Southeastern NC Regional

Hazard Mitigation Plan

Adopted by Brunswick County Board of Commissioners: April 4, 2016
Adopted by New Hanover County Board of Commissioners: June 20, 2016
Adopted by Pender County Board of Commissioners: April 18, 2016
Approved by Federal Emergency Management Agency: April 26, 2016

HOLLAND CONSULTING PLANNERS

U.S. Department of Homeland Security
FEMA Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

April 26, 2016

Mr. Chris Crew
State Hazard Mitigation Officer
North Carolina Division of Emergency Management
4238 Mail Service Center
Raleigh, North Carolina 27699

Reference: Southeastern NC Regional Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew:

We are pleased to inform you that the Southeastern NC Regional Multi-jurisdictional Hazard Mitigation Plan is in compliance with the Federal hazard mitigation planning requirements resulting from the Disaster Mitigation Act of 2000, as contained in 44 CFR 201.6. The plan is approved for a period of five (5) years, to April 25, 2021.

This plan approval extends to the following participating jurisdictions that provided copies of their resolutions adopting the plan:

- Brunswick County, Unincorporated
- Town of Belville
- Town of Carolina Shores
- Town of Shallotte
- Town of Watha
- Town of Wrightsville Beach

The approved participating jurisdictions are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

We commend the participants in the Southeastern NC Regional plan for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years. We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development. When the plan is amended or revised, it must be resubmitted through the State as a "plan update" and is subject to a formal review and approval process by our office. If the plan is not updated prior to the required five (5) year update, please ensure that the draft update is submitted at least six (6) months prior to expiration of this plan.

The State and the participants in the Southeastern NC Regional plan should be commended for their close coordination and communications with our office in the review and subsequent approval of the plan. If you or the Southeastern NC Regional community have any questions or need any additional information please do not hesitate to contact Shemeeka Hopkins, of the Hazard Mitigation Assistance Branch at (770) 220-8788 or Linda L. Byers of my staff at (770) 220-5498.

Sincerely,

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

U.S. Department of Homeland Security
FEMA Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

May 13, 2016

Mr. Chris Crew
State Hazard Mitigation Officer
North Carolina Division of Emergency Management
4238 Mail Service Center
Raleigh, North Carolina 27699

Reference: Southeastern Regional NC Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew:

This is a follow-up to our previous correspondence of April 26, 2016, in which we approved the Southeastern Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following adoption resolutions for inclusion within this plan and subsequently have approved these communities under the approved Southeastern Regional Multi-jurisdictional Hazard Mitigation Plan:

- City of Northwest
- City of Southport
- Town of Bolivia
- Town of Carolina Beach
- Town of Caswell Beach
- Town of Kure Beach
- Town of Leland
- Town of Oak Island
- Town of Ocean Isle Beach
- Town of Sandy Creek
- Town of St. James
- Town of Varnamtown
- Village of Bald Head Island

The approved participating communities are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

We continue to commend the additional participants in the Southeastern Regional Multi-jurisdictional Hazard Mitigation Plan for the development of a solid, workable plan that will guide hazard mitigation activities over the coming years. Please note that all requests for funding will be evaluated individually according to the specific eligibility and other requirements of the particular program under which the application is submitted. For example, a specific mitigation activity or project identified in the plan may not meet the eligibility requirements for FEMA funding, and even eligible mitigation activities are not automatically approved for FEMA funding under any of the aforementioned programs.

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If you or the participants in the Southeastern Regional Multi-jurisdictional Hazard Mitigation Plan have any questions or need any additional information please do not hesitate to contact Shemeeka Hopkins of the Hazard Mitigation Assistance Branch, at (770) 220-8788 or Linda L. Byers of my staff at (770) 220-5498.

Sincerely,

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

U.S. Department of Homeland Security
FEMA Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

June 1, 2016

Mr. Chris Crew
State Hazard Mitigation Officer
North Carolina Division of Emergency Management
4238 Mail Service Center
Raleigh, North Carolina 27699

Reference: Southeastern Regional NC Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew:

This is a follow-up to our previous correspondence of April 26, 2016, in which we approved the Southeastern Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following adoption resolution for inclusion within this plan and subsequently have approved the community under the approved Southeastern Regional Multi-jurisdictional Hazard Mitigation Plan:

- City of Boiling Springs Lakes

The approved participating community is hereby an eligible applicant through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

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Sincerely,

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

U.S. Department of Homeland Security
FEMA Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

June 23, 2016

Mr. Chris Crew
State Hazard Mitigation Officer
North Carolina Division of Emergency Management
4238 Mail Service Center
Raleigh, North Carolina 27699

Reference: Southeastern Regional NC Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew:

This is a follow-up to our previous correspondence of April 26, 2016, in which we approved the Southeastern Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following adoption resolution for inclusion within this plan and subsequently have approved the community under the approved Southeastern Regional Multi-jurisdictional Hazard Mitigation Plan:

- Town of Calabash
- Town of Navassa
- Town of Surf City
- City of Wilmington
- New Hanover County, Unincorporated

The approved participating communities are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

National Flood Insurance Program (NFIP) participation is required for some programs.

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Sincerely,

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

U.S. Department of Homeland Security
FEMA Region IV
3003 Chamblee Tucker Road
Atlanta, GA 30341

FEMA

August 15, 2016

Mr. Chris Crew
State Hazard Mitigation Officer
North Carolina Division of Emergency Management
4238 Mail Service Center
Raleigh, North Carolina 27699

Reference: Southeastern Regional NC Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew:

This is a follow-up to our previous correspondence of April 26, 2016, in which we approved the Southeastern Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following adoption resolution for inclusion within this plan and subsequently have approved the community under the approved Southeastern Regional Multi-jurisdictional Hazard Mitigation Plan:

- Town of Holden Beach
- Pender County, Unincorporated
- Town of Sunset Beach
- Village of St. Helena

The approved participating communities are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Flood Mitigation Assistance (FMA)

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Sincerely,

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

U.S. Department of Homeland Security
FEMA Region IV
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Atlanta, GA 30341

FEMA

September 23, 2016

Mr. Chris Crew
State Hazard Mitigation Officer
North Carolina Division of Emergency Management
4238 Mail Service Center
Raleigh, North Carolina 27699

Reference: Southeastern Regional NC Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew:

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- Town of Burgaw
- Town of Atkinson
- Town of Topsail

The approved participating communities are hereby eligible applicants through the State for the following mitigation grant programs administered by the Federal Emergency Management Agency (FEMA):

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
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Sincerely,

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

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SECTION 1.

INTRODUCTION AND PLANNING PROCESS

INTRODUCTION

When a major natural event strikes our built environment, it is deemed a "natural disaster." Hazard mitigation is simply about preventing natural disasters. The idea of preventing natural disasters at first seems counterintuitive if not impossible. We certainly cannot prevent natural events, like hurricanes and tornados. Yet the impacts of natural events – who and what gets hurt – are largely determined by what, where, and how we build and function. Thus, some impacts of natural hazards on our population, and economic, social, and physical environment are, in the bigger picture, self-inflicted. As citizens and local government entities, we have not inherited a perfectly planned and resilient community. Thus, we must assess current vulnerabilities resulting from past decisions relating to development design and location, in an effort to reduce the harmful impacts of natural, and in some cases, man-made hazards.

North Carolina Emergency Management summarizes hazard mitigation as follows:

> "Hazard mitigation involves the use of specific measures to reduce the impact of hazards on people and the built environment. Measures may include both structural and non-structural techniques, such as protecting buildings and infrastructure from the forces of nature or wise floodplain management practices. Actions may be taken to protect both existing and/or future development. It is widely accepted that the most effective mitigation measures are implemented before an event at the local government level, where decisions on the regulation and control of development are ultimately made."

SOUTHEASTERN NC REGION

A regional hazard mitigation plan is classified by the Federal Emergency Management Agency (FEMA) as any mitigation planning effort involving two or more county jurisdictions. This Hazard Mitigation Plan (HMP) involves a three-county region including Brunswick, New Hanover, and Pender Counties. All the municipalities within the three counties are also participants in this plan, including Atkinson, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Burgaw, Calabash, Carolina Beach, Carolina Shores, Caswell Beach, Holden Beach, Kure Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Saint Helena, Sandy Creek, Shallotte, Southport, St. James, Surf City, Sunset Beach, Topsail Beach, Varnamtown, Watha, Wilmington, and Wrightsville Beach. Once completed and certified by FEMA, this document will replace all mitigation planning documents previously adopted by any of the participating jurisdictions. This Regional HMP is being developed as a new document. The planning process and format is being developed in a manner that will facilitate future updates and implementation at the regional scale.

Brunswick, New Hanover, and Pender Counties each maintain a Local Emergency Planning Committee. The Local Emergency Planning Committees (LEPC) are federally mandated entities composed of state and local officials, business representatives and members of the press. The role of the LEPC is to form a partnership with local governments and industries as a resource for enhancing hazardous materials preparedness. This includes incorporating planning for hazmat incidents into the local emergency management plan and annexes; assessing capabilities and developing hazmat response capability using local resources, mutual aid and contractors; training responders; and exercising the plan.

Incorporation of the LEPCs into the planning process will assist the Regional MAC in working through the development of regional mitigation strategies. Ultimately, Pender County will function as lead agency in the development of a plan that will serve the mitigation needs of all participating counties. Pender County was charged with dealing administratively with all grant program requirements; however, all jurisdictions will be addressed equally through the development of this plan.

HAZARD MITIGATION LEGISLATION

In the early 1990s, a new federal policy regarding disasters began to evolve. Rather than simply reacting whenever disasters strike communities, the federal government would encourage communities to first assess their vulnerability to various disasters, and then take actions to reduce or eliminate potential risks. The logic is simply that a disaster-resistant community can rebound from a natural disaster with less loss of property or human injury, at much lower cost, and consequently more quickly. Moreover, other costs associated with disasters, such as the time lost from productive activity by businesses and industries, are minimized.

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Pub. Law 93-288, as amended) embodies this new philosophy. Section 409 of the Stafford Act sets forth the requirements that communities evaluate natural hazards within their respective jurisdictions and develop an appropriate plan of action to mitigate those hazards.

The amended Stafford Act requires that the community identify potential hazards to the health, safety and well-being of its residents and identify and prioritize actions that can be taken by the community to mitigate those hazards – before disaster strikes. For communities to remain eligible for hazard mitigation assistance from the federal government, they must first prepare a hazard mitigation plan (this plan). These plans may be developed at the municipal, county, or regional level.

Responsibility for fulfilling the requirements of Section 409 of the Stafford Act and administering the FEMA Hazard Mitigation Program, as outlined in the Code of Federal Regulations (44 CFR 206.405), has been delegated to the State of North Carolina, specifically to the North Carolina Division of Emergency Management (NCEM).

The Disaster Mitigation Act of 2000 (DMA 2K) amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the Act) by repealing the previous mitigation planning provisions (Section 409) and replacing them with a new set of mitigation plan requirements (Section 322). This new section emphasizes the need for state, tribal, and local entities to closely coordinate mitigation planning and implementation efforts.

On July 1, 2008, FEMA issued a revised version of the Local Multi-Hazard Mitigation Planning Guidance ("Blue Book"), which is the standard utilized for preparation of this plan. Among the most significant changes in the planning guidelines reflected in this update are: 1) estimation of the numbers and types of structures that have experienced repetitive flood losses; 2) identification of actions to ensure continued local compliance with the National Flood Insurance Program (NFIP); and 3) integration of Community Rating System (CRS) planning initiatives with the overall hazard mitigation planning process.

WHAT IS HAZARD MITIGATION AND WHY IS IT IMPORTANT TO THE REGION?

What is Hazard Mitigation?

Hazard mitigation is the practice of reducing risks to people and property from natural disasters. Hazard mitigation involves recognizing and adapting to natural forces, and is defined by FEMA as any sustained action taken to reduce long-term risk to human life and property from natural hazards. A fundamental premise of hazard mitigation is that current dollars invested in mitigation will significantly reduce the demand for future expenditures by reducing the extent of emergency recovering, repair, and reconstruction following a disaster.

Why is Hazard Mitigation Important to the Southeastern NC Region?

The Southeastern NC Regional Hazard Mitigation Plan (HMP) is being completed to attain the following goals:

- Work to improve existing local government policies and codes to reduce the impacts of natural hazards.
- Design and implement specific mitigation measures to protect vulnerable public and private properties.
- Increase the protection of critical facilities and infrastructure from hazard threats through retrofit projects for existing facilities and innovative design standards for new facilities.
- Enhance public education programs to promote community awareness of natural hazards and the hazard mitigation techniques available to reduce their impact.
- Improve stormwater management through enhanced local government programs, policies, and practices.
- Enhance each county's storm evacuation procedures through increased intergovernmental coordination between the Counties, the participating municipalities, and the State of North Carolina.
- Increase the County's emergency management capabilities through sustained system and technology improvements.
- Promote volunteer involvement in emergency preparedness and response through increased citizen awareness and training activities.

These goals were developed through discussions with the Regional Mitigation Advisory Committee (MAC) and served as the foundation for the development of regional and local strategies outlined within Section 6 of the plan.

Hazard mitigation planning is intended to construct a framework for the prevention and reaction to disasters if and when they may occur. The framework created by this plan will help to instill an ongoing effort to lessen the impact that disasters have on citizens and property throughout the region. There are many aspects of mitigation planning that cannot be addressed at the regional level. In order to address this issue, this plan will outline strategies that will address both regional mitigation initiatives and strategies that serve the needs of each individual participating jurisdiction.

PLAN FORMAT

In developing this plan, including all strategic initiatives and policy statements, the following factors were taken into account:

- The strategy will improve upon the region's participation and role in the National Flood Insurance Program; and
- The policy meets at least one community mitigation goal; and
- The policy complies with all laws and regulations; and
- The policy is cost-beneficial; and
- The community implementing the policy has (or will have) the capability to do so; and
- The policy is environmentally sound; and
- The policy is technically feasible.

The plan format is presented in a manner that the MAC feels best represents the current situation within the region, as well as each participating jurisdiction. In developing this plan, the Southeastern NC Region has been viewed as a single entity; however, when necessary, a detailed overview of county and municipal data is provided.

The plan content is organized as follows:

Section 1. Introduction
This section of the HMP update provides the purpose of the plan, acknowledges the participants in the planning process, describes the planning process, and reviews the citizen participation and adoption process for the HMP.

Section 2. Regional Profile
This section of the HMP update outlines the existing conditions throughout the Region and the participating jurisdictions. These overviews address the following existing conditions: history, demographics, topography, climate, and other general information regarding the community. The detailed profiles provided within this section address each county independently.

Section 3. Hazard Identification and Analysis

This section of the HMP update provides relevant data and narrative descriptions of natural hazards that impact the Southeastern NC Region. The information within this section is based on interviews with local officials and on public data sources such as the National Climatic Data Center and FEMA. Throughout this section the Southeastern NC Region is addressed as a single entity. The hazards identified and discussed within this section generally impact each individual county equally. Thus, the weather history and likelihood of occurrence data has been presented at the regional scale.

Section 4. Community Capability Assessment

This section of the HMP update provides an assessment of each community's current hazard mitigation practices, as well as its potential to engage in mitigation activities. This section provides an overview of both regional and local mechanisms available to key decision makers. All participating jurisdictions within this plan have been addressed within this plan's capability review. The following is addressed for each county and municipal government participating in this planning effort: administrative capabilities, infrastructure policies (when applicable), land development controls, and existing local and state policy programs.

Section 5. Vulnerability Assessment

This section of the HMP update identifies specific locations throughout the Southeastern NC Region that are vulnerable to natural hazards through narrative, data, and maps. The vulnerability assessment looks at each county independently. This approach was taken due to differences in data which may exist between each individual county. In working through this assessment, the best available data was utilized to conduct a vulnerability assessment that will give an indication of existing and future "at-risk" development within each participating jurisdiction.

Section 6. Mitigation Goals, Objectives, and Strategies

This section of the HMP identifies local/regional goals, objectives, and specific strategies which will respond to identified mitigation needs by completing the following steps:

- Identifying policies to carry out the mitigation strategies
- Creating an action plan for the mitigation strategies
- Prioritizing the policies
- Identifying funding sources
- Assigning implementation responsibilities

Strategies have been developed to address both regional and local needs. In developing this plan, it was determined that although this is a regional planning effort, some mitigation efforts are carried out at the county and/or municipal level. Due to this distinction, a wide range of implementation strategies are provided ranging from very broad (regional) to very specific (local project specific strategies). All strategies specific to a participating county or municipal jurisdiction were developed through County specific MAC meetings.

Section 7. Monitoring, Evaluating and Reporting Progress
This section of the HMP provides procedures for ongoing monitoring and evaluation after the HMP is adopted by each community's governing body, NCEM, and FEMA. Additionally, this section outlines procedures to ensure that an annual evaluation report is prepared and appropriate revisions and updates of the plan are completed.

Appendices
These sections present supporting documentation as outlined within the plan. All maps referenced throughout the HMP will be included in Appendix A.

INCORPORATION OF EXISTING PLANS, STUDIES, AND REPORTS

Each jurisdiction participating in this plan has a wide range of existing policy and regulatory documents to assist in the preparation of the Hazard Mitigation Plan. Information from each respective county's Comprehensive Plan, Zoning/Subdivision Ordinance (where applicable), and Flood Damage Prevention Ordinance were instrumental in compiling information presented in this plan. Additionally, the Southeastern NC Region has recently participated in several regional planning efforts including the FOCUS project, a regional plan for sustainable development. Through implementation of this plan, each participating jurisdiction will continue to reference these documents in an effort to carry out an effective mitigation program at both the local and regional level.

PLANNING PROCESS

In 2014, Pender County applied for and received a $64,999.25 Pre-Disaster Mitigation (PDM) Program grant through the North Carolina Division of Emergency Management (NCEM) for the Southeastern NC Region. NCEM approved the county's grant application and the hazard mitigation planning process began. Upon receipt of the aforementioned PDM grant, primary responsibility for development of the Southeastern NC Regional Hazard Mitigation Plan was placed in the hands of the Planning Directors and/or Emergency Management Directors for Pender, New Hanover, and Brunswick Counties.

In 2015, Pender County procured the services of Holland Consulting Planners, Inc., (HCP) of Wilmington, North Carolina, to assist in the development of a comprehensive Hazard Mitigation Plan Update for the three-county region.

Subsequent to establishing a work authorization with the planning consultant, Pender County called an initial scoping meeting with the project consultant and regional stakeholders. This meeting involved a general discussion of how the project should be carried out, including establishing a Regional Mitigation Advisory Committee (MAC) to oversee plan development.

Through discussions at the initial meeting, it was determined that the best approach to dealing with this effort would be to establish a Regional MAC, while still maintaining the presence and membership of each individual County MAC. The Regional MAC was charged with developing the overall document and establishing regional strategies. All Regional MAC meetings are open to the public, including the MAC

members of each individual county jurisdiction. Each County MAC was charged with addressing the needs of their respective county, and was responsible for reviewing the draft and identifying any gaps, errors, and/or omissions.

Dealing with natural hazards and disasters is rarely the responsibility of one employee or official in any community. Rather, it is a team effort, often comprised of representatives from administration, planning/zoning, public works, fire/police, and other departments. These various interests are represented on each County MAC in order to efficiently address this "multi-disciplinary" aspect of hazard mitigation.

County MAC members were charged with the responsibility of working through the development of local strategies, and assisting the consultant through compiling the information, input, and background required to develop the overall regional plan. The following provides a listing of the County and Regional MAC members that participated in the 2015 plan update process. Additional stakeholders who attended County and Regional MAC meetings are included in Appendix B.

Brunswick County Mitigation Advisory Committee	
MAC Member	**Jurisdiction/Agency**
Marc Pagès, Land Planner	Brunswick County Planning Department
Chris McCall, Assistant Village Manager/Shoreline Erosion Specialist	Village of Bald Head Island
Athina Williams, Town Administrator/Clerk	Town of Belville
Bill Murphy, City Engineer	City of Boiling Spring Lakes
Terri Knox, Town Clerk	Town of Bolivia
Chuck Nance, Town Administrator	Town of Calabash
Gail Treglia, Code Compliance Officer	Town of Carolina Shores
George Kassler, Administrative Chief of Police	Town of Caswell Beach
Timothy Evans, Planning & Inspections Director Rhonda Wooten, CAMA/Zoning Official	Town of Holden Beach
Steven Spruill, Public Work Director	Town of Leland
Eulis A. Willis, Mayor	Town of Navassa
Gwendolyn K. Spicer, Town Clerk	Town of Northwest
Steve Edwards, Building Codes Administrator Donna Coleman, Code Enforcement Officer	Town of Oak Island
Chuck Rash, Assistant Fire Chief Keith Dycus, Development Services Specialist	Town of Ocean Isle Beach
Tina Colby, Town Clerk	Town of Sandy Creek
Robert Lewis, Planning Director	Town of Shallotte
John Allen, Community Development Specialist	City of Southport
Don McGuire, Emergency Management Team Member	Town of St. James
Rawls Howard, Planning and Inspections Director Randy Walters, Building Inspector Kevin Dempsey, Fire Chief	Town of Sunset Beach
George Ennis Swain, Mayor Pro Tem	Town of Varnamtown

New Hanover County Mitigation Advisory Committee	
MAC Member	**Jurisdiction/Agency**
Warren Lee, Director	New Hanover County Emergency Management & 911
Steven Still, Senior Emergency Management Specialist	New Hanover County Emergency Management & 911
Kristen Skinner, Emergency Management Specialist	New Hanover County Emergency Management & 911
Charles Smith, Public Information Officer	New Hanover County Emergency Management & 911
Debora Cottle, 911 Manager	New Hanover County Emergency Management & 911
Tim Burgess, Assistant County Manager	New Hanover County Administration
Ken Vafier, Planning Manager	New Hanover County Development Services
Wanda Coston, Community Development Planner	New Hanover County Development Services
Joshua Swift, Deputy Health Director	New Hanover County Health Department
Jeremy Hardison, Senior Planner	Town of Carolina Beach
Captain Ed Kennedy, Assistant Fire Chief	Town of Kure Beach
Tom Crews, Technical Services Manager	City of Wilmington
Corey Harrison, Senior Systems Analyst	City of Wilmington
Kathryn Thurston, Zoning Administration/Floodplain Manager	City of Wilmington
Tony Wilson, Planning & Parks Director	Town of Wrightsville Beach

Pender County Mitigation Advisory Committee	
MAC Member	**Jurisdiction/Agency**
Tom Collins, Director	Pender County Emergency Management
Kyle Breuer, Director	Pender County Planning Department
Randell Woodruff, County Manager	Pender County Manager's Office
David Williams, Chairman	Pender County Board of Commissioners
Jack Turner, Mayor	Town of Atkinson
Margie Craver, Town Clerk	Town of Atkinson
Eugene Mulligan, Mayor	Town of Burgaw
Chad McEwen, Town Manager	Town of Burgaw
Rebekah Roth, Planning Administrator	Town of Burgaw
Robert Barnhill, Mayor	Village of St. Helena
Mary Bakan, Village Clerk	Village of St. Helena
A.D. (Zander) Guy, Jr., Mayor	Town of Surf City
Larry Bergman, Town Manager	Town of Surf City
Todd Rademacher, Planning Director	Town of Surf City
Howard Braxton, Mayor	Town of Topsail Beach
Michael Moore, Interim Town Manager	Town of Topsail Beach
Needham C. Hall, Mayor	Town of Watha
Retha C. Garriss, Town Clerk	Town of Watha

Southeastern NC Regional Mitigation Advisory Committee	
MAC Member	**Jurisdiction/Agency**
Marc Pagès, Land Planner	Brunswick County Planning Department
Warren Lee, Director	New Hanover County Emergency Management & 911
Steven Still, Senior Emergency Management Specialist	New Hanover County Emergency Management & 911
Kristen Skinner, Emergency Management Specialist	New Hanover County Emergency Management & 911
Tom Collins, Director	Pender County Emergency Management
Kyle Breuer, Director	Pender County Planning Department

A series of meetings were held to develop the Southeastern NC Regional Hazard Mitigation Plan. A total of three MAC meetings were held within each county jurisdiction and three regional partner meetings were conducted. Notification of all county MAC meetings were made via email communication or hard copy letter depending upon the preference of the jurisdiction (see Appendix B for participation documentation). The distribution list was established in concert with each participating county. The following provides a brief summary of all meetings held and what was addressed at each.

Southeastern NC Regional MAC

- March 19, 2015: The March meeting of the Regional MAC focused on initiating the planning process and establishing a course of action for addressing the needs of each participating County independently. Primary contacts were established for each County and those individuals were charged with compiling a list of key stakeholders that should be involved in the MAC meetings held at the County/Municipal level.

- September 25, 2015: The September Regional MAC meeting was held to inform all participants that the draft plan was complete and available for review. Additionally, the close out and adoption procedures were reviewed to ensure that all participating jurisdictions would be prepared to address this element of the planning process in an efficient manner. All participants were informed that the plan would be submitted for formal review and comment by NCEM and subsequently FEMA. This meeting also served as a subsequent meeting for both the Pender and New Hanover County MAC groups.

Brunswick County Mitigation Advisory Committee

- April 14, 2015: The April meeting of the Brunswick County MAC served as a project kickoff effort. The planning process and responsibilities of participating jurisdictions were covered. Additionally, participants were given a thorough overview of the shift in process from a County-based effort to a Regional Planning model. Strategies from the County's 2011 plan were disseminated for review and discussion at the second meeting of the MAC.

- May 1, 2015: The Brunswick County MAC was provided copies of a summary of the CRS program and copies of draft Mitigation Strategy updates. Additionally, the MAC discussed progress made since adoption of the 2011 plan. The MAC was asked to come to the final meeting prepared to discuss all necessary changes and updates regarding both mitigation strategies and critical facilities located throughout unincorporated and incorporated portions of the County.

- June 5, 2015: The MAC met to discuss comments on the draft strategies, mapping and vulnerability analysis completed to date. Sections 1, 2, and 3 were reviewed and discussed. There were no questions or comments. The MAC was asked to review all information and draft sections to ensure that all information was accurate.

- March 21, 2016: The final public meeting was held for all Brunswick County participating jurisdictions at the David R. Sandifer Building Training Room. An overview of the plan and planning process was conveyed to the public and the public was provided an opportunity to comment. No comments were received and the public was made aware of the pending adoption scheduled for April 4, 2016, by the Brunswick County Board of Commissioners.

New Hanover County Mitigation Advisory Committee

- April 21, 2015: The April meeting of the New Hanover County MAC served as a project kickoff effort. The planning process and responsibilities of participating jurisdictions were covered. Additionally, participants were given a thorough overview of the shift in process for a County-based effort to a Regional Planning model. Strategies from the County's 2011 plan were disseminated for review and comment by staff and stakeholders participating in the process.

- May 13, 2015: At the second meeting of the New Hanover County MAC, revised strategies were reviewed and stakeholders were asked to review the strategies in an effort to ensure that all proposed actions were accurate and aligned with current County and municipal policies regarding mitigation activity. Additionally, the New Hanover County MAC was asked to review all mapping and vulnerability analysis results for accuracy and completeness.

- June 5, 2015: This meeting of the New Hanover County MAC was convened for NHC staff members to discuss and comment on draft strategies presented at the May 13th meeting. Comments received were forwarded to the project consultant for incorporation into the draft plan.

- June 24, 2015: This meeting was called by the County to discuss incorporation of Community Rating System (CRS) strategies into the draft plan.

- February 25, 2016: The final public meeting was held for all New Hanover County participating jurisdictions at the Carolina Beach Town Hall. An overview of the plan and planning process was conveyed to the public and the public was provided an opportunity to comment. No comments were received and the public was made aware of the pending adoption scheduled for June 20, 2016, by the New Hanover County Board of Commissioners.

Pender County Mitigation Advisory Committee

- April 17, 2015: The April meeting of the Pender County MAC served as a project kickoff meeting. The planning process and responsibilities of participating jurisdictions were covered. Additionally, participants were given a thorough overview of the shift in process from a County-based effort to a Regional Planning model. Strategies from the County's 2011 plan were disseminated for review and discussion at the second meeting of the MAC.

- May 29, 2015: The second meeting of the Pender County MAC focused on review of and finalization/update of all existing County strategies. The MAC was also informed that Sections 1 through 3 of the plan were available online on the project website for review and comment. It was also decided that in lieu of an additional MAC gathering, the project consultant would deal directly with all participating jurisdictions in an effort to provide for plan updates specific and relevant to Pender County and its municipal project partners.

- June 12, 2015: The third and final MAC meeting in Pender County was focused on providing an overview of material completed to date. Additionally, draft mitigation strategies were summarized and an overview of the adoption process was provided.

- March 17, 2016: The final public meeting was held for all Pender County participating jurisdictions at the Pender County Emergency Operations Center. An overview of the plan and planning process was conveyed to the public and the public was provided an opportunity to comment. No comments were received and the public was made aware of the pending adoption scheduled for April 18, 2016, by the Pender County Board of Commissioners.

These meetings were advertised locally through a newspaper of general circulation in each participating county and website postings. Copies of advertisements for the meeting notices have been provided in Appendix C.

Initial draft sections of the plan were completed and distributed to the MAC on August 7, 2015, with a final draft version of the entire plan being distributed on September 4, 2015, to all Regional MAC members. Additionally, the plan was posted on the project website (http://www.southeasternhmp.net) for review by the following agencies and organizations: NC Forest Service, NC Department of Transportation, NC Cooperative Extension, NC Department of Environmental Quality, American Red Cross, Cape Fear Council of Governments, and the NC Office of Emergency Medical Services. All adjacent county jurisdictions were made aware that the plan was available for review as well. All entities were notified via email in an effort to solicit input, and included a link to the project website (see Appendix C). No comments were received.

Review comments were received from Regional MAC members in September 2015, and NCEM on October 28, 2015. Revisions were made to the final draft HMP based on these comments (see Appendix D).

AUTHORITY FOR HMP ADOPTION AND RELEVANT LEGISLATION

This HMP Update will be adopted by the Pender, New Hanover, and Brunswick County Boards of Commissioners and the governing bodies of each of the twenty-nine (29) participating municipalities under the authorities and police powers granted to county and municipal governments by the North Carolina General Statutes (see NCGS, Chapter 153A).

The HMP has been developed in accordance with the requirements of the following laws, regulations, and guidance:

- North Carolina General Statutes (N.C.G.S), Chapter 166-A: North Carolina Emergency Management Act, as amended by Senate Bill 300: An Act to Amend the Laws Regarding Emergency Management as Recommended by the Legislative Disaster Response and Recovery Commissioner (a.k.a. Session Law 2001-214), adopted June 15, 2001; and

- Public Law 106-390, The Robert T. Stafford Disaster Mitigation Act of 2000, as amended (adopted October 30, 2000); and

- Interim Final Regulations regarding Hazard Mitigation Planning and the Hazard Mitigation Grant Program at 44 C.F.R. Parts 201 and 206 as published in the Federal Register: October 1, 2002 (Volume 67, Number 190, Page 61512-61515).

The above-listed laws, regulations and guidance should be carefully monitored to ensure continued compliance.

SECTION 2.

COMMUNITY PROFILES

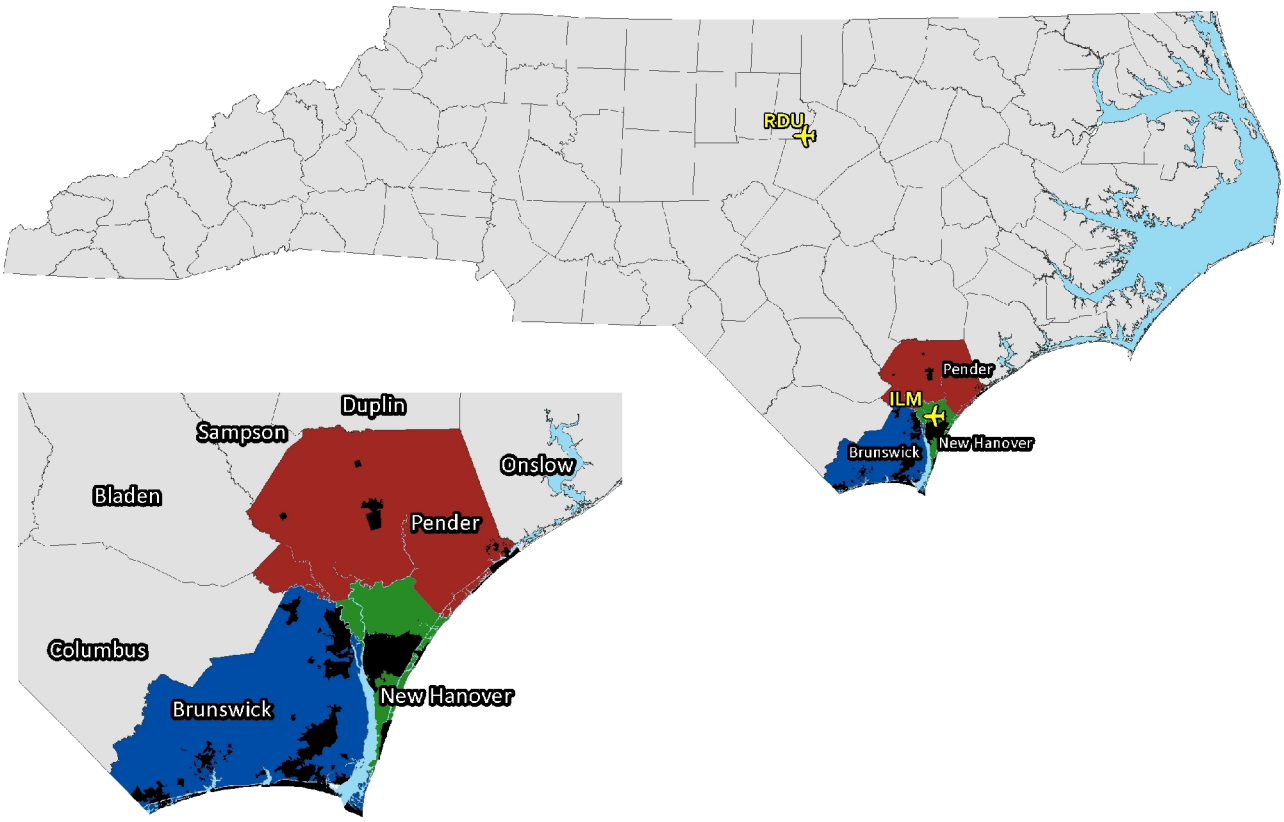
INTRODUCTION

General information for the Southeastern NC Region as a whole such as location, topography/geology, and climate have been combined in this section. Following the region's introductory information is a summary for each county, containing pertinent information regarding history, and demographics including population, housing, and economic characteristics. This information provides a snapshot of basic factors impacting day-to-day decision-making and economic growth.

Location

The Southeastern NC Region is located in the Southeastern Coastal Plain of North Carolina. Key transportation routes through the Region include US 421 running north-south through Pender/New Hanover Counties, Interstate 40 running north-south from Wilmington to Raleigh, and US 76 extending from western North Carolina to Wilmington. The primary north-south route through the counties is US Highway 17. CSX Transportation provides service running north-south from Raleigh and east-west from Charlotte to the Wilmington terminus. The CSX western route connects to the federal rail line serving the Sunny Point Ocean Terminal in Brunswick County. The Wilmington International Airport (ILM) or the Raleigh-Durham International Airport (RDU) are the primary providers of air transportation service. The following provides the general location of these facilities, as well as the three-county region.

Figure 1. Regional Location



Topography/Geology

As previously noted, the Southeastern NC Region is located within the Southeastern Coastal Plain of North Carolina. Elevations throughout the three counties range from approximately sea level to roughly 75 feet above sea level within the northern and western portions of the region. The land surfaces throughout the region are nearly level to gently sloping; however, some steep slopes exist along stream banks and river courses. Drainage throughout the majority of the region flows to the Cape Fear River. Western Brunswick County drains to the Waccamaw River while the western portions of Pender County drain to the Black River. The Black River is one of only two rivers in the Nation considered pollution-free.

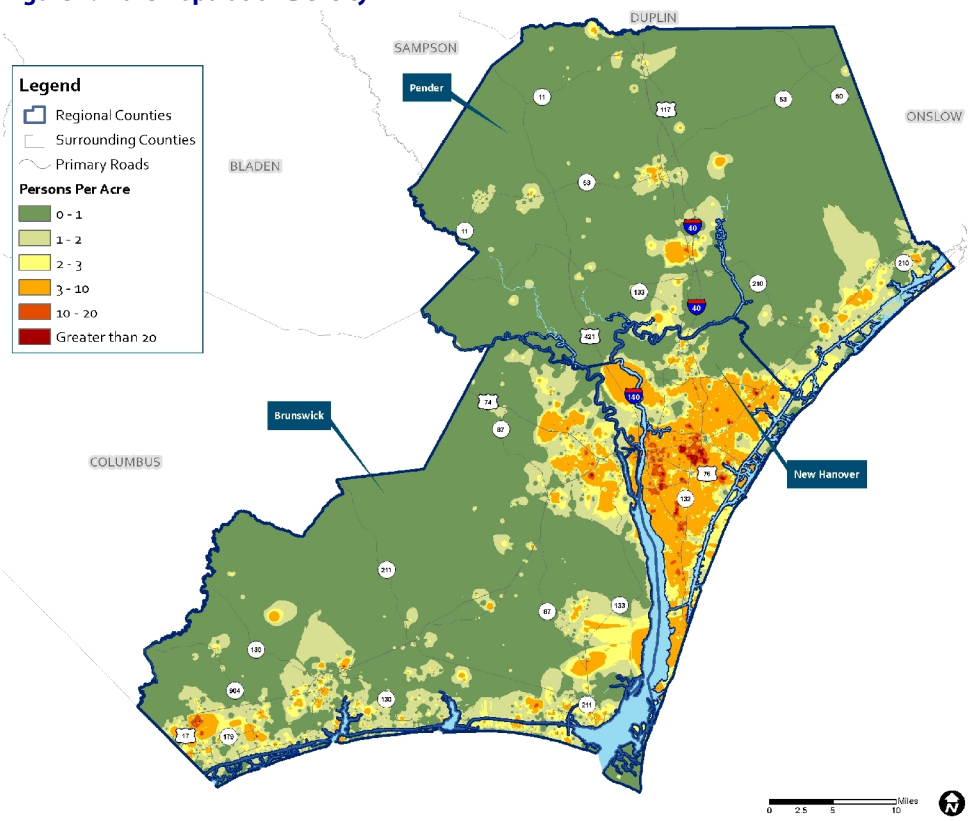
Climate

The Southeastern NC Region gets an average of 55 inches of precipitation per year. Snowfall average is less than 2 inches for the region. On average, there are 215 sunny days per year in the Region. The July high temperature is around 90 degrees Fahrenheit. The January low temperature is 33 degrees Fahrenheit.

Regional Population

As an overview, in 2010, the Southeastern NC Region had a total population of 370,139. The regional population density is delineated on Figure 2. It is estimated that approximately 33,630 people, or 9% of the region's total population reside within a flood hazard area (refer to Maps 2-14, 16-19, and 21-27 in Appendix A for delineation of flood hazard areas).

Figure 2. 2013 Population Density



BRUNSWICK COUNTY

History

Brunswick County is located on the southeastern coast of North Carolina. It is bordered by New Hanover, Columbus, Pender, and Horry (South Carolina) counties, and by the Atlantic Ocean. It is one of the larger North Carolina counties with an area of 856.51 square miles. It also boasts 47 miles of coastline. The County was formed from sections of New Hanover and Bladen counties. Brunswick County is named after the Town of Brunswick, which was located near present day Southport at the mouth of the Cape Fear River. Brunswick town was named in honor of King George I, Duke of Brunswick, and was established in 1745. It was made into a County in 1764. It was then, and still is for the most part, a mainly rural County.

Brunswick Town was the first County Seat of the newly formed Brunswick County. It remained so until 1779, well after the outbreak of the Revolutionary War. In 1779, Lockwood Folly was established as the County Seat, and the Court was convened at the house of John Bell until the courthouse was built in 1786. On November 28, 1808, the County Seat was moved to Smithville, a town established in 1792 at the mouth of the Cape Fear River. Smithville was later named Southport, and the County Seat remained there until 1975, when it was moved to Bolivia, the current County Seat.

Brunswick County was divided into several districts since inception, but in 1812 these were stabilized into six: Northwest, Town Creek, Smithville, Shallotte, Lockwood Folly, and Waccamaw - all of which are current townships.

The Town of Bolivia was established in the 1890s and was incorporated in 1911. In 1975, the County Seat was moved from Southport to Bolivia because Bolivia was closer to the center of the County and could provide better service to the population.

Population

The Brunswick County total population (including municipalities) increased by 43.5% from 1990 to 2000 and by 50.8% from 2000 to 2013 (see Table 2-1).

Table 2-1. Brunswick County/Municipalities Population 1990-2013

	Total Population				Percent Change			
Jurisdiction	**1990**	**2000**	**2010**	**2013 Est.**	**'90-'00**	**'00-'10**	**'10-'13**	**'90-13**
Bald Head Island	78	173	158	132	121.8%	-8.7%	-16.5%	69.2%
Belville	46	285	1,936	2,323	519.6%	579.3%	20.0%	495.0%
Boiling Spring Lakes	1,672	2,972	5,372	5,440	77.8%	80.7%	1.3%	225.4%
Bolivia	226	148	143	173	-34.5%	-3.4%	21.0%	-23.5%
Calabash	1,189	711	1,786	1,829	-40.2%	151.2%	2.4%	53.8%
Carolina Shores	–*	1,482	3,048	3,352	–*	105.7%	10.0%	126.2%**
Caswell Beach	155	370	398	503	138.7%	7.6%	26.4%	224.5%

	Total Population				Percent Change			
Jurisdiction	**1990**	**2000**	**2010**	**2013 Est.**	**'90-'00**	**'00-'10**	**'10-'13**	**'90-13**
Holden Beach	642	787	575	871	22.6%	-26.9%	51.5%	35.7%
Leland	1,785	1,938	13,527	14,499	8.6%	598.0%	7.2%	712.3%
Navassa	433	479	1,505	1,670	10.6%	214.2%	11.0%	285.7%
Northwest	–*	671	735	868	–*	9.5%	18.1%	29.4%**
Oak Island	–*	6,571	6,783	6,970	–*	3.2%	2.8%	6.1%**
Ocean Isle Beach	534	426	550	821	-20.2%	29.1%	49.3%	53.7%
Sandy Creek	271	246	260	379	-9.2%	5.7%	45.8%	39.9%
Shallotte	976	1,381	3,675	3,595	41.5%	404.9%	-2.2%	268.3%
Southport	2,349	2,351	2,833	2,953	-0.3%	20.5%	4.2%	25.2%
St. James	–*	804	3,165	3,442	–*	293.7%	8.6%	328.1%**
Sunset Beach	321	1,824	3,572	3,629	468.2%	95.8%	1.6%	1030.5%
Varnamtown	434	481	541	600	10.8%	12.5%	10.9%	38.2%
Subtotal - All Municipalities	11,121	24,100	50,562	54,049	116.7%	109.8%	6.9%	386.0%
Unincorporated Areas	39,864	49,043	56,869	56,275	23.0%	16.0%	-1.0%	41.2%
Brunswick County (Total)	50,985	73,143	107,431	110,324	43.5%	46.9%	2.7%	116.4%

**Municipality was incorporated after 1990. Incorporation years are as follows: Carolina Shores, 1998; Northwest, 1998; Oak Island, 1999; St. James, 1999.*
***For municipalities incorporated after 1990, overall percent change was calculated from 2000-2013, not 1990-2013.*
Source: US Census Bureau; 2009-2013 American Community Survey 5-Year Estimates.

Between 1990 and 2013, the County's unincorporated areas and almost all of Brunswick County's municipalities experienced population growth. Bald Head Island experienced population declines from 2000 to 2010 and from 2010 to 2013. Bolivia experienced a significant decline from 1990 to 2000 and lessor declines between 2000 to 2010. Holden Beach also experienced a decline from 2000 to 2010. From 1990 to 2013, Bolivia was the only municipality experiencing a decline for the entire 23-year period. The North Carolina Office of State Planning forecasts an overall increase in the County's population.

Housing

The number of occupied housing units for the County in the 2013 American Community Survey was 47,600 units, or 60.9% of the total housing units. Vacant housing units accounted for 30,559 units, or 39.1% of the total housing inventory. Table 2-2 summarizes the County's and municipalities' dwelling units by tenure. In the oceanfront beach communities, the vacant units (mainly seasonal) ranged from a high of 93.2% in Bald Head Island to a low of 60% in Oak Island. The non-beach municipalities' vacancy rate ranged from a high of 39.4% in Calabash to a low of 5.8% in Sandy Creek.

Table 2-2. Brunswick County/Municipalities Summary of Housing Units by Tenure, 2013		
	Number of Units	**% of Total**
Bald Head Island		
Owner-Occupied Units	68	6.8%
Renter-Occupied Units	0	0.0%
Vacant Units	931	93.2%
Total Housing Units - Bald Head Island	999	100.0%
Belville		
Owner-Occupied Units	716	81.4%
Renter-Occupied Units	104	11.8%
Vacant Units	60	6.8%
Total Housing Units - Belville	880	100.0%
Boiling Spring Lakes		
Owner-Occupied Units	2,031	72.7%
Renter-Occupied Units	358	12.8%
Vacant Units	406	14.5%
Total Housing Units - Boiling Spring Lakes	2,795	100.0%
Bolivia		
Owner-Occupied Units	35	63.6%
Renter-Occupied Units	15	27.3%
Vacant Units	5	9.1%
Total Housing Units - Bolivia	55	100.0%
Calabash		
Owner-Occupied Units	643	44.7%
Renter-Occupied Units	228	15.9%
Vacant Units	567	39.4%
Total Housing Units - Calabash	1,438	100.0%
Carolina Shores		
Owner-Occupied Units	1,586	68.7%
Renter-Occupied Units	181	7.9%
Vacant Units	541	23.4%
Total Housing Units - Carolina Shores	2,308	100.0%
Caswell Beach		
Owner-Occupied Units	222	29.7%
Renter-Occupied Units	22	2.9%
Vacant Units	504	67.4%
Total Housing Units - Caswell Beach	748	100.0%

	Number of Units	% of Total
Holden Beach		
Owner-Occupied Units	396	16.7%
Renter-Occupied Units	32	1.4%
Vacant Units	1,939	81.9%
Total Housing Units - Holden Beach	2,367	100.0%
Leland		
Owner-Occupied Units	4,711	67.2%
Renter-Occupied Units	1,538	21.9%
Vacant Units	765	10.9%
Total Housing Units - Leland	7,014	100.0%
Navassa		
Owner-Occupied Units	455	67.0%
Renter-Occupied Units	137	20.2%
Vacant Units	87	12.8%
Total Housing Units - Navassa	679	100.0%
Northwest		
Owner-Occupied Units	291	70.1%
Renter-Occupied Units	56	13.5%
Vacant Units	68	16.4%
Total Housing Units - Northwest	415	100.0%
Oak Island		
Owner-Occupied Units	2,426	27.7%
Renter-Occupied Units	1,027	11.7%
Vacant Units	5,315	60.6%
Total Housing Units - Oak Island	8,768	100.0%
Ocean Isle Beach		
Owner-Occupied Units	341	10.7%
Renter-Occupied Units	73	2.3%
Vacant Units	2,763	87.0%
Total Housing Units - Ocean Isle Beach	3,177	100.0%
Sandy Creek		
Owner-Occupied Units	95	69.4%
Renter-Occupied Units	34	24.8%
Vacant Units	8	5.8%
Total Housing Units - Sandy Creek	137	100.0%

	Number of Units	% of Total
Shallotte		
Owner-Occupied Units	852	48.2%
Renter-Occupied Units	594	33.6%
Vacant Units	322	18.2%
Total Housing Units - Shallotte	1,768	100.0%
Southport		
Owner-Occupied Units	887	47.6%
Renter-Occupied Units	490	26.3%
Vacant Units	486	26.1%
Total Housing Units - Southport	1,863	100.0%
St. James		
Owner-Occupied Units	1,560	63.9%
Renter-Occupied Units	178	7.3%
Vacant Units	704	28.8%
Total Housing Units - St. James	2,442	100.0%
Sunset Beach		
Owner-Occupied Units	1,697	33.9%
Renter-Occupied Units	135	2.7%
Vacant Units	3,178	63.4%
Total Housing Units - Sunset Beach	5,010	100.0%
Varnamtown		
Owner-Occupied Units	190	59.0%
Renter-Occupied Units	36	11.2%
Vacant Units	96	29.8%
Total Housing Units - Varnamtown	322	100.0%
Brunswick County		
Owner-Occupied Units	36,363	46.5%
Renter-Occupied Units	11,237	14.4%
Vacant Units	30,559	39.1%
Total Housing Units - County	78,159	100.0%

Source: 2009-2013 American Community Survey 5-Year Estimates.

Over 71% of the County's housing units have been built during or after 1970. Table 2-3 provides the years housing units were constructed by municipality and the County as a whole.

Table 2-3. Brunswick County/Municipalities Housing Units by Year Structure Built, 2013

Year	# of Structures	% of Total	
Bald Head Island			
2010 or later	0	0.0%	
2000 to 2009	430	43.0%	*Largest % of Bald Head Island's housing units built 2000-09*
1990 to 1999	309	30.9%	
1980 to 1989	224	22.4%	
1970 to 1979	32	3.2%	
1960 to 1969	1	0.1%	
1950 to 1959	0	0.0%	
1940 to 1949	0	0.0%	
1939 or earlier	3	0.3%	
Total Structures	999	100.0%	
Belville			
2010 or later	0	0.0%	
2000 to 2009	367	41.7%	*Largest % of Belville's housing units built 2000-09*
1990 to 1999	296	33.6%	
1980 to 1989	80	9.1%	
1970 to 1979	109	12.4%	
1960 to 1969	7	0.8%	
1950 to 1959	15	1.7%	
1940 to 1949	3	0.3%	
1939 or earlier	3	0.3%	
Total Structures	880	100.0%	
Boiling Spring Lakes			
2010 or later	0	0.0%	
2000 to 2009	1,222	43.7%	*Largest % of Boiling Spg. Lakes' housing units built 2000-09*
1990 to 1999	869	31.1%	
1980 to 1989	354	12.7%	
1970 to 1979	186	6.7%	
1960 to 1969	104	3.7%	
1950 to 1959	51	1.8%	
1940 to 1949	0	0.0%	
1939 or earlier	9	0.3%	
Total Structures	2,795	100.0%	

Year	# of Structures	% of Total	
Bolivia			
2010 or later	0	0.0%	
2000 to 2009	11	20.0%	
1990 to 1999	9	16.4%	
1980 to 1989	2	3.6%	
1970 to 1979	15	27.3%	*Largest % of Bolivia's housing units built in 1970s*
1960 to 1969	4	7.3%	
1950 to 1959	3	5.5%	
1940 to 1949	2	3.6%	
1939 or earlier	9	16.4%	
Total Structures	55	100.0%	
Calabash			
2010 or later	0	0.0%	
2000 to 2009	217	15.1%	
1990 to 1999	517	36.0%	*Largest % of Calabash's housing units built in 1990s*
1980 to 1989	486	33.8%	
1970 to 1979	135	9.4%	
1960 to 1969	0	0.0%	
1950 to 1959	65	4.5%	
1940 to 1949	14	1.0%	
1939 or earlier	4	0.3%	
Total Structures	1,438	100.0%	
Carolina Shores			
2010 or later	0	0.0%	
2000 to 2009	979	42.4%	*Largest % of Carolina Shores' housing units built 2000-09*
1990 to 1999	586	25.4%	
1980 to 1989	563	24.4%	
1970 to 1979	102	4.4%	
01960 to 1969	0	0.0%	
1950 to 1959	62	2.7%	
1940 to 1949	0	0.0%	
1939 or earlier	16	0.7%	
Total Structures	2,308	100.0%	

Year	# of Structures	% of Total	
Caswell Beach			
2010 or later	0	0.0%	
2000 to 2009	143	19.1%	
1990 to 1999	163	21.8%	
1980 to 1989	315	42.1%	*Largest % of Caswell Beach's housing units built in 1980s*
1970 to 1979	66	8.8%	
1960 to 1969	34	4.5%	
1950 to 1959	18	2.4%	
1940 to 1949	5	0.7%	
1939 or earlier	4	0.5%	
Total Structures	748	100.0%	
Holden Beach			
2010 or later	0	0.0%	
2000 to 2009	430	18.2%	
1990 to 1999	600	25.3%	*Largest % of Holden Beach's housing units built in 1980s/90s*
1980 to 1989	619	26.2%	
1970 to 1979	347	14.7%	
1960 to 1969	311	13.1%	
1950 to 1959	58	2.5%	
1940 to 1949	0	0.0%	
1939 or earlier	2	0.1%	
Total Structures	2,367	100.0%	
Leland			
2010 or later	320	4.6%	
2000 to 2009	5,156	73.5%	*Largest % of Leland's housing units built 2000-09*
1990 to 1999	366	5.2%	
1980 to 1989	308	4.4%	
1970 to 1979	345	4.9%	
1960 to 1969	198	2.8%	
1950 to 1959	128	1.8%	
1940 to 1949	51	0.7%	
1939 or earlier	142	2.0%	
Total Structures	7,014	100.0%	

Year	# of Structures	% of Total	
Navassa			
2010 or later	5	0.7%	
2000 to 2009	189	27.8%	*Largest % of Navassa's housing units built 2000-09*
1990 to 1999	136	20.0%	
1980 to 1989	119	17.5%	
1970 to 1979	75	11.0%	
1960 to 1969	59	8.7%	
1950 to 1959	22	3.2%	
1940 to 1949	44	6.5%	
1939 or earlier	30	4.4%	
Total Structures	679	100.0%	
Northwest			
2010 or later	0	0.0%	
2000 to 2009	83	20.0%	
1990 to 1999	108	26.0%	*Largest % of Northwest's housing units built in 1990s*
1980 to 1989	71	17.1%	
1970 to 1979	63	15.2%	
1960 to 1969	50	12.0%	
1950 to 1959	21	5.1%	
1940 to 1949	7	1.7%	
1939 or earlier	12	2.9%	
Total Structures	415	100.0%	
Oak Island			
2010 or later	27	0.3%	
2000 to 2009	2,517	28.7%	*Largest % of Oak Island's housing units built 2000-09*
1990 to 1999	1,528	17.4%	
1980 to 1989	2,066	23.6%	
1970 to 1979	1,100	12.5%	
1960 to 1969	1,007	11.5%	
1950 to 1959	376	4.3%	
1940 to 1949	53	0.6%	
1939 or earlier	94	1.1%	
Total Structures	8,768	100.0%	

Year	# of Structures	% of Total	
Ocean Isle Beach			
2010 or later	6	0.2%	
2000 to 2009	632	19.9%	
1990 to 1999	716	22.5%	
1980 to 1989	1,163	36.6%	*Largest % of Ocean Isle Beach's housing units built in 1980s*
1970 to 1979	479	15.1%	
1960 to 1969	139	4.4%	
1950 to 1959	39	1.2%	
1940 to 1949	3	0.1%	
1939 or earlier	0	0.0%	
Total Structures	3,177	100.0%	
Sandy Creek			
2010 or later	8	5.8%	
2000 to 2009	24	17.5%	
1990 to 1999	47	34.3%	*Largest % of Sandy Creek's housing units built in 1980s/90s*
1980 to 1989	47	34.3%	
1970 to 1979	9	6.6%	
1960 to 1969	0	0.0%	
1950 to 1959	2	1.5%	
1940 to 1949	0	0.0%	
1939 or earlier	0	0.0%	
Total Structures	137	100.0%	
Shallotte			
2010 or later	0	0.0%	
2000 to 2009	1,037	58.7%	*Largest % of Shallotte's housing units built 2000-09*
1990 to 1999	275	15.6%	
1980 to 1989	346	19.6%	
1970 to 1979	54	3.1%	
1960 to 1969	7	0.4%	
1950 to 1959	25	1.4%	
1940 to 1949	10	0.6%	
1939 or earlier	14	0.8%	
Total Structures	1,768	100.0%	

Year	# of Structures	% of Total	
Southport			
2010 or later	0	0.0%	
2000 to 2009	630	33.8%	*Largest % of Southport's housing units built 2000-09*
1990 to 1999	208	11.2%	
1980 to 1989	324	17.4%	
1970 to 1979	239	12.8%	
1960 to 1969	116	6.2%	
1950 to 1959	105	5.6%	
1940 to 1949	20	1.1%	
1939 or earlier	221	11.9%	
Total Structures	1,863	100.0%	
St. James			
2010 or later	81	3.3%	
2000 to 2009	1,513	62.0%	*Largest % of St. James's housing units built 2000-09*
1990 to 1999	779	31.9%	
1980 to 1989	69	2.8%	
1970 to 1979	0	0.0%	
1960 to 1969	0	0.0%	
1950 to 1959	0	0.0%	
1940 to 1949	0	0.0%	
1939 or earlier	0	0.0%	
Total Structures	2,442	100.0%	
Sunset Beach			
2010 or later	36	0.7%	
2000 to 2009	2,024	40.4%	*Largest % of Sunset Beach's housing units built 2000-09*
1990 to 1999	971	19.4%	
1980 to 1989	1,505	30.0%	
1970 to 1979	287	5.7%	
1960 to 1969	96	1.9%	
1950 to 1959	29	0.6%	
1940 to 1949	46	0.9%	
1939 or earlier	16	0.3%	
Total Structures	5,010	100.0%	

Year	# of Structures	% of Total	
Varnamtown			
2010 or later	0	0.0%	
2000 to 2009	40	12.4%	
1990 to 1999	94	29.2%	*Largest % of Varnamtown's housing units built in 1990s*
1980 to 1989	57	17.7%	
1970 to 1979	38	11.8%	
1960 to 1969	63	19.6%	
1950 to 1959	15	4.7%	
1940 to 1949	7	2.2%	
1939 or earlier	8	2.8%	
Total Structures	322	100.0%	
Brunswick County			
2010 or later	735	0.9%	
2000 to 2009	28,024	35.9%	*Largest % of Brunswick County's housing units built 2000-09*
1990 to 1999	17,894	22.9%	
1980 to 1989	15,729	20.1%	
1970 to 1979	7,926	10.1%	
1960 to 1969	4,136	5.3%	
1950 to 1959	1,982	2.5%	
1940 to 1949	705	0.9%	
1939 or earlier	1,028	1.3%	
Total Structures	78,159	100.0%	

Source: 2009-2013 American Community Survey 5-Year Estimates.

Economy

In 2013, there was a total of 42,755 employed persons in Brunswick County. Table 2-4 provides the County's and municipalities' unemployment rates for the civilian labor force for selected years. The overall unemployment rate for the County increased by 32.1% between 2000 and 2013. The unemployment rates increased for all of the County's municipalities. However, the unemployment rate for Caswell Beach increased only 0.3% from 4.3% in 2000 to 4.6% in 2013. In 2013, other municipal unemployment rates ranged from 7.8% in Southport to 31.9% in Bolivia.

Table 2-4. Brunswick County/Municipalities Civilian Unemployment Rate, 16 years and over

	2000	2013	% Change
Bald Head Island			
Civilian Labor Force	85	35	-58.8%
Number Employed	80	32	-60.0%
Number Unemployed	5	3	-40.0%
Bald Head Island Unemployment Rate	5.9%	8.6%	45.8%

	2000	2013	% Change
Belville			
Civilian Labor Force	170	1,217	615.9%
Number Employed	170	1,120	558.8%
Number Unemployed	0	97	--
Belville Unemployment Rate	0.0%	8.0%	--
Boiling Spring Lakes			
Civilian Labor Force	1,380	2,884	109.0%
Number Employed	1,337	2,528	89.1%
Number Unemployed	43	356	727.9%
Boiling Spring Lakes Unemployment Rate	3.1%	12.3%	296.8%
Bolivia			
Civilian Labor Force	51	72	41.2%
Number Employed	46	49	6.5%
Number Unemployed	5	23	3.6%
Bolivia Unemployment Rate	9.8%	31.9%	225.5%
Calabash			
Civilian Labor Force	355	816	129.9%
Number Employed	338	693	105.0%
Number Unemployed	17	123	623.5%
Calabash Unemployment Rate	4.8%	15.1%	214.6%
Carolina Shores			
Civilian Labor Force	487	1,170	140.2%
Number Employed	465	1,050	125.8%
Number Unemployed	22	120	445.5%
Carolina Shores Unemployment Rate	4.5%	10.3%	128.9%
Caswell Beach			
Civilian Labor Force	138	216	56.5%
Number Employed	132	206	56.1%
Number Unemployed	6	10	66.7%
Caswell Beach Unemployment Rate	4.3%	4.6%	7.0%
Holden Beach			
Civilian Labor Force	320	343	7.2%
Number Employed	314	304	-3.2%
Number Unemployed	6	39	550.0%
Holden Beach Unemployment Rate	1.9%	11.4%	500.0%
Leland			
Civilian Labor Force	942	7,282	673.0%
Number Employed	888	6,667	650.8%
Number Unemployed	54	615	1038.9%
Leland Unemployment Rate	5.7%	8.4%	47.4%
Navassa			
Civilian Labor Force	186	824	343.0%
Number Employed	164	695	323.8%
Number Unemployed	22	129	486.4%
Navassa Unemployment Rate	11.8%	15.7%	33.1%

	2000	2013	% Change
Northwest			
Civilian Labor Force	308	400	29.9%
Number Employed	286	333	16.4%
Number Unemployed	22	67	204.5%
Northwest Unemployment Rate	7.1%	16.8%	136.6%
Oak Island			
Civilian Labor Force	3,145	3,313	5.3%
Number Employed	3,038	2,871	-5.5%
Number Unemployed	107	442	313.1%
Oak Island Unemployment Rate	3.4%	13.3%	291.2%
Ocean Isle Beach			
Civilian Labor Force	194	428	120.6%
Number Employed	190	364	91.6%
Number Unemployed	4	64	1500.0%
Ocean Isle Beach Unemployment Rate	2.1%	15.0%	614.3%
Sandy Creek			
Civilian Labor Force	128	171	33.6%
Number Employed	124	154	24.2%
Number Unemployed	4	17	325.0%
Sandy Creek Unemployment Rate	3.1%	9.9%	219.4%
Shallotte			
Civilian Labor Force	541	1,785	229.9%
Number Employed	522	1,529	194.8%
Number Unemployed	19	256	124.7%
Shallotte Unemployment Rate	3.5%	14.3%	308.6%
Southport			
Civilian Labor Force	1,089	1,406	29.1%
Number Employed	1,035	1,296	25.2%
Number Unemployed	54	110	103.7%
Southport Unemployment Rate	5.0%	7.8%	56.0%
St. James			
Civilian Labor Force	250	704	181.6%
Number Employed	230	625	171.7%
Number Unemployed	20	79	295.0%
St. James Unemployment Rate	8.0%	11.2%	40.0%
Sunset Beach			
Civilian Labor Force	658	1,292	96.4%
Number Employed	620	1,143	84.4%
Number Unemployed	38	149	292.1%
Sunset Beach Unemployment Rate	5.8%	11.5%	98.3%
Varnamtown			
Civilian Labor Force	217	283	30.4%
Number Employed	206	240	16.5%
Number Unemployed	11	43	290.9%
Varnamtown Unemployment Rate	5.1%	15.2%	198.0%

	2000	2013	% Change
Brunswick County			
Civilian Labor Force Number Employed Number Unemployed	33,922 32,355 1,567	49,745 42,753 6,992	46.6% 32.1% 346.2%
Brunswick County Unemployment Rate	4.6%	14.1%	206.5%
North Carolina Unemployment Rate	5.3%	11.1%	109.4%

Source: 2000 US Census; 2009-2013 American Community Survey 5-Year Estimates.

Brunswick County's civilian employment is heavily concentrated in the education/health/social service and retail trade sectors. The largest single employment category is the Educational Services, and Health Care and Social Assistance sector, which constitutes 19.6% of all those employed who are 16 years of age and older. Retail Trade accounts for the second largest category with 14.7%. Of the County's total 2013 employed labor force, 11.3% were employed in the Arts, Entertainment, and Recreation, and Accommodation and Food Services sector, 10.7% in the Construction sector, and 10.5% in the Professional, Scientific, and Management, and Administrative and Waste Management Services sector. Table 2-5 provides a summary of Brunswick County's employment by industry.

Table 2-5. Brunswick County Employment by Industry, 2013

Categories	Total Employment	% of Total
Agriculture, forestry, fishing and hunting, and mining	349	0.8%
Construction	4,589	10.7%
Manufacturing	3,320	7.8%
Wholesale trade	550	1.3%
Retail trade	6,276	14.7%
Transportation and warehousing, and utilities	2,478	5.8%
Information	821	1.9%
Finance and insurance, and real estate and rental and leasing	2,711	6.3%
Professional, scientific, and management, and administrative and waste management services	4,506	10.5%
Educational services, and health care and social assistance	8,395	19.6%
Arts, entertainment, and recreation, and accommodation and food services	4,841	11.3%
Other services (except public administration)	1,813	4.2%
Public administration	2,104	4.9%
Total	42,753	100.0%

Source: 2009-2013 American Community Survey 5-Year Estimates.

Normally, per capita income is considered a good indicator of an area's income producing capability or strength. Table 2-6 provides a comparison of per capita incomes for Brunswick County, its municipalities, and North Carolina.

Table 2-6. Brunswick County and North Carolina *Per Capita* Income, 2000, 2010, and 2013

	2000 Census	2010 Census	2013 Estimate
Bald Head Island	$45,585	$93,711	$63,819
Belville	$22,482	$31,875	$25,198
Boiling Spring Lakes	$18,079	$23,381	$22,058
Bolivia	$12,973	$18,585	$13,934
Calabash	$22,975	$21,519	$22,508
Carolina Shores	$27,093	$27,734	$28,716
Caswell Beach	$41,731	$71,586	$52,740
Holden Beach	$35,114	$55,871	$41,912
Leland	$18,462	$27,878	$32,228
Navassa	$11,328	$18,881	$16,026
Northwest	$16,419	$18,758	$19,161
Oak Island	$23,964	$28,764	$30,208
Ocean Isle Beach	$42,605	$47,334	$50,092
Sandy Creek	$14,296	$25,373	$17,801
Shallotte	$21,168	$23,397	$23,899
Southport	$23,059	$33,532	$26,583
St. James	$50,567	$54,413	$67,955
Sunset Beach	$36,181	$40,700	$42,655
Varnamtown	$18,394	$20,950	$21,577
Brunswick County	$19,857	$26,315	$26,839
North Carolina	$20,307	$24,745	$25,284

Source: 2000 US Census; 2010 US Census; 2009-2013 American Community Survey 5-Year Estimates.

The Town of Bolivia had the lowest and St. James had the highest per capita income of all of the County's municipalities for 2013. The Town of Bolivia also had the lowest and Bald Head Island had the highest per capita income for 2010. Overall, the County's per capita income increased from 2000 to 2013 by $6,982, or 34.4%.

NEW HANOVER COUNTY

History

New Hanover County is located on the southeastern coast of North Carolina. It is bordered by Brunswick and Pender counties, and by the Atlantic Ocean. It is the second-smallest county in North Carolina by land area (328 square miles). The County was formed in 1729 as New Hanover Precinct of Bath County, from Craven Precinct. It was named for the House of Hanover, which was then ruling Great Britain. In 1734, parts of New Hanover Precinct became Bladen Precinct and Onslow Precinct. With the abolition of Bath County in 1739, all of its constituents became counties.

In 1750, the northern part of New Hanover County became Duplin County. In 1764, another part of New Hanover County was combined with part of Bladen County to form Brunswick County. Finally, in 1875, the separation of northern New Hanover County to form Pender County reduced it to its present dimensions.

New Hanover's county seat was once called New Carthage. However, when the town was incorporated in 1739, it became known as Wilmington, in honor of the Earl of Wilmington, Spencer Compton. Though New Hanover County is the second smallest in area, it is one of the most populous as its county seat is one of the state's largest cities.

Population

The population of New Hanover County increased by 33.3% from 1990 to 2000, and by 28.8% from 2000 to 2013. Table 2-7 provides a summary of New Hanover County's population figures, including the municipalities.

Table 2-7. New Hanover County/Municipalities Population, 1990-2013

	Total Population				Percent Change			
	1990	2000	2010	2013 Est.	'90-'00	'00-'10	'10-'13	'90-13
Carolina Beach	3,631	4,701	5,706	5,817	29.5%	21.4%	1.9%	60.2%
Kure Beach	618	1,507	2,012	1,961	144.0%	33.5%	-2.5%	217.3%
Wilmington	55,530	75,838	106,476	108,530	36.6%	40.4%	1.9%	95.4%
Wrightsville Beach	2,797	2,593	2,477	2,511	-7.3%	-4.5%	1.4%	-10.2%
Subtotal - All Municipalities	62,576	84,639	116,671	118,819	35.3%	37.8%	1.8%	89.9%
Unincorporated Areas	57,708	75,668	85,996	87,584	31.1%	13.6%	1.8%	51.8%
New Hanover County (Total)	120,284	160,307	202,667	206,403	33.3%	26.4%	1.8%	71.6%

Source: US Census Bureau; 2009-2013 American Community Survey 5-Year Estimates.

All municipalities in New Hanover County experienced an increase in population from 1990 to 2013, except for Wrightsville Beach which declined by 286 people. Wilmington has the largest population of the County's municipalities. The NC Office of State Planning predicts a continuing increasing trend for New Hanover County's overall population.

Housing

The number of occupied housing units for the County, as reported in the 2013 American Community Survey, was 86,010, or 84.3% of the total number of housing units. Vacant housing units (16,069) comprised 15.7% of the total number of units. Table 2-8 summarizes the County's and municipalities' dwelling units by tenure. Wrightsville Beach has the highest number of vacant housing units of New Hanover County's municipalities (attributable to seasonal housing), at 59.4%, while Wilmington has the highest percentage of rental units, at 46.3%. Overall, the County's occupancy rate is highest at 84.3%.

Table 2-8. New Hanover County/Municipalities Summary of Housing Units by Tenure, 2013

	Number of Units	% of Total
Carolina Beach		
Owner-Occupied Units	1,204	23.1%
Renter-Occupied Units	1,210	23.3%
Vacant Units	2,790	53.6%
Total Housing Units - Carolina Beach	5,204	100.0%
Kure Beach		
Owner-Occupied Units	732	35.4%
Renter-Occupied Units	198	9.6%
Vacant Units	1,137	55.0%
Total Housing Units - Kure Beach	2,067	100.0%
Wilmington		
Owner-Occupied Units	21,953	40.6%
Renter-Occupied Units	25,050	46.3%
Vacant Units	7,109	13.1%
Total Housing Units - Wilmington	54,112	100.0%
Wrightsville Beach		
Owner-Occupied Units	627	23.2%
Renter-Occupied Units	469	17.4%
Vacant Units	1,605	59.4%
Total Housing Units - Wrightsville Beach	2,701	100.0%
New Hanover County		
Owner-Occupied Units	50,681	49.7%
Renter-Occupied Units	35,329	34.6%
Vacant Units	16,069	15.7%
Total Housing Units - County	102,079	100.0%

Source: 2009-2013 American Community Survey 5-Year Estimates.

The majority of the County's housing units (75.8%) were built after 1970. Table 2-9 presents housing units for the County and its municipalities by year the structures were built.

Table 2-9. New Hanover County/Municipalities Housing Units by Year Structure Built, 2013

Year	# of Structures	% of Total	
Carolina Beach			
2010 or later	8	0.2%	
2000 to 2009	1,376	26.4%	
1990 to 1999	515	9.9%	
1980 to 1989	1,825	35.1%	*Largest % of Carolina Beach's housing units built in 1980s*
1970 to 1979	566	10.9%	
1960 to 1969	275	5.3%	
1950 to 1959	352	6.8%	
1940 to 1949	239	4.6%	
1939 or earlier	48	9.0%	
Total Structures	5,204	100.0%	
Kure Beach			
2010 or later	6	0.3%	
2000 to 2009	750	36.3%	*Largest % of Kure Beach's housing units built 2000-09*
1990 to 1999	459	22.2%	
1980 to 1989	401	19.4%	
1970 to 1979	59	2.9%	
1960 to 1969	98	4.7%	
1950 to 1959	116	5.6%	
1940 to 1949	133	6.4%	
1939 or earlier	45	2.2%	
Total Structures	2,067	100.0%	
Wilmington			
2010 or later	259	0.5%	
2000 to 2009	8,570	15.8%	
1990 to 1999	12,099	22.4%	*Largest % of Wilmington's housing units built in 1990s*
1980 to 1989	8,512	15.7%	
1970 to 1979	5,929	11.0%	
1960 to 1969	5,102	9.4%	
1950 to 1959	4,030	7.4%	
1940 to 1949	4,001	7.4%	
1939 or earlier	5,610	10.4%	
Total Structures	54,112	100.0%	

Year	# of Structures	% of Total	
Wrightsville Beach			
2010 or later	0	0.0%	
2000 to 2009	260	9.6%	
1990 to 1999	342	12.7%	
1980 to 1989	662	24.5%	*Largest % of Wr. Bch's housing units built in 1970s & 1980s*
1970 to 1979	654	24.2%	
1960 to 1969	309	11.4%	
1950 to 1959	239	8.8%	
1940 to 1949	118	4.4%	
1939 or earlier	117	4.3%	
Total Structures	2,701	100.0%	
New Hanover County			
2010 or later	608	0.6%	
2000 to 2009	22,779	22.3%	
1990 to 1999	24,725	24.2%	*Largest % of New Han. County's housing units built in 1990s*
1980 to 1989	16,618	16.3%	
1970 to 1979	12,659	12.4%	
1960 to 1969	8,014	7.9%	
1950 to 1959	5,580	5.5%	
1940 to 1949	4,889	4.8%	
1939 or earlier	6,207	6.1%	
Total Structures	102,079	100.0%	

Source: 2009-2013 American Community Survey 5-Year Estimates.

Economy

In 2013, there was a total of 11,690 employed persons in New Hanover County. Table 2-10 provides the County's and municipalities' unemployment rates for the civilian labor force for selected years. The overall unemployment rate increased for the County from 5.7% in 2000 to 10.4% in 2013. The unemployment rates also increased substantially for all of the County's municipalities.

Table 2-10. New Hanover County/Municipalities Civilian Unemployment Rate, 16 years and over

	2000	2013	% Change
Carolina Beach			
Civilian Labor Force	2,799	3,511	25.4%
Number Employed	2,712	3,121	15.1%
Number Unemployed	87	390	348.3%
Carolina Beach Unemployment Rate	3.1%	11.1%	251.1%

	2000	2013	% Change
Kure Beach			
Civilian Labor Force Number Employed Number Unemployed	802 760 42	977 878 99	21.8% 15.5% 135.8%
Kure Beach Unemployment Rate	5.2%	10.1%	94.2%
Wilmington			
Civilian Labor Force Number Employed Number Unemployed	40,031 36,629 3,402	59,293 52,308 6,985	48.1% 42.8% 105.3%
Wilmington Unemployment Rate	8.5%	11.8%	38.8%
Wrightsville Beach			
Civilian Labor Force Number Employed Number Unemployed	1,609 1,577 32	1,453 1,336 117	-9.7% -15.3% 265.6%
Wrightsville Beach Unemployment Rate	2.0%	8.1%	305.0%
New Hanover County			
Civilian Labor Force Number Employed Number Unemployed	86,174 81,238 4,936	112,023 100,333 11,690	30.0% 23.5% 136.8%
New Hanover County Unemployment Rate	5.7%	10.4%	82.5%
North Carolina Unemployment Rate	5.3%	11.1%	109.4%

Source: 2000 US Census; 2009-2013 American Community Survey 5-Year Estimates.

New Hanover County's civilian employment is heavily concentrated in the education/health/social service and arts/accommodation/food services sectors. The largest single employment category is the Educational Services, and Health Care and Social Assistance sector, which constitutes 24.2% of all those employed who are 16 years of age and older. The Arts, Entertainment, and Recreation, and Accommodation and Food Services sector accounts for the second largest category at 13.9%. Of the County's total 2013 employed labor force, 12.0% were employed in the Retail Trade sector, 11.8% in the Professional, Scientific, and Management, and Administrative and Waste Management Services sector, and 7.5% in the Construction industry. Table 2-11 provides a summary of New Hanover County's employment by industry.

Table 2-11. New Hanover County Employment by Industry, 2013

Categories	Total Employment	% of Total
Agriculture, forestry, fishing and hunting, and mining	230	0.2%
Construction	7,527	7.5%
Manufacturing	6,697	6.7%
Wholesale trade	2,941	2.9%
Retail trade	12,009	12.0%
Transportation and warehousing, and utilities	3,820	3.8%
Information	2,579	2.6%

Categories	Total Employment	% of Total
Finance and insurance, and real estate and rental and leasing	5,531	5.5%
Professional, scientific, and management, and administrative and waste management services	11,828	11.8%
Educational services, and health care and social assistance	24,231	24.2%
Arts, entertainment, and recreation, and accommodation and food services	13,912	13.9%
Other services (except public administration)	5,571	5.6%
Public administration	3,457	3.4%
Total	100,333	100.0%

Source: 2009-2013 American Community Survey 5-Year Estimate.

Normally, per capita income is considered a good indicator of an area's income producing capability or strength. Table 2-12 provides a comparison of per capita incomes for New Hanover County, its municipalities, and North Carolina.

Table 2-12. New Hanover County and North Carolina *Per Capita* Income, 2000, 2010, and 2013

	2000 Census	2010 Census	2013 Estimate
Carolina Beach	$24,128	$31,878	$34,110
Kure Beach	$26,759	$45,364	$43,780
Wilmington	$21,503	$26,662	$29,017
Wrightsville Beach	$36,575	$80,427	$48,382
New Hanover County	$23,123	$29,363	$29,679
North Carolina	$20,307	$24,745	$25,284

Source: 2000 US Census; 2010 US Census; 2009-2013 American Community Survey 5-Year Estimates.

The City of Wilmington had the lowest and Wrightsville Beach had the highest per capita income of all of the County's municipalities for both 2000 and 2010. Overall, the County's per capita income increased from 2000 to 2010 by $4,977, or 24.5%.

PENDER COUNTY

History

In 1524, explorers to what is now called Pender County reported on the numerous varieties of game, particularly wild turkeys, found in the area. A century later in 1663, the Barbados Commissioners, attempting to settle the Lower Cape Fear, explored the northeast branch of the Cape Fear River. The commissioners named the community "Rocky Point," the name which it retains today.

Although the County was settled in 1725, it was not formed from New Hanover County until 150 years later. The Lord's Proprietors laid out a tract to the north of New Brunswick for Welsh settlers. They came seeking good bottom land and tidal/river transportation. Thriving commercial success followed and large plantations were built during this period of prosperity. Pender's residents were ardent patriots during the Revolutionary War, and it was at Moore's Creek that they defeated the Scottish Highlanders sent from Fayetteville by Flora McDonald, the Scottish heroine.

In the War Between the States, the area sent nearly 4,000 troops to battle and gave the Confederacy its youngest general, William D. Pender, from whom the County was named. Still a part of New Hanover County after the war, Pender's prosperous plantation system was obliterated during the Reconstruction years. However, the County was born in 1875 out of Reconstruction policies. The County was created with the City of Watha as the first county seat. Burgaw, the present County seat, was chartered in 1879 and received its name from a local tribe of Indians.

Population

The population of Pender County increased by 42.4% from 1990 to 2000, and by 30.0% from 2000 to 2013. Table 2-13 provides a summary of Pender County's population figures by municipality.

Table 2-13. Pender County/Municipalities Population, 1990-2013

	Total Population				Percent Change			
	1990	2000	2010	2013 Est.	'90-'00	'00-'10	'10-'13	'90-13
Atkinson	275	236	299	355	-14.2%	26.7%	18.7%	29.1%
Burgaw	2,099	3,337	3,872	3,949	59.0%	16.0%	2.0%	88.1%
St. Helena	321	395	389	440	23.1%	-1.5%	13.1%	37.1%
Surf City	970	1,393	1,853	2,330	43.6%	33.0%	25.7%	140.2%
Topsail Beach	346	471	368	433	36.1%	-21.9%	17.7%	25.1%
Watha	154	151	190	271	-1.9%	25.8%	42.6%	76.0%
Subtotal - All Municipalities	4,165	5,983	6,971	7,778	43.6%	16.5%	11.6%	86.7%
Unincorporated Areas	24,690	35,099	45,246	45,634	42.2%	28.9%	0.9%	84.8%
Pender County (Total)	28,855	41,082	52,217	53,412	42.4%	27.1%	2.3%	85.1%

Source: US Census Bureau; 2009-2013 American Community Survey 5-Year Estimates.

All municipalities experienced increases in population from 1990 to 2013. Burgaw has the largest population of the County's municipalities. The NC Office of State Planning predicts a continuing increasing trend for Pender County's overall population.

Housing

The number of occupied housing units for the County, as reported in the 2013 American Community Survey, was 20,254, or 75.9% of the total number of housing units. Vacant housing units (6,427) comprised 24.1% of the total number of units. Table 2-14 summarizes the County's and municipalities' dwelling units by tenure. Surf City and Topsail Beach has the highest percentage of vacant housing units (attributable to seasonal housing) of Pender County's municipalities. Overall, the County's occupancy rate is high at 75.9%.

Table 2-14. Pender County/Municipalities Summary of Housing Units by Tenure, 2013

	Number of Units	% of Total
Atkinson		
Owner-Occupied Units	161	79.7%
Renter-Occupied Units	11	5.4%
Vacant Units	30	14.9%
Total Housing Units - Atkinson	202	100.0%
Burgaw		
Owner-Occupied Units	571	37.6%
Renter-Occupied Units	604	39.7%
Vacant Units	345	22.7%
Total Housing Units - Burgaw	1,520	100.0%
St. Helena		
Owner-Occupied Units	127	59.1%
Renter-Occupied Units	63	29.3%
Vacant Units	25	11.6%
Total Housing Units - St. Helena	215	100.0%
Surf City		
Owner-Occupied Units	735	22.1%
Renter-Occupied Units	429	12.9%
Vacant Units	2,161	65.0%
Total Housing Units - Surf City	3,325	100.0%
Topsail Beach		
Owner-Occupied Units	186	14.4%
Renter-Occupied Units	41	3.2%
Vacant Units	1,065	82.4%
Total Housing Units - Topsail Beach	1,292	100.0%

	Number of Units	% of Total
Watha		
Owner-Occupied Units	84	62.2%
Renter-Occupied Units	33	24.5%
Vacant Units	18	13.3%
Total Housing Units - Watha	135	100.0%
Pender County		
Owner-Occupied Units	15,656	58.7%
Renter-Occupied Units	4,598	17.2%
Vacant Units	6,427	24.1%
Total Housing Units - County	26,681	100.0%

Source: 2009-2013 American Community Survey 5-Year Estimates.

The majority of the County's housing units (81.9%) were built during or after 1970. Table 2-15 presents housing units for the County and its municipalities by year the structures were built.

Table 2-15. Pender County/Municipalities Housing Units by Year Structure Built, 2013

Year	# of Structures	% of Total	
Atkinson			
2010 or later	0	0.0%	
2000 to 2009	15	7.4%	
1990 to 1999	42	20.8%	
1980 to 1989	18	8.9%	
1970 to 1979	23	11.4%	
1960 to 1969	11	5.4%	
1950 to 1959	21	10.4%	
1940 to 1949	18	8.9%	
1939 or earlier	54	26.7%	*Largest % of Atkinson's housing units built pre-1940*
Total Structures	202	100.0%	
Burgaw			
2010 or later	34	2.2%	
2000 to 2009	285	18.8%	
1990 to 1999	186	12.2%	
1980 to 1989	171	11.3%	
1970 to 1979	309	20.3%	*Largest % of Burgaw's housing units built post-1970*
1960 to 1969	218	14.3%	
1950 to 1959	76	5.0%	
1940 to 1949	99	6.5%	
1939 or earlier	142	9.3%	
Total Structures	1,520	100.0%	

Year	# of Structures	% of Total	
St. Helena			
2010 or later	0	0.0%	
2000 to 2009	28	13.0%	
1990 to 1999	26	12.1%	
1980 to 1989	18	8.4%	
1970 to 1979	75	34.9%	*Largest % of St. Helena's housing units built in 1970s*
1960 to 1969	42	19.5%	
1950 to 1959	10	4.7%	
1940 to 1949	2	0.9%	
1939 or earlier	14	6.5%	
Total Structures	215	100.0%	
Surf City			
2010 or later	58	1.7%	
2000 to 2009	1,138	34.2%	*Largest % of Surf City's housing units built 2000-2009*
1990 to 1999	648	19.5%	
1980 to 1989	731	22.0%	
1970 to 1979	261	7.8%	
1960 to 1969	180	5.4%	
1950 to 1959	282	8.5%	
1940 to 1949	22	0.7%	
1939 or earlier	5	0.2%	
Total Structures	3,325	100.0%	
Topsail Beach			
2010 or later	0	0.0%	
2000 to 2009	145	11.2%	
1990 to 1999	236	18.3%	
1980 to 1989	246	19.0%	
1970 to 1979	345	26.7%	*Largest % of Topsail Beach's housing units built in 1970s*
1960 to 1969	145	11.2%	
1950 to 1959	146	11.3%	
1940 to 1949	18	1.4%	
1939 or earlier	11	0.9%	
Total Structures	1,292	100.0%	

Year	# of Structures	% of Total	
Watha			
2010 or later	0	0.0%	
2000 to 2009	5	3.7%	
1990 to 1999	30	22.2%	
1980 to 1989	25	18.5%	
1970 to 1979	12	8.9%	
1960 to 1969	6	4.4%	
1950 to 1959	0	0.0%	
1940 to 1949	2	1.5%	
1939 or earlier	55	40.7%	*Largest % of Watha's housing units built pre-1940*
Total Structures	135	100.0%	
Pender County			
2010 or later	388	1.5%	
2000 to 2009	6,643	24.9%	
1990 to 1999	6,855	25.7%	*Largest % of Pender County's housing units built post-1990*
1980 to 1989	4,915	18.4%	
1970 to 1979	3,039	11.4%	
1960 to 1969	1,633	6.1%	
1950 to 1959	1,384	5.2%	
1940 to 1949	687	2.6%	
1939 or earlier	1,137	4.3%	
Total Structures	26,681	100.0%	

Source: 2009-2013 American Community Survey 5-Year Estimates.

Economy

In 2013, there was a total of 22,453 employed persons in Pender County. Table 2-16 provides the County's and municipalities' unemployment rates for the civilian labor force for selected years. The overall unemployment rate increased for the County from 5.7% in 2000 to 11.0% in 2013. The unemployment rates also increased for all of the County's municipalities.

Table 2-16. Pender County/Municipalities Civilian Unemployment Rate, 16 years and over

	2000	2013	% Change
Atkinson			
Civilian Labor Force	104	174	67.3%
Number Employed	104	168	61.5%
Number Unemployed	0	6	-
Atkinson Unemployment Rate	0.0%	3.4%	-

	2000	2013	% Change
Burgaw			
Civilian Labor Force	1,045	1,063	0.7%
Number Employed	966	848	-12.2%
Number Unemployed	79	215	172.2%
Burgaw Unemployment Rate	7.6%	20.2%	165.8%
St. Helena			
Civilian Labor Force	218	246	12.8%
Number Employed	208	224	7.7%
Number Unemployed	10	22	120.0%
St. Helena Unemployment Rate	4.6%	8.9%	93.5%
Surf City			
Civilian Labor Force	698	1,130	61.9%
Number Employed	671	1,028	53.2%
Number Unemployed	27	102	277.8%
Surf City Unemployment Rate	3.9%	9.0%	130.8%
Topsail Beach			
Civilian Labor Force	209	253	21.1%
Number Employed	208	232	11.5%
Number Unemployed	1	21	200.0%
Topsail Beach Unemployment Rate	0.5%	8.3%	156.0%
Watha			
Civilian Labor Force	74	137	85.1%
Number Employed	63	114	81.0%
Number Unemployed	11	23	109.1%
Watha Unemployment Rate	14.9%	16.8%	12.8%
Pender County			
Civilian Labor Force	18,972	25,242	33.0%
Number Employed	17,896	22,453	25.5%
Number Unemployed	1,076	2,789	159.2%
Pender County Unemployment Rate	5.7%	11.0%	93.0%
North Carolina Unemployment Rate	5.3%	11.1%	109.4%

Source: 2000 US Census; 2009-2013 American Community Survey 5-Year Estimates.

Pender County's civilian employment is heavily concentrated in the education/health/social service, retail trade, and construction sectors. The largest single employment category is the Educational Services, and Health Care and Social Assistance sector which constitutes 19.2% of all those employed who are 16 years of age and older. The Retail Trade sector accounts for the second largest category with 14.5%. Of the County's total 2013 employed labor force, 11.1% were employed in the Construction industry and 10.3% in the Professional, Scientific, and Management, and Administrative and Waste Management Services sector. Table 2-17 provides a summary of Pender County's employment by industry.

Table 2-17. Pender County Employment by Industry, 2013		
Categories	**Total Employment**	**% of Total**
Agriculture, forestry, fishing and hunting, and mining	607	2.7%
Construction	2,490	11.1%
Manufacturing	2,200	9.8%
Wholesale trade	576	2.6%
Retail trade	3,245	14.5%
Transportation and warehousing, and utilities	1,157	5.2%
Information	178	0.8%
Finance and insurance, and real estate and rental and leasing	981	4.4%
Professional, scientific, and management, and administrative and waste management services	2,311	10.3%
Educational services, and health care and social assistance	4,314	19.2%
Arts, entertainment, and recreation, and accommodation and food services	1,777	7.9%
Other services (except public administration)	1,233	5.5%
Public administration	1,384	6.2%
Total	22,453	100.0%

Source: 2009-2013 American Community Survey 5-Year Estimates.

Normally, per capita income is considered a good indicator of an area's income producing capability or strength. Table 2-18 provides a comparison of per capita incomes for Pender County, its municipalities, and North Carolina.

Table 2-18. Pender County and North Carolina *Per Capita* Income, 2000, 2010, and 2013			
	2000 Census	**2010 Census**	**2013 Estimate**
Atkinson	$18,135	$21,747	$25,861
Burgaw	$13,831	$16,870	$15,471
St. Helena	$18,040	$23,605	$22,629
Surf City	$25,242	$33,120	$37,003
Topsail Beach	$35,838	$35,126	$36,935
Watha	$15,654	$16,547	$16,793
Pender County	$17,882	$22,872	$23,526
North Carolina	$20,307	$24,745	$25,284

Source: 2000 US Census; 2010 US Census; 2009-2013 American Community Survey 5-Year Estimates.

