Palm Beach North Resilience Action Plan

prepared for

Palm Beach North Chamber of Commerce

prepared by

Cambridge Systematics, Inc.

May 31, 2022

www.camsys.com

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date

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About This Document

This document was prepared by Cambridge Systematics, Inc., under contract to the City of Palm Beach Gardens, and in support of the Palm Beach North Disaster Resiliency Task Force, a coalition of public, private, and civic organizations working together to develop a Resilience Action Plan for northern Palm Beach County. Preparation of this document is supported by the Florida Department of Economic Opportunity through a Community Planning Technical Assistance Grant #P0409.

1.0 Introduction

The northern portion of Palm Beach County (Palm Beach North), consisting of Palm Beach Gardens, Riviera Beach, Juno Beach, Jupiter, Jupiter Inlet Colony, Mangonia Park, Lake Park, Palm Beach Shores, North Palm Beach, and Tequesta, has been one of the fastest growing parts of Florida for the past few decades. Home to more than 196,000 residents and more than 9,400 businesses, Palm Beach North is Florida's "Prosperity Coast" with a unique combination of a growing economy and a high quality of life.

Extreme weather events, such as flooding, storm surge, and extreme heat, are threatening the safety and prosperity of the region with the potential to cause injuries and fatalities, damage infrastructure, and disrupt business operations. Such impacts are potentially growing in magnitude with increasing temperatures, intensifying precipitation events, and rising sea levels due to climate change. In addition, environmental hazards – like water and air pollution – can contribute to chronic diseases like cancer or to acute illnesses like heat exhaustion. Pandemics, like COVID-19, and the potential spread of other diseases create challenges to protecting public health, which is compounded by the growing numbers of residents, industries, visitors, and freight movement in the region. Moreover, potential technological risks such as electricity or internet failures or cybersecurity threats could add to the stress of managing emergencies as our reliance on technology increases.

The Palm Beach North Resilience Action Plan will help the region mitigate, prepare for, respond to, and recover from extreme weather, climate change, public heath, and technology-related emergency events. The project team developed the Resilience Action Plan with input from municipalities, the public, local businesses, and regional partners who were solicited to gather available information on the region's potential vulnerabilities, identify areas at risk, and create a plan for building resilience in the region. With oversight from the Palm Beach North Chamber of Commerce's Disaster Resiliency Task Force, this effort is a first step in initiating broader action among Palm Beach North residents and businesses to improve regional resilience and help shape detailed vulnerability assessments and resilience strategies for the region in the future.

2.0 Regional Risks and Vulnerabilities

In developing this Action Plan, the project team identified potential risks and vulnerabilities in Palm Beach North through outreach to local government, businesses, and regional organizations; a preliminary desktop analysis of impact from selected hazards; and a stakeholder workshop.

2.1 Outreach

The project team conducted a series of outreach efforts to understand the vulnerabilities and risks of most concern to businesses and local governments in the region. These include:

- A Palm Beach North Local Government Resilience Action Plan Survey distributed to the 10 Palm Beach North municipalities.
- A Palm Beach North Business Resilience Action Plan Survey conducted with local businesses.
- Interviews with leaders from regional organizations, including the Florida Department of Transportation, Florida Power and Light, Palm Beach County, Palm Beach Transportation Planning Agency, and Treasure Coast Regional Planning Council.

The top five risks ranked by local governments (Table 2-1) are flooding; high wind and heavy rain associated with hurricanes/coastal storm events; storm surge; sea level rise; and threats to cybersecurity. The top five risks ranked by businesses (Table 2-2) are loss of power, communications, or utilities; epidemics; threats to cybersecurity; human-caused acts (e.g., hazardous materials spills, acts of terrorism, etc.); and flooding. Among the set of risks survey participants were asked to rank, flooding and threats to cybersecurity fell within the top five greatest risks impacting both community and business resilience. Local governments and businesses are impacted by environmental risks such as heavy rain associated with hurricanes and tropical storm events that have the potential to cause flooding, storm surge, and the loss of power, communications, and utilities. In both cases, participants identified risk of drought, extreme heat, and environmental pollution as less of a concern to the region today. Participants identified "other" risks, including supply chain disruptions.

Table 2-1 Local Government Ranking of Vulnerabilities and Risks

Overall Rank	Vulnerability/Risk
1	Flooding
2	High wind and heavy rain associated with hurricanes/coastal storm events
3	Storm surge
4	Sea level rise
5	Threats to cybersecurity
6	Environmental pollution
7	Epidemics
8	Extreme heat
9	Acts of terror
10	Drought

Table 2-2 Business Ranking of Vulnerabilities and Risks

Overall Rank	Vulnerability/Risk
1	Loss of power, communications, or utilities
2	Epidemics
3	Threats to cybersecurity
4	Human-caused acts
5	Flooding
6	High wind
7	Storm surge
8	Sea level rise
9	Extreme heat
10	Environmental pollution
11	Drought
12	Other

In addition to identifying and ranking risks, the surveys and interviews created an inventory of plans, projects, programs, guidance, tools, and other resources that can be used to address resilience. For instance, the team identified opportunities to collaborate among existing entities with resilience initiatives, including those of the Treasure Coast Regional Planning Council, Palm Beach County Office of Resilience, and the Coastal Resilience Partnership formed by the seven south Palm Beach County municipalities. Business and local government participation in developing the Palm Beach County Local Mitigation Strategy, Community Rating System, and county and utility emergency management exercises presented opportunities for building resilience in the region. The effort also highlighted several opportunities for the local governments and businesses in the Palm Beach North region to enhance collaboration and coordination across key partners and agencies to build the region's resilience. For full details, please refer to the Inventory of Existing Resilience Plans and Policies Technical Memorandum dated February 28, 2022.

2.2 Preliminary Analysis of Risks and Vulnerabilities

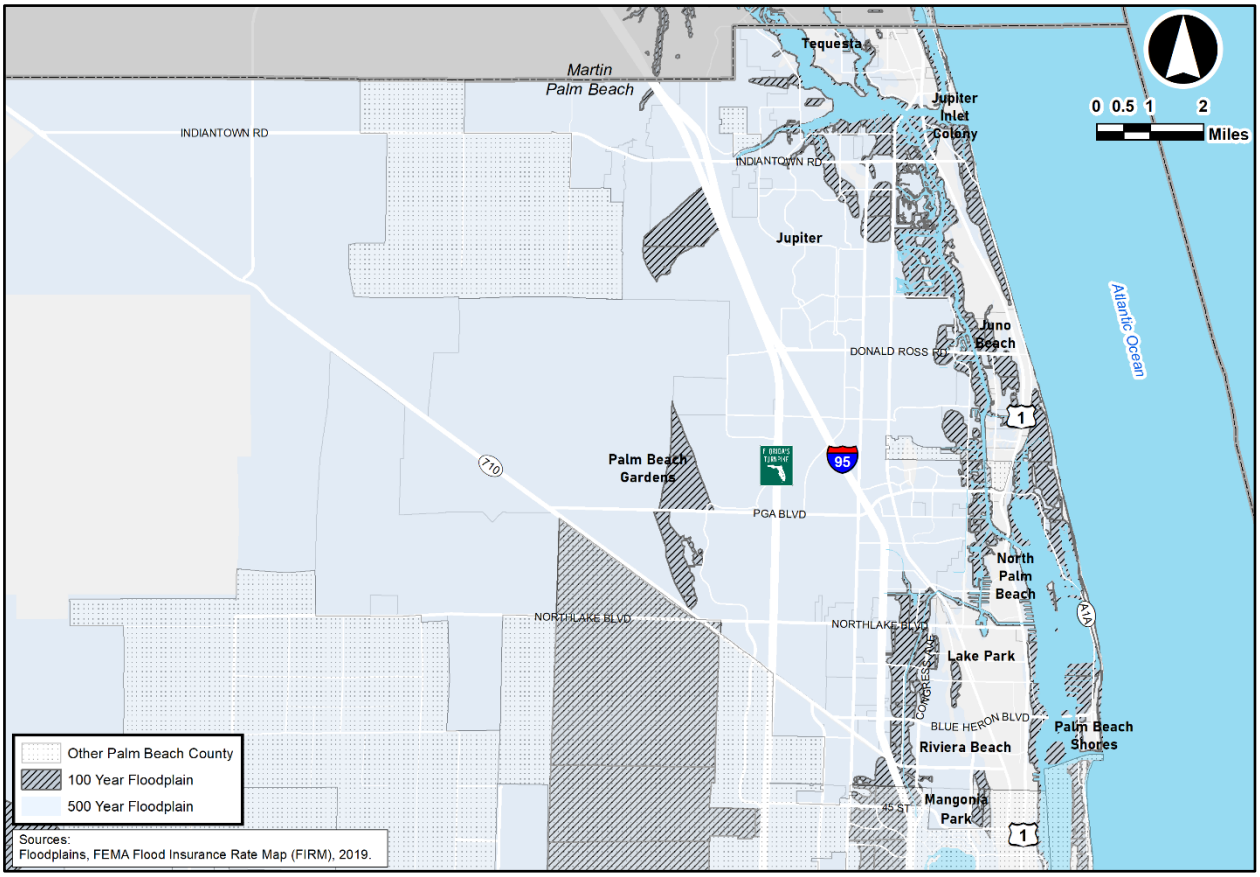
Following the outreach effort, the project team conducted a preliminary risk and vulnerability analysis to assess the impact of flooding, storm surge, sea level rise, and extreme heat within the Palm Beach North region. These four risks were chosen given their readily available and timely data sources, including the Federal Emergency Management Agency Flood Insurance Rate Map, National Oceanic and Atmospheric Administration Sea, Lake, and Overland Surges from Hurricanes model (also know as the SLOSH Model), Sea Level Scenario Sketch Planning Tool, and the U.S. Climate Resiliency Toolkit. This analysis identified the potential occurrence and severity of these risks over the next few decades based on available data, tools, and maps, as well as areas, assets, and communities that could be impacted by such risks. The socioeconomic makeup of the region and community characteristics like access to broadband Internet was overlayed with the potential impacted areas by different stressors to identify areas of additional vulnerability and opportunities to improve the resilience of the region.

