. Start with this basic list and customize to the needs of your business: https://www.fema.gov/media-library-data/1387572158481-3561e0b74b8da0f6deb4424c9a29bbf6/business_emergency_supplies.pdf. Talk to your employees about what emergency supplies the organization will have, and which ones individuals should consider keeping on hand.
- Sign up for weather or other emergency alerts from your local government (see list of local alerts in Hampton Roads http://www.readyhamptonroads.org/prepare/be_informed/local_alerts/) and/or by following authoritative sources on Twitter (@VDEM @VDEM_Region5 @NWSWakefieldVA @511hamptonroads)
- Download the ReadyVirginia mobile app from http://www.vaemergency.gov/prepare-recover/ready-virginia-mobile-app/

Need a preparedness plan? Here are some sample checklists and templates
- Sample Hurricane Preparedness checklist (http://www2.agilityrecovery.com/assets/SBA/hurricaneprepsba.pdf)
- Sample Winter Weather Preparedness checklist (http://www2.agilityrecovery.com/assets/SBA/wntrweathersba.pdf)
- Sample Flood Preparedness checklist (http://www2.agilityrecovery.com/assets/SBA/floodprepsba.pdf)
- Fillable Business Continuity and Disaster Preparedness Plan from Ready.gov (https://www.fema.gov/media-library/assets/documents/89544)
- Ready.gov provides an Emergency Response Plan template https://www.fema.gov/media-library-data/1388775706419-f977cdebbefcd545dfc7808c3e9385fc/Business_EmergencyResponsePlans_10pg_2014.pdf

Continuity of Operations Planning

Need to address…		Self-assessment (circle your answer)		
☐	**Do you have an emergency or disaster preparedness plan for disasters or weather events?**	No	Yes, for disasters or weather events	Yes, for disasters and weather events
☐	**Are your employees familiar with this emergency plan?**	No or Not applicable	Yes, some employees	Yes, all employees
☐	**Does your business have a continuity of operations or recovery plan?**	No	Yes, unwritten or in my head	Informally written or formally prepared
	Does your continuity of operations or recovery plan address any of the following?			
☐	Essential personnel	No		Yes
☐	Essential services	No		Yes
☐	Essential equipment	No		Yes
☐	Alternate reporting locations	No		Yes
☐	Reopening	No		Yes
☐	Access to critical records	No		Yes
☐	**Are your employees familiar with this continuity of operations or recovery plan?**	No or Not applicable	Yes, some employees	Yes, all employees
☐	**Do you have at least 3 months of emergency operating funds?**	No		Yes
☐	**Do you have a plan for evacuation or sheltering-in-place in the event of disasters or extreme weather events?**	No	Yes, for staff	Yes, for staff and customers
☐	**Do you have a plan/strategy for re-entry to your physical location following disasters or extreme weather events?**	No		Yes
☐	**Do you have agreements in place with service providers that you can execute during and after a disaster? (such as debris removal, generator placement, etc.?)**	No		Yes

☐	**Do you have generators on site?**	No		Yes
☐	**Do you have emergency supplies on site?**	No		Yes
☐	**Do you have transportation to assist staff and customers during disasters or weather events?**	No	Yes, for staff	Yes, for staff and customers
☐	**Have you received any training on business continuity?**	No		Yes

Continuity and recovery planning plays an important role in ensuring your business can still operate during and after an extreme event, disaster, or other serious disruption. Business disruption costs money – lost revenues and extra expenses mean reduced profits. Having a plan and being able to put it into immediate action can mean the difference between staying open and shutting down for a few days (or even weeks and months). Up to 40% of businesses affected by disasters never re-open (Source: Insurance Information Institute).

Four steps to develop a business continuity plan
(https://www.ready.gov/business/implementation/continuity)
1. Conduct a business impact analysis to identify time-sensitive, critical business functions and processes, and the resources that support them (https://www.fema.gov/media-library-data/1388776348838-b548b013b1cfc61fa92fc4332b615e05/Business_ImpactAnalysis_Worksheet_2014.pdf)
2. Identify and document resource requirements, determine gaps between recovery requirements and existing capabilities, select appropriate recovery strategies, and implement these strategies. Strategies may involve contracting with third parties, entering into partnership or reciprocal agreements, or displacing other business activities.
3. Organize a business continuity team and compile a business continuity plan to manage a business disruption. Consider using the business continuity plan template from Ready.gov (https://www.fema.gov/media-library-data/1389019980859-b64364cba1442b96dc4f4ad675f552e4/Business_ContinuityPlan_2014.pdf)
4. Conduct training for the business continuity team and testing and exercises to evaluate recovery strategies and the plan (https://www.ready.gov/business/implementation/training, https://www.ready.gov/business/testing).

Get started on continuity of operations and recovery planning for your business.