SECTION 3.

HAZARD IDENTIFICATION & ANALYSIS

INTRODUCTION

As part of the Southeastern NC Region's hazard mitigation efforts and the preparation of this plan, the three-county region will need to decide on which specific hazards it should focus its attention and resources. To plan for hazards and to reduce losses, the Southeastern NC Region needs to know:

1) the type of natural hazards that threaten the region,
2) the characteristics of each hazard,
3) the likelihood of occurrence (or probability) of each hazard,
4) the magnitude of the potential hazards, and
5) the possible impacts of the hazards on the community.

The following section identifies each hazard that poses an elevated threat to the counties and municipalities located within the Southeastern NC Region. A rating system that evaluates the potential for occurrence for each identified threat is provided (see Table 3-8). The following natural hazards were determined to be of concern for the region:

1. Hurricanes and Coastal Storms
2. Flooding
3. Winter Storms and Freezes
4. Thunderstorms/Windstorms, Lightning, and Hail
5. Tornados
6. Wildfires
7. Earthquakes
8. Dam/Levee Failures
9. Droughts and Extreme Heat
10. Tsunamis
11. Coastal Hazards
12. Sinkholes

A detailed explanation of these hazards and how they have impacted the region is provided on the following pages. The weather history summaries provided throughout this discussion have been compiled from the National Oceanic and Atmospheric Administration (NOAA) as provided through the National Climatic Data Center (NCDC). The NCDC compiles monthly reports that track weather events and any financial or life loss associated with a given occurrence. These reports are compiled and stored in an online database that is organized by state and county for the entire United States. The data presented within this section as well as Appendix E are the results of this research.

HURRICANES AND COASTAL STORMS

Hurricanes are cyclonic storms that originate in tropical ocean waters poleward of about 5° latitude. Basically, hurricanes are heat engines, fueled by the release of latent heat from the condensation of warm water. Their formation requires a low pressure disturbance, sufficiently warm sea surface temperature, rotational force from the spinning of the Earth, and the absence of wind shear in the lowest 50,000 feet of the atmosphere.

Hurricanes that impact North Carolina form in the so-called Atlantic Basin, from the west coast of Africa westward into the Caribbean Sea and Gulf of Mexico. Hurricanes in this basin generally form between June 1 and November 30, with a peak around mid-September. As a hurricane develops, barometric pressure at its center falls and winds increase. Winds at or exceeding 39 mph result in the formation of a tropical storm, which is given a name and closely monitored by the NOAA National Hurricane Center in Miami, Florida. When winds are at or exceed 74 mph, the tropical storm is deemed a hurricane.

Because hurricanes derive their strength from warm ocean waters, they are generally subject to deterioration once they make landfall. The forward momentum of a hurricane can vary from just a few miles per hour to up to 40 mph. This forward motion, combined with a counterclockwise surface flow make the right front quadrant of the hurricane the location of the most potentially damaging winds.

Hurricane intensity is measured using the Saffir-Simpson Scale, ranging from 1 (minimal) to 5 (catastrophic). The following scale categorizes hurricane intensity linearly based upon maximum sustained winds.

- Category 1: Winds of 74 to 95 miles per hour. Very dangerous winds will produce some damage: Well-constructed frame homes could have damage to roof, shingles, vinyl siding, and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.

- Category 2: Winds of 96 to 110 miles per hour. Extremely dangerous winds will cause extensive damage: Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.

- Category 3: Winds of 111 to 129 miles per hour. Devastating damage will occur: Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.

- Category 4: Winds of 130 to 156 miles per hour. Catastrophic damage will occur: Well-built homes can sustain severe damage with loss of most of the roof structure and/or exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

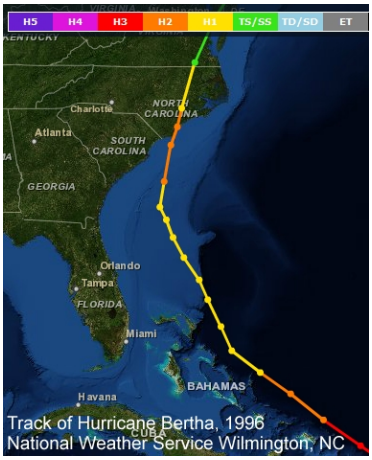
- Category 5: Winds greater than 157 miles per hour. Catastrophic damage will occur: A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

Similar to hurricanes, coastal storms are ocean-fueled storm events capable of causing substantial damage to coastal areas due to their associated strong winds and heavy surf. The nor'easter is a particularly devasting type of coastal storm, named for the winds that blow in from the northeast and drive the storm up the US East Coast alongside the Gulf Stream, a band of warm water that lies off the Atlantic coast. They are caused by the interaction of the jet stream with horizontal temperature gradients and generally occur during the fall and winter months when moisture and cold air are plentiful. Coastal storm events are known for dumping heavy amounts of rain and snow, producing hurricane-force winds, and creating high surf that causes severe beach erosion and coastal flooding.

North Carolina has an extensive hurricane history dating back to colonial times. During the nineteenth century, storms occurred in 1837, 1846, 1856, 1879, 1883, and 1899. During the 1950s, North Carolina was impacted by several hurricanes, including Hazel, Connie, Diane, and Ione. Between 1960 - 1990, there was a decrease in landfalling hurricanes, with the exception of Hurricane Donna in 1960, Hurricane Diana in 1984, and Hurricane Hugo in 1989. Recent history has included a number of hurricanes/tropical storms, including several major storms, with Emily (1993), Opal (1995), Bertha (1996), Fran (1996), Bonnie (1998), Dennis (1999), Floyd (1999), Isabel (2003), Charley (2004), Ophelia (2005), Ernesto (2006), Irene (2011), Andrea (2013), and Arthur (2014) all leaving their mark on North Carolina. These storms had varying impacts on the Southeastern NC Region. Following are brief descriptions of several storms in recent history which had a significant impact on the region.

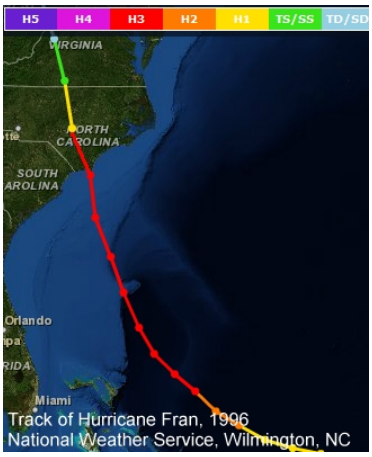
July 5 to July 12, 1996 (Hurricane Bertha)

Hurricane Bertha formed on July 5, 1996. As a Category One hurricane, Bertha moved across the northeastern Caribbean. The storm's highest sustained winds reached 115 mph north of Puerto Rico. Bertha made landfall near Wilmington on July 12 as a Category Two hurricane, with estimated winds of 105 mph. Bertha claimed two lives in North Carolina and did substantial damage to agricultural crops and forestland. Storm surge flooding and beach erosion were severe along the coast. Damages were estimated to exceed $60 million for homes and structures, and over $150 million for agriculture. Corn, tobacco, and other crops received severe damage from the storm. Rainfall totals of over 5 inches were common in eastern North Carolina, resulting in widespread flooding and power outages. The Southeastern NC Region experienced approximately $17,500,000 in crop damage and $27,000,000 in property damage.



Track of Hurricane Bertha, 1996
National Weather Service Wilmington, NC

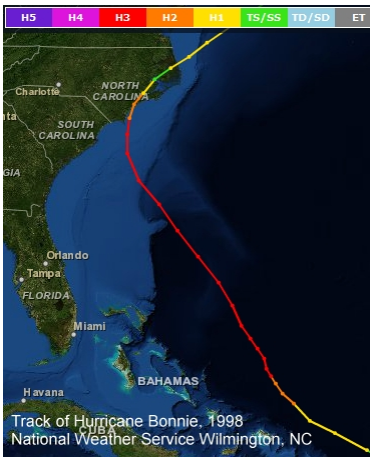
August 23 to September 5, 1996 (Hurricane Fran)



Hurricane Fran was the most destructive hurricane of the 1996 season. The storm was created on August 23, reaching hurricane status on August 29, while about 450 miles to the northeast of the Leeward Islands. It strengthened to a Category Three hurricane northeast of the central Bahamas on September 4. Hurricane Fran, with winds estimated at 115 mph, made landfall over Cape Fear on the evening of September 5, then continued northward over the eastern United States causing widespread damage. Fran was responsible for 34 deaths overall (24 in North Carolina alone), mostly caused by flash flooding in the Carolinas, Virginia, West Virginia, and Pennsylvania.

The storm surge on the North Carolina coast destroyed or seriously damaged thousands of beach front structures. Immediately following the storm, nearly 1.8 million people were without electrical power. Most electrical service was restored within 8-10 days. In Brunswick County, storm surge was around 6 feet, with beach erosion around 15 feet on the eastern islands. Seven beach houses on the east end of Holden Beach were damaged or destroyed. The storm passed through New Hanover County with winds gusting around 110 mph, storm surge 12 feet above mean sea level (MSL), and 40 foot beach erosion destroying most docks and piers. Pleasure Island was hardest hit, as 25 homes were carried off foundations and many others badly damaged. Wrightsville Beach was not hit as hard, but 15 homes were at least 75% damaged. In Wilmington, 14 homes were destroyed and 385 homes suffered major damage. In Pender County, a 12-foot storm surge on Topsail Island caused 40 feet of beach erosion and wiped out dunes as overwash destroyed most of the first row of beach houses and heavily damaged the rest. More than 890 businesses and 30,000 homes were damaged by the storm which also damaged or destroyed 8.25 million acres of forest. The damage in North Carolina alone was estimated at $5.2 billion. The Southeastern NC Region experienced approximately $385,000,000 in property damage, $49,000,000 in crop damages, and two (2) deaths. The agricultural damage was the greatest in Pender County.

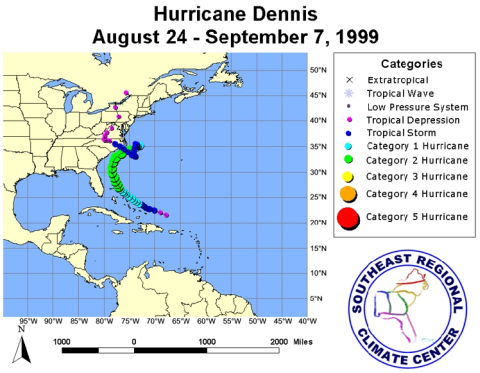
August 19 to 30, 1998 (Hurricane Bonnie)



Hurricane Bonnie originated as a tropical wave over Africa. It slowly increased speed and made its way across the Atlantic, near the Leeward Islands and then Hispaniola. It made landfall near Wilmington as a border Category 2/3 hurricane with approximately 115 mph winds and a diameter of 400 miles on August 27, 1998. Rainfall totals between 8-11 inches were recorded in portions of eastern North Carolina. Storm surge ranged from 5-8 feet with most barrier island overwash from the sound side, not the ocean side. The storm slowly moved off land on August 28, 1998. In its wake, the total damage was estimated in the $1 billion range. There was an estimated $360 million in insured property damage, including $240 million in North Carolina alone. The Southeastern NC Region experienced approximately $72,200,000 in property damage.

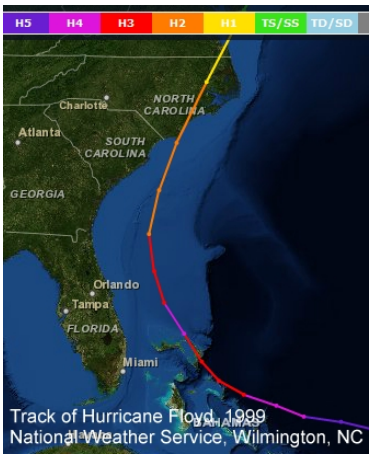
August 24 to September 7, 1999 (Hurricane/Tropical Storm Dennis)

Hurricane Dennis developed over the eastern Bahamas on August 26, 1999, and drifted parallel to the southeastern United States from the 26th to the 30th. The center of Dennis approached to within 60 miles of the Carolina coastline on August 30th as a strong Category 2 hurricane. Although, the storm never made landfall, rainfall amounts approached ten inches in coastal southeastern North Carolina and beach erosion was substantial. Dennis made a return visit in September as a tropical storm, moving west-northwest through eastern and central North Carolina and then lingering off the coast for several days.



For most counties, Tropical Storm Dennis left relatively little in its wake although on the Outer Banks beach erosion and the storm tide effects were extreme. Unfortunately, the hurricane approached eastern North Carolina during one of the highest astronomical tides of the month. For almost a week after Tropical Storm Dennis made landfall, associated rain fell on inland counties. This allowed most of the rivers to rise above flood stage which set the stage for the next hurricane, Hurricane Floyd and its associated record flooding.

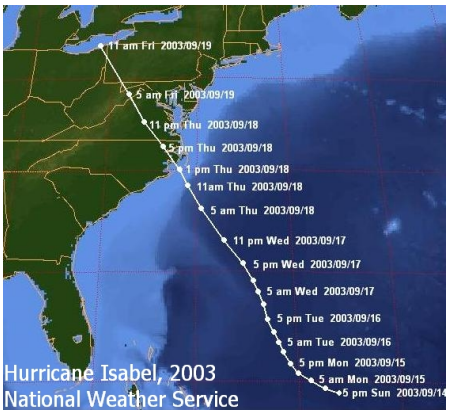
September 7 to 18, 1999 (Hurricane Floyd)



Hurricane Floyd brought flooding rains, high winds, and rough seas to a good portion of the United States coastline from September 14th through the 18th. Although Hurricane Floyd reached Category 4 intensity in the Bahamas, it weakened to a Category 2 hurricane by the time it made landfall in North Carolina. Due to Floyd's large size, heavy rainfall covered a larger area and lasted longer than a typical Category 2 storm. Flooding caused major problems across the region resulting in at least 77 deaths and damages estimated in the billions. In North Carolina alone, 7,000 homes were destroyed; 17,000 homes were inhabitable; and 56,000 homes were damaged.

Extreme flooding was experienced across most counties. Inland flooding exceeded Hurricane Bertha, Fran, Bonnie, and Dennis combined. Most counties reported their worst flooding ever. The Northeast Cape Fear River had the worst flood of the century, while the Black River flood was the worst since 1945. Unbelievable numbers of homes were covered with water and over half a million customers throughout the warning area were without power. High water closed most roads, including US 17, isolating many areas. A dam failed at Boiling Spring Lakes, inundating the area. In Pender County, more than 3,000 hogs, 90,000 turkeys, and 200 cows were lost due to drowning. Animal waste and septic tanks added pollution to the flooding. Two human fatalities occurred as motorists drove into flooded parts of highways. Unofficially the flooding from Hurricane Floyd has been compared to a 500-year flood.

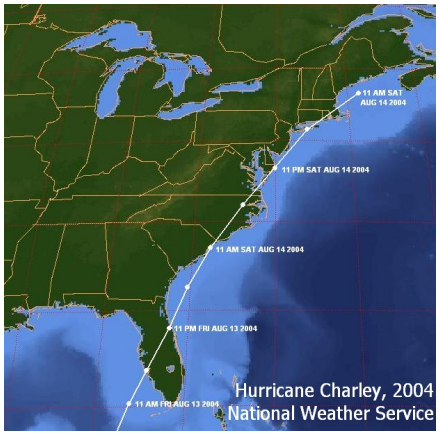
September 6 to 19, 2003 (Hurricane Isabel)



Hurricane Isabel began her path to the east coast of the United States as a tropical storm around September 6, 2003. On September 7th, Isabel was upgraded to a hurricane with 90 mile per hour (mph) sustained winds. By September 8th , Isabel became the third major hurricane of the year at a Category 4 with winds reaching almost 135 mph. Isabel continued her path towards the east coast with a well-formed eye and catastrophic winds that eventually reached 160 mph on September 11, 2003. According to the National Oceanic and Atmospheric Administration (NOAA), at that point Isabel's hurricane force winds extended 60 miles out from the center and tropical storm force winds extended approximately 185 miles out. The storm began to weaken and on September 16th was reduced to a Category 2. Large ocean swells and dangerous surf were experienced from South Carolina to New Jersey.

The hurricane made landfall on September 19th along the southern Outer Banks. Widespread power outages were experienced in eastern North Carolina and Virginia. The fringe of Isabel's circulation caused offshore winds gusting near 60 mph along the beaches of Pender, New Hanover, and Brunswick counties. Damage was minimal, mainly to scattered tree limbs and some roof shingles. Beach erosion damaged a roadway on Bald Head Island in Brunswick County.

August 9 to August 15, 2004 (Hurricane/Tropical Storm Charley)

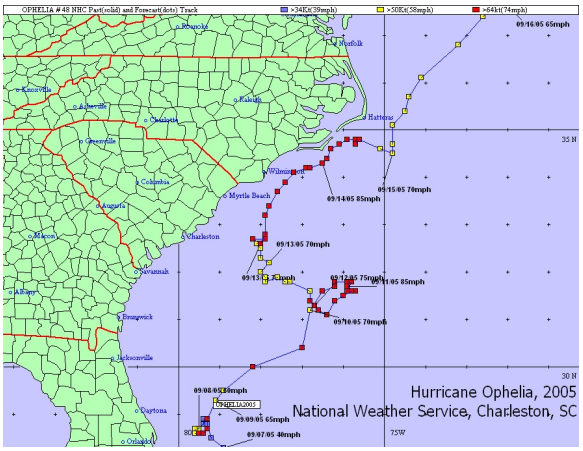


Hurricane Charley initially made landfall on the west coast of Florida between Fort Myers and Tampa as a Category 4 hurricane. The storm crossed Florida, and exited the coast as a Category 1 storm. It continued northeast and made landfall again near Cape Romain as a weak Category 1 hurricane with sustained winds at 75 mph. It moved up the coast and then inland around Myrtle Beach. In Horry and Georgetown counties, insurance claims totaled $5 million, mostly along the Grand Strand. There were downed trees, roof damage, and flooding along the coast in this area.

Tropical Storm Charley moved northeast across the Coastal Plains of Eastern North Carolina during the afternoon hours of August 14th. Brunswick County was hit the hardest, with peak winds around 85 mph. Damage was extensive, with 2,231 homes damaged, 231 with major damage, and 40 homes destroyed in the county. Many beach homes were damaged, with 221 homes damaged at Sunset Beach alone. Crop damage in Brunswick County was also widespread, with 50% of the tobacco crop lost, and 30% of the corn and field vegetables destroyed. New Hanover County was the next hardest hit, with many businesses damaged in Wilmington and surrounding cities. The majority of the county had power outages from downed limbs on power lines. Rainfall ranged from two (2) inches near the cost, to around four (4) inches from eastern Bladen County, south through

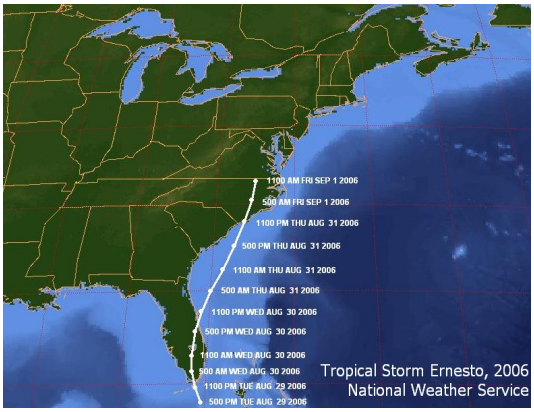
Columbus County. Vegetative debris was widespread, plugging storm drains and contributing to ponding and flooding the next day. Storm surge was minimal, with some minor overwash. Property damages were estimated at $10,175,875 across the Southeastern NC Region.

September 6 to September 17, 2005 (Hurricane Ophelia)



Category one Hurricane Ophelia, with maximum sustained winds of 85 mph, approached the North Carolina coast on the September 13th. The hurricane remained offshore brushing the southern coastal counties of North Carolina on the September 14th and 15th. The large eyewall (50 miles in diameter) was over New Hanover, Pender, and Brunswick counties with hurricane strength wind gusts reported at Wrightsville Beach. There were unofficial reports of wind gusts to 84 mph at Bald Head Island and Kure Beach. Rainfall was heaviest in the eastern portion of Brunswick County. Average rainfall over the Southeastern NC Region ranged from 6 to 10 inches. The storm continued to track slowly northeast. Ophelia brushed by Outer Banks Hyde and Dare counties on the September 16th with hurricane force wind gusts. Damage over the Southeastern NC Region was mainly minor roof damage and flooding. There were moderate reports of downed trees and the utility company reported over 51,000 people without power at the height of the storm. Beach erosion was also a problem. A longshore current gouged a five (5) foot escarpment along the coast of New Hanover and Pender counties. Damage to the area and the cost for clean up was $6 million for Pender and New Hanover counties, with $2.3 million for Brunswick County. Most of the money went to the clean up of storm debris.

August 24 to September 1, 2006 (Tropical Storm Ernesto)



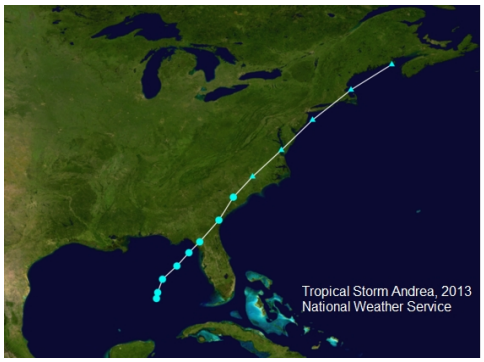
Tropical Storm Ernesto, with maximum sustained winds of 70 mph, made landfall on August 31st during the late evening hours. The strong tropical storm moved across the coastal plains region during the early morning hours of September 1st. In general, wind gusts ranged from 40 to 60 mph with the highest gusts near 70 mph along the coastal sections of New Hanover and Brunswick counties. Most of the property damage was due to rainfall and fresh water flooding, with little structural damage from wind. Rainfall storm totals ranged from 4.5 inches in Columbus County to nearly 12 inches along the coast of Pender County. In Pender County, the Northeast Cape Fear River crested at 16.7 feet, almost 7 feet above the flood stage of 10 feet. This was the second highest crest on record, exceeded only by Hurricane Floyd at 22.5 feet. Flooding on the Northeast Cape Fear River caused 1,600 people to evacuate near the Town of Burgaw, including the Birch Creek and

River Bend communities. The heavy rains contributed to multiple sewer spills, most notable in New Hanover County. Crop damage was extensive, particularly in Columbus and Pender counties. In Pender County, over 12,000 acres of corn were destroyed, 13,000 soybeans, 7,000 acres of cotton, and 760 acres of tobacco were also damaged. Thousands of turkeys and chickens were also lost due to the tropical storm. Along the coast, storm surge was less than 3 feet. Beach erosion was minor to moderate, with some dune loss mainly at Topsail Island.

August 26 to 27, 2011 (Hurricane Irene)

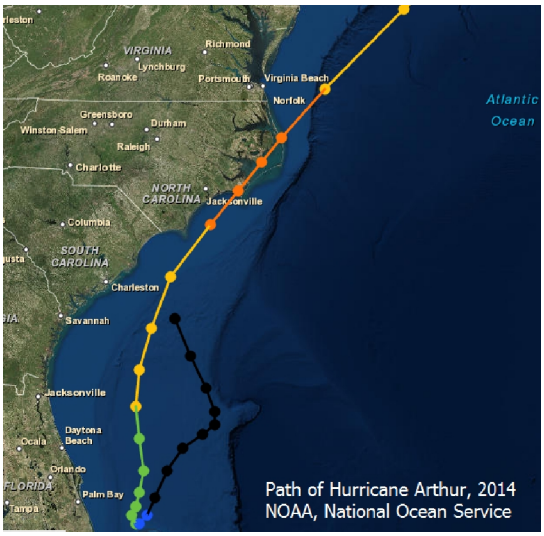
Hurricane Irene made landfall during the morning of the 27th, near Cape Lookout, as a large Category 1 hurricane. Due to the large size of the hurricane, strong damaging winds, major storm surge, and flooding rains were experienced across much of eastern North Carolina. Several destructive tornados occurred during the evening of the 26th associated with the hurricane. Millions of dollars in damages were reported across the area. Property and crop damages were estimated to be 209 million dollars. Storm surge damages were estimated at 420 million dollars. Across the Southeastern NC Region, winds gusting as high as 60 mph resulted in downed trees and power lines with power outages. Rainfall amounts across the Region ranged from three to over eight inches resulting in flooding of roads and low-lying areas. The Southeastern NC Region experienced approximately $4.35 million in property damage.

June 5 to 7, 2013 (Tropical Storm Andrea)



Tropical Storm Andrea made landfall in the Florida Big Bend area during the late afternoon on June 6th. Andrea had the greatest impacts across Eastern NC on June 7th as it moved inland across the area, bringing torrential rain, brief tropical storm force winds, and isolated severe weather. Heavy rain preceded the storm, with tropical rain continuing throughout the day. Rainfall totals were impressive, with many spots receiving 3-4 inches. Brunswick County had the highest totals with an area east of Bolivia receiving 6.46 inches. There were numerous reports of street flooding. The strongest winds came during and slightly after the center of Andrea passed that afternoon. The Wilmington State Port clocked in at 43 kts, with 42 kts reported at the Wilmington International Airport. North Topsail Beach also came in at 43 kts. A 30 foot Grady White vessel was blown off its lift at the dock at Wrightsville Beach.

July 1 to 4, 2014 (Hurricane/Tropical Storm Arthur)



A depression formed off the Florida coast on June 30th and strengthened as it moved north. The tropical system became a hurricane off the Georgia coast and was named Arthur. Hurricane Arthur continued to move north northeast and further strengthened to a Category 2 hurricane with 100 mph winds as it made its closest pass to Wilmington, North Carolina the evening of July 3rd (40 miles). Tropical storm force winds were felt over much of northeast South Carolina and southeast North Carolina. Heavy rain was also a factor, with many locations receiving over three inches of rainfall. The strongest wind recorded in the Region was 66 mph, at Bald Head Island. Tropical storm force winds were experienced for about 10 hours, with numerous power outages reported. Beach erosion was minimal. The storm exited the Region in the early morning on July 4th.

Retired Names

Some hurricanes are so significant and have such a great impact on an area that the names are retired. The name of a hurricane may be retired if the country affected by the storm makes the request to the World Meteorological Organization (WMO). When the name is retired it may not be used again for at least ten years to avoid public confusion with other storms. Several of the hurricanes that affected the Region were so destructive that their names were retired. The following is a list of those hurricanes: Hazel, Connie, Ione, Donna, Fran, Floyd, Isabel, Charley, and Irene.

Extent

North Carolina's geographic location of the Atlantic Ocean and its proximity to the Gulf Stream make it prone to hurricanes. In fact, North Carolina has experienced the fourth greatest number of hurricane landfalls of any state in the twentieth century (trailing Florida, Texas and Louisiana).

The Southeastern NC Region is located in the eastern North Carolina coastal plain. The geographic proximity of the region to the coast increases the likelihood of occurrence for hurricanes. Hurricane extent is defined by the Saffir-Simpson Scale which classifies hurricanes into Category 1 through Category 5 (see pages 3-2 and 3-3). The greatest classification of hurricane to impact the Southeastern NC Region was Hurricane Fran, which was a Category 3 hurricane when it passed through the region. Using Table 3-8 as a guide, it was determined that hurricanes are "likely" to occur in the Southeastern NC Region.

FLOODING

Flooding is a localized hazard that is generally the result of excessive precipitation. It is the most common environmental hazard, due to the widespread geographical distribution of river valleys and coastal areas, and the attraction of residents to these areas. Floods can be generally considered in two categories: flash floods, the product of heavy localized precipitation in a short time period over a given location; and general floods, caused by precipitation over a longer time period and over a given river basin.

Flash floods occur within a few minutes or hours of heavy amounts of rainfall or from a dam or levee failure. Flash floods can destroy buildings and bridges, uproot trees, and scour out new drainage channels. Heavy rains that produce flash floods can also trigger mudslides. Most flash flooding is caused by slow-moving thunderstorms, repeated thunderstorms in a local area, or by heavy rains from hurricanes and tropical storms. Although flash flooding occurs often along mountain streams, it is also common in urban areas where much of the ground is covered by impervious surfaces.

The severity of a flooding event is determined by a combination of river basin physiography, local thunderstorm movement, past soil moisture conditions, and the degree of vegetative clearing. Abnormal weather patterns may also contribute to flooding of a local area. Large-scale climatic events, such as the El Nino-Southern Oscillation in the Pacific have been linked to increased storm activity and flooding in the United States. Nationally, July is the month in which most flash flooding events occur, and nearly 90% of flash floods occur during the April through September period.

While flash floods occur within hours of a rain event, general flooding is a longer-term event, and may last for several days. The primary types of general flooding are riverine flooding, coastal flooding, and urban flooding. Riverine flooding is a function of excessive precipitation levels and water runoff volumes within the watershed of the stream or river. Coastal flooding is typically a result of storm surge, wind-driven waves, and heavy rainfall produced by hurricanes, tropical storms, and other large coastal storms. Urban flooding occurs where manmade development has obstructed the natural flow of water and decreased the ability of natural groundwater to absorb and retain surface water runoff. This is partly a result of the use of waterways for transportation purposes in earlier times. Sites adjacent to rivers and coastal inlets provided convenient places to ship and receive commodities. The price of this accessibility was increased flooding in the ensuing urban areas. Urbanization increases the magnitude and frequency of floods by increasing impermeable surfaces, increasing the speed of drainage collection, reducing the carrying capacity of the land, and occasionally overwhelming sewer systems.

The periodic flooding of lands adjacent to rivers, streams, and shorelines (land known as floodplain) is a natural and inevitable occurrence that can be expected to take place based upon established recurrence intervals. When stream flow exceeds the capacity of the normal water course, some of the above-normal stream flow spills over onto adjacent lands within the floodplain. The recurrence interval of a flood is defined as the average time interval, in years, expected between a flood of a particular magnitude and an equal or larger flood. Flood magnitude increases with increasing recurrence interval.

Floodplains are divisible into areas expected to be inundated by spillovers from stream flow levels associated with specific flood-return frequencies. The National Flood Insurance Program (NFIP) uses flood zone designations to indicate the magnitude of flood hazards in specific areas. The following are flood hazard zones located within the Southeastern NC Region and a definition of what each zone means.

- Zone A: Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.

- Zone AE: Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. In most instances, base flood elevations derived from detailed analyses are shown at selected intervals within these zones.

- Zone AEFW: 100-year floodway; The floodway is an area that includes the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water-surface elevation by more than a designated height.

- Zone VE: Areas subject to inundation by the 1% annual chance flood event with additional hazards due to storm-induced velocity wave action.

- 0.2% Annual Chance (X-500): Areas of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.

From 1996-2014, the Southeastern NC Region experienced seventy-six (76) flooding events that were reported to the National Climatic Data Center (see Appendix E for a detailed description of hazard events). On average, the flood level during these flooding events was reported to be 6-8 feet above flood stage. The most significant flood level was in September 1999, when the Cape Fear River crested at 22.48 feet at Burgaw, NC. Further information on the history of flooding events associated with hurricanes in the region is provided in the hurricane discussion of this plan.

Flood hazard varies by location and type of flooding. Coastal areas are most at risk from flooding caused by hurricanes, tropical storms, and nor'easters. Low-lying coastal areas in close proximity to the shore, sounds, or estuaries are exposed to the threat of flooding from storm surge and wind-driven waves, as well as from intense rainfall. Areas bordering rivers may also be affected by large discharges caused by heavy rainfall over upstream areas.

Inland areas are most at risk from flash flooding caused by intense rainfall over short periods of time. Urban areas are particularly susceptible to flash floods. Large amounts of impervious surfaces in urban areas increase runoff amounts and decrease the lag time between the onset of rainfall and stream flooding. Man-made channels may also constrict stream flow and increase flow velocities.

The dominant sources of flooding in the Southeastern NC Region are storm surge and riverine flooding. Based on Table 3-8, the likelihood of occurrence of flooding in the Southeastern NC Region is "highly likely."

WINTER STORMS AND FREEZES

Severe winter storms can produce an array of hazardous weather conditions, including heavy snow, blizzards, freezing rain and ice pellets, and extreme cold. Severe winter storms are extratropical cyclones fueled by strong temperature gradients and an active upper-level jet stream. The winter storms that impact North Carolina generally form in the Gulf of Mexico or off the southeast Atlantic Coast. Few of these storms result in blizzard conditions, defined by the presence of winds in excess of 35 mph, large amounts of snow or blowing snow, and visibilities of less than 1/4 mile for an extended period of time (at least 3 hours). While the frequency and magnitude of snow events are highest in the mountains due to the elevation, the geographical orientation of the mountains and Piedmont contribute to a regular occurrence of freezing precipitation events (e.g., ice pellets and freezing rain) in the Piedmont.

Winter storm events may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Sleet is a raindrop that freezes into an ice pellet formation before reaching the ground, where it usually bounces upon hitting the surface and does not stick to objects. However, sleet can accumulate like snow and cause a hazard to motorists. Freezing rain is rain that falls to the ground when the temperature is below freezing, forming a glaze of ice on roadways and other surfaces. An ice storm occurs when freezing rain falls and freezes immediately upon impact. Even small accumulations of ice can cause a significant hazard, especially on power lines, roads, and trees. A freeze event is weather marked by low temperatures below the freezing point (zero degrees Celsius or 32 degrees Fahrenheit).

Severe winter weather is typically associated with much colder climates; however, in some instances winter storms do occur in the warmer climate of North Carolina. Winter storms can paralyze a community by shutting down normal day-to-day operations. Winter storms can produce an accumulation of snow and ice on trees and utility lines resulting in loss of electricity and blocked transportation routes. Frequently, especially in rural areas, loss of electric power means loss of heat for residential customers, which poses an immediate threat to human life. Because of the rare occurrence of these events, central and eastern North Carolina communities are often not prepared because they cannot afford to purchase expensive road and debris clearing equipment for these relatively rare events. In 2014 and 2015, there were four (4) occurrences of severe winter weather within the Southeastern NC Region (see Appendix E for a detailed description of hazard events).

The entire State of North Carolina has a likelihood of experiencing severe winter weather. The threat varies by location and by type of storm. Coastal areas typically face their greatest threat from nor'easters and other severe winter coastal storms. Freezing rain and ice storms typically occur once every several years at inland locations, and severe snowstorms have been recorded occasionally.

The Southeastern NC Region is unlikely to be hit with severe blizzard conditions (i.e., high winds and blowing snow), but is subject to freezing rain, icing, and snowfall. The extent of winter storms can be measured by the amount of snowfall received (in inches). The greatest one-day snowfall recorded in the Southeastern NC Region was in December 1989, which resulted in approximately 17.5 inches of snowfall in New Hanover County. Based on historic information and the geographic location of the three-county area, the likelihood of occurrence for a severe winter storm is "possible."

SEVERE THUNDERSTORMS/WINDSTORMS, LIGHTNING, AND HAIL

Thunderstorms are underrated in the damage, injury, and death they can bring. Lightning precedes thunder, because lightning causes thunder. As lightning moves through the atmosphere, it can generate temperatures of up to 54,000 degrees Fahrenheit. This intense heating generates shockwaves which turn into sound waves, thus generating thunder.

Warm, humid conditions encourage thunderstorms as the warm, wet air updrafts into the storm. As warm, moisture rich air rises, it forms cumulus nimbus clouds, or thunderstorm clouds, usually with a flattened top or an anvil shape, reaching to altitudes of over 40,000 feet. If this air is unstable, the conditions are favorable for causing hail, damaging winds, and tornados.

Damage to property from direct or indirect lightning can take the form of an explosion or a burn. Damage to property has increased over the last 35 years. This increase is probably due to increased population. Yearly losses are estimated at $35 million by the National Weather Service. This amount is compiled from newspaper reports, but many strikes are not reported. Lightning causes an average of between 55 and 60 fatalities and 300 injuries per year. Between 1995 and 2008, there were 648 fatalities in the United States attributed to lightning strikes. The National Lightning Safety Institute estimates US lightning costs and losses between $5 and $6 billion per year. This information is compiled from insurance reports and other sources that keep track of weather damages.

Thunderstorm winds also cause widespread damage and death. Thunderstorm "straight line" wind occurs when rain-cooled air descends with accompanying precipitation. According to the National Weather Service, a severe thunderstorm is a storm which produces tornados, hail 0.75 inches or more in diameter, or winds greater than 58 mph. At the very extreme, winds of 160 mph have been recorded. These winds can smash buildings and uproot and snap trees, and are often mistaken for tornados.

'Downbursts' are often spawned during thunderstorms. Downbursts are an excessive burst of wind that is sometimes mistaken for tornadic activity. These are defined as surface winds in excess of 125 mph, which are caused by small scale downdrafts from the base of a convective cloud. A downburst occurs when rain-cooled air within a convective cloud becomes heavier than its surroundings. Since cool air is heavier than warm air, it rushes toward the ground with a destructive force. Exactly what triggers the sudden downward rush is still unknown.

Downbursts appear to strike at a central point and blow outward. (Picture a bucket of water dashed against grass. If it hits straight on, the grass will be flattened in a circular pattern. If it hits at an angle, the grass will be flattened in a teardrop pattern).

Downbursts can be further classified into two categories:

- Microburst: Less than 2 ½ miles wide at the surface, duration less than 5 minutes and winds up to 146 miles per hour.

- Macroburst: Greater than 2 ½ miles wide at the surface, duration of 5-30 minutes with winds up to 117 miles per hour.

The Southeastern NC Region is extremely susceptible to thunderstorms/lightning and windstorms, suffering 459 such events from 1956 to 2014. Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to a 50-year history from the National Climatic Data Center, the strongest recorded thunderstorm wind in the Southeastern NC Region was reported in June 1995, at 85 knots (approximately 98 mph). Additionally, the Southeastern NC Region suffered 235 hail events from 1957 to 2014 (see Appendix E for detailed descriptions of hazard events). Hail extent can be defined by the size of the hail stone. The largest hail stone reported in the Southeastern NC Region was 2.5 inches. Based on Table 3-8, the likelihood of occurrence is "highly likely."

TORNADOS

Tornados are produced during severe thunderstorms, which are created near the convergence zone between warm, moist air and cold, dry air. Tornados derive their energy from the heat contained in warm, moist air masses. Tornados do not form during every thunderstorm. They occur when the moist, warm air is trapped beneath a stable layer of cold, dry air by an intervening layer of warm, dry air. This effect is called an inversion. If this inversion is disturbed, the moist air will push through the stable air that is holding it down. This warm air will then condense as the latent heat it holds is released. This air will then spiral upwards. With the help of different types of winds, this spiral gains speed, producing a tornado.

The path of a tornado is generally less than 0.6 mile wide. The length of the path ranges from a few hundred yards to dozens of miles. A tornado will rarely last longer than 30 minutes. The combinations of conditions that cause tornados are common across the southern U.S. in early spring, especially in April and May. Tornados have been reported lifting and moving objects weighing more then 300 tons up to 30 feet in the air. They can also lift homes off their foundations and move them 300 feet. They collect an incredible amount of debris, which can be projected outward at high velocities. Typically, tornados are accompanied by heavy rain. The damage caused by a tornado is a result of the high wind velocity and wind-blown debris, also accompanied by lightning or large hail. According to the National Weather Service, tornado wind speeds normally range from 40 mph to more than 300 mph. The most violent tornados have rotating winds of 250 mph or more and are capable of causing extreme destruction and turning normally harmless objects into deadly missiles.

The National Weather Service issues a tornado watch for a specific geographic area when conditions favor tornadic activity. A tornado warning is issued when a tornado has actually been sighted or indicated by weather radar.

Waterspouts are weak tornados that form over warm water and are most common along the Gulf Coast and Southeastern states. Waterspouts occasionally move inland, becoming tornados that cause damage and injury. However, most waterspouts dissipate over the open water, causing threats only to marine and boating interests. Typically, waterspouts are weak and short-lived and, because they are so common, most go unreported unless they cause damage.

The intensity, path length, and width of tornados are rated according to a scale originally developed by T. Theodore Fujita and Allen D. Pearson in 1971. At the time Fujita derived the scale, little information was available on damage caused by wind, so the original scale presented little more than educated guesses at wind speed ranges for specific tiers of damage. Further research suggested that wind speeds for strong tornados on the Fujita scale were greatly overestimated, and on February 1, 2007, the Fujita scale was decommissioned (in the US only) in favor of what scientists believe is a more accurate Enhanced Fujita (EF) Scale. The EF Scale is thought to improve on the F-scale on many counts – it accounts for different degrees of damage that occur with different types of structures, both man-made and natural. The expanded and refined damage indicators and degrees of damage standardize what was somewhat ambiguous. It also is thought to provide a much better estimate for wind speeds, and sets no upper limit on the wind speeds for the strongest level, EF5. The Enhanced Fujita Scale is provided in Table 3-1.

Table 3-1. Enhanced Fujita Tornado Scale

Category	Wind Speed	Equivalent Saffir-Simpson Scale	Potential Damage
EF0	65-85 mph	N/A	Light Damage: Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over.
EF1	86-110 mph	Cat 1/2/3	Moderate Damage: Roofs severely stripped; mobile homes overturned or badly damaged; loss of exterior doors; windows and other glass broken.
EF2	111-135 mph	Cat 3/4/5	Considerable Damage: Roofs torn off well-constructed houses; foundations of frame homes shifted; mobile homes completely destroyed; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
EF3	136-165 mph	Cat 5	Severe Damage: Entire stories of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some distance.
EF4	166-200 mph	Cat 5	Devastating Damage: Well-constructed houses and whole frame houses completely leveled; cars thrown and small missiles generated.
EF5	>200 mph	N/A	Explosive Damage: Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 300 feet; steel reinforced concrete structures badly damaged; high-rise buildings have significant structural deformation.

Source: National Oceanic and Atmospheric Administration.

A total of ninety (90) tornado events have been documented by the National Climatic Data Center in the Southeastern NC Region since 1951 (see Appendix E for detailed descriptions of hazard events). Tornado hazard extent is measured by the Enhanced Fujita Tornado Scale (see Table 3-1). The greatest magnitude reported was an F2 tornado, which touched down on August 13, 2004, in Pender County, resulting in three (3) deaths, twenty- nine (29) injuries, and $1,300,000 in property damage. In conclusion, tornados represent a significant threat to the Southeastern NC Region due primarily to their relative frequency and large impact. Based on Table 3-8, the likelihood of occurrence is "likely."

WILDFIRES

A wildfire is an uncontrolled burning of grasslands, brush, or woodlands. The potential for wildfire depends upon surface fuel characteristics, recent climate conditions, current meteorological conditions and fire behavior. Hot, dry summers and dry vegetation increase susceptibility to fire in the fall, a particularly dangerous time of year for wildfire.

While natural fires occur in any area in which there is vegetation, flammability varies by species, moisture content, and is influenced by the climate. Temperate, primarily deciduous forests, such as those in North Carolina, are most vulnerable to fire in autumn, when the foliage dries out. Grasses are least prone to ignition in the morning, when their moisture content is greatest.

Many wildfires have been caused by lightning strikes, however, humans are the greatest cause of wildfires. The progressive expansion of human activities into heavily vegetated areas has not only increased the number of wildfires but also increased the losses to life and property. The majority of fires which threaten life and property have been due to human actions. Main sources of ignition have been agricultural fires and discarded cigarette butts and campfires which have gotten out of control.

There are three classes of wildland fires: surface fire, ground fire, and crown fire. A surface fire is the most common of these three classes and burns along the floor of a forest, moving slowly and killing or damaging trees. A ground fire (muck fire) is usually started by lightning or human carelessness and burns on or below the forest floor. Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees. Wildfires are usually signed by dense smoke that fills the area for miles around.

According to Forest Statistics for North Carolina, 2002, published by the USDA-Forest Service, 895,000 acres of the Region's total acreage (1,231,700 acres) are in forestland. This figure represents 72.7% of the Region. The majority of the timberland (560,800 acres, or 62.7%) is in private ownership. Private ownership includes combined acreage for both corporate and individual owners. The rest of the timberland is owned by the State (47,300 acres or 5.3%), Federal (10,400 acres or 1.2%), County & Municipal (500 acres or 0.1%), and the Forestry Industry (275,500 or 30.8%).

Table 3-2 provides a summary of wildfire occurrences by County for the entire region. The largest wildfire event recorded for the Region was the 1955 Green Swamp Fire in Brunswick County, which burned 117,000 acres.

Table 3-2. Southeastern NC Region Wildfire Data

	Brunswick County		New Hanover County		Pender County	
Year	Fires	Acres	Fires	Fires	Acres	Acres
2005	83	873.9	24	38.9	54	80.2
2006	65	998.8	34	29.7	64	206.9
2007	119	824.9	41	55.2	95	2,378.8
2008	76	776.7	15	1,259.5	71	413.1

	Brunswick County		New Hanover County		Pender County	
Year	**Fires**	**Acres**	**Fires**	**Fires**	**Acres**	**Acres**
2009	47	507.1	20	51.2	22	60.3
2010	58	867.2	19	37.7	33	137.0
2011	108	1,313.9	18	31.1	72	32,086.3
2012	71	311.9	9	100.4	23	464.2
2013	29	349.8	6	16.0	26	16.7
2014	63	248.3	6	2.7	48	1,716.0
Totals	**719**	**7,072.5**	**192**	**1,622.4**	**508**	**37,559.5**

Source: NC Forest Service.

As population densities spread out into areas surrounding the forestland, citizens and private property increasingly become more susceptible to the effects of wildfires. While the incorporated government jurisdictions in the Southeastern NC Region have significantly less forestland within their corporate limits and extraterritorial jurisdictions (ETJs) than in the unincorporated areas, the municipal governments' boundaries exist at the "urban/wildland interface" - the area where human development meets undeveloped, forested areas which provide fuel for fires. This "urban/wildland interface" presents the greatest risk to life and property from wildfires.

Overall, however, the risk of wildfire damages in the Southeastern NC Region is mitigated by the fact that forested tracts are generally of manageable size, accessible to fire fighting equipment and personnel, and circumscribed by roadways or waterways that limit the extent and severity of wildfires. Based on Table 3-8, the likelihood of occurrence is "highly likely."

EARTHQUAKES

Earthquakes are geologic events that involve movement or shaking of the Earth's crust. Earthquakes are usually caused by the release of stresses accumulated as a result of the rupture of rocks along opposing fault planes in the Earth's outer crust. These fault planes are typically found along borders of the Earth's 10 tectonic plates. The areas of greatest tectonic instability occur at the perimeters of the slowly moving plates, as these locations are subjected to the greatest strains from plates traveling in opposite directions and at different speeds. Deformation along plate boundaries causes strain in the rock and the consequent buildup of stored energy. When the built-up stress exceeds the rocks' strength, a rupture occurs. The rock on both sides of the fracture is snapped, releasing the stored energy and producing seismic waves, generating an earthquake.

Most property damage and earthquake-related deaths are caused by the failure and collapse of structures due to ground shaking. The level of damage depends upon the amplitude and duration of the shaking, which are directly related to the earthquake size, distance from the fault, site and regional geology.

Earthquakes are measured in terms of their magnitude and intensity. Magnitude is measured using the Richter Scale, an open-ended logarithmic scale that describes the energy release of an earthquake through a measure of shock wave amplitude. Each unit increase in magnitude on the Richter Scale corresponds to a ten-fold increase in wave amplitude, or a 244-fold increase in energy. Intensity is most commonly measured using the Modified Mercalli Intensity (MMI) Scale. It is a twelve-level scale based on direct and indirect measurements of seismic effects. The scale levels are typically described using roman numerals. Table 3-3 provides a summary of the Modified Mercalli Scale of Earthquake Intensity and its relation to the Richter Scale.

Table 3-3. Modified Mercalli Scale of Earthquake Intensity

Scale	Intensity	Description of Effects	Maximum Acceleration (mm/sec)	Corresponding Richter Scale
I	Instrumental	Detected only on seismographs	<10	
II	Feeble	Some people feel it	<25	<4.2
III	Slight	Felt by people resting; like a truck rumbling by	<50	
IV	Moderate	Felt by people walking	<100	
V	Slightly Strong	Sleepers awake, church bells ring	<250	<4.8
VI	Strong	Trees sway; suspended objects swing; objects fall off shelves	<500	<5.4
VII	Very Strong	Mild alarm; walls crack; plaster falls	<1000	<6.1
VIII	Destructive	Moving cars uncontrollable; masonry fractures; poorly constructed buildings damaged	<2500	
IX	Ruinous	Some houses collapse; ground cracks; pipes break open	<5000	<6.9
X	Disastrous	Ground cracks profusely; many buildings destroyed; liquefaction and landslides widespread	<7500	<7.3
XI	Very Disastrous	Most buildings and bridges collapse; roads, railways, pipes and cables destroyed; general triggering of other hazards	<9800	<8.1
XII	Catastrophic	Total destruction; trees fall; ground rises and falls in waves	>9800	>8.1

Source: Local Hazard Mitigation Planning Manual, NC Division of Emergency Management.

Earthquakes are relatively infrequent but not uncommon in North Carolina. Earthquake extent can be measured by Richter Scale and the Modified Mercalli Intensity (MMI) Scale (see Table 3-3), and the distance of the epicenter from the Southeastern NC Region. The earliest North Carolina earthquake on record is that of March 8, 1735, near Bath. It is likely that this earthquake was less than Intensity V (slightly strong; sleepers awake). During the great earthquake of 1811 (Intensity VI), centered in the Mississippi Valley near New Madrid, Missouri, tremors were felt throughout North Carolina. The most property damage in North Carolina ever attributed to an earthquake was caused by the August 31, 1886, Charleston, South Carolina, shock. The quake left approximately 65 people dead in Charleston and caused chimney collapses, fallen plaster, and cracked walls in Abbottsburg, Charlotte, Elizabethtown, Henderson, Hillsborough, Raleigh, Waynesville, and Whiteville. On February 21, 1916, the Asheville area was the center for a large intensity VI

earthquake, which was felt in Alabama, Georgia, Kentucky, South Carolina, Tennessee, and Virginia. Subsequent minor earthquakes have caused damage in North Carolina in 1926, 1928, 1957, 1959, 1971, 1973, and 1976. The most recent tremor, measured at 2.9 magnitude, happened near Charlotte on March 21, 2011.

In North Carolina, earthquake epicenters are generally concentrated in the active Eastern Tennessee Seismic Zone. The Eastern Tennessee Seismic Zone is part of a crescent of moderate seismic activity risk extending from Charleston, South Carolina, northwestward into eastern Tennessee and then curving northeastward into central Virginia. While there have been no earthquakes with a MMI intensity greater than IV since 1928 in this area, it has the potential to produce an earthquake of significant intensity in the future.

North Carolina's susceptibility to earthquakes decreases from west to east in relation to the Eastern Tennessee Seismic Zone. Generally, there are three different zones of seismic risk in North Carolina. The eastern portion of the State faces minimal effects from seismic activity. Locations in the middle and southeastern areas of the State face a moderate hazard from seismic activity, while the area from Mecklenburg County west through the Blue Ridge faces the greatest risk from seismic activity. These different levels of risk correspond to proximity to areas with historical seismic activity and changes in topography. Brunswick, New Hanover, and Pender Counties are located in the portion of North Carolina that is susceptible to the effects of earthquakes. The likelihood of occurrence for earthquakes is "unlikely."

DAM/LEVEE FAILURE

According to the Dam Safety Law of 1967, a dam is defined as a structure erected to impound or divert water. This term is roughly synonymous with the term "levee" and these terms can be used interchangeably. Dams provide tremendous benefits, including water for drinking, power generation, and flood protection. At the same time, however, dams also represent a great risk to public safety, the environment, and local and regional economies when they fail. Flooding may result at many points along a watercourse when a dam failure occurs. Dams are dynamic structures that experience both internal and external changes in their conditions over time. Old pipes may deteriorate and continued development along rivers can cause more runoff. That runoff can result in the overtopping of dams. In addition, large storm events, such as hurricanes or severe thunderstorms, can overwhelm a dam's ability to function properly.

According to "Success and Challenges: National Dam Safety Program 2002" completed in 2002 by the Association of State Dam Safety Officials, forty (40) dams failed in North Carolina following Hurricane Floyd in September of 1999 and over 100 dams overtopped, causing property damage and requiring evacuation of downstream areas to avoid injury and loss of life.

According to data obtained from the North Carolina Dam Safety Program within the Division of Energy, Mineral, and Land Resources of the NC Department of Environmental and Natural Resources, there are twenty-one (21) dams located in the Southeastern NC Region. Most of these dams (10) are located in Brunswick County with the remaining dams located in New Hanover County (5) and Pender County (6). Table 3-4 provides information regarding those dams.

Table 3-4. Dams Located in the Southeastern NC Region

State ID Code	Dam Name	River or Stream	Dam Status	Hazard Classification	Nearest Town
BRUNS-001	North Lake Dam	Allen Creek	Exempt	Low	Orton
BRUNS-002	Pine Lake Dam	Allen Creek	Exempt	Low	Orton
BRUNS-003	Boiling Springs Lake Dam	Allen Creek	Impounding	High	Orton
BRUNS–004	Hewitt Lake Dam	Shallotte Creek-Os	Exempt	Low	Windy Point
BRUNS-005	Orton Lake Dam	Orton Creek	Exempt	Low	Orton
BRUNS-006	Motsu Disposal Dike	Cape Fear River-Os	Exempt-DOD	Low	Southport
BRUNS-007	Shallotte Wastewater Lagoon No. 1	Shallotte River	Impounding	High	Shallotte
BRUNS-009	Shallotte Wastewater Lagoon No. 2	Shallotte River	Impounding	High	Shallotte
BRUNS-010	ADM-904 Aeration Basin Dike	N/A	Impounding	Intermediate	Southport
BRUNS-011	Boiling Springs Lake Upper Dam	Allen Creek	Impounding	High	Boiling Springs Lake
NEWHA-001	Greenfield Lake Dam	Cape Fear River-Os	Exempt	Low	Wilmington
NEWHA-002	Diamond Shamrock Dam	Cape Fear River-Ne	Exempt	Low	
NEWHA-003	Sutton 1972 Cooling Pond	Cape Fear River	Exempt	Low	Wilmington
NEWHA-004	Sutton 1971 Ash Pond	Cape Fear River	Exempt	Low	Wilmington
NEWHA-005	Sutton 1984 Ash Pond	Cape Fear River	Impounding	Low	Wilmington
PENDE-001	Lake Ann Dam	Jones Creek	Exempt	Low	Still Bluff
PENDE-002	Bond Pond Dam	Moore's Creek	Exempt	Low	
PENDE-003	Squires Lake Dam	White Oak Creek	Exempt	Intermediate	Atkinson
PENDE-004	Olde Point Pond Dam	Cape Fear River-Os	Exempt	Low	
PENDE-005	Camp Kirkwood Lake Dam	Cape Fear River-Ne	Exempt	Low	Wilmington
PENDE-006	Belvedere Golf Course Dam		Exempt	Low	

Source: North Carolina Dam Inventory December 2, 2014, North Carolina Dam Safety Program.

Fifteen (15) of the dams are considered exempt. Exempt status means that a dam is not regulated by dam safety laws because of the size of the dam and/or a low hazard classification. Fifteen (15) of the 21 dams have a low hazard classification and two (2) have an intermediate classification. There are four (4) dams with a high hazard classification: Boiling Spring Lakes Dam (a.k.a., Sanford Lake Dam), Shallotte Waste Lagoon Number 1, Shallotte Wastewater Lagoon Number 2, and Boiling Springs Lake Upper Dam. According to NCDC, a dam failed at Boiling Spring Lakes, inundating the area on September 15, 1999, as a result of Hurricane Floyd. That dam was rebuilt with a concrete ogee-type spillway and is now known as Upper Dam, a high hazard dam due to the proximity of State Route 87 located just downstream of the dam. Table 3-5 provides a description of the dam hazard classifications.

Table 3-5. North Carolina Dam Hazard Classifications

Hazard Classification	Description	Quantitative Guidelines
Low	Interruption of road service, low volume roads Economic damage	Less than 25 vehicles per day Less than $30,000
Intermediate	Damage to highways, interruption of service Economic damage	25 to less than 250 vehicles per day $30,000 to less than $200,000
High	Loss of human life* Economic damage	Probable loss of 1 or more human lives More than $200,000

**Probable loss of human life due to breached roadway or bridge on or below the dam.*
Source: NC Division of Energy, Mineral, and Land Resources.

There is a low probability of failure of the Boiling Spring Lakes Upper Dam due to the construction of the concrete spillway that should minimize the potential for overtopping. The Sanford Dam currently has an existing spillway that is out of compliance with the regulatory requirement to withstand flood levels that correspond with half (½) of the PMP (Probable Maximum Precipitation). Therefore, the potential does exist for overtopping of this dam. The City of Boiling Spring Lakes received funding assistance for design in 2011, and contract documents have been prepared for the construction of a new "additional" spillway to provide adequate hydraulic capacity. With the support of Brunswick County and surrounding communities, the City is currently pursuing grant funding through FEMA for this important project to mitigate the potential for catastrophic failure, and to prevent flooding that has isolated residents from emergency services. In the event of a dam breach or levee failure, the extent of flooding would be similar to that of a flooding event which on average was reported to be 6-8 feet above flood stage (see page 3-11). The likelihood of occurrence of a dam failure affecting the Southeastern NC Region is "likely."

DROUGHTS/HEAT WAVES

The National Drought Mitigation Center (NDMC) generally defines a drought as a hazard of nature that is a result of a deficient supply of precipitation to meet the demand. Droughts occur in all types of climate zones and have varying effects on the area experiencing the drought. Droughts tend to be associated with heat waves. An extended drought period may have economic impacts (agriculture, industry, tourism, etc.), social impacts (nutrition, recreation, public safety, etc.), and environmental impacts (animal/plant, wetland, and water quality).

NDMC also reports that droughts are related to the balance between precipitation and evapotranspiration or to the timing of seasonal occurrences such as rainy seasons. Often times, development and human involvement aggravates the impact of droughts. Planning for droughts has become increasingly more important. Thirty-eight states have some type of drought plan in place. North Carolina is one of those states with a drought plan focusing on response.

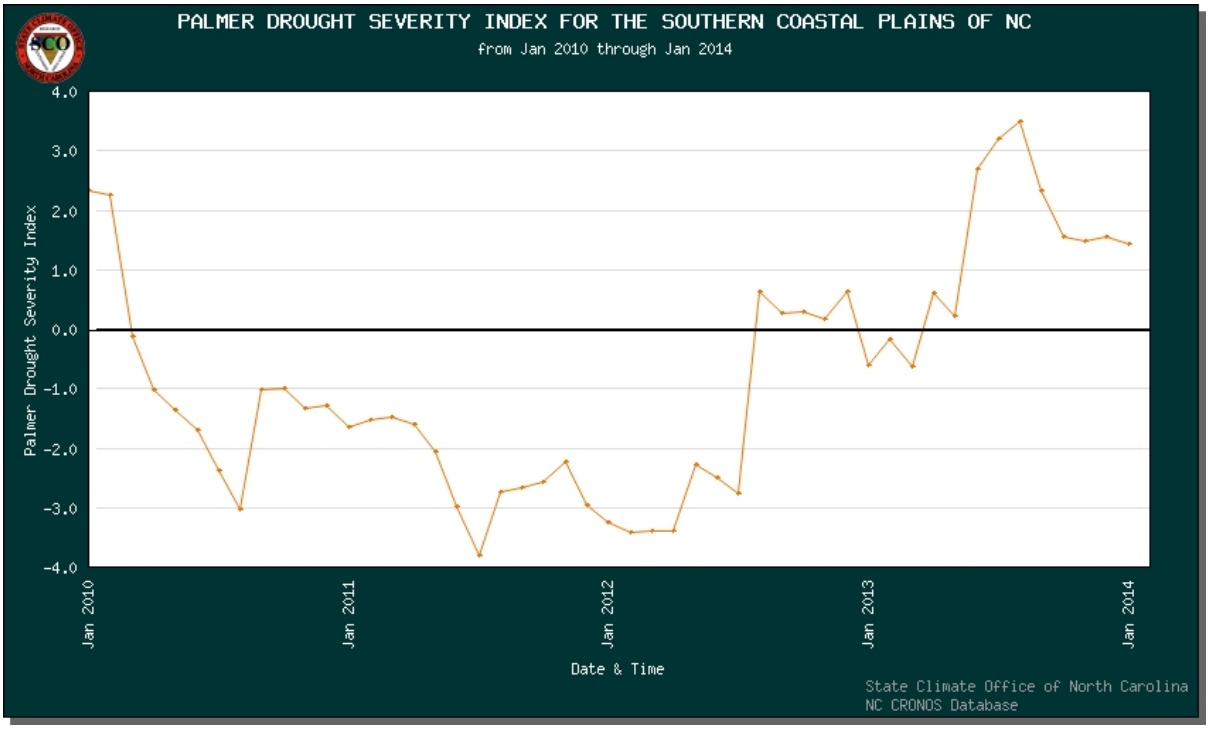
The Drought Monitoring Council was an interagency coordination and information exchange body created in 1992. In 2002, the council did a creditable job monitoring and coordinating drought responses, while increasing public awareness of the council's function and effectiveness. In 2003, the General Assembly recognized the Drought Monitoring Council's leadership and performance by giving them official statutory

status and assigning them the responsibility for issuing drought advisories. The council's name was changed to the Drought Management Advisory Council (DMAC) to reflect the broader role of the council, which extends beyond monitoring drought conditions. The drought advisories provide accurate and consistent information to assist local governments and other water users in taking appropriate drought response actions in specific areas of the state that are exhibiting impending or existing drought conditions.

According to the NC Drought Management Advisory Council, there are four categories of drought. From least detrimental to worst, the drought categories are moderate, severe, extreme, and exceptional. State and federal officials use the different drought categories as a barometer to assist local governments and other water users in taking appropriate drought response actions. For instance, drought officials recommend to water users and local governments experiencing moderate drought to minimize non-essential water uses. Non-essential uses include those that do not have health or safety impacts such as car washing and cleaning streets or sidewalks. However, officials recommend that water users eliminate non-essential water use when areas are experiencing severe drought, a category that is one step worse than moderate drought.

In addition to the DMAC classifications, the Palmer Drought Severity Index (PDSI) attempts to measure the duration and intensity of the long-term drought-inducing circulation patterns. Long-term drought is cumulative, so the intensity of drought during the current month is dependent on the current weather patterns plus the cumulative patterns of previous months. Since weather patterns can change almost literally overnight from a long-term drought pattern to a long-term wet pattern, the PDSI can respond fairly rapidly. Note that man-made changes are not considered in this calculation. PDSI index values generally range from -6 to +6, where negative values denote dry spells, and positive values denote wet spells. The following graph depicts the PDSI ratings for the Southern Coastal Plains region which includes the counties of Brunswick, New Hanover, and Pender.

Figure 3. Palmer Drought Severity Index for the Southern Coastal Plains of NC



Extreme heat may exacerbate or induce drought conditions. Differing from drought, extreme heat can have devastating effects on health. Extreme heat is often referred to as a "heat wave." According to the National Weather Service, there is no universal definition for a heat wave, but the standards US definition is any event lasting at least three (3) days where temperatures reach ninety (90) degrees Fahrenheit or higher. However, it may also be defined as an event at least three days long where temperatures are 10 degrees greater than the normal temperature for the affected area. Heat waves are typically accompanied by humidity but may also be very dry. These conditions can pose serious health threats causing an average of 1,500 deaths each summer in the United States.

Drought typically covers a large area and cannot be confined to any geographic or political boundaries. According to the Palmer Drought Severity Index, North Carolina has a relatively low risk for drought hazard. However, local areas may experience much more severe and/or frequent drought events than what is represented on the Palmer Drought Severity Index. It is also notable that drought conditions typically do not cause significant damage to the built environment.

Similar to drought, extreme heat can occur anywhere in the US and has no geographic or political boundaries. Brunswick, New Hanover, and Pender counties are in a region where extreme heat is common in the summer months. However, coastal areas may have a slightly reduced risk due to ocean winds, a natural temperature stabilizer.

There are two ways of monitoring drought outlined within this plan. For the purposes of this plan, the PDSI as outlined above will be utilized to determine extent. The NC State Climate Office indicated that the Southern Coastal Plains region experienced severe drought conditions during the summer months of 1999, 2001, 2002, 2007, 2008, 2010, 2011, and 2012 (-3.81 PDSI in July 2011). Drought effects are often severe. Drought can last for extended periods and it affects all citizens, businesses and government. Brunswick, New Hanover, and Pender counties and the municipalities within those counties have the authority to restrict use of certain water resources. These restrictions and how they are imposed are found in local ordinances. Based on Table 3-8, the likelihood of occurrence for drought is "likely."

TSUNAMIS

The word tsunami is Japanese and means "harbor wave." A tsunami is a wave or series of waves most commonly caused by an earthquake or by a large undersea landslide, volcanic eruption, or other undersea disturbances. From the area of disturbance, tsunami waves will travel outward in all directions and can originate hundreds or even thousands of miles away from affected coastal areas.

In the open ocean, tsunami waves travel at speeds of up to 600 miles per hour but are too small to be observed, and the time between wave crests may be 5 to 90 minutes. As the waves approach shallow coastal waters, they slow down and may rise to several feet or, in rare cases, up to 100 feet. Although the waves slow down as they reach shallow water, the energy remains constant. The first wave is almost never the largest; successive waves may be spaced ten or more minutes apart and continue arriving for many hours. The coastal areas at greatest risk are less than 50 feet above sea level and within one mile of the shoreline. Tsunamis can cause great loss of life and property damage where they come ashore, and most tsunami deaths are the result

of drowning. Associated risks include water pollution, damaged gas lines, and flooding. Tsunami activity is possible along the East Coast of the United States, but is a greater risk along the Pacific Rim states (Washington, Oregon, California, Alaska, and Hawaii). As many as 40 tsunami or tsunami-like events have been reported along the East Coast since the early 1600s. Although an East Coast tsunami would be rare, two off-shore areas are currently under investigation according to a 2002 National Geophysical Data Center report. One area of interest consists of large cracks northeast of Cape Hatteras, North Carolina, that could foretell of the early stages of an underwater landslide resulting in a tsunami. The other area of interest consists of submarine canyons approximately 150 kilometers from Atlantic City, New Jersey. Significant factors for consideration with regard to these areas are recent discoveries along the East Coast that demonstrate the existence of pressurized hydrates and pressurized water layers in the continental shelf. This has produced speculation among the scientific community on possible triggers that could cause sudden and perhaps violent releases of compressed material that could factor into landslide events and the resulting tsunami waves.

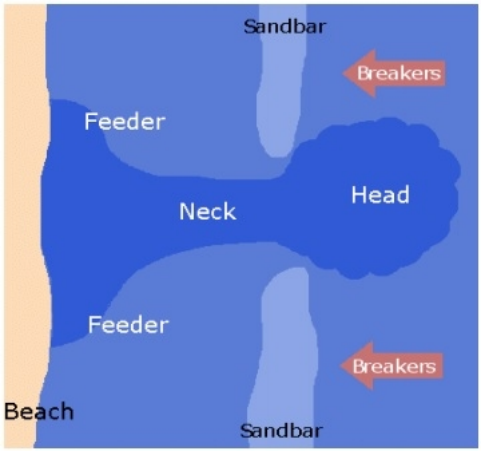
Historical records do not indicate any past significant tsunami occurrences for the Southeastern NC Region, and such an event is generally considered possible but "unlikely." However, the potential for tsunami impacts along the entire Eastern United States coast does exist as evidenced by other recorded tsunami occurrences in the area. The potential local and extent of the tsunami hazard for the Southeastern NC Region is similar and slightly more extensive than the established flood hazard area. The probability of a future tsunami event affecting the Southeastern NC Region is considered to be very low, though coastal areas are at the greatest risk. Even upon impact, the consequences of a tsunami strike are thought to be low for the Region given off-shore terrain. Therefore, there is no indication that this hazard is a significant enough threat to the state or the Region to warrant further analysis or a detailed vulnerability assessment.

COASTAL HAZARDS

Rip Currents

A rip current is an extremely dangerous hazard, killing approximately 100 people each year (according to the National Weather Service). Rip currents form in the surf-zone as waves disperse. According to NOAA, waves break on the sandbar, move towards the beach and then return to the ocean through a channel. Water becomes trapped between the beach and the sandbar, causing the water to move away from the beach in a narrow, river-like channel. There are three parts to a rip current: 1) the feeder; 2) the neck; and 3) the head. The feeder current flows parallel to the shore, converging at the neck and flowing, as a rip current, towards the head. At the head, the current expands and releases slack. Rip currents are typically mushroom-shaped and brown in color due to sand being picked up. However, some may have no color at all. Rip currents also vary in size and shape.

Figure 4. Rip Current Diagram *Source: NOAA.*



According to the National Oceanic and Atmospheric Administration, there are four different types of rip currents including traveling, fixed, permanent, and flash.

- Flash: A flash current is short in duration (less than 10 minutes) and is enhanced by large swell. This causes unpredictable conditions where they occur.
- Permanent: This type of rip current develops along jetties, groins, and piers.
- Fixed: These rip currents are dependent upon the shape of bays, coasts, reefs, or sandbars.
- Traveling: This type of rip current forms along long beach currents which run parallel to the beach. The long beach current pushes the rip away from its original location, weakening it.

Rip currents form along coastal areas in large bodies of water including oceans and the Great Lakes. All of the coastal areas in the Southeastern NC Region are uniformly at-risk to rip currents. Further, these areas are equally susceptible to any of the four types of rip currents. The Fort Fisher revetment in New Hanover County is notorious for permanent rip current occurrences. Piers throughout the Region also have permanent rip currents. The most dangerous rip currents of any type occur during high surf when wave height and wave period are the highest.

A total of fourteen (14) rip current events have been documented by the National Climatic Data Center in the Southeastern NC Region from 1997 to 2014 (see Appendix E for detailed descriptions of hazard events) resulting in twelve (12) deaths and eleven (11) injuries. The probability of future rip current occurrences is "likely." This hazard occurs naturally along the shorelines of the Southeastern NC Region. Inclement weather conditions may hasten the severity of this hazard. This is a very dangerous natural hazard in the Southeastern NC Region that, unlike other hazards, only affects life instead of property. Therefore, no vulnerability assessment will be performed in Section 5, Vulnerability Assessment.

Storm Surge

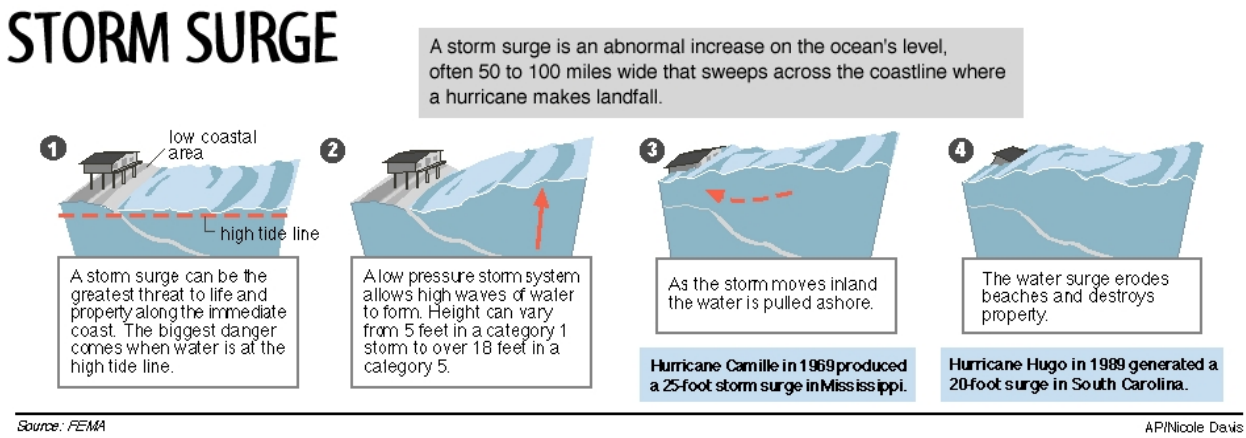
Storm surges are caused by the wind and pressure forces 'pushing' the water into the continental shelf and onto the coastline. The storm surge pushes the tide to rise many feet above its normal level. The height of these surges can reach over 20 feet. A surge, aided by the hammering of the waves, can act like a bulldozer, destroying everything in its path. They also are responsible for coastal flooding and erosion. The storms that generate the large waves of coastal surges can develop year round, but they typically occur from late fall to early spring. Hurricanes and other tropical cyclones also generate storm surges.

Factors controlling storm surges include the following:

- Concave shoreline configurations or narrow bays create resonance within the area due to winds forcing in water, elevating the surface of the water higher.

- Low barometric pressures cause the water surface to rise, thus increase the height of the storm surge.
- Storms that arrive during peak astronomical tides have higher surge heights and more flooding.
- Storms with higher wind speeds drive greater amounts of water across the shallow continental shelf. This increases the volume and elevation of water pushed up against the coast.

Figure 5. Storm Surge



Storm surges cause flooding by dune overwash, tidal elevation rise in inland bays and harbors, and backwater flooding through the mouth of coastal rivers. Storm surge can result in street, business, and residential flooding. The waves accompanying a storm event can strike with enough force to destroy wall systems and undermine foundations, causing collapse. Erosion of a dune system by waves and overwash can expose buildings to destructive flooding, foundation scour, and other damage.

A common way to describe the hazard probability of a storm surge return period has been the 1-percent chance of being equaled or exceeded in any given year, also known as the 100 year flood. The Southeastern NC Region has an expected storm surge elevation with a 10-year recurrence interval of 2+ meters. Dense development on the Region's shorelines increases the number of people and structures at risk.

Although storm surges typically occur during tropical events, several notable non-tropical storm surge events have occurred since 1960. For instance, the Ash Wednesday storm of 1962 affected over 620 miles of shoreline over 4 high tides. This storm caused $300 million in damages. The Halloween Nor'easter of 1991 also caused severe flooding and coastal erosion along the entire East Coast.

Most of the Region has a chance of being impacted by a storm surge, whether through high velocity waves, or flooding. The probability of the Region being impacted by storm surge is likely (see Table 3-8). This impact can be seen on Figures 6 and 7, Hurricane Storm Surge Inundation (Slow and Fast Models). As shown in the figures, areas closest to coastal areas are at high risk for storm surge inundation in addition to most

riverine floodplains along major rivers. While areas not located immediately along the coast or major rivers may not be directly impacted by storm surge inundation except in extreme storm events, they might experience flooding caused by storm surge and extremely high tides that affect the drainage of areas further inland.

Figure 6. Storm Surge Inundation - SLOSH Slow Moving Storm

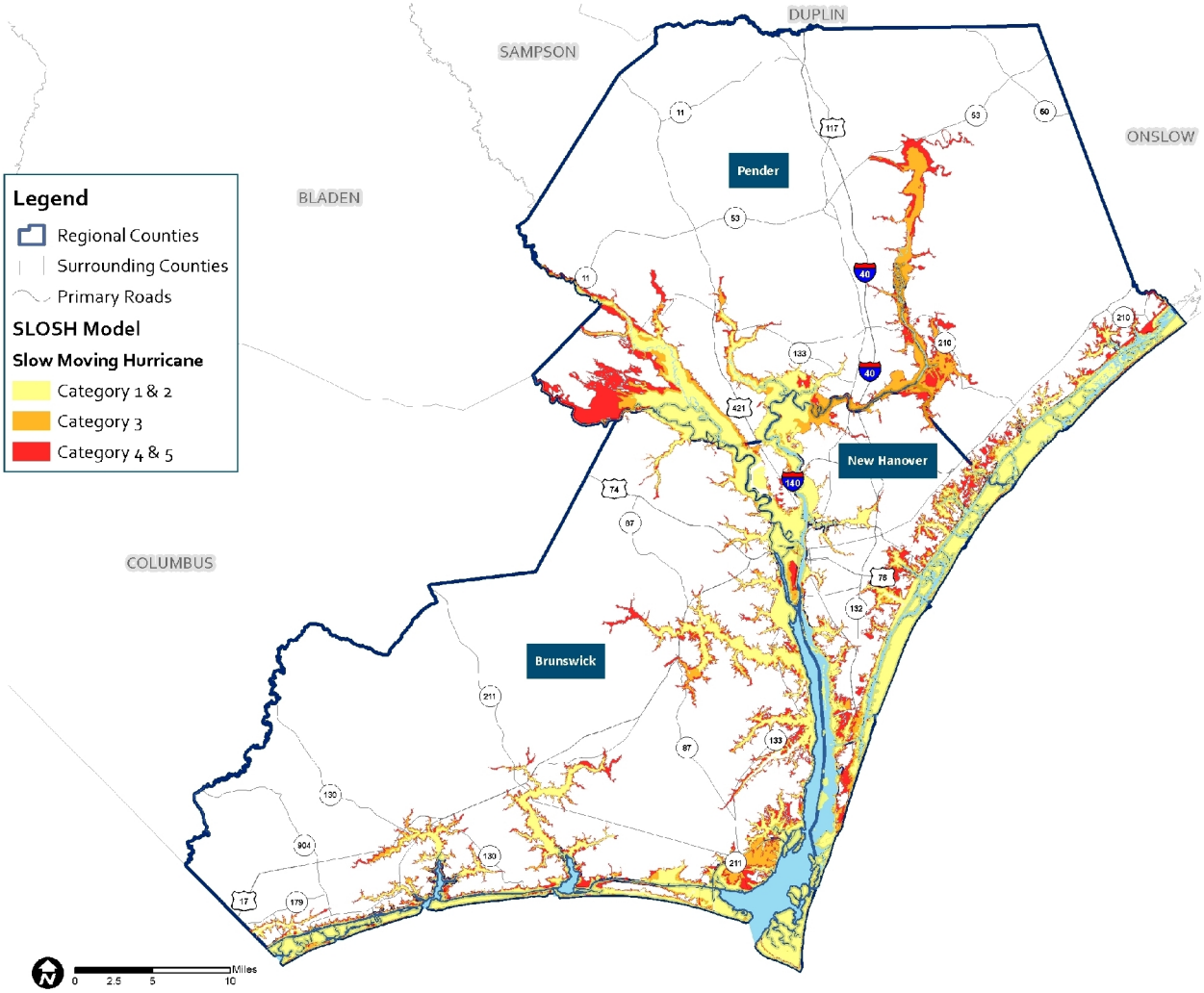
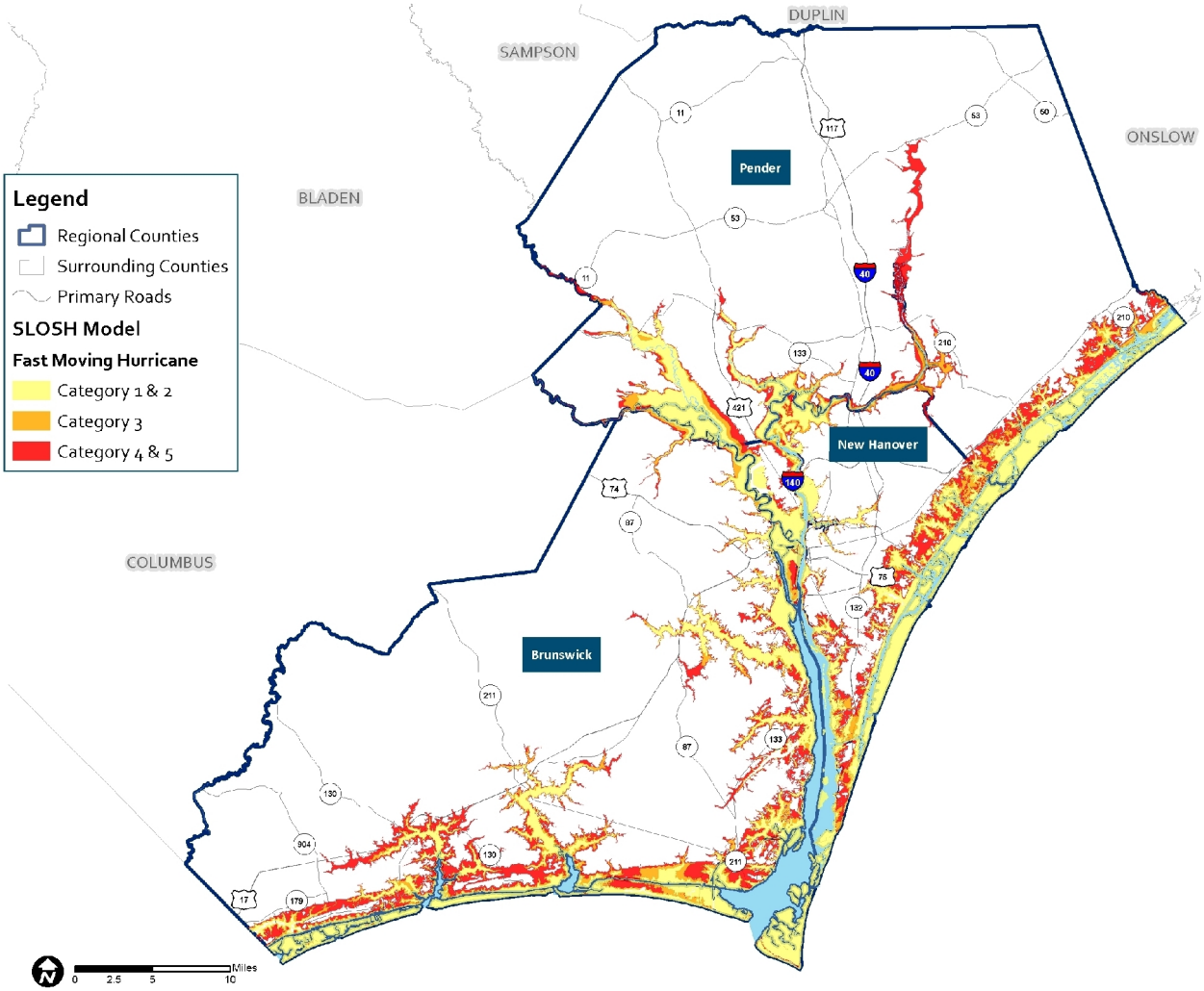


Figure 7. Storm Surge Inundation - SLOSH Fast Moving Storm



According to the National Oceanic and Atmospheric Administration, there have been eight (8) reported storm surge events which have affected the Southeastern NC Region since 1996.

Table 3-6. Historical Storm Surge Impacts

Location	Date	Magnitude	Description
New Hanover County	9/15/1996	12 feet	Hurricane Fran caused storm surge of 12 feet MSL. Between storm surge and the expansive beach erosion, most docks and piers were destroyed.
New Hanover County Brunswick County	10/8/1996	3 feet above normal	Remnants of Tropical Storm Josephine caused high tides 3 feet higher and seawater flooding around 1 foot deep on sections of roads on barrier islands.
New Hanover County	8/26/1998	7-9 feet	Hurricane Bonnie caused storm surge between 7 to 9 feet with most barrier island overwash from the south side, not the ocean side.

Location	Date	Magnitude	Description
New Hanover County	9/15/1999	9-10 feet	Hurricane Floyd caused storm surge between 9 and 10 feet, inundating barrier islands.
Southeastern NC Region	2/3/1998	2 feet above normal	A nor'easter caused heavy surf and high tides 2 feet above normal, causing 4 feet of dune erosion and minor overwash
New Hanover County	10/27/2007		High astronomical tides and northeast winds caused minor sound flooding.
Brunswick County	9/6/2008		Storm surge from Tropical Storm Hanna breached a 6 foot high sandbag wall, severely undermining streets.
Pender County	9/25/2008	1-2 feet	A strong low pressure system produced heavy rain and coastal flooding. Virginia Creek backed up at high tide with 1 to 2 feet of water on Sloop Point Road.

Source: National Oceanic and Atmospheric Administration.

Erosion

Erosion is a hydrologic hazard defined as the wearing away of land and loss of beach, shoreline, or dune material. It is measured as the rate of change in the position or horizontal (landward) displacement of a shoreline over a period of time. Short-term erosion typically results from episodic natural events such as hurricanes and storm surge, windstorms and flooding hazards, but may be exacerbated by human activities such as boat wakes, removal of dune and vegetative buffers, shoreline hardening and dredging. Long-term erosion is a function of multi-year impacts such as wave action, sea level rise, sediment loss, subsidence and climate change. Climatic trends can change a beach from naturally accreting to eroding due to increased episodic erosion events caused by waves from an above-average number of storms and high tides, or the long-term effects of fluctuations in sea level.

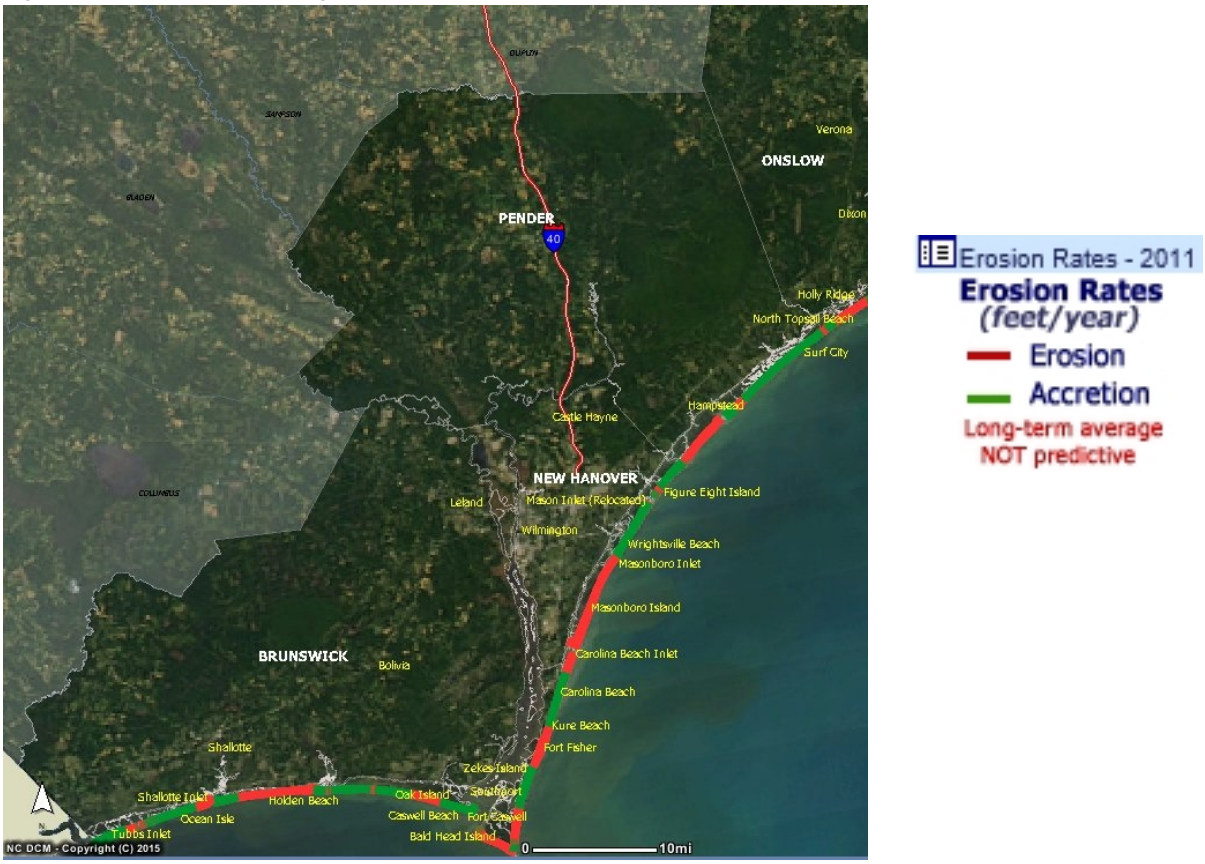
Natural recovery from erosion can take years to decades. If a beach and dune system does not recover quickly enough naturally, coastal and upland property may be exposed to further damage in subsequent coastal erosion and flooding events. Human actions to supplement natural coastal recovery, such as beach nourishment, dune stabilization and shoreline protection structures (e.g., sea walls, groins, jetties, etc.) can mitigate the hazard of coastal erosion, but may also exacerbate it under some circumstances.

Death and injury are not associated with coastal erosion; however, it can cause the destruction of buildings and infrastructure and represents a major threat to the local economies of coastal communities that rely on the financial benefits of recreational beaches.

All of the Southeastern NC Region's coastal and riverine areas are susceptible to the erosion hazard. The severity of coastal erosion is typically measured through a quantitative assessment of annual shoreline change for a given beach cross-section of profile (feet or meters per year) over a long period of time. Erosion rates vary as a function of shoreline type and are influenced primarily by episodic events, but can be used in land use and hazard management to define areas of critical concern.

Erosion in the Southeastern NC Region has occurred primarily in areas directly adjacent to the Atlantic Ocean. Figure 8 illustrates historic shoreline data for areas that have experienced accreting or eroding shorelines as of 2011. These are point values which are monitored by the North Carolina Division of Coastal Management.

Figure 8. Southeastern NC Region Erosion Rates, 2011 *Source: NCDCM.*



Coastal erosion remains a natural, dynamic and continuous process for the coastal areas in the Southeastern NC Region and thus has a high probability of future occurrence. The damaging impacts of coastal erosion are lessened through continuous (and costly) beach nourishment and structural shoreline protection measures; however, it is likely that the impacts of coastal erosion will increase in severity due to future episodic storm events.

SINKHOLES

Sinkholes form in areas with underlying limestone and other rock types that are soluble in natural water. The collapse of overlying sediments into the underground cavities produces sinkholes. Most underlying limestone is porous, allowing the acidic rain water to percolate through their strata, dissolving some limestone and carrying it away in solution. It is for this reason that sinkholes contribute to groundwater contamination, rapidly carrying away contaminated water. Over time, this persistent erosional process can create extensive underground voids and drainage systems in much of the carbonate rocks.