Key findings and maps from the preliminary analysis are described in the following sections. Full details of this analysis are available in the Preliminary Identification of Potential Vulnerabilities and Risks Technical Memorandum dated February 28, 2022. It should be noted that this preliminary analysis is not a comprehensive vulnerability assessment of the region. The information provided here is for planning purposes only; more detailed assessments of vulnerabilities and risks are needed to evaluate potential strategies.

2.2.1 Flooding Events

The assessment of flooding used the 100-year and 500-year floodplain areas from the statewide digital flood insurance map data (2019) from the Federal Emergency Management Agency. These reflect the statistical likelihood of 1 percent or 0.2 percent chance for a storm/flood event for 100-year and 500-year floodplain areas, respectively (also sometimes called the 1 percent and 0.2 percent recurrence-intervals). Current climate trends suggest more sustained precipitation during rain events in the future. If that is the case, the statistical likelihood of heavier rain occurrence may increase. The 100-year and 500-year floodplains are shown in Figure 2-1.

Figure 2-1 The 100-Year and 500-Year Flooding Scenarios

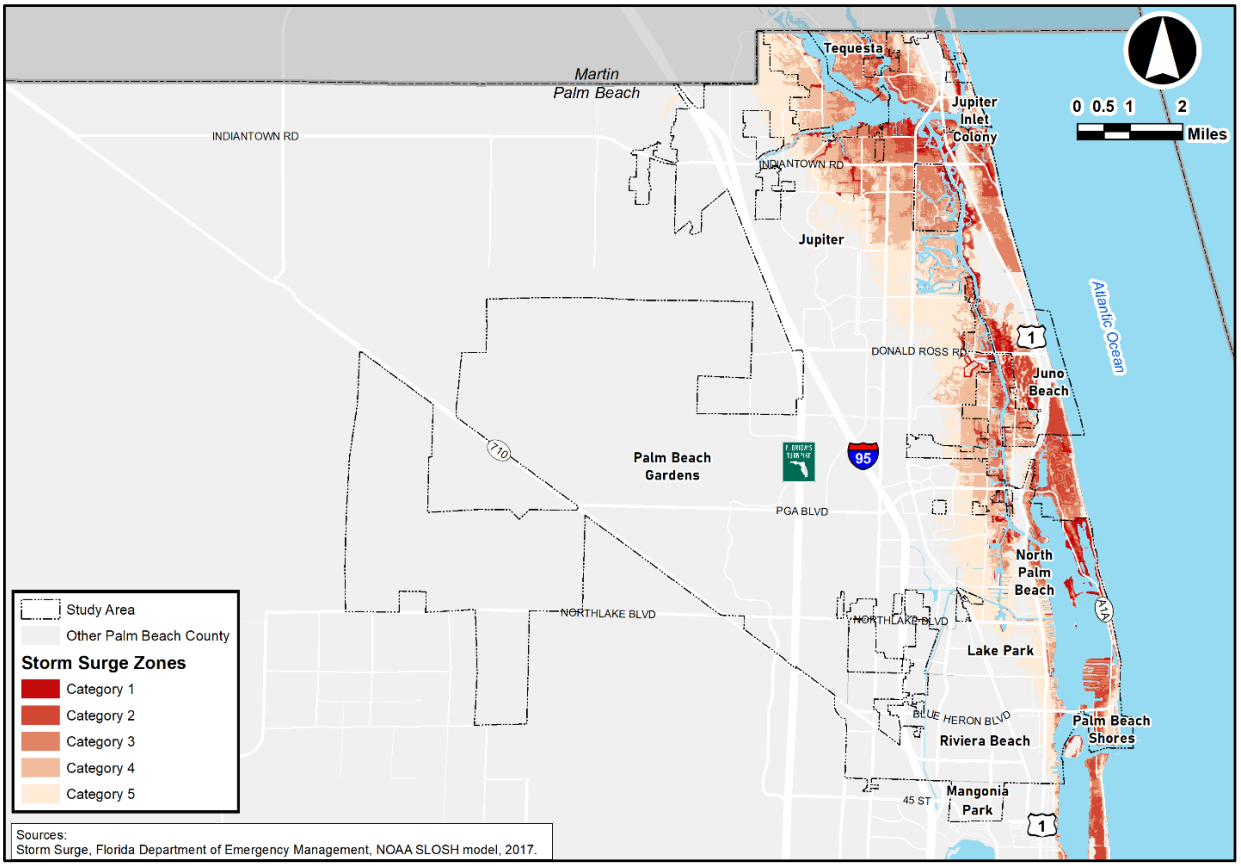


The 500-year floodplain covers most of the region's periphery. The 100-year floodplain should be especially planned for, as it is likely to happen more often. The 100-year floodplain covers a large portion of the region, including much of the intracoastal and coastal regions. A particular area of concern is along I-95 from Northlake Boulevard to SR-710, where there is significant industrial future land and where there are higher levels of traditionally underserved residents, such as elderly, disabled, low-income, minority, Native American, limited English proficiency, and limited literacy populations.

2.2.2 Storm Surge

The project team conducted the assessment of storm surge risk from hurricanes using the 2017 storm surge depth inundation data from the Florida Division of Emergency Management, which uses the NOAA SLOSH model. Storm surge projections are shown in Figure 2.2. This shows the storm surge inundation area for Category 1 hurricanes in the darkest shade, as that is the most critically vulnerable area. More area inland is vulnerable to stronger (lower likelihood) storms and the Category 5 storm surge inundation zone represents the maximum area (worst case scenario) of the region vulnerable to coastal flooding due to a hurricane.

Figure 2-2 Storm Surge Scenarios by Hurricane Strength



There is significant vulnerability in the region to storm surge. Much of the coastal areas and waterfront areas of Jupiter and Tequesta, for example, are at risk from Category 2 or lower hurricane impact. Also, the areas of Juno Beach bordering the intracoastal show high risk from hurricane storm surge. However, the southern inland part of the region, which has some significant flooding risk, traditionally underserved communities, and significant industrial land use, is relatively less impacted by storm surge risk.

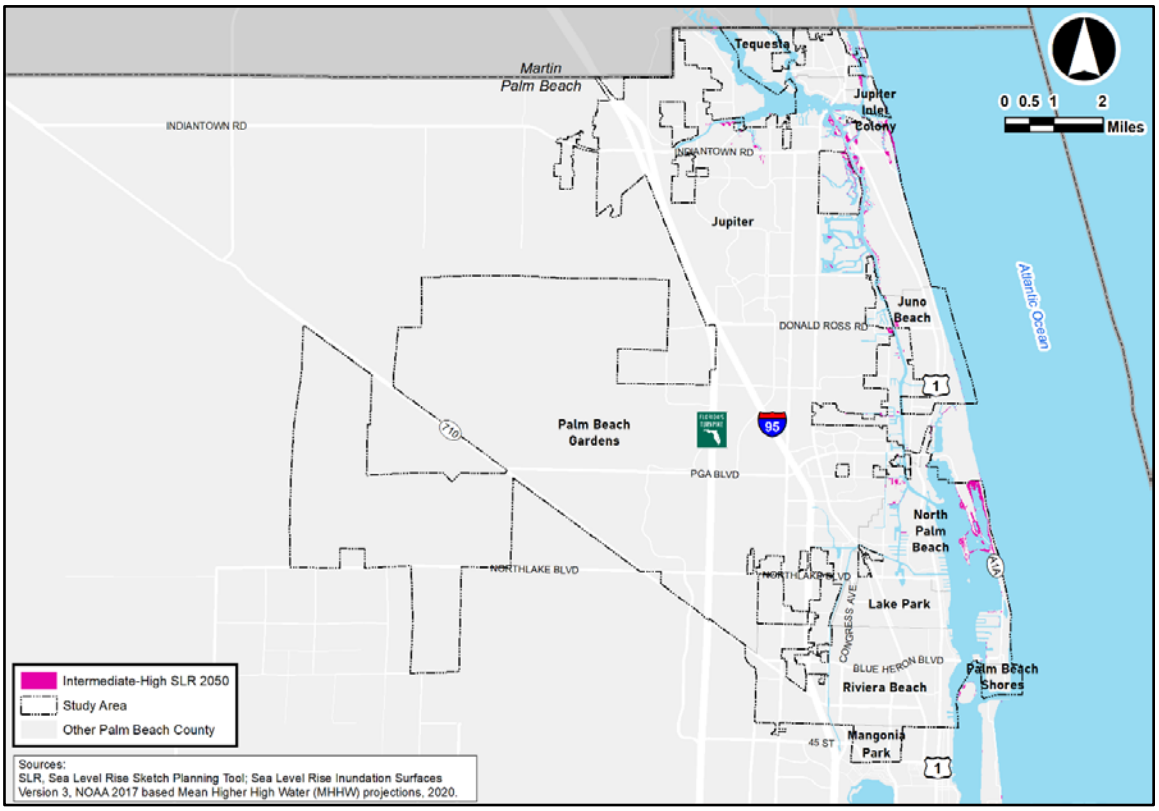
It is important to note the transportation facilities at risk of storm surge, as response and recovery efforts in a major hurricane event could be impacted by damage to the transportation infrastructure. US 1 mostly traverses higher land relative to surrounding areas, but other roads such as SR-A1A; Indiantown Road, Pennock Lane, and Center Street in Jupiter; Tequesta Drive in Tequesta; and other important connecting and arterial roads could be compromised by storm surge in a major storm event. Emergency planning efforts in the region should take this into account.