- This SBA checklist provides a **comprehensive outline of the disaster recovery process** (http://www.agilityrecovery.com/assets/SBA/recoversba.pdf)
- **Need help developing a continuity of operations or recovery plan?** The U.S. Department of Homeland Security provides a six-part video series on business continuity (https://www.ready.gov/business-continuity-planning-suite)
- **Identify your critical business functions** using worksheets from the SBA (http://www2.agilityrecovery.com/assets/SBA/criticalbusfuncsba.pdf), Institute for Business and Home Safety (https://disastersafety.org/wp-content/uploads/4_Business_Function.pdf), or (https://www.ajg.com/media/1329771/Critical-Business-Functions.pdf)
- **Create a disaster recovery kit** to protect important records and emergency items. These will be important to reconstruct vital information and establish operations following an event. The SBA provides a checklist of necessary items for the disaster recovery kit (http://www.agilityrecovery.com/assets/SBA/drkitsba.pdf)

Communication

Need to address…		Self-assessment (circle your answer)		
☐	**Does your business have a process or plan for communicating with employees about emergency preparedness issues?**	No	Yes – a process	Yes – a formal plan
	Does your employee communications process or plan include any of the following?			
☐	Email lists	No		Yes
☐	Employee telephone directory	No		Yes
☐	Text message/text message system	No		Yes
☐	Company Intranet	No		Yes
☐	Company website	No		Yes
☐	Social media	No		Yes
☐	**Do you have emergency contact information for your employees?**	No		Yes
☐	**Does your business have a process or plan for communicating with customers/guests/clients about emergency preparedness issues?**	No	Yes – a process	Yes – a formal plan
	Does your customers/guests/clients communications process or plan include any of the following?			
☐	Email lists	No		Yes
☐	Employee telephone directory	No		Yes
☐	Text message/text message system	No		Yes
☐	Company Intranet	No		Yes
☐	Company website	No		Yes
☐	Social media	No		Yes
☐	**Are you part of a network or organization that disseminates information about disaster planning and recovery?**	No		Yes

Your employees, customers/clients, and vendors are among your business' most valuable assets. Two-way communication is central before, during and after a disaster. It is important to set up communication plans in advance of a disaster or extreme event, and to have back-up communication systems in place.

Need to get started? The SBA provides a sample Emergency Communications checklist (http://www2.agilityrecovery.com/assets/SBA/emercommsba.pdf)

Communication with Employees. Make sure you communicate preparedness, response and recovery information. Use company newsletters, company intranet, employee emails, and/or other communication tools.
- To communicate during an emergency, have a list of all employee contact information and consider setting up a telephone calling tree (a list of who calls whom), a password-protected page on the company website, an email alert or a call-in voice recording to disseminate messages to employees.
- Designate an out-of-town phone number where employees can leave an "I'm okay" message in a catastrophic disaster.
- If you have employees with disabilities or special needs, ask them what assistance, if any, they require.
- Communicate regularly with employees before, during and after an incident.

Communication with Guests or Customers. Make sure you communicate preparedness, response and recovery information to guests and customers, as appropriate. Have a plan for how you will use physical signage, paper communication, e-mails, text messages, and/or other communication tools to communicate in advance of an anticipated extreme event. If you host guests on-site during a disaster or extreme event, make sure you have back-up communication systems in place to communicate with guests in case your primary communication systems are disrupted.

Have a Crisis Communication Plan. Plan for how you will communicate with employees, local authorities, customers and others during and after a disaster or extreme event.
- Be prepared to provide employees with information on when, if and how to report to work following an emergency.
- It may also be important to update your customers, clients, and/or the general public. Communicate with your customers about whether and when products will be received or services rendered. Make information available via your business website, social media, recorded phone messages, and other tools.
- Share with government officials what your company is prepared to do to help in recovery efforts. Also communicate with local, state and federal authorities what emergency assistance is needed for you to continue essential business activity.

Have a **contact list of critical vendors and external resources**. The list should include all vendors and external resources that your organization relies on for day-to-day operations as well as during emergencies. Consider including the following information: Name of external organization, point of contact, e-mail address, office phone number, cellphone number, and customer service phone number.

Develop a network or join a professional organization. It never hurts to have a supportive network around you. Dealing with disasters and extreme events can not only be stressful but lonely. The key is to surround yourself with like-minded individuals who can offer advice, share opportunities and listen to your problems. Go beyond your typical inner circle and broaden your network of support.   Consider the following as a starting point:

- Coastal Virginia Tourism Alliance http://visitcova.com/
- Virginia Beach Hotel Association http://virginiabeachhotelassociation.com/
- Virginia Beach Restaurant Association https://www.dineinvb.com/
- Virginia Restaurant, Lodging & Travel Association (Norfolk Region Chapter) http://www.vrlta.org/group/norfolk
- Williamsburg Hotel & Motel Association http://www.virginia.org/Listings/PlacesToStay/WilliamsburgHotelMotelAssociation/
- Virginia Tourism Corporation http://www.vatc.org/tourism/
- Hampton Roads Chamber of Commerce http://www.hamptonroadschamber.com/
- Eastern Shore of Virginia Chamber of Commerce http://www.esvachamber.org/
- Clean and Resilient Marina http://www.virginiacleanmarina.com/
- Virginia Green http://www.deq.virginia.gov/Programs/PollutionPrevention/VirginiaGreen/