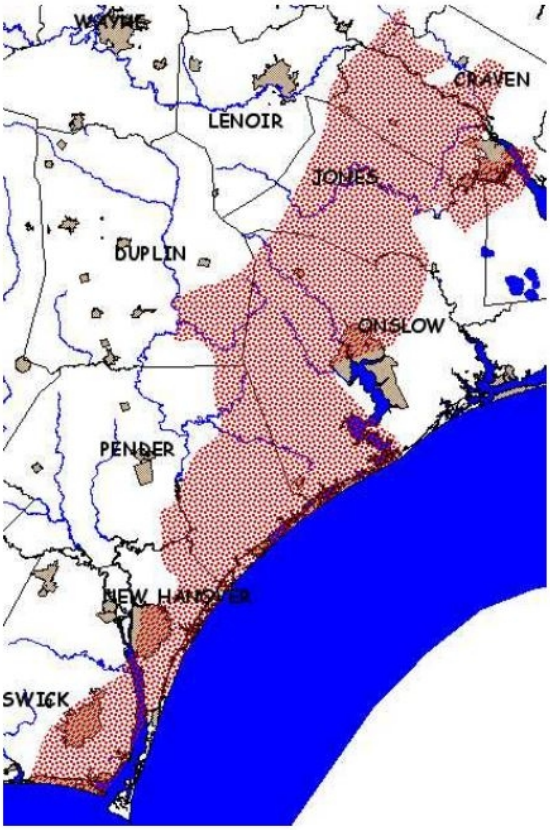
The three general types of sinkholes are: subsidence, solution, and collapse. Subsidence sinkholes form gradually where the overburden (the sediments and water that rest on the limestone) is thin and only a veneer of sediments is overlying the limestone. Solution sinkholes form where no overburden is present and the limestone is exposed at land surface. Collapse sinkholes are most common in areas where the overburden is thick, but the confining layer is breached or absent. Collapse sinkholes can form with little warning and leave behind a deep, steep-side hole.

Sinkholes occur in many shapes, from steep-walled holes to bowl or cone-shaped depressions. Sinkholes are dramatic because the land generally stays intact for a while until the underground spaces get too big. If there is not enough support for the land above the spaces, then a sudden collapse of the land surface can occur. Under natural conditions, sinkholes form slowly and expand gradually. They may fill with water forming lakes and ponds. Human activities such as dredging, constructing reservoirs, diverting surface water and pumping groundwater can accelerate the rate of sinkhole expansions, resulting in the abrupt formation of collapse sinkholes.

Sinkhole formation is exacerbated by urbanization. Development increases water usage, alters drainage pathways, overloads the ground surface and redistributes the soil. According to FEMA, the number of human-induced sinkholes has doubled since 1930 and insurance claims for damages as a result of sinkholes has increased 1,200 percent from 1987 to 1991, costing nearly $100 million.

According to the NC Division of Water Resources, many sinkholes have occurred in the Southeastern NC Region. The susceptible areas are shown in Figure 9. The Castle Hayne and Riverbed Formation occur in this area making conditions more likely. In addition, areas of groundwater pumping may accelerate the formation of sinkholes.

Figure 9. Sinkhole Activity in NC *Source: NCDWR.*



Notable sinkhole examples occur near Snow's Cut and Carolina Beach State Park (New Hanover County), along Interstate 40 (Pender County), and Sunny Point Military Ocean Terminal and Boiling Spring Lakes (Brunswick County). For example, Boiling Spring Lakes was drained via sinkholes in 1978. In addition, Big Lake in Boiling Spring Lakes was drained in 2003 and 2007 to repair it from damage due to sinkholes. Many smaller sinkholes in the area have since filled with water becoming small ponds. In 2001, a sinkhole in Pender County closed a portion of Interstate 40 and extreme flooding in 2014 created two sinkholes in Hampstead. Based on Table 3-8, the likelihood of occurrence for sinkholes is "possible."

EXPLANATION OF HAZARDS NOT IDENTIFIED

The following hazards were not identified within the context of this document for the reasons indicated.

Hazard	Why Not Identified
Landslides	There is no history of landslides in the Southeastern NC Region.
Volcanoes	There is no history of volcanic activity in the Southeastern NC Region.

RANKING OF NATURAL HAZARD POTENTIAL

The hazards outlined within the preceding sections, as well as hazards that have occurred in years prior to 2010 (when the last Hazard Mitigation Plans were prepared), have been ranked below based on a score derived from several factors. Each hazard was ranked based on frequency, number of injuries caused, number of resulting deaths, and dollar amount of property damage losses since 1951. These factors have been ranked on a scale of 1 (High) to 9 (Low). The table is organized to display the ranking of each hazard with respect to a given factor. As evidenced by the table, the hazards have been listed in order by total hazard potential. Refer to Appendix E for a listing of natural hazard events by year.

Table 3-7. Southeastern NC Region Ranking of Hazard Potential

Hazard	Ranking by Frequency	Ranking by Injuries	Ranking by Deaths	Ranking by Property Damage Loss	Total All Factors
Thunderstorms/Windstorms, Lightning, & Hail	1	1	2	2	6
Tornados	2	2	3	3	10
Hurricanes and Coastal Storms	4	5	4*	1	14
Coastal Hazards	5	3	1	7*	16
Flooding	3	4	5*	4	16
Wildfires	6	5*	5*	5	21
Winter Storms and Freezes	8	5*	4*	6	23
Droughts and Extreme Heat	7	5*	5*	7*	24
Sinkholes***	9*	6*	6*	8*	29
Tsunamis**	9*	6*	6*	8*	29
Dam/Levee Failures**	9*	6*	6*	8*	29
Earthquakes**	9*	6*	6*	8*	29

**Indicates a tie score.*
***Due to the lack of historical data, earthquakes, tsunamis, sinkholes, and dam/levee failures were given the same score for all factors.*
Source: National Oceanic and Atmospheric Administration.

HAZARD DAMAGE AND LIKELIHOOD OF OCCURRENCE SUMMARY

The following table provides an estimate of damage potential and likelihood of occurrence based on the preceding sections. All factors were taken into account when filling out this table including input from county/municipal staff members, data documenting historical occurrences, and instances of storms impacting the region since the last Hazard Mitigation Plan Updates in 2010.

Table 3-8. Southeastern NC Region Hazard Impact

Type of Hazard & Associated Elements	Likelihood of Occurrence[1] (Highly Likely, Likely, Possible, Unlikely)	Impact Rating[2] (Intensity Scales or Relative Terms)	Potential Impact[3] (Catastrophic, Critical, Limited, Negligible)
Hurricanes and Coastal Storms	Likely	Severe	Catastrophic
Flooding	Highly Likely	Severe	Critical
Winter Storms and Freezes	Possible	Moderate	Limited
Thunderstorms/Windstorms, Lightning, and Hail	Highly Likely	Severe	Critical
Tornados	Likely	Severe	Critical
Wildfires	Highly Likely	Moderate	Limited
Earthquakes	Unlikely	Moderate	Critical
Dam/Levee Failures	Likely	Moderate	Limited
Droughts and Extreme Heat	Likely	Moderate	Limited
Tsunamis	Unlikely	Moderate	Limited
Coastal Hazards	Likely	Severe	Negligible
Sinkholes	Possible	Moderate	Negligible

NOTES:

[1] Likelihood of occurrence was estimated using historic data and the following chart (based on the 2010 plans):

Likelihood	Frequency of Occurrence
Highly Likely	Near 100% probability in the next year.
Likely	Between 10 and 100% probability in the next year, or at least one chance in the next 10 years.
Possible	Between 1 and 10% probability in the next year, or at least one chance in the next 100 years.
Unlikely	Less than 1% probability in the next year, or less than one chance in the next 100 years.

[2] The hazard's intensity was estimated using historic data and various standardized scales as outlined in Table 3-7, Ranking of Hazard Potential. This table provides a composite score of hazard impact and potential based on four factors including: frequency; number of injuries; number of deaths; and ranking based on total property damage losses. The classification listed in the table above is based on the following classifications:

Severe: Hazard potential ranking of 0 to 20
Moderate: Hazard potential ranking of 21 or greater

[3] The potential impact was estimated by considering the magnitude of the event, how large an area within the community is affected, and the amount of human activity in that area, then using the following chart as a tool (based on the 2010 plans):

Level	Area Affected	Impact
Catastrophic	More than 50%	• Multiple deaths • Complete shutdown of facilities for 30 days or more • More than 50 percent of property is severely damaged
Critical	25 to 50%	• Multiple severe injuries • Shutdown of critical facilities for 1-2 weeks • More than 25 percent of property is severely damaged
Limited	10 to 25%	• Some injuries • Shutdown of some critical facilities 24 hours to one week • More than 10 percent of property is severely damaged
Negligible	Less than 10%	• Minor injuries • Minimal quality-of-life impact • Shutdown of some critical facilities and services for 24 hours or less • Less than 10 percent of property is severely damaged
N/A	Hazard has no discernable impact on the built environment	

SECTION 4.

COMMUNITY CAPABILITY ASSESSMENT

INTRODUCTION

This section of the HMP is intended to analyze each regional jurisdiction's capacity to address the threats that natural hazards pose to them. In order to provide a thorough review of each entity involved in this planning effort, this section of the plan provides a detailed overview of capability with regards to Brunswick, New Hanover, and Pender Counties, as well as each municipal jurisdiction.

This section of the HMP will identify those areas in which the participating jurisdictions are already undertaking positive hazard mitigation efforts that should be supported or enhanced and may also identify areas where their current policies may be worsening hazard risks. In order to achieve these goals, this section contains the following sections:

1) Agency/Organizational Review
2) Existing Policies and Program Review
3) Community Capability Assessment
4) Legal Capability Review
5) Fiscal Capability Review
6) Political Acceptability Review

Elements 1 and 2 noted above are further broken down by County and subsequently by each participating municipal jurisdiction within each County. Under the Agency/Organizational Review section, the review of each municipality is provided in a summary format. This plan denotes the programs and policies in place within each jurisdiction; however, further information relating to these documents is available through each respective government's administration.

AGENCY/ORGANIZATIONAL REVIEW

The purpose of this subsection of the HMP is to list and describe all local government departments, agencies and organizations that have a direct (or indirect) impact on hazard mitigation and/or hazard control through specific responsibilities in these areas or through seemingly unrelated responsibilities (e.g., site selection for school facilities), and to describe these responsibilities.

Brunswick County

The Brunswick County Government Offices are located at 30 Government Center Drive NE, in Bolivia, NC. The County operates under a Board of Commissioners-Manager form of government. Table 4-1 provides an overview of offices, organizations, and agencies responsible for hazard control and hazard mitigation activities in the County. The table provides a summary of each departments' function, as well as each respective departments' relative impact on mitigation issues. Table 4-2 provides an overview of capability for each participating municipal jurisdiction within Brunswick County.

Table 4-1. Agency/Organizational Review for Brunswick County

County Department	Applicable to Mitigation	Contact
Agricultural Extension	X	Phone: 910/253-2610 URL: http://brunswick.ces.ncsu.edu/
Animal Control	X	Phone: 910/754-8204 URL: http://aps.brunswicksheriff.com/
Building Inspections	X	Phone: 910/253-2200 URL: http://www.brunswickcountync.gov/code/
Co-op Extension Service	X	Phone: 910/253-2610 URL: http://brunswick.ces.ncsu.edu/
County Manager's Office	X	Phone: 910/253-2016 URL: www.brunswickcountync.gov/manager/about/
Emergency Management	X	Phone: 910/253-5383 URL: www.brunswickes.com/
Farm Bureau	X	Phone: 800/789-2565 URL: www.ncfb.org
Finance Office	X	Phone: 910/253-2829 URL: http://www.brunswickcountync.gov/finance/budget/
Food Stamp Program		Phone: 910/253-2177 URL: www.brunswickcountync.gov/hhs/
Health Department	X	Phone: 910/253-2250 URL: www.brunswickcountync.gov/health/
Housing Authority		Phone: 910/253-2222 URL: www.brunswickcountync.gov/housing/
Mental Health Center		Phone: 910/253-2077 URL: www.brunswickcountync.gov/dss/
Parks and Recreation	X	Phone: 910/253-2670 URL: www.brunswickcountync.gov/parks/
Planning Department	X	Phone: 910/253-2025 URL: www.brunswickcountync.gov/planning/
Public Works	X	Phone: 910/253-2655 URL: www.brunswickcountync.gov/utilities/
Sheriff's Office	X	Phone: 910/754-8204 URL: http://www.brunswicksheriff.com/
Social Services	X	Phone: 910/253-2077 URL: www.brunswickcountync.gov/dss/
Solid Waste		Phone: 910/253-4177 URL: www.brunswickcountync.gov/solidwaste/
State Forest Service	X	Phone: 910/253-2160 URL: http://brunswick.ces.ncsu.edu/
Tax Office	X	Phone: 910/253-2811 URL: www.brunswickcountync.gov/tax/

Table 4-2. Brunswick County Municipalities Overview of Capability

Municipality	Type of Government	Fire/EMS	Police	Planning	Public Works
Bald Head Island	Council-Manager	X	X	X	X
Belville	Council-Manager		X	X	X
Boiling Spring Lakes	Council-Manager	X	X		X
Bolivia	Mayor-Council				X
Calabash	Council-Manager	X	X	X	X
Carolina Shores	Council-Administrator	X		X	X
Caswell Beach	Council-Administrator			X	X
Holden Beach	Council-Manager	X	X	X	X
Leland	Council-Manager	X	X	X	X
Navassa	Council-Manager	X	X	X	X
Northwest	Council-Manager	X	X	X	X
Oak Island	Council-Manager	X	X	X	X
Ocean Isle Beach	Council-Manager	X	X	X	X
Sandy Creek	Mayor-Council				
Shallotte	Council-Manager	X	X	X	X
Southport	Council-Manager	X	X	X	X
St. James	Council-Administrator	X		X	X
Sunset Beach	Council-Manager	X	X	X	X
Varnamtown	Mayor-Council				

New Hanover County

The New Hanover County Government Complex is located at 230 Government Center Drive in Wilmington, NC. The County operates under a Board of Commissioners-Manager form of government. Table 4-3 provides an overview of offices, organizations, and agencies responsible for hazard control and hazard mitigation activities in the County. The table provides a summary of each departments' function, as well as each respective departments' relative impact on mitigation issues. Table 4-4 provides an overview of capability for each participating municipal jurisdiction within New Hanover County.

Table 4-3. Agency/Organizational Review for New Hanover County

County Department	Applicable to Mitigation	Contact
Agricultural Extension	X	Phone: 910/798-7660 URL: www.arboretum.nhcgov.com/
Animal Control	X	Phone: 910/798-7500 URL: www.newhanoversheriff.com/animal-services-unit/
Building Inspections	X	Phone: 910/798-7175 URL: http://planningdevelopment.nhcgov.com/

County Department	Applicable to Mitigation	Contact
Co-op Extension Service	X	Phone: 910/798-7660 URL: www.arboretum.nhcgov.com/
County Manager's Office	X	Phone: 910/798-7184 URL: http://www.nhcgov.com/administration/
Emergency Management	X	Phone: 910/452-6120 URL: http://em911.nhcgov.com/
Farm Bureau	X	Phone: 800/789-2565 URL: www.ncfb.org
Finance Office	X	Phone: 910/798-7300 URL: www.tax.nhcgov.com/
Food Stamp Program		Phone: 910/798-3712 URL: www.socialservices.nhcgov.com/
Health Department	X	Phone: 910/798-6500 URL: www.health.nhcgov.com/
Housing Authority		Phone: 910/341-7700 URL: www.wha.net/
Mental Health Center		Phone: 910/343-7000 URL: www.nhrmc.org/services/behavioral
Parks and Recreation	X	Phone: 910/798–7275 URL: www.parks.nhcgov.com/
Planning Department	X	Phone: 910/798-7175 URL: http://planningdevelopment.nhcgov.com/
Public Works	X	Phone: 910/798-7175 URL: http://planningdevelopment.nhcgov.com/ *Cape Fear Public Utility Authority* Phone: 910/332-6550 URL: www.cfpua.org
Sheriff's Office	X	Phone: 910/798-7500 URL: www.newhanoversheriff.com/
Social Services	X	Phone: 910/798-3712 URL: www.socialservices.nhcgov.com/
Solid Waste		Phone: 910/798-4400 URL: www.recycling.nhcgov.com/
State Forest Service	X	Phone: 910/798-7660 URL: www.arboretum.nhcgov.com/
Tax Office	X	Phone: 910/798-7300 URL: www.tax.nhcgov.com/

Table 4-4. New Hanover County Municipalities Overview of Capability

Municipality	Type of Government	Fire/EMS	Police	Planning	Public Works
Carolina Beach	Council-Manager	X	X	X	X
Kure Beach	Mayor-Council	X	X	X	X
Wilmington	Council-Manager	X	X	X	X
Wrightsville Beach	Council-Manager	X	X	X	X

Pender County

The Pender County Administration Building is located at 805 S. Walker Street, Burgaw, NC. The County operates under a Board of Commissioners-Manager form of government. Table 4-5 provides an overview of offices, organizations, and agencies responsible for hazard control and hazard mitigation activities in the County. The table provides a summary of each departments' function, as well as each respective departments' relative impact on mitigation issues. Table 4-6 provides an overview of capability for each participating municipal jurisdiction within Pender County.

Table 4-5. Agency/Organizational Review for Pender County

County Department	Applicable to Mitigation	Contact
Agricultural Extension	X	Phone: 910/259-1235 URL: https://pender.ces.ncsu.edu/
Animal Control	X	Phone: 910/259-1484 URL: http://www.pendercountync.gov/Government/OfficesLocationDirectory/AnimalShelter.aspx
Building Inspections	X	Phone: 910/259-1202 URL: http://www.pendercountync.gov/Government/Departments/PlanningCom munityDevelopment/Inspections.aspx
Co-op Extension Service	X	Phone: 910/259-1235 URL: https://pender.ces.ncsu.edu/
County Manager's Office	X	Phone: 910/259-1200 URL: pendercountync.gov/Government/Departments/CountyManager.aspx
Emergency Management	X	Phone: 910/259-1202 URL: www.penderem.com/
Farm Bureau	X	Phone: 800/789-2565 URL: www.ncfb.org
Finance Office	X	Phone: 910/259-1282 URL: http://pendercountync.gov/Government/Departments/Finance.aspx
Food Stamp Program		Phone: 910/259-1240 URL: http://pendercountync.gov/government/departments/socialservices/Services/FoodandNutrition.aspx
Health Department	X	Phone: 910/259-1230 URL: http://health.pendercountync.gov/
Housing Authority		Phone: 910/259-1208 URL: http://pendercountync.gov/Government/Departments/HousingAuthority.aspx
Mental Health Center		Phone: 910/259-1230 URL: http://health.pendercountync.gov/Programs.aspx
Parks and Recreation	X	Phone: 910/259-1330 URL: http://pendercountync.gov/Government/Departments/ParksRecreation.aspx
Planning Department	X	Phone: 910/259-1484 URL: http://pendercountync.gov/Government/Departments/PlanningCommunityDevelopment.aspx

Table 4-5. Agency/Organizational Review for Pender County

County Department	Applicable to Mitigation	Contact
Public Works	X	Phone: 910/259-1228 URL: http://www.pendercountync.gov/Government/Departments/PublicWorks.aspx
Sheriff's Office	X	Phone: 910/259-1212 URL: www.pendersheriff.com/
Social Services	X	Phone: 910/259-1240 URL: http://www.pendercountync.gov/government/departments/socialservices/
Solid Waste		Phone: 910/259-1570 URL: http://www.pendercountync.gov/Government/Departments/SolidWaste.aspx
State Forest Service	X	Phone: 910/259-1235 URL: https://pender.ces.ncsu.edu/
Tax Office	X	Phone: 910/259-1222 URL: http://www.pendercountync.gov/Government/Departments/TaxCollections.aspx

Table 4-6. Pender County Municipalities Overview of Capability

Municipality	Type of Government	Fire/EMS	Police	Planning	Public Works
Atkinson	Council-Manager		X	X	X
Burgaw	Mayor-Council	X	X	X	X
St. Helena	Mayor-Council				X
Surf City	Council-Manager	X	X	X	X
Topsail Beach	Council-Manager	X	X	X	X
Watha	Mayor-Council				X

EXISTING POLICIES AND PROGRAM REVIEW

The purpose of this subsection of the HMP update is to describe the policies, programs, ordinances, and practices that each participating community has in place affecting hazard control and/or hazard mitigation. Whereas many participating communities have similar policies and ordinances, several of the most common of these policies and ordinances will be described generally or generically in the following overview section. Deviations from the "generic" descriptions provided below will be noted, if applicable.

Flood Damage and Prevention Ordinance

Each community that participates in the National Flood Insurance Program (NFIP) must adopt a flood damage prevention ordinance. In general, this ordinance requires the following provisions in all areas of special flood hazard (100-year floodplain) identified by the Federal Emergency Management Agency in its Flood Insurance Rate Map (FIRM):

1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure;

2. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damages;

3. All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damages;

4. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;

5. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

6. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;

7. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding; and,

8. Any alteration, repair, reconstruction, or improvements to a structure which is in compliance with the provisions of this ordinance, shall meet the requirements of "new construction" as contained in this ordinance.

In areas designated as floodways, no encroachments, including fill, new construction, substantial improvements, and other developments shall be permitted unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood. Implementation responsibility is typically through the Town/County Planning and/or Building Inspections Department as a condition of a zoning permit.

New FIRMs produced by the State of North Carolina Floodplain Mapping Program and the Federal Emergency Management Agency have been recently adopted throughout Brunswick, New Hanover, and Pender Counties.

North Carolina State Building Code

The North Carolina State Building Codes regulate for fire resistance, in addition to seismic, flooding, and high wind resilience. These codes are reviewed annually and amended as new requirements and materials are introduced. Building codes apply primarily to new construction or buildings undergoing substantial alteration. Enforcement at the local level is provided as indicated in Tables 4-1 to 4-6.

An applicant for a building permit must submit plans to the appropriate inspections department for approval. The inspections department reviews the plans and elects to approve or reject them or to require revisions. Construction cannot begin until local officials confirm that the plans are in accordance with the code.

A building inspector must then visually monitor the construction of the building. The inspector's duty is to make sure that the project follows the plans as approved. Inspectors are empowered to stop work on projects that fail to conform to the plans. Any observed errors must be fixed before work can continue. The inspector must perform a final review before an occupancy permit is issued.

Zoning Ordinance

Zoning is the traditional and nearly ubiquitous tool available to local governments to control the use of land. Broad enabling authority for municipalities in North Carolina to engage in zoning is granted in N.C.G.S. 160A-381. The statutory purpose for the grant of power is to promote health, safety, morals, or the general welfare of the community. Land "uses" controlled by zoning include the type of use (e.g., residential, commercial, industrial) as well as minimum specifications for use such as lot size, building height and set backs, density of population, and the like. The local government is authorized to divide its territorial jurisdiction into districts, and to regulate and restrict the erection, construction, reconstruction, alteration, repair, or use of buildings, structures, or land within those districts. Districts may include general use districts, overlay districts, and special use districts or conditional use districts. Zoning ordinances consist of maps and written text. Communities maintaining zoning regulations are indicated in Tables 4-1 to 4-6.

Subdivision Ordinance

Subdivision regulations control the division of land into parcels for the purpose of building development or sale. Flood-related subdivision controls typically require that subdividers install adequate drainage facilities, and design water and sewer systems to minimize flood damage and contamination. They prohibit the subdivision of land subject to flooding, unless flood hazards are overcome through filling or other measures and prohibit filling of floodway areas. They require that subdivision plans be approved prior to the sale of land. Subdivision regulations are a more limited tool than zoning and only indirectly affect the type of use made of land or minimum specifications for structures.

Broad subdivision control enabling authority for municipalities is granted in N.C.G.S. 160-371. Subdivision is defined as all divisions of a tract or parcel of land into two or more lots and all divisions involving a new street (N.C.G.S. 160A-376). The definition of subdivision does not include the division of land into parcels greater than 10 acres where no street right-of-way dedication is involved.

The community thus possesses great power (in theory, anyway) to prevent unsuitable development in hazard-prone areas. Communities maintaining subdivision regulations are indicated in Tables 4-1 to 4-6.

Capital Improvements Plan

A capital improvements program is a planned schedule of capital expenditures for physical improvements within a local government's jurisdiction, usually over a five-year period, listed according to priority. Not all local governments maintain a CIP; however, establishing one is a strategy defined within this plan.

COMMUNITY CAPABILITY ASSESSMENT

The following tables provide a capability assessment and assessment of existing programs and policies for each participating jurisdiction. A summary table is outlined for each participating county and their respective municipal jurisdictions.

Table 4-7. Brunswick County Jurisdictional Functions/Capabilities

	Brunswick County	Bald Head Island	Belville	Boiling Spring Lakes	Bolivia	Calabash	Carolina Shores	Caswell Beach	Holden Beach	Leland
Comprehensive Land Use Plan (LUP)	X	X	X	X	X	X	X	X	X	X
Parks and Recreation/Open Space Plan	X	X	X	X		X			X	X
Zoning Ordinance	X	X	X	X	X	X	X	X	X	X
Subdivision Ordinance	X	X	X	X	X	X	X	X	X	X
Stormwater Ordinance	X	X					X		X	X
Floodplain Ordinance	X	X	X	X	X	X	X	X	X	X
NFIP Participant	X	X	X	X	X	X	X	X	X	X
CRS Participant	X					X		X	X	
Capital Improvements Plan	X	X	X	X		X				X
Building Inspections/ Permitting	X	X		X		X	X		X	X
	Navassa	**Northwest**	**Oak Island**	**Ocean Isle Beach**	**Sandy Creek**	**Shallotte**	**Southport**	**St. James**	**Sunset Beach**	**Varnamtown**
Comprehensive Land Use Plan (LUP)	X	X	X	X	X	X	X	X	X	X
Parks and Recreation/Open Space Plan	X		X	X		X	X	X	X	
Zoning Ordinance	X	X	X	X	X	X	X	X	X	X
Subdivision Ordinance	X	X	X	X	X	X	X	X	X	X
Stormwater Ordinance	X		X	X		X	X		X	
Floodplain Ordinance	X	X	X	X	X	X	X	X	X	X
NFIP Participant	X	X	X	X	X	X	X	X	X	X
CRS Participant			X	X			X		X	
Capital Improvements Plan			X	X		X	X	X	X	
Building Inspections/ Permitting	X		X	X		X	X		X	

Table 4-8. New Hanover County Jurisdictional Functions/Capabilities

	New Hanover County	Carolina Beach	Kure Beach	Wilmington	Wrightsville Beach
Comprehensive Land Use Plan (LUP)	X	X	X	X	X
Parks and Recreation/Open Space Plan	X	X	X	X	X
Zoning Ordinance	X	X	X	X	X
Subdivision Ordinance	X	X	X	X	X
Stormwater Ordinance	X	X	X	X	X
Floodplain Ordinance	X	X	X	X	X
NFIP Participant	X	X	X	X	X
CRS Participant	X	X	X		X
Capital Improvements Plan	X	X	X	X	X
Building Inspections/ Permitting	X	X	X	X	X

Table 4-9. Pender County Jurisdictional Functions/Capabilities

	Pender County	Atkinson	Burgaw	St. Helena	Surf City	Topsail Beach	Watha
Comprehensive Land Use Plan (LUP)	X	X	X	X	X	X	X
Parks and Recreation/Open Space Plan	X		X		X	X	
Zoning Ordinance	X	X	X	X	X	X	X
Subdivision Ordinance	X	X	X	X	X	X	X
Stormwater Ordinance	X				X	X	
Floodplain Ordinance	X	X	X	X	X	X	
NFIP Participant	X	X	X	X	X	X	
CRS Participant	X					X	
Capital Improvements Plan	X		X			X	
Building Inspections/ Permitting	X		X		X	X	

LEGAL CAPABILITY REVIEW

The following overview provides an account of the legal mechanisms available to Brunswick, New Hanover, and Pender Counties, as well as their respective municipal jurisdictions to implement policies and practices aimed at furthering mitigation objectives outlined within this plan. These tools are equally available to each community; however, some communities do not have the administrative capacity to effectively make use of all land use management tools available to them through the State's enabling legislation.

As a general rule, local governments have only that legal authority which is granted to them by their home state. This principle, that all power is vested in the State and can only be exercised to the extent it is delegated, is known as "Dillon's Rule," and applies to all North Carolina's political subdivisions. Enabling legislation in North Carolina grants a wide array of powers to its cities, towns, and counties.

Local regulations which are enacted within the bounds of the state's enabling authority do not automatically meet with judicial acceptance. Any restrictions which local governments impose on land use or building practices must follow the procedural requirements of the Fourteenth Amendment, or risk invalidation.

These and other constitutional mandates apply to federal and state governments, and all their political subdivisions. Any mitigation measures that are undertaken by the local government in its regulatory capacity must be worded and enforced carefully within the parameters established by the state and federal Constitutions, even when such measures are authorized by the General Statutes of North Carolina, and even when such measures are enacted in order to protect public health and safety by protecting the community from the impacts of natural hazards.

Within the limits of Dillon's Rule and the federal and state Constitutions, local governments in North Carolina have a wide latitude within which to institute mitigation programs, policies, and actions. All local government powers fall into one of four basic groups (although some governmental activities may be classified as more than one type of power): regulation, acquisition, taxation, and spending. Hazard mitigation measures can be carried out under each of the four types of power. Following are a list of these powers and how they may be useful tools for hazard mitigation:

Regulations

General Police Power

Local governments in North Carolina have been granted broad regulatory powers in their jurisdictions. North Carolina General Statutes bestow the general police power on local governments, allowing them to enact and enforce ordinances which define, prohibit, regulate, or abate acts, omissions, or conditions detrimental to the health, safety, and welfare of the people, and to define and abate nuisances (including public health nuisances). Since hazard mitigation can be included under the police power (as protection of public health, safety, and welfare), towns, cities, and counties may include requirements for hazard mitigation in local ordinances. Local governments may also use their ordinance-making power to abate "nuisances," which could include, by local definition, any activity or condition making people or property more vulnerable to any hazard.

Building Codes and Building Inspections

Many structural mitigation measures involve constructing and retrofitting homes, businesses, and other structures according to standards designed to make the buildings more resilient to the impacts of natural hazards. Many of these standards are imposed through the building code. North Carolina has a state compulsory building code which applies throughout the state (N.C.G.S. 143-138). However, municipalities and counties may adopt codes for the respective areas if approved by the state as providing "adequate minimum standards." Local regulations cannot be less restrictive than the state code.

Local governments in North Carolina are also empowered to carry out building inspection. N.C.G.S. Ch. 160A, Art. 19, Part 5; and Ch. 153A, Art. 18, Part 4 empower cities and counties to create an inspection department, and enumerates its duties and responsibilities, which include enforcing state and local laws relating to the construction of buildings; installation of plumbing, electrical, heating systems, etc.; building maintenance; and other matters.

Land Use

Regulatory powers granted by the state to local governments are the most basic manner in which a local government can control the use of land within its jurisdiction. Through various land use regulatory powers, a local government can control the amount, timing, density, quality, and location of new development; all these characteristics of growth can determine the level of vulnerability of the community in the event of a natural hazard. Land use regulatory powers include the power to engage in planning, enact and enforce zoning ordinances, floodplain ordinances, and subdivision controls. Land use controls available to each participating jurisdiction are provided in Tables 4-7 through 4-9.

Zoning: See Existing Policies and Program Review section above.

Floodway Regulation: The North Carolina General Statutes declare that the channel and a portion of the floodplain of all the state's streams will be designated as a floodway, either by the local government or by the state. The legislatively declared purpose of designating these areas as a floodway is to help control and minimize the extent of floods by preventing obstructions which inhibit water flow and increase flood height and damage and other losses (both public and private) in flood hazard areas, and to promote the public health, safety, and welfare of citizens of North Carolina in flood hazard areas.

To carry out this purpose, local governments are empowered to grant permits for the use of the floodways, including the placement of any artificial obstruction in the floodway. No permit is required for certain uses, including agricultural, wildlife and related uses; ground level uses such as parking areas, rotary aircraft ports; lawns, gardens, golf courses, tennis courts, parks, open space, and similar private and public recreational uses. Existing artificial obstructions in the floodway may not be enlarged or replaced without a permit; local governments are empowered to acquire existing obstructions by purchase, exchange, or condemnation if necessary to avoid flood damages.

The procedures that are laid out for issuing permits for floodway use require the local government to consider the dangerous effects a proposed artificial obstruction may create by causing water to be backed up or diverted; or the danger that the obstruction will be swept downstream to the injury of others; and by the injury or damage that may occur at the site of the obstruction itself. Local governments are to take into account anticipated development in the foreseeable future which may be adversely affected by the obstruction, as well as existing development.

Planning: In order to exercise the regulatory powers conferred by the General Statutes, local governments in North Carolina are required to create or designate a planning agency. The planning agency may perform a number of duties, including: make studies of the area; determine objectives; prepare and adopt plans for achieving those objectives; develop and recommend policies, ordinances, and administrative means to implement plans; and perform other related duties. The importance of the planning powers of local governments is emphasized in N.C.G.S. 160A-383, which requires that zoning regulations be made in accordance with a comprehensive plan. While the ordinance itself may provide evidence that zoning is being conducted "in accordance with a plan," the existence of a separate planning document ensures that the government is developing regulations and ordinances that are consistent with the overall goals of the community.

Subdivision Regulation: See Existing Policies and Program Review section above.

Acquisition

The power of acquisition can be a useful tool for pursuing mitigation goals. Local governments may find the most effective method for completely "hazard-proofing" a particular piece of property or area is to acquire the property (either in fee or a lesser interest, such as an easement), thus removing the property from the private market and eliminating or reducing the possibility of inappropriate development occurring. North Carolina legislation empowers cities, towns, and counties to acquire property for public purpose by gift, grant, devise, bequest, exchange, purchase, lease, or eminent domain.

Taxation

Taxation is yet another power granted to local governments by North Carolina law which can be used as a hazard mitigation tool. The power of taxation extends beyond merely the collection of revenue. Many communities set preferential tax rates for areas which are unsuitable for development (e.g., agricultural land, wetlands) and can be used to discourage development in hazardous areas.

Local units of government also have the authority to levy special assessments on property owners for all or part of the costs of acquiring, constructing, reconstructing, extending, or otherwise building or improving beach erosion control or flood and hurricane protection works within a designated area. This can serve to increase the cost of building in such areas, thereby discouraging development.

Because the usual methods of apportionment seem mechanical and arbitrary, and because the tax burden on a particular piece of property is often quite large, the major constraint in using special assessments is political. Special assessments seem to offer little in terms of control over land use in developing areas. They can, however, be used to finance the provision of services a city deems necessary within its boundaries. In addition, they are useful in distributing to the new property owners the costs of the infrastructure required by new development.

Spending

The fourth major power that has been delegated from the North Carolina State General Assembly to local governments is the power to make expenditures in the public interest. Hazard mitigation principles should be made a routine part of all spending decisions made by the local government, including annual budgets and Capital Improvement Plans.

A capital program is usually a timetable by which a city indicates the timing and level of municipal services it intends to provide over a specified duration. Capital programming, by itself, can be used as a growth management technique, with a view to hazard mitigation. By tentatively committing itself to a timetable for the provision of capital to extend municipal services, a community can control its growth to some extent especially where the surrounding area is such that the provision of on-site sewage disposal and water supply are unusually expensive.

In addition to formulating a timetable for the provision of services, a local community can regulate the extension of and access to municipal services.

A capital improvement program (CIP), where applicable, that is coordinated with extension and access policies can provide a significant degree of control over the location and timing of growth. These tools can also influence the cost of growth. If the CIP is effective in directing growth away from environmentally sensitive or high hazard areas, for example, it can reduce environmental costs.

FISCAL CAPABILITY REVIEW

There are many diverse sources of funding available to communities to implement local hazard mitigation plans, including both government and private programs. Often an organization with a particular focus will fund only part of a project. However, with coordination, the community can combine the funding efforts of one program with those of another, thereby serving multiple missions. The grant and loan programs described in this section of the plan are a significant, although certainly not a sole source of funding options available to each of the local government entities participating in this plan.

While federal and national programs carry out the bulk of disaster relief programs that provide funds for mitigation, local governments are encouraged to open the search field as widely as possible, and include alternative funding sources to supplement the local hazard mitigation budget. For instance, local businesses and organizations will frequently support projects that benefit their customers or employees, or which constitute good "PR." Other groups or individuals may be willing to donate "in-kind" services, eliminating the need for cash. Often the in-kind and volunteer services of local community members can be counted toward the local share that is typically needed to match an outside source of funds.

Local governments may also engage in their own "fund-raising" efforts to pay for mitigation programs that benefit the community at-large. In North Carolina, local governments are granted limited powers to raise revenue for public purpose. The General Assembly has conferred upon cities, towns, and counties the power to levy property taxes for various purposes, including: "ambulance services, rescue squads, and other

emergency medical services; beach erosion and natural disasters (including shoreline protection, beach erosion control, and flood and hurricane protection); civil defense; drainage projects or programs; fire protection; hospitals; joint undertakings with other county, city, or political subdivisions; planning; sewage; solid waste; water; water resources; watershed improvement projects" N.C.G.S. §16A-209. These statutorily enumerated purposes make it clear that local governments are empowered to finance certain emergency management activities, including mitigation activities, with property taxes.

Appendix F provides a list and description of several programs which offer funding for hazard mitigation, redevelopment, and post disaster recovery.

POLITICAL ACCEPTABILITY REVIEW

This subsection of the plan is intended to address the participating communities' "political willpower" to address hazards threats in a proactive manner. This "political willpower" is a significant component of a community's capability to implement hazard mitigation. It is, however, a very difficult factor to assess and evaluate as it is constantly changing based on the turnover in elected officials and the (perceived and actual) frequency and severity of natural hazard events.

The following principals of political acceptability are applicable for all of the local governments participating in this plan:

1. Independent of existing regulations that directly address hazard mitigation (e.g., floodplain management ordinance), hazard mitigation is not a goal that should be addressed independent of other goals and objectives of the local government, due to limited local government resources; and

2. Hazard mitigation should be considered and incorporated into policies, procedures, and programs which affect land use and development, such as siting of roadways, siting and building of public facilities, zoning and subdivision ordinances, and extension of infrastructure necessary for growth; and

3. Local revenues are insufficient to support hazard mitigation projects for mitigation of existing hazards at the local level, however, Federal and State grant funds for priority hazard mitigation projects should be pursued when available.

4. One of local government's primary roles in implementing hazard mitigation is educating the public about the risks of natural hazards and how to reduce these risks and/or the costs of these risks.

SECTION 5.

VULNERABILITY ASSESSMENT

INTRODUCTION

This section of the Hazard Mitigation Plan will assist with gauging the present level of vulnerability throughout the Southeastern NC Region. Vulnerability is defined as the extent to which people experience harm and property damage from a hazard. This section provides an overview of unincorporated and incorporated portions of each participating County by discussing the physical layout, existing development, and hazardous locations.

As a component of this Regional planning effort, the vulnerability analysis was updated to reflect the 2015 development characteristics of each County. The data prepared and presented for each County is presented in a consistent manner. The effort to develop and present the data consistently will promote efficient updating of the plan.

The development of Section 5 also involved the review and update of the critical facilities inventory initially established through each respective jurisdiction's 2010/2011 planning process. This section of the plan outlines the methodology utilized to prepare the vulnerability analysis and information relative to all participating jurisdictions.

This section of the HMP also identifies specific locations and facilities vulnerable to natural hazards with narrative, data, and maps. This section will identify the existing threat posed by each hazard outlined within Section 3 of the plan. Many of the hazards listed pose a direct threat to a defined geographic area, while others are considered to impact each County, and the Region, as a whole. Maps have been provided to further clarify the impact area of a respective hazard type. See Appendix A for maps of each participating jurisdiction. Two maps are provided, one for non-specific hazards (thunderstorms, tornados, etc.) and one for floodprone properties (hurricanes, flooding, etc.).

DEVELOPMENT VULNERABILITY

This section defines vulnerability for each jurisdiction participating in the regional plan. The information presented throughout this section reflects the data that is currently available for use in this plan. Due to the regional nature of this plan, some of the county Hazard Vulnerability Analyses may vary substantially from the jurisdiction's 2011/2012 plan. One of the primary reasons that the data has been compiled in this manner is that each County maintains the data necessary to report existing development vulnerability in a manner achievable for all participating jurisdictions. If in some cases, data to establish potential or future vulnerability is not available; local units of government can establish a strategy in the plan aiming to establish this baseline data prior to the next update cycle. Due to the regional scope of this plan, data has been presented at the County and municipal level in a consistent manner. As noted, the resulting methodology will provide for consistency during future updates.

Vulnerability to Non-Specific Hazards

Several of the hazards outlined within Section 3 result in impacts that are not geographically targeted at a specific area or portion of the Counties. The following hazards typically impact unincorporated and incorporated portions of Brunswick, New Hanover, and Pender Counties overall, but may have significant impacts on specific portions of the Counties: severe winter storms, severe thunderstorms, tornadoes, wildfire, nor'easters, sinkholes, dam/levee failures, and earthquakes. Hurricanes/tropical storms are also considered to potentially impact large portions of the Region, but these hazards potentially may have serious impacts on fairly specific portions of each County. Refer to maps in Appendix A for an overview of the areas impacted by these hazards.

Brunswick County Existing Vulnerability

The following provides an overview of development vulnerability with respect to non-specific hazards for incorporated and unincorporated portions of Brunswick County.

Table 5-1. Brunswick County Non-Specific Hazards Development Vulnerability

	Developed			Undeveloped	
Location	**# of Properties**	**Acres**	**Building Value**	**# of Properties**	**Acres**
Unincorporated County	25,929	75,174.40	$3,751,705,680	44,939	373,613.20
Bald Head Island	1,051	386.99	$547,350,550	1,330	1,236.83
Belville	789	450.54	$117,090,210	155	449.29
Boiling Spring Lakes	2,227	1,556.45	$303,116,250	6,821	12,569.78
Boliva	83	153.65	$15,572,790	78	188.62
Calabash	1,031	1,579.23	$143,829,020	1,180	968.59
Carolina Shores	1,064	433.11	$153,140,160	202	286.29
Caswell Beach	360	179.59	$91,300,930	198	1,254.11
Holden Beach	2,227	462.30	$479,058,570	1,190	927.45
Leland	7,124	6,460.99	$1,358,999,240	2,767	4,632.02
Navassa	524	753.09	$57,405,170	509	6,426.57
Northwest	277	794.30	$22,614,570	439	2,966.70
Oak Island	8,563	2,238.52	$1,255,649,700	4,453	14,477.52
Ocean Isle Beach	2,337	543.78	$603,883,980	1,260	1,188.15
Sandy Creek	87	95.46	$7,898,430	99	261.43
Shallotte	1,638	1,363.48	$426,881,100	1,686	3,723.44
Southport	1,921	831.31	$404,904,480	1,130	1,202.31
St. James	2,555	1,162.56	$820,380,230	2,223	3,610.10
Sunset Beach	3,442	1,214.23	$671,287,770	1,823	2,348.42
Varnamtown	261	345.12	$24,092,230	225	182.89
Brunswick County Total	63,490	96,179.10	$11,256,161,060	72,707	432,513.71

Source: Brunswick County, US Census Bureau, HCP, Inc.

Brunswick County Future Vulnerability

At this time, Brunswick County and its participating jurisdictions do not have the database (including recently developed accurate and usable information) required to perform a detailed analysis of potential future conditions in relation to the non-specific hazard area. The County, in conjunction with participating municipal jurisdictions, will continue to work on improving its GIS capabilities and aim to incorporate this element into future updates of this plan.

New Hanover County Existing Vulnerability

The following provides an overview of development vulnerability with respect to non-specific hazards for incorporated and unincorporated portions of New Hanover County.

Table 5-2. New Hanover County Non-Specific Hazards Development Vulnerability

	Developed			Undeveloped	
Location	**# of Properties**	**Acres**	**Building Value**	**# of Properties**	**Acres**
Unincorporated County	34,832	38,463.21	$5,973,267,600	7,037	46,600.72
Carolina Beach	3,617	836.68	$574,416,800	1,267	365.81
Kure Beach	1,696	289.14	$321,791,800	451	80.94
Wilmington	34,876	20,973.50	$8,435,111,702	5,127	7,628.23
Wrightsville Beach	1,712	499.67	$531,789,400	213	161.84
New Hanover Co Total	76,733	61,062.20	$15,836,377,302	14,095	54,837.54

Source: New Hanover County, US Census Bureau, HCP, Inc.

New Hanover County Future Vulnerability

At this time, New Hanover County and its participating jurisdictions do not have the database (including recently developed accurate and usable information) required to perform a detailed analysis of potential future conditions in relation to the non-specific hazard area. The County, in conjunction with participating municipal jurisdictions, will continue to work on improving its GIS capabilities and aim to incorporate this element into future updates of this plan.

Pender County Existing Vulnerability

The following provides an overview of development vulnerability with respect to non-specific hazards throughout Pender County.

Table 5-3. Pender County Non-Specific Hazards Development Vulnerability

	Developed			Undeveloped	
Location	**# of Properties**	**Acres**	**Building Value**	**# of Properties**	**Acres**
Unincorporated County	20,973	128,551.40	$2,489,174,290	16,522	401,662.98
Atkinson	197	233.75	$9,937,450	178	356.00
Burgaw	1,273	1,365.43	$237,307,122	746	1,328.84
Saint Helena	203	794.43	$21,674,847	196	2,696.33
Surf City	3,326	978.24	$295,546,684	1,315	2,093.31
Topsail Beach	1,495	283.39	$154,234,920	390	80.53
Watha	103	270.66	$5,859,534	104	346.25
Pender County Total	27,570	132,477.30	$3,213,734,847	19,451	408,564.24

Source: Pender County, US Census Bureau, HCP, Inc.

Pender County Future Vulnerability

At this time, Pender County and its participating jurisdictions do not have the database (including recently developed accurate and usable information) required to perform a detailed analysis of potential future conditions in relation to the non-specific hazard area. The County, in conjunction with participating municipal jurisdictions, will continue to work on improving its GIS capabilities and aim to incorporate this element into future updates of this plan.

Flooding

Flooding primarily impacts the Southeastern NC Region during thunderstorm events, heavy rains, and in some cases when upstream precipitation results in downstream drainage issues. Hurricanes and tropical storm events can also result in heavy flooding. The following section provides an analysis of vulnerability for properties within the Region's flood zones and provides an overview of the impacts associated with: riverine flooding, hurricanes/tropical storms, and dam/levee failure.

Flood Insurance Rate Maps (FIRMS)

Maps provided in Appendix A graphically depict the extent of the high risk flooding areas within each participating jurisdiction as defined by the Flood Insurance Rate Maps (FIRMS) developed by the Federal Emergency Management Agency (FEMA). FEMA defines areas within "flood zones," based on varying levels of risk of flooding in each area. Properties in Zones "A" and "AE" are considered to be high-risk flood zones, as there is a 1% or greater chance of flooding each year.

Properties in Zone VE are also considered to be high-risk flood zones, as there is a 1% or greater chance of flooding per year, with additional hazards due to storm-induced velocity wave action. Properties in Zone "X-500" have an approximately 0.02, or 1 in 500, chance of flooding each year. Table 5-4 provides the acreage within each County located within a flood hazard area.

Table 5-4. Southeastern NC Region Flood Hazard Areas

	Pender County		New Hanover County		Brunswick County	
Type	**Acres**	**% of County**	**Acres**	**% of County**	**Acres**	**% of County**
A	63,334.41	11.4%	0.00	0.0%	98,322.80	18.0%
AE	103,545.11	18.6%	25,100.43	19.6%	82,531.47	15.1%
AEFW	14,267.31	2.6%	1,296.90	1.0%	4,626.54	0.8%
VE	7,682.13	1.4%	11,790.08	9.2%	12,464.55	2.3%
X-500	12,352.28	2.2%	2,455.19	1.9%	6,787.93	1.2%
Total	201,181.24	36.1%	40,642.60	31.7%	204,733.29	37.4%

Source: FEMA, HCP, Inc.

Brunswick County Existing Vulnerability

The following provides an overview of existing conditions for portions of Brunswick County located within a defined flood hazard area, utilizing the same methodology outlined in the Vulnerability to Non-Specific Hazards section for Brunswick County. Data is not currently available to provide a more detailed breakdown.

Table 5-5. Brunswick County Floodprone Structures

	Developed			Undeveloped	
Location	**# of Properties**	**Acres**	**Building Value**	**# of Properties**	**Acres**
Unincorporated County	5,144	42,207.46	$936,395,170	9,877	289,727.95
Bald Head Island	943	369.96	$497,521,870	1,209	1,200.30
Belville	58	93.60	$16,820,460	43	140.17
Boiling Spring Lakes	490	488.98	$69,759,680	617	3,227.51
Bolivia	22	72.33	$9,920,910	30	132.51
Calabash	69	852.26	$8,449,500	133	372.87
Carolina Shores	0	0.00	$0	0	0.00
Caswell Beach	353	179.32	$90,112,170	196	1,253.07
Holden Beach	2,223	461.70	$477,817,230	1,161	923.33
Leland	507	4,352.90	$140,921,330	416	2,510.72
Navassa	63	361.88	$17,308,010	118	4,897.27
Northwest	9	11.82	$889,720	10	520.46
Oak Island	5,403	1,500.61	$861,110,810	3,082	7,454.69

	Developed			Undeveloped	
Location	**# of Properties**	**Acres**	**Building Value**	**# of Properties**	**Acres**
Ocean Isle Beach	2,289	320.60	$593,404,480	1,203	1,058.18
Sandy Creek	0	0.00	$0	2	92.71
Shallotte	222	337.29	$81,234,500	361	1,773.21
Southport	317	318.44	$91,116,380	352	883.52
St. James	827	528.13	$257,504,770	583	810.77
Sunset Beach	1,455	459.09	$320,880,570	757	1,282.37
Varnamtown	90	171.25	$8,623,640	91	75.55
Brunswick County Total	20,484	53,087.62	$4,479,791,200	20,241	318,337.16

Source: Brunswick County, US Census Bureau, HCP, Inc.

Brunswick County Future Vulnerability

At this time, Brunswick County does not have the database required to perform a detailed analysis of potential future conditions in relation to flood hazard areas. The County will continue to work on improving its GIS capabilities and aim to incorporate this element into future updates of this plan.

New Hanover County Existing Vulnerability

The following provides an overview of existing conditions for portions of New Hanover County located within a defined flood hazard area, utilizing the same methodology outlined in the Vulnerability to Non-Specific Hazards section for New Hanover County. Data is not currently available to provide a more detailed breakdown.

Table 5-6. New Hanover County Floodprone Properties

	Developed			Undeveloped	
Location	**# of Properties**	**Acres**	**Building Value**	**# of Properties**	**Acres**
Unincorporated County	6,036	20,492.65	$1,688,120,800	2,063	28,417.00
Carolina Beach	2,490	535.66	$401,763,900	756	221.32
Kure Beach	395	88.35	$93,635,300	118	22.71
Wilmington	3,452	5,688.93	$1,542,978,101	797	3,679.96
Wrightsville Beach	1,680	481.04	$519,798,000	210	160.78
New Hanover Co Total	14,053	27,286.63	$4,246,296,101	3,944	32,501.77

Source: New Hanover County, US Census Bureau, HCP, Inc.

New Hanover County Future Vulnerability

At this time, New Hanover County does not have the database required to perform a detailed analysis of potential future conditions in relation to flood hazard areas. The County will continue to work on improving its GIS capabilities and aim to incorporate this element into future updates of this plan.

Pender County Existing Vulnerability

The following provides an overview of existing conditions for portions of Pender County located within a defined flood hazard area, utilizing the same methodology outlined in the Vulnerability to Non-Specific Hazards section for Pender County. Data is not currently available to provide a more detailed breakdown.

Table 5-7. Pender County Floodprone Structures

	Developed			Undeveloped	
Location	**# of Properties**	**Acres**	**Building Value**	**# of Properties**	**Acres**
Unincorporated County	4,733	75,669.61	$880,015,246	4,967	308,857.20
Atkinson	18	97.91	$1,139,317	17	74.27
Burgaw	320	665.47	$107,308,870	252	614.51
Saint Helena	20	189.24	$1,354,299	18	1,099.40
Surf City	2,689	580.79	$9,920,910	911	1,594.70
Topsail Beach	1,495	283.39	$154,234,920	390	80.53
Watha	13	83.38	$672,762	9	48.59
Pender County Total	9,288	77,569.79	$1,154,646,324	6,564	312,369.20

Source: Pender County, US Census Bureau, HCP, Inc.

Pender County Future Vulnerability

At this time, Pender County does not have the database required to perform a detailed analysis of potential future conditions in relation to flood hazard areas. The County will continue to work on improving its GIS capabilities and aim to incorporate this element into future updates of this plan.

Drought/Extreme Heat

No analysis was performed to address the drought/extreme heat hazard within the Southeastern NC Region. All properties and citizens are equally vulnerable to this risk within Pender, New Hanover, and Brunswick Counties. The Counties, the participating municipalities, and servicing public drinking water utilities will continue to monitor the drought situation in conjunction with the State of North Carolina to ensure that water supply resources are protected and maintained. Over the last few years, each has nearly been required to institute mandatory water restrictions as a result of persistent drought conditions. The Regional MAC will continue to work closely with all participating jurisdictions to ensure that water resources are protected.

FRAGILE AREAS

Fragile areas are areas which could easily be damaged or destroyed by inappropriate, unplanned, or poorly planned development. These areas include Areas of Environmental Concern (AECs), Natural Resource Fragile Areas, and 404 Wetlands. The AECs located in the Southeastern NC Region include wetlands and public trust areas. The presence and protection of fragile areas can provide natural hazard mitigation benefits. Wetlands and open space areas in general act as natural flood controls by storing tremendous amounts of floodwater and slowing/reducing downstream flows. Riparian (vegetated buffer) habitat protection programs can help preserve the natural mitigating features of streams while also achieving wildlife preservation objectives. Following are definitions of the types of fragile areas that can be found throughout Pender, New Hanover, and Brunswick Counties. These areas are protected from haphazard development by Coastal Area Management (CAMA) regulations.

Public Trust Areas (AECs)

Public trust areas are all waters of the Atlantic Ocean and the lands thereunder from the mean high water mark to the seaward limit of state jurisdiction; all natural bodies of water subject to measurable lunar tides and lands thereunder to the mean high water mark; all navigable natural bodies of water and lands thereunder to the mean high water level or mean water level as the case may be, except privately-owned lakes to which the public has no right to access; all water in artificially-created bodies of water containing significant public fishing resources or other public resources which are accessible to the public by navigation; and all waters in artificially-created bodies of water in which the public has acquired rights by prescription, custom, usage, dedication, or any other means.

Natural Resource Fragile Areas

Natural resource fragile areas are generally recognized to be of educational, scientific, or cultural value because of the natural features of the particular site. Features in these areas serve to distinguish them from the vast majority of the landscape. These areas include complex natural areas, areas that sustain remnant species, pocosins, wooded swamps, prime wildlife habitats, or registered natural landmarks.

404 Wetlands

404 wetlands are areas covered by water or that have water-logged soils for long periods during the growing season. Plants growing in wetlands are capable of living in soils lacking oxygen for at least part of the growing season. Some wetlands, such as swamps, are obvious. Others are sometimes difficult to identify because they may be dry during part of the year. Wetlands include, but are not limited to, bottomlands, forests, swamps, pocosins, pine savannahs, bogs, marshes, and wet meadows.

Section 404 of the Clean Water Act requires that anyone interested in depositing dredged or fill material into "waters of the United States," including wetlands, must apply for and receive a permit for such activities. 404 wetland areas are scattered throughout the Southeastern NC Region. Specific wetlands locations must be delineated in the field on case-by-case basis by the US Army Corps of Engineers.

CRITICAL FACILITIES (including participating jurisdictions)

After a hazard event, it is important to be aware of those facilities that are essential to the health, safety, and viability of each County. The damage or destruction of publicly-owned facilities could disrupt the everyday lives of citizens throughout the Southeastern NC Region. For the purpose of completing this plan, critical facilities are defined as those facilities that are essential to the preservation of life and property during a disaster, those that are critical to the continuity of government, those necessary to ensure timely recovery, and those that provide shelter to individuals needing that service. Following are lists of the most critical facilities for Pender, New Hanover, and Brunswick Counties (including all participating municipalities). Critical facilities located throughout each County are mapped in Appendix A, with the exception of water treatment facility infrastructure and associated capital improvements. These facilities are not mapped due to concerns related to public safety. The critical facilities listing and associated maps were compiled by the MAC through the planning process associated with this update.

Table 5-8. Brunswick County Critical Facilities

Map ID	Facility	Type	Location
MAP 2 - UNINCORPORATED BRUNSWICK COUNTY			
1	Belville Elementary School	Schools	Leland
2	Brunswick County Early College	Schools	Bolivia
3	Cedar Grove Middle School	Schools	Supply
4	Charter Day School	Schools	Leland
5	Jessie Mae Monroe Elementary	Schools	Ash
6	Lincoln Elementary School	Schools	Leland
7	Supply Elementary School	Schools	Supply
8	Town Creek Elementary	Schools	Winnabow
9	Union Elementary School	Schools	Shallotte
10	Virginia Williamson Elementary	Schools	Bolivia
11	Waccamaw School	Schools	Ash
12	Brunswick Community College Campus Police	Emergency Services	Bolivia
13	Brunswick County Sheriff's Department/Brunswick County Jail	Emergency Services	Bolivia
14	Novant Health Brunswick Medical Center	Emergency Services	Supply
15	Town of Shallotte Fire Department Station 2	Emergency Services	Shallotte
16	Tri-Beach Volunteer Fire Department Station 1	Emergency Services	Supply
17	Tri-Beach Volunteer Fire Department Station 3	Emergency Services	Supply
18	Sunset Harbor and Zion Hill Volunteer Fire Department	Emergency Services	Bolivia
19	Winnabow Volunteer Fire Department	Emergency Services	Winnabow
20	Supply Volunteer Fire Department	Emergency Services	Supply
21	Shallotte Point Volunteer Fire Department	Emergency Services	Shallotte
22	Civietown Volunteer Fire Department	Emergency Services	Supply

Map ID	Facility	Type	Location
23	Grissettown - Longwood Fire and Rescue	Emergency Services	Ocean Isle Beach
24	Calabash Fire Department Station 12-2	Emergency Services	Calabash
25	Sunny Point Fire Department-DOD	Emergency Services	Southport
26	Waccamaw Volunteer Fire and Rescue	Emergency Services	Ash
27	Coastine Rescue Squad	Emergency Services	Supply
MAP 3 - BALD HEAD ISLAND			
1	Bald Head Island Police Department	Emergency Services	Bald Head Island
2	Bald Head Island Volunteer Fire and Rescue	Emergency Services	Bald Head Island
3	Bald Head Island Town Hall	Government	Bald Head Island
MAP 4 - BELVILLE, LELAND, AND NAVASSA			
1	Belville Elementary School	Schools	Belville
2	North Brunswick High School	Schools	Leland
3	Leland Middle School	Schools	Leland
4	Leland Fire & Rescue	Emergency Services	Leland
5	Leland Police Department	Emergency Services	Leland
6	Leland Town Hall	Government	Leland
7	Navassa Police Department	Emergency Services	Navassa
8	Navassa Volunteer Fire Department	Emergency Services	Navassa
9	Navassa Town Hall	Government	Navassa
MAP 5 - BOILING SPRING LAKES			
1	South Brunswick High School	Schools	Boiling Spring Lakes
2	South Brunswick Middle School	Schools	Boiling Spring Lakes
3	Boiling Spring Lakes Police Department	Emergency Services	Boiling Spring Lakes
4	Boiling Spring Lakes Volunteer Fire Department - 1	Emergency Services	Boiling Spring Lakes
5	Boiling Spring Lakes Volunteer Fire Department - 2	Emergency Services	Boiling Spring Lakes
6	Boiling Spring Lakes Volunteer Fire Department -3	Emergency Services	Boiling Spring Lakes
7	Boiling Spring Lakes EMS	Emergency Services	Boiling Spring Lakes
8	Boiling Spring Lakes Town Hall	Government	Boiling Spring Lakes
MAP 6 - BOLIVIA			
1	Bolivia Elementary School	Schools	Bolivia
2	Bolivia Volunteer Fire Department	Emergency Services	Bolivia
3	Bolivia Town Hall	Government	Bolivia
MAP 7 - CALABASH AND CAROLINA SHORES			
1	Calabash Fire Department	Emergency Services	Calabash
2	Calabash Volunteer EMS	Emergency Services	Calabash
3	Calabash Town Hall	Government	Calabash
4	Carolina Shores Town Hall	Government	Carolina Shores

Map ID	Facility	Type	Location
MAP 8 - CASWELL BEACH, OAK ISLAND, AND ST. JAMES			
1	Caswell Beach Police Department	Emergency Services	Caswell Beach
2	Caswell Beach Town Hall	Government	Caswell Beach
3	Oak Island Police Department	Emergency Services	Oak Island
4	Oak Island Fire and Rescue Department	Emergency Services	Oak Island
5	Oak Island Fire and Rescue Department - Station 3	Emergency Services	Oak Island
6	Oak Island Fire and Rescue Department - Station 2	Emergency Services	Oak Island
7	Oak Island Water Rescue Team	Emergency Services	Oak Island
8	Oak Island Town Hall	Government	Oak Island
9	St. James Fire Department	Emergency Services	St. James
10	St. James Town Hall	Government	St. James
MAP 9 - HOLDEN BEACH AND VARNAMTOWN			
1	Holden Beach Police Department	Emergency Services	Holden Beach
2	Tri-Beach Volunteer Fire Department - Station 2	Emergency Services	Holden Beach
3	Holden Beach Town Hall	Government	Holden Beach
4	Varnamtown Town Hall	Government	Varnamtown
5	All Holden Beach Sewer System Lift Stations (not mapped)	Government	Holden Beach
MAP 10 - NORTHWEST AND SANDY CREEK			
1	Northwest Police Department	Emergency Services	Northwest
2	Northwest Volunteer Fire and Rescue Department	Emergency Services	Northwest
3	Northwest Town Hall	Government	Northwest
4	Sandy Creek Town Hall	Government	Sandy Creek
MAP 11 - OCEAN ISLE BEACH			
1	Ocean Isle Beach Fire Department	Emergency Services	Ocean Isle Beach
2	Ocean Isle Beach Police Department	Emergency Services	Ocean Isle Beach
3	Ocean Isle Beach Town Hall	Government	Ocean Isle Beach
MAP 12 - SHALLOTTE			
1	Shallotte Middle School	Schools	Shallotte
2	West Brunswick High School	Schools	Shallotte
3	Brunswick County EMS	Schools	Shallotte
4	Shallotte Fire Department - Station 1	Emergency Services	Shallotte
5	Shallotte Fire Department - Station 5	Emergency Services	Shallotte
6	Shallotte Police Department	Emergency Services	Shallotte
7	Shallotte Rescue Squad	Emergency Services	Shallotte
8	Shallotte Town Hall	Emergency Services	Shallotte
MAP 13 - SOUTHPORT			
1	Brunswick County Academy	Schools	Southport
2	Southport Elementary School	Schools	Southport

Map ID	Facility	Type	Location
3	J. Arthur Dosher Memorial Hospital	Schools	Southport
4	Southport Fire Department	Emergency Services	Southport
5	Southport Police Department	Emergency Services	Southport
6	Southport Rescue Squad	Emergency Services	Southport
7	Southport City Hall	Government	Southport
MAP 14 - SUNSET BEACH			
1	Sunset Beach Fire Department	Emergency Services	Sunset Beach
2	Sunset Beach Police Department	Emergency Services	Sunset Beach
3	Sunset Beach Town Hall	Government	Sunset Beach

Source: Brunswick County and all participating municipalities.

Table 5-9. New Hanover County Critical Facilities

Map ID	Facility	Type	Location
MAP 16 - UNINCORPORATED NEW HANOVER COUNTY			
1	Castle Hayne Elementary School	Schools	Castle Hayne
2	Charles P Murray Middle School	Schools	Wilmington
3	Dr. Hubert Eaton Sr Elementary School	Schools	Wilmington
4	Edwin A Anderson Elementary School	Schools	Wilmington
5	Emma B Trask Middle School	Schools	Wilmington
6	Emsley A Laney High School	Schools	Wilmington
7	Eugene Ashley High School	Schools	Wilmington
8	H. C. Bellamy Elementary School	Schools	Wilmington
9	Holly Shelter Middle School	Schools	Castle Hayne
10	Mary C Williams Elementary School	Schools	Wilmington
11	Murrayville Elementary School	Schools	Wilmington
12	Myrtle Grove Middle School	Schools	Wilmington
13	Ogden Elementary School	Schools	Wilmington
14	Wilmington Early College High School	Schools	Wilmington
15	Wrightsboro Elementary School	Schools	Wilmington
16	Castle Hayne Volunteer Fire Department	Emergency Services	Castle Hayne
17	New Hanover County Sheriff's Office/Detention Center	Emergency Services	Castle Hayne
18	Federal Point Fire and Rescue	Emergency Services	Wilmington
19	Myrtle Grove Volunteer Fire Department	Emergency Services	Wilmington
20	New Hanover Regional Emergency Medical Services - Airlink Station	Emergency Services	Wilmington
21	New Hanover Regional Emergency Medical Services - Station 1	Emergency Services	Wilmington
22	North Carolina Division of Forest Resources District 8	Emergency Services	Wilmington

Map ID	Facility	Type	Location
23	Ogden Volunteer Fire Department	Emergency Services	Wilmington
24	Wilmington International Airport Rescue Base/Public Safety	Emergency Services	Wilmington
25	Wrightsboro Volunteer Fire Department	Emergency Services	Wilmington
MAP 17 - CAROLINA BEACH AND KURE BEACH			
1	Carolina Beach Elementary School	Schools	Carolina Beach
2	Carolina Beach Fire Department	Emergency Services	Carolina Beach
3	Carolina Beach Police Department	Emergency Services	Carolina Beach
4	Carolina Beach Town Hall	Government	Carolina Beach
5	Kure Beach Police Department	Emergency Services	Kure Beach
6	Kure Beach Volunteer Fire Department	Emergency Services	Kure Beach
7	Kure Beach Town Hall	Government	Kure Beach
MAP 18 - WILMINGTON			
1	A H Snipes Academy of Arts/Design	Schools	Wilmington
2	Bradley Creek Elementary School	Schools	Wilmington
3	Cape Fear Center for Inquiry	Schools	Wilmington
4	College Park Elementary School	Schools	Wilmington
5	D. C. Virgo Preparatory Academy	Schools	Wilmington
6	Dr John Codington Elementary School	Schools	Wilmington
7	Edwin A Alderman Elementary School	Schools	Wilmington
8	Forest Hills Elementary School	Schools	Wilmington
9	Gregory Elementary School	Schools	Wilmington
10	Holly Tree Elementary School	Schools	Wilmington
11	Isaac M Bear High School	Schools	Wilmington
12	John J Blair Elementary	Schools	Wilmington
13	John T Hoggard High School	Schools	Wilmington
14	Lake Forest Academy	Schools	Wilmington
15	MCS Noble Middle School	Schools	Wilmington
16	Mary Sidberry Mosley PLC	Schools	Wilmington
17	New Hanover High School	Schools	Wilmington
18	Pine Valley Elementary School	Schools	Wilmington
19	R Freeman School of Engineering	Schools	Wilmington
20	Roland Grise Middle School	Schools	Wilmington
21	Sunset Park Elementary School	Schools	Wilmington
22	Walter L Parsley Elementary School	Schools	Wilmington
23	Williston Middle School	Schools	Wilmington
24	Wilmington Preparatory Academy	Schools	Wilmington
25	Winter Park Model Elementary School	Schools	Wilmington

Map ID	Facility	Type	Location
26	Bureau of Alcohol Tobacco Firearms and Explosives	Emergency Services	Wilmington
27	Cape Fear Hospital	Emergency Services	Wilmington
28	New Hanover County Sheriff - Narcotics Vice Squad and Detective Unit	Emergency Services	Wilmington
29	New Hanover County Sheriff's Office - Patrol Division	Emergency Services	Wilmington
30	New Hanover Regional Emergency Medical Services - Station 2	Emergency Services	Wilmington
31	New Hanover Regional Medical Center	Emergency Services	Wilmington
32	North Carolina State Highway Patrol Troop B District VI	Emergency Services	Wilmington
33	North Carolina State Ports Authority - Wilmington Police Dept.	Emergency Services	Wilmington
34	UNCW Police Department	Emergency Services	Wilmington
35	United States Customs and Border Protection - Port of Entry	Emergency Services	Wilmington
36	US DEA & Marshal's Service	Emergency Services	Wilmington
37	Wilmington Fire Department Station 1 - Headquarters	Emergency Services	Wilmington
38	Wilmington Fire Department Station 2	Emergency Services	Wilmington
39	Wilmington Fire Department Station 3	Emergency Services	Wilmington
40	Wilmington Fire Department Station 4	Emergency Services	Wilmington
41	Wilmington Fire Department Station 5	Emergency Services	Wilmington
42	Wilmington Fire Department Station 6	Emergency Services	Wilmington
43	Wilmington Fire Department Station 7	Emergency Services	Wilmington
44	Wilmington Fire Department Station 8	Emergency Services	Wilmington
45	Wilmington Fire Department Station 9	Emergency Services	Wilmington
46	Wilmington Fire Department Station 10	Emergency Services	Wilmington
47	Wilmington Fire Department Station 11	Emergency Services	Wilmington
48	Wilmington Police Department	Emergency Services	Wilmington
49	Wilmington City Hall	Government	Wilmington
50	New Hanover County Emergency Management	Government	Wilmington
MAP 19 - WRIGHTSVILLE BEACH			
1	Wrightsville Beach Elementary School	Schools	Wrightsville Beach
2	Wrightsville Beach Fire Department	Emergency Services	Wrightsville Beach
3	Wrightsville Beach Police Department	Emergency Services	Wrightsville Beach
4	Wrightsville Beach Town Hall	Government	Wrightsville Beach

Source: New Hanover County and all participating municipalities.

Table 5-10. Pender County Critical Facilities

Map ID	Facility	Type	Location
MAP 21 - UNINCORPORATED PENDER COUNTY			
1	Cape Fear Elementary School	Schools	Rocky Point
2	Cape Fear Middle School	Schools	Rocky Point
3	Heide Trask High School	Schools	Rocky Point
4	Malpass Corner Elementary School	Schools	Burgaw
5	North Topsail Elementary	Schools	Hampstead
6	Pender High School	Schools	Burgaw
7	Penderlea Elementary School	Schools	Willard
8	Rocky Point Elementary School	Schools	Rocky Point
9	South Topsail Elementary School	Schools	Hampstead
10	Topsail Elementary School	Schools	Hampstead
11	Topsail High School	Schools	Hampstead
12	Topsail Middle School	Schools	Hampstead
13	West Pender Middle School	Schools	Burgaw
14	North Carolina Division of Forest Resources District 8	Emergency Services	Rocky Point
15	Hampstead Volunteer Fire Department	Emergency Services	Burgaw
16	Pender Volunteer EMS and Rescue - Station 2	Emergency Services	Hampstead
17	Pender Volunteer EMS and Rescue - Station 6	Emergency Services	Watha
18	Sloop Point Fire Department	Emergency Services	Rocky Point
19	Surf City Volunteer Fire Department	Emergency Services	Willard
20	Maple Hill Volunteer Fire Department	Emergency Services	Maple Hill
21	Pender Volunteer EMS and Rescue - Station 8	Emergency Services	Hampstead
22	Long Creek Grady Volunteer Fire Department	Emergency Services	Hampstead
23	Pender Volunteer EMS and Rescue - Station 7 Headquarters	Emergency Services	Willard
24	Rocky Point Volunteer Fire Department Station 22	Emergency Services	Hampstead
25	Shiloh-Columbia Volunteer Fire Department - Station 1900	Emergency Services	Rocky Point
26	Pender Volunteer EMS and Rescue - Station 5	Emergency Services	Hampstead
27	Penderlea Volunteer Fire Department	Emergency Services	Maple Hill
28	Union Rescue Squad	Emergency Services	Willard
MAP 22 - ATKINSON			
1	Atkinson Fire Department	Emergency Services	Atkinson
2	Pender County EMS	Emergency Services	Atkinson
3	Atkinson Town Hall	Government	Atkinson
MAP 23 - BURGAW			
1	Burgaw Elementary School	Schools	Burgaw
2	Burgaw Middle School	Schools	Burgaw

Map ID	Facility	Type	Location
3	Pender Early College High School	Schools	Burgaw
4	Burgaw Fire Department	Emergency Services	Burgaw
5	Burgaw Police Department	Emergency Services	Burgaw
6	NC Highway Patrol	Emergency Services	Burgaw
7	Pender County Sheriff's Office	Emergency Services	Burgaw
8	Pender Memorial Hospital	Emergency Services	Burgaw
9	Pender Volunteer EMS and Rescue - Station 1	Emergency Services	Burgaw
10	Burgaw Town Hall	Government	Burgaw
11	Pender County Emergency Management Operations Center	Government	Burgaw
MAP 24 - SAINT HELENA			
1	Saint Helena Town Hall	Government	Saint Helena
MAP 25 - SURF CITY			
1	Surf City Fire Department	Emergency Services	Surf City
2	Surf City Police Department	Emergency Services	Surf City
3	Surf City Town Hall	Government	Surf City
MAP 26 - TOPSAIL BEACH			
1	Pender Volunteer EMS and Rescue - Station 4	Emergency Services	Topsail Beach
2	Topsail Beach Fire Department	Emergency Services	Topsail Beach
3	Topsail Beach Police Department	Emergency Services	Topsail Beach
4	Topsail Beach Town Hall	Government	Topsail Beach
MAP 27 - WATHA			
1	Watha Town Hall	Government	Watha

Source: Pender County and all participating municipalities.

It should be noted that infrastructure components have not been included within this listing. All infrastructure components associated with the provision of water service and wastewater treatment are considered critical facilities. This information has been withheld from this document due to public safety concerns.

REPETITIVE LOSS STRUCTURES

Repetitive loss structures are those that have suffered damage from repeated hazard events. A Repetitive Loss (RL) property is technically defined as any insurable building for which two or more claims of more than $1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978. A RL property may or may not be currently insured by the NFIP. The only reliable source of information on repetitive loss structures is flood insurance claims data available through the National Flood Insurance Program (NFIP). Table 5-11 provides the RL properties located within Brunswick, New Hanover, and Pender Counties.

Table 5-11. Southeastern NC Region Repetitive Loss Properties

County	Non-Residential	Residential	Total
Unincorporated Brunswick County	4	25	29
Bald Head Island	0	0	0
Belville	0	0	0
Boiling Spring Lakes	0	5	5
Bolivia	0	0	0
Calabash	0	0	0
Carolina Shores	0	0	0
Caswell Beach	0	0	0
Holden Beach	1	229	230
Leland	0	0	0
Navassa	0	0	0
Northwest	0	0	0
Oak Island	3	255	258
Ocean Isle Beach	0	113	113
Sandy Creek	0	0	0
Shallotte	0	0	0
Southport	0	1	1
St. James	0	0	0
Sunset Beach	0	3	3
Varnamtown	0	0	0
Unincorporated New Hanover County	0	4	4
Carolina Beach	0	1	1
Kure Beach	0	0	0
Wilmington	8	249	257
Wrightsville Beach	0	0	0
Unincorporated Pender County	2	39	41
Atkinson	0	2	2
Burgaw	1	23	24
Saint Helena	0	0	0
Surf City	0	8	8
Topsail Beach	0	2	2
Watha	0	1	1

NOTE: Repetitive loss data will be updated prior to plan adoption.
Source: NC Emergency Management.

KEY ISSUES REGARDING THUNDERSTORMS/WINDSTORMS, LIGHTNING, & HAIL

This section is intended to address the key issues regarding each participating jurisdiction's most vulnerable structures and key infrastructure. These issues and, in turn, strategies (see Section 6) are intended to address the community's vulnerability to thunderstorms/windstorms, lightning, and hail. Implementation strategies addressing each of these issues are defined within Section 6 of the plan. These hazards have been identified as the region's most significant hazard as defined in Table 3-7, page 3-32.

Brunswick County

Efforts to address the following key issues will be overseen by Brunswick County Administration. However, the municipalities of Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown will also benefit from these efforts.

- Brunswick County, in concert with the participating municipalities listed above, will continue to enforce all NC State Building Code regulations in an effort to minimize wind-related damage as well as wind-borne debris.

- Brunswick County and all participating municipalities listed above will continue to work on the implementation and update of this plan in an effort to identify more effective solutions regarding mitigation from severe thunderstorms/windstorms, lightning, and hail.

- Brunswick County and all participating municipalities listed above will continue to pro-actively research and acquire funding to mitigate repetitive loss and/or severe repetitive loss properties.

- Brunswick County will work closely with the Sunset Harbor and Zion Hill Volunteer Fire Department to investigate the potential for relocation of the existing facility outside of the flood hazard area.

New Hanover County

Efforts to address the following key issues will be overseen by New Hanover County Administration. However, the municipalities of Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach will also benefit from these efforts.

- New Hanover County, in concert with the participating municipalities listed above, will continue to enforce all NC State Building Code regulations in an effort to minimize wind-related damage as well as wind-borne debris.

- New Hanover County and all participating municipalities listed above will continue to work on the implementation and update of this plan in an effort to identify more effective solutions regarding mitigation from severe thunderstorms/windstorms, lightning, and hail.

- New Hanover County and all participating municipalities listed above will continue to pro-actively research and acquire funding to mitigate repetitive loss and/or severe repetitive loss properties.

Pender County

Efforts to address the following key issues will be overseen by Pender County Administration. However, the municipalities of Atkinson, Burgaw, Saint Helena, Surf City, Topsail Beach, and Watha will also benefit from these efforts.

- Pender County, in concert with the participating municipalities listed above, will continue to enforce all NC State Building Code regulations in an effort to minimize wind-related damage as well as wind-borne debris.

- Pender County and all participating municipalities listed above will continue to work on the implementation and update of this plan in an effort to identify more effective solutions regarding mitigation from severe thunderstorms/windstorms, lightning, and hail.

- Pender County and all participating municipalities listed above will continue to pro-actively research and acquire funding to mitigate repetitive loss and/or severe repetitive loss properties.

- Pender County will work closely with the Maple Hill Volunteer Fire Department and the Penderlea Volunteer Fire Department to investigate the potential for relocation of the existing facilities outside of the flood hazard area.

CHANGE IN LAND USE FORM

The economy throughout eastern North Carolina has been hit extremely hard by the recession that began in 2008. One sector of the economy that has been impacted most significantly was the construction and development industry. The recession left many communities with planned subdivisions and commercial ventures that never materialized. In the wake of this recession, limited construction and, in turn, building permits have been issued for development throughout the three-county region.

Due to the limited and sporadic development activity that has occurred over the last five years throughout the Region, a summary of how land use characteristics have shifted is provided in the Table 5-12 below. The results and categories defined in the table are a combination of building permit activity by jurisdiction and discussions with each county Mitigation Advisory Committee. The limited development as outlined in Table 5-12 is also based on the results of the Development Vulnerability discussion presented on page 5-1. This information is presented for both the community at large, as well as portions of each jurisdiction located within the FEMA-defined Flood Hazard Areas. What limited development that has occurred in the floodplain has been subject to each jurisdiction's respective Flood Damage Prevention Ordinance. A summary of communities participating in the National Flood Insurance Program (NFIP), as well as communities maintaining current Flood Damage Prevention Ordinances, is provided in Section 4, Community Capability Assessment.

The following three categories of development activity provide an indicator of shifts in land use characteristics for each community participating in this plan:

- No/Low Growth: Average of less than 50 building permits annually
- Moderate Growth: Average of 51 to 150 building permits annually
- High Growth: Average of more than 150 building permits issued annually

Table 5-12. Southeastern NC Region Development Activity

County	Non-Specific Hazard Area	Flood Hazard Area
Brunswick County	Moderate	No/Low
Bald Head Island	No/Low	No/Low
Belville	No/Low	No/Low
Boiling Spring Lakes	No/Low	No/Low
Bolivia	No/Low	No/Low
Calabash	No/Low	No/Low
Carolina Shores	No/Low	No/Low
Caswell Beach	No/Low	No/Low
Holden Beach	No/Low	No/Low
Leland	No/Low	No/Low
Navassa	No/Low	No/Low
Northwest	No/Low	No/Low
Oak Island	No/Low	No/Low
Ocean Isle Beach	No/Low	No/Low
Sandy Creek	No/Low	No/Low
Shallotte	No/Low	No/Low
Southport	No/Low	No/Low
St. James	No/Low	No/Low
Sunset Beach	No/Low	No/Low
Varnamtown	No/Low	No/Low
New Hanover County	Moderate	No/Low
Carolina Beach	No/Low	No/Low
Kure Beach	No/Low	No/Low
Wilmington	Moderate	No/Low
Wrightsville Beach	No/Low	No/Low
Pender County	No/Low	No/Low
Atkinson	No/Low	No/Low
Burgaw	No/Low	No/Low
Saint Helena	No/Low	No/Low
Surf City	No/Low	No/Low
Topsail Beach	No/Low	No/Low
Watha	No/Low	No/Low

Source: Regional and County MACs.

SECTION 6.

MITIGATION STRATEGIES

INTRODUCTION

This section of the Regional Hazard Mitigation Plan outlines all of the goals and strategies that will be implemented at the regional, county, and municipal level. It should be noted that all goals and implementing strategies relating to the individual counties were based on elements of each respective jurisdictions' 2010/2011 plan. All strategies relating to regional initiatives were developed through this planning process. The modifications of these plan elements was based on the direction and input of the Regional and County MACs and a range of stakeholders (see Appendix B). All actions have been updated and are intended to reflect the current needs and desires of the Regional Mitigation Advisory Committee and their respective jurisdictions. The mitigation strategies developed through the planning process will be implemented at the regional, county, and in some cases, municipal level. Pender County will take the lead in undertaking all strategies outlined within this plan relating to the region overall, with support and assistance from Brunswick and New Hanover Counties, as well as all participating jurisdictions.

As the MACs worked through the development of this action plan, the group focused on six primary mitigation focus areas for the region, as well as each participating jurisdiction. These focus areas define the various aspects of mitigation, and provide guidance toward the development of a truly comprehensive solution to mitigation planning.

1. Prevention Mechanisms include regulatory methods such as planning and zoning, building regulations, open space planning, land development regulations, and stormwater management.

2. Property Protection actions diminish the risk of structural damage through acquisition of land, relocation of buildings, modifying high-risk structures, and floodproofing high-risk structures.

3. Natural Resource Protection can soften hazard impacts through mechanisms such as erosion and sediment control or wetlands protection.

4. Emergency Services measures include warning, response capabilities, critical infrastructures protection, and health and safety maintenance.

5. Structural Mitigation controls natural hazards through projects such as reservoirs, levees, diversions, channel modifications and storm sewers.

6. Public Education includes providing hazard maps and information, outreach programs, real estate disclosure, technical assistance and education.

2010/2011 MITIGATION PROGRESS REPORTS

Public Participation

All participating jurisdictions work very closely with citizens to provide programs and support that will improve each County's resiliency to natural disasters. Over the last five years, each county has taken significant steps to improve upon existing emergency service functions and programs. The public was an integral part in carrying out all of these efforts. All issues relating to emergency management policy and programs have been thoroughly discussed with the respective County Board of Commissioners and Town/City Councils. In more specific terms, the public has been involved in discussions relating to regulatory tools, mitigation, and emergency services through County Planning Board and Board of Commissioners meetings. All meetings involving these two bodies are locally advertised and open to the public. Through this Hazard Mitigation Plan update, the Regional MAC intends to expand public outreach efforts, as outlined in the updated strategies.

Monitoring and Evaluation

Brunswick, New Hanover, and Pender Counties, as well as participating municipal jurisdictions, have and will continue to utilize the information within this document for day-to-day planning efforts. Through monitoring the status of each jurisdiction's existing Mitigation Plan, each County has improved upon the data utilized throughout this document. Each County's administration maintains a dialogue with their respective County Board of Commissioners and municipal representatives regarding mitigation/ emergency management issues, and provides the public with information when deemed necessary.

Incorporation of Mitigation Plan into Other Planning Mechanisms

Over the last five years, Brunswick, New Hanover, and Pender Counties, as well as all participating jurisdictions, have made several land development policy amendments. The information and strategies outlined within each County's existing HMP were factored into discussions during the development of these documents. This coordination ensures that information outlined in the hazard mitigation plan is carrying over into land use policy. Additionally, each County and pertinent municipal jurisdictions reviewed their Flood Damage Prevention Ordinances to ensure compliance with current standards, including review and adoption of updated Flood Insurance Rate Maps. All entities also considered the HMP during decisions relating to capital expenditures such as infrastructure improvements.

Mitigation Strategy Progress

Over the last five years, each jurisdiction participating in this update process have implemented strategies at both the County and municipal levels. Through these implementation efforts, each jurisdiction has strengthened their respective mitigation programs, as well as improved the resiliency of their respective community. A comprehensive status report of each participating jurisdictions existing mitigation actions is provided in Appendix G of the plan.

Review of Possible Alternatives for Mitigation Program Expansion

Refer to Appendix H for a summary regarding Community Rating System (CRS) Step 7.

MITIGATION STRATEGIES

The overall hazard mitigation planning effort is focused on providing the region and each participating jurisdiction with an action plan that will strive toward the achievement of the goals outlined below. In order to establish this plan, the Regional MAC decided that the best approach would be to define goals to guide the development of strategies developed through this plan. In taking this approach, the goals as defined in each communities' 2010/2011 plan have been redefined. The overall intent is consistent; however, the language and content of the statements has been slightly modified as outlined in the mitigation action status report (see Appendix G).

The following provides definitions of how goals and implementing strategies relate to one another:

- Goals – A broad based statement of intent that establishes the direction for the Regional Hazard Mitigation Plan. Goals state desired outcomes for the overall implementation process.

- Implementing Strategies – A project specific strategy aimed at mitigation and involving a specific entity, interest, and funding mechanism.

As noted, goals are statements of desirable future conditions that are to be achieved. They are broad in scope and assist in setting community priorities. The following goals will provide the basis for the implementation strategies that will be included in this section, some of which are already being administered and implemented locally. These goals take into account the strategic goals outlined within each participating jurisdictions' existing plan.

1. Work to improve existing local government policies and codes to reduce the impacts of natural hazards.

2. Design and implement specific mitigation measures to protect vulnerable public and private properties.

3. Increase the protection of critical facilities and infrastructure from hazard threats through retrofit projects for existing facilities, reconstruction projects on parcels where an existing building and/or foundation has been partially or completely demolished or destroyed, and innovative design standards for new facilities.

4. Enhance public education programs to promote community awareness of natural hazards and the hazard mitigation techniques available to reduce their impact.

5. Improve stormwater management through enhanced local government programs, policies, and practices.

6. Enhance each county's storm evacuation procedures through increased intergovernmental coordination between the Counties, the participating municipalities, and the State of North Carolina.

7. Increase the County's emergency management capabilities through sustained system and technology improvements.

8. Promote volunteer involvement in emergency preparedness and response through increased citizen awareness and training activities.

Tables 6-1 to 6-4 outline all implementing strategies developed through the Southeastern NC regional planning process. The tables also provide guidance relating to funding sources, priority, and a variety of other information required to effectively implement the plan.

The actions in the following tables have been ranked based on a cost-benefit review conducted by the Regional MAC through the planning process. Each implementing action has been provided a priority of low, medium, or high based on this review. The following provides a breakdown of the factors utilized to conduct this cost benefit review:

1. High Priority – Highly cost-effective, administratively feasible and politically feasible strategies that should be implemented in fiscal years 2016/2017 and 2017/2018 and be continued.

2. Medium Priority – Strategies that have at least two of the following characteristics (but not all three) and should be implemented in fiscal years 2017/2018 to 2018/2019:

   - Highly cost-effective; or
   - Administratively feasible, given current levels of staffing and resources; or
   - Are politically popular and supportable given the current environment.

3. Low Priority – Strategies that have at least one of the following characteristics (but not two or three) and should be implemented in the next five(5) years (by the end of 2019/2020):

   - Highly cost-effective; or
   - Administratively feasible, given current levels of staffing and resources; or
   - Are politically popular and supportable given the current environment.

Strategies will be implemented earlier if resources are available. It should also be noted that projects or initiatives given low priority may be ultimately contingent upon grant funding.

The following tables provide a detailed breakdown of specific mitigation strategies that will aid the region and all participating jurisdictions in furthering the goals discussed throughout this section of the plan. These implementing strategies are intended to address activities to be achieved over the next five years. Subsequent to this period, the MAC will revisit these actions as outlined within Section 7, Plan Maintenance. The implementing strategies have been broken down into independent sections including: Regional mitigation strategies, Brunswick County mitigation strategies, New Hanover County mitigation strategies, and Pender County mitigation strategies. In many cases, there are also strategies developed for implementation by participating municipal jurisdictions.

It should be noted that in devising the strategies outlined in this section, the Regional MAC took the following factors into consideration:

- The strategy will solve the problem it is intended to solve, or begin to develop a solution.
- The strategy meets at least one community mitigation goal.
- The strategy complies with all laws and regulations.
- The strategy is cost-beneficial.
- The community implementing the strategy has (or will have) the capability to do so.
- The strategy is environmentally sound.
- The strategy is technically feasible.
- The strategy will further the County's standing in the NFIP.

The overriding consideration in deciding whether a strategy should be established and/or maintained was whether the project or initiative was cost-beneficial. The MAC reviewed each potential statement based on the overall benefit in relation to the financial and staff resources required for implementation.