2.2.3 Sea Level Rise

The project team assessed the potential risk of sea level rise using data from the Sea Level Scenario Sketch Planning Tool developed by the University of Florida GeoPlan Center, which analyzes current flood risks and future flood risks using various sea level rise (SLR) scenarios. The Sea Level Scenario Sketch Planning Tool mapped SLR scenarios by county using local tide gauge data and various sea level projection curves. The

projection used for this analysis was the intermediate-high projection for 2050 (NOAA 2017).[1] The SLR inundation areas are shown in bright pink in Figure 2.3.

Figure 2-3 Sea Level Rise Intermediate-High 2050 Projection



SLR projections in the region are smaller in geography. However, they represent potentially permanent changes in sea and tidal inundation. Any locations currently experiencing issues with king tides could experience them to a greater extent and some areas not currently experiencing noticeable issues could do so in the future. The two vulnerable areas are: north of the region in the creek and inlet waterfront areas and on the John D. MacArthur Beach State Park area of North Palm Beach. SLR is expected to create ongoing and increasing impacts on infrastructure, businesses, and residences. Adaptation and mitigation of such impact will require long-term planning, design, construction, and possible relocation or managed retreat. As of now, the predictions do not heavily impact the areas with more traditionally underserved communities, but there is always cause for thought on how to address dealing with SLR in a fair and equitable manner.

2.2.4 Extreme Heat

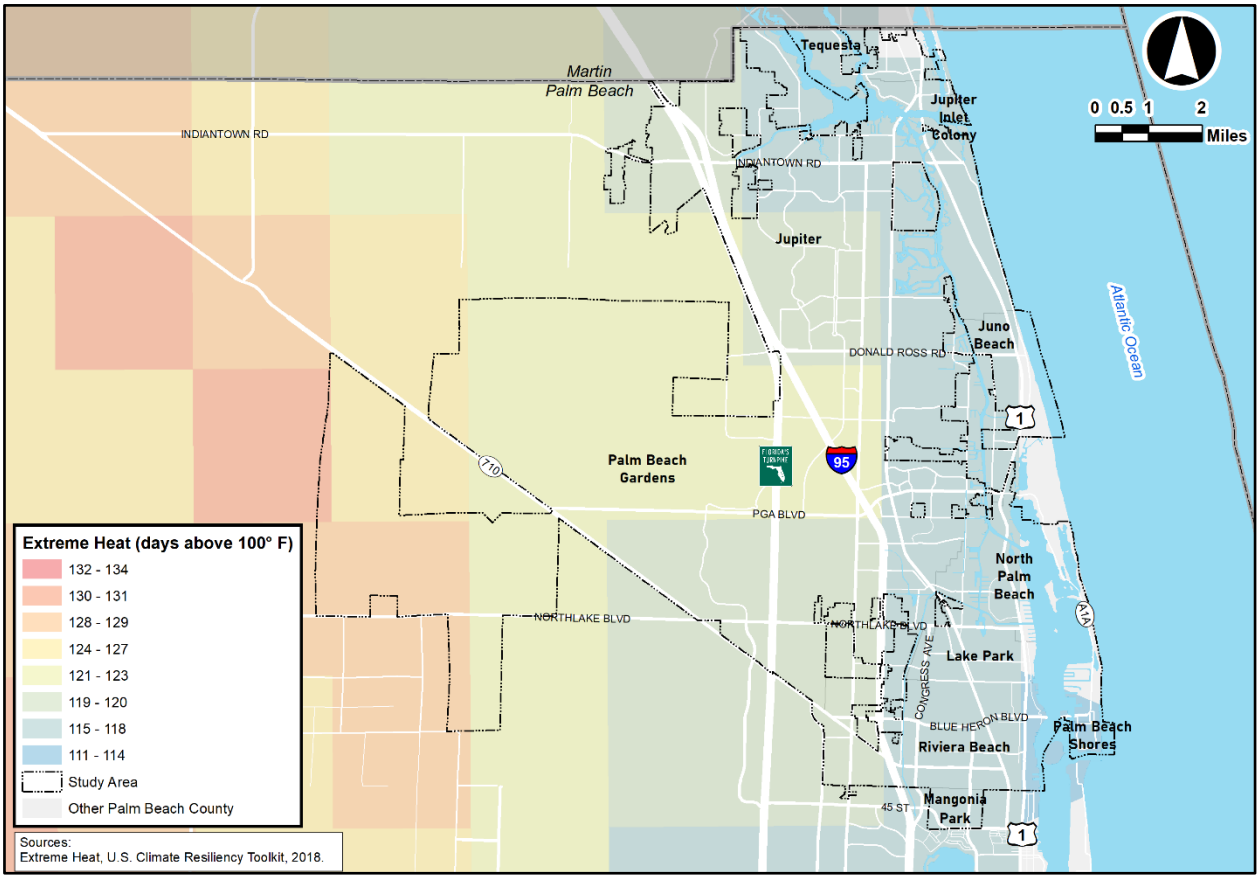
The project team assessed the potential risk of extreme heat using the statistical downscaled CMIP5 model in the Localized Constructed Analog dataset.[2] This data shows the number of days per year with temperatures projected to top above 100° F by the end of the century under a high emission scenario. The

[1] For comparison, this projection estimates about 16 inches above 2000 mean sea level, while the short term (2040) estimates in the Southeast Florida Regional Compact Unified Sea Level Rise Projection: 2019 Update is 10–17 inches above 200 mean and the medium term (2070) estimate is 21–54 inches above 2000 mean.

[2] LOCA statistical downscaling—LOCA Statistical Downscaling (Localized Constructed Analogs). http://loca.ucsd.edu/

current count for the county is below 10 days per year. This projection estimates a drastic increase in days of extreme heat, which can be disruptive to the region. The results are shown in Figure 2.4.

Figure 2-4 High Emission 2100 Scenario for Number of Extreme Heat Days Per Year



Extreme heat impacts business and residential activities, including the agricultural industry, outdoor workers, construction and materials, and walking and biking.

The traditionally underserved, particularly lower income residents may need assistance with cooling if they cannot afford energy costs or reliable air conditioning. Public cooling shelters/centers are one option to provide distressed populations with a refuge from the heat. Many industries could be impacted in their daily work, and water need/demand could noticeably increase relative to population growth. Materials for building and transportation infrastructure may need to be altered to endure more high heat exposure. These are all planning considerations for managing the possibility of higher extreme heat in coming decades.

2.3 Stakeholder Workshop

To further support the development of the Palm Beach North Resilience Action Plan, a stakeholder workshop was held on March 31, 2022 to set priorities among potential risks and impacts to the Palm Beach North region, identify and prioritize strategies the Palm Beach North region should consider addressing these risks, and identify partner roles and responsibilities to implement these strategies. Thirty-six stakeholders from

within and outside the Palm Beach North region participated in the workshop, including local governments, businesses, resilience organizations, medical and educational facilities, and utilities.

During the workshop, stakeholders participated in four breakout groups covering Extreme Weather, Climate Change, Technology, and Public Health, to provide inputs on risks and impacts to the Palm Beach North region, as shown in the four figures below. The potential strategies discussed and prioritized during the workshop inform the development of this action plan and are described in Section 3.0.

A full summary of the workshop as well as a copy of the workshop agenda and list of participants are available in the Stakeholder Workshop Technical Memorandum dated April 19, 2022. Participants in the workshop discussed that extreme weather events such as flooding, storm surge, heavy precipitation, and extreme heat, have the potential to cause damage to public infrastructure and personal properties, cause electricity or internet outages, and disrupt business operations, education, transportation management, and many other activities. A specific concern was raised about losing access to critical resources such as gas, electricity, cash, medicines, and clean water, and essential services, such as pharmacies, banks/ATMs, and grocery stores. Potential technological risks such as electricity or internet failures or cybersecurity threats could add to the stress of managing emergencies due to people's reliance on technology. Power or internet outages could also limit people's access to digital records, such as credit card information, passwords, insurance records, and inventory databases, which could make it difficult to conduct personal or business activities. Such impacts are potentially growing in magnitude due to climate change, causing disruption to supply chain, tourism, and the agriculture industry, and creating long-term negative impacts on the environment, labor force, and the region's quality of life.

Maintaining effective communication during emergency events is another challenge raised by the participants. On the one hand, the access to various websites, social media, or other digital platforms and channels of communication could be hampered by power outages during an emergency. On the other hand, excessive information, including competing or misinformation, could make it difficult for people to identify the knowledge they need quickly during an emergency, such as weather forecasts, evacuation or shelter-in-place notices, availability of food or gas, or contact information for emergency respondents.

People's mobility will also be impacted if an emergency event causes transit service to stop operating or make it unsafe to drive due to damage to traffic signals. There is also a concern for whether electric vehicle charging stations will be out of service due to power outage.

Participants also discussed potential risks related to public health, such as the pandemic, chronic diseases due to water or air pollution, acute illnesses like heat exhaustion after a storm, and mental stress related to climate change. These challenges will be especially significant to high-risk or traditionally underserved communities, such as the elderly, disabled, or low-income populations. Participants expressed concern about how to address the combined effect of public health concerns during weather related emergency events, and with technological challenges.