Resources and Assistance

Need to address…		Self-assessment (circle your answer)	
	Does your business have any of the following insurance?		
☐	Flood	No	Yes
☐	Wind	No	Yes
☐	Fire	No	Yes
☐	Catastrophic loss	No	Yes
☐	Loss of income	No	Yes
☐	Equipment breakdown (boiler and machinery)	No	Yes
☐	**Do you know what is covered by your insurance?**	No	Yes
☐	**Do you know where or how to obtain information about government recovery assistance programs?**	No	Yes

Insurance is an important resource for getting your business up and running again following a disaster or extreme event. Therefore, it is important that you have adequate insurance coverage. Inadequate insurance coverage can lead to major financial loss if your business is damaged, destroyed or simply interrupted for a period of time. However, there are many other resources available to help you recover. Identifying these resources in advance of a disaster or extreme event will facilitate recovery.

What types of insurance should you consider?
Talk to your insurance agent about different insurance options. Insurance coverage is available for every conceivable risk your business might face. Cost and amount of coverage of policies vary among insurers. You should discuss your specific business risks and the types of insurance available with your insurance agent or broker. Your agency can advise you on the exact types of insurance you should consider purchasing.
- Basic overview of business insurance from the SBA (https://www.sba.gov/managing-business/running-business/insurance)

Assess your insurance coverage on an annual basis.
- Insurance policies vary – check with your agent or provider about things such as physical losses, flood coverage and business interruption.
- Understand what your policy covers and what it does not. Ask about any deductibles, if applicable.
- Consider how you will pay creditors and employees. You should also plan how you will provide for your own income.

- Find out what records your insurance provider will want to see after an emergency and store them in a safe place.
- Use this Insurance Discussion Form from Ready.gov to discuss your insurance coverage with your agent (https://www.fema.gov/media-library-data/1389017324674-9b45706d0f7cb9bccef9c3e4dd4a64dd/Business_InsuranceDiscussionForm_2014.pdf)

Dealing with Your Insurance After a Disaster or Extreme Event

Your insurance policy is a contract between you and your insurance carrier. As the insured, you have certain duties and responsibilities in the event of a loss.

When dealing with your insurance carrier in the event that your business suffers damages and/or losses:

- Notify you broker or insurance company that a loss has occurred, first by telephone and then follow-up in writing.
- Make emergency and temporary repairs to mitigate further damage.
- Prevent liability by blocking building entry of unauthorized individuals.
- Review the insurance policy to verify the scope of the amount of coverage.
- Establish a "disaster loss amount" to track all loss-related expenses.
- Document your activity in a log and maintain accurate records.
- Collect all books, records and other data (photographs, etc.) pertaining to the damaged property.
- Contact the insurance company's representatives to arrange for a joint inspection of damages. When you first meet with the insurance representative try to reach an agreement of the scope of the damage and loss and on a rough timetable of events to drive the adjustment process.
- Document, in writing, all agreements with the insurance adjuster.
- Request and advance payment on the loss from the insurance company, first verbally and then follow-up in writing.
- Evaluate the building, contents and business interruption/ extra expense claims.
- Quantify the building damage by preparing a diagram of the building, indicating all damaged areas.
- Prepare a detailed estimate of the damage to business personal property pricing according to recent invoices, catalogs or knowledge of the products. To speed up the process, invite the adjuster to work with you to develop the damage estimates. It may eliminate controversy in the final stages of the adjustment.
- For the business interruption and extra expense claims, gather information from books, records, forecasts and market analysis, and then determine the period of indemnity.

Recovery assistance programs (Note: This is not an exhaustive list)
- **Disaster Assistance and Emergency Relief Program for Individuals and Businesses –** Businesses in a federally-declared disaster area can deduct unreimbursed casualty losses (for property that was destroyed by a natural disaster) on tax returns (using Form 4684).

(https://www.irs.gov/businesses/small-businesses-self-employed/disaster-assistance-and-emergency-relief-for-individuals-and-businesses-1)

- **SBA Business Disaster Loans** – Provides low interest disaster loans to businesses in a declared disaster area to repair or replace real estate, personal property, machinery & equipment, inventory and business assets that have been damaged or destroyed in a declared disaster. (https://www.sba.gov/loans-grants/see-what-sba-offers/sba-loan-programs/disaster-loans/types-disaster-loans/business-physical-disaster-loans)

- **SBA Economic Injury Disaster Loans** – Provides loans to small businesses in a declared disaster area that experience substantial economic injury. Substantial economic injury is defined being unable to meet obligations and to pay ordinary and necessary operating expenses. Loans provide the necessary working capital to help small businesses survive until normal operations resume after a disaster. (https://www.sba.gov/loans-grants/see-what-sba-offers/sba-loan-programs/disaster-loans/types-disaster-loans/economic-injury-disaster-loans)

- **Disaster Unemployment Assistance –** Provides benefit assistance to individuals whose employment or self-employment has been lost or interrupted as a direct result of a declared disaster and who are not eligible for regular unemployment insurance benefits. (https://workforcesecurity.doleta.gov/unemploy/disaster.asp)

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