Acronyms provided in the funding source column of Tables 6-2 to 6-4 are defined as follows:

- GF - General Funds
- HMGP - Hazard Mitigation Grant Program
- PDM - Pre-Disaster Mitigation
- UHMA - Unified Hazard Mitigation Assistance
- PA - Public Assistance
- USACE - US Army Corps of Engineers
- NCDEQ - NC Department of Environmental Quality
- NCDOT - NC Department of Transportation
- NCDPS - NC Department of Public Safety
- NCDPH - NC Division of Public Health
- NCCE - NC Cooperative Extension
- NCFS - NC Forest Service
- ARC - American Red Cross
- SILT - Smith Island Land Trust

Table 6-1. Southeastern NC Regional Mitigation Strategies

Number	Strategy	Responsible Party/Dept.
R1	Participating Counties will work together to educate citizens about the availability of their respective Special Medical Needs Registry. These efforts will involve not only education, but outreach regarding how and where to enroll appropriately to ensure that assistance can be provided in the event of a natural or man-made disaster requiring evacuation and sheltering.	▪ Participating County Emergency Management ▪ Participating County Administration
R2	Emergency Management Departments for each participating County will work collectively to integrate regional response capabilities into annual exercises organized through North Carolina Emergency Management. These efforts will be focused on the sharing of available resources including: equipment, sheltering, and manpower.	▪ Participating County Emergency Management ▪ Participating County Administration
R3	Participating Counties will consider all of the local and regional data, information, and strategies outlined within this plan when carrying out duties and responsibilities associated with the respective County's Local Emergency Planning Committee (LEPC).	▪ Participating County Emergency Management ▪ Participating County Administration
R4	When possible, Participating Counties involved in the Community Rating System (CRS) will aim to leverage efforts regarding compliance with the program. This strategy will attempt to reduce redundancy and staff time investment in establishing and/or maintaining compliance with the updated program.	▪ Participating County Administration
R5	Participating Counties will work together to ensure that the sheltering needs of each community are adequately addressed. These efforts will involve coordination between County Emergency Management Departments, NCEM, and the American Red Cross.	▪ Participating County Emergency Management ▪ NC Emergency Management ▪ American Red Cross
R6	Participating Counties will work together as a regional Mitigation Advisory Committee to identify and, when possible, address drainage issues of regional significance/ concern. These efforts will also include the input and involvement of NC State Agencies.	▪ Participating County Administrations ▪ NC Department of Transportation ▪ NC Department of Environmental Quality ▪ NC Emergency Management
R7	Participating Counties will work together in an effort to educate citizens about hazard mitigation and public safety issues and efforts underway throughout the Region. These efforts will involve the recruitment and engagement of volunteer groups to address a range of issues relating to mitigation and emergency response.	▪ Participating County Emergency Management ▪ Participating County Administration
R8	Participating Counties will be open to establishing and maintaining mutual aid agreements focused on providing emergency assistance in the form of manpower, equipment, and sheltering in the event of a natural disaster. Resource allocation will be determined on an as needed basis.	▪ Participating County Emergency Management ▪ Participating County Administration
R9	Participating Counties will work together on future regional planning efforts relating to land use, emergency management, and stormwater management.	▪ Participating County Administration
R10	Participating Counties will maintain representation on the Southeastern NC Regional Mitigation Advisory Committee and will participate in the five year update of this plan.	▪ Southeastern NC Regional Mitigation Advisory Committee

Table 6-2. Brunswick County Mitigation Strategies

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC1	Continue to maintain a library of materials focused on educating citizens, builders, realtors and developers about the dangers associated with floodplain development. This information will also outline sound techniques for floodplain development and floodproofing of existing structures. The County will also maintain staff educated on these issues to work with prospective builders. (CRS 350)	2, 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Planning Brunswick Co Emergency Services Municipal Administrations	GF
BC2	Continue/expand efforts to partners with area utility districts to encourage proper development of regional water and sewer systems. (CRS 510)	1, 3, 5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration Brunswick Co Sewer Districts Municipal Administrations	GF, NCDPS, NCDEQ
BC3	When possible, ensure that no public and/or critical facilities are proposed for flood hazard areas. Additionally, when siting new public/critical facilities, the information and data outlined in this plan will be factored into the decision-making process. (CRS 510, 610)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration Municipal Administrations	GF

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC4	In coordination with participating municipal jurisdictions, continue to accept gifts/donations of land located in hazard areas or rendered unbuildable by storms or other events, for the purpose of shorefront access. (CRS 420)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Moderate	Brunswick Co Administration Municipal Administrations	GF, NCDPS
BC5	In conjunction with annual EOP updates, determine if access to all critical facilities is readily available in the event of a natural hazard event. Careful consideration should be given to localized flooding issues that may restrict access along limited access thoroughfares. Where access issues are identified, establish a plan for alternative transportation. (CRS 610)	1, 2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Emergency Operations Center Municipal Administrations	GF
BC6	Maintain County and Town Stormwater Ordinances in conjunction with land use ordinances for compatibility of EPA Phase II NPDES requirements. These efforts should also include analysis of stormwater hotspots and potential remedies for these issues. (CRS 450)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration Municipal Administrations	GF, NCDEQ

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC7	Consider submitting an application to join the Community Rating System using Hazard Mitigation components to fulfill application requirements.	1, 2, 3, 4, 6	1, 2, 4, 8, 10, 11, 12	Brunswick County, Belville, Boiling Spring Lakes, Bolivia, Carolina Shores, Leland, Navassa, Northwest, Sandy Creek, Shallotte, St. James, Varnamtown	High	Brunswick Co Administration Municipal Administrations NCDPS	GF, NCDPS
BC8	Review respective Comprehensive Land Use Plans annually to ensure that the Future Land Use Maps adequately delineates portions of the County/ municipalities deemed unsuitable for development due to existing environmental conditions or other factors outlined in this plan. (CRS 510)	2, 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Moderate	Brunswick Co Planning Municipal Administrations	GF, NCDPS, NCDEQ
BC9	Review and update as necessary the Flood Damage Prevention Ordinance to ensure maximum protection from flood hazard events. Additionally, jurisdictions with freeboard requirements adopted at the local level will continue to enforce these minimum standards (Brunswick County freeboard requirements is two feet above BFE). (CRS 430)	1, 2, 3, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration Municipal Administrations	GF, NCDPS

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC10	Periodically evaluate local land development regulations for ability to target and direct growth to areas consistent with the land classification map, the water distribution system, and existing and future sewer systems. (CRS 430, 510)	1, 2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Moderate	Brunswick Co Administration Municipal Administration	GF
BC11	Work closely with NCDOT and the Cape Fear Regional MPO to improve road access standards and protect the integrity of significant traffic-carrying roadways throughout the County. These efforts should specifically target the issue of restriping highway intersections and lane markings for higher visibility. (CRS 510)	2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Moderate	Brunswick Co Administration Municipal Administrations NC Department of Transportation Cape Fear Regional MPO	GF, NCDOT
BC12	Continue to consider incorporating the concept of cluster subdivision development into the County's subdivision regulations. Employing this development option, if adopted, will provide for a development pattern which minimizes impacts on environmentally sensitive portions of the County, including floodplains. (CRS 430)	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County	Moderate	Brunswick Co Planning Brunswick Co Administration	GF, NCDEQ

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC13	Review rebuilding activities after major storm events to determine how revisions to existing policies and procedures could help minimize repetitive losses. (CRS 340, 510, 540)	1, 2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration Municipal Administrations	GF, NCDPS, FEMA
BC14	Maintain all FEMA Elevation Certificates, FEMA Floodproofing Certificates for non-residential structures, and where applicable, a V Zone Design Certificate for all structures built or floodproofed since application to the CRS. V Zone Design Certification must be maintained only for structures built subsequent to January 1, 2013. (CRS 310)	1, 2, 3, 4, 6	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Planning Municipal Administrations	GF
BC15	Review written policies on water and sewer system extensions and tap on policies to ensure that the County is adequately addressing and discouraging inappropriate development in sensitive environmental areas and areas prone to flood or storm surge hazards. (CRS 360, 510)	1, 2, 3, 4, 5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration Brunswick Co Sewer Districts Municipal Administrations	GF, Sewer Districts

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC16	Consider the data and recommendations outlined in this plan when preparing updates to Capital Improvements Plans. All recommendations regarding capital expenditures will focus on siting all infrastructure and public facilities outside of the Flood Hazard Area. (CRS 510)	1, 2, 3, 4, 5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Moderate	Brunswick Co Administration Municipal Administrations	GF
BC17	Inventory existing lots and structures within flood hazard areas to establish baseline data regarding current state of development. These efforts will be incorporated into the comprehensive planning process. (CRS 410, 420)	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Low	Brunswick Co Administration Municipal Administrations	GF, NCDPS, NCDEQ
BC18	Support commercial forestry activities, provided significant adverse impacts on natural resource systems are fully mitigated. Such activities should be considered in accordance with the standards and recommendations of the US Forest Service. The County also advocates the voluntary participation of commercial forestry interests in the State of North Carolina's best management practice program for forestry management. (CRS 420)	1, 2, 3, 4	6, 9	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	NC Forest Service Brunswick Co Emergency Services Municipal Administrations	GF, NCFS
BC19	Continue to support beach municipalities in maintenance/protection of beaches as well as protecting shorelines under County jurisdiction. (CRS 510)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Bald Head Island, Caswell Beach, Holden Beach, Oak Island, Ocean Isle Beach, Sunset Beach	High	Municipal Administrations	GF, USACE

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC20	Continue to require 404 wetlands and 100-year floodplain areas to be delineated on all preliminary subdivision plats for lands within and adjacent to the proposed subdivision. (CRS 540)	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Moderate	Brunswick Co Administration Brunswick Co Emergency Operations Center NCDEQ	GF, NCDPS, NCDEQ
BC21	Continue to undertake the following actions to support maintenance of safe hurricane evacuation routes: ■ Identify and support improvements to roads that serve as hurricane evacuation routes. ■ Post evacuation routes on County and Town websites. ■ Perform routine bridge and culvert maintenance, and raise bridges over streams that have documented flooding during significant rain events. ■ Support the planning and implementation of regional roadways. (CRS 610)	2, 4, 6	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Emergency Operations Center Municipal Administrations	GF, NCDPS
BC22	Continue to support the US Army Corps of Engineers' regulations, the applicable guidelines of the Coastal Area Management Act, and the use of local land use ordinances to regulate development of freshwater swamps, marshes, and 404 wetlands. (CRS 510)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration Municipal Administrations NCDEQ	GF, NCDEQ

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC23	Support the relocation of structures endangered by erosion, if the relocated structure will be in compliance with all applicable policies and regulations. Additionally, the issue of tax base loss should be taken into account within municipal jurisdictions. (CRS 520)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Planning NCDPS	GF, NCDPS
BC24	Continue to enforce respective flood damage prevention ordinances and participate in the National Flood Insurance Program. Subdivision regulations will be enforced – requiring elevation monuments to be set so that floodplain elevations can be more easily determined. Additionally, municipalities with freeboard requirements shall continue to enforce this standard locally. (CRS 310, 430)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Planning Brunswick Co Administration	GF
BC25	Continue to support the guidelines of the Coastal Area Management Act and the efforts and programs of the NC Department of Environmental Quality, Division of Coastal Management and the Coastal Resources Commission to protect the coastal wetlands, estuarine waters, estuarine shorelines, and public trust waters of Brunswick County. (CRS 420, 510)	1, 2, 4, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Moderate	Brunswick Co Administration Municipal Administrations	GF, NCDEQ

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC26	Continue to proactively seek out grant funding through NCEM and FEMA for mitigation of repetitive loss properties (RLPs) from future flood events. The County will maintain a list of RLPs and, on an annual basis, will apply for funding for all structures that meet cost-benefit thresholds as defined by FEMA. The County will assist all municipal jurisdictions in working through the structural mitigation grant funding process. (CRS 520)	1, 2, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration Municipal Administrations	GF, NCDPS
BC27	Integrate publicly acquired land into public park and greenway systems. These efforts may be carried out through update of the County Blue/Greenway system, as well as municipal planning efforts. (CRS 420, 520)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Moderate	Brunswick Co Administration Municipal Administrations	GF, NCDEQ, NCDOT
BC28	Continue to enforce the NC State Building Code. Local government inspections staff will recertify the NC State Building Code as the adopted local regulation applying to all construction activities on an annual basis. Through enforcement of the NC State Building Code, jurisdictions will work to ensure that all structures, including manufactured homes, are properly anchored to minimize potential impacts stemming from a disaster event. (CRS 430)	2, 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Inspections Municipal Inspections	GF

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC29	Consider a policy for contractors to pick up building material and building debris prior to coastal storms.	1, 2, 3, 5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration Municipal Administrations	GF, FEMA
BC30	Continue to enforce minimum housing code to require the improvement of substandard housing. (CRS 430)	2, 4	1, 2, 4, 8, 10, 11,, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration Municipal Administrations	GF
BC31	Continue providing density credits for developments that establish perpetual easements for ecologically sensitive lands. (CRS 430, 520)	2, 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Low	Brunswick Co Administration Municipal Administrations	GF

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC32	Enhance and develop new public accesses to waterway resources in a manner as to protect sensitive environment areas from development and implement the priority recommendations contained in the Brunswick County Shoreline Access Plan. (CRS 330)	1, 2, 3, 4, 5	1, 2, 4 , 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Moderate	Brunswick Co Administration Municipal Administrations	GF, NCDPS
BC33	Improve Hazard Warning and Response Plan (warning and evacuating critical facilities, getting persons out of flood-prone or isolated areas, controlling vehicles on evacuation routes, evacuation of hazard materials). (CRS 610)	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Emergency Operations Center Brunswick Co Administration Municipal Administrations	GF, NCDPS
BC34	Continue and expand the program to retrofit schools and other public facilities to serve as emergency shelters.	2, 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Moderate	Brunswick Co Schools Brunswick Co Administration	GF, NCDPS

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC35	Provide training for "first responders" in identifying and reporting opportunities to mitigate the effects of future disasters at both the county and municipal level. (CRS 610)	2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Emergency Services Municipal Administration	GF, N CDPS
BC36	Work with industry to develop emergency response plans for specific industries and ensure that all plans are fully coordinated with County emergency management plans. These efforts will be carried out in conjunction with the County LEPC. (CRS 510)	2, 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Unincorporated Brunswick County	Moderate	Brunswick Co LEPC Brunswick Co Emergency Services	GF
BC37	Evaluate areas with limited evacuation capacity and pursue methods of improving capacity. These efforts will be carried out with support from NCDOT and NCDPS. (CRS 610)	2, 4, 6	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Emergency Services Municipal Administrations	GF, NCDPS

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC38	Continue debris removal program to correct problem sites at both the County and municipal level.	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Emergency Services Brunswick Co Administration Municipal Administrations	GF, NCDPS
BC39	Continue to maintain/enforce an overall cap of 5% on post-development stormwater discharge increase over pre-development conditions through the County's stormwater management program. (CRS 430)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Engineering Brunswick Co Administration Municipal Administrations	GF, NCDPS
BC40	Continue to support efforts to place spoil materials from channel maintenance and dredging on Brunswick County beaches, including each of the incorporated municipalities, as warranted.	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Moderate	Brunswick Co Administration Municipal Administrations	GF, NCDPS

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC41	Support Section 206 Lower Lockwood Folly River Aquatic Habitat Restoration Project (removal of sediment bars to increase tidal flushing and improve aquatic habitat).	1, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration	GF, NCDEQ, NCDOT
BC42	Continue implementation of EPA Phase II requirements. These efforts shall include providing oversight services to county municipalities. (CRS 450)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Engineering Brunswick Co Administration Municipal Administrations	GF, NCDEQ
BC43	Incorporate new FEMA digital FIRMs into the County GIS when necessary. This effort shall also include maintenance and inventory of all County land parcel data. (CRS 350, 410)	2, 4	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration Municipal Administrations	GF, NCDPS

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC44	Establish locations for flood awareness signs – show elevations of high water during/after Hurricane Floyd, the base flood, and the base flood plus 2 feet. Signs should be surveyed to serve as elevation reference marks. (CRS 330)	2, 4, 6	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Low	Brunswick Co Emergency Services Brunswick Co Administration Municipal Administrations	GF
BC45	Continue to work closely with real estate agents to ensure that prospective buyers are educated about development within a flood hazard area. The County will prepare materials for dissemination to local real estate agents to assist in this education process. Additionally, materials and information regarding mitigation and retrofitting techniques will be made available on County and municipal websites. (CRS 330)	2, 4, 6	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Calabash, Caswell Beach, Oak Island, Ocean Isle Beach, Southport, Sunset Beach	High	Brunswick Co Planning Brunswick Co Administration Municipal Administrations	GF, NCDPS, FEMA
BC46	Continue to expand upon the Alert Emergency Notification System available to all residents. Brunswick County Emergency Management will coordinate with all municipal jurisdictions regarding registration through the Brunswick County Emergency Notification Registration Portal. (CRS 610)	2	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Administration Municipal Administration	GF, NCDPS

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC47	Establish and maintain retrofitting techniques and publicize in the public libraries, and also through citizen newsletters. (CRS 330)	2, 4	1, 2, 4, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Emergency Services Brunswick Co Administration Municipal Administrations	GF, NCDPS
BC48	Coordinate with local churches and Spanish speaking representatives to disperse information about the hazards prevalent in the area and the steps they can take to mitigate these hazards. (CRS 330)	2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	Moderate		GF, NCDPS
BC49	Maintain nuclear event preparedness. Develop a plan of action to maintain the materials and knowledge base for addressing a nuclear event, or develop preliminary measures to assist the county until the representatives arrive. This responsibility must be supported by provision of adequate funding for materials and training necessary to maintain this preparedness. These efforts should be coordinated with the County LEPC to also include addressing man-made/ technological hazards. (CRS 610)	1, 2, 3, 4, 5, 6	Man-made	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Emergency Services Municipal Administrations	GF, NCDPS

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC50	Work closely with the Brunswick County Sheriff's Department on improving the County's multi-jurisdictional communications system in an effort to enhance interoperability.	1, 2, 3, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Sheriff's Office Municipal Administrations	GF, NCDPS
BC51	Monitor the status of backup generators, communications, and vehicles for all critical public facilities. In addition, develop a list of providers of emergency equipment.	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Emergency Services Municipal Administrations	GF, NCDPS
BC52	Maintain fire event preparedness by ensuring fire hydrants are working properly and coordinating with the NC State Forest Service. These efforts will include the inspection of all fire hydrants. Additionally, County Emergency Services will incorporate the improvement of firefighting procedures into these efforts.	2, 4, 6	6	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick Co Emergency Services Municipal Fire Departments NC Forest Service	GF, NCPDS, NCFS

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC53	Continue to enforce and adopt water shortage response plans and water shortage ordinances for municipalities operating central water service.	1, 3, 5	9	Brunswick County, Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, Varnamtown	High	Brunswick County Administration Municipal Administrations	GF, NCDEQ
VILLAGE OF BALD HEAD ISLAND							
BC54	Continue to support the Bald Head Island Conservancy and the Smith Island Land Trust in their efforts to acquire land for open space preservation. It is the Village's desire that these properties be deed restricted and maintained in their natural state. (CRS 420)	1, 2, 3, 5	1, 2, 4, 8, 10, 11, 12	Bald Head Island	High	Bald Head Island Administration	GF, SILT
BC55	Continue to maintain a local early warning system relating to notifications regarding flooding and other man-made disasters. This effort should involve all citizens and visitors, as well as the Village's critical infrastructure system. (CRS 610)	2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Bald Head Island	High	Bald Head Island Emergency Services Brunswick County Emergency Services	GF, NCDPS
TOWN OF HOLDEN BEACH							
BC56	Continue to monitor and improve the town-wide water system. This effort will include: ■ Increase water pressure on west end of island by improving water availability, upsizing, or installing new lines. ■ Relocate all critical elements of the Town's wastewater system above base flood elevation, including all pump stations and control mechanisms.	1, 3, 5	6	Holden Beach	Moderate	Holden Beach Administration	GF, NCDEQ, HMGP

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CITY OF NORTHWEST							
BC57	Construct storm drainage piping and ditch improvements as follows: ■ 3,300 LF of ditch improvements; 1,200 LF of new ditch ■ 2,250 LF of ditch improvements; 1,200 LF of new ditch ■ 435 LF of ditch improvements; 2,100 LF of new ditch ■ 300 LF of ditch improvements; 5,195 of new ditch ■ 1,492 LF of new ditch; 1,900 LF of new ditch and piping ■ Installation of 50 LF of RCP pipe	1, 3, 5	1, 2, 4 , 8, 10, 11, 12	Northwest	High	Northwest Administration	GF, NCDEQ
CITY OF SOUTHPORT							
BC58	Limit development adjacent to the railroad tracks.	1, 2, 3, 5	Man-made	Southport	Moderate	Southport Administration	GF
TOWN OF ST. JAMES							
BC59	Continue to actively participate in the Fire Wise program to reduce and remove debris that h as the potential for fire hazards.	2, 4, 6	6	St. James	High	St. James Administration	GF
BC60	Continue to pursue efforts to reduce stormwater runoff by draining, in advance of major storm events, the numerous retention ponds located on golf courses to reduce the amount of localized flooding. (CRS 450)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	St. James	High	St. James Administration	GF
TOWN OF SUNSET BEACH							
BC61	Inspect all fire hydrants within the Town's corporate limits on a revolving schedule. Through this effort, the Town will aim to inspect each hydrant a minimum of two times per calendar year.	1, 2, 3, 4, 5	6	Sunset Beach	High	Sunset Beach Fire Department Brunswick County Emergency Services	GF, NCDPS

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
BC62	Maintain a pre-disaster debris management contract with a qualified provider. The Town will review and assess this contract every three years.	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Sunset Beach	High	Sunset Beach Administration	GF
BC63	Conduct on-site fire inspections on all non-residential structures a minimum of once annually.	1, 3, 5	6	Sunset Beach	High	Sunset Beach Fire Department	GF
BC64	Maintain a staff level Public Information Officer charged with disseminating information relating to threats associated with man-made and natural disasters. The Public Information Officer's role and duties are defined within the Town's Hurricane Operations Plan.	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Sunset Beach	High	Sunset Beach Administration	GF
TOWN OF OCEAN ISLE BEACH							
BC65	Continue to maintain National Weather Service StormReady and TsunamiReady designations. (CRS 610)	1, 2, 3, 4, 6	1, 2, 4, 5, 10, 11	Ocean Isle Beach	Moderate	Ocean Isle Beach Administration Brunswick County Emergency Services	GF, NCDPS, NWS
BC66	Improve overall safety measures regarding ingress and egress from town. Initially, the town will achieve this strategy by installing five cameras at designated locations.	1, 2, 3, 4, 6	1, 2, 3, 5, 10, 11	Ocean Isle Beach	Moderate	Ocean Isle Beach Administration Brunswick County Emergency Services	GF, NCDPS

Table 6-3. New Hanover County Mitigation Strategies

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
NHC1	Maintain the County's Continuity of Operations Plan (COOP) by ensuring that updates are completed in accordance with current New Hanover County policy. Currently, the county updates the plan where appropriate through the county's web-based management platform. The County Emergency Management Department will assist participating municipalities in development of their own respective COOP, as necessary.	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Emergency Management New Hanover Co Administration Municipal Administrations	GF, NCDPS
NHC2	Continue to expand and improve upon bolstering the county's IT/GIS systems against both man-made and natural hazard threats. This effort will involve the identification and elimination of known vulnerabilities and periodic updates of the GIS mapping system. Through this effort, the county will attempt to expand the scope of this effort to potentially involve and address issues associated with the local business community. (CRS 410, 320)	1, 3, 5	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Information Technology New Hanover Co Administration	GF
NHC3	Continue to maintain generators installed at all shelter facilities and other critical facilities through a routine maintenance schedule. Additionally, the county will aim to install permanent generators at critical facilities identified through this planning effort, if feasible.	2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Emergency Management New Hanover Co Property Management	GF, NCDPS, ARC
NHC4	Continue to implement the Rip Current Awareness Program to promote rip current awareness within the county by partnering with various beach services and the National Weather Service. Emphasis should be placed on educating children, the local public and tourists. (CRS 330)	2, 4	11	Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	Municipal Administrations	GF

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
NHC5	New Hanover County has established a capital project fund to assist with drainage projects located within the unincorporated county. Projects are identified, prioritized, and implemented as necessary to improve drainage to benefit affected property owners. Where required, projects are coordinated with the NC Department of Environmental Quality and the United States Army Corps of Engineers. (CRS 510)	1, 2, 4, 5, 6	1, 2, 4, 8, 10, 11, 12	New Hanover County	Moderate	New Hanover Co Engineering New Hanover Co Administration	GF, NCDPS, PDM, UHMA, NCDEQ, USACE
NHC6	Continue to enforce the NC State Building Code. Local government inspections staff will recertify the NC State Building Code as the adopted local regulation applying to all construction activities on an annual basis. Through enforcement of the NC State Building Code, jurisdictions will work to ensure that all structures, including manufactured homes, are properly anchored to minimize potential impacts stemming from a disaster event. (CRS 430)	2, 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Inspections Municipal Inspections	GF
NHC7	Assist in securing funding to retrofit/elevate wastewater pumping stations located in the 100-year floodplain. These infrastructure components routinely flood during flooding and storm surge events. (CRS 510, 520)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	Moderate	New Hanover Co Engineering New Hanover Co Administration Municipal Administrations Cape Fear Public Utility Authority	GF, NCDPS, PDM, UHMA
NHC8	Continue to work closely with the US Department of Agriculture to carry out the county-wide Beaver Management Program. (CRS 510)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	Moderate	New Hanover Co Engineering New Hanover Co Administration Municipal Administrations	GF, NCDEQ
NHC9	Adopt updated Flood Insurance Rate Map data and Flood Damage Prevention Ordinance. Continue to evaluate Flood Damage Prevention Ordinance to ensure most effective floodplain management practices are being implemented. (CRS 350, 410)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Planning Municipal Administrations	GF, NCDPS

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
NHC10	The New Hanover County Engineering Department will review and revise the Stormwater Ordinance as necessary to address the current conditions located throughout the county. Existing drainage, which is an integral part of stormwater management, is being addressed under NHC5. (CRS 450)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County, Wilmington	Moderate	New Hanover Co Engineering Wilmington Planning	GF, NCDPS
NHC11	Update existing vulnerability analysis on all critical facilities identified through the county inventory. (CRS 510)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County	Moderate	New Hanover Co Emergency Management New Hanover Co Engineering New Hanover Co Administration New Hanover Co Property Management	GF, NCDEQ
NHC12	Identify opportunities for acquisition, elevation, retrofitting, and/or reconstruction of hazard prone properties. Continue to notify repetitive loss property owners to see if they are interested in participating in future programs. (CRS 520)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Administration New Hanover Co Emergency Management New Hanover Co Planning New Hanover Co Soil and Water Conservation Municipal Administrations	GF, HMGP, PDM, UHMA
NHC13	Continue to implement the county's public awareness campaign emphasizing the economic benefits of participation in the CRS program. The primary focus of this effort is to educate citizens about the hazards associated with floodplain development. (CRS 330)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wrightsville Beach	High	New Hanover Co Planning New Hanover Co Administration New Hanover Co Communications and Outreach Municipal Administrations	GF, FEMA
NHC14	Continue to conduct a public awareness campaign regarding potential hazards of urban/wildfire interface. (CRS 330)	1, 2, 3, 4, 5	6	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Fire Services New Hanover Co Emergency Management New Hanover Co Planning Municipal Administrations NC Forest Service	GF, FEMA, NCFS
NHC15	Continue to encourage standards for Firewise Communities/USA into the subdivision review process.	1, 2, 3, 5	6	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Fire Services New Hanover Co Planning New Hanover Co Emergency Management	GF

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
NHC16	Continue to research funding options for the installation of sewer in portions of the county that still rely on septic systems.	1, 3, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Engineering New Hanover Co Administration New Hanover Co Health Department Municipal Administrations Cape Fear Public Utility Authority	GF, NCDEQ, NCDPS
NHC17	Use all available tools to disseminate a range of information including but not limited to natural hazard awareness, evacuation orders, and man-made events. (CRS 330)	2, 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Emergency Management New Hanover Co Administration New Hanover Co Communications and Outreach	GF
NHC18	Continue to enforce additional land use regulations in Special Flood Hazard Areas, Areas of Environmental Concern through implementation of Zoning Ordinance, Subdivision Ordinance, Flood Damage Prevention Ordinance, and CAMA Minor Permitting Program. (CRS 430, 510)	1, 2, 3, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Planning Municipal Administrations	GF
NHC19	Following a storm event, take advantage of opportunities to acquire or purchase land located in storm hazard areas which are rendered unbuildable or have sustained substantial damage, as funding is available. The property should satisfy objectives including, but not limited to, the conservation of open space and scenic areas and the provision of public water access. (CRS 520)	1, 2, 3, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Administration New Hanover Co Planning New Hanover Co Soil and Water Conservation New Hanover Co Parks and Gardens Municipal Administrations	GF, HMGP, UHMA, NCDPS
NHC20	Conduct new assessments of hazard areas periodically to address changes to floodplain, shoreline, and inlet conditions caused by natural and man-made forces. This effort will be carried out through periodic Hazard Mitigation, Comprehensive Land Use, Parks & Recreation, and Greenway Master planning efforts. (CRS 410)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Planning New Hanover Co Administration New Hanover Co Engineering New Hanover Co Parks and Gardens Municipal Administrations	GF, NCDPS, NCDEQ
NHC21	Consider developing innovate approaches to floodplain management including density tradeoffs, cluster development regulations, and additional opportunities for land donation and dedication. (CRS 510)	1, 2, 3, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County	High	New Hanover Co Planning New Hanover Co Administration	GF, NCDEQ

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
NHC22	Continue to maintain annual review process for New Hanover County Health Department's (NHCHD) Preparedness Plan to include the NHCHD Emergency Response, Community Containment, Mass Prophylaxis, Pandemic Influenza, Medical Countermeasure Plans, and the Response Plans Development Review policy and the Epidemiology (EPI) Team Policy.	2, 3, 4, 6	Man-made	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Health Department New Hanover Co Emergency Management Municipal Administrations	GF
NHC23	Continue to require and provide National Incident Management System (NIMS) training for county personnel which includes ICS 100, ICS 200, ICS 300, ICS 400, IS 700, and IS 800.	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Emergency Management New Hanover Co Administration New Hanover Co Human Resources Municipal Administrations	GF
NHC24	Continue to sustain radio communications system through maintenance contracts and system upkeep, as funding is available. (CRS 610)	1, 2, 3, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Emergency Management New Hanover Co Administration Municipal Administrations	GF, NCDPS
NHC25	Encourage new property owners, contractors, real estate agents, builders, developers, and architects to become familiar with NFIP land use and building standards and principles for quality redevelopment and safe housing development through written materials. These materials are available through local building inspections departments, local library branches, and online. (CRS 320, 330, 350)	1, 2, 3, 5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Planning Municipal Administrations	GF
NHC26	Continue public outreach efforts to educate the community about disaster preparedness for all hazards significant to New Hanover County. (CRS 320, 330, 350)	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Emergency Management New Hanover Co Communications and Outreach Municipal Administrations	GF, NCDPS

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
NHC27	Incorporate information regarding Emergency Response and Re-Entry policies and procedures and relevant emergency response actions the public can take using emergency management outreach and communication procedures as outlined in the Emergency Operations Plan. All entities should be clear regarding all responsibilities outlined in the Emergency Operations Plan.	1, 2, 3, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Emergency Management New Hanover Co Communications and Outreach Municipal Administrations	GF
NHC28	Maintain a website which provides information about the Regional Hazard Mitigation Plan and relevant mitigation measures the public can take. (CRS 330)	2, 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Emergency Management New Hanover Co Communications and Outreach Municipal Administrations	GF
NHC29	Continue working with the NC Department of Transportation and participating jurisdictions to improve road visibility and maintain evacuation routes in the event of a natural or man-made disaster. (CRS 610)	2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Emergency Management Municipal Administrations Wilmington Urban Area Metropolitan Planning Organization	GF, NCDPS
NHC30	Publicize on county/municipal websites maps of evacuation routes which will facilitate the evacuation of all coastal portions of the county in case of a hazardous event. (CRS 330)	2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Emergency Management New Hanover Co Communications and Outreach Municipal Administrations	GF, NCDPS
NHC31	Work with the various county/municipal fire departments to assure adequate fire prevention and protection during fire events. Part of this responsibility is dependent upon each department's ability to maintain the materials and a knowledge base for addressing such events. This responsibility must be supported by provision of adequate funding for the continuing education and materials necessary to maintain this preparedness.	1, 2, 3, 4, 5, 6	6	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Emergency Management New Hanover Co Fire Services Municipal Fire Departments	GF

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
NHC32	Assist with procurement of additional emergency generators for wastewater pump stations within the floodplain. Assign fixed or portable generators as appropriate for site location.	1, 3, 5	1, 2, 4, 8, 10, 11, 12	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	Moderate	New Hanover Co Administration Municipal Administrations Cape Fear Public Utility Authority	GF, NCDPS, FEMA
NHC33	Maintain vegetation-free perimeter buffers around groundwater well sites, pump stations, and drinking water storage tanks to mitigate wildfire hazards to critical infrastructure. (CRS 420, 510)	1, 3, 5	6	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	Moderate	New Hanover Co Administration Municipal Administrations Cape Fear Public Utility Authority	GF, NCDPS, NCDEQ
NHC34	Continue to enforce and adopt water shortage response plans and water shortage ordinances for municipalities operating central water service.	1, 3, 5	9	New Hanover County, Carolina Beach, Kure Beach, Wilmington, Wrightsville Beach	High	New Hanover Co Health Department New Hanover Co Planning Municipal Administrations Cape Fear Public Utility Authority	GF, NCDEQ
NHC35	Work with industry to develop emergency response plans for specific industries and ensure that all plans are fully coordinated with County emergency management plans. These efforts will be carried out in conjunction with the County LEPC. (CRS 510)	2, 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Unincorporated New Hanover County	Moderate	New Hanover Co LEPC New Hanover Co Emergency Management Wilmington Business Development Wilmington Chamber of Commerce	GF
CITY OF WILMINGTON							
NHC36	Maintain internal policies and procedures to support City employees in responding to emergency situations. Policies and procedures will include, but will not be limited to, an Inclement Weather Policy. (CRS 610)	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Wilmington	High	Wilmington Administration	GF
NHC37	Continue to provide training for City personnel through FEMA's Emergency Management Institute (EMI) including ICS 100, ICS 200, ICS 300, ICS 400, ICS 700, and IS 800.	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Wilmington	High	Wilmington Administration	GF
NHC38	Partner with the County to incorporate hazard mitigation educational materials in existing communication vehicles such as city newsletters and city/county websites. (CRS 330, 610)	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Wilmington	High	Wilmington Administration New Hanover County Emergency Management	GF

Table 6-4. Pender County Mitigation Strategies

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
PC1	In concert with the American Red Cross (ARC), maintain a continuously updated list of all dedicated shelter facilities.	1, 2, 3, 5	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Emergency Management Municipal Administrations American Red Cross	GF, NCDPS, ARC
PC2	Maintain continuous contact/working relationship with electric service providers in the County to address the following (1) disaster preparedness techniques (e.g., tree trimming, vegetation planting requirements, pole replacement), (2) Identify critical electrical facilities needing retrofit or upgrade and map with elevation reference marks and, (3) communication with County officials during and immediately after a natural hazard event that results in loss of electrical power. Meet at least once per year with electric service providers in preparation for hurricane season. (CRS 510)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Emergency Management Electric Service Providers	GF, Electric Service Providers
PC3	Expand availability and improve effectiveness of all secondary power sources at all County and Municipal critical facilities. (CRS 420, 520)	1, 2, 3, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Emergency Management Municipal Administrations	GF, NCDPS
PC4	Support the establishment of conservation easements on all floodprone property and impose such easements on all properties acquired with public assistance funds. The county will assist municipalities in working through this process. (CRS 420)	1, 2, 4, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Planning Municipal Administrations	GF, PDM, HMGP, UHMA
PC5	Conduct an annual review of development restrictions in floodplain areas and maintain initiatives to ensure limited residential and commercial development in the floodplains and protection of critical facilities. This effort should include a review of county and municipal zoning, subdivision, and flood damage prevention regulations. (CRS 430)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Planning Municipal Administrations	GF

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
PC6	Maintain all properties acquired through HMGP funding or other sources aimed at addressing natural hazard mitigation as open space in perpetuity. (CRS 520)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Administration Municipal Administrations	GF
PC7	Adopt and annually update capital improvements plans at the county and municipal level with an emphasis on mitigation for critical facilities including relocation and retrofitting. (CRS 510)	1, 2, 3, 5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	Moderate	Pender County Emergency Management Municipal Administrations	GF
PC8	At the staff level, work with the NCDOT to identify and develop resolutions for local and regional drainage issues created by NCDOT facilities, including inspections of channels, retention basins, and, as needed, pursue debris removal. (CRS 450)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	Moderate	Pender County Planning Municipal Administrations NCDOT	GF, NCDOT
PC9	Apply for all available funding from the Hazard Mitigation Grant Program (HMGP) and funds to assist with the mitigation of severe repetitive loss properties to relocate structures out of the floodplain. (CRS 420, 520)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Administration Municipal Administrations	GF, PDM, HMGP, UHMA
PC10	Require a finished floor elevation certificate for all development within the special flood hazard area (SFHA) within both incorporated and unincorporated portions of the County. All elevation certificates should be submitted on an official FEMA elevation certificate. No certificate of occupancy shall be issued for any development within a defined special flood hazard area without the submittal of the required elevation certificate. (CRS 310)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Administration Pender County Planning Municipal Administrations	GF
PC11	Continue to comply with NC State Coastal stormwater regulations. (CRS 450, 540)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Administration Pender County Planning Municipal Administrations	GF, NCDEQ

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
PC12	Continuously maintain tax parcel information for all properties located throughout the county.	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County GIS	GF
PC13	Maintain a map information service involving the following: (1) Provide information relating to Flood Insurance Rate Maps (FIRMs) to all inquirers, including providing information on whether a given property is located within a flood hazard area, (2) Provide information regarding the flood insurance purchase requirement on the county's website, (3) Maintain historical and current FIRM's, (4) Locally advertise annually in the local newspaper, (5) Provide information to inquirers about local floodplain management requirements, (6) Include in the county's newsletter (all property owners) and on the county's website a letter on flood insurance, (7) Notify property owners within a floodprone area that they are subject to flooding. (CRS 320)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Planning Pender County Emergency Management Pender County Administration Municipal Administrations	GF, FEMA
PC14	Make information regarding hazards and development regulations within the floodplains available through the following: (1) The County Planning Director will ensure that the local library maintains information relating to flooding and flood protection, (2) The County will provide a link on their website to FEMA resources addressing flooding and flood protection, and (3) materials will be made available at municipal administration buildings. (CRS 430)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Planning Pender County Emergency Management Pender County Administration Municipal Administrations	GF, FEMA

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
PC15	Provide comprehensive services regarding planning and development activities within the defined SFHA. These services will include (1) Providing site specific flood and flood-related information on an as needed basis, (2) Building inspections department will maintain a list of contractors with experience in floodproofing and retrofit techniques, (3) Building inspections department will maintain materials providing an overview of how to select a qualified contractor, (4) Make site visits upon request to review occurrences of flooding, drainage, and sewer problems--if applicable, inspector should provide one-on-one advice to the property owner, (5) Provide advice and assistance regarding CRS Activity 530, (6) Advertise the availability of services annually within the local newspaper, and (7) Maintain a log of all individuals assisted through these services, including site visits. (CRS 330, 340, 350)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Planning Pender County Administration Municipal Administrations	GF, FEMA
PC16	Work with local real estate agencies to ensure that agents are informing clients when property for sale is located within an SFHA. The County will provide these agencies with brochures documenting the concerns relating to development located within flood prone areas. (CRS 330)	1, 2, 3, 4, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Planning Pender County Administration Municipal Administrations	GF
PC17	Coordinate with the Pender County School System Hazards Awareness Educational Programs to be presented by Public Safety personnel. (CRS 330)	2, 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Emergency Management	GF
PC18	Post educational information on the County's website addressing the hazards associated with wildfires, hail, tsunamis, tornados, hurricanes, flooding, and storm surge, as well as other hazards outlined in Section 3 of this plan. (CRS 330)	2, 4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Emergency Management Municipal Administrations	GF

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
PC19	Continue to rely on the Pender County Emergency Operations Plan (EOP) for effective disaster event communication. These efforts should include exercises to ensure that all municipalities are engaged and aware of their role in the emergency response process.	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Emergency Management Municipal Administrations	GF, NCDPS
PC20	Maintain a registry of special medical needs individuals who has been coordinated with the Pender County Department of Social Services. This list will include: (1) Persons on life support systems, (2) Persons dependent on electricity for medical equipment, and (3) Persons with severe mental handicap or mental illness. Coordinate with current county system and local plans. Connect with county CTY (Call Back Program). (CRS 610)	2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Social Services Municipal Administrations	GF, NCDPS
PC21	Work on the five year implementation of this plan. At the end of this five year period, the county will undertake efforts to update this plan including the following ten planning steps: (1) Organize to prepare the plan, (2) Involve the public, (3) Coordinate with other agencies, (4) Assess the hazard, (5) Assess the problem, (6) Set goals, (7) Review possible activities, (8) Draft an action plan, (9) Adopt the plan, and (10) Implement, evaluate, and revise.	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8 , 9, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Administration Municipal Administrations	GF, PDM, HMGP
PC22	Continue to enforce the International Building Code, to include requiring that new structures or structures undergoing significant renovation (renovations or expansion exceeding 50% of fair market value) meet code requirements for coastal and noncoastal areas. (CRS 430)	1, 2, 3, 4, 5	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Planning Municipal Administrations	GF

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
PC23	Continue to support the NC Office of Dam Safety's efforts to monitor and inspect all dams throughout the state. The county will rely on this agency to ensure that all dam facilities, both public and private, are properly maintained and stable . (CRS 630)	1, 2, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Administration Municipal Administrations	GF
PC24	Request Hazard Mitigation Assistance (HMA) funding for the elevation/floodproofing of repetitive loss properties. (CRS 420, 520)	1, 2, 3, 5	1, 2, 4, 8, 10,11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Emergency Management Municipal Administrations	GF, PDM, HMGP, UHMA
PC25	Request Hazard Mitigation Assistance (HMA) funding for windproofing of critical facilities.	1, 2, 3, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Emergency Management Municipal Administrations	GF, PDM, HMGP, UHMA
PC26	Continue to maintain state approved water supply plans in municipalities operating central water service.	1, 3, 5	9	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Public Works Municipal Administrations	GF, NCDEQ
PC27	Continue to enforce and adopt water shortage response plans and water shortage ordinances for municipalities operating central water service.	1, 3, 5	9	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	High	Pender County Public Works Municipal Administrations	GF, NCDEQ
PC28	Continue to seek funding sources for the elevation or retrofitting of existing sewer lift stations in an effort to reduce or eliminate the impacts from flooding. (CRS 520)	1, 3, 5	1, 2, 4, 8, 10, 11, 12	Pender County, Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, Watha	Moderate	Pender County Administration Municipal Administrations	GF, PDM, HMGP, UHMA

SUMMARY OF CRS RATING OF STRATEGIES

All jurisdictions participating in this plan which are members of the Community Rating System (CRS) program should focus on the implementation of the following guidance. These efforts should be carried out above and beyond the strategies defined in Tables 6-2 through 6-4. All communities participating in the CRS program are identified on pages 4-10 and 4-11 of this plan.

Table 6-5. CRS Rating System Summary

CRS Number	CRS Activity	National Average Awarded CRS Points	CRS Documentation
310	Elevation Certificates	69	All required elevation certificates shall be kept on file within the responsible party's Building Inspections Department.
320	Map Information Service	138	The responsible party shall maintain the following information relating to the map information service: ■ A log of inquiries including: date, FIRM zone of subject property, address/location of subject property, indication that inquirer was informed of insurance purchase requirement. ■ Records of all agencies who have inquired, or were provided information. ■ Copies of historical and current FIRM's within the local government Planninng and Inspections department. ■ A copy of the affidavit documenting that this service was publicized in the local newspaper once annually.
330	Outreach Activities	90	The responsible party shall maintain a copy of the following information: ■ A copy of the notice mailed to all property owners located within an SFHA ■ A listing of all property owners the notice was mailed to ■ A notice certifying the date the notices were mailed ■ Copies of the outreach projects conducted during the year
340	Hazard Disclosure	19	The responsible party shall maintain a copy of the following information relating to hazard disclosure: ■ Disclosure statements from five local real estate agents stating that it is their agencies policy to inform clients if a property is located within an SFHA ■ A copy of the brochure that the county has disseminated to real estate agents
350	Flood Protection Information	24	The responsible party shall maintain the following information regarding the provision of flood protection insurance: ■ A listing of publication dates for all materials on file at the local library ■ A statement from the Librarian that the flood related materials are listed within the libraries resource management system

CRS Number	CRS Activity	National Average Awarded CRS Points	CRS Documentation
360	Flood Protection Assistance	53	The responsible party shall maintain the following information regarding the provision of flood protection assistance program: ■ Affidavit of publication for the advertisement regarding the provision of flood protection assistance ■ A copy of the contractor's list on file in the Building Inspections Department ■ A copy of the document outlining how to hire a contractor on file in the Building Inspections Department
410	Additional Flood Data	86	The responsible party shall maintain the following information regarding additional flood data: ■ Develop new flood elevation, floodway delineations, wave heights, or other regulatory flood hazard data for an area not mapped in detail by the flood insurance study. ■ Have a more restrictive mapping standard.
420	Open Space Preservation	191	The responsible party shall maintain the following information regarding the County's current inventory of open space parcels: ■ A copy of all deed restrictions in place for all properties acquired through FEMA sponsored acquisition projects to prevent future development ■ A map for the file showing all open space parcels within the county
430	Higher Regulatory Standards	166	The responsible party shall maintain the following information: ■ Records of annual review by the MAC and participating jurisdictions ■ Records of revisions to all local ordinances
440	Flood Date Maintenance	79	The responsible party shall maintain the following information regarding the County's flood data maintenance efforts: ■ A hard copy of all digital tax parcel records maintained within the GIS ■ A summary of what data is included within the County's GIS
450	Stormwater Management	98	■ Document at the county and municipal level, where applicable, review of development proposals for consistency with North Carolina State Coastal stormwater drainage management rules which regulate size and improve water quality ■ Maintain documentation correspondence indicating coordination with the North Carolina Division of Water Quality
510	Floodplain Management Planning	115	Maintain a current certified Pender County Multi-Jurisdictional Hazard Mitigation Plan

CRS Number	CRS Activity	National Average Awarded CRS Points	CRS Documentation
520	Acquisition and Relocation	213	■ Document identification of properties suitable for acquisition and relocation ■ Actively pursue available funding to assist with property acquisition and relocation
540	Drainage System Maintenance	232	■ Maintain records of inspections conducted in concert with NCDOT and resulting actions taken to remove debris. ■ Incorporate provisions for continuous maintenance of retention ponds into local ordinances, including debris removal ■ Maintain records of all county and municipal stormwater projects
610	Flood Warning Program	93	Provide early flood warnings to the public, and have a detailed flood response plan keyed to flood crest predictions
630	Dam Safety	66	No documentation required; State Approved Plan
Total Average Points		**1732**	

SECTION 7.

PLAN MAINTENANCE & IMPLEMENTATION

INTRODUCTION

The Plan Maintenance and Implementation section of the plan has been prepared to reflect the region's intentions for implementation, maintenance, and public participation over the next five years. This section provides a clear explanation of how the strategies detailed throughout Section 6 will be implemented.

IMPLEMENTATION

Implementation of the Southeastern NC Regional Hazard Mitigation Plan will commence with adoption of the document by all participating jurisdictions. Resolutions of Adoption are provided in Appendix I of the plan.

Upon adoption, this Regional Hazard Mitigation Plan faces the truest test of its worth – implementation. Implementation implies two closely related concepts: action and priority. While this plan puts forth many worthwhile and high priority recommendations, the first task facing the Mitigation Advisory Committee (MAC) is the decision about which action to undertake first. There are two factors to consider in making that decision: the priority of the item and available funding. Thus, pursuing low or no-cost high-priority recommendations will have the greatest likelihood of success. Central to the success of this plan is the need for regional coordination regarding implementation of some of the mitigation strategies.

Another highly effective and low-cost implementation mechanism is incorporation of the hazard mitigation plan recommendations and their underlying principles into other regional, county, and municipal plans and regulatory mechanisms, such as Capital Improvements Plans and Land Use Plans. The Counties and participating municipalities will utilize this plan as a starting point toward implementing policies and programs to reduce losses to life and property from natural hazards. Brunswick, New Hanover, and Pender Counties will all be charged with ensuring implementation of strategies specific to their jurisdiction. If these efforts require intergovernmental coordination the Regional MAC should also be involved. If a strategy has been documented as regional, all participating jurisdictions should assist in carrying out the function and/or strategy.

Mitigation is most successful when it is incorporated into the day-to-day functions and priorities of government and development. This integration is accomplished by constant efforts to network, identify, and highlight the multi-objective benefits to each program and its stakeholders. This effort is achieved through the routine actions of monitoring implementation efforts, attending meetings, and promoting a safe, sustainable community. Additional mitigation strategies could include consistent and ongoing enforcement of existing policies and review of regional, county, and municipal programs for coordination and regional multi-objective opportunities.

Coincidentally with these efforts, it is important to maintain a constant monitoring of funding opportunities that can be leveraged to implement some of the more costly recommended actions. This process will include creating and maintaining a bank of ideas on how any required local match or participation requirement can be met. When funding does become available, MAC members will be in a position to capitalize on the opportunity for their respective jurisdictions. Funding opportunities to be monitored include special pre-

and post-disaster funds, special district budgeted funds, state or federal earmarked funds, and grant programs, including those that can serve or support multi-objective implementing actions.

ROLE OF THE MAC IN IMPLEMENTATION AND MAINTENANCE

With adoption of this plan, the Regional MAC will be tasked with plan implementation and maintenance. The MAC, led by Tom Collins of the Pender County Emergency Management Department, agrees to:

- Act as a forum for hazard mitigation issues;
- Disseminate hazard mitigation ideas and activities to all participants;
- Pursue the implementation of high-priority, low/no-cost recommended actions;
- Keep the concept of mitigation in the forefront of community decision-making by identifying plan recommendations when other community goals, plans, and activities overlap, influence, or directly affect increased community vulnerability to disasters;
- Continuously monitor multi-objective cost-share opportunities to help the community implement the plan's recommended actions for which no current funding exists;
- Monitor and assist in implementation and update of this plan;
- Report on plan progress and recommended changes to the County Boards of Commissioners; and
- Inform and solicit input from the public.

The MAC will not have any powers over County or municipal staff personnel; it will be a purely advisory body. Its primary duty is to see the plan successfully carried out and to report to the community governing boards and the public on the status of plan implementation and mitigation opportunities for the region, counties, and participating municipal jurisdictions. Other duties include reviewing and promoting mitigation proposals, considering stakeholder concerns about hazard mitigation, passing concerns on to appropriate entities, and posting relevant information on the Counties' websites.

EVALUATION, MONITORING, AND UPDATING

Plan maintenance implies an ongoing effort to monitor and evaluate plan implementation and to update the plan as progress, roadblocks, or changing circumstances are recognized. In order to track progress and update the mitigation strategies identified in the policy section of the plan, the Regional MAC will revisit this plan on an annual basis and after a hazard event. Tom Collins, acting as chair of the MAC, is responsible for initiating this review and will consult with members of the MAC. This monitoring and updating will take place through a formal review by the MAC annually, and a five-year written update to be submitted to the NCEM and FEMA Region IV, unless disaster or other circumstances (e.g., changing regulations) require a change to this schedule.

Evaluation of progress can be achieved by monitoring changes in vulnerabilities identified in the plan. Changes in vulnerability can be identified by noting:

- Decreased vulnerability as a result of implementing recommended actions;
- Increased vulnerability as a result of failed or ineffective mitigation actions; and/or
- Increased vulnerability as a result of new development (and/or annexation).

Updates to this plan will:

- Consider changes in vulnerability due to project implementation;
- Document success stories where mitigation efforts have proven effective;
- Document areas where mitigation actions were not effective;
- Document any new hazards that may arise or were previously overlooked;
- Incorporate new data or studies on hazards and risks;
- Incorporate new capabilities or changes in capabilities;
- Incorporate growth and development-related changes to County inventories; and
- Incorporate new project recommendations or changes in project prioritization.

In order to best evaluate any changes in vulnerability as a result of plan implementation, the MAC will use the following process:

- A representative from the responsible office identified in each mitigation strategy will be requested to report on a annual basis to the MAC on project status and provide input on whether the project as implemented meets the defined objectives and is likely to be successful in reducing vulnerabilities.
- If the project does not meet identified objectives, the MAC may recommend additional measures to be implemented, and an assigned individual will be responsible for defining project scope, implementing the project, monitoring success of the project, and making any required modifications to the plan.

Changes will be made to the plan to accommodate for projects that have failed or are not considered feasible after a review for their consistency with established criteria, the time frame, County priorities, and/or funding resources. Priorities that were identified as potential mitigation strategies will be reviewed as well during the monitoring and update of this plan to determine feasibility of future implementation.

Updating of the plan will be accomplished by written changes and submissions as the MAC deems appropriate and necessary, and as approved by the Board of Commissioners for each participating County or the participating municipalities' governing boards, if applicable. In keeping with the process of adopting the plan, a public involvement process to receive public comment on plan maintenance and updating will be held annually, and the final product will be adopted by each County and all participating municipalities.

CONTINUED PUBLIC INVOLVEMENT

Public participation is an integral component to the new mitigation planning process and will continue to be essential as the Southeastern NC Regional Hazard Mitigation Plan evolves over time. Significant changes or amendments to the Plan shall require the involvement of the general community as deemed appropriate prior to any formal adoption procedures.

Efforts to involve the general community in the plan maintenance, evaluation, and review process will be made as necessary. These efforts may include:

- Advertising meetings of the MAC with invitation for public participation;
- Designating knowledgeable and willing members of the community to serve as official representatives on the MAC;
- Utilizing local media to update the community of any maintenance and/or periodic review activities taking place;
- Utilizing the Pender, New Hanover, and Brunswick County government websites to advertise any maintenance and/or periodic review activities taking place; and
- Keeping copies of the Plan in local libraries.

INCORPORATION INTO EXISTING PLANS AND DOCUMENTS

The MAC, which will meet at a minimum annually, will provide a mechanism for ensuring that the actions identified in this plan are incorporated into ongoing County and municipal planning activities for each participating jurisdiction as follows:

Pender County
Atkinson
Burgaw
Saint Helena
Surf City
Topsail Beach
Watha

New Hanover County
Carolina Beach
Kure Beach
Wilmington
Wrightsville Beach

Brunswick County
Bald Head Island
Belville
Boiling Spring Lakes
Bolivia
Calabash
Carolina Shores
Caswell Beach
Holden Beach
Leland
Navassa
Northwest
Oak Island
Ocean Isle Beach
Sandy Creek
Shallotte
Southport
St. James
Sunset Beach
Varnamtown

The participating jurisdictions currently utilize comprehensive land use planning and building codes to guide and control development in the communities. After all participating jurisdictions adopt the Regional Hazard Mitigation Plan, these existing mechanisms will have hazard mitigation strategies integrated into them. The communities will utilize the planning tools outlined under Table 4-7 for Brunswick County, Table 4-8 for New Hanover County, and Table 4-9 for Pender County.

After the adoption of the HMP, the participating jurisdictions will work with the State Building Code office to make sure the jurisdictions adopt and enforce the minimum standards established in the new State Building Code. This effort will ensure that life/safety criteria are met for new construction. These efforts will be carried out by the Regional MAC, as well as each respective County MAC. The following County MAC participants will be responsible for implementation at the County level:

Brunswick County Mitigation Advisory Committee	
MAC Member	**Jurisdiction/Agency**
Marc Pagès, Land Planner	Brunswick County Planning Department
Chris McCall, Assistant Village Manager/Shoreline Erosion Specialist	Village of Bald Head Island
Athina Williams, Town Administrator/Clerk	Town of Belville
Bill Murphy, City Engineer	City of Boiling Spring Lakes
Terri Knox, Town Clerk	Town of Bolivia
Chuck Nance, Town Administrator	Town of Calabash
Gail Treglia, Code Compliance Officer	Town of Carolina Shores
George Kassler, Administrative Chief of Police	Town of Caswell Beach
Timothy Evans, Planning & Inspections Director Rhonda Wooten, CAMA/Zoning Official	Town of Holden Beach
Steven Spruill, Public Work Director	Town of Leland
Eulis A. Willis, Mayor	Town of Navassa
Gwendolyn K Spicer, Town Clerk	Town of Northwest
Steve Edwards, Building Codes Administrator Donna Coleman, Code Enforcement Officer	Town of Oak Island
Chuck Rash, Assistant Fire Chief Keith Dycus, Development Services Specialist	Town of Ocean Isle Beach
Tina Colby, Town Clerk	Town of Sandy Creek
Robert Lewis, Planning Director	Town of Shallotte
John Allen, Community Development Specialist	City of Southport
Don McGuire, Emergency Management Team Member	Town of St. James
Rawls Howard, Planning and Inspections Director Randy Walters, Building Inspector Kevin Dempsey, Fire Chief	Town of Sunset Beach
George Ennis Swain, Mayor Pro Tem	Town of Varnamtown

New Hanover County Mitigation Advisory Committee	
MAC Member	**Jurisdiction/Agency**
Warren Lee, Director	New Hanover County Emergency Management & 911
Steven Still, Senior Emergency Management Specialist	New Hanover County Emergency Management & 911
Kristen Skinner, Emergency Management Specialist	New Hanover County Emergency Management & 911
Charles Smith, Public Information Officer	New Hanover County Emergency Management & 911
Debora Cottle, 911 Manager	New Hanover County Emergency Management & 911
Tim Burgess, Assistant County Manager	New Hanover County Administration
Ken Vafier, Planning Manager	New Hanover County Development Services
Wanda Coston, Community Development Planner	New Hanover County Development Services
Joshua Swift, Deputy Health Director	New Hanover County Health Department
Jeremy Hardison, Senior Planner	Town of Carolina Beach
Captain Ed Kennedy, Assistant Fire Chief	Town of Kure Beach
Tom Crews, Technical Services Manager	City of Wilmington
Corey Harrison, Senior Systems Analyst	City of Wilmington
Kathryn Thurston, Zoning Administration/Floodplain Manager	City of Wilmington
Tony Wilson, Planning & Parks Director	Town of Wrightsville Beach

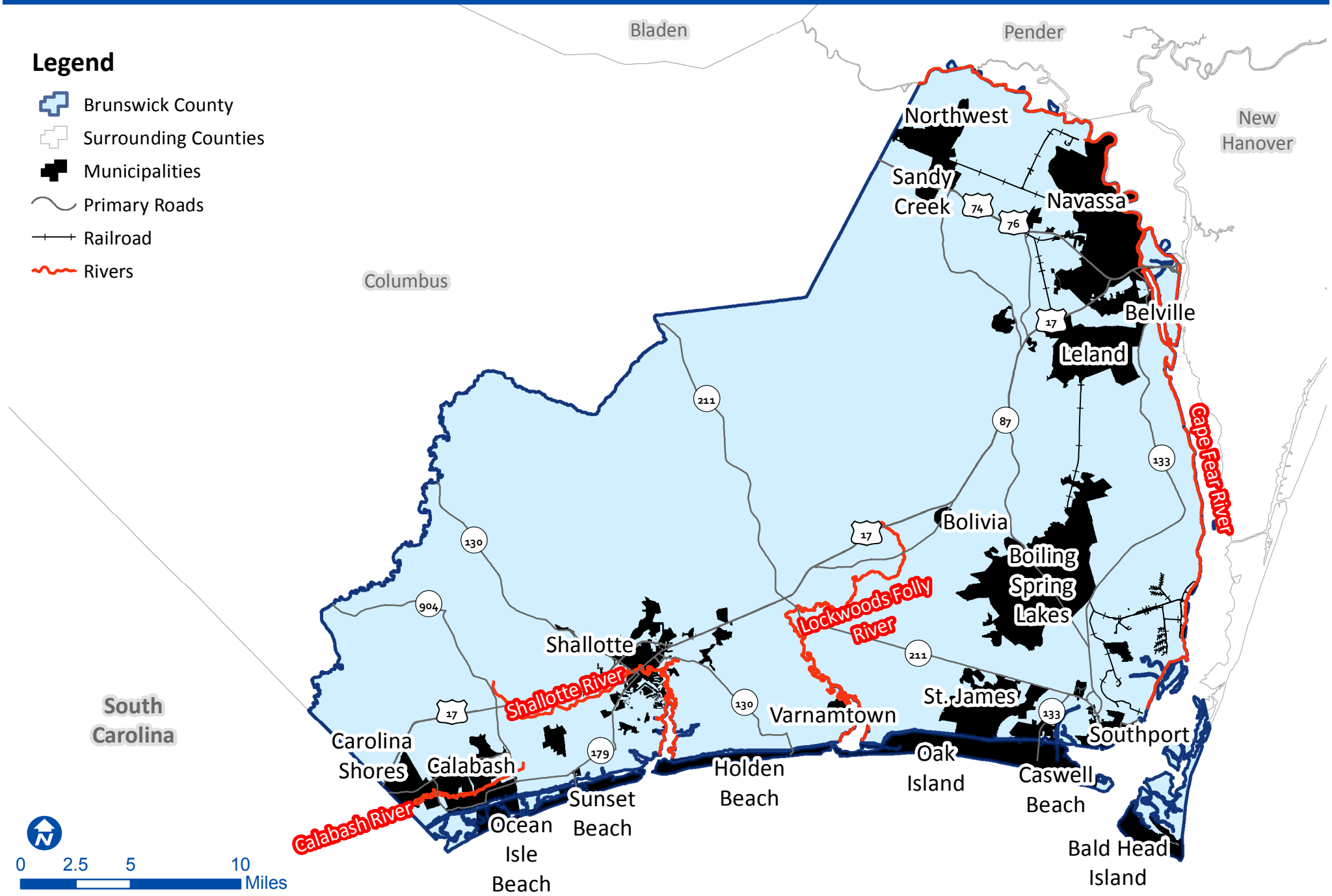
Pender County Mitigation Advisory Committee	
MAC Member	**Jurisdiction/Agency**
Tom Collins, Director	Pender County Emergency Management
Kyle Breuer, Director	Pender County Planning Department
Randell Woodruff, County Manager	Pender County Manager's Office
David Williams, Chairman	Pender County Board of Commissioners
Jack Turner, Mayor	Town of Atkinson
Margie Craver, Town Clerk	Town of Atkinson
Eugene Mulligan, Mayor	Town of Burgaw
Chad McEwen, Town Manager	Town of Burgaw
Rebekah Roth, Planning Administrator	Town of Burgaw
Robert Barnhill, Mayor	Village of St. Helena
Mary Bakan, Village Clerk	Village of St. Helena
A.D. (Zander) Guy, Jr., Mayor	Town of Surf City
Larry Bergman, Town Manager	Town of Surf City
Todd Rademacher, Planning Director	Town of Surf City
Howard Braxton, Mayor	Town of Topsail Beach
Michael Moore, Interim Town Manager	Town of Topsail Beach
Needham C. Hall, Mayor	Town of Watha
Retha C. Garriss, Town Clerk	Town of Watha

The capital improvements planning that may occur in the future will also contribute to the goals in the HMP. The jurisdictions will work with capital improvements planners to secure high-hazard areas for low risk uses. During the HMP planning/implementation period, each participating jurisdiction will strive for the objective of formal adoption of the HMP policies.

APPENDIX A.

MAPS

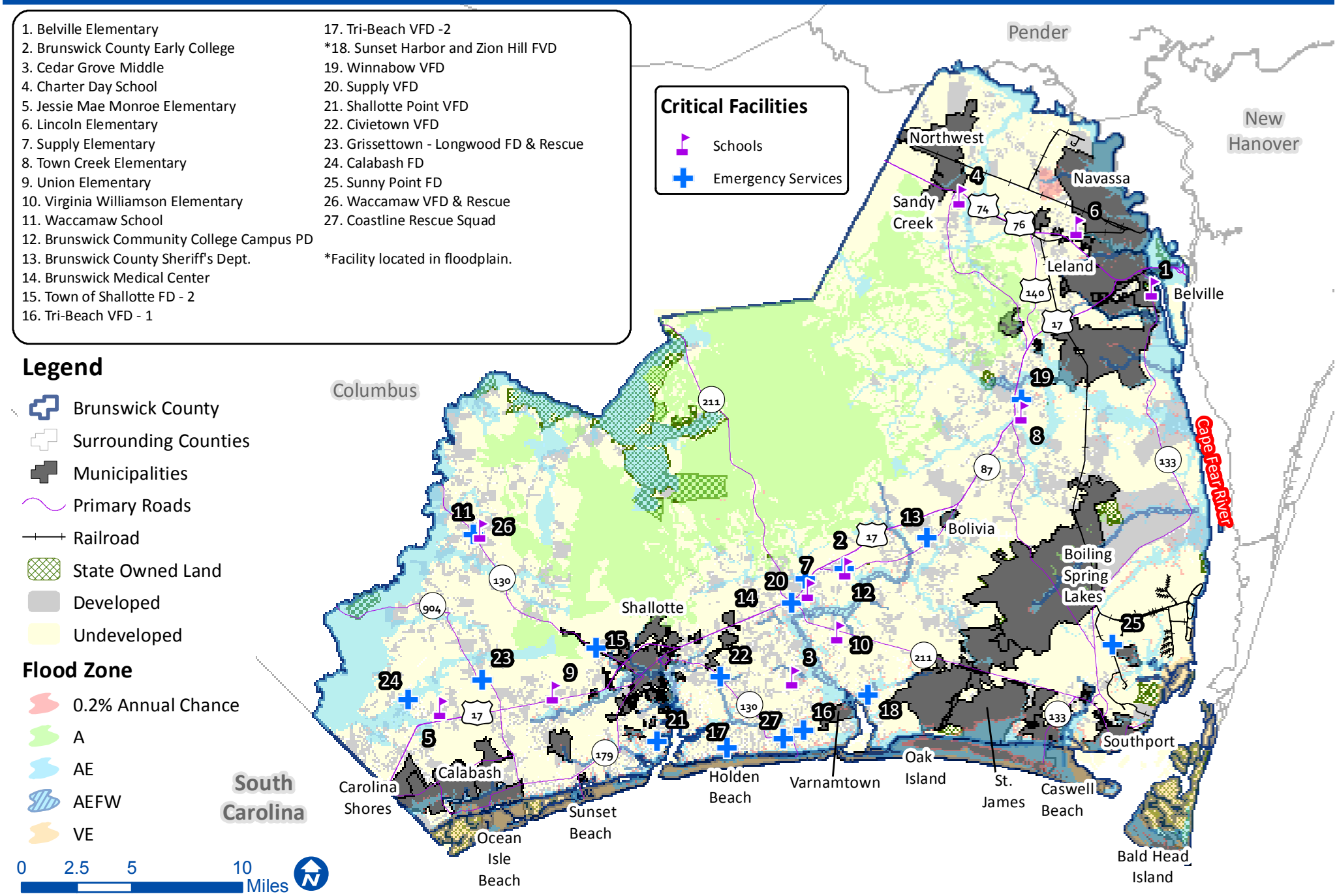
Map 1 - Brunswick County
Non-Specific Hazards



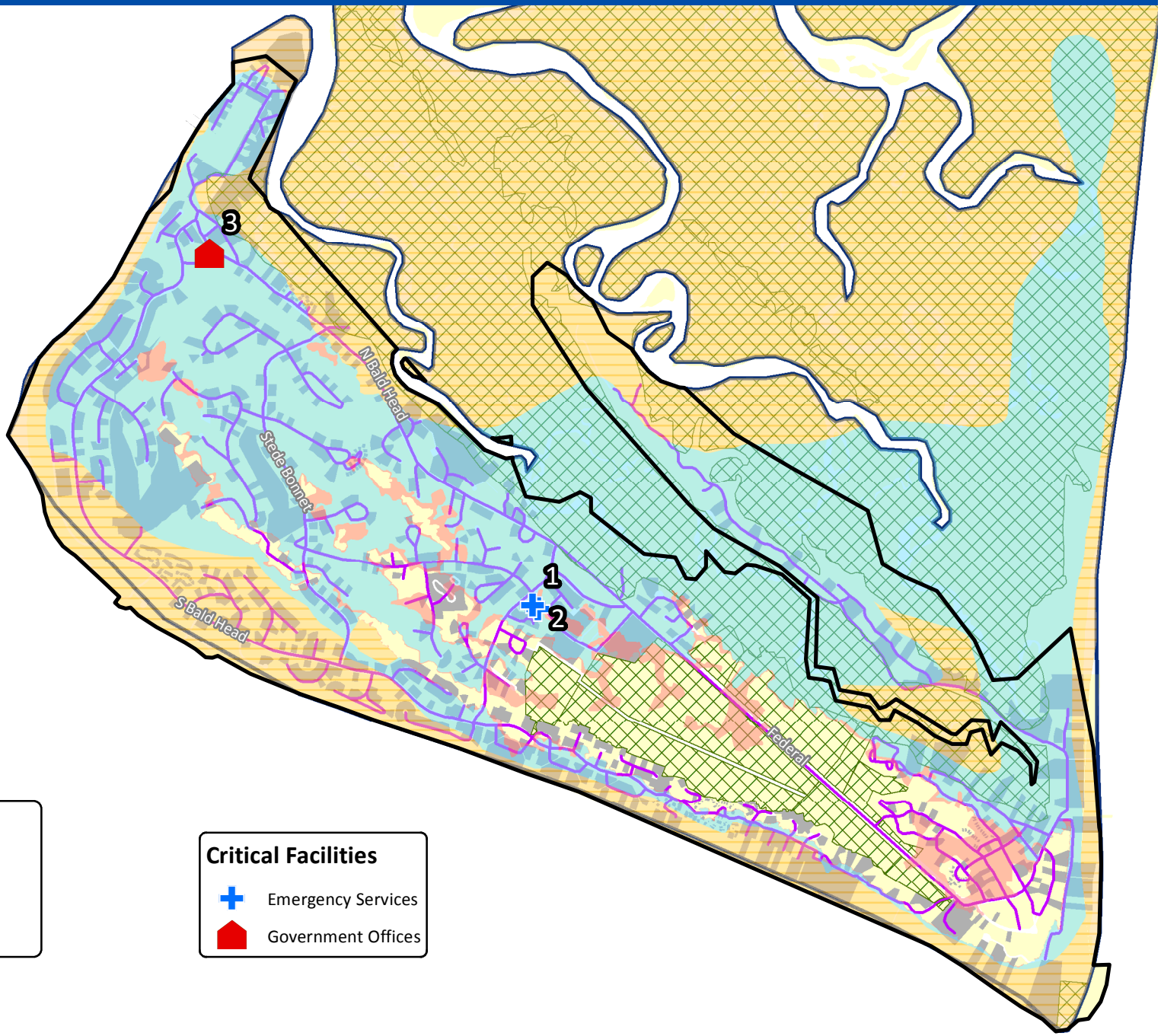
Map 2 - Brunswick County
Specific Hazards

1. Belville Elementary
2. Brunswick County Early College
3. Cedar Grove Middle
4. Charter Day School
5. Jessie Mae Monroe Elementary
6. Lincoln Elementary
7. Supply Elementary
8. Town Creek Elementary
9. Union Elementary
10. Virginia Williamson Elementary
11. Waccamaw School
12. Brunswick Community College Campus PD
13. Brunswick County Sheriff's Dept.
14. Brunswick Medical Center
15. Town of Shallotte FD - 2
16. Tri-Beach VFD - 1
17. Tri-Beach VFD -2
*18. Sunset Harbor and Zion Hill FVD
19. Winnabow VFD
20. Supply VFD
21. Shallotte Point VFD
22. Civietown VFD
23. Grissettown - Longwood FD & Rescue
24. Calabash FD
25. Sunny Point FD
26. Waccamaw VFD & Rescue
27. Coastline Rescue Squad

*Facility located in floodplain.



Map 3 - Village of Bald Head Island
Flood Hazard Areas & Critical Facilities



Legend

- Brunswick County
- Bald Head Island Corporate Limits
- Rivers
- Railroad
- Local Roads
- State Owned Land
- Developed
- Undeveloped

Flood Zone

- 0.2% Annual Chance
- A
- AE
- AEFW
- VE

*1. Bald Head Island Police Department
*2. Bald Head Island Volunteer Fire Department
*3. Bald Head Island Town Hall

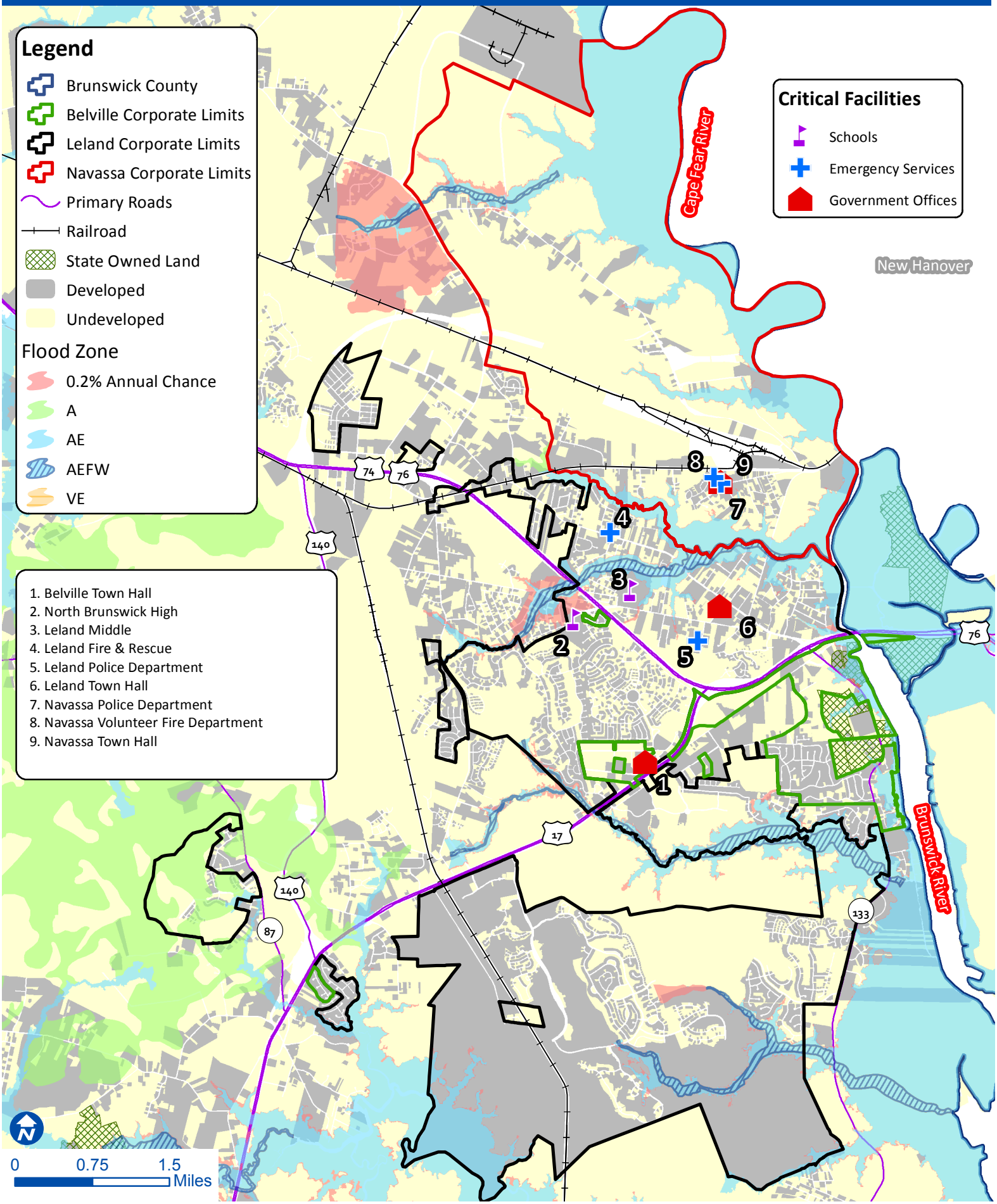
*Facility located in floodplain

Critical Facilities

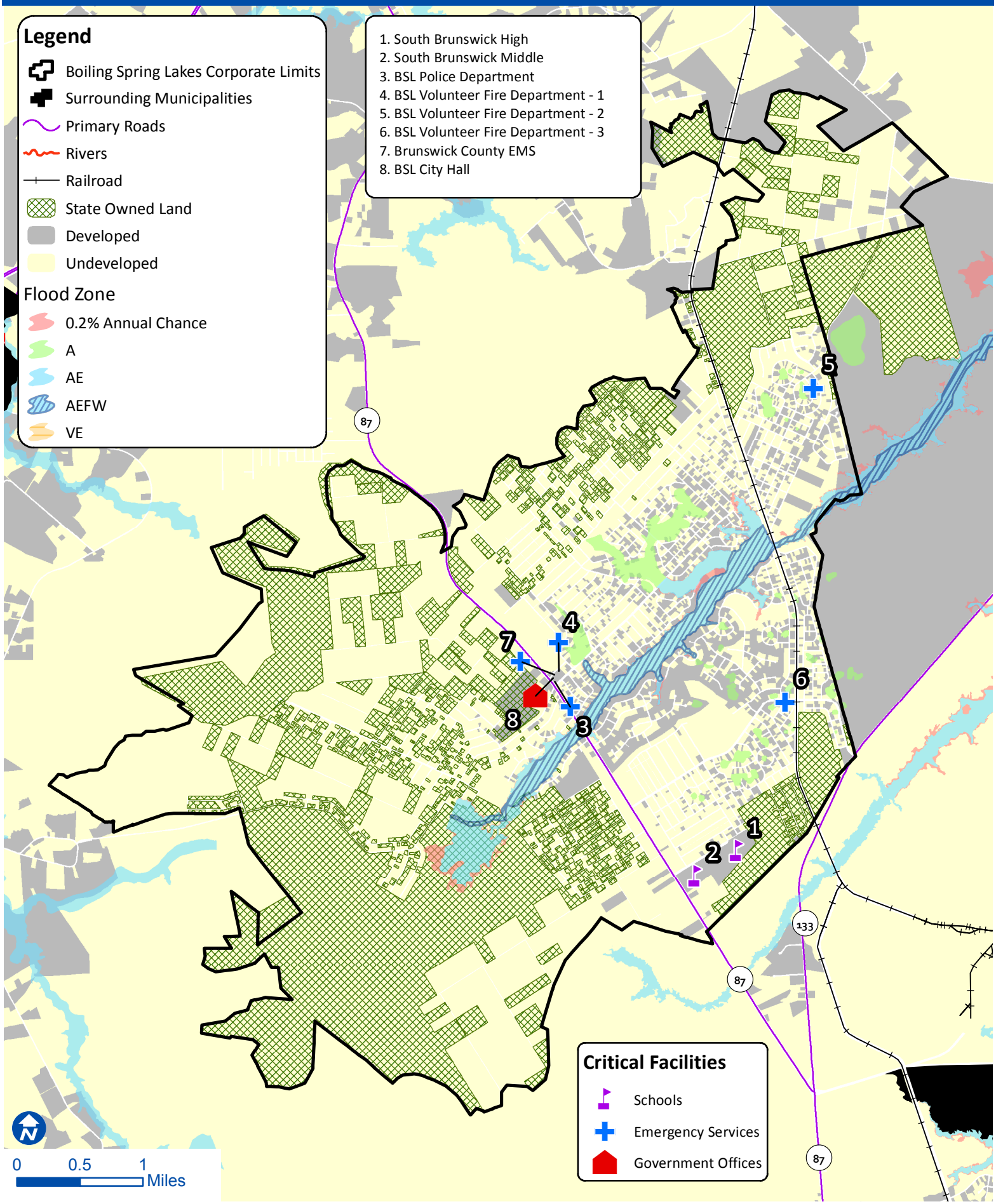
- Emergency Services
- Government Offices

0 0.25 0.5 Miles

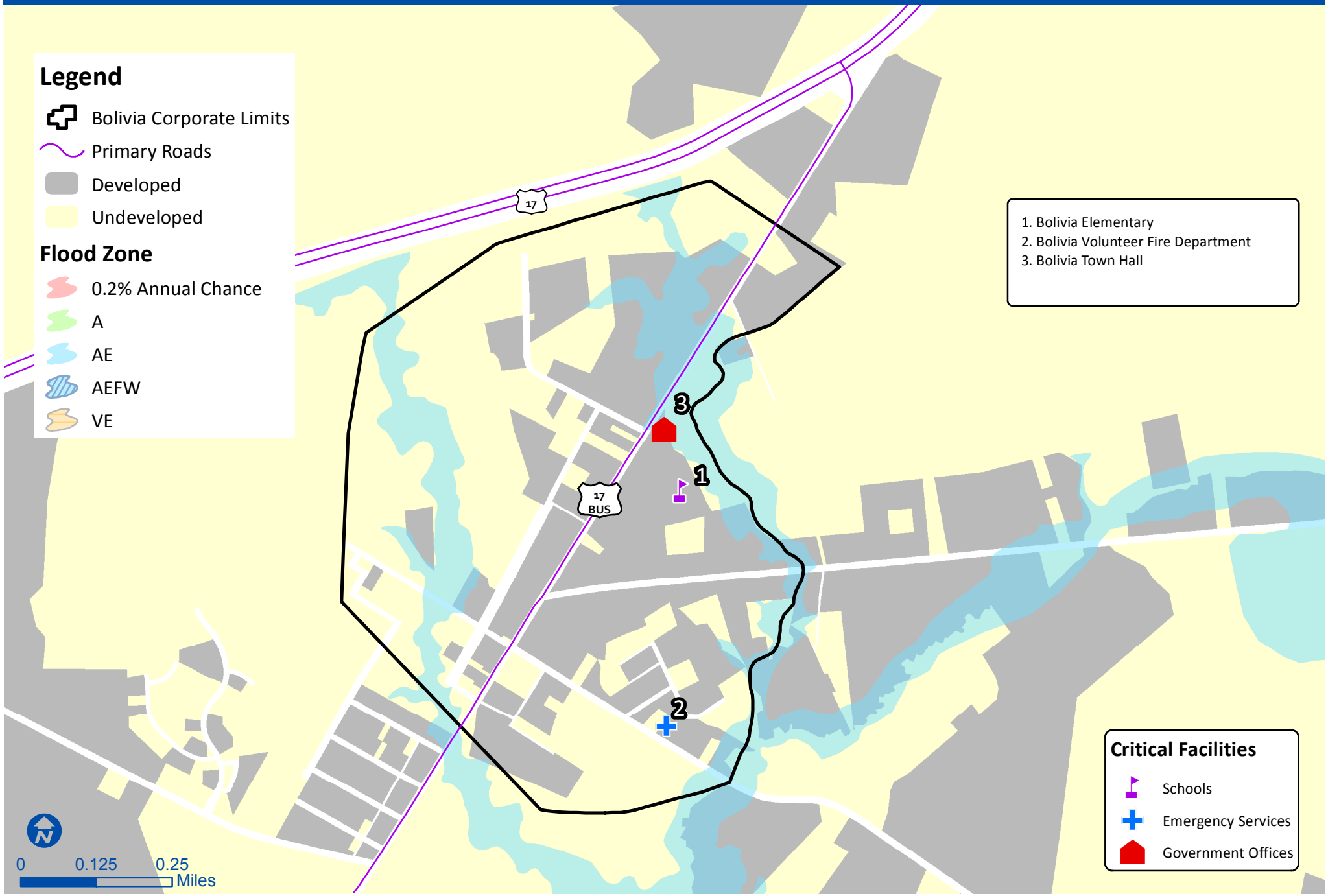
Map 4 - Town of Belville, Town of Leland & Town of Navassa Flood Hazard Areas & Critical Facilities



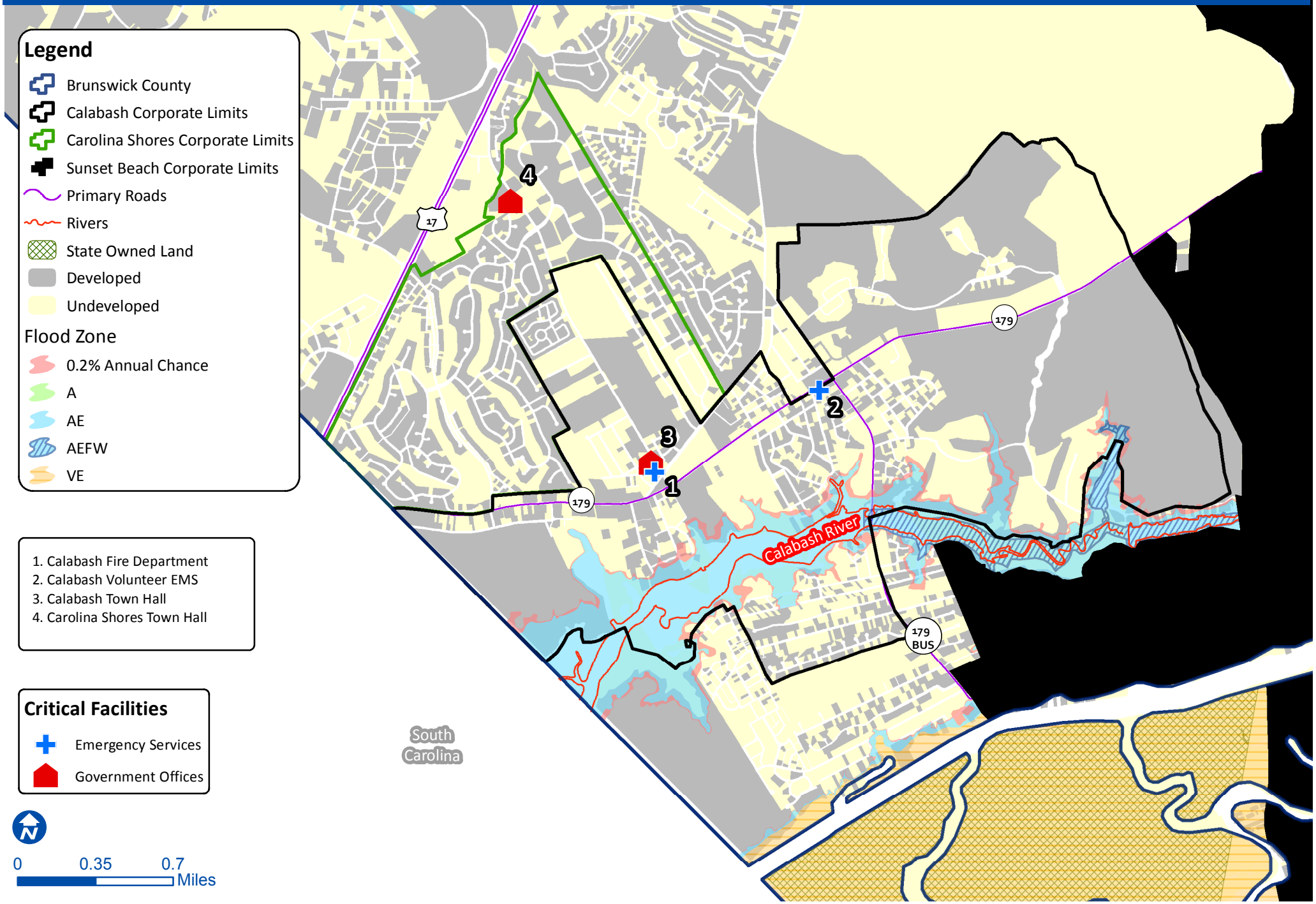
Map 5 - City of Boiling Spring Lakes
Flood Hazard Areas & Critical Facilities



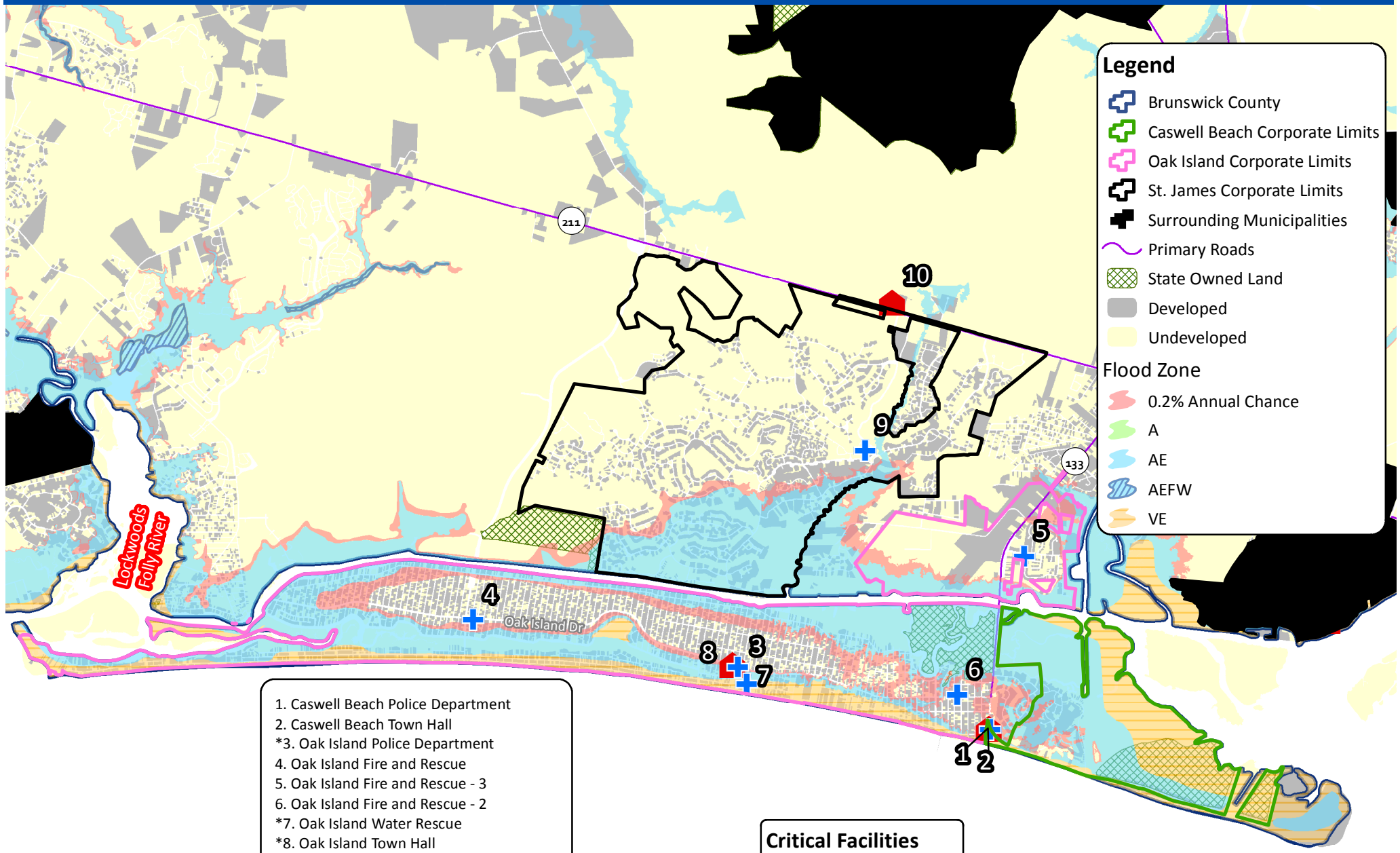
Map 6 - Town of Bolivia
Flood Hazard Areas & Critical Facilities



Map 7 - Town of Calabash and Town of Carolina Shores
Flood Hazard Areas & Critical Facilities



Map 8 - Town of Caswell Beach, Town of Oak Island & Town of St. James Flood Hazard Areas & Critical Facilities



1. Caswell Beach Police Department
2. Caswell Beach Town Hall
*3. Oak Island Police Department
4. Oak Island Fire and Rescue
5. Oak Island Fire and Rescue - 3
6. Oak Island Fire and Rescue - 2
*7. Oak Island Water Rescue
*8. Oak Island Town Hall
9. St. James Fire Department
10. St. James Town Hall