Figure 2-5 Extreme Weather Risks

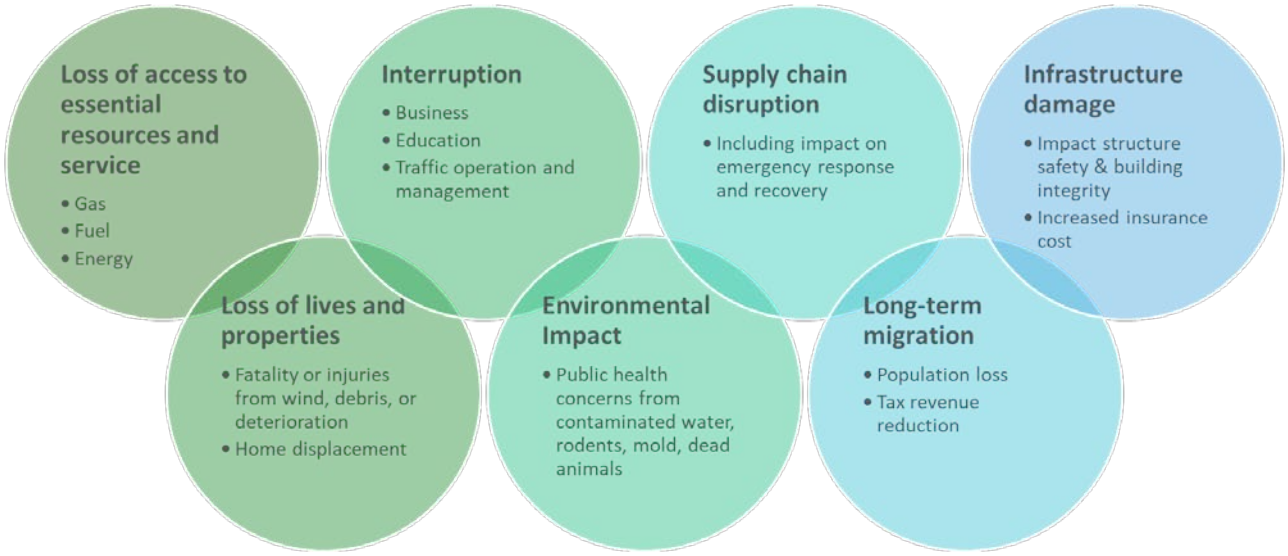


Figure 2-6 Climate Change Risks

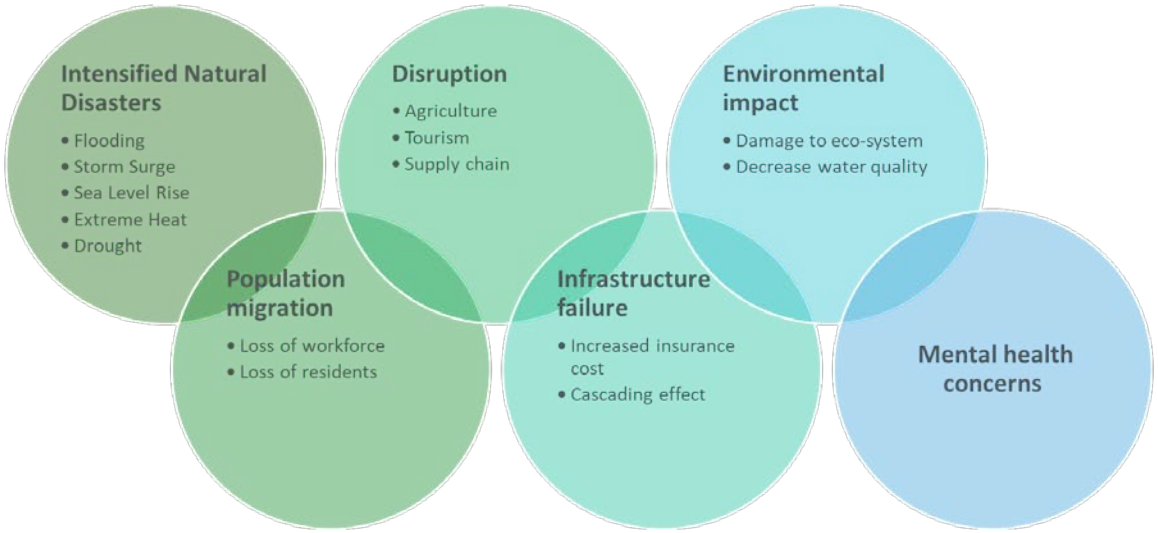


Figure 2-7 Technology Related Risks

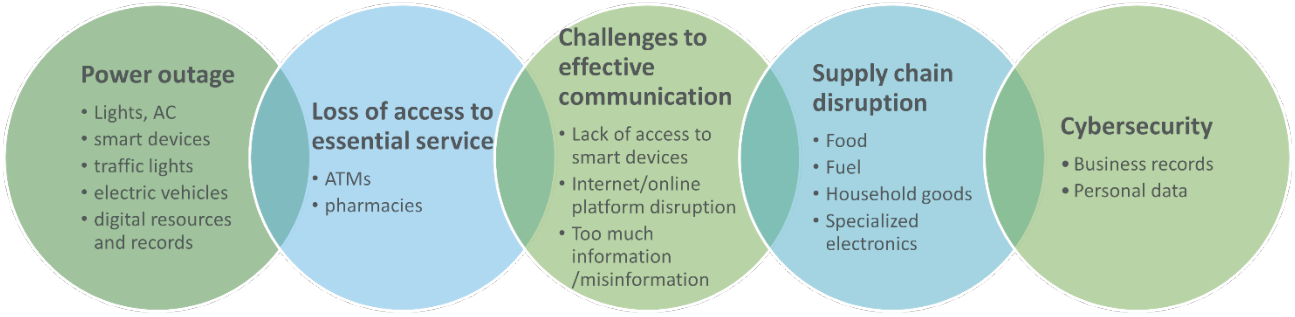
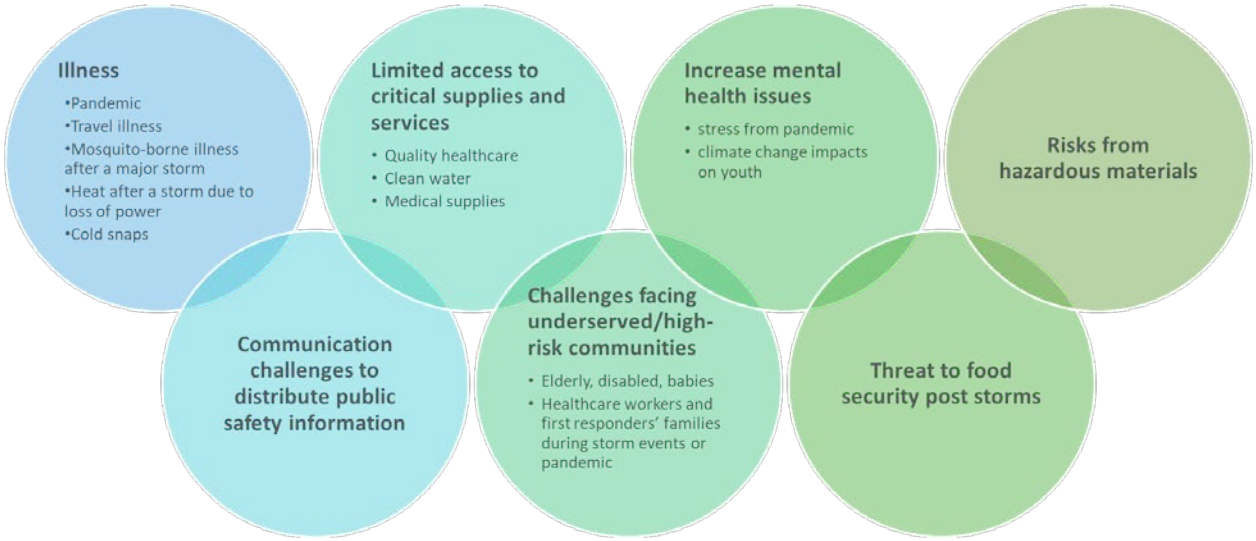


Figure 2-8 Public Health Related Risks



3.0 Action Plan

Building upon input from stakeholders, this section presents actions to improve resilience during the four phases of emergency management: mitigation, preparedness, response, and recovery. These actions are intended to be an initial set of priorities; recommendations for next steps and future actions are identified in Section 4.0. For each action in the tables that follow, the action plan identifies the timeframe for implementation (short-term: < one year, medium-term: 1 – 3 years, long-term: 3 – 5 years); whether the action should be led locally or coordinated regionally; and whether the Palm Beach North Chamber of Commerce may play a role in advancing or facilitating implementation. The ID numbers do not imply priority but are provided for easy identification.

3.1 Cross-Cutting Actions

Building resilience in the Palm Beach North region should start with establishing strong, clear goals that define the region's vision and specify the objectives or steps to achieve these goals. Goals should be specific and measurable. They should state exactly what needs to happen, where, when, and with whom to give clear direction to the planning process and narrow the focused actions in measurable ways. It is important to also identify performance metrics or indicators that are linked to resilience goals and strategies to monitor progress and evaluate success.

Improving resilience in Palm Beach North requires a collaborative effort. Promoting leadership, education, and empowerment in government, community, and business organizations is necessary to foster coordination across the region and identify clear roles and responsibilities to lead and support the development and implementation of resilience policies and strategies. Table 3-1 shows cross-cutting strategies that could be applied to all phases of emergency management.

Table 3-1 Cross-Cutting Actions

ID	Actions	Timeframe Short-term: < 1 yr Medium-term: 1 – 3 yrs Long-term: 3 - 5 yrs	Recommended Lead	Potential PBN Chamber Role
1	Establish resilience goals and objectives for the Palm Beach North region.	Short-term	Regional	★
2	Incorporate resilience goals and objectives into the planning process and functions of government agencies and business communities.	Long-term	Regional	★
3	Develop resilience performance metrics/indicators for public and private critical infrastructure linked to goals, timing, and strategies to monitor adaptation and mitigation progress and evaluate success.	Short-term	Regional	★
4	Promote leadership, education and empowerment in government, community, and business organizations to identify roles and responsibilities for developing and implementing resilience policies and strategies.	Short-term	Regional	★

ID	Actions	Timeframe Short-term: < 1 yr Medium-term: 1 – 3 yrs Long-term: 3 - 5 yrs	Recommended Lead	Potential PBN Chamber Role
5	Create a community flyer/guide with key informational resources for emergencies, including shelter locations, evacuation routes/directions, emergency hotlines/contacts, websites/radio channels/other ways to stay informed, etc., and make it easily accessible to residents and businesses in both digital and non-digital formats.	Short-term	Regional	★
6	Establish a Community Emergency Response Team (CERT) to facilitate emergency preparedness and take response actions until the professional responders arrive.	Short-term	Local	★
7	Partner with the Coastal Resilience Partnership in southeast Palm Beach County, Sustainable Palm Beach County, and the Palm Beach League of Cities on resilience planning initiatives.	Short-term	Regional	★
8	Identify a single voice to represent the Palm Beach North business community during a disaster to coordinate, share business impacts, and enhance communication with the Palm Beach County Emergency Operations Center.	Short-term	Regional	★
9	Participate in the South Florida Regional Climate Change Compact workshops and Annual Climate Leadership Summit to share knowledge, engage leadership across sectors, and mobilize the collaboration needed to build a resilient region.	Short-term	Regional	★
10	Strengthen relationships between the business community and the Palm Beach County Office of Resilience to ensure that investments in resilience offer a good return and demonstrate that Palm Beach County is a place where people want to live, and businesses want to invest.	Short-term	Regional	★
11	Participate in Palm Beach County's Local Mitigation Strategy development to secure post-disaster funding and Community Rating System to help reduce flood insurance costs.	Short-term	Regional	★
12	Identify resilience-related funding or grant opportunities.	Short-term	Regional	★
13	Increase awareness and coordination with local, regional, state, and national entities during the process of distributing Federal Emergency Management Agency funding to municipalities.	Short-term	Regional	★

3.2 Mitigation

Mitigation strategies are actions that prevent or reduce the cause, impact, and consequences of disasters. As shown in Table 3-2, mitigation strategies include updates to planning practices and regulations, structure and infrastructure projects, natural system protection, as well as approaches to enhance education and awareness.

Understanding the risks and vulnerabilities that are common in a region is the foundation of hazard mitigation, which is also the prerequisite for many resilience-related grant opportunities. Most of the plans, projects, programs, guidance, tools, and other resources in the Inventory of Existing Resilience Plans and Policies Technical Memorandum (February 28, 2022) do not address mitigation. The actions in the table below are meant, in part, to address this gap. It is important to incorporate mitigation plans when planning for future infrastructure and businesses.

Given the uncertainty of resilience risks and vulnerabilities, stakeholders recommended a Dynamic Adaptive Pathway Planning approach which specifies immediate actions to address the near future and keeps options open to adapt when better data and information becomes available.

Many mitigation strategies involve enhancing infrastructure to make sure it can withstand the impact of extreme weather events. The actions below take a broad view of infrastructure, including transportation, utilities, drainage systems, technology, and building structures.

While infrastructure projects can reduce the impact of extreme weather events, strategies to address climate change, such as preserving ecosystems and adopting renewable energy, could be applied to prevent or reduce the cause of future disasters—tackling the problem at its root. The following actions address these, and other issues related to mitigation, but should be conducted in conjunction with supporting broader statewide and national efforts prevent or reduce the impact of disasters.

Table 3-2 Mitigation Actions

ID	Mitigation Actions	Timeframe Short-term: < 1 yr Medium-term: 1 – 3 yrs Long-term: 3 - 5 yrs	Recommended Lead	Potential PBN Chamber Role
M-1	Develop a regional mitigation strategy based on existing local mitigation strategies and vulnerability assessments.	Short-term	Regional	★
M-2	Conduct or review existing vulnerability and risk assessments and develop measurements of vulnerability and risks for critical infrastructure, businesses and communities. Consider creating a standardized system of resiliency scores to identify gaps and opportunities to increase resilience, such as identifying communities that might be more vulnerable than others.	Short-term	Regional	★
M-3	Incorporate mitigation plans and ordinances in planning and construction of infrastructure improvement, specify actions to be taken immediately to be prepared for the near future and keep options open to adapt if needed (Dynamic Adaptive Pathway Planning).	Medium-term	Regional	★
M-4	Consider the projected impact of climate change and extreme climate events when planning for future public and private infrastructure . For example, determine roadway elevation based on projected flood elevation over its useful life.	Medium-term	Regional	★

ID	Mitigation Actions	Timeframe Short-term: < 1 yr Medium-term: 1 – 3 yrs Long-term: 3 - 5 yrs	Recommended Lead	Potential PBN Chamber Role
M-5	Develop aged building inspection guidelines. Improve building codes for renovation and construction in coastal and flood prone areas and exceed building codes where deemed necessary locally.	Medium-term	Regional	
M-6	Harden/bury electricity, broadband, other utility lines, and close broadband gaps in the region.	Medium-term	Regional	
M-7	Harden public infrastructure and private buildings against sea level rise and extreme climate events using heat resistant materials, low-impact design, green infrastructure, (such as permeable pavement and bio swales), and nature-based features for future infrastructure when possible. Prioritize low- and moderate-income communities for resilience investments.	Medium-term	Local	★
M-8	Improve and maintain drainage systems.	Medium-term	Local	
M-9	Implement strategies to improve cybersecurity, such as providing trainings for employees to establish basic security practices, backing up critical business or personal data, and installing firewall security for Internet connections.	Medium-term	Local	★
M-10	Build sea walls/protection barriers for coastal cities.	Long-term	Regional	
M-11	Apply strategies to mitigate climate change, such as preserve natural areas, adopt renewable energy, employ carbon sequestration strategies, or build with natural based features that restore or protect ecosystems.	Long-term	Regional	★
M-12	Discuss corporate social responsibility for climate change and encourage good practices to offset emissions through environmentally friendly actions and measured improvement in air quality.	Long-term	Regional	★

3.3 Preparedness

Table 3-3 addresses preparedness strategies, including planning, training, and educational activities for events that cannot be mitigated. Preparing for emergency events requires a collective effort from government agencies, businesses, and residents. Having an emergency preparedness plan is the first step toward ensuring the safety of residents, businesses, and public and private properties during disasters. The local government survey showed that all local governments in the region have at least one plan that addresses at least one stage of emergency management. Among those identified were Comprehensive Emergency Management Plans, disaster preparedness plans, hurricane plans and procedures, flood plans, and policies related to flood protection and control. Opportunities exist for the region's local governments to consider additional hazards in their plans, including threats to cybersecurity and epidemics, to provide a more comprehensive approach to preparedness.

Input from workshop participants identified opportunities to not only update and enhance coordination among these plans, but also to coordinate and streamline purchases, positioning, and sharing of critical supplies and equipment, such as generators and portable hot spots and charging devices. The project team identified additional key needs, such as updating communications plans and facilitating public/private collaboration and response, such as the ability to provide emergency services in master planned communities under ownership of homeowners' association.

The business survey demonstrated that many businesses do not have a Continuity of Operations Plan (COOP), or their plans are out of date. COOPs are critical to helping businesses prepare for and recover from a disaster and include strategies for handling remote work situations and technology disruptions to networks, servers, computers, and mobile devices. One key strategy may be to mandate or incentivize COOPs and emergency equipment such as generators for certain types of essential businesses. The business survey also revealed that while some businesses conduct or participate in training exercises, there are training exercises held by others in the region from which they may benefit. The stakeholder interviews revealed that the Treasure Coast Regional Planning Council, Florida Power and Light, and the Palm Beach County Department of Public Safety, Division of Emergency Management conduct exercises in which businesses and local governments are encouraged to participate. Actions to address these and other preparedness issues follow below.

Table 3-3 Preparedness Actions

ID	Preparedness Actions	Timeframe Short-term: < 1 yr Medium-term: 1 – 3 yrs Long-term: 3 - 5 yrs	Recommended Lead	Potential PBN Chamber Role
P-1	Conduct or use available comprehensive vulnerability and risk assessments to assess the impact of potential natural or human-caused hazards on residents and visitors, infrastructure, operations of public agencies and businesses, the environment, and other aspects of the Palm Beach North region.	Short-Term	Regional	
P-2	Conduct future analyses for risks related to public health and technology, identify strategies, and promote educational materials or training programs to help residents and businesses prepare for, respond to, and recover from potential public health and technology related hazards.	Short-Term	Regional	
P-3	Update/expand emergency preparedness plans with goals, timing, and measurements to create shared responsibility among government, businesses, and residents.	Short-term	Regional	★
P-4	Identify resources, guidelines, and best practices related to flood management, environmental protection, and storing/moving resources during an emergency event.	Short-term	Regional	★
P-5	Conduct public outreach and education programs on emergency preparedness for residents and businesses, especially underserved and high-risk communities.	Short-term	Local	★