*Facility located in floodplain

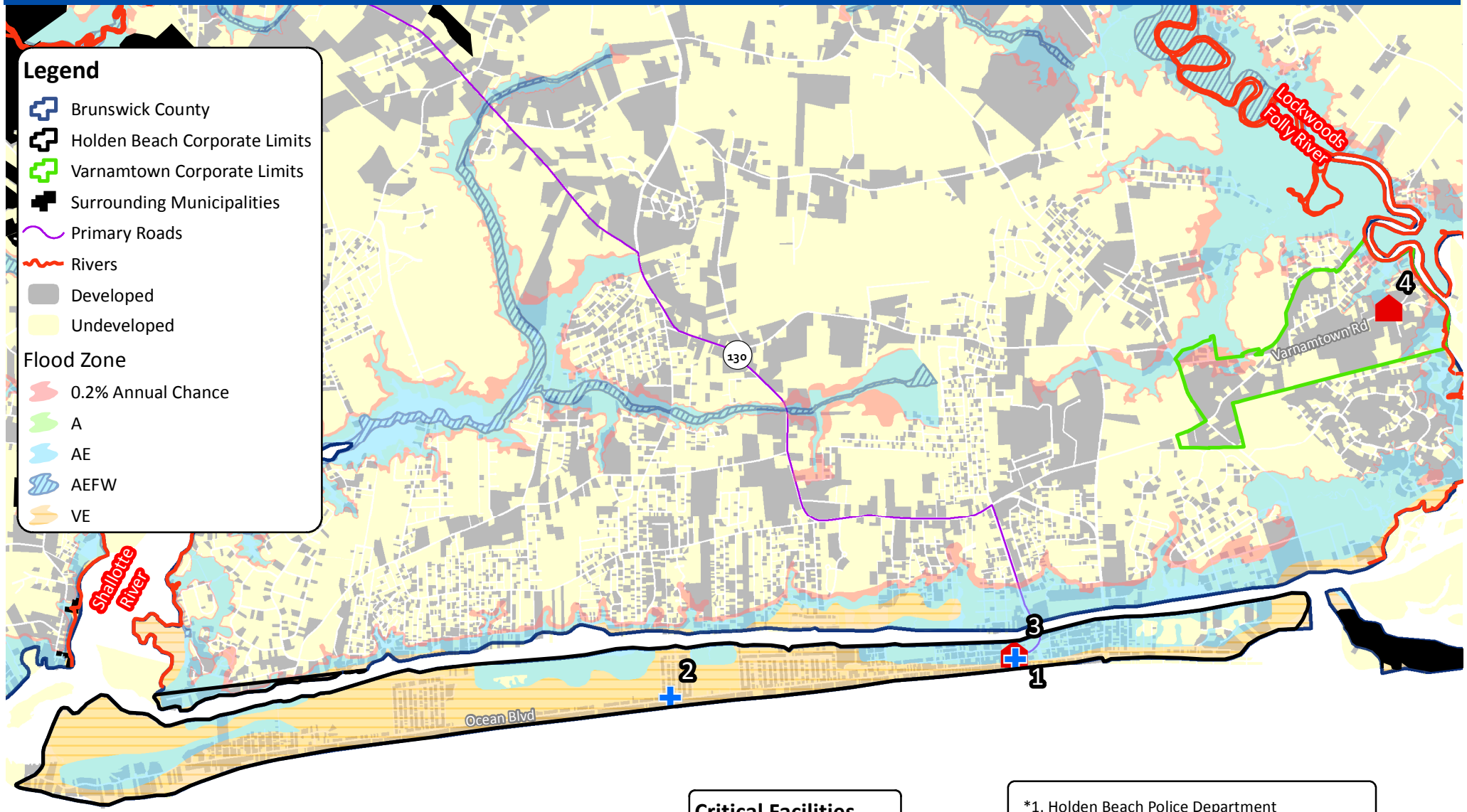
Critical Facilities

Emergency Services

Government Offices

0 0.75 1.5 Miles

Map 9 - Town of Holden Beach and Town of Varnamtown Flood Hazard Areas & Critical Facilities



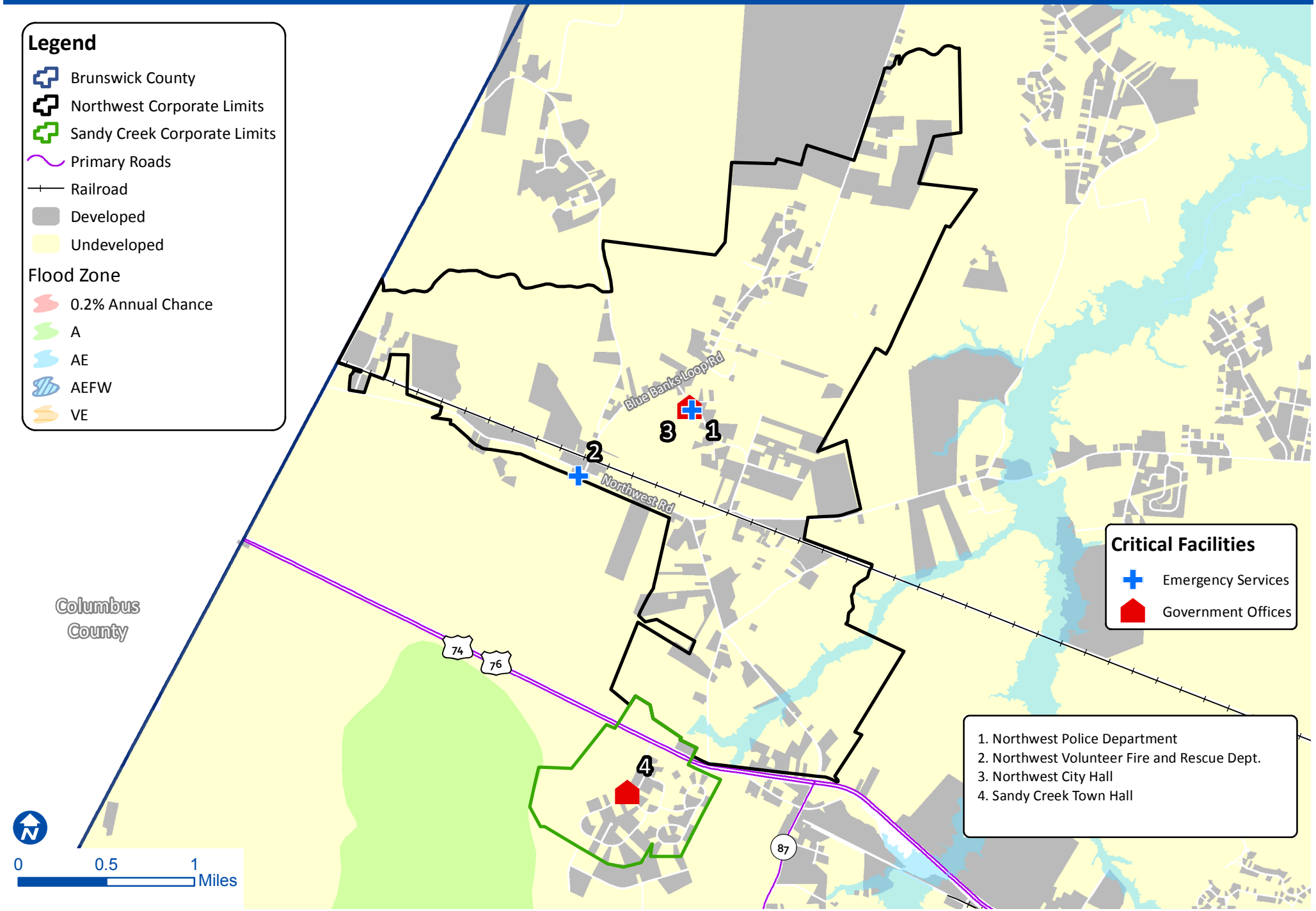
Critical Facilities

- Emergency Services
- Government Offices

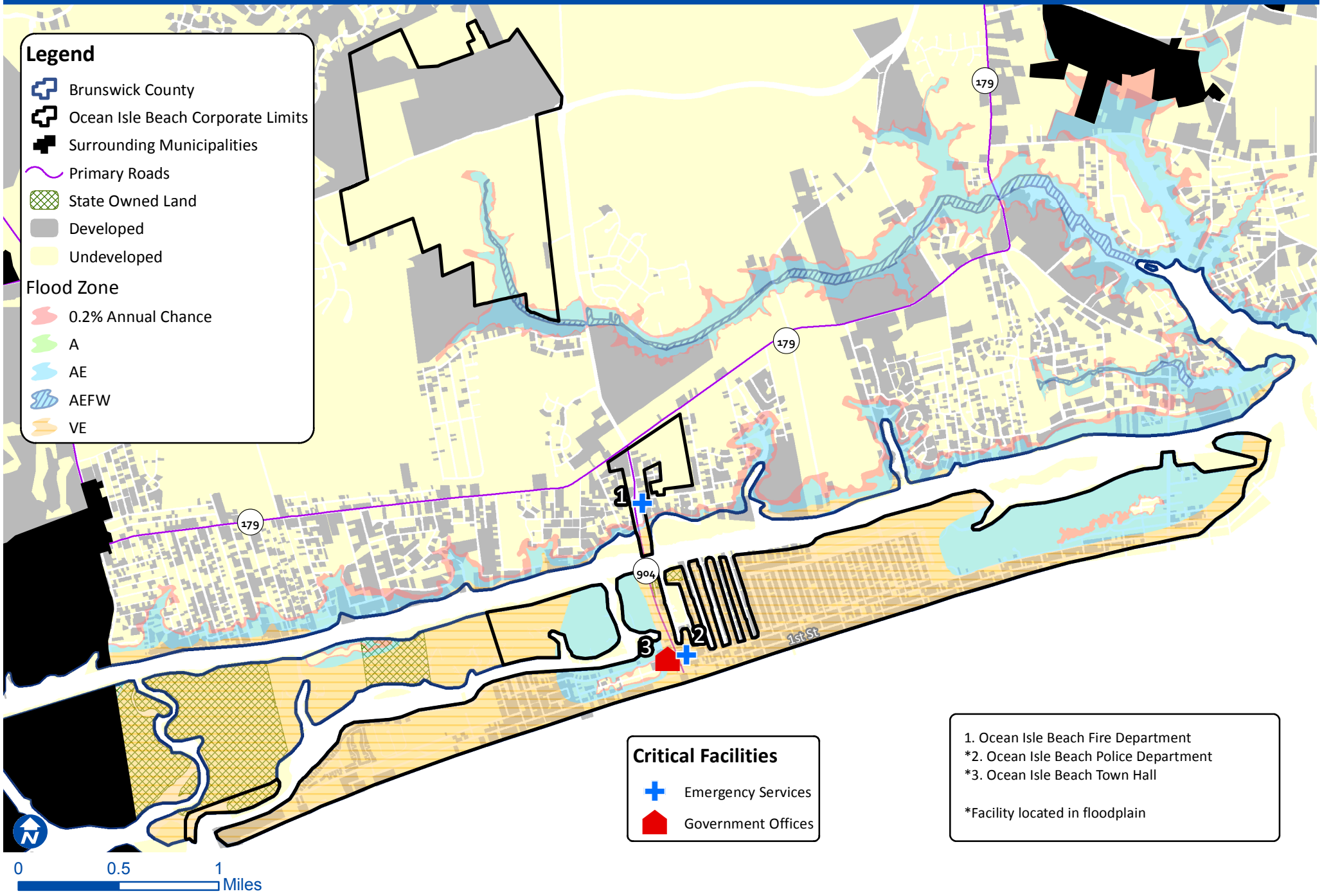
*1. Holden Beach Police Department
*2. Tri-Beach Volunteer Fire Department - 2
*3. Holden Beach Town Hall
4. Varnamtown Town Hall

0 0.5 1 Miles

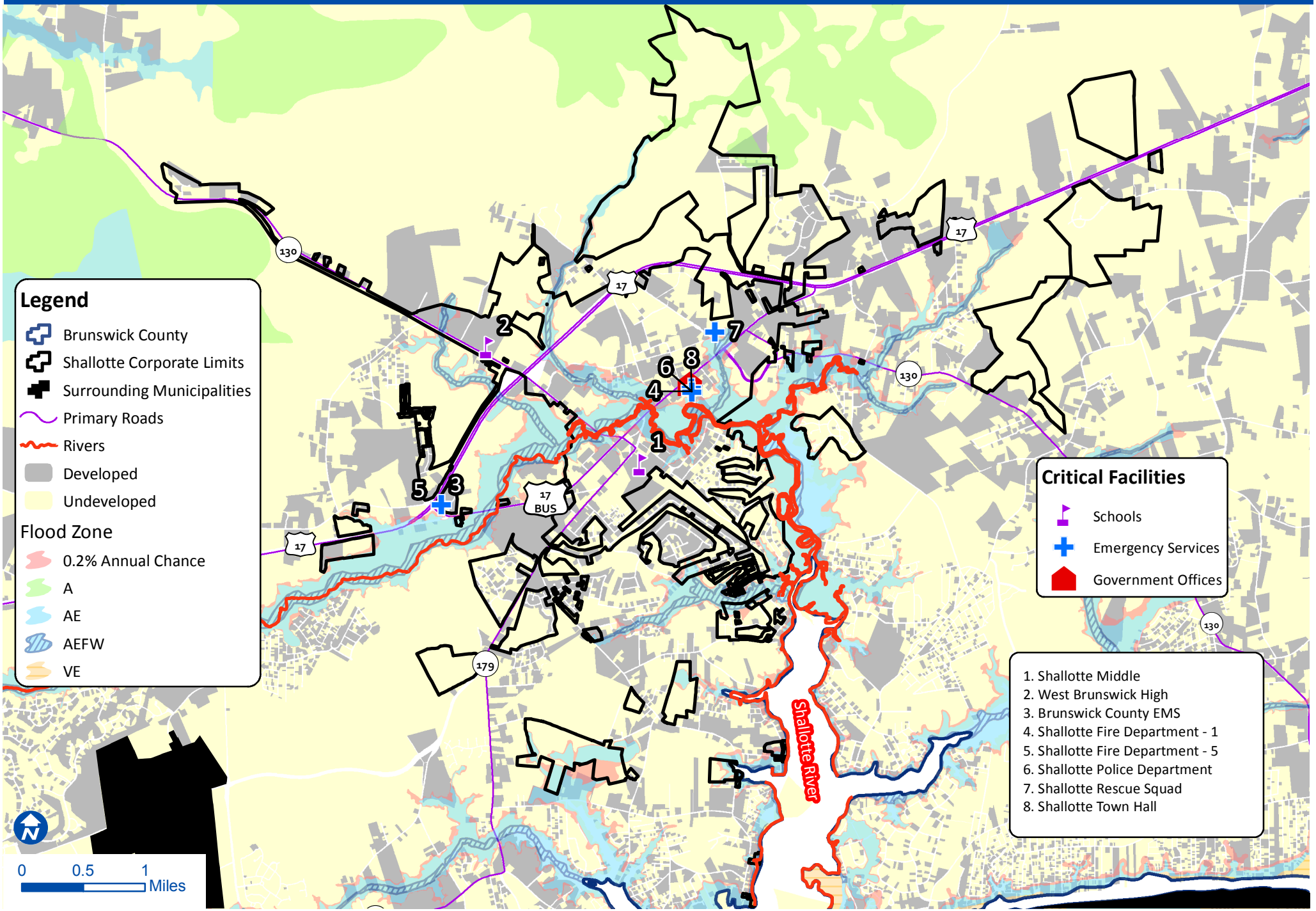
Map 10 - City of Northwest and Town of Sandy Creek
Flood Hazard Areas & Critical Facilities



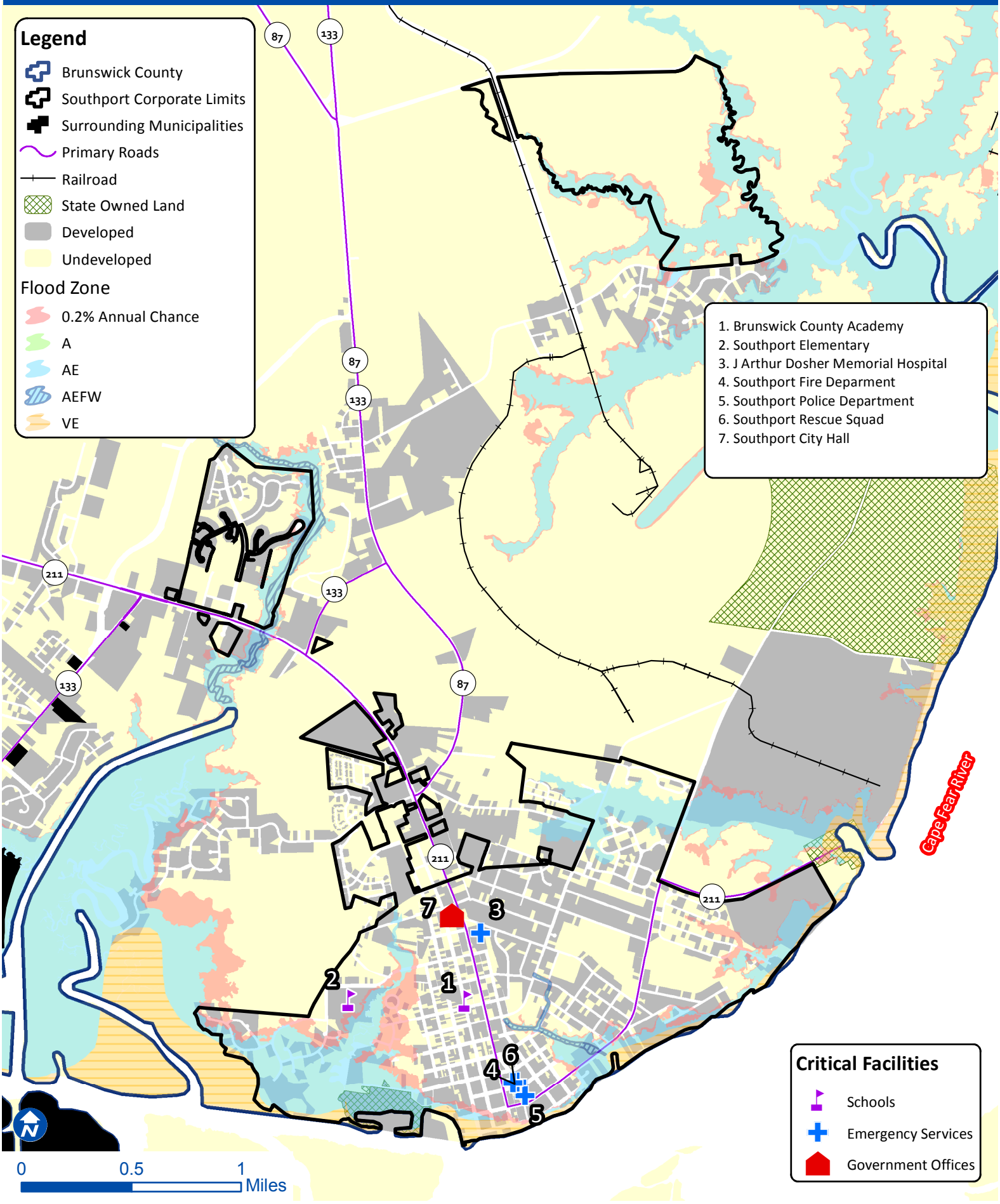
Map 11 - Town of Ocean Isle Beach
Flood Hazard Areas & Critical Facilities



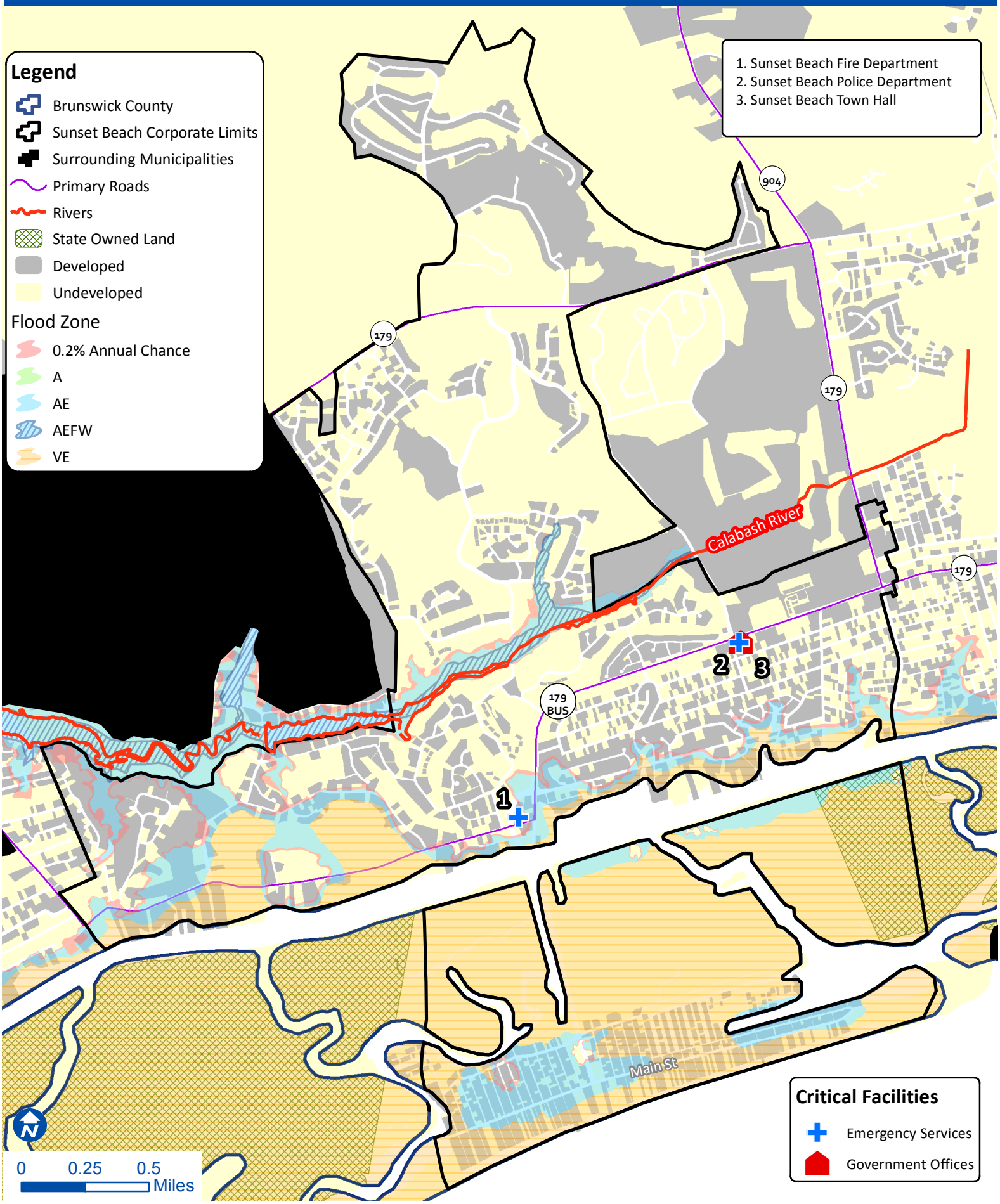
Map 12 - Town of Shallotte
Flood Hazard Areas & Critical Facilities



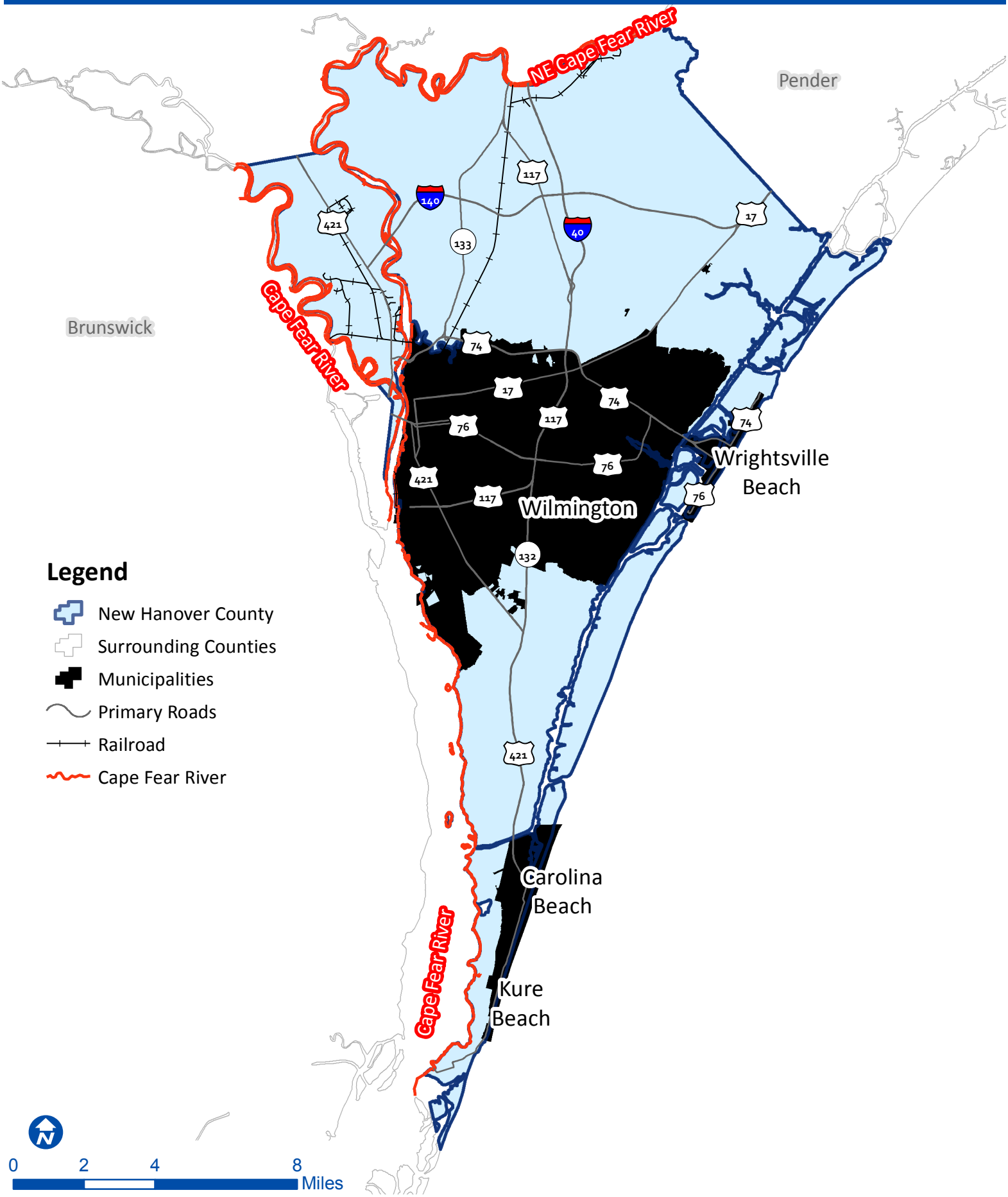
Map 13 - City of Southport
Flood Hazard Areas & Critical Facilities



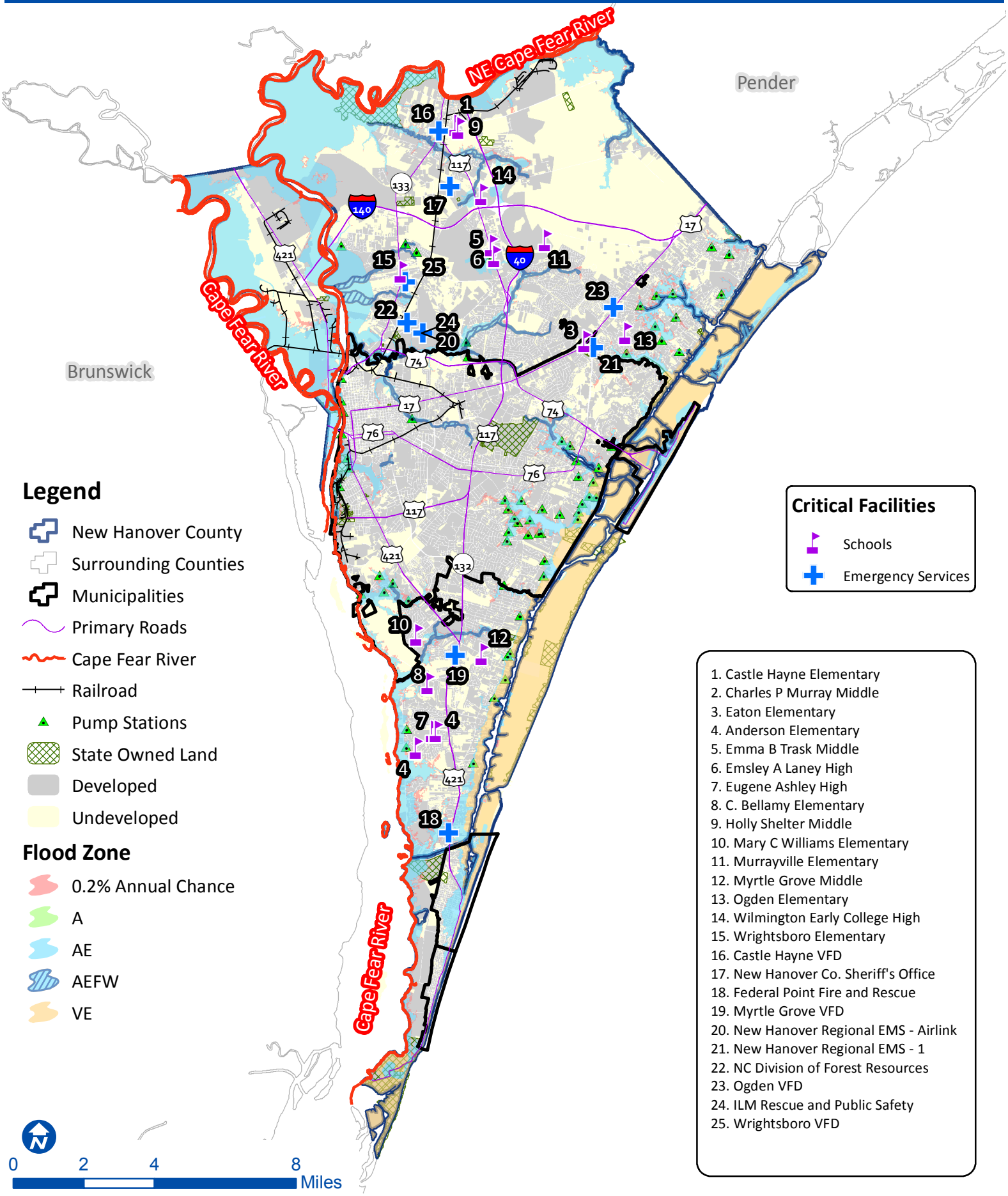
Map 14 - Town of Sunset Beach
Flood Hazard Areas & Critical Facilities



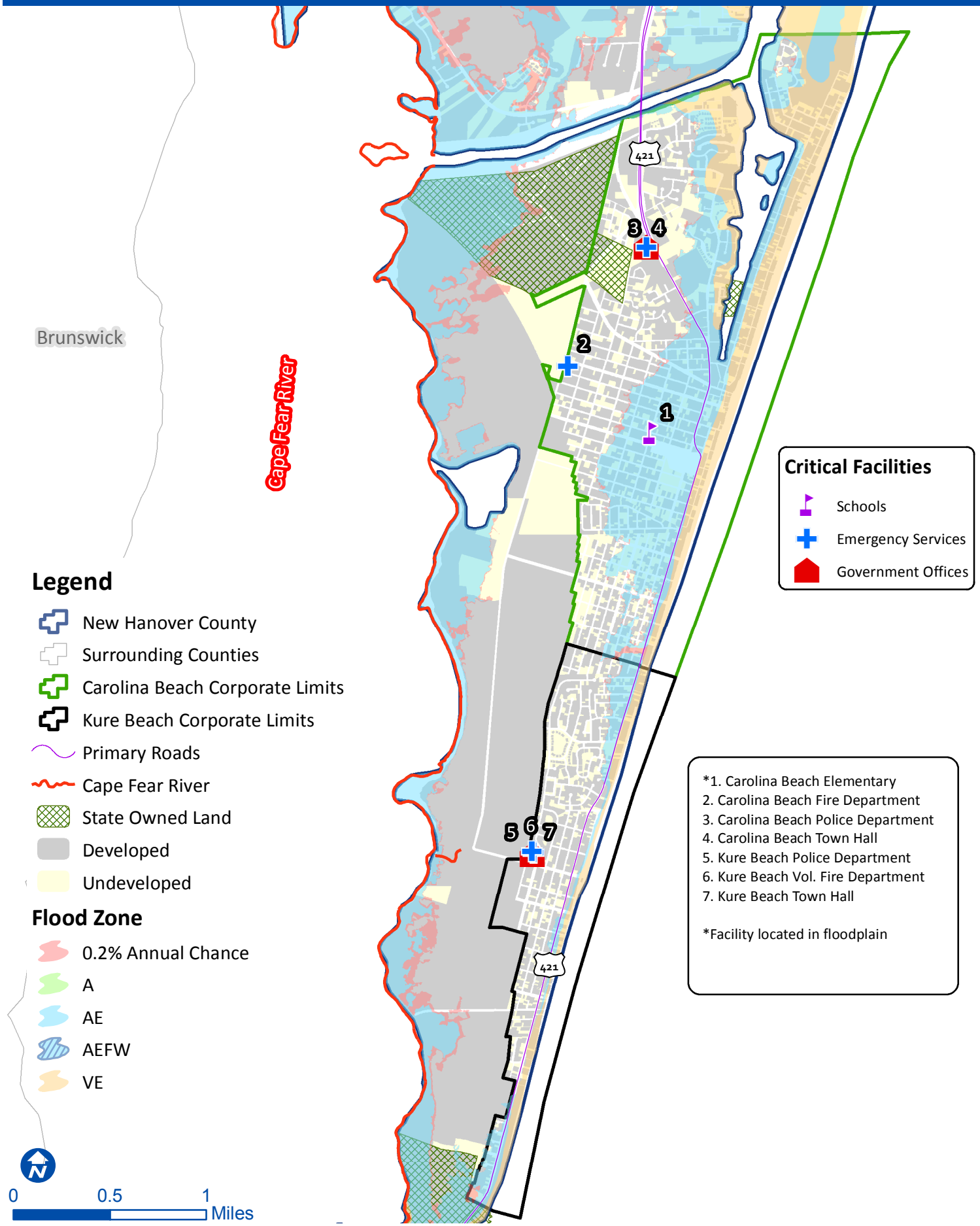
Map 15 - New Hanover County Non-Specific Hazards



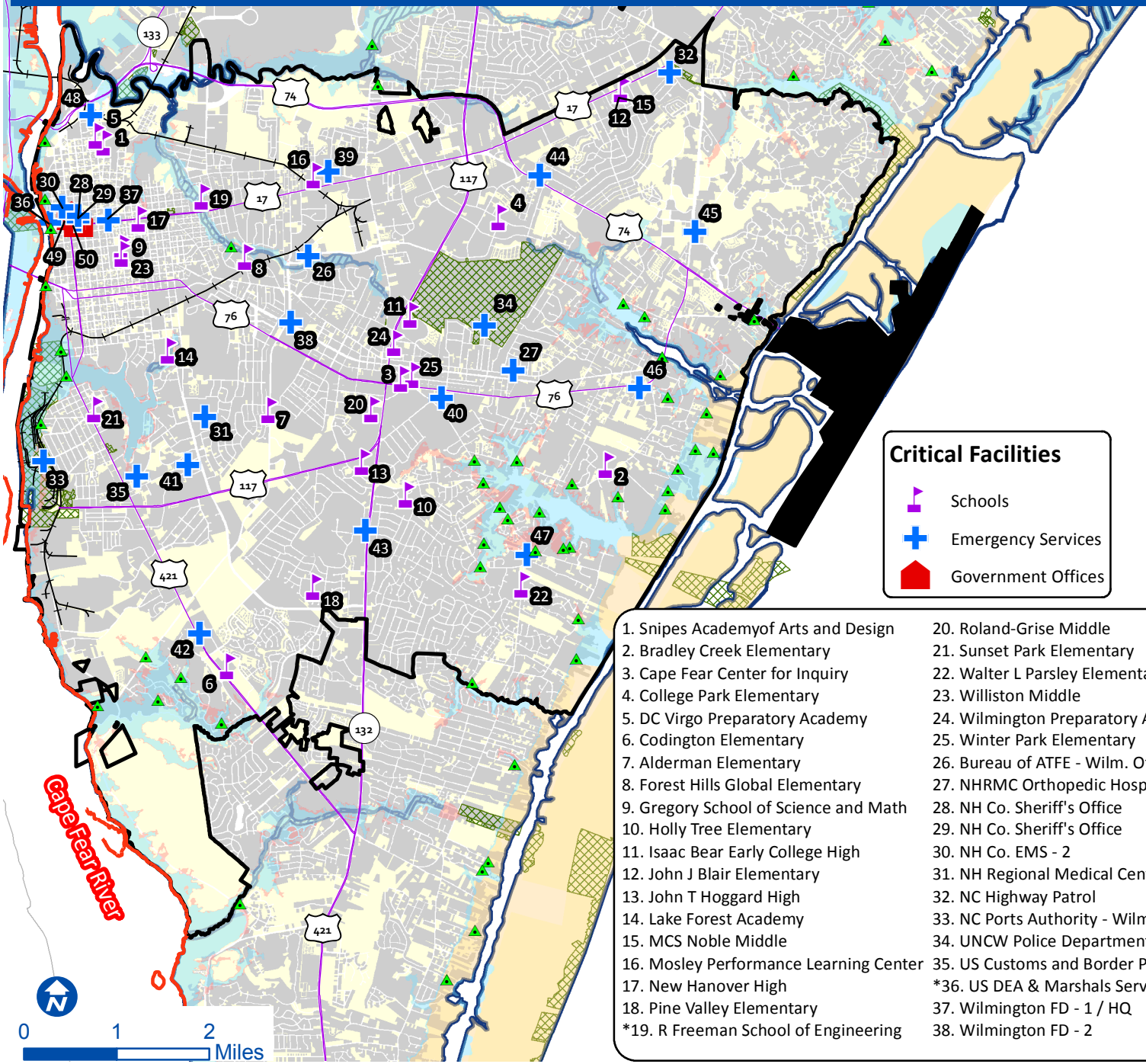
Map 16 - New Hanover County Specific Hazards



Map 17 - Town of Carolina Beach & Town of Kure Beach Flood Hazard Areas & Critical Facilities



Map 18 - City of Wilmington
Flood Hazard Areas & Critical Facilities



Legend

- New Hanover County
- Surrounding Counties
- Wilmington Corporate Limits
- Wrightsville Beach Corporate Limits
- Primary Roads
- Cape Fear River
- Pump Stations
- Railroad
- State Owned Land
- Developed
- Undeveloped

Flood Zone

- 0.2% Annual Chance
- A
- AE
- AEFW
- VE

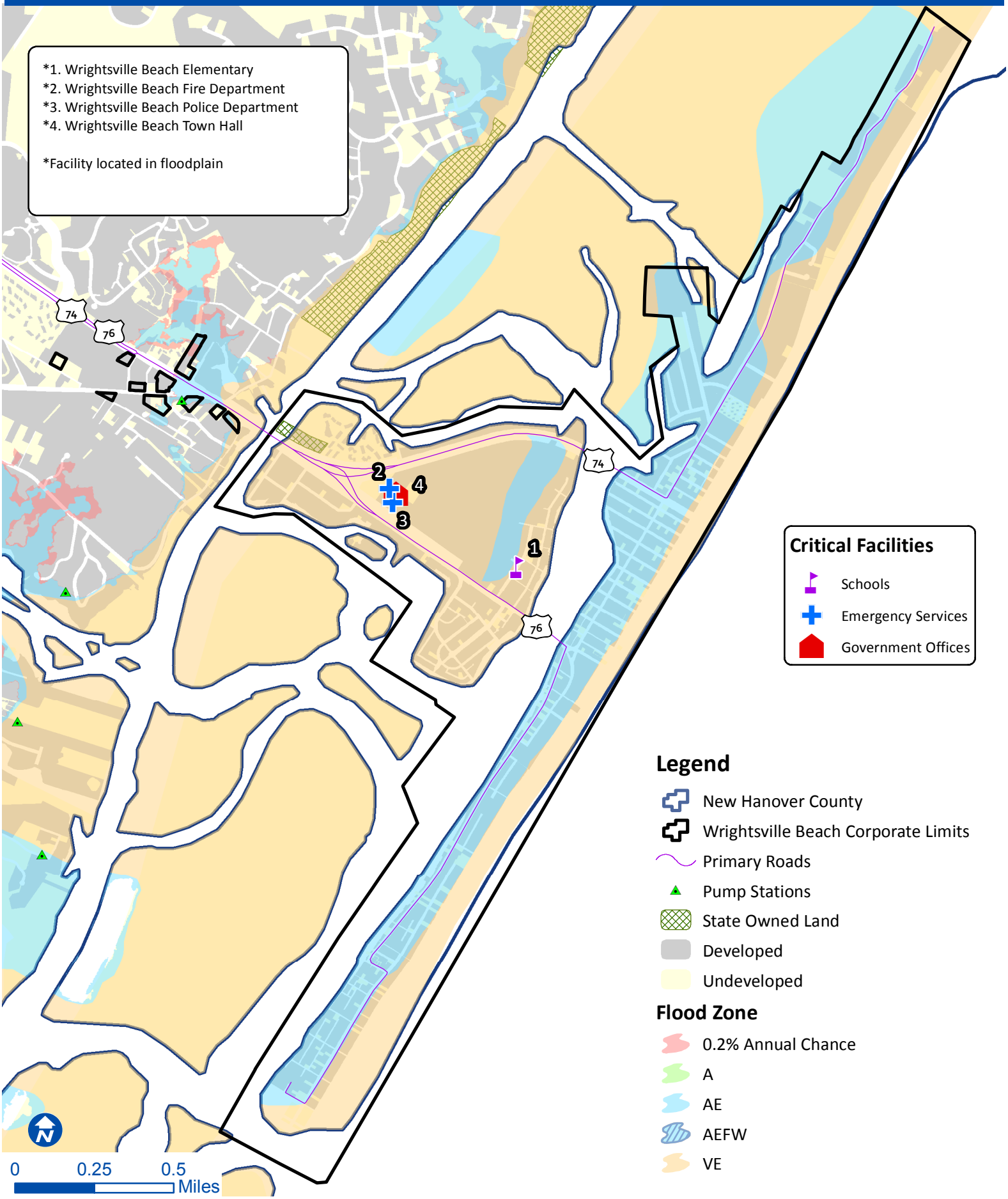
Critical Facilities

- Schools
- Emergency Services
- Government Offices

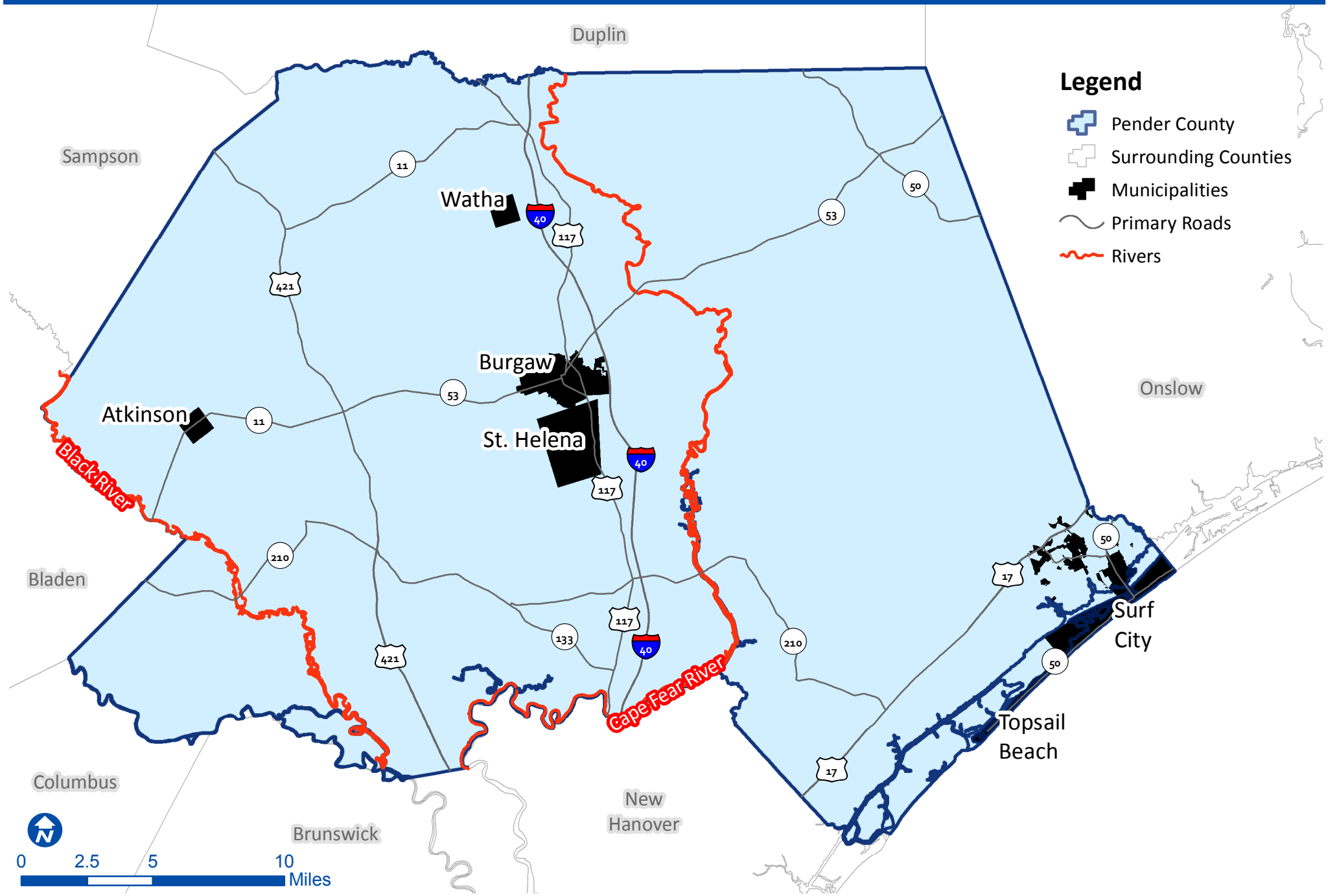
1. Snipes Academyof Arts and Design
2. Bradley Creek Elementary
3. Cape Fear Center for Inquiry
4. College Park Elementary
5. DC Virgo Preparatory Academy
6. Codington Elementary
7. Alderman Elementary
8. Forest Hills Global Elementary
9. Gregory School of Science and Math
10. Holly Tree Elementary
11. Isaac Bear Early College High
12. John J Blair Elementary
13. John T Hoggard High
14. Lake Forest Academy
15. MCS Noble Middle
16. Mosley Performance Learning Center
17. New Hanover High
18. Pine Valley Elementary
*19. R Freeman School of Engineering
20. Roland-Grise Middle
21. Sunset Park Elementary
22. Walter L Parsley Elementary
23. Williston Middle
24. Wilmington Preparatory Academy
25. Winter Park Elementary
26. Bureau of ATFE - Wilm. Office
27. NHRMC Orthopedic Hospital
28. NH Co. Sheriff's Office
29. NH Co. Sheriff's Office
30. NH Co. EMS - 2
31. NH Regional Medical Center
32. NC Highway Patrol
33. NC Ports Authority - Wilmington PD
34. UNCW Police Department
35. US Customs and Border Protection
*36. US DEA & Marshals Service
37. Wilmington FD - 1 / HQ
38. Wilmington FD - 2
39. Wilmington FD - 3
40. Wilmington FD - 4
41. Wilmington FD - 5
42. Wilmington FD - 6
43. Wilmington FD - 7
44. Wilmington FD - 8
45. Wilmington FD - 9
46. Wilmington FD - 10
47. Wilmington FD - 11
48. Wilmington PD
49. Wilmington City Hall
50. NH Co. Emergency Management

*Facility located in floodplain

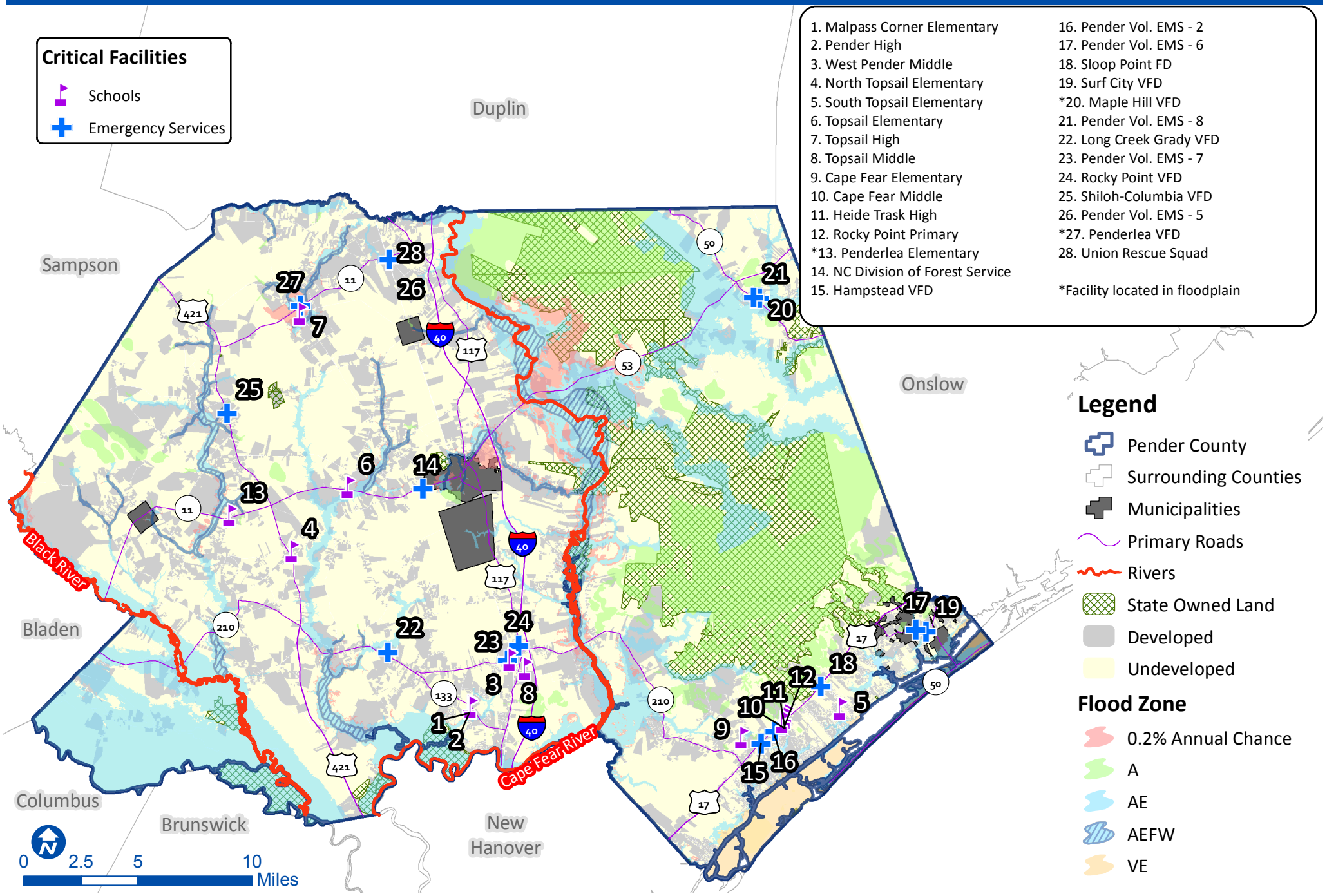
Map 19 - Town of Wrightsville Beach
Flood Hazard Areas & Critical Facilities



Map 20 - Pender County
Non-Specific Hazards



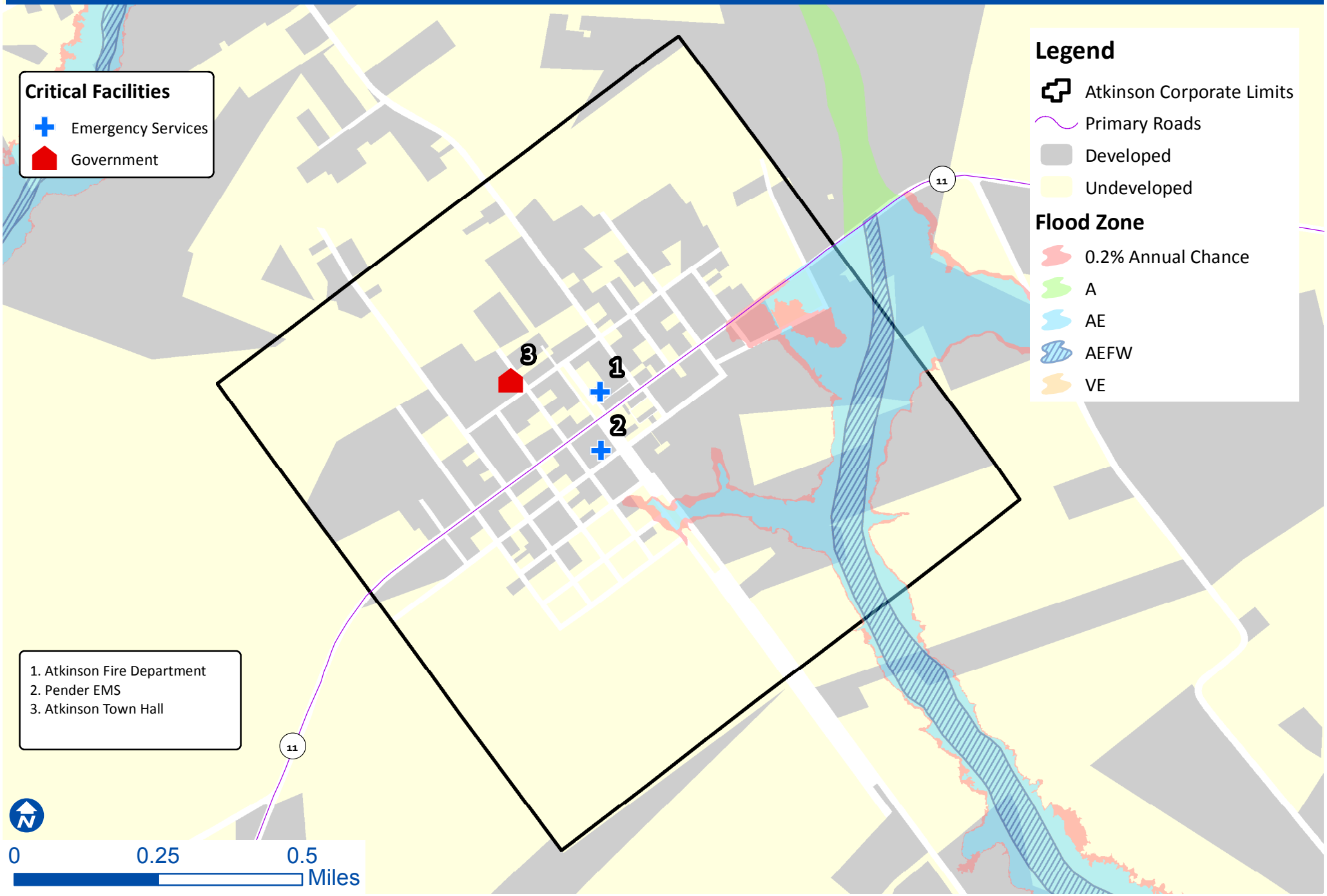
Map 21 - Pender County
Specific Hazards



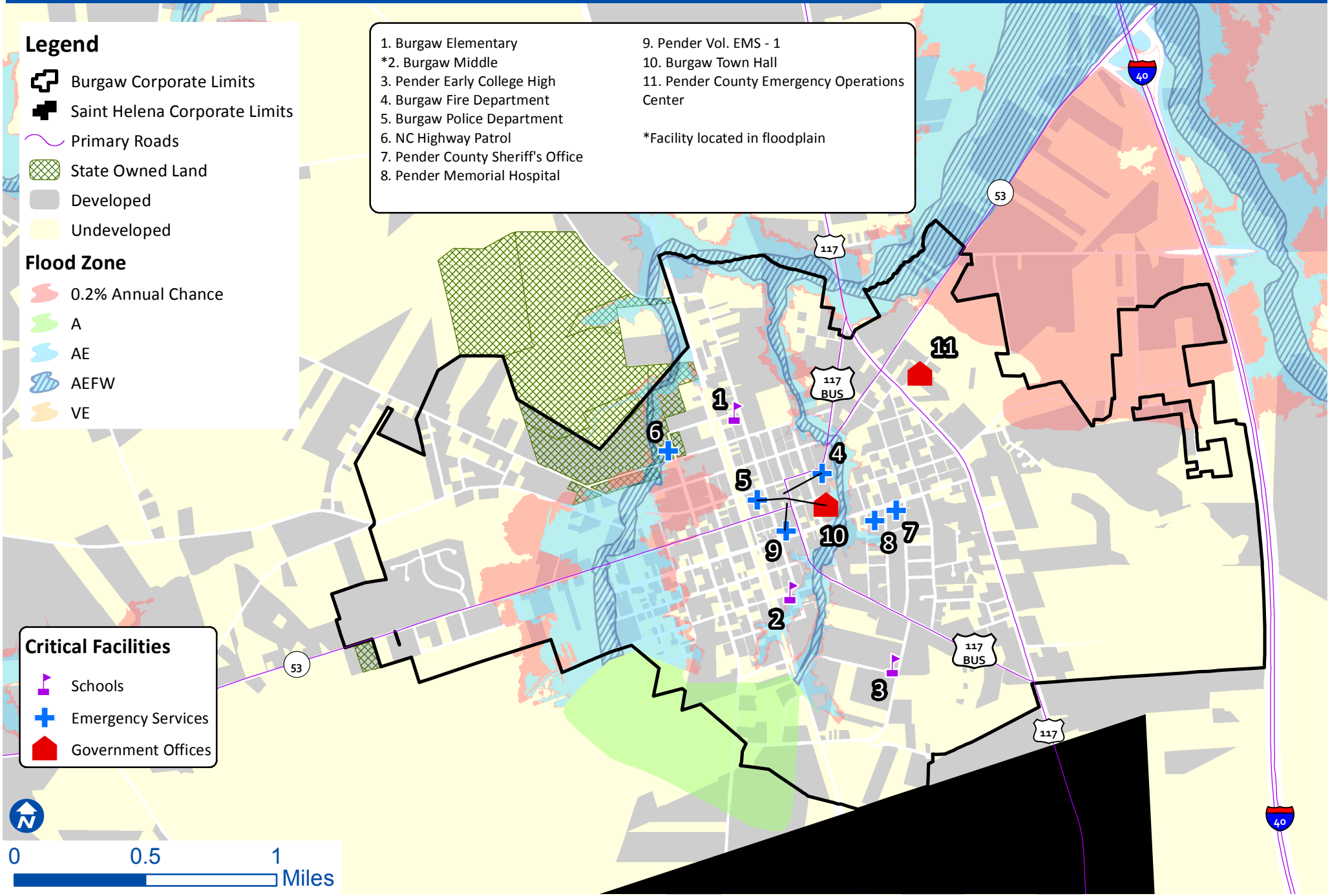
1. Malpass Corner Elementary
2. Pender High
3. West Pender Middle
4. North Topsail Elementary
5. South Topsail Elementary
6. Topsail Elementary
7. Topsail High
8. Topsail Middle
9. Cape Fear Elementary
10. Cape Fear Middle
11. Heide Trask High
12. Rocky Point Primary
*13. Penderlea Elementary
14. NC Division of Forest Service
15. Hampstead VFD
16. Pender Vol. EMS - 2
17. Pender Vol. EMS - 6
18. Sloop Point FD
19. Surf City VFD
*20. Maple Hill VFD
21. Pender Vol. EMS - 8
22. Long Creek Grady VFD
23. Pender Vol. EMS - 7
24. Rocky Point VFD
25. Shiloh-Columbia VFD
26. Pender Vol. EMS - 5
*27. Penderlea VFD
28. Union Rescue Squad

*Facility located in floodplain

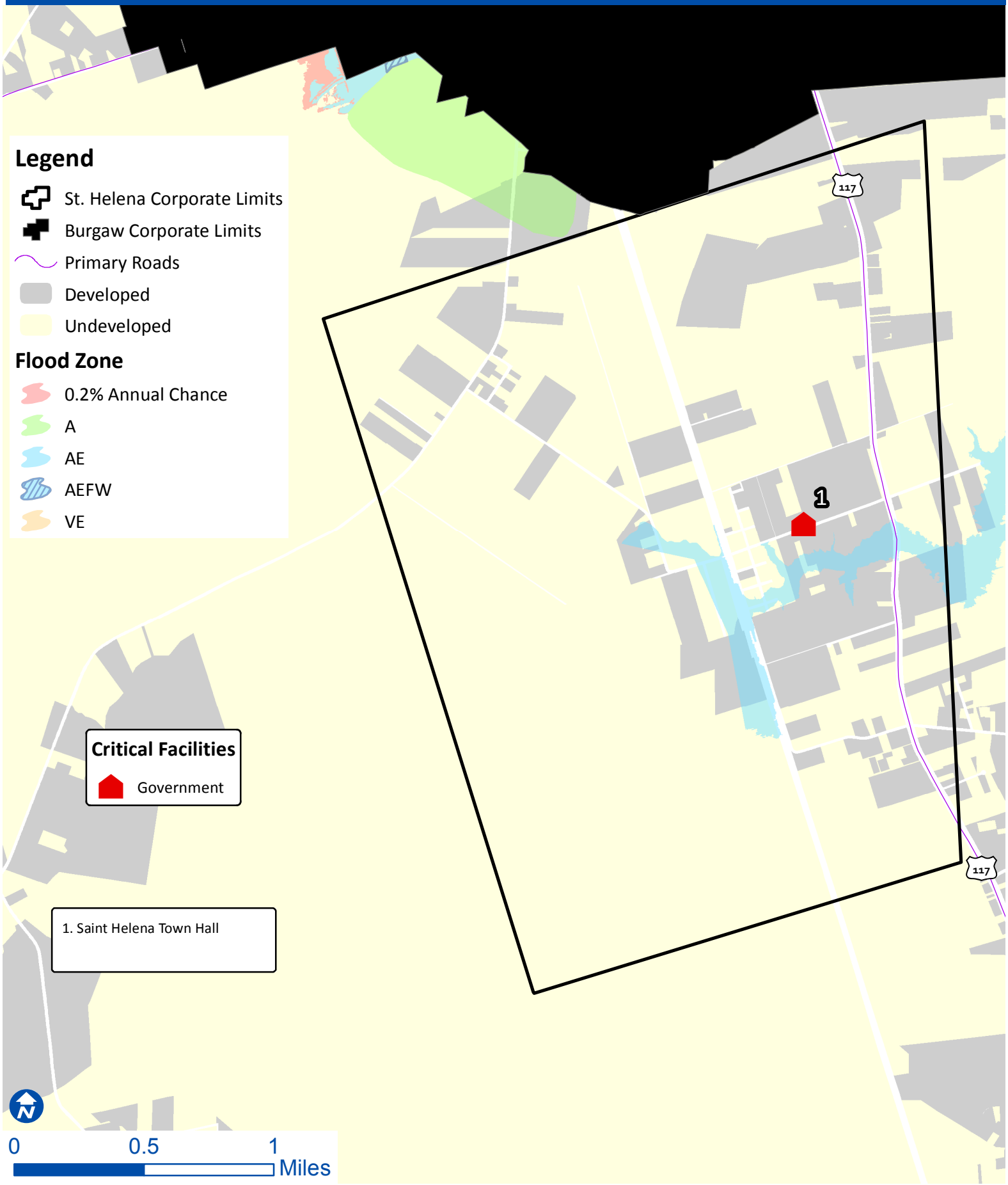
Map 22 - Town of Atkinson
Flood Hazard Areas & Critical Facilities



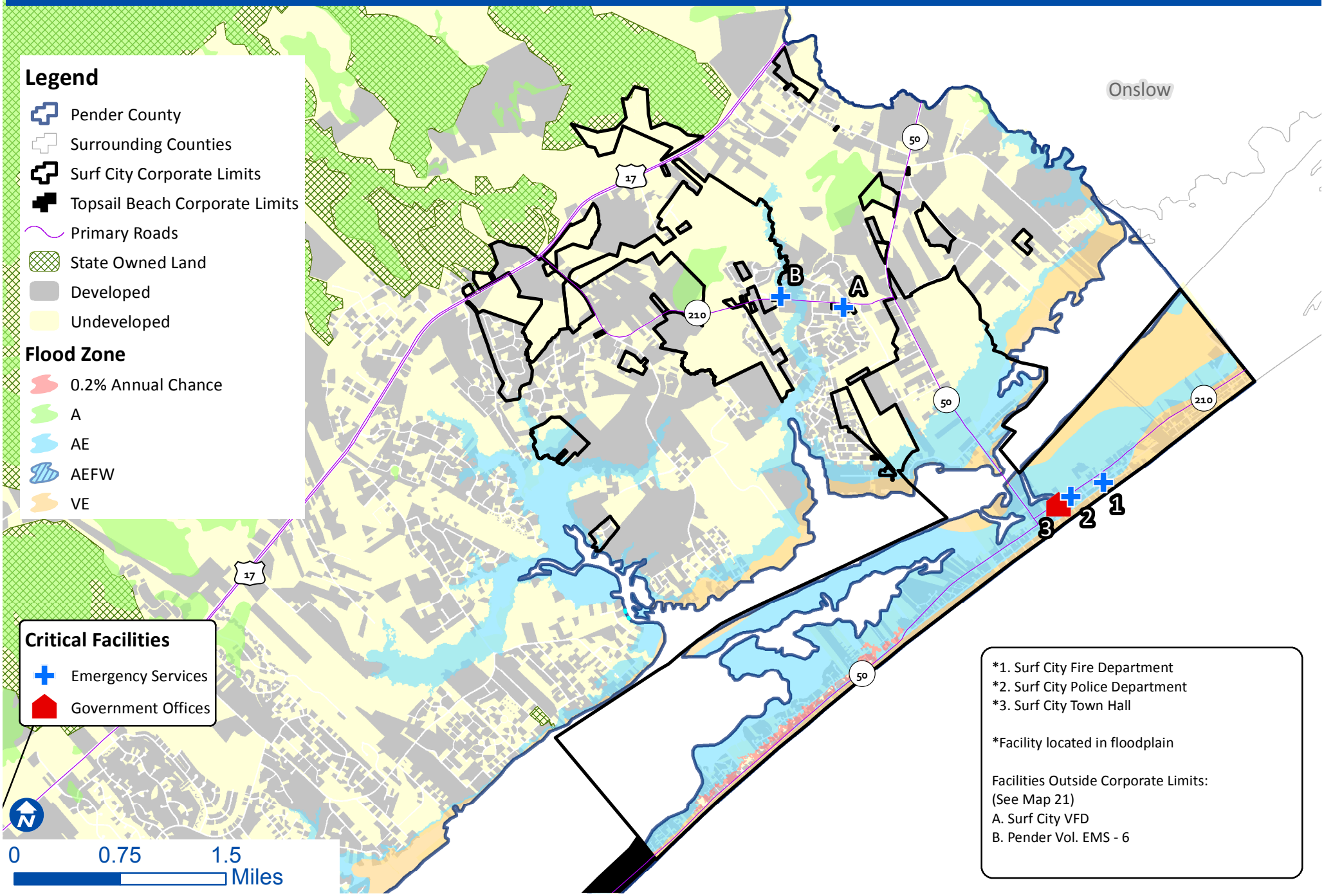
Map 23 - Town of Burgaw
Flood Hazard Areas & Critical Facilities



Map 24 - Village of St. Helena
Flood Hazard Areas & Critical Facilities



Map 25 - Town of Surf City
Flood Hazard Areas & Critical Facilities

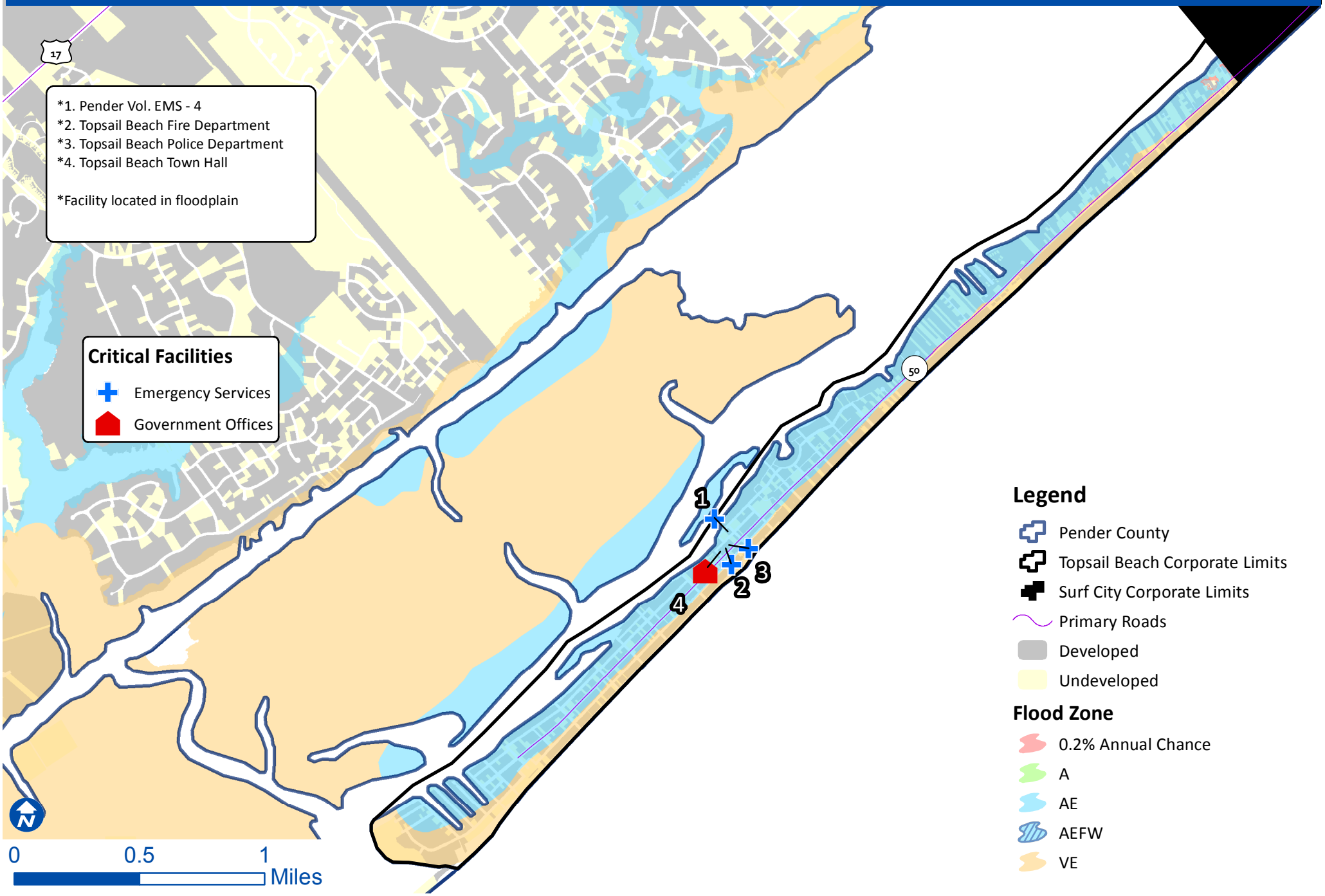


*1. Surf City Fire Department
*2. Surf City Police Department
*3. Surf City Town Hall

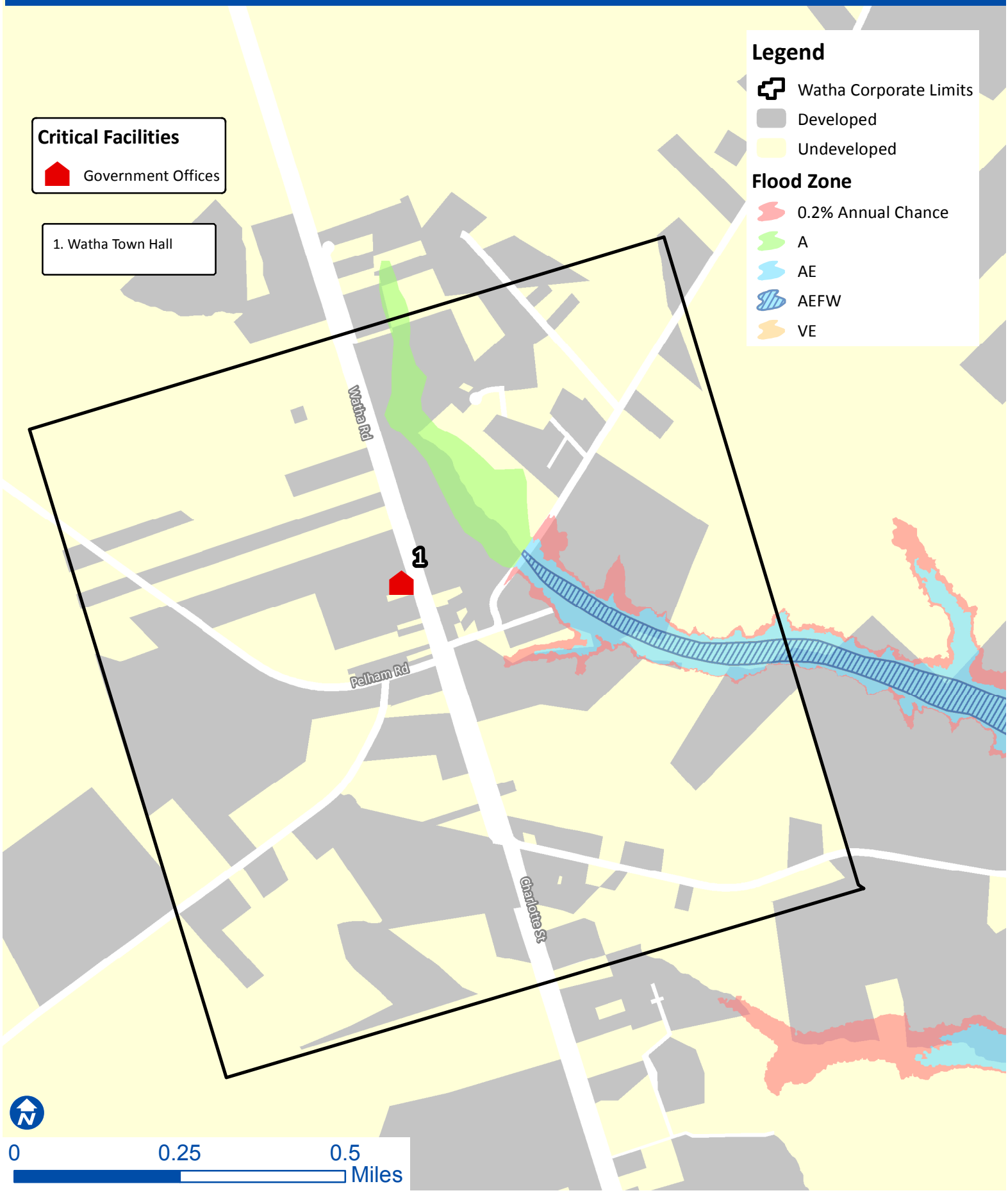
*Facility located in floodplain

Facilities Outside Corporate Limits:
(See Map 21)
A. Surf City VFD
B. Pender Vol. EMS - 6

Map 26 - Town of Topsail Beach
Flood Hazard Areas & Critical Facilities



Map 27 - Town of Watha
Flood Hazard Areas & Critical Facilities



APPENDIX B.

LOCAL GOVERNMENT PARTICIPATION DOCUMENTATION

MEETING REGISTRATION RECORD

Page ____ of ____

PROGRAM TITLE: Hazard Mitigation Plan Kickoff

DATE FROM: 7/30/14 **TO:** _____ **Location:** New Hanover EOC

NAME (PLEASE PRINT)	E-MAILING ADDRESSES	PHONE NUMBER (DAYTIME)	TITLE/POSITION	DEPARTMENT
✓ Jennifer Rigby	jrigby@nhcgov.com	798-7237	LR Planner	Planning
✓ Ken Vafier	kvafier@nhcgov.com	798-7281	Planning Supervisor	P & I
✓ BEN ANDREA	BANDREA@NHCGOV.COM	798-7571	CURRENT PLANNER	P & I
✓ Chris O'Keefe	cokeefe@nhcgov.com	798-7164	Director	P+I
✓ Chris May	cmay@capefearcog.org	910-395-4553	Director	CFCOG
✓ Kyle Breuer	kbreuer@pendercountync.gov	910-259-1202	Planning Director	Planning
✓ WARREN LEE	wlee@nhcgov.com	798-6910	DIRECTOR	EM/911
✓ Tim Owens	towens@towb.org	239-1770	Manager	Admin
✓ DAVID HEGLAR	HEGLARPW@CORNING.COM	232-3041	EMERGENCY MGR KURE BEACH	TOWN COUNCIL

MEETING REGISTRATION RECORD

PROGRAM TITLE: Hazard Mitigation Plan Kickoff

DATE FROM: 7/30/14 **TO:** _____ **Location:** New Hanover EOC

NAME (PLEASE PRINT)	E-MAILING ADDRESSES	PHONE NUMBER (DAYTIME)	TITLE/POSITION	DEPARTMENT
Steven Still	sstill@nhcgov.com	910-798-6907	Sr. EM Specialist	EM

Hazard Mit Planning Update 12/16/14

Tom Collins	tcollins@pendercountync.gov
Steven Spruill	sspruill@townofleland.com
Keith Dyers	keith@oibgov.com
Doug Haas	doug.haas@ncdps.gov
Kristen Skinner	kskinner@nhcgov.com
WARREN LEE	wlee@nhcgov.com
Tony Wilson	twilson@towb.org
Steve Edwards	sedwards@ci.oak-island.nc.us
Chris May	cmay@capefearcog.org
KEN VAFIER	kvafier@nhcgov.com
SAM GERUASE	police chief@TopsailBeach.org
Marc Pages	marc.pages@brunswickcountync.gov
STEPHEN BOYETT	SBOYETT@VILLAGEBHI.ORG
Kyle Breuer	kbreuer@pendercountync.gov
Allen Wilson	awilson@townofburgaw.com

MEETING REGISTRATION RECORD

Page ____ of ____

PROGRAM TITLE: Regional Hazard Mitigation Plan

DATE FROM: 3/19/2015 **TO:** _____ **Location:** New Hanover EOC

NAME (PLEASE PRINT)	E-MAILING ADDRESSES	PHONE NUMBER (DAYTIME)	TITLE/POSITION	DEPARTMENT
Ryan Cox	ryan.cox@ncdps.gov	919-825-2311	Hazard Mitigation Planning Supervisor NCEM	NCEM
Brent Cotten	Brent.Cotten@ncdps.gov	919-825-2592	Hazard Mitigation Planner	NCEM
Donald McGuire	mcguired@ec.rr.com	910 540 6648	Dep Director	Town of St James
Steve Edwards	sedwards@ci.oak-island.nc.us	910-523-2439	Building Codes Admin	Town of OAK ISLAND Development Serv.
Allen Wilson	awilson@townofburgaw.com	910-789-0292	Fire Marshal Em Coord.	Town of Burgaw
JOHN ALLEN	JOHN_ALLEN@SOUTHPORTNC.ORG	910 457 7961	COMMUNITY DEVELOPMENT SPECIALIST	CITY OF SOUTHPORT
Timothy Evans	TEVANS@HBTownHall.com	910-515-4501	PLANNING DIRECTOR	Town of Holden Beach

MEETING REGISTRATION RECORD

Page ____ of ____

PROGRAM TITLE: Regional Hazard Mitigation Plan

DATE FROM: 3/19/2015 **TO:** _____ **Location:** New Hanover EOC

NAME (PLEASE PRINT)	E-MAILING ADDRESSES	PHONE NUMBER (DAYTIME)	TITLE/POSITION	DEPARTMENT
ALEX AUTEN	Alex.Auten@Ncdps.gov	252-340-0776	MULTI-HAZARD PLANNER	NCEM
ZAK WHICKER	Zakare.whicker@Ncdps.gov	910-409-7997	AREA 5 COORDINATOR	NCEM
Bill Murphy	wmurphy@cityofbsl.org	(910) 363 0025	City Engineer	Boiling Spring Lakes
Marc Pagès	marc.pages@brunswickcountync.gov	910-253-2056	Land Planner	Brunswick Co. Planning
Tony Wilson	twilson@towb.org	910-524-7701	Director of Planning & Inspections	Wrightsville Beach
Ken Vafier	Kvafier@nhcgov.com	910-798-7281	Planning mgr New Hanover Co	Planning/Inspections
Keith Dycus	Keith@oibgov.com	910-579-3469	GIS + Codes Planner	Ocean Isle

MEETING REGISTRATION RECORD

Page ____ of ____

PROGRAM TITLE: Regional Hazard Mitigation Plan

DATE FROM: 3/19/2015 **TO:** _____ **Location:** New Hanover EOC

NAME (PLEASE PRINT)	E-MAILING ADDRESSES	PHONE NUMBER (DAYTIME)	TITLE/POSITION	DEPARTMENT
SAMUEL GERUASE	policechief@topsailbeach.org	910 328-4851	chief	POLICE DEPT.
Kyle Breuer	kbreuer@pendercountync.gov	910 259-1202	Director	Planning
Jeremy Hardison	Jeremy.hardison@carolinabeach.org	910-458-2991	SR. Planner	planning
Steven Spruill	sspruill@townofleland.com	910-332-4652	Public Works Director	P.W.
Athira Williams	townadministrator@townofhelville.com	910-371-2456	Town Administrator	Administration Planning

MEETING REGISTRATION RECORD

Page ____ of ____

PROGRAM TITLE: Regional Hazard Mitigation Plan

DATE FROM: 3/19/2015 **TO:** _____ **Location:** New Hanover EOC

NAME (PLEASE PRINT)	E-MAILING ADDRESSES	PHONE NUMBER (DAYTIME)	TITLE/POSITION	DEPARTMENT
KRISTEN SKINNER	kskinner@nhcgov.com	910-798-6905	EM SPECIALIST	NHC EM
Steven Still	sstill@nhcgov.com	910-798-6907	Deputy Director	NHCEM
CHUCK NANCE	tacalabash@atmc.net	910-579-6747x6	TOWN ADMINISTRATOR	CALABASH
Heather Griffin	heather.griffin@brunswickcountync.gov	910-253-2562	Brunswick County Emergency Services	EM Planner
Tom Collins	tcollins@pendercountyncgov	910-259-1210	Director	Pender EM

Regional MAC Kickoff Meeting 3/19/2015

Name	Address e-mail	Representing
Brent Cotter	brent.cotter@ncdps.gov	NCEM
Ryan Cox	ryan.cox@ncdps.gov	NCEM
Donald McGuire	mcguired@ec.rr.com	Town of St James
Steve Edwards	sedwards@ci.oak-island.nc.us	Town of Oak Island
Allen Wilson	awilson@townofburgaw.com	Town of Burgaw
JOHN ALLEN	JOHN_ALLEN@SOUTHPORTNC.ORG	CITY OF SOUTHPORT
Timothy Hale Evans	TEVANS@HBTOWNHALL.COM	TOWN of Holden Beach.

Name	Address e-mail	Representing
Chief Sam Gervase	policechief@topsailbeach.org	Town of Topsail Beach
Kristen Skinner	kskinner@nhcgov.com	NHC EM
Steven Still	sstill@nhcgov.com	NHC EM
Chuck Nance	tacalabash@atmc.net	Town of Calabash
Heather Griffin	heather.griffin@brunswickcountync.gov	BCES
Athina Williams	townadministrator@townofbelville.com	TO Belville
Steven Spruill	ssspruill@townofleland.com	Town of Leland
Jeremy Hardison	Jeremy.hardison@t	

Name	Address email	Representing
Alex Auten	Alex.Auten@ncdps.gov	NCEM
ZAKARE WHICKER	Zakare.whicker@ncdps.gov.	NCEM
Bill Murphy	wmurphy@cityofbsl.org	Boiling Sp. Lakes
Marc Pages	marc.pages@brunswickcountync.gov	Brunswick Co.
Tony Wilson	twilson@townwb.org	Wrightsville Beach
Ken Vafier	kvafier@nhcgov.com	New Hanover
Keith Dyers	Keith@oibgov.com	Ocean Isle

Brunswick County MAC

SIGN-UP SHEET
Hazard Mitigation Regional Meeting
April 14, 2015 – Oak Island Town Hall

SPEAKER NAME & EMAIL ADDRESS **(PLEASE PRINT)**	Phone number	
Don McGuire mcguire@pcc.rr.com	910 540 6648	St. J.
Bill Murphy wmurphy@cityofbsl.org	(910) 3630025	BSL
GEORGE KASSLER WWW.POLICE@CASWELLBEACH.ORG	910 278-5471	CB
Chuck Rash chuck@oibgov.com	910 579-2804	OIB
Timothy D Evans TEvans@HbTownHall.com	910-515-4501	HB
Rhonda Wooten RWooten@HbTownHall.com	910-842-6080	HB
Steven Sprvill sspruill@townofleland.com	910-332-4652	Lel
GEORGE ENNIS SWAIN-VARNAMTOWN, N.C.	842-6217	Var
Keith Pycus Keith@oibgov.com	(910) 579-3469	OIB
Donna Coleman dcoleman@ci.oak-island.nc.us	(910) 201-8047	OI
Marc Pages marc.pages@brunswickcountync.gov	910-253-2056	BC
Rawls Howard rhoward@atmc.net	910-579-0068	SB
Kevin Dempsey kevindempsey@atmc.net	910-540-7966	SB
Gail Treglia gtreglia@atmc.net	910-575-4877	CS
Steve Edwards sedwards@ci.oak-island.nc.us	910-201-8052	OI
Randy Walters RandyWalters@ATMC.Net	910-579-0068	SB
JOHN ALLEN JOHN_ALLEN@SOUTHPORTNC.ORG	910 457 7961	SP
Robert Lewis rlewis@townofshallotte.org	910-754-4032	SH
Athina Williams townadministrator@townofleland.com	910-371-2456	Bel
CHRIS MCCALL cmccall@villagebhi.org	910.616.7625	BHI

May 1, 2015 Brunswick Co. Hazard Mitigation Plan

Name	Agency	Email
Don McGuire	St James	mcguirede@ci.nmcom
Keith Dycus	Town of OIB	keith@oibgov.com
Cebock HANCE	CALABASH	tacalabash@atmc.net
Chuck Rash	Sunset Beach	chuck@oibgov.com
Robert Lewis	Town of Shallotte	rlewis@townofshallotte.org
Steven Sprvill	Town of Leland	ssprvill@townofleland.co
Randy WALTERS	TOWN OF SUNSET BEACH	RANDYWalters@ATMC.Net
KEVIN Dempsey	TOWN SUNSET BEACH	KEVINdempsey@atmc.net
Jeff Cappadona	Town of Belville	jeffrey.cappadona@cavanaughsolutions.com
GEORGE ENNIS SWAIN,	VARNAMTOWN	ph 842-6217
Ada McDonald	Varnamtown	
Dewey Smith	Bolivia	townhall.bolivia@atmc.net
Chad Hicks	Caswell Beach	910-278-5471 chicks@caswellbeach.org
Marti Hardy	Caswell Beach	910-278-5471 " "
Marc Pages	Br. Co. Planning	marc.pages@brunsco.net
Steve Edwards	Town of Oak Island	sedwards@ci.oak-island.nc.us
Bill Murphy	City of Boiling Spring Lakes	wmurphy@cityofBSL.org

HAZARD MITIGATION PLAN WORKSHOP
FRIDAY, JUNE 5, 2015

DATE	TIME	NAME	ORGANIZATION	TELEPHONE NUMBER	EMAIL
6/5/2015		Tina Colby	Town of Sandy Creek	655-3153	tclerksandycreek@aol.com
6/5/2015		Brent Cotten	NCEM Hazard Mitigation Planner	919-825-2592	brent.cotten@ncdps.gov
6/5/2015		John Mello	NCEM/Mitigation Plans	919-825-2334	john.mello@ncdps.org
6-5-15		Athina Williams	Town of Belville	910-371-2456	townadministrator@townofbelville.com
6/5/15		Marc Pages	Brunswick Co Planning	910-253-2056	marc.pages@brunswickcountync.gov
6/5/15		Chris McCall	Bald Head Island	910-457-9700	cmccall@villagebhi.org
6/5/15		Keith Dycus	Town of OIB	910-579-3469	Keith@oibgov.com
6/5/15		Chuck Rash	Town of OIB	910-579-2804	Chuck@oibgov.com
6/5/15		Jeff Capparadona	Cavanaugh (Town of Belville)	(910) 392-4462	jeffrey.capparadona@cavanaughsolutions.com
6/5/15		Rawls Howard	Town of Sunset Beach	910-579-0068	rhoward@atmc.net
6/5/15		Bill Murphy	City of Boiling Spring Lakes	910 363 0025	wmurphy@cityofbsl.org
6/5/15		Steve Edwards	Town of Oak Island	910-201-8052	sedwards@ci.oak-island.nc.us
6.5.15		Randy Walters	Sunset Beach	910 579-0068	randywalters@atmc.net

HAZARD MITIGATION PLAN WORKSHOP
FRIDAY, JUNE 5, 2015

DATE	TIME	NAME	ORGANIZATION	TELEPHONE NUMBER	EMAIL
6-5-16	10:00	Steven Sprvill	Town of Leland	910 332 4652	ssprvill@townofleland.com
6-5-15	10:00	Jake Vann	CFCOG	910-395-4553	jvan@capefearcog.org
6/5/15	10:00	JOHN ALLEN	CITY OF S'PORT	910 457 7900	JOHN_ALLEN@SOUTHPORTNC.ORG
6/5/15		Tim EVANS	TOWN of Holden Beach	910-515-4501	TOWN of Holden Beach.