ID	Preparedness Actions	Timeframe Short-term: < 1 yr Medium-term: 1 – 3 yrs Long-term: 3 - 5 yrs	Recommended Lead	Potential PBN Chamber Role
P-6	Encourage residents to develop household preparedness plans, such as purchasing/maintaining hazard insurance, preparing generators, charging devices/battery storage, keeping emergency cash on hand, and backing up passwords and financial records.	Short-term	Local	★
P-7	Encourage and help businesses to develop COOPs and/or remote work contingency plans. Investigate approaches to mandate/incentivize power/broadband backup system for essential businesses, such as banks, pharmacies, food stores, and gas stations.	Short-term	Local	★
P-8	Provide resources for residents and businesses to evaluate the cost and benefit of resilience investment, such as guidelines, toolkits, and trainings.	Short-term	Local	★
P-9	Conduct emergency trainings and drills, including Federal Emergency Management Agency on-line trainings and pre-event and post-event exercises. Participate in emergency management exercises or training opportunities provided by Palm Beach County, the Treasure Coast Regional Planning Council, and Florida Power and Light. Train all public sector leadership on duties and management with annual sign-off required by the Emergency Operations Center.	Short-term	Local	
P-10	Ensure the readiness and availability of critical equipment and supplies, including water, common medicines, medical supplies, portable generators, cell towers, charging stations, cyber-cafés, Dynamic Message Signs, etc. Pre-position staff and resources to shelters and Point of Distribution locations and inform the public prior to an event.	Short-term	Local	★
P-11	Coordinate with the business community to understand the resources and capabilities available during emergencies, such as a vendor lists and inventories of equipment and supplies and provide this information to local communities.	Short-term	Regional	★
P-12	Coordinate purchasing or sharing of equipment and supplies during emergencies.	Short-term	Regional	★
P-13	Develop a repository to track critical equipment and supplies across the region during emergencies.	Medium-term	Regional	★
P-14	Develop agreements to streamline/expedite purchasing of equipment and supplies during emergencies (e.g., reduce number of bids required).	Short-term	Regional	★

ID	Preparedness Actions	Timeframe Short-term: < 1 yr Medium-term: 1 – 3 yrs Long-term: 3 - 5 yrs	Recommended Lead	Potential PBN Chamber Role
P-15	Plan for traffic safety/control for post-extreme weather events and establish pre-defined maintenance of traffic and contingencies for major thoroughfares.	Short-term	Regional	
P-16	Maintain points of contact for communities and/or Homeowners Associations. Investigate approaches to enable Homeowners Associations to enter homes for response and rescue in a master planned community.	Short-term	Local	★
P-17	Develop communication plans with multiple ways of communicating (both digital and non-digital) among Emergency Operation Centers, state, county, municipalities, and private entities. Leverage the availability of social media, ham radio/operators, satellite phones, communication devices, and capabilities of the yachting/vessel community. Make people aware of trusted communication channels for emergencies. Coordinate across agencies to ensure the accuracy and consistency of messaging.	Medium-term	Regional	★
P-18	Encourage more hospitals to join the South Florida Healthcare Resilience Collaborative.	Medium-term	Regional	
P-19	Conduct post-mortem assessments of prior events to identify effective practices. Leverage findings and data from completed or on-going resilience studies, research, and analyses through collaboration among businesses, universities, county, state, and federal agencies.	Medium-term	Regional	★

3.4 Response

Response is everyone's responsibility. Coordination and collaboration between the public and private sector are critical when responding to an emergency, particularly when some communities or areas of the region are impacted more than others. Table 3-4 consists of actions taken to protect personal safety and well-being during or immediately after a disaster when business and other operations do not function normally. In the stakeholder interview with Florida Power and Light, they noted their work with communities and local Emergency Operations Centers to ensure they have the right list of critical infrastructure facility priorities in the event of a disaster or major storm. The Palm Beach County Emergency Operations Center includes a seat for business/industry. A staff member from the Office of Equal Business Opportunity serves in that capacity; they engage with the business community during and following an event. While they typically focus on critical infrastructure, such as gas stations and grocery stores, they are interested in exploring how other businesses are impacted during a disaster. Actions resulting from the surveys, interviews, and stakeholder workshop follow below. Many of these actions should or must be accomplished in coordination and communication with the Palm Beach County Emergency Operation Center.

Table 3-4 Response Actions

ID	Response Actions	Timeframe Short-term: < 1 yr Medium-term: 1 – 3 yrs Long-term: 3 - 5 yrs	Recommended Lead	Potential PBN Chamber Role
RP-1	Coordinate between the Palm Beach County Emergency Operation Center and local governments to deploy first responders and mobile medical clinics where needed (rotating/fixed locations).	Short-term	Regional	
RP-2	Develop and deploy a method for tracking portable devices where most needed, including portable cell towers, charging stations, internet hotspots, and portable solar message boards and traffic lights. Consider existing mutual aid agreements for distributing emergency equipment.	Short-term	Regional	
RP-3	Encourage businesses to communicate with employees and provide support for emergency needs (immediate financial assistance/access to cash).	Short-term	Local	★
RP-4	Leverage businesses' remote working capabilities and operate according to their COOP during emergencies.	Short-term	Local	★
RP-5	Identify and leverage businesses' resources and capabilities to support community needs during emergencies.	Short-term	Local	★
RP-6	Use a real time repository to track and share resources available during events, including power, fuel, charging stations, open pharmacies, open ATMs, etc.	Medium-term	Regional	
RP-7	Deploy security plans and teams for emergency response resources and materials.	Medium-term	Local	
RP-8	Investigate approaches for legislative protection that enables residents or businesses to provide shelter for families of first responders or healthcare workers.	Medium-term	Regional	★

3.5 Recovery

Table 3-5 includes recovery strategies—efforts to address damage from an emergency event and restore normalcy. Plans and practices related to recovery were also an identified gap in the Inventory of Existing Resilience Plans and Policies Technical Memorandum (February 28, 2022).

Cleanup or debris removal is usually the first step toward recovery after an emergency event. If there is an evacuation, specific procedures for reentry should be developed after the evacuation order is lifted. This is especially important for business recovery. A real time repository of resources could help gauge when communities and businesses return to normal, such as availability of fuel, food, and power.

Post-disaster redevelopment plans should be created to provide guidelines for the transition from immediate disaster recovery to medium-term redevelopment and finally to a long-term stronger and more resilient

future. The plans should define a system to prioritize repairs and roadway clearances, considering both the criticality of infrastructure or services and the vulnerability and equity of communities. Recovery guidelines can also be created and distributed to assist residents and businesses with applying for recovery funds. The actions below address the gap in recovery plans and policies in the region.

Table 3-5 Recovery Actions

ID	Strategy	Timeframe Short-term: < 1 yr Medium-term: 1 – 3 yrs Long-term: 3 - 5 yrs	Recommended Lead	Potential PBN Chamber Role
RC-1	Coordinate with Solid Waste Authorities for post-emergency cleanup/debris removal. Identify essential employees needed to assist with business recovery using pre-established protocols.	Short-term	Local	
RC-2	Conduct assessment of damages and document all assessment costs with notes of degree of inspection reasonableness.	Short-term	Local	
RC-3	Create and post reentry letters for recovery.	Short-term	Local	
RC-4	Increase coordination between local governments and utility providers to assist with disaster recovery operations.	Short-term	Local	
RC-5	Use the real time repository of emergency equipment and resources to help gauge when communities and businesses return to normal, such as availability of fuel, food, power, etc.	Medium-term	Regional	
RC-6	Create post-disaster redevelopment plans.	Medium-term	Local	
RC-7	Define a system to prioritize repairs and roadway clearances.	Medium-term	Local	
RC-8	Develop guidelines and assist residents and businesses in applying for recovery funds.	Medium-term	Local	★
RC-9	Leverage investment and betterments with rebuilding to reduce vulnerability to future disasters.	Long-term	Local	

4.0 Roles and Responsibilities

4.1 Mitigation

Palm Beach County and local municipalities in the Palm Beach North region play key roles in mitigation. The county and municipal Local Government Comprehensive Plans and Comprehensive Emergency Management Plans provide policy framework for addressing impacts from potential natural and technological hazards. The county and municipalities could limit public expenditures in areas subject to destruction by natural disasters (especially within the coastal high hazard area) through their comprehensive planning and processing of development petitions (i.e., rezoning petitions, site plans), building permits, zoning and lot clearing ordinances, and the adoption of and amendments to the Florida Building Code. Municipalities could work with Palm Beach County to incorporate resilience considerations through project design, construction of

roads and bridges, and street improvements, which include stormwater drainage facilities within their jurisdiction. The county oversees the construction of capital projects (such as shoreline protection) as well as the long-term maintenance of County facilities (e.g., emergency operations center).

Reginal coordination is also important for mitigation. The Florida Division of Emergency Management mobilizes and coordinates the state's services and resources to support local and regional mitigation strategies. The South Florida Water Management District can provide guidance to address issues of water conservation, extreme drought, and flooding and leads programs that achieve hazard mitigation relative to flooding, hurricanes, and drought. The Treasure Coast Regional Planning Council usually leads effort to address multi-jurisdictional growth management issues and works in cooperation with federal and state agencies to plan for emergency management issues.

All regional and local agencies and entities should work together to increase public and private sector awareness and support for hazard mitigation. The Palm Beach North Chamber of Commerce can lead the effort to improve coordination between government agencies and the private sector, for example, to encourage businesses to review and provide inputs that refine the county's and municipalities' hazard and vulnerability analysis for the business community.

4.2 Preparedness

Municipalities in the Palm Beach North region lead their emergency preparedness efforts with support from Palm Beach County's Department of Emergency Management, including information sharing, exercises and training opportunities, and participation in local preparedness organizations, meetings, or workshops. The Palm Beach County Emergency Operations Center is typically responsible for establishing, staffing, and operating Point of Distributions within a municipality, or support requests by communities that would like to staff and/or operate a Point of Distribution within their jurisdiction. Municipalities are responsible for distributing informational materials to their citizens, coordinating media activities with the county's Emergency Operations Center pertaining to emergency preparedness, and identifying transportation needs for evacuation using mass transportation.

The Treasure Coast Regional Planning Council administers and implements planning, training, and exercise activities focused on preparedness and assists in developing Comprehensive Emergency Management Plans and COOPs. Economic resilience is a pillar in the Council's Comprehensive Economic Development Strategy. The Palm Beach Transportation Planning Agency includes measures in its 2045 Long Range Transportation Plan related to sea level rise and storm surge based on the 100-year floodplain, which focus on making infrastructure more resilient and adaptive. Transportation funds are prioritized to address these issues, and as projects are prioritized, points are awarded for projects that reduce the impact of sea level rise and annual flooding and improve evacuation routes.

The Palm Beach North Chamber of Commerce can lead the effort to inform and equip the business community to prepare for emergencies, such as using available guidance and resources to conduct self-assessments of cost and benefit for resilience investment and develop COOPs. The chamber could also lead on creating a vendor list and inventories of equipment and supplies for the region.

4.3 Response

Palm Beach County is a leader in emergency response and in partnership with municipalities, including threat recognition, warnings, and notifications to the public and responding organizations. During emergency events (e.g., hurricanes), the Florida Division of Emergency Management is the leader in coordinating state resources to support local governments, non-profit organizations, and private sector entities for emergency response; it is responsible for emergency response for multi-jurisdictional hazards or when the emergency is beyond the capabilities of local governments and their resources. The division also serves as the liaison between each municipality and the State Emergency Operations Center. In addition, Palm Beach County Fire Rescue provides emergency medical services throughout the county, and the Palm Beach County Sheriff's Office is responsible for traffic control during emergency events.

Municipalities are responsible for coordinating and collaborating with the Palm Beach County Emergency Operations Center prior to the announcement and implementation of a municipal declaration of a state of local emergency to enable accurate and consistent countywide communication. Each municipality is responsible for dispatching emergency services, identifying a primary liaison and an alternate to serve as the municipality's emergency management representative to the county's Emergency Operations Center, providing regular situational updates, and submitting mission requests and requests for resources. Municipalities usually oversee emergency equipment purchases, leases, and resource tracking.

The Palm Beach North Chamber of Commerce can serve as a liaison among public and private sectors by assisting businesses with their emergency response activities and leveraging business resources and capabilities to support community needs during emergency events.

4.4 Recovery

Municipalities coordinate with the Palm Beach County Emergency Operations Center prior to the announcement and implementation of re-entry orders. Each municipality is responsible for debris removal and disposal, preliminary damage assessment, establishing Disaster Recovery Centers if requested, and restoring infrastructure within their jurisdiction. Palm Beach County, the Florida Division of Emergency Management, and Federal Emergency Management Agency aid, as needed.

There are many resources at the federal, state, county, and local level to help with community and business restoration and recovery efforts. The Palm Beach North Chamber of Commerce could work with municipalities to evaluate available recovery resources, identify gaps and challenges, develop strategies to fill gaps, and provide guidance and assistance to help communities and business owners obtain recovery funds.

5.0 Next Steps

Developing the Palm Beach North Disaster Resilience Plan highlighted many opportunities for the local governments and businesses in the Palm Beach North region to work together to build the region's resilience. While actions, timeframes, and roles are noted above, there are steps the Palm Beach North Chamber of Commerce, local governments, and businesses in the region should undertake to begin moving this plan forward. These include the following:

- Continue regularly scheduled meetings (e.g., quarterly) of the Palm Beach North Disaster Resiliency Task Force to coordinate efforts and oversee implementation of the plan, with an annual status meeting to evaluate progress toward plan implementation and make decisions on major action items.

- Identify a champion or organization to lead each strategy in the action plan, including their names, roles, and responsibilities.

- Commit resources to plan implementation and seek grants and other available resilience-related funding opportunities to support resilience planning, development, education, and training activities.

- Review, prioritize, and initiate the short-term actions identified in the tables above, such as creating Community Emergency Response Teams.

- Begin additional analyses or research. The initial analysis of potential vulnerabilities and risks was preliminary and based on data that was available and easily accessible. Additional analyses for other risks identified in the survey results, including public health and technology, should be conducted to identify actions that help residents and businesses to prepare for, respond to, and recover from these hazards.

- Develop performance metrics or indicators linked to the actions to monitor implementation and evaluate the success of this initial phase.

- Seek opportunities to promote the Disaster Resilience Plan and implementation efforts, beginning with an invitation to Florida's Chief Resilience Officer to attend a meeting of the Palm Beach North Chamber of Commerce.

Finally, this Action Plan is only an initial step toward a broader and more comprehensive process of building resilience in the Palm Beach North region. Updating the plan every five years will provide an opportunity to refresh and evaluate new data, assess the relevancy of the strategies based on the data, identify new strategies where needed, and measure progress toward building resilience in the region.

PALM BEACH NORTH
CHAMBER OF COMMERCE

Palm Beach North Disaster Resiliency Task Force

Meeting #4

May 9, 2022

Join Zoom Meeting
Meeting ID: 867 9567 7069; Passcode: 209286
(Dial in Alternative: + 16468769923, 86795677069#)

Objective

- Receive feedback from the Task Force on the draft Palm Beach North Resilience Action Plan

Time	Topic	Presenter/Facilitator
2:00 pm	Welcome, Introductions, and Meeting Objective	Noel Martinez, President & CEO, Palm Beach North Chamber of Commerce
2:10 pm	Draft Palm Beach North Resilience Action Plan • Facilitated Discussion	Sheri Coven, Cambridge Systematics
3:20 pm	General Discussion and Concluding Comments	Noel Martinez, President & CEO, Palm Beach North Chamber of Commerce
3:30 pm	Adjourn	

Palm Beach North Chamber of Commerce

Disaster Resiliency Task Force Meeting
May 9, 2022

Welcome and Introductions

Noel Martinez (Palm Beach North Chamber of Commerce) welcomed attendees.

Attendees: (15)

Name	Organization	Attendance
Task Force Members		
Chip Armstrong	Armstrong Group	X
David Markarian	Markarian Group	
John Carr	R&R Industries	X
John Curd	City of Riviera Beach Fire Rescue	X
John D'Agostino	Town of Lake Park	X
Judy Jones	Village of Tequesta	
Kevin Dalton	Unlimited Car Wash	
Kevin Lucas	Town of Jupiter Inlet Colony	
Mark Smith	GHP	X
Matt Moxley	FPL	
Michael Barbera	Town of Jupiter	X
Noel Martinez	PBN Chamber of Commerce	X
Orlando Rodriguez	Town of Palm Beach Shores	
Regina Jenkins	Village of North Palm Beach	X
Rick Murrell	Tropical Shipping	X
Stephanie Mitrione	FPL	
Steve Hallock	Town of Juno Beach	
Steve Stepp and David Reyes	City of Palm Beach Gardens	X
Victor Martin	North County Neighborhood Coalition	X
Jennifer Nunget-Hill		
Mark Johnson		X
Kathleen Dempsey	PBN Chamber of Commerce	
John Kaliski	Cambridge Systematics	X
Kensington Little	Cambridge Systematics	X
Sheri Coven	Cambridge Systematics	X
Yingfei Huang	Cambridge Systematics	X

Meeting Purpose

The meeting purpose was to review the list of actions in the draft Palm Beach North Resilience Action Plan. Sheri Coven (Cambridge Systematics) facilitated the discussion.

Action Item Review

Cross-Cutting Actions

Sheri explained that the cross-cutting actions, shown in the table below, applied to all phases of emergency management. Participants did not have any comments regarding these actions.

ID	Cross-Cutting Actions	Timeframe	Recommended Lead	Potential PBN Chamber Role
1	Establish resilience goals and objectives for the Palm Beach North region.	Short-term	Regional	★
2	Incorporate resilience goals and objectives into the planning process, plans, and functions of government agencies and business communities.	Long-term	Regional	★
3	Develop resilience performance metrics/indicators for public and private critical infrastructure linked to goals, timing, and strategies to monitor adaptation and mitigation progress and evaluate success.	Short-term	Regional	★
4	Promote leadership, education and empowerment in government, community, and business organizations to identify roles and responsibilities for developing and implementing resilience policies and strategies.	Short-term	Regional	★
5	Create a community flyer/guide with key information listed for emergencies, including shelter locations, evacuation routes/directions, emergency hotlines/contacts, websites/radio channels/other ways to stay informed, etc., and make it easily accessible to residents and businesses in both digital and non-digital formats.	Short-term	Regional	★
6	Establish a Community Emergency Response Team (CERT) to facilitate emergency preparedness and take response actions until the professional responders arrives.	Short-Term	Local	★

Mitigation Actions

Sheri explained that the mitigation actions, shown in the table below, prevent or reduce the cause, impact, and consequences of disasters.