Southeastern NC Hazard Mitigation Plan Meeting

March 21, 2016 David R. Sandifer Building Training Room

Name	Organization	Email	Phone
Don McGuire	St James EM	mcguired@ec.rr.com	910 540 6648
Timothy dale Davis	Holden Beach	1331Timothy@Gmail.Com	910-842-6080
PETE LARKIN	SUNSET BEACH	PLARKIN@TENSARCORP.COM	443-994-4242
STEPHEN BOYETT	BALD HEAD	SBOYETT@VILLAGEBHI.ORG	457-6255
Keith Dycus	Town of OIB	Keith@oibgov.com	910-579-3469
Chuck Rash	Town of OIB	Chuck@oibgov.com	910-579-2804
ENNIS SWAIN	VARNAM TOWN		910-842-6217
Robert Lewis	Shallotte	rlewis@townofshallotte.org	910-754-4032
Bill Murphy	City of Boiling Spring Lks	wmurphy@cityofbsl.org	910 363-0025
Trey Burke	NAVASSA / Cape Fear COG	tburke@capefearcog.org	395-4553
Chad Hicks	Caswell Beach	chicks@caswellbeach.org	910-278-5471
Tina Colby	Town of Sandy Creek	tclerksandycreek@aol.com	910.655.3153
Ella Jane Marotou	Town of Bolivia	townhall.bolivia@atmc.net	910-253-5303
Steven Sprvill	Town of Leland	ssprvill@townofleland.com	910 332 4652
CHUCK NANCE	TOWN OF CALABASH	tocalabash@atmc.net	910-579-6747x6
Sheila M Bell	Town of Oak Island	sheilabell@ci.oak-island.nc.us	910-520-8508
Steve Edwards	Town of Oak Island	sedwards@ci.oak-island.nc.us	910-201-8052

SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

Brunswick County MAC Public Input Meeting

March 21, 2016

Name	Jurisdiction	E-Mail	Phone
JOHN ALLEN	CITY OF S'PORT	JOHN_ALLEN@SOUTHPORTNC.ORG	910 457 7961
Rawls Howard	Town of Sunset Beach	rhoward@atmc.net	910-579-0068
Jeff Cappadona	Town of Belville	jeffrey.cappadona@cavanaughsolutions.com	(910) 392-4462

SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

New Hanover County MAC Meeting

April 21, 2015

Name/Representing	Address	E-Mail	Phone
KRISTEN SKINNER/NHC EM	230 GOVERNMENT CENTER DR, STE 115 WILMINGTON, NC 28403	kskinner@nhcgov.com	910-798-6905
Eric Griffin UNCW	601 S. College Rd Wilmington, NC 28403-5919	griffinek@uncw.edu	910-962-7874
CFCC Police Dept. DANIEL J. WILCOX	411 N. FRONT ST WILMINGTON 28401	DWILCOX@CFCC.EDU	910 362 7670
LYNN BESTUL NHC ENV MGT	3002 US HWY 421 N WILMINGTON 28401	LBESTUL@NHCGOV.COM	910-798-4410
James DeGolyer GEH	3901 Castle Hayne Road Wilmington NC 28401	james.degolyer@ge.com	910-819-5862
JIM IANNUCCI	230 GOVT CENTER WILM, NC 28403	jiannucci@nhcgov.com	910-798-7142
Tim Burgess NHC	230 Government Center Drive Wilmington, NC 28403	tburgess@nhcgov.com	910-798-7183
James Jarvis	1102 S. 16th St. Wilmington, NC 28401	James.Jarvis3@redcross.org	910-762-2683 x328
Jeremy Hardison Town of Carolina Beach	1121 N. Lake Park BLVD Town of CB	Jeremy.hardison@carolinabeach.org	910-458-2991
Heidi Cox NCDENR-Public Water Supply	127 Cardinal Dr. Ext. Wilmington, NC 28405	heidicox@ncdenr.gov	910 796-7368
NCDENR-PUBLIC WATER DIANE WILLIAMS	" "	diane.j.williams@ncdenr.gov	910-796-7366
Tony Wilson	321 Causway Dr Wrightsville Beach	twilson@tcub.org	910 524-7701
Michelle Turner-PPD	~~[illegible]~~ 929 N. Front St., 28401	Michelle.turner@ppdi.com	910-558-7261

SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

New Hanover County MAC Meeting

April 21, 2015

Name/Representing	Address	E-Mail	Phone
John Fullerton	City of Wilmington	john.fullerton@wilmingtonnc.gov	910 254-0900
Spencer Rogers	NC Sea Grant	rogersp@uncw.edu	910-962-2491
KATHY STEPHENS	300 Division Drive NCDOT	kstephen@ncdot.gov	910-251-2655
Rod Wyatt	NC Dot	rwyatt@ncdot.gov	910 341-0300
Brent Cotten	NCEM	brent.cotten@ncdps.gov	919-825-2592
Quinn Woolard	NCEM	quinn.woolard@ncdps.gov	919-825-2569
Congressman Rouzer	310 goverment center drive unit 1 Bolivia NC 28422	chance.lambeth@mail.house.gov	919-630-3411
Billy Howard New Hanover Regional EMS	5305 Wrightsville Ave Wilm J 28403	billy.howard@NHRMC.org	910-367-1425
Steve Still / NHC EM	230 Government Dr Wilm	sstill@nhcgov.com	910-798-6907
CDR Joe Solomon / USCG Sector NC	721 Medical Center Dr Wilmington, NC	Joseph.H.Solomon@uscg.mil	910-772-2204
Kevin Cowan	NC State Port	Kevin.cowan@ncports.com	910-251-2725
Gregg Teague / NC State Ports Police	NC State Port	gregg.teague@ncports.com	910-279-7121
Ken VaFier	NHC Planning & Inspections	kvafier@nhcgov.com	910 798 7281
Warda Coston	NHC Planning & Inspections	wcoston@nhcgov.com	910-798-7442
Beth Eckert	CFPUA-235 Port Ctr Dr. Wilmington, NC 28403	beth.eckert@cfpua.org	910-524-4133

ERIC HATCHER / CFPUA	235 GOVERNMENT CENTER DR WILMINGTON, NC 28412	eric.hatcher@cfpua.org	910.332.6508
Darnell Boyd / NHCHD	2029 S. 17th St. Wilmington, NC 28412	dboyd@nhcgov.com	910-798-6761
DAVID KELLAM / Figure8 Island	15 Bridge Rd. Wilmington, NC. 28411	david@figure8homeowners.com	910-686-0635

SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

New Hanover County MAC Meeting

May 13, 2015

Name/Representing	Address	E-Mail	Phone
Brant Cotten/NCEM -		brant.cotten@ncdps.gov	919-825-2592
Ryan Cox -		ryan.cox@ncdps.gov	919-825-2311
Marc Pages		Marc.pages@brunswickcountync.gov	910-253-2056
Lenore Bellamy -		Lenore.Bellamy@NHCS.net	254-4275 910 254-4308
Wanda Coston -		wcoston@nhcgov.com	910-798-7442
Spencer Rogers -		rogerssp@uncw.edu	910-962-2491
Tony Wilson -		twilson@tawb.org	910-239-1745
Debora Cottle -		Dcottle@nhcgov.com	798-6931
Charles Smith -		cgsmith@nhcgov.com	798-7446
Alex Auten -		Alex.Auten@NCdps.gov	252-340-0776
Thomas Johnson -		Thomas.Johnson111@USCG.mil	772-2206
TIFFANY ZEHNLE -		TIFFANY.M.ZEHNLE@USCG.MIL	910-515-5593
Chance Lambeth -		Chance.Lambeth@mail.house.gov ~~house.mail.gov~~	919-630-3411
Tom Crews -		tom.crews@wilmingtonnc.gov	910-371-5803
Corey Harrison -		Corey.Harrison@wilmingtonncgov	910-342-2739
WARREN LEE -		WLee@nhc.gov.com	910-798-[illegible]

SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

New Hanover County MAC Meeting

May 13, 2015

Name/Representing	Address	E-Mail	Phone
ERIC HATCHER CFPUA	235 GOVERNMENT CENTER DRIVE WILMINGTON NC 28403	eric.hatcher@cfpua.org	910 332-6508
Greeda Hopkin/ARC	1102 S. 16th St. Wilmington, NC 28401	greeda@yahoo.com	(910)409-1787
MARK BENNETT/NHRMC	2131 S 17TH ST WILM 28401	MARK.BENNETT@NHRMC.ORG	(910)343-2883
Wendy Housand NHRMC/EMS	5301 Wrightsville Ave Bldg J Wilmington 28403	Wendy.Housand@NHRMC.org	(910)-343-4800
Ken Vafier NHC planning	230 Gov't Center Dr	Kvafier@nhcgov.com	910-798-7281
Steve Still NHC Emergency Mangt	230 Gov Center Dr	sstill@nhcgov.com	910-798-6907
DANIEL WILCOX CFCC	411 N. FRONT ST WILMINGTON 28401	DWILCOX@CFCC.EDU	910 362 7676
Eric Griffin UNCW	601 S. College Rd Wilmington, NC 28403-5917	griffinek@uncw.edu	910 962-7874
Tim Burgess, NHC	230 Gov. Center Drive, Suite 195 Wilmington, NC 28403	tburgess@nhcgov.com	910 798-7183
Mike Arkinson, NHC	" Suite 155	Markinson@nhcgov.com	910 798-7474
Kathryn Thurston	305 Chestnut	Kathryn.Thurston@wilmingtonnc.gov	341-3249
Joshua Swift NHC Health Dept.	2029 S. 17th St. Wilmington, NC 28401	jswift@nhcgov.com	910/798-6592
Kristin Skinner		kskinner@nhcgov.com	910-798-6905

SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

New Hanover County MAC Meeting

May 13, 2015

Name/Representing	Address	E-Mail	Phone
ED KENNEDY KURE BEACH	7312 CASSIMIR PL WILMINGTON, NC 28412	Kboceanrescue@yahoo.com	910 409-9398
HANS EDWARDS SOUTHEASTERN HEALTHCARE PREPAREDNESS REGION	4552 CAROLINA BEACH RD Wilmington NC 28412	hans.edwards@enhrmc.org	910-667-4877

Jeremy Hardison		Jeremy.hardison@carolinabeach.org	910-458-2991

SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

New Hanover County MAC Meeting

June 5, 2015

Name/Representing	Address	E-Mail	Phone
Ken VaFier NHC	230 Govt Center Dr Wilm	kvafier@nhcgov.com	798-7281
Kristen Skinner, NHC	230 Govt Center Dr Ste 115 Wilm	kskinner@nhcgov.com	798-6905
WARREN LEE, NHCEM/911	" "	wlee@nhcgov.com	798-6910
ERIC HATCHER/CFRPA	235 GOVT CENTER DRIVE	eric.hatcher@cfrpa.org	332-6508
Joe Iannucci/NHC	230 Govt Center	jiannucci@nhcgov.com	798-7142

SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

New Hanover County MAC Meeting

June 24, 2015

Name/Representing	Address	E-Mail	Phone
Ken V-Fiur NHC	230 Government Center Dr Wilm	KVaFur@nhcgov.com	798-7281
Landis Holland	3329 Wrightsville Ave. Wilm, 28403	lholland@pepplanning.com	392-0060
Kristen Skinner, NHC	230 Government Center Dr, Wilm, Ste. 115	kskinner@nhcgov.com	910-798-6905

SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

Pender County MAC Public Input Meeting

March 17, 2016

Name	Jurisdiction	E-Mail	Phone
Robert Barnhill	St. Helena	rbarnhill@ec.rr.com	910-604-0131
Larry Bergman	Surf City	lbergman@townofsurfcity.com	910 232 7521
Kyle Breuer	Pender County	kbreuer@pendercountyncgov	910 259 1202

CITY OF NORTHWEST

P.O. BOX 1509
LELAND, NORTH CAROLINA 28451
TELEPHONE: (910) 655-3110
FAX: (910) 655-8853

MAYOR
James A. Knox
MAYOR PRO-TEM
Charles L. Carroll
COUNCILMEN
Foster McKoy
James W. McKoy
Haywood Miller Jr.
Michael D. Troy

CITY ATTORNEY
John C. Wessell, III
CITY CLERK
Gwendolyn K. Spicer
ASST. CLERK
Adrienne L. Wright
Incorporated
June 28, 1993

December 3, 2015

Mr. Tom Collins, EM Director
Pender County
P.O. Box 28
Burgaw, NC 28425

Dear Mr. Collins:

This letter is in reply to your request for a description of participation from the City of Northwest in the planning process for the Southeastern NC Regional Hazard Mitigation Plan project. Due to our extremely small staff, we have been unable to have a representative attend any of the planning meetings. The City has utilized the project website which has been very instrumental in reviewing what has been proposed and beneficial in relaying to Council what has transpired through the meetings.

City staff maintains frequent contact with county officials, not only regarding water/sewer issues, but all emergency management situations. Based on our previous work with Brunswick County Planning and Emergency Management officials on past projects, we are satisfied that the proposed draft plan will provide the necessary remedies for all of Brunswick County, including the City of Northwest, in the event of a major disaster.

The Town appreciates your work on this project. Please contact me if you have any questions.

Sincerely,

Gwen Spicer

Gwen Spicer
Town Clerk

Cc: Dale Holland, HCP

THE VILLAGE OF ST. HELENA NORTH CAROLINA
EST 1905 INC 1988

December 1, 2015

Mr. Charles Collins, Director
Pender County Emergency Management
PO Box 28
Burgaw, NC 28425

Dear Mr. Collins:

The Village of St. Helena, although not represented at every meeting, kept the Village Council up to date on the newly proposed Southeastern NC Regional Hazard Mitigation Plan. Our building inspector, which also works with the Town of Burgaw, did an excellent job of staying on top of the proposal and any changes that occurred during the planning process and we feel comfortable with the plan as it affects the Village. The council is in agreement with it at this point.

I might point out that not all towns are full time, nor have full time employees to attend meetings during the day. Consideration for some evening meetings in the future would enable us to attend.

Again our council has reviewed the proposed plan on several occasions and at this time is in agreement with the plan as proposed. There may be some concerns during the public hearing phase, but it is our intent to approve the plan upon receipt and review of the adopted final proposal.

Respectfully,

Robert M. Barnhill
Mayor

P.O. Box 1508 | Burgaw, NC 28425 | 910-259-9655

TOWN OF WATHA
1059 Camp Kirkwood Rd
Watha, NC 28478

November 30, 2015

Mr. Tom Collins, EM Director
Pender County
P.O. Box 28
Burgaw, NC 28425

Dear Mr. Collins:

Please be advised that the Town of Watha, Pender County, fully intends to adopt and implement the proposed Southeastern NC Regional Hazard Mitigation Plan pending approval from FEMA. We participated in the 2010 Pender County Hazard Mitigation Plan, but understand and appreciate the need for broader regional cooperation.

Due to our limited staff, we have been unable to have a representative attend any of the planning meetings. However, we monitored the planning process via the project website and informational emails. Our Town Clerk maintains frequent contact with county officials regarding general issues, including emergency management situations. Based on our previous work with Pender County Planning and Emergency Management officials on past projects, we are satisfied that the proposed draft plan will provide the necessary remedies for all of Pender County, including the Town of Watha, in the event of a major disaster.

The Town appreciates your work on this project. Please contact me if you have any questions.

Sincerely,

Needham C. Hall
Mayor

Cc: Dale Holland, HCP

APPENDIX C.

PUBLIC INVOLVEMENT DOCUMENTATION

Southeastern NC Regional

Hazard Mitigation Plan Meeting

Pender County will hold an informational meeting to

discuss the Regional Hazard Mitigation Plan update.

Please come and help Pender County

prepare for potential disaster events through proper planning.

This effort involves the County, as well as all municipalities.

Where: Pender County Emergency Operations Center

805 Ridgewood Avenue, Burgaw, NC

When: April 17, 2015, at 2:00 PM

Please direct questions to:

Tom Collins at (910) 259-1210

http://www.southeasternhmp.net

Southeastern NC Regional

Hazard Mitigation Plan Meeting

Brunswick County will hold a Mitigation Advisory Committee meeting to

discuss the Regional Hazard Mitigation Plan update.

Public input on the area's natural hazards, problems, and possible solutions will

be solicited and Community Rating System (CRS) requirements will be discussed.

Please come and help Brunswick County

prepare for potential disaster events through proper planning.

This effort involves the County, as well as all municipalities.

Where: Shallotte Board of Aldermen Meeting Chambers

110 Cheers Street, Shallotte, NC

When: May 1, 2015, at 10:00 AM

Please direct questions to:

Marc Pages at 910.253.2025

http://www.southeasternhmp.net

Southeastern NC Regional

Hazard Mitigation Plan Meeting

New Hanover County will hold a Mitigation Advisory Committee meeting to

discuss the Regional Hazard Mitigation Plan update.

Municipal and local input on the area's natural hazards, problems, and possible solutions will

be solicited and Community Rating System (CRS) requirements will be discussed.

Please come and help New Hanover County

prepare for potential disaster events through proper planning.

This effort involves the County, as well as all municipalities.

Where: New Hanover County Emergency Operations Center

220 Government Center Drive, Wilmington, NC

When: May 13, 2015, at 2:00 PM

Please direct questions to:

Kristen Skinner at 910.798.6900

http://www.southeasternhmp.net

PUBLIC NOTICE
Southeastern Regional Hazard Mitigation Plan
Mitigation Advisory Committee Meeting

Pender County will be hosting a Hazard Mitigation Advisory Committee (MAC) meeting on Friday, May 29, 2015, beginning at 10:30 am. This meeting is a required activity under the Southeastern Regional Hazard Mitigation planning project. This planning effort also includes all units of government within both Brunswick and New Hanover Counties. The meeting will focus on the development of strategies addressing Hazard Mitigation throughout Pender County, including its municipalities. Citizens should be aware that the Community Rating System (CRS) program and its impact on the community will be a focus of this effort. The meeting will be held in the Pender County Emergency Operations Center located at 805 Ridgewood Avenue, Burgaw, N.C.

Those persons unable to attend the meeting may review work completed to date regarding the plan at a project dedicated website, www.southeasternregionalhmp.net . Citizens and interested parties may comment via the project website or through our project consultant, Landin Holland, with the firm Holland Consulting Planners, Inc., at (910) 392-0060.

#6913 5/28/2015

Public Notice

Southeastern Regional Hazard Mitigation Plan Mitigation Advisory Committee Meeting

Brunswick County will be hosting a Hazard Mitigation Advisory Committee (MAC) **meeting on Friday, June 5, 2015, beginning at 10:00 am**. This meeting is a required activity under the Southeastern Regional Hazard Mitigation planning project. This planning effort also includes all units of government within both Pender and New Hanover Counties. The meeting will focus on the development of strategies addressing Hazard Mitigation throughout Brunswick County, including its municipalities. Citizens should be aware that the Community Rating System (CRS) program and its impact on the community will be a focus of this effort. The meeting will be held at the **Belville Town Hall, 497 Olde Waterford Way, Suite 205, Belville, NC.** Those persons unable to attend the meeting may review work completed to date regarding the plan at a project dedicated website, www.southeasternhmp.net. Citizens and interested parties may comment via the project website or through our project consultant, Landin Holland, with the firm Holland Consulting Planners, Inc., at (910) 392-0060.

STATE OF NORTH CAROLINA
COUNTY OF BRUNSWICK

AFFIDAVIT OF PUBLICATION

Before the undersigned, a Notary Public of said County and State, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared

Angie Sutton

who, being first duly sworn, deposes and says: that she is

General Manager

(Owner, partner, publisher, or other officer or employee authorized to make this affidavit)

of The Brunswick Beacon, a newspaper published, issued, and entered as periodical mail in the Town of Shallotte in the said County and State; that she is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in The Brunswick Beacon on the following date(s):

June 4, 2015

and that the said newspaper in which such notice, paper document or legal advertisement was published, was at the time of each and every such publication, a newspaper meeting all the requirements and qualifications of Section 1-597 of the General Statutes of North Carolina and was a qualified newspaper within the meaning of Section 1-597 of the General Statutes of North Carolina.

This the 4th day of June, 2015.

Angie Sutton
(Signature of person making affidavit)

Sworn to and subscribed before me this 4th day of June, 2015.

DOROTHY MASCOLO
Notary Public
Brunswick County
My Commission Expires
12/29/2019
NORTH CAROLINA

Dorothy Mascolo
(Notary Public)

Legal Ad Number 6930

AFFIDAVIT OF PUBLICATION
The Pender-Topsail Post & Voice
P. O. Box 955 • Burgaw, NC 28425
(910) 259-9111

Before the undersigned Notary Public of Pender County, North Carolina, personally appeared James A. Pettigrew, who says that he is authorized to make this affidavit for *The Pender-Topsail Post & Voice*, that the notice or other legal advertisement which is attached hereto, was published in *The Pender-Topsail Post & Voice* on the following dates:

6/11/2015

The newspaper in which notice of legal advertisement was published was, at the time of each and every such publication, a newspaper of general circulation in Pender County meeting all the requirements and qualifications of Chapter I-597 of the General Statutes of North Carolina.

James A. Pettigrew
Signature of Affiant

Sworn to and subscribed before me this date, June 12**, 2015.**

Melissa T. Walds
Signature of Notary Public

MELISSA T. WALDS
My Commission Expires
NOTARY
PUBLIC
08-10-2018
PENDER COUNTY, N.C.
SEAL

PUBLIC NOTICE
Southeastern Regional Hazard Mitigation Plan Mitigation Advisory Committee Meeting

Pender County will be hosting a Hazard Mitigation Advisory Committee (MAC) meeting on Friday, June 12, 2015, beginning at 10:00 am. This meeting is a required activity under the Southeastern Regional Hazard Mitigation planning project. This planning effort also includes all units of government within both Brunswick and New Hanover Counties. The meeting will focus on the development of strategies addressing Hazard Mitigation throughout Pender County, including its municipalities. Citizens should be aware that the Community Rating System (CRS) program and its impact on the community will be a focus of this effort. The meeting will be held in the Pender County Emergency Operations Center located at 805 Ridgewood Avenue, Burgaw, N.C.

Those persons unable to attend the meeting may review work completed to date regarding the plan at a project dedicated website, www.southeasternhmp.net. Citizens and interested parties may comment via the project website or through our project consultant, Landin Holland, with the firm Holland Consulting Planners, Inc., at (910) 392-0060.

#6930 6/11/2015

PUBLIC NOTICE

Southeastern Regional Hazard Mitigation Plan
Mitigation Advisory Committee Meeting

A Southeastern NC Regional Mitigation Advisory Committee (MAC) meeting will be held on **Friday, September 25, 2015, beginning at 11:00 am.** This meeting is a required activity under the Southeastern Regional Hazard Mitigation planning project. This planning effort includes all units of government within Brunswick, New Hanover, and Pender Counties. The meeting will focus on review of the draft Southeastern NC Regional Hazard Mitigation Plan, which is available for public review at the following website, www.southeasternhmp.net. Citizens should be aware that the Community Rating System (CRS) program and its impact on the community will be a focus of this effort. The meeting will be held at the **Wrightsville Beach Public Safety Building, 3 Bob Sawyer Drive, Wrightsville Beach, NC.**

Citizens and interested parties may comment via the project website or through our project consultant, Landin Holland, with the firm Holland Consulting Planners, Inc., at (910) 392-0060.

AFFIDAVIT OF PUBLICATION

STATE OF NORTH CAROLINA
COUNTY OF NEW HANOVER

PUBLIC INPUT MEETING
Southeastern Regional Hazard Mitigation Plan Mitigation Advisory Committee
The New Hanover County Mitigation Advisory Committee (MAC) will be hosting a public input meeting on Thursday, February 25, 2016, beginning at 6:00 pm, to discuss the draft Southeastern NC Regional Hazard Mitigation Plan. This planning effort includes New Hanover County, the City of Wilmington, and the Towns of Carolina Beach, Kure Beach, and Wrightsville Beach. Citizens should be aware that the Community Rating System (CRS) program and its impact on the community will be a key topic of discussion. The meeting will be held in the Carolina Beach Council Room, Town Hall, 1121 N. Lake Park Boulevard, Carolina Beach, North Carolina. All citizens are encouraged to attend.
A copy of the plan is available for public review at the following web address: http://www.southeasternhmp.net/. The public is encouraged to review the draft plan.
For questions and/or additional information, please contact Kristen Skinner at 910/798-6905.

Before the undersigned, a Notary Public of Said County and State,

Jarimy Springer

Who, being duly sworn or affirmed, according to the law, says that he/she is

Accounting Specialist

of THE STAR-NEWS, a corporation organized and doing business under the Laws of the State of North Carolina, and publishing a newspaper known as STAR-NEWS in the City of Wilmington

PUBLIC INPUT MEETING Southeastern Regional Hazard Mitigation Plan Mitigation Advisory Committee The New Hanover County Mitigation Advisory Committee MAC will be hosting a public input meeting on Thursday, February 25, 2016, beginning at 6:00 pm, to discus

was inserted in the aforesaid newspaper in space, and on dates as follows:

2/18 1x

And at the time of such publication Star-News was a newspaper meeting all the requirements and qualifications prescribed by Sec. No. 1-597 G.S. of N.C.

Jarimy Springer

Title: **Accounting Specialist**

Sworn or affirmed to, and subscribed before me this 23rd day of February, A.D., 2016

In Testimony Whereof, I have hereunto set my hand and affixed my official seal, the day and year aforesaid.

Tanya V. Wright

Notary Public

TANYA V. WRIGHT
NOTARY PUBLIC
NORTH CAROLINA
NEW HANOVER COUNTY
MY COMM. EXP. 1-12-21

My commission expires 12 day of Jan, 20 21

Upon reading the aforegoing affidavit with the advertisement thereto annexed it is adjudged by the Court that the said publication was duly and properly made and that the summons has been duly and legally served on the defendant(s).

This _____ day of _____, ____

_____
Clerk of Superior Court

MAIL TO:

Legal Ad Number 7256

AFFIDAVIT OF PUBLICATION
The Pender-Topsail Post & Voice
P. O. Box 955 • Burgaw, NC 28425
(910) 259-9111

Before the undersigned Notary Public of Pender County, North Carolina, personally appeared James A. Pettigrew, who says that he is authorized to make this affidavit for *The Pender-Topsail Post & Voice*, that the notice or other legal advertisement which is attached hereto, was published in *The Pender-Topsail Post & Voice* on the following dates:

3/10

The newspaper in which notice of legal advertisement was published was, at the time of each and every such publication, a newspaper of general circulation in Pender County meeting all the requirements and qualifications of Chapter I-597 of the General Statutes of North Carolina.

J C Pettigrew

Signature of Affiant

Sworn to and subscribed before me this date, March 11th **, 2016.**

Melanie Lane Moore

Signature of Notary Public

SEAL

MELANIE LANE MOORE
NOTARY
MY COMMISSION EXPIRES
9-23-20
PUBLIC
PENDER COUNTY, NC

PUBLIC INPUT MEETING
Southeastern Regional Hazard Mitigation Plan
Mitigation Advisory Committee

The Pender County Mitigation Advisory Committee (MAC) will be hosting a public input meeting on Thursday, March 17, 2016, beginning at 6:00 pm, to discuss the draft Southeastern NC Regional Hazard Mitigation Plan. This planning effort includes Pender County, the Village of St. Helena, and the Towns of Atkinson, Burgaw, Surf City, Topsail Beach, and Watha. Citizens should be aware that the Community Rating System (CRS) program and its impact on the community will be a key topic of discussion. The meeting will be held in the Pender County Emergency Operations Center located at 805 Ridgewood Avenue, Burgaw, N.C. All citizens are encouraged to attend.

A copy of the plan is available for public review at the following web address: http://www.southeasternhmp.net/. The public is encouraged to review the draft plan.

For questions and/or additional information, please contact Tom Collins at 910/259-1210.

#7256 3/10/2016

PUBLIC INPUT MEETING

Southeastern Regional Hazard Mitigation Plan
Mitigation Advisory Committee

The Brunswick County Mitigation Advisory Committee (MAC) will be hosting a **public input meeting on Monday, March 21, 2016, beginning at 1:30 pm**, to discuss the draft Southeastern NC Regional Hazard Mitigation Plan. This planning effort includes Brunswick County, the Village of Bald Head Island, the Towns of Belville, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, St. James, Sunset Beach, and Varnamton, and the Cities of Boiling Spring Lakes and Southport. Citizens should be aware that the Community Rating System (CRS) program and its impact on the community will be a key topic of discussion. The meeting will be held in the **Second Floor Training Room, David Sandifer Administration Building, 30 Government Center Drive NE, Bolivia, North Carolina 28422.** All citizens are encouraged to attend.

A copy of the plan is available for public review at the following web address: http://www.southeasternhmp.net/. The public is encouraged to review the draft plan.

For questions and/or additional information, please contact Marc Pages at 910/253-2056.

Cindy M. Anderson

From: HCP Wilmington Office [wilmington@hcpplanning.com]
Sent: Monday, December 28, 2015 9:00 AM
To: 'bill.walker@ncagr.gov'; 'pender.ncfs@ncagr.gov'; 'debra.wilson@ncdenr.gov'; 'jim.gregson@ncdenr.gov'; 'kecollette@ncdot.gov'; 'mark_blevins@ncsu.edu'; 'regina.godette@dhhs.nc.gov'; 'al_hight@ncsu.edu'; 'mark_seitz@ncsu.edu'; 'Vicki.Labelle@redcross.org'; 'kworley@columbusco.org'; 'bclark@columbusco.org'; 'gmartin@bladenco.org'; 'gelkins@bladenco.org'; 'susanh@sampsonnc.com'; 'ronaldbass@sampsonnc.com'; 'mikea@duplincountync.com'; 'reids@duplincountync.com'; 'Jeff_Hudson@onslowcountync.gov'; 'norman_bryson@onslowcountync.gov'; 'celdridge@horrycounty.org'; 'cmay@capefearcog.org'
Cc: 'Tom Collins'; 'lholland@hcpplanning.com'; 'Dale Holland'
Subject: Southeastern NC Regional Hazard Mitigation Plan

Tracking:

Recipient	Read
'bill.walker@ncagr.gov'	Read: 12/28/2015 9:03 AM
'pender.ncfs@ncagr.gov'	
'debra.wilson@ncdenr.gov'	
'jim.gregson@ncdenr.gov'	
'kecollette@ncdot.gov'	
'mark_blevins@ncsu.edu'	
'regina.godette@dhhs.nc.gov'	
'al_hight@ncsu.edu'	
'mark_seitz@ncsu.edu'	
'Vicki.Labelle@redcross.org'	
'kworley@columbusco.org'	
'bclark@columbusco.org'	
'gmartin@bladenco.org'	Read: 12/28/2015 9:12 AM
'gelkins@bladenco.org'	
'susanh@sampsonnc.com'	
'ronaldbass@sampsonnc.com'	
'mikea@duplincountync.com'	Read: 12/28/2015 9:08 AM
'reids@duplincountync.com'	Read: 1/4/2016 8:09 AM
'Jeff_Hudson@onslowcountync.gov'	
'norman_bryson@onslowcountync.gov'	
'celdridge@horrycounty.org'	
'cmay@capefearcog.org'	
'Tom Collins'	
'lholland@hcpplanning.com'	
'Dale Holland'	
'cma6197@yahoo.com'	

The Southeastern NC Region, which includes the counties of Brunswick, New Hanover, and Pender, and all municipalities within these counties, have prepared the Southeastern NC Regional Hazard Mitigation Plan (HMP). A draft has been submitted to the NC Department of Public Safety, Emergency Management Section and the Federal Emergency Management Agency For review and comment.

We solicit your review and comment on the draft 2015 Regional HMP. The plan may be reviewed at http://www.southeasternhmp.net/plan-documents.html. Please submit any questions or comments to Mr. Tom Collins, Project Coordinator and Pender County Emergency Management Director at tcollins@pendercountync.gov on or before January 15, 2016.

Your assistance is appreciated. Please contact Mr. Collins at 910/259-1210 if you have any questions.

Thank you,

Landin W. Holland, MPA, AICP, CZO
Senior Planner
3329 Wrightsville Ave, Ste F
Wilmington, NC 28403
Phone: 910/392-0060
Email: lholland@hcpplanning.com

County	NC Forest Service	NCDENR	NCDOT	NC Cooperative Extension	NCOEMS	American Red Cross
Brunswick	bill.walker@ncagr.gov	debra.wilson@ncdenr.gov	kecollette@ncdot.gov	mark_blevins@ncsu.edu	regina.godette@dhhs.nc.gov	Vicki.Labelle@redcross.org
New Hanover	bill.walker@ncagr.gov	jim.gregson@ncdenr.gov	kecollette@ncdot.gov	al_hight@ncsu.edu		Vicki.Labelle@redcross.org
Pender	pender.ncfs@ncagr.gov		kecollette@ncdot.gov	mark_seitz@ncsu.edu		Vicki.Labelle@redcross.org

Adjacent Jurisdictions/Agencies

Columbus Co	kworley@columbusco.org, bclark@columbusco.org
Bladen Co	gmartin@bladenco.org, gelkins@bladenco.org
Sampson Co	susanh@sampsonnc.com, ronaldbass@sampsonnc.com
Duplin Co	mikea@duplincountync.com, reids@duplincountync.com
Onslow Co	Jeff_Hudson@onslowcountync.gov, norman_bryson@onslowcountync.gov
Horry Co, SC	celdridge@horrycounty.org
Cape Fear COG	cmay@capefearcog.org

Emailed 12/28/2015

APPENDIX D.

NCEM/FEMA REVIEW COMMENTS

APPENDIX D:
LOCAL MITIGATION PLAN REVIEW TOOL

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan's strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

Jurisdiction: **Pender County**	**Title of Plan: Southeastern NC Regional Hazard Mitigation Plan**	**Date of Plan:** **October 7, 2015**
Local Point of Contact: **Tom Collins**	**Address:** **EMS Station 1/Emergency Operations Center** **805 Ridgewood Avenue Burgaw, NC 28425**	
Title: **Emergency Management Director**		
Agency: **Pender County**		
Phone Number: **910/259-1210**	**E-Mail:** tcollins@pendercountync.gov	

State Reviewer: **Quinn Woolard**	**Title:** **MITIGATION PLANNER**	**Date:** **10/28/2015, 12/01/2015, 12/07/2015, 12/15/2015, 12/17/2015**

FEMA Reviewer: Linda L. Byers **Darlene Booker (QC)**	**Title:** RIV Sr. Lead Planning Specialist **Hazard Mitigation Program Analyst**	**Date:** December 30, 2015 **January 21, 2016**
Date Received in FEMA Region IV	December 29, 2015	
Plan Not Approved		
Plan Approvable Pending Adoption	January 19, 2016 ; recommend ADR after final meeting and receipt of Adoption Resolutions	
Plan Approved	April 26, 2016 (ADD lettrs:05-13,06-01,06-23,08-15)	

SECTION 1:
REGULATION CHECKLIST

INSTRUCTIONS: The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the Plan by Element/sub-element and to determine if each requirement has been 'Met' or 'Not Met.' The 'Required Revisions' summary at the bottom of each Element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is 'Not Met.' Sub-elements should be referenced in each summary by using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in this *Plan Review Guide* in Section 4, Regulation Checklist.

1. REGULATION CHECKLIST **Regulation** (44 CFR 201.6 Local Mitigation Plans)	**Location in Plan** (section and/or page number)	**Met**	**Not Met**
ELEMENT A. PLANNING PROCESS			
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	Section 1 Page 1-6 Appendix B *FEMA: All pages were validated*	X	
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	Section 1 Page 1-6 Page 1-11 *FEMA: All pages were validated*	X	
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Section 1 Page 1-11 *FEMA: All pages were validated*	X	
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	Section 4 Page 4-7 to 4-11 *FEMA: All pages were validated*	X	
A5. Is there discussion of how the community (ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	Section 7 Page 7-4 *FEMA: All pages were validated*	X	
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	Section 7 Page 7-2 to 7-4 *FEMA: All pages were validated*	X	

1. REGULATION CHECKLIST **Regulation** (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
ELEMENT A: REQUIRED REVISIONS FEMA Comments: The plan documentation is exemplary laying out the planning process of how the three counties were integrated into one regional plan but also how they maintained their distinct organizations. It is commendable that each entity was allowed to maintain their appropriate county strategies and provide input that contributed to the overall regional entire plan. *More details in Section2*)			
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT			
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))	Section 3 Page 3-1 *FEMA: All pages were validated*	X	
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))	Section 3 Page 3-1 *FEMA: All pages were validated*	X	
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))	Section 5 Page 5-1 *FEMA: All pages were validated*	X	
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))	Section 5 Page 5-17 *FEMA: All pages were validated*	X	
ELEMENT B: REQUIRED REVISIONS Complete the following sentence: On average, the flood level during these flooding events was reported to be __ feet (to be completed) above flood stage. (on page 3-11)			
ELEMENT C. MITIGATION STRATEGY			
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))	Section 4 Page 4-1 *FEMA: All pages were validated*	X	
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	Section 4 Page 4-7 to 4-11 *FEMA: All pages were validated*	X	
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Section 6 Page 6-3 *FEMA: All pages were validated*	X	

1. REGULATION CHECKLIST **Regulation** (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	Section 6 *FEMA: All pages were validated*	X	
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	Section 6 Page 6-4 to 6-6 (and continuing) *FEMA: All pages were validated*	X	
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	Section 6 Page 6-2 to 6-3 *FEMA: All pages were validated*	X	
ELEMENT C: REQUIRED REVISIONS FEMA Concurs: Elements C1, C2, C3, C4, C5 and C6 met the regulation requirements.			
ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION (applicable to plan updates only)			
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))	Section 5 Page 5-19 *FEMA: All pages were validated*	X	
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Appendix G *FEMA: All pages were validated*	X	
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	Appendix G *FEMA: All pages were validated*	X	
ELEMENT D: REQUIRED REVISIONS			
ELEMENT E. PLAN ADOPTION			
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))	Section 1, 7, and Appendix H	X	
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))	Section 1, 7, and Appendix H	X	

1. REGULATION CHECKLIST **Regulation** (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
ELEMENT E: REQUIRED REVISIONS Adoption documentation has not been provided. Unsigned copies are included but must be signed and submitted to FEMA. E1: The plan must include documentation of plan adoption, usually a resolution by the governing body or other authority. E2: Each jurisdiction that is included in the plan must have its governing body adopt the plan prior to FEMA approval. For additional information, please see Element E, Plan Adoption, in the "Local Mitigation Plan Review Guide", October 1, 2011, Pages 28-29 and Task 8 of the Local Mitigation Planning Handbook, March 2013. Adoption Resolutions received are noted and highlighted in Section 3 of this PRT (9/22/16).*Byers*			
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)			
F1.			
F2.			
ELEMENT F: REQUIRED REVISIONS			

SECTION 2:
PLAN ASSESSMENT

INSTRUCTIONS: The purpose of the Plan Assessment is to offer the local community more comprehensive feedback to the community on the quality and utility of the plan in a narrative format. The audience for the Plan Assessment is not only the plan developer/local community planner, but also elected officials, local departments and agencies, and others involved in implementing the Local Mitigation Plan. The Plan Assessment must be completed by FEMA. The Assessment is an opportunity for FEMA to provide feedback and information to the community on: 1) suggested improvements to the Plan; 2) specific sections in the Plan where the community has gone above and beyond minimum requirements; 3) recommendations for plan implementation; and 4) ongoing partnership(s) and information on other FEMA programs, specifically RiskMAP and Hazard Mitigation Assistance programs. The Plan Assessment is divided into two sections:

1. Plan Strengths and Opportunities for Improvement
2. Resources for Implementing Your Approved Plan

Plan Strengths and Opportunities for Improvement is organized according to the plan Elements listed in the Regulation Checklist. Each Element includes a series of italicized bulleted items that are suggested topics for consideration while evaluating plans, but it is not intended to be a comprehensive list. FEMA Mitigation Planners are not required to answer each bullet item, and should use them as a guide to paraphrase their own written assessment (2-3 sentences) of each Element.

The Plan Assessment must not reiterate the required revisions from the Regulation Checklist or be regulatory in nature, and should be open-ended and to provide the community with suggestions for improvements or recommended revisions. The recommended revisions are suggestions for improvement and are not required to be made for the Plan to meet Federal regulatory requirements. The italicized text should be deleted once FEMA has added comments regarding strengths of the plan and potential improvements for future plan revisions. It is recommended that the Plan Assessment be a short synopsis of the overall strengths and weaknesses of the Plan (no longer than two pages), rather than a complete recap section by section.

Resources for Implementing Your Approved Plan provides a place for FEMA to offer information, data sources and general suggestions on the overall plan implementation and maintenance process. Information on other possible sources of assistance including, but not limited to, existing publications, grant funding or training opportunities, can be provided. States may add state and local resources, if available.

A. Plan Strengths and Opportunities for Improvement

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

Element A: Planning Process-Strengths

- The 2015 Updated Mitigation Plan for three counties was completed in a new regional plan format. The state contracted with a new consultant for the development of the regional plan. Pender County procured the services of Holland Consulting Planners, Inc., (HCP) in 2015, of Wilmington, North Carolina, to assist in the development of a comprehensive Hazard Mitigation Plan Update for the three-county region. Following the establishing a work authorization with the planning consultant, Pender County set up an initial scoping meeting with the project consultant and regional stakeholders. The meeting involved a general discussion of how the project should be carried out, including establishing a Regional Mitigation Advisory as a team effort which was comprised of representatives from administration, planning/zoning, public works, fire/police, and other departments. These various interests are represented on each County MAC in order to efficiently address this "multi-disciplinary" aspect. The strength of the development of the plan was the inclusions of many stakeholders included in the three counties. Several meetings were held for each county to gain knowledge of what there the most pressing mitigation issues. These steps were well document in the appendices of the plan. Included in the plan are table and other panning documents. The planning process demonstrates who, how, and what were the objectives of the new regional plan. The Committee (MAC) was charged with the task to oversee plan development and included the following:
- Involvement of stakeholders (elected officials/decision makers, plan implementers, business owners, academic institutions, utility companies, water/sanitation districts, etc.);
- Involvement of Planning, Emergency Management, Public Works Departments or other planning agencies (i.e., regional planning councils);
- Diverse methods of participation (meetings, surveys, online, etc.); and
- Reflective of an open and inclusive public involvement process.

Element A: Planning Process-Opportunities for Improvement (Mitigation Handbook)

After sending an email or letter invitation, follow it up with a phone call to emphasize why participation is needed and to answer any questions.

- Send a formal invitation signed by the mayor, elected official, or department head.
- Plan the initial meeting at a convenient time and location for everyone.
- Provide beverages or food at meetings to bolster attendance and attention spans

Element B: Hazard Identification and Risk Assessment-Strengths

The Hazard and Risk Identification again is exemplary. The documentation of type, location, and extent reads like a geographical depiction of the planning area. The addition of the charts and tables make the plan very easy to find and understand how the plan developers included relevant and current data. The depiction of the various hazard events was excellently written. All of the following elements were included in the planning documentation:

- A general description of land uses and future development trends within the community so that mitigation options can be considered in future land use decisions;
- The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas; and
- A description of potential dollar losses to vulnerable structures, and a description of the methodology used to prepare the estimate.
- Use of best available data (flood maps, HAZUS, flood studies) to describe significant hazards;
- Communication of risk on people, property, and infrastructure to the public (through tables, charts, maps, photos, etc.);
- Incorporation of techniques and methodologies to estimate dollar losses to vulnerable structures;

- Incorporation of Risk MAP products (i.e., depth grids, Flood Risk Report, Changes Since Last FIRM, Areas of Mitigation Interest, etc.); and
- Identification of any data gaps that can be filled as new data became available.

Element C: Mitigation Strategy-Strengths

The Regional plan has incorporated a unique documentation strategy that addresses each county and participating jurisdiction by identifying the policies and procedures separately. The plan does a very detailed documentation of the Mitigation Strategy in the following manner to:

- The plan documents the links the vulnerability assessment to key problems identified in the risk identification by county and each jurisdiction.
- The Hazard Identification and Risk Assessment section provides a full scale of a blueprint for reducing potential losses identified by listing all of the current County strategies and provides a list of what the counties deemed important to their planning area.
- All actions have been updated and are intended to reflect the current needs and desires of the Regional Mitigation Advisory Committee and their respective jurisdictions.
- The new regional Plan utilizes a custom prioritization index in Section 6 (Tables 6-1 to 6-4)outline all implementing strategies to rank hazards, and then improves upon the index by offering clear and specific goals for each county and the participating jurisdictions with detailed specific mitigation actions. This approach is applicable and ensures actions are considered in the framework of the each local community's perspective and environment
- Each proposed mitigation action lists the responsible department or agency, the anticipated cost, the potential funding sources, the jurisdiction the action would take place within, the timeframe, and the status of the action. Such detailed write ups limit miscommunication and describe each proposed action comprehensively.
- The plan list each strategy with the responsible party and also how the strategies will be funded.
- Interesting, the plan also addresses CRS guidance for the counties participating in the regional plan. All jurisdictions participating in this plan which are members of the Community Rating System (CRS). This is extremely a well thought out process for the plan to move the communities forward in terms of improving CRS ratings. (Tables 6-2 through 6-4.)

Element D: Plan Update, Evaluation, and Implementation (*Plan Updates Only*)

The new regional plan incorporates all of the following requirements. In the development of the plan, there is considerable documentation of each county and the participation jurisdictions. Each section reads as a separate plan for the participations. It is very easy to separate out the various parts which makes the plan useable as needed. The Plan goes above and beyond minimum requirements to document how the plan will be evaluated and what Implementation measures with respect to the following were completed:

- Status of previously recommended mitigation actions;
- Identification of obstacles to possible solutions for overcoming risk;
- Documentation of annual reviews and committee involvement;
- Identification of a lead person to take ownership of, and champion the Plan;

- Reducing risks from natural hazards and serving as a guide for decisions makers as they commit resources to reducing the effects of natural hazards;
- An approach to evaluating future conditions (i.e. socio-economic, environmental, demographic, change in built environment etc.);
- Discussion of how changing conditions and opportunities could impact community resilience in the long term

- *Discussion of how the mitigation goals and actions support the long-term community vision for increased resilience.*

B. Resources for Implementing Your Approved Plan

Mitigation Planning Toolkit:
This is an extensive web based tool to assist States, Local, and Tribal Communities involved in Hazard Mitigation Plan Development and Updates. The content will help guide the direction of plan development and required updates.
http://www.fema.gov/library/viewRecord.do?id=5580

Local Mitigation Planning Handbook:
This Handbook provides guidance to local governments on developing or updating hazard mitigation plans to meet the requirements under the Code of Federal Regulations (CFR) Title 44 – Emergency Management and Assistance §201.6.
Use the Local Plan Guide and Handbook in tandem to understand technical requirements
http://www.fema.gov/library/viewRecord.do?fromSearch=fromsearch&id=7209

Integrating Mitigation Strategies with Local Planning:
This resource provides practical guidance on how to incorporate risk reduction strategies into existing local plans, policies, codes, and programs that guide community development or redevelopment patterns.
http://www.fema.gov/library/viewRecord.do?id=7130

Mitigation Ideas:

- Communities can use this resource to identify and evaluate a range of potential mitigation actions for reducing risk to natural hazards and disasters.
  http://www.fema.gov/media-library/assets/documents/30627?id=6938

SECTION 3:
MULTI-JURISDICTION SUMMARY SHEET (OPTIONAL- Complete jurisdiction name only)

INSTRUCTIONS: For multi-jurisdictional plans, a Multi-jurisdiction Summary Spreadsheet may be completed by listing each participating jurisdiction, which required Elements for each jurisdiction were 'Met' or 'Not Met,' and when the adoption resolutions were received. This Summary Sheet does not imply that a mini-plan be developed for each jurisdiction; it should be used as an optional worksheet to ensure that each jurisdiction participating in the Plan has been documented and has met the requirements for those Elements (A through E).

MULTI-JURISDICTION SUMMARY SHEET												
#	Jurisdiction Name	Jurisdiction Type (city/borough/ township/ Village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Require-ments
1	Brunswick County	County					Y	Y	Y	Y	Y	
2	Bald Head Island	Village					Y	Y	Y	Y	Y	
3	Belville	Town					Y	Y	Y	Y	Y	
4	Boiling Spring Lakes	City					Y	Y	Y	Y	Y	
5	Bolivia	Town					Y	Y	Y	Y	Y	
6	Calabash	Town					Y	Y	Y	Y	Y	
7	Carolina Shores	Town					Y	Y	Y	Y	Y	
8	Caswell Beach	Town					Y	Y	Y	Y	Y	
9	Holden Beach	Town					Y	Y	Y	Y	Y	

MULTI-JURISDICTION SUMMARY SHEET												
#	Jurisdiction Name	Jurisdiction Type (city/borough/ township/ Village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Require-ments
10	Leland	Town					Y	Y	Y	Y	Y	
11	Navassa	Town					Y	Y	Y	Y	Y	
12	Northwest	Town					Y	Y	Y	Y	Y	
13	Oak Island	Town					Y	Y	Y	Y	Y	
14	Ocean Isle Beach	Town					Y	Y	Y	Y	Y	
15	Sandy Creek	Town					Y	Y	Y	Y	Y	
16	Shallotte	Town					Y	Y	Y	Y	Y	
17	Southport	Town					Y	Y	Y	Y	Y	
18	St. James	Town					Y	Y	Y	Y	Y	
19	Sunset Beach	Town					Y	Y	Y	Y	Y	
20	Varnamtown	Town					Y	Y	Y	Y	Y	
21	New Hanover County	County					Y	Y	Y	Y	Y	
22	Carolina Beach	Town					Y	Y	Y	Y	Y	
23	Kure Beach	Town					Y	Y	Y	Y	Y	

MULTI-JURISDICTION SUMMARY SHEET												
#	Jurisdiction Name	Jurisdiction Type (city/borough/ township/ Village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Require-ments
24	Wilmington	City					Y	Y	Y	Y	Y	
25	Wrightsville Beach	Town					Y	Y	Y	Y	Y	
26	Pender County	County					Y	Y	Y	Y	Y	
27	Atkinson	Town					Y	Y	Y	Y	Y	
28	Burgaw	Town					Y	Y	Y	Y	Y	
29	St. Helena	Village					Y	Y	Y	Y	Y	
30	Surf City	Town					Y	Y	Y	Y	Y	
31	Topsail Beach	Town					Y	Y	Y	Y	Y	
32	Watha	Town					Y	Y	Y	Y	Y	

APPENDIX E.

HAZARD INVENTORY

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TI	EVENT_TYPE	MAGNITTOR_F_SCALE	DEATHS_	INJURIES_I	DAMAGE_PROPERTY_N	DAMAGE_CROPS_NUM
COASTAL BRUNSWICK (ZONE)		10/27/2012	615	Coastal Flood		0	0	0	0
COASTAL NEW HANOVER (ZONE)		10/27/2012	715	Coastal Flood		0	0	0	0
COASTAL BRUNSWICK (ZONE)		11/15/2012	800	Coastal Flood		0	0	0	0
COASTAL NEW HANOVER (ZONE)		11/15/2012	800	Coastal Flood		0	0	0	0
REGIONAL EVENT	Brunswick, New Hanover	6/14/2011	0	Drought		0	0	0	0
REGIONAL EVENT	Brunswick, New Hanover	7/1/2011	0	Drought		0	0	0	0
NEW HANOVER CO.	EAST WILMINGTON	6/25/1996	1555	Flash Flood		0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/16/1996	1045	Flash Flood		0	0	0	0
NEW HANOVER CO., PENDER CO.	WILMINGTON, BURGAW	7/21/1996	1200	Flash Flood		0	0	0	0
NEW HANOVER CO., PENDER CO.	CASTLE HAYNE, ROCKY P	8/4/1996	1530	Flash Flood		0	0	0	0
PENDER CO.	CURRIE	9/6/1996	2330	Flash Flood		0	0	0	0
REGIONAL EVENT	SUPPLY, SOUTH WILMIN	9/11/1996	545	Flash Flood		0	0	0	0
NEW HANOVER CO., PENDER CO.	CASTLE HAYNE, BURGAW	9/12/1996	1630	Flash Flood		0	0	0	0
REGIONAL EVENT	CALABASH, FT FISHER, SC	10/8/1996	500	Flash Flood		0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/7/1997	1720	Flash Flood		0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/21/1997	1830	Flash Flood		0	0	0	0
REGIONAL EVENT	LONG BEACH, WILMINGT	1/23/1998	1200	Flash Flood		0	0	0	0
REGIONAL EVENT	CALABASH, CAROLINA BE	2/3/1998	1930	Flash Flood		0	0	0	0
REGIONAL EVENT	CALABASH, CASTLE HAYN	2/17/1998	530	Flash Flood		0	0	0	0
BRUNSWICK CO.	PHOENIX	5/11/1998	520	Flash Flood		0	0	0	0
NEW HANOVER CO.	WILMINGTON	5/27/1998	1350	Flash Flood		0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/5/1998	350	Flash Flood		0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/18/1998	1415	Flash Flood		0	0	0	0
BRUNSWICK CO., NEW HANOVER CO	LELAND, WILMINGTON	8/19/1998	1550	Flash Flood		0	0	0	0
PENDER CO.	CURRIE	8/30/1998	1600	Flash Flood		0	0	0	0
PENDER CO.	BURGAW	8/31/1998	1915	Flash Flood		0	0	0	0
PENDER CO.	BURGAW	9/1/1998	0	Flash Flood		0	0	0	0
BRUNSWICK CO., NEW HANOVER CO	SOUTHPORT, SOUTH WII	9/3/1998	1515	Flash Flood		0	0	0	0
BRUNSWICK CO., NEW HANOVER CO	SOUTHPORT, CAROLINA	5/1/1999	1700	Flash Flood		0	0	0	0
PENDER CO.	SCOTTS HILL	5/2/1999	400	Flash Flood		0	0	0	0
NEW HANOVER CO.	WRIGHTSVILLE BEACH	7/11/1999	1400	Flash Flood		0	0	0	0
REGIONAL EVENT	SOUTHPORT, CAROLINA	8/30/1999	145	Flash Flood		0	0	0	0
REGIONAL EVENT	LELAND, WILMINGTON, I	9/15/1999	730	Flash Flood		0	0	0	0
PENDER CO.	WARDS CORNER	9/28/1999	625	Flash Flood		0	0	0	0
REGIONAL EVENT	CALABASH, CAROLINA BE	10/17/1999	930	Flash Flood		0	0	0	0
BRUNSWICK CO.	BOLIVIA	8/4/2000	1030	Flash Flood		0	0	0	0
BRUNSWICK CO.	SHALLOTTE	9/5/2000	630	Flash Flood		0	0	0	0
BRUNSWICK CO.	SHALLOTTE	9/18/2000	1150	Flash Flood		0	0	0	0
BRUNSWICK CO., NEW HANOVER CO	BOLIVIA, CAROLINA BEA	9/21/2000	1410	Flash Flood		0	0	0	0
REGIONAL EVENT	GRISSETTOWN, CAROLIN	9/23/2000	1337	Flash Flood		0	0	0	0
REGIONAL EVENT	LONG BEACH, WILMINGT	3/20/2001	2015	Flash Flood		0	0	50000	0
PENDER CO.	ROCKY PT	6/15/2001	1930	Flash Flood		0	0	10000	0
BRUNSWICK CO.	SHALLOTTE	6/25/2001	1345	Flash Flood		0	0	0	0
BRUNSWICK CO.	SHALLOTTE	6/26/2001	530	Flash Flood		0	0	0	0
BRUNSWICK CO.	CALABASH	7/6/2001	1430	Flash Flood		0	0	0	0
BRUNSWICK CO.	SUPPLY	7/26/2001	1715	Flash Flood		0	0	0	0
BRUNSWICK CO.	LELAND	8/6/2001	1500	Flash Flood		0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/14/2001	845	Flash Flood		0	0	0	0
REGIONAL EVENT	SHALLOTTE, WILMINGTC	8/31/2006	2127	Flash Flood		0	0	0	0
PENDER CO.	HAMPSTEAD	9/1/2006	0	Flash Flood		0	0	0	0
NEW HANOVER CO.	EAST WILMINGTON, NEV	7/6/2009	2101	Flash Flood		0	0	0	0
BRUNSWICK CO., NEW HANOVER CO	LELAND, WINNABOW, EA	9/27/2010	1620	Flash Flood		0	0	800000	0
REGIONAL EVENT	ELIAH, FULFORD, LANVA	9/29/2010	1428	Flash Flood		0	0	1800000	0
REGIONAL EVENT	BOLIVIA, CAUSE LNDG, F	9/30/2010	842	Flash Flood		0	0	650000	0
BRUNSWICK CO., NEW HANOVER CO	SUPPLY, WILMINGTON	6/27/1997	1350	Flood		0	0	0	0
NEW HANOVER CO., PENDER CO.	WILMINGTON, PENDERL	9/15/1997	1500	Flood		0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/2/2001	1230	Flood		0	1	0	0
BRUNSWICK CO.	SOUTHPORT	7/6/2001	1500	Flood		0	0	0	0
NEW HANOVER CO.	CASTLE HAYNE	7/11/2001	1730	Flood		0	0	0	0
NEW HANOVER CO.	WILMINGTON	9/1/2002	1500	Flood		0	0	0	0
NEW HANOVER CO.	WILMINGTON	9/15/2002	1545	Flood		0	0	0	0
PENDER CO.	HAMPSTEAD	9/7/2009	1245	Flood		0	0	15000	0
BRUNSWICK CO.	GRISSETTOWN	5/29/2010	745	Flood		0	0	5000	0
NEW HANOVER CO.	WILMINGTON	8/19/2010	1520	Flood		0	0	1000	0
NEW HANOVER CO.	MASONBORO	9/27/2010	1250	Flood		0	0	0	0
NEW HANOVER CO.	WILMINGTON	9/30/2010	424	Flood		0	0	0	0
NEW HANOVER CO.	FERNSIDE, NEW BERN JC	6/29/2011	1630	Flood		0	0	5000	0
NEW HANOVER CO.	WILMINGTON, SOUTH W	9/26/2011	1444	Flood		0	0	0	0
PENDER CO.	WALKERS STORE	5/30/2012	1200	Flood		0	0	0	0
PENDER CO.	VAN EDEN, PENDERLEA,	7/11/2012	1900	Flood		0	0	0	0
BRUNSWICK CO., NEW HANOVER CO	TOWN CREEK, WILMING	6/27/2013	2150	Flood		0	0	0	0
BRUNSWICK CO.	CALABASH	7/1/2013	1435	Flood		0	0	0	0
NEW HANOVER CO.	MURRAYSVILLE, MYRTLE	7/12/2013	1250	Flood		0	0	0	0
BRUNSWICK CO.	MILL CREEK	7/13/2013	822	Flood		0	0	0	0
BRUNSWICK CO.	MILL CREEK	7/21/2014	1615	Flood		0	0	0	0
PENDER CO.	HAMPSTEAD, TOPSAIL, V	8/9/2014	1600	Flood		0	0	20000	0
NEW HANOVER CO.	WILMINGTON, MASONB	9/12/2014	2028	Flood		0	0	0	0
BRUNSWICK CO., NEW HANOVER CO	FULFORD, WRIGHTSBOR	12/24/2014	1141	Flood		0	0	10000	0

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TI	EVENT_TYPE	MAGNITTOR_F_SCALE	DEATHS_	INJURIES_I	DAMAGE_PROPERTY_N	DAMAGE_CROPS_NUM
NEW HANOVER CO.	WILMINGTON	9/12/2007	1430	Funnel Cloud		0	0	0	0
BRUNSWICK CO., NEW HANOVER CC	LELAND, WILMINGTON	8/27/2008	938	Funnel Cloud		0	0	0	0
NEW HANOVER CO.	NAVASSA	6/2/2010	1205	Funnel Cloud		0	0	0	0
PENDER CO.	ATKINSON	4/28/2011	1512	Funnel Cloud		0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/14/2011	1902	Funnel Cloud		0	0	0	0
NEW HANOVER CO., PENDER CO.	SOUTH WILMINGTON, H.	8/22/2011	1547	Funnel Cloud		0	0	0	0
BRUNSWICK CO.	LELAND	10/7/2012	1530	Funnel Cloud		0	0	0	0
NEW HANOVER CO.	KURE BEACH	12/26/2012	948	Funnel Cloud		0	0	0	0
NEW HANOVER CO.	HARBOR IS	8/11/2013	1420	Funnel Cloud		0	0	0	0
NEW HANOVER CO.		8/12/1957	1215	Hail	1	0	0	0	0
NEW HANOVER CO.		9/4/1961	1400	Hail	1.75	0	0	0	0
NEW HANOVER CO.		8/17/1965	1350	Hail	0.75	0	0	0	0
PENDER CO.		5/30/1966	1740	Hail	1.75	0	0	0	0
NEW HANOVER CO.		5/25/1969	1305	Hail	0.75	0	0	0	0
NEW HANOVER CO.		6/16/1971	1700	Hail	2.5	0	0	0	0
NEW HANOVER CO.		4/22/1976	1511	Hail	0.75	0	0	0	0
NEW HANOVER CO., PENDER CO.		6/19/1977	1520	Hail	1	0	0	0	0
PENDER CO.		7/25/1978	1715	Hail	1	0	0	0	0
BRUNSWICK CO.		5/11/1979	1400	Hail	1	0	0	0	0
BRUNSWICK CO.		7/4/1979	1840	Hail	1	0	0	0	0
PENDER CO.		8/20/1979	1440	Hail	0.75	0	0	0	0
PENDER CO.		2/23/1980	1900	Hail	1.75	0	0	0	0
BRUNSWICK CO., NEW HANOVER CC		4/4/1980	1143	Hail	0.75	0	0	0	0
NEW HANOVER CO.		4/4/1980	1158	Hail	1.75	0	0	0	0
PENDER CO.		3/9/1983	1510	Hail	0.75	0	0	0	0
BRUNSWICK CO.		4/14/1984	355	Hail	1.75	0	0	0	0
PENDER CO.		5/8/1984	1939	Hail	0.75	0	0	0	0
PENDER CO.		4/16/1985	1315	Hail	0.75	0	0	0	0
NEW HANOVER CO., PENDER CO.		4/16/1985	1609	Hail	0.88	0	0	0	0
NEW HANOVER CO.		4/16/1985	1507	Hail	1	0	0	0	0
PENDER CO.		4/16/1985	1440	Hail	1.75	0	0	0	0
BRUNSWICK CO.		5/16/1985	1607	Hail	1	0	0	0	0
BRUNSWICK CO.		5/29/1986	1627	Hail	0.75	0	0	0	0
BRUNSWICK CO.		6/2/1986	1300	Hail	0.75	0	0	0	0
NEW HANOVER CO.		6/2/1986	1200	Hail	1	0	0	0	0
NEW HANOVER CO.		6/20/1986	1645	Hail	0.75	0	0	0	0
NEW HANOVER CO.		7/15/1986	1425	Hail	1	0	0	0	0
BRUNSWICK CO.		7/25/1986	1250	Hail	0.75	0	0	0	0
BRUNSWICK CO.		4/25/1987	1320	Hail	0.75	0	0	0	0
BRUNSWICK CO.		4/25/1987	1300	Hail	1	0	0	0	0
BRUNSWICK CO.		7/15/1987	1000	Hail	0.75	0	0	0	0
NEW HANOVER CO.		7/15/1987	1046	Hail	1.75	0	0	0	0
PENDER CO.		8/29/1987	1545	Hail	0.75	0	0	0	0
PENDER CO.		9/14/1987	1203	Hail	0.75	0	0	0	0
NEW HANOVER CO., PENDER CO.		4/24/1988	625	Hail	1	0	0	0	0
NEW HANOVER CO.		6/8/1988	1237	Hail	0.75	0	0	0	0
PENDER CO.		4/26/1989	0	Hail	1.75	0	0	0	0
BRUNSWICK CO.		4/27/1989	2000	Hail	0.75	0	0	0	0
PENDER CO.		6/5/1989	1257	Hail	0.75	0	0	0	0
BRUNSWICK CO.		4/30/1990	1900	Hail	1	0	0	0	0
PENDER CO.		8/29/1990	2255	Hail	0.75	0	0	0	0
BRUNSWICK CO.		4/30/1991	1340	Hail	0.75	0	0	0	0
BRUNSWICK CO.		6/21/1992	1330	Hail	0.75	0	0	0	0
NEW HANOVER CO.		6/21/1992	1345	Hail	0.88	0	0	0	0
PENDER CO.	S Portion	8/5/1994	1645	Hail	0.75	0	0	0	0
PENDER CO.	Scotts Hill	5/15/1995	1725	Hail	0.75	0	0	0	0
PENDER CO.		6/12/1995	1416	Hail	0.75	0	0	0	0
NEW HANOVER CO.	Wilmington	7/10/1995	1315	Hail	0.75	0	0	0	0
PENDER CO.	Wilmington	7/10/1995	1410	Hail	0.75	0	0	0	0
NEW HANOVER CO.	Wilmington	7/10/1995	1245	Hail	1	0	0	0	0
NEW HANOVER CO.	Wilmington	7/11/1995	1620	Hail	1	0	0	0	0
NEW HANOVER CO.	Wilmington	7/11/1995	1605	Hail	1.25	0	0	0	0
NEW HANOVER CO.	Wilmington	7/11/1995	1610	Hail	1.75	0	0	0	0
PENDER CO.	ATKINSON, ROCKY PT	3/15/1996	1705	Hail	0.75	0	0	0	0
BRUNSWICK CO.	BOLIVIA	3/17/1996	1120	Hail	0.75	0	0	0	0
NEW HANOVER CO.	WILMINGTON	4/1/1996	205	Hail	0.75	0	0	0	0
NEW HANOVER CO., PENDER CO.	WILMINGTON, ROCKY PT	4/1/1996	211	Hail	1	0	0	0	0
PENDER CO.	CURRIE	4/15/1996	1005	Hail	0.75	0	0	0	0
NEW HANOVER CO., PENDER CO.	WILMINGTON, WATHA, I	5/6/1996	1758	Hail	0.75	0	0	0	0
NEW HANOVER CO., PENDER CO.	CASTLE HAYNE, PENDERI	5/6/1996	1715	Hail	1	0	0	0	0
BRUNSWICK CO.	LELAND	6/12/1996	1530	Hail	0.75	0	0	0	0
NEW HANOVER CO.	(ILM)WILMINGTON ARPT	6/12/1996	1126	Hail	1	0	0	0	0
NEW HANOVER CO.	WILMINGTON, EAST WIL	6/13/1996	1444	Hail	0.75	0	0	0	0
NEW HANOVER CO.	EAST WILMINGTON	6/13/1996	1450	Hail	1	0	0	0	0
BRUNSWICK CO.	LELAND	6/13/1996	1427	Hail	1.75	0	0	0	0
BRUNSWICK CO.	LELAND	7/3/1996	1610	Hail	1	0	0	0	0
PENDER CO.	ASHTON	7/3/1996	1335	Hail	1.25	0	0	0	0
BRUNSWICK CO.	ASH	7/3/1996	1240	Hail	1.5	0	0	0	0

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TI	EVENT_TYPE	MAGNITTOR_F_SCALE	DEATHS_	INJURIES_I	DAMAGE_PROPERTY_N	DAMAGE_CROPS_NUM
PENDER CO.	ROCKY PT	7/30/1996	1655	Hail	0.88	0	0	0	0
PENDER CO.	WILLARD, WATHA	4/21/1997	1700	Hail	0.75	0	0	0	0
NEW HANOVER CO.	CAROLINA BEACH	4/22/1997	2321	Hail	0.88	0	0	0	0
PENDER CO.	SCOTTS HILL	6/3/1997	1130	Hail	1	0	0	0	0
BRUNSWICK CO.	BOLIVIA	6/3/1997	1225	Hail	1.5	0	0	0	0
BRUNSWICK CO., PENDER CO.	LELAND, BURGAW	7/5/1997	2100	Hail	0.75	0	0	0	0
PENDER CO.	ROCKY PT	7/7/1997	1655	Hail	0.75	0	0	0	0
NEW HANOVER CO.	(ILM)WILMINGTON ARPT	7/7/1997	1650	Hail	1	0	0	0	0
NEW HANOVER CO.	EAST WILMINGTON	7/18/1997	1407	Hail	0.88	0	0	0	0
BRUNSWICK CO.	SHALLOTTE	8/5/1997	1440	Hail	0.75	0	0	0	0
BRUNSWICK CO.	CALABASH	8/5/1997	1415	Hail	1.5	0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/18/1997	1553	Hail	1	0	0	0	0
PENDER CO.	BURGAW	4/3/1998	2320	Hail	0.75	0	0	0	0
BRUNSWICK CO.	SUPPLY	4/9/1998	717	Hail	0.75	0	0	0	0
BRUNSWICK CO.	LELAND	4/9/1998	733	Hail	1	0	0	0	0
BRUNSWICK CO.	ASH	4/22/1998	1530	Hail	0.75	0	0	0	0
BRUNSWICK CO., PENDER CO.	HOLDEN BEACH, SHALLO	5/4/1998	1630	Hail	0.75	0	0	0	0
PENDER CO.	WATHA	5/4/1998	1520	Hail	1	0	0	0	0
BRUNSWICK CO., NEW HANOVER CO	LELAND, WILMINGTON	5/4/1998	1705	Hail	1.25	0	0	0	0
NEW HANOVER CO.	CAROLINA BEACH	5/4/1998	1917	Hail	1.75	0	0	0	0
NEW HANOVER CO.	MURRAYSVILLE	5/7/1998	2240	Hail	2	0	0	2000	0
BRUNSWICK CO.	LELAND	5/8/1998	1920	Hail	1	0	0	0	0
NEW HANOVER CO.	WILMINGTON	5/8/1998	1919	Hail	1.25	0	0	0	0
NEW HANOVER CO., PENDER CO.	WILMINGTON, ROCKY PT	5/17/1998	1705	Hail	0.75	0	0	0	0
NEW HANOVER CO.	WILMINGTON	5/17/1998	225	Hail	1	0	0	0	0
BRUNSWICK CO.	MACO	5/17/1998	1720	Hail	1.25	0	0	0	0
BRUNSWICK CO., PENDER CO.	LELAND, ROCKY PT	5/23/1998	1400	Hail	0.75	0	0	0	0
NEW HANOVER CO., PENDER CO.	WILMINGTON, HAMPST	5/23/1998	1400	Hail	1	0	0	0	0
NEW HANOVER CO.	WILMINGTON	5/23/1998	1630	Hail	2	0	0	0	0
NEW HANOVER CO.	WILMINGTON	5/27/1998	1247	Hail	1	0	0	0	0
BRUNSWICK CO.	LELAND	6/13/1998	1610	Hail	0.75	0	0	0	0
NEW HANOVER CO.	WILMINGTON ARPT	6/13/1998	1547	Hail	2	0	0	0	0
BRUNSWICK CO.	LELAND	8/19/1998	1535	Hail	1	0	0	0	0
NEW HANOVER CO.	WILMINGTON	9/8/1998	1510	Hail	0.75	0	0	0	0
PENDER CO.	WILLARD	9/8/1998	1425	Hail	1.75	0	0	0	0
PENDER CO.	BURGAW	2/19/1999	1630	Hail	0.75	0	0	0	0
NEW HANOVER CO.	WILMINGTON	2/19/1999	1615	Hail	1	0	0	0	0
PENDER CO.	BURGAW	2/28/1999	1515	Hail	0.75	0	0	0	0
PENDER CO.	WILLARD	2/28/1999	1457	Hail	1	0	0	0	0
BRUNSWICK CO.	LONG BEACH	5/14/1999	1559	Hail	0.88	0	0	0	0
BRUNSWICK CO.	BOLIVIA, SOUTHPORT, SU	5/14/1999	1543	Hail	1.75	0	0	0	0
NEW HANOVER CO., PENDER CO.	CASTLE HAYNE, ROCKY P	8/19/1999	1450	Hail	0.88	0	0	0	0
REGIONAL EVENT	SUPPLY, WILMINGTON, (	4/18/2000	15	Hail	0.75	0	0	0	0
BRUNSWICK CO.	WINNABOW	4/28/2000	1513	Hail	0.75	0	0	0	0
BRUNSWICK CO., NEW HANOVER CO	ASH, MYRTLE GROVE	4/28/2000	1440	Hail	0.88	0	0	0	0
BRUNSWICK CO.	LELAND	4/28/2000	1525	Hail	1	0	0	0	0
BRUNSWICK CO.	GRISSETTOWN	4/29/2000	1955	Hail	0.75	0	0	0	0
NEW HANOVER CO., PENDER CO.	WILMINGTON, SCOTTS H	5/22/2000	726	Hail	0.75	0	0	0	0
PENDER CO.	HAMPSTEAD	5/25/2000	1653	Hail	0.75	0	0	0	0
BRUNSWICK CO.	HOLDEN BEACH	5/25/2000	1725	Hail	0.88	0	0	0	0
BRUNSWICK CO.	CASWELL BEACH, LELANI	5/28/2000	1522	Hail	0.75	0	0	0	0
NEW HANOVER CO., PENDER CO.	MYRTLE GROVE, WATHA	7/16/2000	1530	Hail	1	0	0	0	0
PENDER CO.	WARDS CORNER	7/16/2000	1523	Hail	1.25	0	0	0	0
BRUNSWICK CO., PENDER CO.	ASH, PENDERLEA	7/16/2000	2057	Hail	1.75	0	0	0	0
PENDER CO.	BURGAW	7/22/2000	1631	Hail	0.75	0	0	0	0
PENDER CO.	PENDERLEA	7/22/2000	1600	Hail	1	0	0	0	0
PENDER CO.	CURRIE	8/11/2000	1145	Hail	0.75	0	0	0	0
BRUNSWICK CO., PENDER CO.	BOLIVIA, HOLDEN BEACH	4/1/2001	1330	Hail	0.75	0	0	0	0
NEW HANOVER CO.	WILMINGTON	4/1/2001	1255	Hail	0.88	0	0	0	0
PENDER CO.	WILLARD	5/12/2001	1725	Hail	1.75	0	0	0	0
BRUNSWICK CO.	ASH	5/26/2001	1305	Hail	1.75	0	0	0	0
BRUNSWICK CO.	SHALLOTTE	5/28/2001	1225	Hail	0.75	0	0	0	0
NEW HANOVER CO.	WILMINGTON	5/28/2001	1155	Hail	1	0	0	0	0
BRUNSWICK CO., PENDER CO.	LELAND, HAMPSTEAD	5/28/2001	1143	Hail	1.75	0	0	0	0
NEW HANOVER CO.	WILMINGTON	4/3/2002	1321	Hail	0.75	0	0	0	0
NEW HANOVER CO.	MYRTLE GROVE	5/10/2002	1350	Hail	1	0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/31/2002	1330	Hail	0.75	0	0	0	0
BRUNSWICK CO., NEW HANOVER CO	HOLDEN BEACH, LELAND	3/11/2003	1035	Hail	0.75	0	0	0	0
NEW HANOVER CO.	WILMINGTON	3/11/2003	1240	Hail	0.88	0	0	0	0
BRUNSWICK CO., NEW HANOVER CO	LONG BEACH, SOUTHPOI	3/11/2003	1045	Hail	1	0	0	0	0
NEW HANOVER CO.	WILMINGTON	3/11/2003	1234	Hail	1.25	0	0	0	0
BRUNSWICK CO.	MACO	5/3/2003	2128	Hail	1	0	0	0	0
NEW HANOVER CO., PENDER CO.	MURRAYSVILLE, CURRIE,	5/29/2003	1900	Hail	0.75	0	0	0	0
PENDER CO.	CURRIE, SURF CITY	5/29/2003	1518	Hail	1	0	0	0	0
NEW HANOVER CO.	WILMINGTON	5/31/2003	1637	Hail	1	0	0	0	0
BRUNSWICK CO.	LELAND	5/31/2003	1625	Hail	1.25	0	0	0	0
PENDER CO.	PENDERLEA	6/20/2003	1245	Hail	0.88	0	0	0	0
BRUNSWICK CO.	MACO	7/12/2003	1257	Hail	0.75	0	0	0	0

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BRUNSWICK CO.	LELAND	8/23/2003	1606	Hail	0.88	0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/23/2003	1611	Hail	1	0	0	0	0
BRUNSWICK CO.	WINNABOW	6/3/2004	1335	Hail	0.75	0	0	0	0
BRUNSWICK CO.	LELAND	6/3/2004	1345	Hail	0.88	0	0	0	0
BRUNSWICK CO., NEW HANOVER CC	LELAND, WRIGHTSBORO	6/3/2004	1355	Hail	1.25	0	0	0	0
PENDER CO.	MAPLE HILL	7/11/2004	1455	Hail	0.75	0	0	0	0
NEW HANOVER CO.	MYRTLE GROVE	7/17/2004	1300	Hail	1	0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/13/2005	1426	Hail	0.75	0	0	0	0
NEW HANOVER CO.	WILMINGTON	1/2/2006	2332	Hail	0.75	0	0	0	0
PENDER CO.	WATHA	1/31/2006	215	Hail	1	0	0	0	0
BRUNSWICK CO., NEW HANOVER CC	SHALLOTTE, WILMINGTC	4/3/2006	1905	Hail	0.75	0	0	0	0
BRUNSWICK CO., NEW HANOVER CC	SHALLOTTE, CAROLINA B	4/3/2006	2116	Hail	0.88	0	0	0	0
BRUNSWICK CO.	SOUTHPORT	4/3/2006	1815	Hail	1	0	0	0	0
BRUNSWICK CO.	SOUTHPORT	4/3/2006	1945	Hail	1.5	0	0	0	0
NEW HANOVER CO., PENDER CO.	CAROLINA BEACH, ATKIN	4/3/2006	1925	Hail	1.75	0	0	0	0
BRUNSWICK CO.	ASH	4/8/2006	1415	Hail	0.88	0	0	0	0
PENDER CO.	BURGAW	5/26/2006	1930	Hail	0.75	0	0	0	0
PENDER CO.	ATKINSON	5/26/2006	1625	Hail	1.75	0	0	0	0
BRUNSWICK CO., NEW HANOVER CC	ASH, LELAND, WILMINGT	6/6/2006	1645	Hail	0.75	0	0	0	0
NEW HANOVER CO., PENDER CO.	WILMINGTON, WATHA	6/6/2006	1421	Hail	0.88	0	0	0	0
BRUNSWICK CO.	BOLIVIA	6/6/2006	1358	Hail	1	0	0	0	0
PENDER CO.	HAMPSTEAD	6/8/2006	1345	Hail	0.75	0	0	0	0
BRUNSWICK CO.	SHALLOTTE	6/8/2006	1945	Hail	0.88	0	0	0	0
BRUNSWICK CO., NEW HANOVER CC	CALABASH, WILMINGTOI	6/8/2006	1925	Hail	1.75	0	0	0	0
BRUNSWICK CO., NEW HANOVER CC	LELAND, WILMINGTON	8/8/2006	1700	Hail	0.75	0	0	0	0
BRUNSWICK CO.	SUPPLY	6/5/2007	1753	Hail	1	0	0	0	0
BRUNSWICK CO.	ASH	6/13/2007	1450	Hail	0.75	0	0	0	0
REGIONAL EVENT	LELAND, WILMINGTON, (	6/25/2007	1255	Hail	0.75	0	0	0	0
BRUNSWICK CO.	MACO	7/27/2007	1440	Hail	0.88	0	0	0	0
BRUNSWICK CO.	LELAND	3/15/2008	1850	Hail	0.75	0	0	0	0
NEW HANOVER CO.	WILMINGTON	3/15/2008	1850	Hail	1	0	0	0	0
REGIONAL EVENT	NORTHWEST, FERNSIDE,	4/21/2008	1655	Hail	0.75	0	0	0	0
PENDER CO.	BURGAW, ROCKY PT, MA	5/5/2008	1340	Hail	0.75	0	0	0	0
PENDER CO.	TOPSAIL	5/11/2008	1704	Hail	0.88	0	0	0	0
PENDER CO.	EAST ARCADIA	5/11/2008	1700	Hail	1	0	0	0	0
PENDER CO.	MARLBORO	5/11/2008	1647	Hail	1.75	0	0	0	0
PENDER CO.	ATKINSON	5/20/2008	2000	Hail	0.75	0	0	0	0
PENDER CO.	BELLS XRDS	6/9/2008	1632	Hail	0.88	0	0	0	0
BRUNSWICK CO.	SOUTHPORT	6/17/2008	1803	Hail	0.75	0	0	0	0
BRUNSWICK CO.	SOUTHPORT	6/17/2008	1803	Hail	0.88	0	0	0	0
BRUNSWICK CO.	BOLIVIA, LONG BEACH A	6/21/2008	810	Hail	0.88	0	0	0	0
BRUNSWICK CO.	VARNUM	6/21/2008	815	Hail	1	0	0	0	0
NEW HANOVER CO.	EAST WILMINGTON, WIL	6/22/2008	1425	Hail	0.88	0	0	0	0
PENDER CO.	PENDERLEA	4/20/2009	1632	Hail	0.88	0	0	0	0
NEW HANOVER CO.	SEA BREEZE	5/11/2009	944	Hail	0.88	0	0	0	0
BRUNSWICK CO.	LANVALE, WINNABOW	5/11/2009	917	Hail	1	0	0	0	0
NEW HANOVER CO.	SEA BREEZE	5/11/2009	939	Hail	1.75	0	0	0	0
NEW HANOVER CO.	MASONBORO	5/19/2010	1443	Hail	0.75	0	0	1000	0
PENDER CO.	PINEY WOOD	4/28/2011	1507	Hail	1	0	0	1000	0
BRUNSWICK CO.	BELL SWAMP, GRISSETTC	5/10/2011	2018	Hail	1	0	0	1500	0
BRUNSWICK CO.	MILL CREEK	5/10/2011	2027	Hail	1.25	0	0	1000	0
BRUNSWICK CO.	MILL CREEK	5/10/2011	2035	Hail	1.5	0	0	2000	0
BRUNSWICK CO., NEW HANOVER CC	MILL CREEK, CAROLINA E	5/10/2011	2029	Hail	1.75	0	0	150000	0
BRUNSWICK CO.	LONG BEACH ARPT, MILL	6/5/2011	1655	Hail	1	0	0	2000	0
NEW HANOVER CO.	MURRAYSVILLE	6/23/2011	1515	Hail	1	0	0	1000	0
NEW HANOVER CO.	BAYMEADE	6/26/2011	1158	Hail	0.75	0	0	0	0
PENDER CO.	SURF CITY	6/29/2011	1427	Hail	0.75	0	0	0	0
NEW HANOVER CO.	HARBOR IS	6/29/2011	1515	Hail	1.75	0	0	2000	0
PENDER CO.	MURRAY TOWN	9/28/2011	1530	Hail	1	0	0	1000	0
BRUNSWICK CO.	SECESSION, TOWN CREEI	11/4/2011	1345	Hail	1	0	0	2000	0
BRUNSWICK CO.	LONG BEACH	3/19/2012	1401	Hail	1	0	0	500	0
PENDER CO.	WARDS CORNER	3/25/2012	1430	Hail	0.88	0	0	250	0
PENDER CO.	BURGAW, MASPASS COR	3/25/2012	1417	Hail	1	0	0	1500	0
BRUNSWICK CO.	SECESSION	3/25/2012	1810	Hail	1.5	0	0	2000	0
BRUNSWICK CO.	SUPPLY	3/25/2012	1800	Hail	1.75	0	0	2500	0
BRUNSWICK CO.	BOLIVIA	4/26/2012	1630	Hail	0.88	0	0	250	0
BRUNSWICK CO.	BOWEN PT	5/14/2012	1826	Hail	0.75	0	0	0	0
PENDER CO.	ROCKY PT	5/22/2012	1430	Hail	0.75	0	0	0	0
PENDER CO.	HAMPSTEAD, ROCKY PT	5/22/2012	1430	Hail	1	0	0	1500	0
PENDER CO.	HAMPSTEAD	5/22/2012	1446	Hail	1.75	0	0	1500	0
PENDER CO.	CURRIE	6/23/2012	1736	Hail	0.75	0	0	0	0
BRUNSWICK CO.	CALABASH	7/1/2012	1733	Hail	1	0	0	1000	0
PENDER CO.	WILLARD	7/1/2012	1625	Hail	1	0	0	0	0
PENDER CO.	ATKINSON	8/2/2012	1712	Hail	1	0	0	3000	0
NEW HANOVER CO.	CASTLE HAYNE	10/7/2012	1702	Hail	0.88	0	0	500	0
BRUNSWICK CO., PENDER CO.	PHOENIX, MARLBORO	10/7/2012	1640	Hail	1	0	0	4500	0
BRUNSWICK CO.	LONGWOOD	6/13/2013	2345	Hail	1	0	0	750	0
PENDER CO.	MARLBORO	3/22/2014	1908	Hail	0.88	0	0	250	0

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TI	EVENT_TYPE	MAGNITTOR_F_SCALE	DEATHS_	INJURIES_I	DAMAGE_PROPERTY_N	DAMAGE_CROPS_NUM
PENDER CO.	MARLBORO	3/22/2014	1911	Hail	1	0	0	250	0
PENDER CO.	MARLBORO	3/22/2014	1908	Hail	1.5	0	0	1200	0
BRUNSWICK CO.	EAST ARCADIA	5/23/2014	1639	Hail	0.88	0	0	0	0
BRUNSWICK CO.	GRISSETTOWN	5/23/2014	1645	Hail	1	0	0	500	0
BRUNSWICK CO.	THOMASBORO	5/23/2014	1646	Hail	1.75	0	0	2000	0
PENDER CO.	LONG CREEK	5/29/2014	1507	Hail	1	0	0	250	0
PENDER CO.	SHELTER NECK	6/5/2014	1710	Hail	1	0	0	500	0
BRUNSWICK CO., NEW HANOVER CC	WINNABOW, FERNSIDE	7/28/2014	1521	Hail	1	0	0	1000	0
BRUNSWICK CO.	SECESSION	8/21/2014	1322	Hail	0.75	0	0	0	0
BRUNSWICK CO.	SECESSION	8/21/2014	1320	Hail	0.88	0	0	0	0
REGIONAL EVENT	BRUNSWICK, NEW HAN(	7/21/2011	1800	Heat		0	0	0	0
REGIONAL EVENT	BRUNSWICK, NEW HAN(	6/29/2012	1200	Heat		0	0	0	0
REGIONAL EVENT	BRUNSWICK, NEW HAN(	7/26/2012	1130	Heat		0	0	0	0
NEW HANOVER CO.	WILMINGTON	9/18/2000	1530	Heavy Rain		0	2	5000	0
NEW HANOVER CO.	WILMINGTON	7/15/2002	2130	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/29/2002	1545	Heavy Rain		0	0	0	0
BRUNSWICK CO., NEW HANOVER CC	SHALLOTTE, WILMINGTC	8/30/2002	445	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/31/2002	30	Heavy Rain		0	0	0	0
BRUNSWICK CO.	LELAND	7/3/2004	1345	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/29/2004	145	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/15/2004	1140	Heavy Rain		0	0	0	0
BRUNSWICK CO., NEW HANOVER CC	LELAND, WILMINGTON, I	9/1/2004	1442	Heavy Rain		0	0	0	0
BRUNSWICK CO., NEW HANOVER CC	LELAND, CASTLE HAYNE,	9/10/2004	1941	Heavy Rain		0	0	0	0
NEW HANOVER CO., PENDER CO.	WILMINGTON, HAMPSTE	9/14/2004	2115	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/13/2005	1452	Heavy Rain		0	0	0	0
NEW HANOVER CO.	MASONBORO	8/19/2005	1750	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/23/2005	2004	Heavy Rain		0	0	0	0
REGIONAL EVENT	SHALLOTTE, WILMINGTC	10/7/2005	800	Heavy Rain		0	0	2600000	0
NEW HANOVER CO.	WILMINGTON	11/21/2005	830	Heavy Rain		0	0	1000	0
BRUNSWICK CO.	WINNABOW	9/14/2006	1610	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/27/2007	1440	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON	5/11/2008	1115	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON	6/22/2008	1436	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON	9/25/2008	1900	Heavy Rain		0	0	0	0
NEW HANOVER CO.	MASONBORO	7/6/2009	1900	Heavy Rain		0	0	0	0
BRUNSWICK CO.	LELAND	8/16/2009	1730	Heavy Rain		0	0	0	0
NEW HANOVER CO., PENDER CO.	WILMINGTON, TOPSAIL	9/22/2009	345	Heavy Rain		0	0	5000	0
NEW HANOVER CO., PENDER CO.	MASONBORO, HAMPSTI	11/11/2009	1250	Heavy Rain		0	0	0	0
BRUNSWICK CO., NEW HANOVER CC	HOLDEN BEACH, WILMIN	12/2/2009	1330	Heavy Rain		0	0	0	0
NEW HANOVER CO.	NAVASSA, BAYMEADE	6/2/2010	1300	Heavy Rain		0	0	0	0
PENDER CO.	BURGAW	8/22/2010	1830	Heavy Rain		0	0	0	0
BRUNSWICK CO., NEW HANOVER CC	ASH, BOLIVIA, EASY HILL,	9/27/2010	930	Heavy Rain		0	0	150000	0
NEW HANOVER CO.	MURRAYSVILLE	3/19/2012	1528	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON, CAROLIN/	8/1/2012	700	Heavy Rain		0	0	0	0
NEW HANOVER CO.	CAROLINA BEACH	12/26/2012	1345	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON	4/12/2013	731	Heavy Rain		0	0	0	0
PENDER CO.	CURRIE	6/7/2013	1751	Heavy Rain		0	0	0	0
PENDER CO.	MARLBORO, ROCKY PT	6/23/2013	1730	Heavy Rain		0	0	0	0
NEW HANOVER CO.	MYRTLE GROVE, MASON	8/17/2013	1000	Heavy Rain		0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/22/2013	1535	Heavy Rain		0	0	2000	0
BRUNSWICK CO.	RUSSTOWN	12/24/2014	1110	Heavy Rain		0	0	0	0
COASTAL NEW HANOVER (ZONE)		3/24/2013	1102	High Wind	51	0	0	0	0
COASTAL NEW HANOVER (ZONE)		3/24/2013	1110	High Wind	58	0	0	0	0
COASTAL NEW HANOVER (ZONE)		3/7/2014	130	High Wind	53	0	0	0	0
REGIONAL EVENT	BRUNSWICK, NEW HAN(	7/12/1996	1100	Hurricane (Typhoon)	90	0	0	27000000	17500000
REGIONAL EVENT	BRUNSWICK, NEW HAN(	9/5/1996	1100	Hurricane (Typhoon)	95	2	0	385000000	49000000
REGIONAL EVENT	BRUNSWICK, NEW HAN(	8/26/1998	600	Hurricane (Typhoon)		0	0	72200000	70100000
REGIONAL EVENT	BRUNSWICK, NEW HAN(	8/30/1999	0	Hurricane (Typhoon)		0	0	75000	0
REGIONAL EVENT	BRUNSWICK, NEW HAN(	9/15/1999	1700	Hurricane (Typhoon)		0	0	109000000	4000000
REGIONAL EVENT	BRUNSWICK, NEW HAN(	8/14/2004	800	Hurricane (Typhoon)		0	0	10175000	2500000
REGIONAL EVENT	BRUNSWICK, NEW HAN(	9/14/2005	600	Hurricane (Typhoon)		0	0	8300000	0
REGIONAL EVENT	BRUNSWICK, NEW HAN(	2/24/2015	530	Ice Storm		0	0	0	0
NEW HANOVER CO.	CAROLINA BEACH	6/12/1996	1230	Lightning		0	0	0	0
BRUNSWICK CO.	LELAND	7/2/1996	1600	Lightning		0	0	25000	0
NEW HANOVER CO.	WILMINGTON	7/14/1996	1130	Lightning		0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/30/1996	1700	Lightning		0	1	0	0
NEW HANOVER CO.	WILMINGTON	7/29/1997	1200	Lightning		0	1	0	0
BRUNSWICK CO.	HOLDEN BEACH	9/18/1997	1500	Lightning		0	0	70000	0
PENDER CO.	BURGAW	8/21/1999	130	Lightning		0	0	40000	0
BRUNSWICK CO.	SHALLOTTE	6/6/2000	100	Lightning		0	0	100000	0
NEW HANOVER CO.	WILMINGTON	8/11/2000	1500	Lightning		0	0	106000	0
NEW HANOVER CO.	WILMINGTON	6/16/2001	1530	Lightning		0	0	15000	0
PENDER CO.	SURF CITY	7/2/2001	1440	Lightning		0	0	0	0
PENDER CO.	SURF CITY	7/11/2001	1630	Lightning		0	0	10000	0
NEW HANOVER CO.	CAROLINA BEACH	7/6/2002	1500	Lightning		0	3	0	0
NEW HANOVER CO.	WILMINGTON	7/20/2002	1345	Lightning		0	1	0	0
NEW HANOVER CO.	WRIGHTSVILLE BEACH	4/7/2003	1400	Lightning		0	0	100000	0
BRUNSWICK CO.	LELAND	5/31/2003	1500	Lightning		0	0	100000	0