ID	Mitigation Action	Timeframe	Lead	Potential PBN Chamber Role
M-1	Conduct vulnerability and risk assessments and develop measurements of vulnerability and risks for critical infrastructure and businesses.	Short-term	Regional	★
M-2	Incorporate mitigation plans and ordinances improvement for infrastructure in planning and construction, specify actions to be taken immediately to be prepared for the near future and keep options open to adapt if needed (Dynamic Adaptive Pathway Planning).	Medium-term	Regional	★

ID	Mitigation Action	Timeframe	Lead	Potential PBN Chamber Role
M-3	Consider the projected impact of climate change and extreme climate events when planning for future infrastructure and businesses. For example, determine roadway elevation based on projected flood elevation over its useful life.	Medium-term	Regional	★
M-4	Develop aged building inspection guidelines. Improve building codes for renovation and construction in coastal and flood prone areas and exceed building codes where deemed necessary locally.	Medium-term	Regional	
M-5	Harden/bury electricity, broadband, other utility lines, and close broadband gaps in the region.	Medium-term	Regional	
M-6	Harden public infrastructure and private buildings against sea level rise and extreme climate events, using heat resistant materials, low-impact design, green infrastructure, (such as permeable pavement and bio swales), and nature-based features for future infrastructure when possible. Prioritize low and moderate-income communities for resilience investments.	Medium-term	Local	★
M-7	Improve and maintain drainage systems.	Medium-term	Local	
M-8	Implement strategies to improve cybersecurity, such as providing trainings for employees to establish basic security practices, backing up critical business or personal data, and installing firewall security for Internet connections.	Medium-term	Local	★
M-9	Build sea walls/protection barriers for coastal cities.	Long-term	Regional	
M-10	Apply strategies to mitigate climate change, such as preserve natural areas, adopt renewable energy, employ carbon sequestration strategies, or build with natural based features that restore or protect ecosystem.	Long-term	Regional	★
M-11	Discuss corporate social responsibility for climate change and encourage good practice to offset their emissions through environmental-friendly actions and measured improvement in air quality.	Long-term	Regional	★

The following comments were offered:

- Include the timeframes (short-term: < one year, medium-term: 1 – 3 years, long-term: 3 – 5 years), in the header for each table.
- Amend Action M-1 to clarify that a mitigation strategy and vulnerability assessments are needed at the regional level, which build off existing local government vulnerability assessments to avoid duplication of work. This will support and drive access to funding opportunities for both businesses and communities.

Preparedness Actions

Sheri explained that the preparedness actions, shown in the table below, include planning, training, and educational activities for events that cannot be mitigated.

ID	Preparedness Action	Timeframe	Lead	Potential PBN Chamber Role
P-1	Conduct or use available comprehensive vulnerability and risk assessments to assess the impact of potential natural or human-caused hazards on residents and visitors, infrastructure, business operations, the environment, and other aspects of the Palm Beach North region.	Short-Term	Regional	
P-2	Conduct future analysis for risks related to public health and technology, identify strategies, and promote educational materials or training programs to help residents and businesses to prepare for, response to, and recovery from potential public health and technology related hazards.	Short-Term	Regional	
P-3	Update/expand emergency preparedness plans with measurement, goals and timing to create shared responsibility among government, businesses, and residents.	Short-term	Regional	★
P-4	Conduct public outreach and education programs on emergency preparedness for residents and businesses, especially underserved and high-risk communities.	Short-term	Local	★
P-5	Encourage residents to develop household preparedness plans, such as purchasing/maintaining hazard insurance, preparing generators, charging devices/battery storage, keeping emergency cash on hand, and backing up passwords and financial records.	Short-term	Local	★
P-6	Encourage businesses to develop Continuity of Operation Plans (COOPs). Investigate approaches to mandate/incentivize power/broadband backup system for essential businesses, such as banks, pharmacies, food stores, and gas stations.	Short-term	Local	★
P-7	Provide tools for residents and businesses to evaluate the cost and benefit of resilience investment.	Short-term	Local	★
P-8	Conduct emergency trainings and drills, including FEMA on-line trainings and pre-event and post-event exercises. Ensure that all public sector leadership has been adequately trained on duties and management with annual signed off training required by the EOC.	Short-term	Local	
P-9	Stockpile critical equipment and supplies, including water, common medicines, medical supplies, portable generators, cell towers, charging stations, cyber-cafés, Dynamic Message Signs, etc. Pre-position staff and resources to shelters and Point of Distribution (POD) locations and inform the public prior to an event.	Short-term	Local	★
P-10	Coordinate purchasing or sharing of equipment and supplies during emergencies.	Short-term	Regional	★
P-11	Develop a repository to track critical equipment and supplies across the region during emergencies.	Medium-term	Regional	★
P-12	Develop agreements to streamline/expedite purchasing of equipment and supplies during emergencies (e.g., reduce number of bids required).	Short-term	Regional	★

P-13	Plan for traffic safety/control for post-extreme weather events, establish pre-defined maintenance of traffic (MOT) and contingencies for major thoroughfares.	Short-term	Regional	
P-14	Maintain points of contact for communities and/or Homeowners Associations. Investigate approach or develop agreement and legislative protection to enable Homeowners Associations' ability to enter homes for response and rescue in a master planned community.	Short-term	Local	★
P-15	Develop communication plans with multiple ways of communication (digital, non-digital, social media) among Emergency Operation Centers, state, county, municipalities, and private entities. Make people award trusted communication channels for emergencies.	Medium-term	Regional	★
P-16	Encourage more hospitals to join the South Florida Healthcare Resilience Collaborative.	Medium-term	Regional	
P-17	Conduct post-mortem assessments of prior events to identify effective practices. Leverage findings and data from completed or on-going resilience studies, research, and analyses through collaboration among businesses, universities, county, state, and federal agencies.	Medium-term	Regional	★

The following comments were offered:

- Action P-1 should clarify that assessments will also include municipalities and the private/public sector. The inclusion of municipalities and the private/public sector should be reflected throughout the plan.
- Replace "tools" with "resources" in Action P-7, and provide clarity on what is meant by resources, for example, methodologies, online resources, etc.
- Replace "Stockpile" with "Ensure ready availability" in Action P-9.
- Action P-15 should consider how information will be broadcasted if there is a total loss of electric power. The action should consider the use of Ham radios, how to identify and locate operators of Ham radios, the capabilities of satellite phones, and the yachting/vessel community, as boat operators tend to have satellite phone capabilities. The action should also address the need for coordinated efforts among messaging to ensure accuracy and consistency.

Response Actions

Sheri explained that the response actions, shown in the table below, focus on coordination and collaboration between the public and private sector when responding to an emergency, noting that response is everyone's responsibility.

ID	Response Action	Timeframe	Lead	Potential PBN Chamber Role
RP-1	Deploy first responders and mobile medical clinics where needed (rotating/fixed locations).	Short-term	Regional	
RP-2	Deploy and develop a method for tracking portable devices where most needed, including portable cell towers, charging stations, internet hotspots, and portable solar message board and traffic lights.	Short-term	Regional	

RP-3	Encourage businesses to communicate with employees and provide support for emergency needs (immediate financial assistance/access to cash).	Short-term	Local	★
RP-4	Leverage businesses' remote working capabilities and operate according to their COOP during emergencies.	Short-term	Local	★
RP-5	Leverage businesses' resources and capabilities to support community needs during emergencies.	Short-term	Local	★
RP-6	Use real time repository to track and share resources availability during events, including power, fuel, charging stations, open pharmacies, open ATMs, etc.	Medium-term	Regional	
RP-7	Deploy security plans and teams for emergency response resources and materials.	Medium-term	Local	

The following comments were offered:

- Overall coordination and communication with the Palm Beach County Emergency Operations Center is the first step toward accomplishing many of the response actions. The narrative in the draft plan that precedes this table should reflect this. Consider utilizing existing mutual aid agreements for distributing emergency equipment, which would be coordinated with the Palm Beach County Emergency Operations Center.
- Action RP-1 should clarify who is responsible for deploying first responders and mobile medical clinics. The responsible party is usually the county Emergency Operations Center in coordination with the municipalities.
- Action RP-5 should clarify that communities must have knowledge of what resources are available to them and how the businesses community can be helpful to them during emergencies. There is also an opportunity to tie this action into preparedness efforts.
- Add an action to address caring for/sheltering the families of critical first responders (e.g., Good Samaritan Bill).

Recovery Actions

Sheri explained that the recovery actions, shown in the table below, are efforts to address damage from an emergency event and restore normalcy.

ID	Recovery Action	Timeframe	Lead	Potential PBN Chamber Role
RC-1	Establish recovery teams for immediate deployment for post-emergency cleanup/debris removal.	Short-term	Local	
RC-2	Create and post reentry letters for recovery.	Short-term	Local	
RC-3	Use the real time repository of emergency equipment and resources to help gauge when communities and businesses return to normal, such as availability of fuel, food, power, etc.	Medium-term	Regional	
RC-4	Create post-disaster redevelopment plans.	Medium-term	Local	
RC-5	Define a system to prioritize repairs and roadway clearances.	Medium-term	Local	
RC-6	Develop guidelines and provide assistance to residents and businesses that need to apply for recovery funds.	Medium-term	Local	★

RC-7	Leverage investment and betterments with rebuilding to reduce vulnerability to future disasters.	Long-term	Local	

The following comments were offered:

- Regarding Action RC-1, it was noted that most municipalities have existing contracts through their solid waste authority for debris removal. Protocols are established at the FEMA level to identify essential employees needed to assist with business recovery. This action will be extremely critical to creating resilience.
- Action RC-2 is necessary for all businesses, yet not all businesses comply.
- Add an action to address the need for accurate assessment of damages (to life, safety, and property), the degree of reasonableness in terms of inspections, and mention that all assessment costs must be collected, aggregated, and documented.

Moving Forward

John Kaliski (Cambridge Systematics) thanked everyone for their support and asked the Task Force members to briefly review and provide feedback on the bullets listed under the Moving Forward section of the plan.

Participants offered the following comments:

- The second bullet "Help businesses develop remote work contingency plans and other resources to assist during pandemics, such as guides related to telework" should include natural disasters, not just pandemics.
- A next step should include inviting the state's Chief Resilience Officer to a meeting of the Palm Beach North Chamber of Commerce.
- Add a bullet to include identification of funding and grant resources as a next step.

John encouraged the Task Force members to review the plan in its entirety.

Next Steps

Noel Martinez (Palm Beach North Chamber of Commerce) reminded the group that feedback and comments on the draft plan are due by Friday, May 13th. He asked Sheri to email the draft plan with her notes to the Task Force members following the meeting along with a link to the Lake Park Seawall Assessment.