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TI	EVENT_TYPE	MAGNITTOR_F_SCALE	DEATHS_	INJURIES_I	DAMAGE_PROPERTY_N	DAMAGE_CROPS_NUM
BRUNSWICK CO.	SHALLOTTE	7/17/2004	1300	Lightning		1	0	0	0
NEW HANOVER CO.	WILMINGTON	3/5/2005	1600	Lightning		0	0	20000	0
NEW HANOVER CO.	WRIGHTSVILLE BEACH	7/13/2005	1505	Lightning		0	1	0	0
BRUNSWICK CO.	LONG BEACH, SHALLOTT	8/14/2005	1030	Lightning		0	0	20000	0
NEW HANOVER CO.	CAROLINA BEACH	8/14/2005	1058	Lightning		0	7	0	0
PENDER CO.	BURGAW	1/31/2006	500	Lightning		0	0	5000	0
NEW HANOVER CO.	WILMINGTON	7/28/2007	1414	Lightning		0	0	80000	0
PENDER CO.	TOPSAIL	7/7/2008	1100	Lightning		1	4	0	0
BRUNSWICK CO.	SECESSION	3/1/2009	1030	Lightning		0	0	10000	0
NEW HANOVER CO.	WILMINGTON	6/26/2009	1530	Lightning		0	0	20000	0
NEW HANOVER CO.	WILMINGTON	6/27/2009	1745	Lightning		0	0	15000	0
PENDER CO.	HAMPSTEAD	7/23/2009	1700	Lightning		0	0	1000	0
NEW HANOVER CO.	WRIGHTSVILLE BEACH	9/25/2009	1400	Lightning		1	1	0	0
NEW HANOVER CO.	SEAGATE	8/18/2010	1405	Lightning		0	0	20000	0
NEW HANOVER CO.	EAST WILMINGTON	8/19/2010	1445	Lightning		0	0	100000	0
NEW HANOVER CO.	SEAGATE	5/13/2011	722	Lightning		0	0	20000	0
BRUNSWICK CO.	SOUTHPORT	6/5/2011	1650	Lightning		0	0	2000	0
NEW HANOVER CO.	SEAGATE	6/29/2011	1551	Lightning		0	0	1000	0
PENDER CO.	SCOTTS HILL	6/29/2011	1546	Lightning		0	0	1000	0
BRUNSWICK CO.	MILL CREEK	8/22/2011	1633	Lightning		0	0	5000	0
BRUNSWICK CO.	SOUTHPORT	3/19/2012	1500	Lightning		0	0	10000	0
BRUNSWICK CO.	FT CASWELL	4/4/2012	400	Lightning		0	0	400000	0
BRUNSWICK CO.	BOWEN PT	5/14/2012	2200	Lightning		0	0	100000	0
NEW HANOVER CO.	WILMINGTON	7/10/2012	1950	Lightning		0	0	1000	0
NEW HANOVER CO.	BAYMEADE	7/23/2012	1615	Lightning		0	0	2000	0
BRUNSWICK CO.	FT CASWELL	8/12/2012	400	Lightning		0	0	75000	0
NEW HANOVER CO.	CASTLE HAYNE	8/19/2012	1300	Lightning		1	0	0	0
BRUNSWICK CO.	CASWELL BEACH	10/15/2012	1930	Lightning		0	0	150000	0
NEW HANOVER CO.	KIRKLAND	12/26/2012	700	Lightning		0	0	200000	0
BRUNSWICK CO.	MILL CREEK	6/3/2013	1236	Lightning		0	0	10000	0
BRUNSWICK CO.	EASY HILL	8/20/2013	1545	Lightning		0	1	6000	0
NEW HANOVER CO.	MYRTLE GROVE	8/23/2013	1905	Lightning		0	0	75000	0
NEW HANOVER CO.	MYRTLE GROVE	9/2/2013	1430	Lightning		0	0	5000	0
PENDER CO.	SLOOP PT	9/2/2013	1430	Lightning		0	2	0	0
BRUNSWICK CO.	VARNUM	6/15/2014	1055	Lightning		0	1	5000	0
BRUNSWICK CO.	SOUTHPORT	7/15/2014	1400	Lightning		0	0	150000	0
NEW HANOVER CO.	MYRTLE GROVE	7/15/2014	1345	Lightning		0	0	10000	0
NEW HANOVER CO.	SEA BREEZE	7/15/2014	1400	Lightning		0	0	250000	0
NEW HANOVER CO.	SEA BREEZE	7/15/2014	1400	Lightning		0	0	5000	0
NEW HANOVER CO.	HARBOR IS	7/15/2014	1630	Lightning		0	0	10000	0
BRUNSWICK CO.	VARNUM	8/3/2014	538	Lightning		0	0	30000	0
PENDER CO.	ASHTON	8/18/2014	2000	Lightning		0	0	20000	0
NEW HANOVER CO.	CAROLINA BEACH	7/1/1997	800	Rip Current		0	1	0	0
NEW HANOVER CO.	CAROLINA BEACH	7/14/1997	800	Rip Current		0	0	0	0
PENDER CO.	TOPSAIL	7/14/1997	800	Rip Current		0	1	0	0
NEW HANOVER CO.	WRIGHTSVILLE BEACH	8/11/2000	1100	Rip Current		0	0	0	0
NEW HANOVER CO.	KURE BEACH	8/20/2000	1400	Rip Current		1	0	0	0
NEW HANOVER CO.	KURE BEACH	9/13/2000	1230	Rip Current		3	0	0	0
NEW HANOVER CO.	CAROLINA BEACH	7/27/2005	1400	Rip Current		1	0	0	0
COASTAL BRUNSWICK (ZONE)		6/4/2012	1815	Rip Current		1	0	0	0
COASTAL NEW HANOVER (ZONE)		7/16/2012	900	Rip Current		0	3	0	0
COASTAL NEW HANOVER (ZONE)		7/17/2012	900	Rip Current		0	0	0	0
COASTAL PENDER (ZONE)		6/22/2013	935	Rip Current		1	0	0	0
COASTAL BRUNSWICK (ZONE)		7/3/2013	1030	Rip Current		3	3	0	0
COASTAL BRUNSWICK (ZONE)		7/4/2013	1300	Rip Current		1	3	0	0
COASTAL NEW HANOVER (ZONE)		5/31/2014	1630	Rip Current		1	0	0	0
BRUNSWICK CO., NEW HANOVER CC	CALABASH, WILMINGTOI	10/8/1996	400	Storm Surge/Tide		0	0	0	0
REGIONAL EVENT	CASWELL BEACH, WRIGH	2/3/1998	1130	Storm Surge/Tide		0	0	0	0
INLAND BRUNSWICK (ZONE)		4/23/2012	1300	Strong Wind	35	1	0	0	0
COASTAL/INLAND BRUNSWICK (ZON		5/30/2012	1126	Strong Wind	39	0	0	2000	0
INLAND BRUNSWICK (ZONE)		5/30/2012	1119	Strong Wind	43	0	0	2000	0
INLAND NEW HANOVER (ZONE)		12/26/2012	1430	Strong Wind	43	0	0	2000	0
INLAND NEW HANOVER (ZONE)		1/31/2013	100	Strong Wind	43	0	0	15000	0
INLAND BRUNSWICK (ZONE)		1/31/2013	45	Strong Wind	48	0	0	1000	0
INLAND PENDER (ZONE)		2/17/2013	1400	Strong Wind	43	0	0	1000	0
NEW HANOVER CO.		2/28/1956	40	Thunderstorm Wind	50	0	0	0	0
NEW HANOVER CO.		4/5/1957	1450	Thunderstorm Wind	63	0	0	0	0
NEW HANOVER CO.		8/12/1957	1215	Thunderstorm Wind	61	0	0	0	0
NEW HANOVER CO.		4/9/1961	2100	Thunderstorm Wind	51	0	0	0	0
BRUNSWICK CO.		3/31/1962	2050	Thunderstorm Wind	69	0	0	0	0
BRUNSWICK CO.		7/4/1962	1630	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		7/28/1963	1600	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		9/10/1964	625	Thunderstorm Wind	52	0	0	0	0
BRUNSWICK CO.		5/12/1965	1600	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		5/13/1965	1730	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		7/9/1966	1154	Thunderstorm Wind	80	0	0	0	0
BRUNSWICK CO.		7/19/1966	1300	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		3/15/1967	1730	Thunderstorm Wind	0	0	0	0	0

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TI	EVENT_TYPE	MAGNITTOR_F_SCALE	DEATHS_	INJURIES_I	DAMAGE_PROPERTY_N	DAMAGE_CROPS_NUM
BRUNSWICK CO.		7/30/1967	1315	Thunderstorm Wind	87	0	0	0	0
NEW HANOVER CO.		11/24/1967	2100	Thunderstorm Wind	52	0	0	0	0
NEW HANOVER CO.		12/28/1967	1121	Thunderstorm Wind	66	0	0	0	0
PENDER CO.		8/25/1968	1500	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		12/7/1968	1900	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		4/2/1970	1200	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		4/2/1970	1150	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		8/1/1970	1945	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		7/20/1971	1415	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		7/27/1971	1830	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		7/11/1973	1645	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		2/3/1974	1835	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		3/16/1974	1650	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		5/23/1975	1800	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		8/18/1975	1626	Thunderstorm Wind	56	0	0	0	0
NEW HANOVER CO.		8/31/1975	1130	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		7/9/1977	1545	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		5/13/1978	1847	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		7/11/1978	1122	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		7/25/1978	2025	Thunderstorm Wind	52	0	0	0	0
BRUNSWICK CO.		12/4/1978	2310	Thunderstorm Wind	52	0	0	0	0
BRUNSWICK CO.		3/24/1979	140	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		3/24/1979	215	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		3/24/1979	210	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		3/24/1979	230	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		3/24/1979	248	Thunderstorm Wind	50	0	0	0	0
NEW HANOVER CO.		7/4/1979	1840	Thunderstorm Wind	60	0	0	0	0
NEW HANOVER CO.		7/15/1979	1635	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		2/23/1980	1845	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		4/27/1980	1045	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		4/27/1980	1130	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		7/29/1981	1718	Thunderstorm Wind	54	0	0	0	0
BRUNSWICK CO.		8/3/1982	1400	Thunderstorm Wind	56	0	0	0	0
NEW HANOVER CO.		8/25/1982	1830	Thunderstorm Wind	60	0	0	0	0
BRUNSWICK CO.		4/18/1983	1245	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		6/4/1983	1320	Thunderstorm Wind	50	0	0	0	0
NEW HANOVER CO.		6/5/1983	145	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		6/25/1983	1845	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		7/22/1983	1500	Thunderstorm Wind	50	0	0	0	0
NEW HANOVER CO.		7/22/1983	1400	Thunderstorm Wind	51	0	0	0	0
BRUNSWICK CO.		7/22/1983	1500	Thunderstorm Wind	61	0	0	0	0
BRUNSWICK CO.		7/24/1983	1828	Thunderstorm Wind	50	0	0	0	0
BRUNSWICK CO.		7/24/1983	1828	Thunderstorm Wind	51	0	0	0	0
BRUNSWICK CO.		3/21/1984	45	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		3/25/1984	730	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		3/25/1984	800	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		7/19/1984	1445	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		6/7/1985	2120	Thunderstorm Wind	50	0	0	0	0
BRUNSWICK CO.		7/25/1985	615	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		4/8/1986	1232	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		5/30/1986	1700	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		6/17/1986	1930	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		7/2/1986	1855	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		7/15/1986	1605	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		7/15/1986	1513	Thunderstorm Wind	55	0	0	0	0
NEW HANOVER CO.		7/15/1986	1534	Thunderstorm Wind	68	0	3	0	0
NEW HANOVER CO.		7/23/1986	1145	Thunderstorm Wind	55	0	0	0	0
BRUNSWICK CO.		4/15/1987	1210	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		4/15/1987	1310	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		7/15/1987	1445	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		7/27/1987	1500	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		8/19/1987	1530	Thunderstorm Wind	57	0	0	0	0
PENDER CO.		11/10/1987	1120	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		3/10/1988	1353	Thunderstorm Wind	51	0	0	0	0
BRUNSWICK CO.		9/4/1988	1908	Thunderstorm Wind	65	0	0	0	0
NEW HANOVER CO.		2/21/1989	1245	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		2/21/1989	1148	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		5/5/1989	2105	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		5/5/1989	2100	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		5/23/1989	1140	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		7/13/1989	2015	Thunderstorm Wind	52	0	0	0	0
BRUNSWICK CO.		5/22/1990	1300	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		7/1/1990	1800	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		7/1/1990	1829	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		7/1/1990	1801	Thunderstorm Wind	55	0	0	0	0
PENDER CO.		10/23/1990	440	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.		3/2/1991	325	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		3/3/1991	1025	Thunderstorm Wind	0	0	0	0	0

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TI	EVENT_TYPE	MAGNITTOR_F_SCALE	DEATHS_	INJURIES_I	DAMAGE_PROPERTY_N	DAMAGE_CROPS_NUM
NEW HANOVER CO.		3/3/1991	1058	Thunderstorm Wind	0	0	0	0	0
PENDER CO.		7/23/1991	1700	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		7/1/1992	1730	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		7/1/1992	1753	Thunderstorm Wind	50	0	0	0	0
PENDER CO.	C and E Portions	8/3/1993	2005	Thunderstorm Wind	0	0	0	0	0
PENDER CO.	Rocky Point	1/17/1994	2025	Thunderstorm Wind	0	0	0	50000	0
BRUNSWICK CO.		5/8/1994	1300	Thunderstorm Wind	0	0	0	0	0
PENDER CO.	Burgaw	8/5/1994	1645	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.	Near Holden Beach	9/18/1994	1655	Thunderstorm Wind	0	0	0	50000	0
BRUNSWICK CO.	Near Long Beach	9/18/1994	1745	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.	Near Seabreeze	9/18/1994	1815	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.		1/7/1995	500	Thunderstorm Wind	0	0	0	10000	0
PENDER CO.		1/7/1995	45	Thunderstorm Wind	0	0	0	1000	0
BRUNSWICK CO.		1/15/1995	400	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.	Exum	3/23/1995	1915	Thunderstorm Wind	0	0	0	7000	0
NEW HANOVER CO.	Wrightsboro	5/15/1995	1720	Thunderstorm Wind	0	0	0	50	0
NEW HANOVER CO.	Wilmington	5/15/1995	1730	Thunderstorm Wind	0	0	0	15	0
PENDER CO.	Rocky Point	5/15/1995	1700	Thunderstorm Wind	0	0	0	500000	0
BRUNSWICK CO.		6/7/1995	1515	Thunderstorm Wind	0	0	0	0	10000
NEW HANOVER CO.		6/7/1995	1430	Thunderstorm Wind	0	0	1	150000	0
PENDER CO.		6/7/1995	1430	Thunderstorm Wind	0	0	0	0	10000
BRUNSWICK CO.		6/12/1995	1830	Thunderstorm Wind	0	0	0	2000	0
BRUNSWICK CO.		6/12/1995	1850	Thunderstorm Wind	0	0	0	15000	0
NEW HANOVER CO.		6/12/1995	1200	Thunderstorm Wind	0	0	0	2000	0
PENDER CO.		6/12/1995	1845	Thunderstorm Wind	0	0	0	2000	0
NEW HANOVER CO.		6/12/1995	1134	Thunderstorm Wind	59	0	0	0	0
BRUNSWICK CO.		6/12/1995	1805	Thunderstorm Wind	60	0	0	0	0
NEW HANOVER CO.		6/12/1995	1849	Thunderstorm Wind	60	0	0	60000	0
PENDER CO.		6/12/1995	1445	Thunderstorm Wind	60	0	0	0	0
PENDER CO.		6/12/1995	1905	Thunderstorm Wind	60	0	0	10000	0
NEW HANOVER CO.		6/12/1995	1900	Thunderstorm Wind	63	0	0	25000	0
BRUNSWICK CO.		6/12/1995	1815	Thunderstorm Wind	65	0	0	4000	0
PENDER CO.		6/12/1995	1930	Thunderstorm Wind	65	0	0	4000	0
BRUNSWICK CO.		6/12/1995	1845	Thunderstorm Wind	98	0	0	25000	0
BRUNSWICK CO.	Leland	7/3/1995	1430	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.	New Hanover	7/3/1995	1620	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.	Wilmington	7/3/1995	1625	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.	Myrtle Grove	7/3/1995	1625	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.	Wilmington	7/11/1995	1637	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.	Wilmington	7/11/1995	1600	Thunderstorm Wind	52	0	0	0	0
NEW HANOVER CO.	Wilmington	7/11/1995	1620	Thunderstorm Wind	60	0	0	0	0
PENDER CO.	Scotts Hill	10/28/1995	115	Thunderstorm Wind	50	0	0	5000	0
NEW HANOVER CO.	Wilmington	10/28/1995	100	Thunderstorm Wind	60	0	0	0	0
BRUNSWICK CO.	Ocean Isle Beach	11/7/1995	1800	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.	Southport	11/7/1995	1825	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.	Sunset Beach	11/7/1995	1755	Thunderstorm Wind	0	0	0	0	0
PENDER CO.	Hampstead	11/7/1995	1825	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.	Long Beach	11/7/1995	1812	Thunderstorm Wind	58	0	0	0	0
BRUNSWICK CO.	Holden Beach	11/7/1995	1805	Thunderstorm Wind	59	0	0	0	0
BRUNSWICK CO.	Bolivia	11/11/1995	1950	Thunderstorm Wind	0	0	0	0	0
NEW HANOVER CO.	Wilmington	11/11/1995	2016	Thunderstorm Wind	0	0	0	0	0
PENDER CO.	Watha	11/11/1995	1945	Thunderstorm Wind	0	0	0	0	0
PENDER CO.	Burgaw	11/11/1995	1955	Thunderstorm Wind	0	0	0	0	0
PENDER CO.	Long Creek	11/11/1995	2000	Thunderstorm Wind	0	0	0	0	0
BRUNSWICK CO.	WINNABOW	4/26/1996	1420	Thunderstorm Wind	65	0	0	0	0
NEW HANOVER CO.	WILMINGTON	4/26/1996	1430	Thunderstorm Wind	65	0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/2/1996	1400	Thunderstorm Wind	55	0	0	20000	0
NEW HANOVER CO.	WILMINGTON	7/3/1996	1620	Thunderstorm Wind	60	0	0	0	0
PENDER CO.	ATKINSON	7/25/1996	1700	Thunderstorm Wind	60	0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/28/1996	1930	Thunderstorm Wind	60	0	0	0	0
BRUNSWICK CO.	LELAND	7/30/1996	1620	Thunderstorm Wind	45	0	0	0	0
BRUNSWICK CO.	SOUTHPORT	10/8/1996	520	Thunderstorm Wind	55	0	0	0	0
PENDER CO.	CURRIE	10/8/1996	555	Thunderstorm Wind	55	0	0	0	0
BRUNSWICK CO.	SUPPLY	2/14/1997	2350	Thunderstorm Wind	50	0	0	0	0
PENDER CO.	ROCKY PT	2/15/1997	12	Thunderstorm Wind	50	0	0	0	0
PENDER CO.	HAMPSTEAD	2/15/1997	25	Thunderstorm Wind	50	0	0	0	0
BRUNSWICK CO.	LELAND	7/5/1997	2110	Thunderstorm Wind	50	0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/5/1997	2059	Thunderstorm Wind	50	0	0	0	0
NEW HANOVER CO.	CASTLE HAYNE	7/7/1997	1630	Thunderstorm Wind	50	0	0	0	0
NEW HANOVER CO.	WRIGHTSVILLE BEACH	7/7/1997	1710	Thunderstorm Wind	50	0	0	0	0
NEW HANOVER CO.	MURRAYSVILLE	7/7/1997	1715	Thunderstorm Wind	50	0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/18/1997	1600	Thunderstorm Wind	60	0	0	0	0
PENDER CO.	WARDS CORNER	8/18/1997	1502	Thunderstorm Wind	60	0	0	0	0
BRUNSWICK CO.	LONG BEACH	11/2/1997	255	Thunderstorm Wind	55	0	0	0	0
PENDER CO.	CURRIE	1/8/1998	840	Thunderstorm Wind	60	0	0	0	0
BRUNSWICK CO.	CASWELL BEACH	3/9/1998	324	Thunderstorm Wind	60	0	0	0	0
NEW HANOVER CO.	CASTLE HAYNE	3/9/1998	345	Thunderstorm Wind	60	0	0	5000	0
PENDER CO.	WATHA	3/9/1998	342	Thunderstorm Wind	64	0	0	5000	0

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BRUNSWICK CO.	ASH	3/9/1998	305	Thunderstorm Wind	65	0	0	0	0
NEW HANOVER CO.	MYRTLE GROVE	4/9/1998	740	Thunderstorm Wind	77	0	0	2000	0
BRUNSWICK CO.	LELAND	5/7/1998	2240	Thunderstorm Wind	55	0	0	0	0
NEW HANOVER CO.	WILMINGTON	5/7/1998	2330	Thunderstorm Wind	60	0	0	0	0
PENDER CO.	SCOTTS HILL	5/7/1998	2300	Thunderstorm Wind	60	0	0	0	0
BRUNSWICK CO.	BOLIVIA	5/7/1998	2320	Thunderstorm Wind	65	0	0	0	0
PENDER CO.	PENDERLEA	5/8/1998	1900	Thunderstorm Wind	60	0	0	0	0
NEW HANOVER CO.	WRIGHTSVILLE BEACH	5/23/1998	1410	Thunderstorm Wind	60	0	0	1000	0
NEW HANOVER CO.	WILMINGTON	5/27/1998	1340	Thunderstorm Wind	55	0	0	0	0
BRUNSWICK CO.	ASH	5/27/1998	1255	Thunderstorm Wind	60	0	0	1000	0
PENDER CO.	HAMPSTEAD	5/27/1998	1310	Thunderstorm Wind	60	0	0	0	0
PENDER CO.	HAMPSTEAD	5/27/1998	1345	Thunderstorm Wind	60	0	0	30000	0
NEW HANOVER CO.	WILMINGTON	6/17/1998	210	Thunderstorm Wind	60	0	0	8000	0
PENDER CO.	SCOTTS HILL	6/19/1998	1845	Thunderstorm Wind	60	0	0	0	0
BRUNSWICK CO.	SUPPLY	6/19/1998	1755	Thunderstorm Wind	65	0	0	30000	0
NEW HANOVER CO.	WILMINGTON	6/19/1998	1830	Thunderstorm Wind	70	0	0	20000	0
PENDER CO.	ROCKY PT	7/24/1998	1457	Thunderstorm Wind	60	0	0	0	0
BRUNSWICK CO.	MACO	7/31/1998	1645	Thunderstorm Wind	65	0	0	50000	0
BRUNSWICK CO.	LONG BEACH	9/3/1998	1431	Thunderstorm Wind	63	0	0	0	0
BRUNSWICK CO.	SUPPLY	9/3/1998	1855	Thunderstorm Wind	65	0	0	0	0
NEW HANOVER CO.	WILMINGTON	9/8/1998	1525	Thunderstorm Wind	80	0	0	15000	0
BRUNSWICK CO.	SOUTHPORT	1/3/1999	330	Thunderstorm Wind	60	0	0	0	0
PENDER CO.	TOPSAIL	3/3/1999	1545	Thunderstorm Wind	60	0	0	20000	0
PENDER CO.	WARDS CORNER	6/10/1999	1535	Thunderstorm Wind	70	0	0	10000	0
BRUNSWICK CO.	SOUTHPORT	7/6/1999	830	Thunderstorm Wind	60	0	0	10000	0
PENDER CO.	WILLARD	7/24/1999	1530	Thunderstorm Wind	65	0	0	30000	0
PENDER CO.	SURF CITY	8/11/1999	2100	Thunderstorm Wind	55	0	0	0	0
PENDER CO.	MAPLE HILL	8/11/1999	2010	Thunderstorm Wind	65	0	0	0	0
NEW HANOVER CO.	CASTLE HAYNE	9/6/1999	644	Thunderstorm Wind	65	0	0	0	0
PENDER CO.	BURGAW	11/2/1999	1105	Thunderstorm Wind	60	0	0	0	0
NEW HANOVER CO.	WILMINGTON	2/14/2000	536	Thunderstorm Wind	54	0	0	0	0
PENDER CO.	WATHA	2/14/2000	510	Thunderstorm Wind	58	0	0	0	0
PENDER CO.	WATHA	3/16/2000	2213	Thunderstorm Wind	50	0	0	0	0
PENDER CO.	WATHA	4/8/2000	1725	Thunderstorm Wind	54	0	0	0	0
NEW HANOVER CO.	WRIGHTSVILLE BEACH	4/18/2000	50	Thunderstorm Wind	61	0	0	0	0
BRUNSWICK CO.	LONGWOOD	5/25/2000	1710	Thunderstorm Wind	60	0	0	75000	0
PENDER CO.	HAMPSTEAD	5/28/2000	1355	Thunderstorm Wind	56	0	0	0	0
PENDER CO.	WILLARD	5/28/2000	1850	Thunderstorm Wind	60	0	0	0	0
BRUNSWICK CO.	SHALLOTTE	7/21/2000	1557	Thunderstorm Wind	55	0	0	5000	0
PENDER CO.	MAPLE HILL	8/16/2000	2325	Thunderstorm Wind	60	0	0	0	0
NEW HANOVER CO.	WILMINGTON	8/24/2000	2300	Thunderstorm Wind	50	0	0	30000	0
PENDER CO.	WATHA	4/1/2001	1408	Thunderstorm Wind	51	0	0	0	0
BRUNSWICK CO.	WINNABOW	4/1/2001	1430	Thunderstorm Wind	55	0	0	0	0
PENDER CO.	BURGAW	4/1/2001	1404	Thunderstorm Wind	65	0	0	15000	0
PENDER CO.	SURF CITY	4/1/2001	1315	Thunderstorm Wind	69	0	0	0	0
NEW HANOVER CO.	WRIGHTSVILLE BEACH	4/1/2001	1315	Thunderstorm Wind	77	0	0	0	0
NEW HANOVER CO.	WILMINGTON	6/7/2001	1745	Thunderstorm Wind	60	0	0	0	0
NEW HANOVER CO.	WILMINGTON ARPT	6/7/2001	1716	Thunderstorm Wind	62	0	0	0	0
BRUNSWICK CO.	LONGWOOD	8/29/2001	1330	Thunderstorm Wind	52	0	0	0	0
NEW HANOVER CO.	WILMINGTON	5/10/2002	1823	Thunderstorm Wind	53	0	0	0	0
BRUNSWICK CO.	LELAND	5/10/2002	1815	Thunderstorm Wind	60	0	0	0	0
PENDER CO.	ROCKY PT	5/10/2002	1823	Thunderstorm Wind	61	0	0	0	0
BRUNSWICK CO.	WINNABOW	6/14/2002	2115	Thunderstorm Wind	55	0	0	0	0
PENDER CO.	BURGAW	6/14/2002	1415	Thunderstorm Wind	60	0	0	0	0
NEW HANOVER CO.	WILMINGTON	6/14/2002	2127	Thunderstorm Wind	65	0	0	15000	0
NEW HANOVER CO.	WILMINGTON	6/14/2002	2130	Thunderstorm Wind	78	0	0	250000	0
PENDER CO.	SURF CITY	7/5/2002	2038	Thunderstorm Wind	52	0	0	0	0
PENDER CO.	MAPLE HILL	7/10/2002	1530	Thunderstorm Wind	60	0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/20/2002	1715	Thunderstorm Wind	55	0	0	5000	0
BRUNSWICK CO.	LELAND	7/20/2002	1655	Thunderstorm Wind	56	0	0	10000	0
BRUNSWICK CO.	MACO	8/24/2002	2100	Thunderstorm Wind	55	0	0	0	0
PENDER CO.	BURGAW	8/24/2002	2015	Thunderstorm Wind	60	0	0	0	0
NEW HANOVER CO.	WRIGHTSVILLE BEACH	11/12/2002	1125	Thunderstorm Wind	50	0	0	0	0
PENDER CO.	HAMPSTEAD	11/12/2002	1133	Thunderstorm Wind	56	0	0	5000	0
PENDER CO.	SURF CITY	11/12/2002	1145	Thunderstorm Wind	59	0	0	0	0
NEW HANOVER CO.	WRIGHTSVILLE BEACH	2/4/2003	1001	Thunderstorm Wind	51	0	0	0	0
BRUNSWICK CO.	WINNABOW	2/22/2003	1615	Thunderstorm Wind	55	0	0	0	0
PENDER CO.	BURGAW	2/22/2003	1700	Thunderstorm Wind	55	0	0	0	0
NEW HANOVER CO.	WILMINGTON	3/20/2003	1315	Thunderstorm Wind	51	0	0	0	0
NEW HANOVER CO.	WILMINGTON ARPT	5/8/2003	258	Thunderstorm Wind	62	0	0	0	0
PENDER CO.	SCOTTS HILL	5/31/2003	1640	Thunderstorm Wind	65	0	0	3000	0
NEW HANOVER CO.	WILMINGTON	5/31/2003	1956	Thunderstorm Wind	87	0	0	750000	0
BRUNSWICK CO.	LELAND	7/9/2003	2240	Thunderstorm Wind	60	0	0	0	0
PENDER CO.	WILLARD	7/11/2003	2045	Thunderstorm Wind	60	0	0	0	0
PENDER CO.	HAMPSTEAD	9/22/2003	1830	Thunderstorm Wind	70	0	0	0	0
BRUNSWICK CO.	LELAND	6/3/2004	1350	Thunderstorm Wind	61	0	0	0	0
NEW HANOVER CO.	MURRAYSVILLE	7/9/2004	1410	Thunderstorm Wind	55	0	0	0	0
PENDER CO.	SURF CITY	7/11/2004	1455	Thunderstorm Wind	65	0	0	0	0

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BRUNSWICK CO.	LELAND	7/17/2004	1250	Thunderstorm Wind	60	0	0	0	0
BRUNSWICK CO.	SOUTHPORT	7/17/2004	1300	Thunderstorm Wind	65	0	0	0	0
PENDER CO.	ROCKY PT	8/5/2004	1800	Thunderstorm Wind	55	0	0	0	0
NEW HANOVER CO.	WILMINGTON	3/5/2005	1551	Thunderstorm Wind	51	0	0	0	0
PENDER CO.	BURGAW	3/8/2005	1040	Thunderstorm Wind	52	0	0	0	0
BRUNSWICK CO.	LANVALE	3/8/2005	1036	Thunderstorm Wind	60	0	0	0	0
PENDER CO.	SURF CITY	3/8/2005	1103	Thunderstorm Wind	63	0	0	0	0
NEW HANOVER CO.	WILMINGTON	3/8/2005	1049	Thunderstorm Wind	77	0	1	150000	0
NEW HANOVER CO.	MYRTLE GROVE	3/8/2005	1100	Thunderstorm Wind	77	0	0	0	0
NEW HANOVER CO.	WILMINGTON	4/3/2006	1850	Thunderstorm Wind	60	0	0	0	0
BRUNSWICK CO.	WINNABOW	4/17/2006	1633	Thunderstorm Wind	60	0	0	0	0
NEW HANOVER CO.	CASTLE HAYNE	4/17/2006	1645	Thunderstorm Wind	63	0	0	0	0
PENDER CO.	ATKINSON	4/17/2006	1613	Thunderstorm Wind	65	0	0	0	0
NEW HANOVER CO.	WRIGHTSVILLE BEACH	6/12/2006	631	Thunderstorm Wind	58	0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/15/2006	1937	Thunderstorm Wind	51	0	0	0	0
BRUNSWICK CO.	LONGWOOD	7/15/2006	1840	Thunderstorm Wind	52	0	0	0	0
NEW HANOVER CO.	WILMINGTON	7/15/2006	1945	Thunderstorm Wind	60	0	0	0	0
PENDER CO.	ATKINSON	7/15/2006	1557	Thunderstorm Wind	65	0	0	1000	0
NEW HANOVER CO.	WILMINGTON	8/8/2006	1645	Thunderstorm Wind	60	0	0	0	0
BRUNSWICK CO.	LELAND	4/15/2007	1224	Thunderstorm Wind	61	0	0	150000	0
PENDER CO.	ASHTON	3/15/2008	1837	Thunderstorm Wind	83	0	7	2000000	0
BRUNSWICK CO.	LONGWOOD	6/20/2008	1306	Thunderstorm Wind	50	0	0	0	0
BRUNSWICK CO.	PINEY GROVE	6/21/2008	810	Thunderstorm Wind	52	0	0	0	0
BRUNSWICK CO.	VARNUM	6/21/2008	800	Thunderstorm Wind	52	0	0	0	0
NEW HANOVER CO.	MURRAYSVILLE	6/22/2008	1405	Thunderstorm Wind	52	0	0	0	0
NEW HANOVER CO.	FERNSIDE	6/22/2008	1430	Thunderstorm Wind	52	0	0	0	0
PENDER CO.	ATKINSON	6/29/2008	1543	Thunderstorm Wind	50	0	0	0	0
PENDER CO.	WATHA	6/29/2008	1609	Thunderstorm Wind	50	0	0	0	0
NEW HANOVER CO.	SOUTH WILMINGTON	7/10/2008	1504	Thunderstorm Wind	50	0	0	0	0
BRUNSWICK CO.	MAKATOKA	7/31/2008	1910	Thunderstorm Wind	52	0	0	0	0
NEW HANOVER CO.	WILMINGTON	4/11/2009	107	Thunderstorm Wind	52	0	0	8000	0
PENDER CO.	PINEY WOOD	5/4/2009	1959	Thunderstorm Wind	52	0	0	2000	0
BRUNSWICK CO.	VARNUM	6/26/2009	1725	Thunderstorm Wind	52	0	0	4000	0
NEW HANOVER CO.	KIRKLAND	6/27/2009	1745	Thunderstorm Wind	50	0	0	2000	0
PENDER CO.	WILLARD	7/28/2009	1540	Thunderstorm Wind	52	0	0	1000	0
BRUNSWICK CO.	BISHOP	12/2/2009	2220	Thunderstorm Wind	50	0	0	2000	0
PENDER CO.	HIGHSMITH	12/2/2009	2214	Thunderstorm Wind	52	0	0	0	0
BRUNSWICK CO.	SHALLOTTE	1/25/2010	557	Thunderstorm Wind	52	0	0	18000	0
PENDER CO.	MONTAGUE	6/16/2010	1335	Thunderstorm Wind	50	0	0	1000	0
PENDER CO.	PINEY WOOD	6/25/2010	1840	Thunderstorm Wind	50	0	0	1000	0
BRUNSWICK CO.	SEASIDE	8/6/2010	1235	Thunderstorm Wind	56	0	0	0	0
PENDER CO.	BURGAW	8/12/2010	1645	Thunderstorm Wind	50	0	0	1000	0
BRUNSWICK CO.	MACO	9/30/2010	620	Thunderstorm Wind	50	0	0	3000	0
BRUNSWICK CO.	GORES LNDG	9/30/2010	601	Thunderstorm Wind	56	0	0	3000	0
BRUNSWICK CO.	LONG BEACH	9/30/2010	602	Thunderstorm Wind	62	0	0	0	0
BRUNSWICK CO.	ASH	4/5/2011	600	Thunderstorm Wind	56	0	0	2500	0
BRUNSWICK CO.	MILL CREEK	4/5/2011	653	Thunderstorm Wind	56	0	0	7000	0
PENDER CO.	HIGHSMITH	4/5/2011	630	Thunderstorm Wind	56	0	0	4000	0
PENDER CO.	HAMPSTEAD	4/5/2011	705	Thunderstorm Wind	56	0	0	2000	0
BRUNSWICK CO.	NORTH WEST	4/5/2011	610	Thunderstorm Wind	61	0	0	0	0
PENDER CO.	LONG CREEK	6/23/2011	1705	Thunderstorm Wind	50	0	0	500	0
NEW HANOVER CO.	(ILM)WILMINGTON ARPT	6/23/2011	1508	Thunderstorm Wind	65	0	0	1000	0
NEW HANOVER CO.	HARBOR IS	6/29/2011	1500	Thunderstorm Wind	50	0	0	0	0
NEW HANOVER CO.	SEAGATE	6/29/2011	1609	Thunderstorm Wind	50	0	0	1000	0
NEW HANOVER CO.	SEAGATE	6/29/2011	1614	Thunderstorm Wind	50	0	0	1000	0
NEW HANOVER CO.	AIRLEE	6/29/2011	1600	Thunderstorm Wind	54	0	0	1000	0
PENDER CO.	SURF CITY	6/29/2011	1439	Thunderstorm Wind	55	0	0	0	0
NEW HANOVER CO.	SOUTH WILMINGTON	6/29/2011	1527	Thunderstorm Wind	56	0	0	1000	0
NEW HANOVER CO.	SOUTH WILMINGTON	6/29/2011	1530	Thunderstorm Wind	62	0	0	3000	0
NEW HANOVER CO.	MURRAYSVILLE	7/21/2011	1400	Thunderstorm Wind	50	0	0	1000	0
BRUNSWICK CO.	HONEY POND	7/24/2011	1537	Thunderstorm Wind	50	0	0	1000	0
PENDER CO.	STAG PARK	8/12/2011	1510	Thunderstorm Wind	61	0	0	6000	0
BRUNSWICK CO.	FREELAND	8/20/2011	1740	Thunderstorm Wind	56	0	0	15000	0
BRUNSWICK CO.	MILL CREEK	8/22/2011	1630	Thunderstorm Wind	50	0	0	2500	0
BRUNSWICK CO.	SOUTHPORT	12/27/2011	1241	Thunderstorm Wind	59	0	0	0	0
PENDER CO.	SURF CITY	3/25/2012	46	Thunderstorm Wind	50	0	0	7000	0
BRUNSWICK CO.	BOWEN PT	5/14/2012	1755	Thunderstorm Wind	50	0	0	1000	0
BRUNSWICK CO.	CAUSE LNDG	7/1/2012	1733	Thunderstorm Wind	50	0	0	500	0
BRUNSWICK CO.	HOLDEN BEACH	7/1/2012	1735	Thunderstorm Wind	50	0	1	0	0
BRUNSWICK CO.	SUPPLY	7/1/2012	1742	Thunderstorm Wind	50	0	0	3000	0
BRUNSWICK CO.	CAMP BRANCH	7/1/2012	1719	Thunderstorm Wind	52	0	0	6000	0
BRUNSWICK CO.	LELAND	7/1/2012	1655	Thunderstorm Wind	52	0	0	5000	0
BRUNSWICK CO.	SUPPLY	7/1/2012	1720	Thunderstorm Wind	52	0	0	4000	0
BRUNSWICK CO.	SUPPLY	7/1/2012	1733	Thunderstorm Wind	52	0	0	6000	0
NEW HANOVER CO.	WILMINGTON	7/1/2012	1708	Thunderstorm Wind	61	0	0	0	0
BRUNSWICK CO.	MILL CREEK	10/7/2012	1828	Thunderstorm Wind	50	0	0	4000	0
BRUNSWICK CO.	MILL CREEK	10/7/2012	1830	Thunderstorm Wind	50	0	0	5000	0
PENDER CO.	NEW TOPSAIL BEACH	12/26/2012	1115	Thunderstorm Wind	51	0	0	0	0

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TI	EVENT_TYPE	MAGNITTOR_F_SCALE	DEATHS_	INJURIES_I	DAMAGE_PROPERTY_I	DAMAGE_CROPS_NUM
BRUNSWICK CO.	SOUTHPORT	12/26/2012	940	Thunderstorm Wind	54	0	0	0	0
BRUNSWICK CO.	SOUTHPORT	12/26/2012	1250	Thunderstorm Wind	59	0	0	0	0
NEW HANOVER CO.	KURE BEACH	12/26/2012	943	Thunderstorm Wind	61	0	0	1500	0
NEW HANOVER CO.	WILMINGTON	1/31/2013	145	Thunderstorm Wind	50	0	0	3000	0
BRUNSWICK CO.	SOUTHPORT	1/31/2013	155	Thunderstorm Wind	51	0	0	0	0
BRUNSWICK CO.	PINEY GROVE	6/3/2013	1218	Thunderstorm Wind	50	0	0	1000	0
PENDER CO.	PENDERLEA	6/13/2013	1922	Thunderstorm Wind	52	0	0	2000	0
PENDER CO.	BELLS XRDS	6/13/2013	2200	Thunderstorm Wind	52	0	0	1000	0
BRUNSWICK CO.	WINNABOW	6/27/2013	2155	Thunderstorm Wind	50	0	0	1000	0
NEW HANOVER CO.	HARBOR IS	6/30/2013	436	Thunderstorm Wind	53	0	0	0	0
PENDER CO.	BURGAW	11/27/2013	9	Thunderstorm Wind	50	0	0	2000	0
PENDER CO.	WHITE STOCKING	11/27/2013	13	Thunderstorm Wind	50	0	0	1000	0
PENDER CO.	BURGAW	11/27/2013	7	Thunderstorm Wind	56	0	0	22000	0
PENDER CO.	BURGAW	11/27/2013	8	Thunderstorm Wind	56	0	0	15000	0
PENDER CO.	BURGAW	11/27/2013	11	Thunderstorm Wind	56	0	0	12000	0
PENDER CO.	BURGAW	2/21/2014	1400	Thunderstorm Wind	50	0	0	5000	0
PENDER CO.	CURRIE	2/21/2014	1350	Thunderstorm Wind	52	0	0	1000	0
BRUNSWICK CO.	CAUSE LNDG	4/30/2014	1330	Thunderstorm Wind	50	0	0	5000	0
PENDER CO.	BURGAW	7/15/2014	1306	Thunderstorm Wind	52	0	0	2000	0
BRUNSWICK CO.	COOL RUN	8/16/2014	1200	Thunderstorm Wind	50	0	0	3000	0
PENDER CO.	MALPASS CORNER	8/18/2014	1900	Thunderstorm Wind	52	0	0	2000	0
PENDER CO.	NEW TOPSAIL BEACH	8/18/2014	2032	Thunderstorm Wind	52	0	0	0	0
PENDER CO.	NEW TOPSAIL BEACH	8/18/2014	2032	Thunderstorm Wind	59	0	0	0	0
PENDER CO.	PENDERLEA	8/22/2014	1850	Thunderstorm Wind	50	0	0	10000	0
PENDER CO.		6/12/1995	1800	THUNDERSTORM WIND/	0	0	0	1000	0
BRUNSWICK CO.		6/12/1995	1820	THUNDERSTORM WIND/	0	0	0	2000	0
PENDER CO.		6/12/1995	1845	THUNDERSTORM WIND/	0	0	0	1000	0
PENDER CO.		6/12/1995	1850	THUNDERSTORM WIND/	0	0	0	2000	0
PENDER CO.		6/13/1951	1530	Tornado	0 F1	0	0	25000	0
BRUNSWICK CO.		7/6/1951	1100	Tornado	0 F1	0	0	25000	0
PENDER CO.		4/30/1953	1800	Tornado	0 F1	0	0	25000	0
NEW HANOVER CO.		6/23/1954	1615	Tornado	0 F1	0	0	250000	0
PENDER CO.		11/2/1954	1330	Tornado	0 F2	0	0	25000	0
PENDER CO.		8/10/1955	1730	Tornado	0 F1	0	1	25000	0
NEW HANOVER CO.		6/12/1958	1500	Tornado	0 F1	0	0	25000	0
NEW HANOVER CO.		10/15/1959	110	Tornado	0 F1	0	1	25000	0
PENDER CO.		2/25/1961	1106	Tornado	0 F1	0	0	2500	0
BRUNSWICK CO.		6/13/1962	137	Tornado	0 F2	0	0	25000	0
BRUNSWICK CO.		9/12/1964	2000	Tornado	0 F0	0	0	25000	0
PENDER CO.		8/5/1969	400	Tornado	0 F2	0	0	25000	0
NEW HANOVER CO.		8/1/1972	530	Tornado	0 F0	0	0	0	0
PENDER CO.		4/26/1973	2318	Tornado	0 F1	0	0	25000	0
PENDER CO.		6/13/1973	1500	Tornado	0 F0	0	0	2500	0
PENDER CO.		7/11/1975	1630	Tornado	0 F1	0	0	25000	0
BRUNSWICK CO.		9/7/1975	1445	Tornado	0 F0	0	0	25000	0
BRUNSWICK CO.		10/17/1975	1200	Tornado	0 F1	0	0	25000	0
BRUNSWICK CO.		5/18/1976	1455	Tornado	0 F1	0	0	25000	0
BRUNSWICK CO.		8/16/1976	1330	Tornado	0 F1	0	0	2500	0
PENDER CO.		4/20/1977	1600	Tornado	0 F0	0	0	25000	0
NEW HANOVER CO.		5/13/1978	1745	Tornado	0 F1	0	0	2500	0
NEW HANOVER CO.		5/13/1978	1805	Tornado	0 F0	0	0	250	0
BRUNSWICK CO.		4/27/1980	1115	Tornado	0 F0	0	0	0	0
PENDER CO.		9/26/1982	630	Tornado	0 F2	0	0	25000	0
BRUNSWICK CO.		5/5/1990	1345	Tornado	0 F1	0	0	2500	0
NEW HANOVER CO.		7/16/1991	1027	Tornado	0 F0	0	0	0	0
PENDER CO.		8/18/1991	630	Tornado	0 F0	0	0	0	0
BRUNSWICK CO.	Longwood	9/18/1994	1645	Tornado	0 F1	0	0	500000	0
BRUNSWICK CO.	Bald Head Island	7/1/1995	1555	Tornado	0 F0	0	0	0	0
PENDER CO.	MALPASS CORNER	4/15/1996	1020	Tornado	F0	0	0	0	0
PENDER CO.	WARDS CORNER	4/15/1996	1050	Tornado	F0	0	0	0	0
BRUNSWICK CO.	SOUTHPORT	8/4/1996	820	Tornado	F0	0	0	0	0
BRUNSWICK CO.	SUPPLY	10/8/1996	445	Tornado	F0	0	0	100000	0
NEW HANOVER CO.	SOUTH WILMINGTON	10/8/1996	640	Tornado	F0	0	0	0	0
BRUNSWICK CO.	LELAND	7/19/1997	1440	Tornado	F0	0	0	2000	0
BRUNSWICK CO.	WINNABOW	7/19/1997	1431	Tornado	F0	0	0	0	0
PENDER CO.	PENDERLEA	10/26/1997	1645	Tornado	F0	0	1	100000	0
NEW HANOVER CO.	WILMINGTON	1/8/1998	901	Tornado	F1	0	3	175000	0
NEW HANOVER CO.	WILMINGTON	5/7/1998	2248	Tornado	F1	0	0	40000	0
NEW HANOVER CO.	WILMINGTON	5/23/1998	1415	Tornado	F1	0	1	50000	0
BRUNSWICK CO.	LELAND	6/13/1998	1602	Tornado	F0	0	0	0	0
PENDER CO.	ATKINSON	6/13/1998	1521	Tornado	F0	0	0	0	0
NEW HANOVER CO.	WILMINGTON	6/19/1998	1820	Tornado	F1	0	0	150000	0
NEW HANOVER CO.	WILMINGTON	9/15/1999	920	Tornado	F0	0	0	0	0
NEW HANOVER CO.	MURRAYSVILLE	9/15/1999	1420	Tornado	F0	0	0	0	0
PENDER CO.	BURGAW	9/15/1999	624	Tornado	F0	0	0	0	0
PENDER CO.	ROCKY PT	3/16/2000	2210	Tornado	F0	0	0	10000	0
PENDER CO.	CURRIE	4/25/2000	1430	Tornado	F0	0	0	15000	0
PENDER CO.	BURGAW	4/28/2000	1245	Tornado	F0	0	0	50000	0

CZ_NAME_STR	BEGIN_LOCATION	BEGIN_DATE	BEGIN_TI	EVENT_TYPE	MAGNITTOR_F_SCALE	DEATHS_	INJURIES_I	DAMAGE_PROPERTY_N	DAMAGE_CROPS_NUM
PENDER CO.	MAPLE HILL	4/1/2001	1415	Tornado	F0	0	0	100000	0
BRUNSWICK CO.	SHALLOTTE	9/11/2001	1348	Tornado	F0	0	0	0	0
BRUNSWICK CO.	SHALLOTTE	7/24/2002	1655	Tornado	F0	0	0	0	0
PENDER CO.	WATHA	5/27/2003	1337	Tornado	F0	0	0	35000	0
PENDER CO.	ROCKY PT	8/13/2004	255	Tornado	F2	3	29	1300000	0
BRUNSWICK CO.	LONG BEACH	9/10/2004	1445	Tornado	F0	0	0	0	0
BRUNSWICK CO.	SOUTHPORT	9/10/2004	1428	Tornado	F0	0	0	0	0
PENDER CO.	POINT CASWELL	11/16/2006	641	Tornado	F1	0	0	70000	0
PENDER CO.	HAMPSTEAD	3/15/2008	1856	Tornado	EF1	0	0	2000000	0
NEW HANOVER CO.	KIRKLAND	5/11/2008	1703	Tornado	EF0	0	0	0	0
PENDER CO.	SURF CITY	8/27/2008	1205	Tornado	EF0	0	0	0	0
BRUNSWICK CO.	REGAN	4/6/2009	1045	Tornado	EF1	0	0	20000	0
PENDER CO.	ATKINSON	4/28/2011	1507	Tornado	EF1	0	0	66000	0
PENDER CO.	ATKINSON	4/28/2011	1510	Tornado	EF0	0	0	33000	0
PENDER CO.	PINEY WOOD	4/28/2011	1529	Tornado	EF1	0	0	105000	0
PENDER CO.	WILLARD	4/28/2011	1538	Tornado	EF0	0	0	12000	0
NEW HANOVER CO.	CAROLINA BEACH	8/18/2011	915	Tornado	EF0	0	0	3000	0
BRUNSWICK CO.	EAST ARCADIA	6/7/2013	22	Tornado	EF0	0	0	10000	0
BRUNSWICK CO.	HOLDEN BEACH	9/22/2013	339	Tornado	EF0	0	0	10000	0
NEW HANOVER CO.	WRIGHTSBORO	12/24/2014	1030	Tornado	EF1	0	1	60000	0
REGIONAL EVENT	BRUNSWICK, NEW HANC	6/18/1996	1000	Tropical Storm	25	0	0	0	0
REGIONAL EVENT	BRUNSWICK, NEW HANC	9/18/2003	800	Tropical Storm		0	0	0	0
BRUNSWICK, NEW HANOVER		8/29/2004	1600	Tropical Storm		0	0	0	0
REGIONAL EVENT	BRUNSWICK, NEW HANC	8/31/2006	1830	Tropical Storm		0	0	0	1602000
REGIONAL EVENT	BRUNSWICK, NEW HANC	9/1/2006	0	Tropical Storm		0	0	0	0
BRUNSWICK (ZONE)		9/6/2008	130	Tropical Storm		0	0	0	0
REGIONAL EVENT	BRUNSWICK, NEW HAN(	8/26/2011	1830	Tropical Storm		0	0	4350000	0
REGIONAL EVENT	BRUNSWICK, NEW HAN(	10/27/2012	1129	Tropical Storm		0	0	5000	0
REGIONAL EVENT	BRUNSWICK, NEW HAN(	6/7/2013	200	Tropical Storm		0	0	0	0
REGIONAL EVENT	BRUNSWICK, NEW HAN(	7/3/2014	1500	Tropical Storm		0	0	0	0
BRUNSWICK CO.	LONG BEACH	4/26/1996	1416	Waterspout		0	0	0	0
NEW HANOVER CO.	CAROLINA BEACH	4/26/1996	1440	Waterspout		0	0	0	0
BRUNSWICK CO.	SOUTHPORT	8/4/1996	814	Waterspout		0	0	0	0
NEW HANOVER CO.	CAROLINA BEACH	5/26/1997	1848	Waterspout		0	0	0	0
PENDER CO.	SURF CITY	9/10/1997	645	Waterspout		0	0	0	0
BRUNSWICK CO.	CASWELL BEACH	7/5/1998	1240	Waterspout		0	0	0	0
NEW HANOVER CO.	KIRKLAND	9/8/1998	1530	Waterspout		0	0	0	0
NEW HANOVER CO.	KURE BEACH	9/30/1998	1025	Waterspout		0	0	0	0
BRUNSWICK CO.	SHALLOTTE	9/11/2001	1340	Waterspout		0	0	0	0
NEW HANOVER CO.	CAROLINA BEACH	9/13/2001	1400	Waterspout		0	0	0	0
NEW HANOVER CO.	CAROLINA BEACH	9/13/2001	1425	Waterspout		0	0	0	0
PENDER CO.	ROCKY PT	6/3/1998	1500	Wildfire		0	0	0	0
INLAND PENDER (ZONE)		6/18/2011	2000	Wildfire		0	0	0	0
INLAND PENDER (ZONE)		7/1/2011	0	Wildfire		0	0	0	0
INLAND PENDER (ZONE)		4/14/2012	1245	Wildfire		0	0	2000	0
INLAND NEW HANOVER (ZONE)		4/16/2012	1700	Wildfire		0	0	2500	0
INLAND PENDER (ZONE)		4/4/2014	1300	Wildfire		0	0	45500	0
REGIONAL EVENT	BRUNSWICK, NEW HAN(	1/28/2014	1500	Winter Storm		0	0	0	0
REGIONAL EVENT	BRUNSWICK, NEW HAN(	2/11/2014	1030	Winter Storm		1	0	0	0
INLAND PENDER (ZONE)		1/9/2015	632	Winter Weather		1	0	40000	0

APPENDIX F.

FUNDING SOURCES

INTRODUCTION

The purpose of the EMPG is to assist state and local governments in enhancing and sustaining all-hazards emergency management capabilities. North Carolina uses EMPG to enhance its ability and to help counties support emergency management activities while simultaneously addressing issues of national concern as identified in the National Priorities of the National Preparedness Guidelines. EMPG Program funding is dependent upon the federal availability of funds and the total funding varies from year to year. EMPG has a 50 percent federal and 50 percent state cost-share cash or in-kind match requirement. The in-kind match is also a requirement of the states EMPG sub-grants to its counties and the Eastern Band of Cherokee Indians.

North Carolina's EMPG program provides its counties and the Eastern Band of Cherokee Indians an opportunity to apply for baseline and supplemental funding. In an effort to align efforts between the State and local emergency management, specific programmatic deliverables are identified and agreed to by both parties. To be eligible for baseline funding, applicants must agree to complete certain universal programmatic deliverables during a specified period of performance. To be eligible for EMPG supplemental funding, applicants must have applied for baseline funding and agreed to complete at least one optional program activity during the specified period of performance.

Contact: NC Department of Public Safety, Strategic Planning Branch Manager, 919/825-2290
https://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,001756

HAZARD MITIGATION GRANT PROGRAM (HMGP)

The Federal Disaster Assistance Act (Stafford Act) provides funds authorized by the federal government and made available by FEMA for a cost-share program to states. The HMGP provides 75% of the funds while the states provide 25% of the funds for mitigation measures through the post-disaster planning process. The Division of Emergency Management administers the program in this state. The state share may be met with cash or in-kind services. The program is available only for areas affected by a Presidentially-declared disaster.

Contact: NC Department of Public Safety, Division of Emergency Management, 919-825-2500
https://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,001623,000177,002108,002113

FLOOD MITIGATION ASSISTANCE PROGRAM (FMAP)

The Flood Mitigation Assistance (FMA) program uses cost-effective measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insured under the National Flood Insurance Program. Eligible activities include acquisition, structure demolition, or structure relocation with the property deed restricted for open space uses in perpetuity. Elevating structures, dry flood-proofing of non-residential structures, and minor structural flood control activities are also eligible. Properties must be insured at the time of application. The FMAP is available to eligible communities every year, not just after a Presidentially-declared disaster. Funds for the FMAP are provided by FEMA and the Division of Emergency Management administers the program in North Carolina.

Contact: NC Department of Public Safety, Division of Emergency Management, 919-825-2500
http://www.fema.gov/flood-mitigation-assistance-grant-program

PRE-DISASTER MITIGATION (PDM)

The Pre-Disaster Mitigation (PDM) provides funds for hazard mitigation planning and implementing mitigation projects prior to a disaster. Such projects reduce overall risks for people and property and reduce reliance on disaster recovery funds. Eligible activities include: acquiring property (i.e. structures and land, where necessary) for open space conversion; relocating public or private structures; elevating existing public or private structures to avoid flooding; retrofitting structures (e.g., storm shutters, hurricane clips, bracing systems) to meet/exceed applicable building codes; constructing safe rooms (tornado and severe wind shelters) that meet FEMA requirements; conducting hydrologic and hydraulic studies/analyses, engineering studies and drainage studies related to a mitigation project; and managing vegetation management to restore dunes, wildfire, or snow avalanche.

Contact: NC Department of Public Safety, Division of Emergency Management, 919-825-2500
http://www.fema.gov/pre-disaster-mitigation-grant-program

HAZARDOUS MATERIALS EMERGENCY PREPAREDNESS (HMEP)

This program provides financial and technical assistance to enhance State, Territorial, Tribal, and local hazardous materials emergency planning and training. The HMEP Grant Program distributes funds to emergency responders for hazmat training and to Local Emergency Planning Committees (LEPC's) for hazmat planning.

Contact: US Department of Transportation, Pipeline and Hazardous Materials Safety Administration, 202/366-1109, hmep.grants@dot.gov, http://phmsa.dot.gov/hazmat

HOMELAND SECURITY GRANT PROGRAM (HSGP)

The Homeland Security Grant Program (HSGP) is a primary funding mechanism for building and sustaining national preparedness capabilities. The HSGP is comprised of distinct funding streams.

State Homeland Security Program (SHSP) supports building and sustaining capabilities at the state and local levels through planning, equipment, training, and exercise activities and helps states to implement the strategic goals and objectives included in state homeland security strategies. SHSP provides funding to all 56 states and territories based on a combination of formula, risk, and effectiveness.

Urban Area Security Initiative (UASI) funds address the unique multi-disciplinary planning, operations, equipment, training, and exercise needs of high-threat, high-density urban areas. This program provides funding to high-risk urban areas based on risk and effectiveness.

Contact: NC Department of Public Safety, Division of Emergency Management, 919-825-2500
https://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,000021,000362

COMMERCIAL EQUIPMENT DIRECT ASSISTANCE PROGRAM (CEDAP)

CEDAP complements the FEMA National Preparedness Directorate's other major grant programs to enhance regional response capabilities, mutual aid, and interoperable communications by providing technology and equipment, together with training and technical assistance required to operate that equipment, to public safety agencies in smaller jurisdictions and certain metropolitan areas. Eligible applicants include law enforcement agencies, fire, and other emergency responders who demonstrate that the equipment will be used to improve their ability and capacity to respond to a major critical incident or work with other first responders. Awardees must not have received equipment/funding under the Urban Areas Security Initiative or the Assistance to Firefighters Grants program. Organizations must submit applications through the Responder Knowledge Base website.

Contact: NC Department of Public Safety, Division of Emergency Management, 919-825-2500
https://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,000021,000362

ASSISTANCE TO FIREFIGHTERS GRANT PROGRAM

Through the Federal Emergency Management Agency, this program provides four grant categories to assist state, local, and tribal Fire Departments with funding necessary for training, equipment purchase, vehicle acquisition, public awareness, code enforcement, arson prevention, and the like.

Contact: FEMA, 866/274-0960, http://www.usfa.fema.gov/grants

UASI NON-PROFIT SECURITY GRANT PROGRAM (NSGP)

The Department of Homeland Security's (DHS) Urban Areas Security Initiative (UASI) Nonprofit Security Grant Program (NSGP) is an important component of the Administration's larger, coordinated effort to strengthen the Nation's overall level of preparedness. NSGP provides funding to strengthen the security of nonprofit organizations that are deemed at high risk of a potential terrorist attack and are located within one of the specific UASI-eligible urban areas.

Contact: NC Department of Public Safety, Division of Emergency Management, 919-825-2500
https://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,000021,000362

PORT SECURITY GRANT PROGRAM (PSGP)

The PSGP provides grant funding to port areas for the protection of critical port infrastructure from terrorism. PSGP funds help ports enhance their risk management capabilities, domain awareness, training and exercises, and capabilities to prevent, detect, respond to, and recover from attacks involving improvised explosive devices and other non-conventional weapons.

Contact: NC Department of Public Safety, Division of Emergency Management, 919-825-2500
https://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,000021,000362

TRANSIT SECURITY GRANT PROGRAM (TSGP)

The TSGP provides grants to the Nation's key high-threat Urban Areas to enhance security measures for their critical transit infrastructure including bus, rail, and ferry systems. The TSGP also provides funding to Amtrak for continued security enhancements for its intercity rail operations between key, high-risk Urban Areas throughout the United States.

Contact: NC Department of Public Safety, Division of Emergency Management, 919-825-2500
https://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,000021,000362

COMPETITIVE TRAINING GRANT PROGRAM (CTGP)

The Department of Homeland Security (DHS), Federal Emergency Management Agency's (FEMA) Competitive Training Grant Program (CTGP) is an important component of the Administration's larger, coordinated effort to strengthen homeland security preparedness. The CTGP awards funds to competitively selected applicants to develop and deliver innovative training programs addressing high priority national homeland security training needs. The CTGP demonstrates FEMA's commitment to work closely with the Nation's homeland security stakeholders in a unified national effort to continuously expand training opportunities that address the evolving national risk environment.

Contact: NC Department of Public Safety, Division of Emergency Management, 919-825-2500
https://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,000021,000362

COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) DISASTER RECOVERY INITIATIVE

The CDBG program provides grants to communities for post-disaster hazard mitigation and recovery following a presidential declaration of a Major Disaster of Emergency. Funds can be used for activities such as acquisition, rehabilitation, or reconstruction of damaged properties and facilities and redevelopment of disaster-affected areas. Funds may also be used for emergency response activities, such as debris clearance and demolition and extraordinary increases in the level of necessary public services. HUD provides funds for the CDBG program, and with the help of the Division of Community Assistance administers the program in North Carolina.

Contact: US HUD
http://portal.hud.gov/hudportal/HUD?src=/hudprograms/disaster-recovery

CLEAN WATER MANAGEMENT TRUST FUND

An agency of the North Carolina Department of Environment and Natural Resources (NCDENR), the Clean Water Management Trust Fund (CWMTF) provides grants for enhancement and restoration of degraded waters. In addition, funding is provided for development of buffers and greenways near rivers for environmental, educational, and recreational needs.

Contact: CWMTF, 252/830-3222, http://www.cwmtf.net

COMMUNITY FACILITIES DIRECT LOAN & GRANT PROGRAM

The US Department of Agriculture (USDA), Rural Housing Service (RHS) provide affordable funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of the community in a primarily rural area, and does not include private, commercial or business undertakings.

Contact: USDA, Bolivia Local Office, 910-253-4448, cynthia.hughes@nc.usda.gov
http://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program

FLOOD INSURANCE

The Federal Emergency Management Agency, Federal Insurance Administration provides the opportunity to purchase flood insurance under the Emergency Program of the National Flood Insurance Program (NFIP).

Contact: NFIP, 888/CALL-FLOOD, ext. 445, http://www.fema.gov/nfip

NORTH CAROLINA WETLANDS RESTORATION PROGRAM

This program, through the North Carolina Department of Environmental Quality (NCDEQ), Division of Water Quality, provides in-kind services for the restoration of wetlands and for increased effectiveness of wetland mitigation efforts.

Contact: NCDEQ, 919-707-8976, http://portal.ncdenr.org/web/eep/wetlands-restoration-program

PARKS AND RECREATION TRUST FUND (PARTF)

Through the NCDEQ Division of Parks & Recreation, this program provides dollar-for-dollar matching grants to local governments for parks and recreational projects to serve the public. PARTF is the primary source of funding to build and renovate facilities in the state parks as well as to buy land for new and existing parks.

Contact: NCDEQ Division of Parks & Recreation, 919/707-9300, parkinfo@ncmail.net
http://www.ncparks.gov/more-about-us/parks-recreation-trust-fund

RECREATIONAL TRAILS PROGRAM (RTP)

Through the Federal Highway Administration and the NC Division of Parks and Recreation - State Trails Program, this program provides grant funding for trails and trail-related recreational needs at the State level. RTP requires a 25 percent match and is a reimbursement grant program.

Contact: NCDEQ Division of Parks and Recreation, 919/707-9326, robert.taber@ncparks.gov
http://www.ncparks.gov/more-about-us/grants/trail-grants

LAND AND WATER CONSERVATION FUND (LWCF)

The Land and Water Conservation Fund (LWCF) has historically been a primary funding source of the U.S. Department of the Interior for outdoor recreation development and land acquisition by local governments and state agencies. In North Carolina, the program is administered by the Department of Environment and Natural Resources. To be eligible for LWCF assistance, every state must prepare and regularly update a statewide comprehensive outdoor recreation plan (SCORP). The SCORP includes inventories or assessments of current recreation resources (local, state and federal) within a state, identifies needs and new opportunities for outdoor recreation improvements and sets forth a five-year action agenda to meet the goals identified by its citizens and elected leaders. Historically, North Carolina's LWCF annual allocation has been split 60/40 between local governments and state agencies.

Contact: Recreation Resources Service, 919/515-7118
http://www.ncparks.gov/more-about-us/grants/lwcf-grants

PHYSICAL DISASTER LOANS

The Small Business Administration (SBA) offers low-interest disaster loans to businesses of all sizes, private non-profit organizations, homeowners, and renters. SBA disaster loans can be used to repair or replace the following items damaged or destroyed in a declared disaster: real estate, personal property, machinery and equipment, and inventory and business assets.

Contact: SBA, 800/827-5722
https://www.sba.gov/category/navigation-structure/loans-grants/small-business-loans/disaster-loans

PROPERTY IMPROVEMENT LOAN INSURANCE

The US Department of Housing and Urban Development (HUD) insures lenders against loss on loans for alterations, repairs and improvements to existing structures and new construction of nonresidential structures.

Contact: HUD, 202/708-1112, http://www.hud.gov/

PUBLIC ASSISTANCE PROGRAM (PA)

The Public Assistance provides federal aid to communities to help save lives and property in the immediate aftermath of a disaster and to help rebuild damaged facilities. Grants cover eligible costs associated with the repair, replacement, and restoration of facilities owned by state and local governments and nonprofit organizations. The Public Assistance program is administered by FEMA.

Contact: FEMA, http://www.fema.gov/public-assistance-local-state-tribal-and-non-profit

RESOURCE CONSERVATION AND DEVELOPMENT

The US Department of Agriculture, Natural Resources Conservation Service (NRCS) provides technical and limited financial assistance to communities for resource conservation projects including land conservation, water management, and environmental enhancement.

Contact: NRCS, http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/

SNAGGING AND CLEARING FOR FLOOD CONTROL

The Office of the Chief of Engineers, Department of the Army, Department of Defense provides this service in order to reduce flood control.

Contact: http://www.usace.army.mil

SOIL AND WATER CONSERVATION

The US Department of Agriculture, Natural Resources Conservation Service provides this in-kind service in order to provide for the conservation, development and productive use of the nation's soil, water, and related resources.

Contact: USDA, NRCS, http://www.nrcs.usda.gov

URBAN PARK AND RECREATION RECOVERY PROGRAM

This program of the Department of the Interior, National Park Service (NPS) provides grants for local governments for improvements in park system management and recreational opportunities.

Contact: NPS, 404/562-3175, http://www.nps.gov/uprr/

WATERSHED PROTECTION AND FLOOD PREVENTION LOANS

This US Department of Agriculture, Rural Utilities Services (RUS) program provides loans to local organizations for the local share of costs for watershed improvement. Funding includes support for drainage, flood prevention and sedimentation control.
Contact: RUS, http://www.rurdev.usda.gov/Home.html

WATERSHED SURVEYS AND PLANNING

The US Department of Agriculture, Natural Resources Conservation Service provides technical and financial assistance for sharing costs of watershed protection measures, including flood prevention, sedimentation control and recreation.

Contact: NRCS, http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/wsp/

APPENDIX G.

MITIGATION STATUS REPORT

BRUNSWICK COUNTY MITIGATION PROGRESS REPORT

The following provides a summary of progress achieved with regard to the strategies adopted through the 2011 Brunswick County Multi-Jurisdictional Hazard Mitigation Plan.

Brunswick County

Strategy P-1: Set up program to advise/assist property owners in retrofitting homes, businesses, and institutional facilities. (Retrofitting is defined as any modification to an existing building or yard to protect the property from flood damage.) (CRS 320)

Progress: The Brunswick County Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, B26, B47

Strategy P-2: Continue/expand efforts to partner with area utility districts to encourage proper development of regional sewer systems.

Progress: Brunswick County has worked closely with local sewer districts to facilitate sound expansion over the last five years. All participating jurisdictions will continue to support County-wide infrastructure expansion through this plan update.

Status/Corresponding 2015 Strategy: BC2

Strategy P-3: When possible, ensure that no public facilities are proposed for flood hazard areas. Protect new critical facilities (e.g., schools, hospitals, fire stations, emergency shelters) to 2' above the 500-year flood elevation (5' above BFE). (CRS 430)

Progress: This strategy has been revised and will be maintained through the plan update.

Status/Corresponding 2015 Strategy: BC3

Strategy P-4: Participate in the voluntary purchase of land parcels located in hazard areas or rendered unbuildable by storms or other events, for the purpose of shorefront access.

Progress: The County, as well as participating jurisdictions, continue to except land gifts or donations as a mitigation tool. This strategy has been revised through this update.

Status/Corresponding 2015 Strategy: BC4

Strategy P-5: Continue program for evaluation and improvement of critical facilities (public and private) – roads, bridges, water, sewer, electricity, etc. – and critical services – fire, rescue, medical, etc.

Progress: Over the last five years, the County has annually reviewed the viability of critical facilities and services through implementation of the County Emergency Operations Plan (EOP). The County will continue to evaluate critical facilities and services through annual EOP practices, procedures and exercises. The strategy has been revised through this update.

Status/Corresponding 2015 Strategy: BC5

Strategy P-6: Maintain County Storm Water Ordinance (effective September 16, 2002) in conjunction with land use ordinances for compatibility of EPA Phase II NPDES requirements.

Progress: Brunswick County continues to maintain, review, and update as necessary the County Stormwater Management Ordinance. This effort will continue to serve as an active component of the County's NPDES Phase II Stormwater Program.

Status/Corresponding 2015 Strategy: BC6

Strategy P-7: Complete Community Rating System Application using Hazard Mitigation Plan components to fulfill application requirements.

Progress: Brunswick County has not completed an application to join the CRS to date. The County, as well as other non-Community Rating System (CRS) participants (refer to page 4-10 and 4-11 for a summary of participating communities) will consider applying for inclusion in the program through implementation of this plan update.

Status/Corresponding 2015 Strategy: BC7

Strategy P-8: Continue to address and strengthen approach to "scattered and sprawling, large lot subdivision activity," "unplanned commercial strip development," "sewage problems and sewage solutions," and "storm water runoff and drainage."

Progress: This strategy was completed through update and adoption of the County's Unified Development Ordinance within the last five years.

Status/Corresponding 2015 Strategy: Completed.

Strategy P-9: Strengthen the land use classification system by more closely defining allowed uses and designating certain areas as off limits to development.

Progress: The County reviews and updates the Land Use Plan and the Unified Development Ordinance on a regular basis. These efforts will continue; therefore, this strategy has been eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy P-10: Develop an open space plan; target key properties for an open space acquisition program. (CRS420)

Progress: Strategies P-8 through P-11 of the existing Brunswick County HMP address the issue of establishing and/or modifying Land Use Planning policy and regulatory mechanisms in an effort to promote sound development within known high hazard areas. These strategies have been simplified and formulated into a general statement of intent regarding review and update of County and municipal Land Use Plans and relevant land development codes.

Status/Corresponding 2015 Strategy: BC4, BC8, BC10, BC27

Strategy P-11: Strengthen policies regarding directing urban level growth to appropriate locations where services can be provided.

Progress: The County periodically reviews and updates its Land Use Plan and Unified Development Ordinance. This strategy has been simplified and formulated into a general statement of intent regarding review and update of County and municipal Land Use Plans and relevant land development codes.

Status/Corresponding 2015 Strategy: BC8, BC10

Strategy P-12: Review and update as necessary the Flood Damage Prevention Ordinance to ensure maximum protection from flood hazard events (CRS 430). Consider raising the minimum flood protection level from 1' above base flood elevation to 2' or more above BFE. All substantially damaged buildings should be elevated to this level (CRS 430).

Progress: The County, as well as all participating jurisdictions, reviews and updates their respective Flood Damage Prevention Ordinances as deemed necessary, or when mandated by NCDPS and/or FEMA through the NFIP. Additionally, all existing locally adopted Base Flood Elevation standards will be maintained.

Status/Corresponding 2015 Strategy: BC9

Strategy P-13: Evaluate the zoning ordinance for its ability to target and direct growth to areas consistent with the land classification map, the water distribution system, and existing and future sewer systems.

Progress: Brunswick County reviewed and updated its Unified Development Ordinance in March 2015. The County and all participating jurisdictions, will continue to review, and update as necessary, their respective Zoning and Subdivision regulations to ensure that regulatory standards remain aligned with local and regional Future Land Use Planning policy documents.

Status/Corresponding 2015 Strategy: BC10

Strategy P-14: Continue efforts to revise, update, and improve subdivision regulations particularly with regard to open space and tree preservation.

Progress: Brunswick County reviewed and updated its Unified Development Ordinance (which includes subdivision regulations) in March 2015. The County and all participating jurisdictions will continue to review and update, as necessary, their respective Zoning and Subdivision regulations to ensure that regulatory standards remain aligned with local and regional Future Land Use Planning policy documents.

Status/Corresponding 2015 Strategy: BC10, BC12

Strategy P-15: Continue to improve road access standards to protect the integrity of significant traffic-carrying roadways throughout the County.

Progress: This strategy has been revised to more specifically address the deficiencies and needs relevant to all state maintained right-of-ways throughout the County.

Status/Corresponding 2015 Strategy: BC11

Strategy P-16: Employ specific provisions of the zoning ordinance, subdivision regulations, and infrastructure improvement plans to encourage a town and country development pattern.

Progress: The general intent of this strategy is being carried forward into the 2015 update; however, the terminology has been modified to more clearly define the desired outcome regarding land development types enabled through both County and municipal land development codes.

Status/Corresponding 2015 Strategy: BC10, BC12

Strategy P-17: Continue to count building improvements cumulatively (maintain permit history so when cumulative improvements equal 50% of building value (substantial improvement) building must be brought up to flood protection standards for new construction) with a goal to eventually have all flood hazard endangered buildings brought up to flood protection standards (CRS 430).

Progress: This strategy has been eliminated from the plan update due to the difficulty in logistically maintaining accurate information necessary to enforce this standard. Additionally, it was decided that imposing this standard on property owners would be excessively burdensome and costly.

Status/Corresponding 2015 Strategy: Eliminated

Strategy P-18: Review rebuilding activities after major storm events to determine how revisions to existing policies and procedures could help minimize repetitive losses.

Progress: This strategy is still in place and a function of the response and recovery process outlined in the County's Emergency Operations Plan.

Status/Corresponding 2015 Strategy: BC13

Strategy P-19: Continue to require and maintain FEMA elevation certificates for all permits for new buildings or improvements to buildings on lots including any portion of the 100-year floodplain (CRS 310).

Progress: The County, as well as all participating municipalities, continues to require the submittal of FEMA Elevation Certificates for development within the defined Flood Hazard Area. This strategy has been updated to reflect current regulatory and record keeping requirements.

Status/Corresponding 2015 Strategy: BC14

Strategy P-20: Review written policies on water and sewer system extensions and tap on policies to ensure that the County is adequately addressing and discouraging inappropriate development in sensitive environmental areas and areas prone to flood or storm surge hazards.

Progress: The County, as well as municipal jurisdictions operating a central water system periodically review extension and tap policies to potentially limit development density in areas identified as high hazard. This strategy will be continued through this planning process.

Status/Corresponding 2015 Strategy: BC15

Strategy P-21: Continue to allot capital funding for the implementation of hazard mitigation activities.

Progress: The County, as well as all participating jurisdictions, maintain a policy of taking the results and data associated with this plan into account when making decisions regarding capital expenditures relating to infrastructure and facility expansion and development.

Status/Corresponding 2015 Strategy: BC16

Strategy P-22: Consider a shoreline overlay district to include requirements for more intense review of proposed drainage, and limitation on the type of land uses allowed within the overlay district.

Progress: This strategy has been eliminated due to the fact that establishment of an overlay district impacting the coastline would involve intergovernmental coordination among a number of Beach Towns. Achievement of an effective policy and resulting regulatory framework is not possible at this time.

Status/Corresponding 2015 Strategy: Eliminated

Strategy P-23: Implement specific zoning standards to discourage or prohibit floating homes from locating in public trust waters.

Progress: This strategy has been eliminated, due to the fact that Brunswick County does not have the jurisdiction to zone public trust waters.

Status/Corresponding 2015 Strategy: Eliminated

Strategy P-24: Inventory existing lots and structures within flood hazard areas to establish baseline data regarding current state of development.

Progress: This effort was carried out during the former planning process. The County will continue to monitor and update the vulnerability analysis presented in this plan as an indicator of development subject to threats associated with natural disasters. This data will be factored into discussions associated with future Comprehensive Planning efforts at the County and municipal levels.

Status/Corresponding 2015 Strategy: BC10, BC17

Strategy P-25: Continue to support greater residential densities in areas that are accessible to water and/or sewer service(s). Agricultural and low-density residential land uses should be located in areas that do not have central water or sewer service.

Progress: This strategy has been eliminated through this update due to the extensive availability of central infrastructure services. Local Land Use Plan and Zoning Standards now serve as the predominant factor in dictating future built densities in both residential and non-residential zoning districts.

Status/Corresponding 2015 Strategy: Eliminated

Strategy P-26: Support commercial forestry activities, provided significant adverse impacts on natural resource systems are fully mitigated. Such activities should be considered in accordance with the standards and recommendations of the US Forest Service. The County also advocates the voluntary participation of commercial forestry interests in the State of North Carolina's best management practice program for forestry management.

Progress: This strategy is still being carried out in the County and will be incorporated into the plan update.

Status/Corresponding 2015 Strategy: BC18

Strategy P-27: Continue to support beach municipalities in maintenance/protection of beaches as well as protecting shorelines under County jurisdiction.

Progress: Brunswick County maintains a general statement of support regarding shoreline stabilization efforts; however, specific solutions and associated cost considerations will be specifically addressed by each relevant barrier island community participating in this plan update.

Status/Corresponding 2015 Strategy: BC19

Strategy P-28: Continue to require 404 wetlands and 100-year floodplain areas to be delineated on all preliminary subdivision plats for lands within and adjacent to the proposed subdivision.

Progress: The County, as well as all participating municipal jurisdictions, continues to support and enforce all US Army Corps of Engineers 404 Wetland Regulations.

Status/Corresponding 2015 Strategy: BC20

Strategy P-29: Develop a tree preservation ordinance that will address the following: – Increase buffering along areas of deforestation or clear cutting; – Provide vegetative medians as a best management plan as highways are expanded or improved when feasible; – Educate the public of the benefits of controlled burns on "natural areas" by certified professional foresters.

Progress: This strategy has been completed through development of the County Unified Development Ordinance.

Status/Corresponding 2015 Strategy: Completed

Strategy P-30: Continue to undertake the following actions to support maintenance of safe hurricane evacuation routes: – Identify and support improvements to roads that serve as hurricane evacuation routes; – Perform routine bridge and culvert maintenance, and raise bridges over streams that have documented flooding during significant rain events; – Support the planning and implementation of regional roadways; – Support the construction of a second Oak Island bridge, and new bridge for Sunset Beach and the Southern Bridge for the Cape Fear River.

Progress: The County continues to work with NCDPS, NCDOT, and all participating municipalities to assure that evacuation routes are effective, maintained and relayed to the public in an effective manner. This is reflected through the plan update.

Status/Corresponding 2015 Strategy: BC21

Strategy P-31: Support development within areas susceptible to sea level rise, shoreline erosion, and/or wetland loss which takes into consideration such conditions upon initial development. In the event such development is later threatened by shoreline loss, the County shall support the AEC use standards governing shoreline protection and management.

Progress: This strategy has been eliminated in response to the current state mandated prohibition on directly addressing sea level rise through plans and/or public policy documents and studies.

Status/Corresponding 2015 Strategy: Eliminated

Strategy P-32: Continue to support the installation of properly engineered and permitted bulkheads to protect against erosion and sea level rise.

Progress: This strategy has been eliminated in response to the current state mandated prohibition on directly addressing sea level rise through plans and/or public policy documents and studies.

Status/Corresponding 2015 Strategy: Eliminated

Strategy P-33: Continue to support the US Army Corps of Engineers' regulations, the applicable guidelines of the Coastal Area Management Act, and the use of local land use ordinances to regulate development of fresh water swamps, marshes, and 404 wetlands.

Progress: The County, as well as all participating municipal jurisdictions, continues to support and enforce all US Army Corps of Engineers 404 Wetland Regulations, CAMA Coastal Development Regulations and all other Federal, State and local regulations aimed at protecting the environmental quality of swamps and wetlands.

Status/Corresponding 2015 Strategy: BC22

Strategy P-34: Support the relocation of structures endangered by erosion, if the relocated structure will be in compliance with all applicable policies and regulations.

Progress: The County, in collaboration with all participating barrier island beach communities, continues to support and relocate when feasible structures imminently threatened by shoreline erosion.

Status/Corresponding 2015 Strategy: BC23

Strategy P-35: Continue to enforce the Brunswick County floodplain ordinance and participate in the National Flood Insurance Program. Subdivision regulations will be enforced – requiring elevation monuments to be set so that floodplain elevations can be more easily determined.

Progress: The County, as well as all participating jurisdictions, reviews and updates their respective Flood Damage Prevention Ordinances as deemed necessary, or when mandated by NCDPS and/or FEMA through the NFIP. Additionally, all existing locally adopted Base Flood Elevation standards will be maintained.

Status/Corresponding 2015 Strategy: BC24

Strategy P-36: Continue to support the guidelines of the Coastal Area Management Act and the efforts and programs of the NC Department of Environment and Natural Resources, Division of Coastal Management, and the Coastal Resources Commission to protect the coastal wetlands, estuarine waters, estuarine shorelines, and public trust waters of Brunswick County.

Progress: The County, as well as all participating municipal jurisdictions, continues to support and enforce all US Army Corps of Engineers 404 Wetland Regulations, CAMA Coastal Development Regulations and all other Federal, State and local regulations aimed at protecting the environmental quality of swamps and wetlands.

Status/Corresponding 2015 Strategy: BC25

Strategy PP-1: Continue to acquire destroyed or substantially damaged properties and relocate households. Seek Federal and State funding (voluntary program). (CRS 520/420)

Progress: The County has not acquired any substantially damaged properties over the last five year planning period. The County, in collaboration with participating municipal jurisdictions, will continue pro-actively treating threatened residential structures as defined through the updated strategies.

Status/Corresponding 2015 Strategy: BC26

Strategy PP-2: Integrate publicly acquired land into public park and greenway systems. (CRS 420)

Progress: The County has not acquired any new land to be dedicated to public/open space use over the last five year planning period. Brunswick County will maintain a policy of acquiring land or accepting land gifts/donations in an effort to expand upon the County's greenway system.

Status/Corresponding 2015 Strategy: BC27

Strategy PP-3: Consider establishing an involuntary program to acquire properties susceptible to flood damage. (CRS 420/510)

Progress: This strategy has been eliminated through this update due to a lack of political will regarding this issue.

Status/Corresponding 2015 Strategy: Eliminated

Strategy PP-4: Identify properties for potential public acquisition and establish a list of priority properties for acquisition following subsequent natural disasters.

Progress: This strategy was deemed redundant to strategy BC26 defined through the plan update; therefore, Strategy PP-4 has been eliminated.

Status/Corresponding 2015 Strategy: Eliminated

Strategy PP-5: Consider establishing a program for purchase of development rights for floodplain properties. (CRS 420) (Possible partial or full tax deduction for charitable donation by property owner(s)).

Progress: This strategy has been eliminated due to the fact that the transfer of development rights are not legislatively enabled in North Carolina.

Status/Corresponding 2015 Strategy: Eliminated

Strategy PP-6: Require residential construction to meet latest wind-resistance standards; encourage replacement of double-wide garage doors to improve wind resistance.

Progress: Strategies PP-6 through PP-10 all deal with standards and regulations established under the NC State Building Code. The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required.

Status/Corresponding 2015 Strategy: BC28

Strategy PP-7: Require new masonry chimneys >6' above roof to have continuous vertical reinforcing steel to help resist high winds. Retrofit existing chimneys.

Progress: Strategies PP-6 through PP-10 all deal with standards and regulations established under the NC State Building Code. The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required.

Status/Corresponding 2015 Strategy: BC28

Strategy PP-8: Ensure doorframes are securely anchored; especially double doors that can be very dangerous in high winds.

Progress: Strategies PP-6 through PP-10 all deal with standards and regulations established under the NC State Building Code. The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required.

Status/Corresponding 2015 Strategy: BC28

Strategy PP-9: Make sure that architectural features are designed, manufactured and installed to limit wind-borne debris.

Progress: Strategies PP-6 through PP-10 all deal with standards and regulations established under the NC State Building Code. The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required.

Status/Corresponding 2015 Strategy: BC10, BC28

Strategy PP-10: Encourage use of wind-resistant construction techniques used in coastal regions.

Progress: Strategies PP-6 through PP-10 all deal with standards and regulations established under the NC State Building Code. The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required.

Status/Corresponding 2015 Strategy: BC28

Strategy PP-11: Consider a policy for contractors to pick up building material and building debris prior to coastal storms.

Progress: Brunswick County promotes and carries out actions related to post-disaster debris management for homeowners and contractors through the County's Emergency Operations Plan. The County will continue to maintain a policy of educating and promoting the removal of construction materials from building sites prior to approaching coastal storm events.

Status/Corresponding 2015 Strategy: BC29

Strategy PP-12: Continue to enforce minimum housing code to require the improvement of substandard housing.

Progress: The County, as well as participating municipal jurisdictions, continues to maintain and enforce minimum housing code standards in an effort to maintain a stable housing stock.

Status/Corresponding 2015 Strategy: BC30

Strategy NR-1: Continue providing density credits for developments that establish perpetual easements for ecologically sensitive lands.

Progress: This strategy has been incorporated into the Brunswick County Unified Development Ordinance, and will be maintained through this plan update.

Status/Corresponding 2015 Strategy: BC31

Strategy NR-2: Enhance and develop new public accesses to waterway resources in a manner as to protect sensitive environment areas from development and implement the priority recommendations contained in the Brunswick County Shoreline Access Plan Update.

Progress: Over the last five years, Brunswick County has not established any new public access sites. The County in collaboration with participating municipal jurisdictions will continue to pro-actively seek out opportunities to increase public access sites. These efforts will focus on portions of the County deemed to be either environmentally sensitive or located within defined high hazard areas.

Status/Corresponding 2015 Strategy: BC32

Strategy NR-3: Continue to implement policies/programs that protect and maintain wetlands.

Progress: The County, as well as all participating municipal jurisdictions, continues to support and enforce all US Army Corps of Engineers 404 Wetland Regulations, CAMA Coastal Development Regulations and all other Federal, State and local regulations aimed at protecting the environmental quality of swamps and wetlands. This strategy was considered redundant to strategy P-36 above and was eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy ES-1: Improve Hazard Warning and Response Plan (warning and evacuating critical facilities, getting persons out of floodprone or isolated areas, controlling vehicles on evacuation routes, evacuation of hazard materials). (CRS 610)

Progress: Brunswick County Emergency Management continues to annually review and, when necessary and practicable, improve upon existing Hazard Warning and Response Plans associated with the County Emergency Operations Plan.

Status/Corresponding 2015 Strategy: BC33

Strategy ES-2: Continue and expand the program to retrofit schools and other public facilities to serve as emergency shelters.

Progress: Brunswick County Emergency Management continues to work closely with NCDPS and the American Red Cross to expand upon the County's existing sheltering inventory. These efforts not only work towards increasing the number of facilities, but also the suitability and effectiveness of existing shelters.

Status/Corresponding 2015 Strategy: BC34

Strategy ES-3: Use State grant funds to retrofit public properties as shelters.

Progress: The County has been unable to secure grant funds to retrofit public facilities as shelters. Due to this fact, this strategy is being eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy ES-4: Provide training for "first responders" in identifying and reporting opportunities to mitigate the effects of future disasters.

Progress: The County has pro-actively addressed this strategy through annual implementation of the County EOP. The first responders receive training on an ongoing basis in accordance with state regulations.

Status/Corresponding 2015 Strategy: BC35

Strategy ES-5: Work with industry to develop emergency response plans for specific industries and ensure that all plans are fully coordinated with County emergency management plans.

Progress: The County works closely with municipalities and the business community to expand preparedness training beyond the scope of local government staff and first responders. These efforts are carried out by local public safety officials and the County Local Emergency Planning Committee (LEPC).

Status/Corresponding 2015 Strategy: BC36

Strategy ES-6: Ensure adequate evacuation time in case of major hazard event.

Progress: Brunswick County Emergency Management works closely with NCDOT and NCDPS through annual EOP updates and exercises to ensure that all defined evacuation routes can handle projected capacities.

Status/Corresponding 2015 Strategy: BC37

Strategy ES-7: Evaluate areas with limited evacuation capacity and pursue methods of improving capacity.

Progress: Brunswick County Emergency Management works closely with NCDOT and NCDPS through annual EOP updates and exercises to ensure that all defined evacuation routes can handle projected capacities.

Status/Corresponding 2015 Strategy: BC37

Strategy ES-8: Protect new critical facilities by floodproofing or locating outside the 500-year floodplain.

Progress: This strategy was deemed vague and redundant to other strategy statement defined throughout the existing plan and was eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy ES-9: Establish program for evaluation and improvements of critical services and facilities.

Progress: This strategy was deemed vague and redundant to other strategy statement defined throughout the existing plan and was eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy ES-10: Evaluate flood or access problems for critical facilities; develop recommendations for protecting critical facilities. Identify alternative command posts.

Progress: This strategy was deemed vague and redundant to other strategy statement defined throughout the existing plan and was eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy S-1: Continue debris removal program to correct problem sites.

Progress: The County, as well as all participating municipal jurisdictions, continues to maintain contracts with pre-qualified disaster debris management companies. These contractors assist the County, in collaboration with NCDPS and NCDENR, in identifying and certifying appropriate disposal sites.

Status/Corresponding 2015 Strategy: BC38

Strategy S-2: Continue to support the dredging of waterways to improve function and water quality.

Progress: This strategy was removed through this update. The statement was deemed arbitrary and lacked adequate justification and/or direction.

Status/Corresponding 2015 Strategy: Eliminated

Strategy S-3: Continue to maintain/enforce an overall cap of 5% on post development stormwater discharge increase over pre-development conditions.

Progress: This strategy continues to be maintained and enforced through the County Stormwater Management Ordinance required through the NPDES Phase II Stormwater Management Program.

Status/Corresponding 2015 Strategy: BC39

Strategy S-4: Continue to enforce and strengthen the County appearance code concerning removal of potential projectiles/debris such as junked motor vehicles and mobile homes, and dilapidated housing.

Progress: The County continues to maintain a nuisance and debris management code; however, this program was not deemed an effective mitigation measure. Addressing nuisance issues within unincorporated portions of the County is very difficult to effectively accomplish.

Status/Corresponding 2015 Strategy: Eliminated

Strategy S-5: Continue to provide funding support for the artificial reef program.

Progress: This strategy has been eliminated due to a lack of political will under the County's current administration.

Status/Corresponding 2015 Strategy: Eliminated

Strategy S-6: Continue to support efforts to place spoil materials from channel maintenance and dredging on Brunswick County beaches, including each of the incorporated municipalities, as warranted.

Progress: The County, as well as all coastal beach communities, continues to strongly support the US Army Corps of Engineers policy of depositing channel maintenance dredge spoils on adjacent beachfront communities.

Status/Corresponding 2015 Strategy: BC40

Strategy S-7: Section 206 Lower Lockwood Folly River Aquatic Habitat Restoration Project. (Removal of sediment bars to increase tidal flushing and improve aquatic habitat.)

Progress: Brunswick County continues to support the activities and funding associated with this project aimed at habitat restoration along the Lockwood Folly River. This effort not only serves to improve environmental

conditions, but also bolster the wetland as an additional buffer against storm surge and excessive riverine flooding.

Status/Corresponding 2015 Strategy: BC41

Strategy S-8: Complete phase-in of EPA Phase II requirements.

Progress: The County continues to maintain its NPDES Phase II Stormwater permit by carrying out all activities defined under the program. This permit will continue to be updated on a five year cycle.

Status/Corresponding 2015 Strategy: BC42

Strategy PI-1: Develop a tracking system to evaluate progress and revise mitigation activities as necessary. Track benefits in flood loss reduction.

Progress: This strategy has been eliminated primarily due to the fact that this process is clearly spelled out within the context of Section 7 of the plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy PI-2: Produce an annual progress report on how well the plan is being implemented – send the report with the annual CRS re-certification and submit a copy to NC Division of Emergency Management.

Progress: This strategy has been eliminated primarily due to the fact that this process is clearly spelled out within the context of Section 7 of the plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy PI-3: Establish a 5-year schedule for reviewing and updating the hazard mitigation plan.

Progress: This strategy has been eliminated primarily due to the fact that this process is clearly spelled out within the context of Section 7 of the plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy PI-4: Preliminary mapping of the Lumber River Basin has been completed and is under review for adoption. The Cape Fear River Basin mapping is ongoing. Review of the preliminary maps can be viewed at www.ncfloodmaps.com.

Progress: The County, as well as all participating municipal jurisdictions, will review and ultimately adopt updated Flood Insurance Rate Maps as they are prepared and provided through the NC/FEMA National Flood Insurance Program. These efforts will also potentially involve updates to the County and Municipal Flood Damage Prevention Ordinances.

Status/Corresponding 2015 Strategy: BC9, BC24, BC43

Strategy PI-5: Incorporate new FEMA digital FIRMs into the County GIS. (CRS 320)

Progress: As new FIRM's are developed and adopted, the updated maps are incorporated into County and municipal GIS systems. Updated FIRM's will also be available through the NCONE Mapping Service.

Status/Corresponding 2015 Strategy: BC43

Strategy PI-6: Develop and implement a hazard awareness program (elevation certificates, FIRM data, bulletin on property protection measures and flood insurance, etc.) that is available through the County's website www.brunsco.net. (CRS 310/320/330/340/440)

Progress: This strategy was deemed redundant to other activities and strategy statements provided throughout the updated County-wide strategies table. Due to this fact, it has been eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy PI-7: Establish locations for flood awareness signs – shown elevations of high water during/after Hurricane Floyd, the base flood, and the base flood plus 2'. Signs should be surveyed to serve as elevation reference marks.

Progress: The County will attempt to make this a higher priority over through the implementation of this plan update. Locating signage regarding historical flood levels provides a reminder to local citizens about the dire consequences associated with hurricanes and associated tropical storm events.

Status/Corresponding 2015 Strategy: BC44

Strategy PI-8: Expand efforts to disseminate flood insurance rate maps to realtors, developers, financial institutions, and insurance agencies.

Progress: The County, as well as participating municipalities, continue to work closely with real estate agents, contractors and developers in an effort to educate potential property owners about the dangers associated with development in defined flood hazard areas.

Status/Corresponding 2015 Strategy: BC45

Strategy PI-9: Early Warning Systems/Dissemination of information regarding need to seek shelter in safe room when high winds expected.

Progress: The County maintains and annually reviews the effectiveness of its early warning system. This system is utilized to provide accurate and up to date notifications about rapidly changing and severe weather conditions impacting the County and region overall.

Status/Corresponding 2015 Strategy: BC46

Strategy PI-10: Establish and maintain retrofitting techniques and publicize in the public libraries, and also through citizen newsletters. (CRS 330/350/360)

Progress: The County in collaboration with municipal jurisdictions continues to provide information regarding techniques for retrofitting structures subject to repetitive flooding associated with natural hazard events. These materials are available in local planning and inspections offices, as well as all public library facilities.

Status/Corresponding 2015 Strategy: BC47

Strategy PI-11: Cooperate with local, state, and federal efforts to inform the public of the anticipated effects of sea level rise.

Progress: This strategy has been eliminated in response to the current state mandated prohibition on directly addressing sea level rise through plans and/or public policy documents and studies.

Status/Corresponding 2015 Strategy: Eliminated

Village of Bald Head Island

Strategy BHI #1: Require a finished floor elevation certificate for all development within the special flood hazard area (SFHA). All elevation certificates should be submitted on an official FEMA elevation certificate. No certificate of occupancy shall be issued for any development within a defined special flood hazard area without the submittal of the required elevation certificate.

Progress: The Village of Bald Head Island has required and maintained elevation certificates for all structures developed within the flood hazard area. This requirement will continue, but is now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC14

Strategy BHI #2: Maintain a map information service involving the following: • Provide information relating to Flood Insurance Rate Maps (FIRMs) to all inquirers, including providing information on whether a given property is located in a flood hazard area; • Provide information regarding the flood insurance purchase requirement; • Maintain historical and current FIRMs; • Advertise the availability of the map information service once annually in the local newspaper; • Provide information to inquirers about local floodplain management requirements.

Progress: The Village's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal

jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

Strategy BHI #3: The Village of Bald Head Island will once annually mail a notice to all property owners whose land is located within a special flood hazard area. The notice should clearly state that the recipient's property is susceptible to flooding and provide information pertinent to emergency evacuation and post-disaster recovery. Additionally, the Village will notify all property owners once annually via mail, either through individual mailers or utility bill inserts, of the hazards associated with flooding and other hazards resulting from severe weather events. The Village Development Services Department will hold one training outreach seminar annually to educate builders, contractors, engineers, and architects about the latest methods available for property protection and development best management practices associated with floodplain development.

Progress: Over the last five years, the Village has direct mailed all properties located within the flood hazard area. This strategy will continue to be carried out as a component of the Village's CRS program.

Status/Corresponding 2015 Strategy: B1, BC48

Strategy BHI #4: The Village will work with local real estate agencies to ensure that agents are informing clients when property for sale is located within an SFHA. The Village will provide these agencies with brochures documenting the concerns relating to development located within flood prone areas and ways that homeowners may make their homes more disaster resistant to strong winds, lightning, and heavy rains.

Progress: The County, as well as participating municipalities, continue to work closely with real estate agents, contractors and developers in an effort to educate potential property owners about the dangers associated with development in defined flood hazard areas. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, BC45

Strategy BHI #5: The Village will make information regarding hazards and development regulations within floodplains available through the following actions: • The Village of Bald Head Island Building Inspector will ensure that the local library maintains information relating to flooding and flood protection; • The Village will provide a link on their website to FEMA resources addressing flooding and flood protection; • The Village will maintain information pertinent to local development conditions and make this information readily available to the public, as well as at the local library.

Progress: The Village's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches

and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC45

Strategy BHI #6: The Village Development Services Department will provide comprehensive services regarding planning and development activities within the defined SFHA and issues relating to the construction of disaster resistant structures. These services will include the following: • Provide site-specific flood and flood related information on an as-needed basis; • The Development Services Department will maintain a list of contractors with experience in floodproofing and retrofit techniques; • Provide information on methods of wind proofing constructions methods for new and renovated structures; • Maintain materials providing an overview of how to select a qualified contractor; • Make site visits upon request to review occurrences of flooding, drainage problems, and sewer problems. If applicable to inspector should provide one-on-one advice to the property owner; • Provide advice and assistance regarding CRS activity 530 (Flood Protection); • Advertise the availability of this service once annually in the local newspaper; • Maintain a log of all individuals assisted through this service including all site visits.

Progress: The Village's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, Table 6-5 (page 6-40)

Strategy BHI #7: The Village will continue to support the NC Floodplain Mapping Program in its efforts to provide accurate and up-to-date Flood Insurance Rate Maps. This effort will also provide support the State's efforts as an NFIP Cooperating Technical Partner.

Progress: The Village has reviewed and adopted recently updated FIRM maps. This process also resulted in the revision and adoption of an updated Flood Damage Prevention Ordinance. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9, BC24

Strategy BHI #8: The Village will continue to support the Bald Head Island Conservancy and the Smith Island Land Trust in their efforts to acquire land for open space preservation. It is the Village's desire that these properties be deed restricted and maintained in their natural state.

Progress: Over the last five years, the Village has supported the efforts of the Bald Head Island Conservancy and the Smith Island Land Trust. These efforts have resulted in 6 parcels being dedicated and preserved as open space in perpetuity.

Status/Corresponding 2015 Strategy: BC54

Strategy BHI #9: The Village of Bald Head Island will continue to enforce CAMA coastal development regulations. The Village will continue to maintain a Certified Floodplain Manager on staff to review all site plans for development occurring within a flood hazard area.

Progress: The Village has pro-actively enforced all state and locally adopted CAMA rules over the last five years through coordination with NCDEQ. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC25

Strategy BHI #10: The Village will maintain a comprehensive Geographic Information System (GIS) with current FIRM panels in an effort to make this information readily available to Village citizens. In addition to this digital data, bound copies of all historical and current FIRM panels will be maintained within the Development Services Department.

Progress: As new FIRM's are developed and adopted, the updated maps are incorporated into County and municipal GIS systems. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9, BC24

Strategy BHI #11: The Village will continue to enforce NCDENR Sedimentation and Erosion Control Standards, as well as other rules and regulations aimed at protecting water quality. The Village will continue to implement the proposed projects outlined within the Village Comprehensive Stormwater Management Plan. This plan is a phased effort, and will continue to be developed and implemented over the next five years through the implementation of this plan.

Progress: The Village has pro-actively enforced all state and locally adopted Sedimentation and Erosion Control standards over the last five years through coordination with NCDEQ. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC25

Strategy BHI #12: The Village of Bald Head Island will work on the five-year implementation of this plan. At the end of this five-year period, the Village will undertake efforts to update this plan.

Progress: This strategy is being carried out through the current planning process. This strategy will be eliminated and addressed through language outlined in Section 7.

Status/Corresponding 2015 Strategy: Eliminated

Strategy BHI #13: The Village of Bald Head Island will continue to maintain an early warning system relating to notifications regarding flooding and other man-made disasters. This effort should involve all citizens and visitors, as well as the Village's critical infrastructure system.

Progress: The Village has maintained an early warning system over the last five years. This strategy will continue through local emergency management procedures.

Status/Corresponding 2015 Strategy: BC55

Strategy BHI #14: The Village will continue to support the NC Office of Dam Safety's efforts to monitor and inspect all dams throughout the state as well as the State of North Carolina. The Village will coordinate with the state agency to ensure that all dam facilities, both public and private, are properly maintained and stable.

Progress: The Village has supported the efforts of the NC Office of Dam Safety through implementation of the Village's CRS program. The County will continue to maintain this policy as a component of the Village's CRS program.

Status/Corresponding 2015 Strategy: Table 6-5 (page 6-40)

Strategy BHI #15: The Village of Bald Head Island will consider participation in the CRS Program.

Progress: This strategy has not been accomplished; however, the Village will consider joining through implementation of this update.

Status/Corresponding 2015 Strategy: BC7, Table 6-5 (page 6-40)

Strategy BHI #16: The Village will continue to monitor potable water resources locally, as well as statewide. When necessary the Village will institute measures to conserve water resources according to the existing Water Shortage Response Plan.

Progress: The Village has pro-actively enforced the local water shortage response ordinance over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC53

Strategy BHI #17: The Village will continue to monitor coastal erosion along the shoreline located within the Village's corporate limits and work towards short and long-term solutions to this issue. This effort will involve cooperation with the US Army Corps of Engineers, as well as other state and federal permitting agencies.

Progress: This strategy has been eliminated in an effort to better reflect the Village's current policy regarding shoreline stabilization and management.

Status/Corresponding 2015 Strategy: Eliminated

Strategy BHI #18: The Village of Bald Head Island will review all land development controls in an effort to identify ways to reduce urban fire risk throughout the Village's corporate limits. Additionally, the Village will continue to enforce its open burning ban.

Progress: This strategy has been enforced through regulations defined in the Village's local zoning regulations. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10, BC52

Town of Belville

Strategy Belville P-1: At the next update of the CAMA Land Use Plan, consider strategies that place restrictions on new development and redevelopment in high hazard areas such as those areas adjacent to the Brunswick River.

Progress: This strategy has not been carried out by the Town. The actions defined under this locally specific strategy statement will be completed through implementation of this update, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC8

Strategy Belville P-2: Continue to support Brunswick County in enforcing the NC State Building Code.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Belville P-3: Continue to support Brunswick County in recording and maintaining all tax parcel information and floodplain locations in the GIS system.

Progress: As new FIRM's are developed and adopted, the updated maps are incorporated into County and municipal GIS systems. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC43

Strategy Belville P-4: Consider developing a Floodplain Management Plan to better assist citizens in the event of such a disaster.

Progress: Belville has developed, adopted, and is enforcing a current Flood Damage Prevention Ordinance (FDPO). The Town will utilize this Regional Mitigation Plan update as a solution to drafting a Flood Management Plan.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Belville P-5: Support Brunswick County in participation in the Community Rating System (CRS).

Progress: Although Belville is not currently a participating CRS community, the Town has supported these efforts and will continue to do so. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC7

Strategy Belville P-6: In order to reduce stormwater runoff, the Town will study ways to mitigate runoff and consider incorporating new standards in Town ordinances.

Progress: The Town has established and enforces a range of stormwater and sedimentation controls aimed at protecting water quality. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC39, BC42

Strategy Belville P-7: The Town will consider making amendments to Town ordinances to prohibit gas stations and junkyards in special flood hazard areas.

Progress: This strategy was completed and will be eliminated through this plan update. The Town will review zoning standards on an annual basis, in an effort to minimize development in flood hazard areas.

Status/Corresponding 2015 Strategy: BC10

Strategy Belville PP-1: Monitor, in public areas, the removal of trees and branches at risk of breaking or falling in wind, ice, and snow storms.

Progress: This strategy is addressed through implementation of the County Emergency Operations Plan.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Belville PP-2: The Town will consider developing a database of existing properties that have received damage due to natural disasters. This database will provide an assessment of properties that have the potential for future damage due to natural disasters.

Progress: The Town has not maintained its efforts to establish this database over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC13, BC17

Strategy Belville NR-1: The Town will consider incorporating shoreline vegetation protection buffers along Areas of Environmental Concern and along canals in order to protect land character and to help mitigate flooding.

Progress: The Town has enforced these standards through the Town's local CAMA Land Use Plan in conjunction with CAMA coastal development regulations. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10, BC25

Strategy Belville ES-1: Continue to make available to the public information in regards to the Brunswick County Emergency Management Response Plan, including the Town of Belville, available for public review at Town Hall.

Progress: The Town of Belville has maintained local Emergency Management procedures on the Town website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of

collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, R2

Strategy Belville ES-2: Keep a copy of the Brunswick County Multi-Jurisdictional Hazard Mitigation Plan, including the Town of Belville, available for public review at Town Hall.

Progress: The Town has maintained a copy of the current Brunswick County Multi-Jurisdictional Hazard Mitigation Plan at Town Hall, as well as on the Town's website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1

Strategy Belville ES-3: Work with Brunswick County officials to distribute materials about the County Water Shortage Response Plan.

Progress: The County has pro-actively enforced and educated the public about the Water Shortage Response Plan over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC53

Strategy Belville ES-4: Monitor the status of backup generators, communications, and vehicles for all critical public facilities. In addition, develop a list of providers of emergency equipment.

Progress: The Town in collaboration with Brunswick County Emergency Management have maintained this strategy over the last five years. These efforts will continue through annual procedures defined int the County EOP. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Belville ES-5: To improve road visibility during hazardous road conditions, encourage NCDOT to place new reflector tape or paint along road edges and in the dividing line on all major roads in the Town.

Progress: The Town in collaboration with other participating County jurisdictions have worked closely with NCDOT to carry out this strategy. Some progress has been made but efforts will continue through this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed

through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC11

Strategy Belville ES-6: The Town will continue to work with other governmental bodies including Brunswick County and surrounding communities to provide for a continued supply of pure, potable water.

Progress: The Town has collaborated with local water and sewer districts to maintain a clean potable water supply. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC2

Strategy Belville ES-7: Maintain fire event preparedness.

Progress: The Town has carried out implementation of this strategy through the County EOP and local volunteer fire department efforts. Additionally, the NC State Forest assists in fire event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy Belville ES-8: Ensure the fire hydrants are working properly.

Progress: This strategy has been carried out through annual public works routine maintenance. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy Belville PI-1: Participate with Brunswick County in a hazard mitigation seminar for community residents, including information on preparedness for all hazards significant to Brunswick County, including the Town of Belville.

Progress: The Town has participated in this seminar as made available through Brunswick County Emergency Management. These seminars are typically held leading into hurricane season. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language

presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1

Strategy Belville PI-2: Provide home and property buyers with information on quality redevelopment and safe housing development. The information is probably most efficiently dispersed at Town Hall and other community owned public facilities.

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC45

City of Boiling Spring Lakes

Strategy BSL PI-1: Educate contractors about principles for quality redevelopment and safe housing development through written materials or a City-sponsored workshop.

Progress: The City's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

Strategy BSL PI-2: Hold a City-sponsored hazard mitigation seminar for the community residents, including information on preparedness, mitigation, and response for all hazards significant to Boiling Spring Lakes.

Progress: This strategy will now be carried out as a component of the County's Emergency Operations Plan.

Status/Corresponding 2015 Strategy: BC1, BC5

Strategy BSL PI-3: Provide new home and property buyers with information on quality redevelopment and safe housing development. The information is probably most efficiently dispersed at the City hall and other community owned, public facilities in City.

Progress: The City's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC45

Strategy BSL PI-4: Manually disperse and post information at City Hall which provides information about the City's Emergency Response Plan and relevant emergency response actions the public can take. Also ensure each City department possesses a clear list of department responsibilities as outlined in the plan. Update department contacts as they change.

Progress: The City maintains comprehensive information regarding land development regulations, emergency response procedures, and public safety programs and initiatives. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1

Strategy BSL PI-5: Manually disperse and post information at City Hall which provides information about the City's Community-Based Hazard Mitigation Plan and relevant mitigation measures that public can take. In addition, provide a response/reply section where residents can comment on the effectiveness of the current plan and where they can make suggestions for future revisions on the plan.

Progress: This effort has not been accomplished; however, the City intends to achieve this strategy through implementation of this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, BC45

Strategy BSL PI-6: The City should publicize, at the City Hall, maps of evacuation routes which will facilitate the evacuation of Boiling Spring Lakes in case of a hazardous event.

Progress: The City has maintained this information on the city website over the five year implementation of the 2011 plan. The actions defined under this locally specific strategy statement will continue, but are now

addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC21

Strategy BSL PI-7: The City should distribute via gas/electric bills maps of evacuation routes which will facilitate the evacuation of Boiling Spring Lakes in case of a hazardous event.

Progress: The City has not direct mailed this information over the last five years. The City will rely on the County Emergency Management as a means to disseminate these maps and information to residents and visitors. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, B21

Strategy BSL PI-8: Work with Brunswick County officials and surrounding communities to distribute materials about the County Water Shortage Response Plan.

Progress: Over the last five years, Boiling Spring Lakes has collaborated with County utility districts to educate businesses and property owners about the terms and potential restrictions associated with local water shortage response plans. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: B53

Strategy BSL P-1: Continue to update the City's Emergency Response Plan on an annual basis. The Emergency Response Plan should contain detailed information on responsible parties and contact information; this information should be updated as positions and contact information changes.

Progress: The City has participated in Emergency Operations efforts at the local and County level over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy BSL P-2: Maintain evacuation routes in the event of a hazardous event.

Progress: The City has worked closely with Brunswick County Emergency Management and NCDOT to maintain and mark evacuation routes. The actions defined under this locally specific strategy statement will

continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC21

Strategy BSL P-3: Monitor the status of backup generators, communications, and vehicles for all critical public facilities. Test generators, communications equipment, and vehicles on a regular basis, not only for maintenance, but to confirm that the equipment continues to match the needs of critical facility expansion or updated operations.

Progress: The City's Public Works department has worked closely with Brunswick County Emergency Management to monitor and maintain backup generators. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy BSL P-4: Purchase, as necessary, backup generators as determined by the results of Action P-3.

Progress: No additional backup generators or quick connects were acquired over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy BSL P-5: Install, as necessary, generator quick connects, as determined by the results of Action P-3.

Progress: No additional backup generators or quick connects were acquired over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy BSL P-6: Continue to enforce the International Building Code. Require that new structures or structures undergoing significant renovation meet code requirements for coastal areas in accordance with the International Building Code.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will

continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy BSL P-7: Monitor trees and branches, in public areas, at risk of breaking or falling in wind, ice, and snow storms. Prune or thin trees or branches when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the City.

Progress: The City's Public Works department in conjunction with local utility providers has worked over the last five years to maintain clearance from power lines and critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy BSL P-8: The City will take a proactive approach in investigating dangerous damaged structures and should take prompt action in condemning damaged structures that have been abandoned.

Progress: The City has carried out this strategy through enforcement of the City's Minimum Housing Code. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC30

Strategy BSL P-9: Record and maintain all tax parcel information and floodplain locations in a GIS system in order to build the City's capability to generate maps when needed.

Progress: Over the last five years, Brunswick County, in collaboration with all participating municipalities, worked to expand upon and improve the quality of county-wide GIS data. The County will continue to work closely with municipalities to establish and maintain a robust and comprehensive GIS system. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC43

Strategy BSL P-10: Develop a database that identifies each property that has received damage due to hazards identified within this mitigation plan. The database should also include a tax identification number of the property, a description of the property damage, the value of the damage, and links to photographs of the damage. Developing this database will allow the City to easily identify properties

at high risk of damage from certain hazards as well as properties which receive repetitive damage from multiple hazards. In an effort to gain historical information, the City should send a survey to all residents requesting information that should be included in the database.

Progress: The City has not been diligent in carrying out this strategy. These efforts will continue in conjunction with the County GIS. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC17

Strategy BSL P-11: The zoning and subdivision ordinances should be revised to utilize the use of various pervious surfaces in parking lots in recreational areas near the floodplain..

Progress: This strategy has not been carried out due to a lack of political will. It will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy BSL P-12: Develop local Water Shortage Response Guidelines (in different phases) as a part of the Boiling Spring Lakes Emergency Response Plan as it relates to the expectations of the City's water supplier.

Progress: The City completed and adopted a Water Shortage Response Plan in 2008; enforcement will continue through this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC53

Strategy BSL P-13: The City should continue their proactive approach to mitigation by connecting Rainwater Retention Drums to the downspouts of each gutter system on every municipal building within Boiling Spring Lakes. The collected water should be used to irrigate all municipal gardens, parks, lawns, and the like.

Progress: This strategy has been eliminated due to a lack of political will and available funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy BSL P-14: Storms can create hazardous road conditions, including decreased ability for drivers to see road boundaries. To improve road visibility, encourage the Department of Transportation to place new reflector tape or paint along road edges and in the dividing line should be placed on all major roads throughout City.

Progress: The City in collaboration with other participating County jurisdictions have worked closely with NCDOT to carry out this strategy. Some progress has been made but efforts will continue through this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC11

Strategy BSL P-15: Continue to encourage proper waste disposal and recycling. In order to protect the vulnerable aquifer from contamination, the City should do all it can to prevent seepage of wastes and toxic elements into the ground. Proper disposal of waste and recycling when possible will aid in this effort. This measure may be implemented through a City policy or through public education measures.

Progress: This strategy was deemed a day-to-day function of the City, and will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy BSL P-16: The zoning ordinance should be amended to prohibit underground chemical and gasoline storage, as set forth by EPA and the International Building Code, in an effort to minimize risks to groundwater resources.

Progress: This strategy was completed in 2009. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy BSL P-17: Regulate storage of toxic wastes. The zoning ordinance should be amended to prohibit the storage of toxic wastes within the planning jurisdiction.

Progress: This strategy was completed in 2009. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy BSL P-18: The City shall work with other appropriate governmental bodies, namely Brunswick County to provide for a continued pure supply of potable water.

Progress: The City has collaborated over the last five years with local water utilities to ensure access to a safe potable water supply. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This

change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC2

Strategy BSL P-19: Maintain fire event preparedness. The fire department has the responsibility to assure the City's protection during fire events. Part of this responsibility is dependent upon the department's ability to maintain the materials and a knowledge base for addressing such an event. This responsibility must be supported by provision of adequate funding for the continuing education and materials necessary to maintain this preparedness.

Progress: The City has worked diligently with Brunswick County Emergency Management to prepare for and respond to fire events. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy BSL P-20: Explore and seek access to all potential sources of information and communication regarding early fire prevention.

Progress: The City has worked diligently with Brunswick County Emergency Management to prepare for and respond to fire events. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy BSL P-21: Evaluate and improve fire fighting procedures.

Progress: The City has worked diligently with Brunswick County Emergency Management to prepare for and respond to fire events. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy BSL P-22: Ensure the fire hydrants are working properly.

Progress: The City Public Works department, in coordination with local fire officials, inspect all town fire hydrants for proper functioning. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies

(Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy BSL P-23: Maintain hazardous materials event preparedness. The City should develop a plan of action to maintain the materials and knowledge base for addressing such a spill, or develop preliminary measures to assist the county till the representatives arrive. This responsibility must be supported by provision of adequate funding for materials and trainings necessary to maintain this preparedness.

Progress: The City's police and fire departments have worked over the last five years with the County Local Emergency Planning Committee to address the issue of hazardous materials. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC49

Strategy BSL P-24: Maintain nuclear event preparedness. The City should develop a plan of action to maintain the materials and knowledge base for addressing a nuclear event, or develop preliminary measures to assist the county until the representatives arrive. This responsibility must be supported by provision of adequate funding for materials and trainings necessary to maintain this preparedness. This may be made part of the City's Emergency Response Plan.

Progress: The City's police and fire departments have worked over the last five years with the County Local Emergency Planning Committee to address the issue of nuclear event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC49

Strategy BSL ES-1: Develop a tornado warning system. Several options exist for a tornado warning system. The most feasible for Boiling Spring Lakes would be to develop a siren to warn of oncoming tornados. This siren would have to differentiate from the fire alarm and be well publicized for citizens to recognize.

Progress: This strategy has not been achieved. Moving forward, early warning efforts will be handled through Brunswick County Emergency Management. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC46

Strategy BSL NRP-1: Protect/Enhance Shoreline Vegetation. The City should revise its zoning and subdivision ordinance to incorporate shoreline vegetation protection buffers along the AEC's in order to protect the character and the help mitigate flooding.

Progress: This strategy was completed in 2006; enforcement has continued since this time. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC25

Town of Bolivia

Strategy Bolivia P-1: Work with Brunswick County to set up program to advise/assist property owners in retrofitting homes, businesses, and institutional facilities. (CRS 320)

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC45

Strategy Bolivia P-2: Work with Brunswick County to ensure that no public facilities are proposed for flood hazard areas. Protect new critical facilities (e.g., schools, hospitals, fire stations, emergency shelters) to 2' above the 500-year flood elevation (5' above BFE). (CRS 430)

Progress: Over the last five years, the Town has steered development away from high hazard areas through enforcement of local zoning regulations and the Flood Damage Prevention Ordinance. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC3, BC9

Strategy Bolivia P-3: In cooperation with Brunswick County, continue program for evaluation and improvement of critical facilities (public and private) – roads, bridges, water, sewer, electricity, etc. – and critical services – fire, rescue, medical, etc.

Progress: The Town has not made improvements to any critical facilities over the last five years. The Town will continue to target opportunities as they arise or funding becomes available. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC3, BC5

Strategy Bolivia P-4: Continue to address and strengthen approach to "scattered and sprawling, large lot subdivision activity," "unplanned commercial strip development," "sewage problems and sewage solutions," and "storm water runoff and drainage."

Progress: This strategy was completed through update and adoption of the County's Unified Development Ordinance within the last five years for areas surrounding the Town. Bolivia did not independently adopt any revised planning and zoning standards. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Bolivia P-5: Review and update as necessary the Flood Damage Prevention Ordinance to ensure maximum protection from flood hazard events (CRS 430). Consider raising the minimum flood protection level from 1' above base flood elevation to 2' or more above BFE. All substantially damaged buildings should be elevated to this level (CRS 430).

Progress: The Town has actively enforced local Flood Damage Prevention Ordinance provisions; however, the BFE has not been increased to two feet. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9

Strategy Bolivia P-6: Evaluate the zoning ordinance for its ability to target and direct growth to areas consistent with the land classification map, the water distribution system, and existing and future sewer systems.

Progress: This strategy was completed through update and adoption of the County's Unified Development Ordinance within the last five years for areas surrounding the Town. Bolivia did not independently adopted any revised planning and zoning standards. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Town of Calabash

Strategy Calabash P-1: Update the Land Use Plan.

Progress: The Town completed a Land Use Plan update in 2012. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC8

Strategy Calabash P-2: Revise/update Stormwater Management Ordinance.

Progress: The Town reviews and updates local stormwater controls on an as needed basis. No revisions were required over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Calabash P-3: Update the Town Zoning Ordinance.

Progress: The Town adopted updates zoning regulations in 2013. The Town will continue to revise these regulations as deemed necessary. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Calabash P-4: Work with Brunswick County to enforce NC Building Codes for wind resistance.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Calabash P-5: Ensure Mobile/Manufactured Homes are installed and secured properly.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. All manufactured homes are tied down in accordance with NC State Building Code. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Calabash P-6: Consider revising Flood Damage Prevention Ordinance.

Progress: The Town revised the Flood Damage Prevention Ordinance in May 2010. The Town will continue to review the Flood Damage Prevention Ordinance annually and update it as deemed necessary and/or required by FEMA and NCDPS. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9

Strategy Calabash S-1: Work with Brunswick County to enforce debris removal program to correct problem sites.

Progress: This strategy is carried out as a component of the County's Emergency Operations Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: B38

Strategy Calabash PI-1: Produce an annual progress report on the status of actions proposed in the HMP.

Progress: This strategy has been carried out through implementation of the Town's current HMP. Moving forward, this language is covered in Section 7 of this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Town of Carolina Shores

Strategy Carolina Shores 1.1.1: Educate contractors about principles for quality redevelopment and safe housing development through written materials or a Town-sponsored workshop.

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

Strategy Carolina Shores 1.1.2: Post the plans on the Town's website.

Progress: The plan has been posted on the Town's website over the last five years. The existing plan will be replaced with this update upon adoption. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1

Strategy Carolina Shores 1.1.3: Provide new home and property buyers with information on quality redevelopment and safe housing development. The information is probably most efficiently dispersed at the Town Hall and other community owned, public facilities in Town.

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC45

Strategy Carolina Shores 1.1.4: Include information in quarterly Town newsletter (via email and hand deliver to POA).

Progress: The Town has carried out this task annually over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented

in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: R7, BC1

Strategy Carolina Shores 1.2.1: Manually disperse and post information at the Town Hall which provides information about the Town's Emergency Response Plan and relevant emergency response actions the public can take. Also ensure each Town department possesses a clear list of department responsibilities as outlined in the plan. Update department contacts as they change.

Progress: The Town has worked closely with Brunswick County Emergency Management over the last five years in an effort to provide citizens with accurate information regarding natural hazards through Town Hall. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1

Strategy Carolina Shores 1.2.2: Manually disperse and post information at the Town Hall which provides information about the Town's Community-Based Hazard Mitigation Plan and relevant mitigation measures the public can take. In addition, provide a response/reply section where residents can comment on the effectiveness of the current plan and where they can make suggestions for future revisions on the plan.

Progress: Information regarding the Town's existing plan has been provided to residents over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, BC5, BC46, BC48

Strategy Carolina Shores 1.3.1: Continue to update the Town of Carolina Shores Emergency Response Plan on an annual basis. The Emergency Response Plan should contain detailed information on responsible parties and contact information; this information should be updated as positions and contact information changes.

Progress: This strategy has been carried out over the last five years in concert with updates to the County Emergency Operations Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Carolina Shores 1.4.1: Maintain evacuation routes in the event of a hazardous event.

Evacuation routes are reviewed and updated annually as necessary through mandated County Emergency Operations Plan updates in collaboration with NCDPS. The County will continue to address this issue through annual Emergency Operations Plan updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC21

Strategy Carolina Shores 1.4.2: The Town should publicize, at Town Hall, maps of evacuation routes which will facilitate the evacuation of Carolina Shores in case of a hazardous event.

Evacuation routes are reviewed and updated annually as necessary through mandated County Emergency Operations Plan updates in collaboration with NCDPS. The County will continue to address this issue through annual Emergency Operations Plan updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC21

Strategy Carolina Shores 1.4.3: The Town should distribute via website and newsletter, maps of evacuation routes which will facilitate the evacuation of Carolina Shores in case of a hazardous event.

Progress: All evacuation routes have been mapped by the Brunswick County GIS department and are reviewed and updated annually as needed. The County will continue to address this issue through annual Emergency Operations Plan updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, BC5, BC21

Strategy Carolina Shores 2.1.1: Monitor the status of backup generators, communications, and vehicles for all critical public facilities. Test generators, communications equipment, and vehicles on a regular basis, not only for maintenance, but to confirm that the equipment continues to match the needs of critical facility expansion or updated operations.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Carolina Shores 2.1.2: Purchase as necessary backup generators as determined by the results of 2.1.1.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Carolina Shores 2.1.3: Purchase emergency supplies for 10 Town personnel who will man the emergency operations center during and following a disaster. This strategy will require the Town to establish a list of items necessary for each employee prior to purchase.

Progress: This strategy has not been accomplished. The Town will apply for funding to have this project completed as the opportunity arises. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Carolina Shores 2.1.4: Purchase 4 chain saws to assist in the removal of debris created during disaster events. Approximate cost of this project is $2000.

Progress: This strategy has been accomplished and will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Carolina Shores 2.1.5: Purchase a tractor/backhoe for clearing.

Progress: This strategy has been accomplished and will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Carolina Shores 2.2.1: Purchase hurricane shutters to place on the 12 windows in Town Hall during high wind events. It is necessary to protect Town Hall as much as possible as it is the emergency operations center for the Town during disaster response and recovery.

Progress: This strategy was not accomplished through implementation of the existing plan. The Town will continue to seek funding opportunities through this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC3

Strategy Carolina Shores 2.2.2: Purchase hurricane shutters to place on the window of the public works building during high wind events.

Progress: This strategy was not accomplished through implementation of the existing plan. The Town will continue to seek funding opportunities through this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC3

Strategy Carolina Shores 3.1.1: Continue to enforce the North Carolina State Building Codes. Require that new structures or structures undergoing significant renovation meet code requirements for coastal areas in accordance with the North Carolina State Building Codes.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Carolina Shores 3.2.1: Monitor trees and branches in public areas at risk of breaking or falling in wind, ice, and snow storms. Prune or thin trees or branches when they would pose an immediate threat to property, utility lines, or other significant structures or critical facilities in the Town.

Progress: The Town's Public Works department in conjunction with local utility providers has worked over the last five years to maintain clearance from power lines and critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Carolina Shores 3.3.1: The Town will take a proactive approach in investigating dangerous damaged structures and should take prompt action in condemning damaged structures that have been abandoned.

Progress: The Town addresses this issue on an ongoing basis due to shoreline migration and erosion. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC30

Strategy Carolina Shores 4.1.1: Record and maintain all tax parcel information and floodplain locations in a GIS system in order to build the Town's capability to generate maps when needed. The Brunswick County GIS department currently completes their GIS mapping.

Progress: The Town has completed this strategy in conjunction with implementation of the existing plan.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Carolina Shores 4.2.1: Develop a database that identifies each property that has received damaged due to hazards identified within the mitigation plan. The database should also include a tax identification number of the property, a description of the property damage, the value of the damage, and links to photographs of the damage. Developing this database will allow the Town to easily identify properties at high risk of damage from certain hazards and well as properties which receive repetitive damage from multiple hazards. In an effort to gain historical information the Town should send a survey to all residents requesting information that should be included in the database.

Progress: The Town addresses this issue on an ongoing basis. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC17

Strategy Carolina Shores 4.3.1: Purchase 5 Nextel radios to assign to all primary Town personnel.

Progress: This strategy has been accomplished and will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Carolina Shores 4.3.2: Purchase 2-way radios as a backup for personnel, approximate cost is $5,000.

Progress: This strategy was not accomplished; however, the Town will continue to work closely with County Emergency Management regarding the issue of emergency communication.

Status/Corresponding 2015 Strategy: BC50

Strategy Carolina Shores 5.1.1: Revise the Zoning and Subdivision Ordinance to require the utilization of various pervious surfaces within the floodplain in order to reduce stormwater runoff. This should utilizing the use of various pervious surfaces in parking lots in recreational areas near the floodplain.

Progress: The Town has not accomplished this strategy; however, the Town will consider changes to land development regulations that will assist with mitigation efforts. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Carolina Shores 5.1.2: Revise the existing special flood hazard area to reflect the areas flooded during Hurricane Floyd.

Progress: The Town addresses this issue on an ongoing basis. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC13, BC17

Strategy Carolina Shores 5.1.3: Identify all structures within the newly identified Special Flood Hazard area.

Progress: This strategy will be completed upon final adoption of updated FIRMs. The maps are currently under review by Brunswick County. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC13, BC17

Strategy Carolina Shores 5.1.4: Implement program to acquire buildings located within the Special Flood Hazard area that have been substantially damaged by flood events.

Progress: No structures were acquired by the Town over the last five years. The Town will continue to address this issue following natural hazard events like the flooding of 2015. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC26

Strategy Carolina Shores 5.1.5: Implement program to elevate any buildings that are located within the Special Flood Hazard area in cases in which owners are not willing to relocate.

Progress: No structures were elevated by the Town over the last five years. The Town will continue to address this issue following natural hazard events like the flooding of 2015. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC26

Strategy Carolina Shores 6.1.1: Work with Brunswick County officials and surrounding communities to distribute materials about the County Water Shortage Response Plan.

Progress: This strategy has not been carried out independently by the Town. The Town has worked closely with Brunswick County Emergency Management to carry out this activity.

Status/Corresponding 2015 Strategy: BC53

Strategy Carolina Shores 6.1.2: Develop local Water Shortage Response Guidelines (in different phases) as a part of the Carolina Shores Emergency Response Plan as it relates to the expectations of the Town's water supplier. Currently the Town follows the county's guidelines.

Progress: This effort was completed and will be implemented through future updates of this plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC53

Strategy Carolina Shores 7.1.1: Develop a tornado and waterspout warning system.

Progress: This strategy has not been developed locally; however, it will be accomplished through annual EOP updates.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Carolina Shores 8.1.1: Maintain a current action plan for fire response.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC35, BC52

Strategy Carolina Shores 8.2.1: Explore and seek access to all potential sources of information and communication regarding early fire detection.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC50

Strategy Carolina Shores 8.2.2: Evaluate and improve fire fighting procedures.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC50, BC52

Strategy Carolina Shores 8.2.3: Ensure the fire hydrants are working properly.

Progress: The Town Public Works department works closely with the Town fire department to inspect all hydrants annually to ensure they are working properly. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy Carolina Shores 9.1.1: Maintain HAZMAT event preparedness. The Fire Department should develop a plan of action to maintain the materials and knowledge base for addressing such a spill, or develop preliminary measures to assist the County until the representatives arrive. This responsibility must be supported by provision of adequate funding for materials and trainings necessary to maintain this preparedness.

Progress: The Town has not completed this effort; however, Town emergency management has worked closely with the County LEPC to address this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC49

Strategy Carolina Shores 10.1.1: Maintain nuclear event preparedness.

Progress: The Town's police and fire departments have worked over the last five years with the County Local Emergency Planning Committee to address the issue of nuclear event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC49

Town of Caswell Beach

Strategy Caswell Beach 1.1.1: Educate contractors about principles for quality redevelopment and safe housing development through written materials or a Town-sponsored workshop.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

Strategy Caswell Beach 1.1.2: Hold a Town-sponsored hazard mitigation seminar for the community residents, including information on preparedness for all hazards significant to Caswell Beach.

Progress: This strategy is addressed through the Town's implementation of required CRS activities.

Status/Corresponding 2015 Strategy: R7, BC1

Strategy Caswell Beach 1.1.3: Provide new home and property buyers with information on quality redevelopment and safe housing development. The information is probably most efficiently dispersed at the Town hall and other community owned, public facilities in Town.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

Strategy Caswell Beach 1.2.1: Manually disperse and have a website posting which provides information about the Town of Caswell Beach Emergency Response Plan and The Time Sensitive Hurricane Plan and relevant emergency response actions the public can take. Also ensure each Town department possesses a clear list of department responsibilities as outlined in the plan.

Progress: The Town has maintained this information on the Town website over the last five years and will continue to update the website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies

(Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, BC5

Strategy Caswell Beach 1.2.2: Manually disperse and have a website posting which provides information about the Town's Community-Based Hazard Mitigation Plan and relevant mitigation measures the public can take. In addition, provide a response/reply section where residents can comment on the effectiveness of the current plan and where they can make suggestions for future revisions on the plan.

Progress: The Town has maintained this information on the Town website over the last five years and will continue to update the website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC3, BC5

Strategy Caswell Beach 1.3.1: Update and revise the Town of Caswell Beach Emergency Response Plan and The Time Sensitive Hurricane Plan on an annual basis. The plans should contain detailed information on responsible parties and contact information; this information should be updated as positions and contact information changes.

Progress: The Town reviews and updates the local emergency response procedures in conjunction with Brunswick County emergency management annually. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Caswell Beach 1.4.1: Maintain evacuation routes in the event of a hazardous event.

Progress: Evacuation routes are reviewed and updated annually as necessary through mandated County Emergency Operations Plan updates in collaboration with NCDPS. The County will continue to address this issue through annual Emergency Operations Plan updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC21

Strategy Caswell Beach 1.4.2: The Town should publicize, on the Town's website, a map of evacuation routes which will facilitate the evacuation of Caswell Beach in case of a hazardous event.

Progress: All evacuation routes have been mapped by the Brunswick County GIS department and are reviewed and updated annually as needed. The County will continue to address this issue through annual Emergency Operations Plan updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC21

Strategy Caswell Beach 2.1.1: Monitor the status of backup generators, communications, and vehicles for all critical public facilities. Test generators, communications equipment, and vehicles on a regular basis, not only for maintenance, but to confirm that the equipment continues to match the needs of critical facility expansion or updated operations.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Caswell Beach 3.1.1: Continue to enforce the North Carolina Building Code. Require that new structures or structures undergoing significant renovation meet code requirements for coastal areas in accordance with the International Building Codes.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Caswell Beach 3.2.1: Monitor trees and branches, in public areas, at risk of breaking or falling in wind, ice, and snow storms. Prune or thin trees or branches when they would pose an immediate threat to property, utility lines, or other significant structures or critical facilities in the Town.

Progress: The Town's Public Works department in conjunction with local utility providers has worked over the last five years to maintain clearance from power lines and critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts

focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Caswell Beach 3.3.1: The Town will take a proactive approach in investigating dangerous damaged structures.

Progress: The Town addresses this issue on an ongoing basis due to shoreline migration and erosion. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC17, BC30

Strategy Caswell Beach 4.1.1: Procure GIS and GPS services through outsourcing for all the town's mapping needs and to assist in monitoring the rate of erosion.

Progress: This strategy has been completed and therefore, will be removed through the plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 4.2.1: Record and maintain all tax parcel information and floodplain locations in a GIS system in order to build the Town's capability to generate maps when needed.

Progress: The County continues to maintain a full-service GIS department which addresses the County and municipal overall mapping and data needs. This routine is considered a day-to-day operation for the County.

Status/Corresponding 2015 Strategy: BC43

Strategy Caswell Beach 4.3.1: Identify damage prone properties and develop a database that identifies each property that has received damage due to hazards identified within this mitigation plan. The database should include a tax identification number of the property, a description of the property damage, the value of the damage, and links to photographs of the damage. Developing this database will allow the Town to easily identify properties at high risk of damage from certain hazards as well as properties which receive repetitive damage from multiple hazards. In an effort to gain historical information, the Town should send a survey to all residents requesting information that should be included in the database.

Progress: The Town addresses this issue on an ongoing basis. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC13, BC17

Strategy Caswell Beach 5.1.1: This should utilize the use of various pervious surfaces in parking lots in recreational areas near the floodplain. The zoning and subdivision ordinances should be revised to require this action.

Progress: The Town has not accomplished this strategy; however, the Town will consider changes to land development regulations that will assist with mitigation efforts. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Caswell Beach 5.2.1: Protect/Enhance Shoreline Vegetation. The Town should revise its zoning and subdivision ordinance to incorporate shoreline vegetation protection buffers along the AEC's and Canals in order to help mitigate flooding and to filter stormwater runoff before it comes in contact with local surface waters.

Progress: The Town has not accomplished this strategy; however, the Town has worked with NCDEQ and the US Army Corps of Engineers. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10, BC20, BC22

Strategy Caswell Beach 5.3.1: Using the Stormwater Drainage Study conducted in August 2000 as a guide, complete and adopt a Stormwater Management Plan.

Progress: The Town has collaborated with the County and NCDEQ to increase standards related to stormwater runoff. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Caswell Beach 5.3.2: Adopt and enforce a Stormwater Ordinance incorporating best management practices to control stormwater runoff from development and redevelopment sites.

Progress: The Town has collaborated with the County and NCDEQ to increase standards related to stormwater runoff. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Caswell Beach 5.3.3: Establish and empower a Stormwater Committee to assist the Planning Board in the development of a local Stormwater Management Plan, Stormwater Ordinance and the implementation of said plan and ordinance. The Town has attempted to establish a Stormwater Committee in the past but was unsuccessful in their attempts. The local governing body should once attempt to establish this committee by using the public education and outreach aspect of this plan to educate the public on the need for such a committee and the need for strong public participation.

Progress: This strategy has not been carried out; however, the Town has and continues to work with NCDEQ and the County to ensure proper stormwater controls. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Caswell Beach 6.1.1: Continue to prioritize beach nourishment as a means of mitigating coastal beach erosion. Beach nourishment has been successfully used, in the past, to increase the amount of sand, to adjust the shoreline profile, to replenish depleted sand supplies and, through literal transport processes to supply sediment to downdrift shorelines.

Progress: Due to the rapidly involving funding and logistical issues related to shoreline management, this strategy is being eliminated from this update and will be handled on an annual basis through local Capital Improvements funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 6.1.2: Complete implementation of the Strategic Plan and its subsequent plans.

Progress: This strategy has been eliminated due to its vague and ambiguous language.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 7.1.1: Work with Brunswick County officials and surrounding communities to distribute materials about the County Water Shortage Response Plan.

Progress: The Town has not direct mailed notices to property owners regarding the Water Shortage Response Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC53

Strategy Caswell Beach 7.1.2: Develop local Water Shortage Response Guidelines (in different phases) as a part of the Caswell Beach Emergency Response Plan as it relates to the expectations of the Town's water supplier.

Progress: This effort was completed in 2012 and will be implemented through future updates of this plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC53

Strategy Caswell Beach 8.1.1: To improve road visibility during hazardous road conditions, encourage NCDOT to place new reflector poles along road edges and in the dividing line on all major roads in the Town.

Progress: The Town continues to collaborate with the County and NCDOT to address this issue. Some progress has been made; however, it continues to be an issue. This strategy will now be addressed through strategies developed and implemented at the County-wide level.

Status/Corresponding 2015 Strategy: BC11

Strategy Caswell Beach 9.1.1: Continue to encourage proper waste disposal and recycling. In order to protect the vulnerable aquifer from contamination, the Town should do all it can to prevent seepage of wastes and toxic elements into the ground. Proposal disposal of waste and recycling when possible will aid in this effort. This measure may be implemented through a Town policy or through public education measures.

Progress: This strategy was deemed a day-to-day function of the town and not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 9.1.2: Implement a central wastewater collection system. One of the highest risks to groundwater is the septic tank system currently being used to handle the Town's wastewater. Studies show that by replacing the current septic tank system with a central collection system the level of groundwater contamination will be drastically reduced.

Progress: This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 9.1.3: To assist in the control and governance of the central wastewater system, the Town should develop a Wastewater Management Ordinance. This ordinance should include a list of potentially hazardous materials whose deposit into the central wastewater system should be prohibited.

Progress: This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 9.2.1: The Town should provide annual calibration of the 6" and 2" meters located at the Oak Island Beach Villas, Caswell Dunes, Arboretum, US Coast Guard Station, and the Baptist Assembly.

Progress: The Town has conducted these calibrations on an annual basis over the last five years. This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 9.2.2: Replace still meters with new water meters and/or meter boxes.

Progress: The Town has replaced a number of meters over the last five years. This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 9.2.3: Replace many of the meters in use by home owners which are old and have questionable accuracy.

Progress: The Town has replaced a number of meters over the last five years. This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 9.3.1: The town purchases water from the county which is responsible for ensuring that the water meets all state and federal laws for safe drinking water. As a means of verifying the water quality, the Town should continue to maintain a Water Sampling Schedule on a continuous basis.

Progress: The Town has worked closely with local water and sewer districts over the last five years to ensure access to a potable water supply. This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 9.3.2: It appears that waterlines were designed for each of the Town neighborhoods, and in some instances new subdivisions, without apparent consideration of a water system for the entire town. As a result, there are several waterlines that dead end in neighborhoods resulting in stale distasteful drinking water. One solution to this problem is to continue the scheduled flushing that is now being performed by Public Utilities throughout the Town.

Progress: This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 9.3.3: The Town does not have maps of the complete Town water system. The lack of built drawings is a major problem particularly as it affects waterline repairs, water turn offs required due to breaks, and fire protection. In an effort to rectify this issue, the Town should conduct a hydraulic analysis of the town's water distribution system to identify deficiencies and ensure protection of public health and safety.

Progress: This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 9.3.4: Determine if connecting the dead end waterlines will increase the amount of water flow to significantly affect the town's water supply for the purpose of fire protection. At the same time, eliminating dead end waterlines will reduce the need for frequent flushing ergo reducing the loss of unmetered water.

Progress: The Town has not carried out this strategy, but intends to carry it out as funding becomes available. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC2, BC15

Strategy Caswell Beach 9.3.5: There are a number of alternatives that will be considered when attempting to increase the town's water flow and water pressure. These alternatives will be reviewed as part of the proposed engineering study and will include a cost benefit analysis to assist in the town's decision making. The risk in not implementing an alternative is to continue to lack sufficient water flow to put out a major fire in the town.

Progress: The Town has not carried out this strategy, but intends to carry it out as funding becomes available. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC15, BC16

Strategy Caswell Beach 9.3.6: Continue to review and revise the Town ordinances to be certain the Town ordinances meet the N.C. State Plumbing Code Standards and State Board of Health requirements.

Progress: This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 9.3.7: By state law, all double check valve assemblies and Reduced Pressure Zones must be in place by July, 2003. The Town should monitor double check valve assemblies and Reduced Pressure Zones to ensure they are in place by the state deadline.

Progress: This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 9.3.8: The Town shall work with other appropriate governmental bodies, namely Brunswick County, and surrounding municipalities to provide for a continued pure supply of potable water.

Progress: The Town has worked closely with local water and sewer districts over the last five years to ensure access to a potable water supply. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC2

Strategy Caswell Beach 10.1.1: Maintain fire event preparedness. The fire department has the responsibility to assure the Town's protection during fire events. Part of this responsibility is dependent upon the department's ability to maintain the materials and a knowledge base for addressing such an event. This responsibility must be supported by provision of adequate funding for the continuing education and materials necessary to maintain this preparedness.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC35, BC52

Strategy Caswell Beach 10.2.1: Explore and seek access to all potential sources of information and communication regarding early fire detection.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC35, BC52

Strategy Caswell Beach 10.2.2: Evaluate and improve fire fighting procedures.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC35, BC52

Strategy Caswell Beach 10.2.3: Ensure the fire hydrants are working properly.

Progress: The Town Public Works department works closely with the Town fire department to inspect all hydrants annually to ensure they are working properly. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy Caswell Beach 10.3.1: Revise the Zoning Ordinance to prohibit the use of fireworks in the Town limits of Caswell Beach.

Progress: This strategy was completed in 2013 and will be enforced moving forward. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Caswell Beach 11.1.1: Maintain hazardous materials event preparedness. The Town should develop a plan of action to maintain the materials and knowledge base for addressing such a spill, or develop preliminary measures to assist the county till the representatives arrive. This responsibility must

be supported by provision of adequate funding for materials and trainings necessary to maintain this preparedness.

Progress: The Town has not completed this effort; however, Town emergency management has worked closely with the County LEPC to address this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC49

Strategy Caswell Beach 11.2.1: The Town should inspect all propane tanks located within the town limits of Caswell Beach to ensure they are secured as established through state regulations. Town officials have identified their concern is primarily related to tanks floating through town during high water events. However, this strategy will also prevent said tanks from being blow over due to high wind events. In addition, the Town should establish a method of ensuring problems with any tanks that are not properly secured are rectified.

Progress: It has been determined that staff does not have the resources to carry out this strategy. This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 11.2.2: The Town should annually inspect all propane tanks located within the town limits of Caswell Beach to ensure there are no leaks from the tanks and to ensure there has been no surface soil contamination from the tanks.

Progress: It has been determined that staff does not have the resources to carry out this strategy. This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Caswell Beach 12.1.1: Maintain nuclear event preparedness. The Town should develop a plan of action to maintain the materials and knowledge base for addressing a nuclear event, or develop preliminary measures to assist the county until the representatives arrive. This responsibility must be supported by provision of adequate funding for materials and trainings necessary to maintain this preparedness. This may be made part of the Towns Emergency Response Plan.

Progress: The Town's police and fire departments have worked over the last five years with the County Local Emergency Planning Committee to address the issue of nuclear event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC49

Town of Holden Beach

Strategy Holden Beach 1.1.1: Educate contractors about principles for quality redevelopment and safe housing development through written materials or a Town-sponsored workshop. The Town will install a monitoring program on the website to track hits to the website.

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

Strategy Holden Beach 1.1.2: Hold a Town-sponsored hazard mitigation seminar for the community residents, including information on preparedness for all hazards significant to Holden Beach. Each May, the Town coordinates with the County Emergency Management Coordinator to hold the seminar to give residents the information and tools needed to respond to any hazard.

Progress: This strategy will be carried out as a function of the Town's CRS program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: R7, BC1

Strategy Holden Beach 1.1.3: Provide new home and property buyers with information on quality redevelopment and safe housing development. The information is probably most efficiently dispersed at the Town hall and other community owned, public facilities in Town.

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC45

Strategy Holden Beach 1.2.1: Manually disperse and have a website posting which provides information about the Town's State of Emergency Ordinance and relevant emergency response actions the public can take. Also ensure each Town department possesses a clear list of department responsibilities as outlined in the plan. Update department contacts as they change.

Progress: The Town has maintained this information on the Town website over the last five years and will continue to update the website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, BC5

Strategy Holden Beach 1.2.2: Manually disperse and have a website posting which provides information about the Town's Hurricane Preparedness Plan and relevant emergency response and preparedness actions the public can take.

Progress: The Town has maintained this information on the Town website over the last five years and will continue to update the website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Holden Beach 1.2.3: Provide a public information display in the Town Hall lobby.

Progress: This display was installed in 2012 and is maintained and updated as necessary. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: R7, BC1

Strategy Holden Beach 1.2.4: Provide survey cards during the annual POA meeting.

Progress: This strategy does not relate to the Town's mitigation program and is therefore, being eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Holden Beach 1.2.5: Provide information on the public access channel (Ch.8) on television concerning the community based hazard mitigation plan and the associated documents.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: R7, B1, BC5

Strategy Holden Beach 1.2.6: Manually disperse and have a website posting which provides information about the Town's Community-Based Hazard Mitigation Plan and relevant mitigation actions the public can take. In addition, provide a response/reply section where residents can comment on the effectiveness of the current plan and where they can make suggestions for future revisions on the plan.

Progress: The Town has maintained the Hazard Mitigation Plan on the Town's website over the last five years. Upon adoption, this document will replace the existing HMP. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: R7, BC1, BC5

Strategy Holden Beach 1.3.1: Update and revise the Town of Holden Beach State of Emergency Ordinance on an annual basis. The State of Emergency Ordinance should contain detailed information on responsible parties and contact information; this information should be updated as positions and contact information changes.

Progress: The Town reviews and updates the local emergency response procedures in conjunction with Brunswick County emergency management annually. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Holden Beach 1.4.1: Maintain evacuation routes in the event of a hazardous event.

Progress: Evacuation routes are reviewed and updated annually as necessary through mandated County Emergency Operations Plan updates in collaboration with NCDPS. The County will continue to address this issue through annual Emergency Operations Plan updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-

wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC21

Strategy Holden Beach 1.4.2: The Town should publicize, on the Town's website, a map of evacuation routes which will facilitate the evacuation of Holden Beach in case of a hazardous event.

Progress: All evacuation routes have been mapped by the Brunswick County GIS department and are reviewed and updated annually as needed. The County will continue to address this issue through annual Emergency Operations Plan updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, BC5, BC21

Strategy Holden Beach 1.4.3: The Town should distribute via Brunswick County water bills, realty companies, the Holden Beach Property Owner's Association, and the town hall public information rack, maps of evacuation routes which will facilitate the evacuation of Holden Beach in case of a hazardous event.

Progress: All evacuation routes have been mapped by the Brunswick County GIS department and are reviewed and updated annually as needed. The County will continue to address this issue through annual Emergency Operations Plan updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, BC5

Strategy Holden Beach 2.1.1: Monitor the status of backup generators, communications, and vehicles for all critical public facilities. Test generators, communications equipment, and vehicles on a regular basis, not only for maintenance, but to confirm that the equipment continues to match the needs of critical facility expansion or updated operations.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Holden Beach 2.1.2: Purchase, as necessary, backup generators as determined by the results of 2.1.1. Install, as necessary, generator quick connects, as determined by the results of 2.1.1.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Holden Beach 3.1.1: Continue to enforce the International Building Code. Require that new structures or structures undergoing significant renovation meet code requirements for coastal areas in accordance with the International Building Codes.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Holden Beach 3.2.1: Monitor trees and branches, in public areas, at risk of breaking or falling in wind, ice, and snow storms. Prune or thin trees or branches when they would pose an immediate threat to property, utility lines, or other significant structures or critical facilities in the Town.

Progress: The Town's Public Works department in conjunction with local utility providers has worked over the last five years to maintain clearance from power lines and critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Holden Beach 3.3.1: The Town will take a proactive approach in investigating dangerous damaged structures and should take prompt action in condemning damaged structures that have been abandoned.

Progress: The Town addresses this issue on an ongoing basis due to shoreline migration and erosion. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC17, BC30

Strategy Holden Beach 3.4.1: Bury the utility lines on Swordfish Drive, Brunswick Avenue West, and those crossing the Intracoastal Waterway in an effort to complete the utility line burial project which began in 1989. Once this portion of the project is finished, the entire community will receive its utilities from buried lines, thus, depleting the potential for service interruption as a result of line breakage for natural hazards. This project is complete as of 2008 and the Town will continue its policy of requiring developers to install utilities underground.

Progress: This effort is complete and therefore, it is eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Holden Beach 4.1.1: Purchase a complete GIS/GPS setup and provide training on said setup to all pertinent town personnel. As of 2008, the Town has its own GIS system, and utilizes this technology to maintain historical data as well as current information regarding particular Town ordinances.

Progress: This strategy has been completed and therefore, will be removed through the plan update.

Status/Corresponding 2015 Strategy: Completed/Eliminated

Strategy Holden Beach 4.2.1: Record and maintain all tax parcel information and floodplain locations in a GIS system in order to build the Town's capability to generate maps when needed. Utilizing the GPS system, the Town maintains a database with this information and can provide this information as requested

Progress: The Town has acquired a GIS/GPS system and updates pertinent data on an as needed basis. These efforts have also included maintaining data layers defining the Town's Flood Hazard Area. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC43

Strategy Holden Beach 4.3.1: Develop a database that identifies each property that has received damage due to hazards identified within this mitigation plan. The database should include a tax identification number of the property, a description of the property damage, the value of the damage, and links to photographs of the damage. Developing this database will allow the Town to easily identify properties at high risk of damage from certain hazards as well as properties which receive repetitive damage from multiple hazards. In an effort to gain historical information, the Town should send a survey to all residents requesting information that should be included in the database. This database is in place and is maintained as new information is received.

Progress: This strategy has not been completed to date. The Town will consider establishing this database following future storm events. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table

6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC17

Strategy Holden Beach 5.1.1: Revise the Zoning and Subdivision Ordinance to require the utilization of various pervious surfaces within the floodplain in order to reduce stormwater runoff. This should include utilizing the use of various pervious surfaces in parking lots in recreational areas near the floodplain. The Town amended their ordinances to provide for the use of pervious materials. The Town will continue to amend its ordinances as new BMP's become available.

Progress: This strategy has not been carried out due to changing views regarding the effectiveness of permeable pavement. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Holden Beach 5.2.1: Revise the zoning and subdivision ordinance to incorporate shoreline vegetation protection buffers along the AEC's and Canals in order to protect the character and to help mitigate flooding. In 2004, the Town amended its ordinances to require this important buffering process.

Progress: The Town has not implemented this strategy; however, the Town has worked closely with NCDEQ to enforce state and local CAMA regulations. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Holden Beach 5.2.2: Protect surrounding surface water and ecosystems from pollutants often associated with flooding and stormwater runoff. Specifically, the Town will provide a natural, vegetative toxin/pollutant filter at the end of all Town owned roads and streets (i.e., Halstead, Roger, Boyd, Fayetteville, Lumberton, Raleigh, Sanford, Burlington, Salisbury, Durham, Charlotte, Greensboro, Lions Paw, Starfish, Sanddollar, Marlin, Tarpon, Dolphin, and Tuna). The Town will continue this project as funds become available.

Progress: The Town has maintained and enforced its stormwater management ordinance over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Holden Beach 6.1.1: Continue to prioritize beach nourishment as a means of mitigating coastal beach erosion.

Progress: Due to the rapidly involving funding and logistical issues related to shoreline management, this strategy is being eliminated from this update and will be handled on an annual basis through local Capital Improvements funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Holden Beach 6.1.2: Develop a Beach Management Plan which will include annual monitoring of literal drift erosion, to address the long-term issue of beach erosion. The Town appointed a 9-member Shoreline Protection Committee; however, this committee was not able to accomplish its goals and objectives. In 2008, a new committee was appointed reducing the number of members to 5 and they have been tasked with developing a vegetation plan.

Progress: Due to the rapidly involving funding and logistical issues related to shoreline management, this strategy is being eliminated from this update and will be handled on an annual basis through local Capital Improvements funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Holden Beach 7.1.1: Work with Brunswick County officials and surrounding communities to distribute materials about the County Water Shortage Response Plan.

Progress: The Town has not direct mailed notices to property owners regarding the Water Shortage Response Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC53

Strategy Holden Beach 7.1.2: Develop local Water Shortage Response Guidelines (in different phases) as a part of the Holden Beach State of Emergency Ordinance as it relates to the expectations of the Town's water supplier.

Progress: This effort was completed in 2012 and will be implemented through future updates of this plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC53

Strategy Holden Beach 7.2.1. The Town should continue their proactive approach to mitigation by connecting Rainwater Retention Drums to the downspouts of each gutter system on every municipal building within Holden Beach. The collected water should be used to irrigate all municipal gardens, parks, lawns, and the like.

Progress: This strategy has been eliminated through this plan update due to a lack of funding and political will.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Holden Beach 8.1.1: Develop a tornado and waterspout warning system. The Town researched this type of system and determined it was cost prohibitive at this time. The Town developed a more cost effective measure by educating the public and join in the campaign with local TV stations to encourage citizens to purchase individual weather alert radios. This type of warning system was determined to be not only more cost effective but more benefit to the individuals because they can have the radio with them at all times.

Progress: The Town has carried out this strategy and has several employees trained in early detection techniques. The Town will maintain continuing education for relevant staff members. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC35

Strategy Holden Beach 9.1.1: To improve road visibility, encourage the Department of Transportation to place new reflector tape or paint along road edges and in the dividing line should be placed on all major roads through Town.

Progress: The Town continues to collaborate with the County and NCDOT to address this issue. Some progress has been made; however, it continues to be an issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC11

Strategy Holden Beach 10.1.1: Continue to encourage proper waste disposal and recycling. In order to protect the vulnerable aquifer from contamination, the Town should do all it can to prevent seepage of wastes and toxic elements into the ground. Proposal disposal of waste and recycling when possible will aid in this effort. This measure may be implemented through a Town policy or through public education measures.

Progress: This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Holden Beach 10.1.2: The zoning ordinance should be amended to prohibit underground chemical and gasoline storage that are a risk to groundwater resources.

Progress: The Town has worked closely with NCDEQ, the local LEPC, and the US Army Corps of Engineers to oversee installation and monitoring of underground tanks. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Holden Beach 10.1.3: The zoning ordinance should be amended too prohibit the storage of toxic wastes within the planning jurisdiction. This amendment was approved by the Town Council. Staff will continue to monitor this issue and amend the Zoning Ordinance as needed.

Progress: The Town has worked closely with NCDEQ, the local LEPC, and the US Army Corps of Engineers to oversee installation and monitoring of underground tanks. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Holden Beach 10.1.4: The Town shall work with other appropriate governmental bodies, namely Brunswick County, Shallotte, and Ocean Isle Beach to provide for a continued pure supply of potable water.

Progress: As noted, the Town has worked closely with local water suppliers to provide a sanitary and consistent potable water supply. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC2

Strategy Holden Beach 10.1.5: Implement a central wastewater collection system. Studies conducted by the Town have shown that the highest risk to groundwater is the septic tank system currently being used to handle the Town's wastewater.

Progress: This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Holden Beach 10.1.6: Develop a Wastewater Management Ordinance to assist in the control and governance of the central wastewater system. This ordinance should include a list of potentially hazardous materials whose deposit into the central wastewater system should be prohibited. Since the Town is a partner with Brunswick County, the Town will adopt the County's Sewer Use Ordinance.

Progress: This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Holden Beach 10.1.7: Amend the Stormwater Management Ordinance to include a list of potentially hazardous materials that should not be deposited into local drainage systems or surface waters. This Ordinance as amended by the Town and the Director of Planning & Inspections will ensure the enforcement and ensure the Town stays in compliance with the state stormwater rules.

Progress: Over the last five years, the County has effectively enforced state and local stormwater management regulations. The Town will update these regulations as deemed necessary, or when amendments will positively impact the Town's mitigation program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Holden Beach 11.1.1: Maintain fire event preparedness.

Progress: The Town's fire department works closely with County Emergency Management to improve upon and educate regarding the issue of fire event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC52

Strategy Holden Beach 11.2.1: Explore and seek access to all potential sources of information and communication regarding early fire detection.

Progress: The Town's fire department works closely with County Emergency Management to improve upon and educate regarding the issue of fire event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC35, BC52

Strategy Holden Beach 11.2.2: Evaluate and improve fire fighting procedures.

Progress: The Town's fire department works closely with County Emergency Management to improve upon and educate regarding the issue of fire event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC35, BC52

Strategy Holden Beach 11.2.3: Ensure the fire hydrants are working properly.

Progress: The Town's fire and public works departments have inspected all hydrants once annually over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC52

Strategy Holden Beach 12.1.1: Maintain HAZMAT event preparedness. The Town should develop a plan of action to maintain the materials and knowledge base for addressing such a spill, or develop preliminary measures to assist the county till the representatives arrive. This responsibility must be supported by provision of adequate funding for materials and trainings necessary to maintain this preparedness.

Progress: Town emergency management staff in conjunction with County Emergency Management and the County LEPC have worked to enforce this strategy. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC33, BC35, BC36

Strategy Holden Beach 12.2.1: The Town shall not support offshore drilling for gas or oil and shall not permit facilities such as oil refineries, storage facilities, or staging areas within the Town.

Progress: This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Holden Beach 13.1.1: Maintain nuclear event preparedness. The Town should develop a plan of action to maintain the materials and knowledge base for addressing a nuclear event, or develop preliminary measures to assist the county until the representatives arrive. This responsibility must be

supported by provision of adequate funding for materials and trainings necessary to maintain this preparedness. This may be made part of the Towns Emergency Response Plan.

Progress: The Town's police and fire departments have worked over the last five years with the County Local Emergency Planning Committee to address the issue of nuclear event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC49

Town of Leland

Strategy Leland PI-1: Educate contractors about principles for quality redevelopment and safe housing development through written materials or a City-sponsored workshop.

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

Strategy Leland PI-2: Hold a City-sponsored hazard mitigation seminar for the community residents, including information on preparedness, mitigation, and response for all hazards significant to Leland.

Progress: This strategy will continue to be implemented as a component of the County' s CRS program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: R7, BC1

Strategy Leland PI-3: Provide new home and property buyers with information on quality redevelopment and safe housing development. The information is probably most efficiently dispersed at the community administration building.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library

of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: B1, BC45

Strategy Leland PI-4: Survey local businesses to determine if they have emergency operations procedures in place and that all employees are aware of said procedures.

Progress: This strategy has not been carried out by the Town; however, local business owners have been provided education and outreach regarding natural hazards through County EOP procedures over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC36

Strategy Leland PI-5: Manually disperse and have a website posting which provides information about the Community-Based Hazard Mitigation Plan for Leland and relevant mitigation measures the public can take. In addition, provide a response/reply section where residents can comment on the effectiveness of the current plan and where they can make suggestions for future revisions on the plan.

Progress: The Town has maintained the current Hazard Mitigation Plan on the Town website. Upon adoption of this update, the Town will replace the current document and continue to make it available through implementation of this plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1

Strategy Leland PI-6: Develop a Town of Leland Emergency Response Plan. The Emergency Response Plan should contain detailed information on responsible parties and contact information; this information should be updated as positions and contact information changes.

Progress: The Town reviews and updates the local emergency response procedures in conjunction with Brunswick County emergency management annually. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Leland PI-7: Manually disperse and post information on the Town-sponsored website about the Town's Emergency Response Plan and relevant emergency response actions the public can take. Also ensure each Town department possesses a clear list of department responsibilities as outlined in the plan. Update department contacts as they change.

Progress: The Town has maintained this information on the Town website over the last five years and will continue to update the website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, BC5

Strategy Leland PI-8: Develop an Alert System to improve the Town's communications with citizens during impending disasters.

Progress: The Town has collaborated over the last five years with County Emergency Management to provide an emergency alert system available to all residents. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC46

Strategy Leland PI-9: Implement a reverse 911 system to assist the Police Department with the Elder Check Program to assist in contacting at risk populations during emergency situations. This program is already being implemented but a reverse 911 system would improve the performance of the program.

Progress: The Town has not established a municipal reverse 911 system. The Town has relied on the County Emergency Management for this service. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC46

Strategy Leland PI-10: Coordinate with local churches and Spanish speaking representatives to disperse information about the hazards prevalent in the area and the steps they can take to mitigate these hazards.

Progress: The Town has not carried out this strategy; but has relied on services provided through County Emergency Management. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC48

Strategy Leland P-1: Monitor the status of backup generators, communications, and vehicles for all critical public facilities. Test generators, communications equipment, and vehicles on a regular basis, not only for maintenance, but to confirm that the equipment continues to match the needs of critical facility expansion or updated operations.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Leland P-2: Continue to enforce the North Carolina State Building Code. Require that new structures or structures undergoing significant renovation meet code requirements for coastal areas in accordance with the International Building Code.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Leland P-3: Monitor trees and branches, in public areas, at risk of breaking or falling in wind, ice, and snow storms. Prune or thin trees or branches when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the Town.

Progress: The Town's Public Works department in conjunction with local utility providers has worked over the last five years to maintain clearance from power lines and critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Leland P-4: The Town will take a proactive approach in investigating dangerous damaged structures and should take prompt action in condemning damaged structures that have been abandoned.

Progress: The Town addresses this issue on an ongoing basis due to future impacts of natural hazard events. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of

collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC17, BC30

Strategy Leland P-5: Hire and train a local Building Inspector. The Town is currently working with Brunswick County to ensure the North Carolina State Building Codes are implemented in the Town. However, they are hiring and training a local Building Inspector in an effort to improve their current institutional capability.

Progress: This strategy has been completed and, therefore, will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Completed/Eliminated

Strategy Leland P-6: Record and maintain all tax parcel information and floodplain locations in a GIS system in order to build the Town's capability to generate maps when needed.

Progress: The Town has an established GIS program and has maintained local floodplain data on this system for the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC43

Strategy Leland P-7: Develop a database that identifies each property that has received damage due to hazards identified within this mitigation plan. The database should also include a tax identification number of the property, a description of the property damage, the value of the damage, and links to photographs of the damage. Developing this database will allow the Town to easily identify properties at high risk of damage from certain hazards as well as properties which receive repetitive damage from multiple hazards. In an effort to gain historical information, the Town should send a survey to all residents requesting information that should be included in the database.

Progress: The Town addresses this issue on an ongoing basis. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC13, BC17

Strategy Leland P-8: Purchase 15 vehicle radios for the Police Department and 15 hand-held radios for the Police Department.

Progress: The Town has purchased fifteen radios over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC50

Strategy Leland P-9: In order to reduce stormwater runoff, the Town should utilize various pervious surfaces within the floodplain. This should include the use of various pervious surfaces in parking lots in recreational areas near the floodplain. The zoning and subdivision ordinances should be revised to require this action.

Progress: The Town has not accomplished this strategy; however, the Town will consider changes to land development regulations that will assist with mitigation efforts. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: B10

Strategy Leland P-10: Develop a Floodplain Management Plan to assist in preventing wetland fill-in and wetland development.

Progress: This Regional Hazard Mitigation effort will serve as the Town's Flood Management Plan moving forward.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Leland P-11: Update the Flood Damage Prevention Ordinance.

Progress: The Town maintains an updated Flood Damage Prevention Ordinance. The Town will continue to review the Flood Damage Prevention Ordinance annually and update it as deemed necessary and/or required by FEMA and NCDPS. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9

Strategy Leland P-12: Develop a Stormwater Advisory Committee to develop a Stormwater Ordinance in an effort to limit future stormwater drainage issues in the Town.

Progress: The strategy has been completed in concert with implementation of the County's Stormwater Management program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Leland P-13: Develop a standby acquisition application to remove all structures with repetitive loss located in the 100-year floodplain.

Progress: This strategy has not been completed. In lieu of this effort, the Town works directly with NCDPS to complete applications as necessary. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC26

Strategy Leland P-14: Become a member of the Community Rating System program through the NFIP.

Progress: The Town has not joined the CRS program to date; this decision was based on the cost-benefit that the program will provide. The Town will revisit this action through implementation of this plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC7

Strategy Leland P-15: Work with Brunswick County officials and surrounding communities to distribute materials about the County Water Shortage Response Plan.

Progress: The Town has worked closely with local water suppliers to develop and disseminate information regarding the Town's Water Shortage Response Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC53

Strategy Leland P-16: Develop local Water Shortage Response Guidelines (in different phases) as a part of the Emergency Response Plan.

Progress: The Town has worked closely with local water suppliers to develop and disseminate information regarding the Town's Water Shortage Response Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC53

Strategy Leland P-17: Maintain fire event preparedness. The fire department has the responsibility to assure the Town's protection during fire events. Part of this responsibility is dependent upon the department's ability to maintain the materials and a knowledge base for addressing such an event. This responsibility must be supported by provision of adequate funding for the continuing education and materials necessary to maintain this preparedness.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy Leland P-18: Explore and seek access to all potential sources of information and continuing education for firefighters.

Progress: The Town's fire department works closely with County Emergency Management to improve upon and educate regarding the issue of fire event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC35, BC52

Strategy Leland P-19: Evaluate and improve fire fighting procedures.

Progress: The Town's fire department works closely with County Emergency Management to improve upon and educate regarding the issue of fire event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC35, BC52

Strategy Leland P-20: Ensure the fire hydrants are working properly.

Progress: The Town's fire and public works departments have inspected all hydrants once annually over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC52

Strategy Leland P-21: Maintain a current action plan for hazardous materials event response. The Town should develop a plan of action to maintain the materials and knowledge base for addressing such a spill. This responsibility must be supported by provision of adequate funding for materials and trainings necessary to maintain this preparedness.

Progress: The Town has not completed this effort; however, Town emergency management has worked closely with the County LEPC to address this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC33, BC36

Strategy Leland P-22: Maintain a current action plan for nuclear event response. The Town should develop a plan of action to maintain the materials and knowledge base for addressing a nuclear event, or develop preliminary measures to assist the county until the representatives arrive. This responsibility must be supported by provision of adequate funding for materials and trainings necessary to maintain this preparedness. This may be made part of the Town's Emergency Response Plan.

Progress: The Town's police and fire departments have worked over the last five years with the County Local Emergency Planning Committee to address the issue of nuclear event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC49

Strategy Leland P-23: Conduct a survey with each department to identify the current training needs of each department. The list from each department should be prioritized and should be developed according to current and future staffing.

Progress: This strategy was deemed irrelevant in relation to the Town's mitigation efforts and will be eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Leland P-24: Educate a primary staff person in conversational Spanish.

Progress: The Town has Spanish speaking staff; however, no formal plan is in place to expand these efforts. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC48

Strategy Leland P-25: Work with volunteer organizations to develop standard operation procedures to be used during disaster recovery and response.

Progress: This strategy has been completed through collaboration with Brunswick County Emergency Management. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Leland PA-1: Have each member of the Planning Board read and respond in group discussion to the NCAPA Citizen Planners Training Program Module.

Progress: This strategy was deemed irrelevant in relation to the Town's mitigation efforts and will be eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Leland PA-2: Conduct a mini-conference to discuss and revise the community vision in an effort to make the community more proactive in regards to development.

Progress: The Town has accomplished this strategy through ongoing planning efforts; it will be eliminated from this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Town of Navassa

Strategy Navassa P-1: In cooperation with Brunswick County, set up program to advise/assist property owners in retrofitting homes, businesses, and institutional facilities. (CRS 320)

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches

and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC45

Strategy Navassa P-2: Continue/expand efforts to partner with area utility districts to encourage proper development of regional sewer systems.

Progress: These efforts are ongoing and the Town works closely with County sewer districts to expand County-wide sewer.

Status/Corresponding 2015 Strategy: BC2

Strategy Navassa P-3: In cooperation with Brunswick County, ensure, when possible, that no public facilities are proposed for flood hazard areas. Protect new critical facilities (e.g., schools, hospitals, fire stations, emergency shelters) to 2' above the 500-year flood elevation (5' above BFE). (CRS 430)

Progress: No modifications have been made to Town critical facilities over the last five years; however, the Town continues to utilize the data in this plan when considering development of new critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC3

Strategy Navassa P-4: In cooperation with Brunswick County, continue program for evaluation and improvement of critical facilities (public and private) – roads, bridges, water, sewer, electricity, etc. – and critical services – fire, rescue, medical, etc.

Progress: No modifications have been made to Town critical facilities over the last five years; however, the Town continues to utilize the data in this plan when considering development of new critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC3, BC5

Strategy Navassa P-5: In cooperation with Brunswick County, continue to address and strengthen approach to "scattered and sprawling, large lot subdivision activity," "unplanned commercial strip development," "sewage problems and sewage solutions," and "storm water runoff and drainage."

Progress: This strategy was completed through update and adoption of the County's Unified Development Ordinance within the last five years.

Status/Corresponding 2015 Strategy: Completed.

Strategy Navassa P-6: In cooperation with Brunswick County, strengthen the land use classification system by more closely defining allowed uses and designating certain areas as off limits to development.

Progress: The County reviews and updates the Land Use Plan on a regular basis. These efforts will continue; therefore, this strategy has been eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Navassa P-7: In cooperation with Brunswick County, continue to strengthen policies directing urban level growth to appropriate locations where services can be provided.

Progress: This strategy has been completed through ongoing land use planning and zoning management over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10, BC15

Strategy Navassa P-8: In cooperation with Brunswick County, continue to review and update the Flood Damage Prevention Ordinance to ensure maximum protection from flood hazard events (CRS 430). Consider raising the minimum flood protection level from 1' above base flood elevation to 2' or more above BFE.

Progress: The County, as well as all participating jurisdictions, reviews and updates their respective Flood Damage Prevention Ordinances as deemed necessary, or when mandated by NCDPS and/or FEMA through the NFIP. Additionally, all existing locally adopted Base Flood Elevation standards will be maintained.

Status/Corresponding 2015 Strategy: BC9

Strategy Navassa P-9: Evaluate the zoning ordinance for its ability to target and direct growth to areas consistent with the land classification map, the water distribution system, and existing and future sewer systems.

Progress: This strategy has been completed through ongoing land use planning and zoning management over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Navassa P-10: Continue efforts to revise, update, and improve subdivision regulations particularly with regard to open space and tree preservation.

Progress: This strategy has not been carried out over the last five years. The Town will consider these amendments moving forward. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Navassa P-11: Continue to improve road access standards to protect the integrity of significant traffic-carrying roadways throughout the Town.

Progress: This strategy has been completed through ongoing land use planning and zoning management over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10, BC11

Strategy Navassa P-12: In cooperation with Brunswick County, continue to review rebuilding activities after major storm events to determine how revisions to existing policies and procedures could help minimize repetitive losses.

Progress: This strategy has been carried out in collaboration with Brunswick County Planning and Emergency Management. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC13

Strategy Navassa P-13: In cooperation with Brunswick County, cntinue to require and maintain FEMA elevation certificates for all permits for new buildings or improvements to buildings on lots including any portion of the 100-year floodplain (CRS 310).

Progress: The County, as well as all participating municipalities, continue to require the submittal of FEMA Elevation Certificates for development within the defined Flood Hazard Area. This strategy has been updated to reflect current regulatory and record keeping requirements.

Status/Corresponding 2015 Strategy: BC14

Strategy Navassa P-14: Continue to allot capital funding for the implementation of hazard mitigation activities.

Progress: This strategy is taken into consideration during budget deliberations on an annual basis in an attempt to further the town's mitigation program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC16

Strategy Navassa P-15: Consider a shoreline overlay district to include requirements for more intense review of proposed drainage, and limitation on the type of land uses allowed within the overlay district.

Progress: This strategy has not been carried out because of uncertainty concerning future development along the shoreline. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

City of Northwest

Strategy Northwest P-1: Using formed Disaster Committee to identify specific hazards, notify endangered parties in advance of storms.

Progress: This strategy has not been carried out locally by the Town. All emergency management efforts are carried out in conjunction with Brunswick County Emergency Management. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Northwest P-2: Enforce ordinances to block construction in flood zones.

Progress: The Town has regulated development in the floodplain over the last five years through enforcement of the Town's Flood Damage Prevention Ordinance. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9, BC10

Strategy Northwest P-3: Work with NCDOT and local crews to treat roads in advance of storms, and clear roads afterward as soon as possible.

Progress: The Town works closely with Brunswick County Emergency Management and NCDOT to carry out this strategy. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC11

Strategy Northwest P-4: Work with the local power service company to have crews on call in case of power outages, and keep access roads to power lines clear.

Progress: The Town works closely with Brunswick County Emergency Management and local utility providers to carry out this strategy. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Northwest PI-1: Provide residents with information about emergency services available.

Progress: The Town has maintained Emergency Management information on the Town's website. These efforts will continue in collaboration with Brunswick County Emergency Management. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, BC5

Strategy Northwest ES-1: Bolster inventory of equipment and services available to residents.

Progress: This strategy was deemed to be vague and will be eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Northwest ES-2: Improve equipment and training for fire fighters, and implement outside resources.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the

County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC35, BC52

Strategy Northwest S-1: Construct storm drainage piping and ditch improvements.

Progress: The Town was not able to carry out this strategy locally, but will continue to seek funding for this capital improvement through implementation of this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC16, BC57

Town of Oak Island

Strategy Oak Island 5-3.1.1: Building Inspectors will continue to enforce local codes on building and development - zoning, subdivision regulations, NC State Building Code, Flood Damage Prevention, Stormwater Regulations, and Dune Protection Regulations.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. Additionally, other ordinances listed have been actively enforced and reviewed/updated annually as necessary. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Oak Island 5-3.1.2: Continue enforcement of the following: (1) one-foot freeboard above the FEMA required height above base flood elevation as determined by the NFIP; (2) requiring a survey and elevation certificate for all construction within a VE zone; (3) Requiring that break away walls or flood gates be installed in all enclosed areas in any flood zone; and (4) Requiring that no electrical, mechanical, or plumbing fixtures other than those required by building code or the NEC be located below base flood and the freeboard.

Progress: The Town has not updated the local Flood Damage Prevention Ordinance over the last five years; however, an update will be carried out in conjunction with the adoption of updated flood maps. The Town has, however, pro-actively enforced the FDPO standards over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9, BC10

Strategy Oak Island 5-3.1.3: The Town will continue participation in CRS program. Continue program to advise/assist property owners in retrofitting homes, businesses and institutional facilities.

Progress: The Town has continued participation in the CRS program, including assisting property owners in retrofitting homes, businesses, and institutional facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC47, Table 6-5 (page 6-40)

Strategy Oak Island 5-3.1.4: The Town will continue the local CAMA development Permit Program using town employees. The Town will continue to monitor and update the CAMA Land Use Plan in accordance with the state guidelines. All policies and actions listed in the CAMA Land Use Plan.

Progress: The Town has not updated the local CAMA Land Use Plan; however, the standards outlined in the plan have been enforced. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC8

Strategy Oak Island 5-3.1.5: The Planning Board will continue review of current zoning, building and development codes to determine consistency with Land Use and Coastal Management Policies. This process focuses on the codes adopted by the Town Council --- zoning ordinance, subdivision regulations, flood damage prevention ordinance, and stormwater ordinance. The Planning Board will make recommendations to the Town Council on any required code adjustments needed to maintain consistency with the Land Use Plan policies, and to minimize impacts of natural hazards.

Progress: The Town has not amended the codes over the last five years; however, these regulations have been enforced. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10, BC25

Strategy Oak Island 5-3.1.6: The town will continue with the installation of the central wastewater treatment system. The wastewater program involves multiple phases. Each phase will be reviewed and approved by the Town Council before proceeding to the next step. Ongoing Stormwater runoff planning: actively implementing additional regulations for limiting impervious surfaces, re-routing stormwater from public streets, and maintaining natural watercourses for proper drainage. The town is aggressively seeking and studying ways to expand and more efficiently operate its biological wastewater treatment facility.

Progress: The Town has completed installation of the Town's central wastewater system. No amendments have been made to the Stormwater Management Ordinance. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC2

Strategy Oak Island 5-3.1.7: The Town staff will continue holding multi-government preparedness meeting yearly to update, change, and clarify evacuation information. By cooperating with the other local governments, Fire and Police Departments, Brunswick Electric Membership Corporation, Progress Energy Carolinas, Inc., Brunswick County Emergency Management, Brunswick County Sheriff's Department, U.S. Coast Guard, and the N.C. State Police we achieve the best possible evacuation and re-entry plans possible for Oak Island.

Progress: The Town has collaborated with the County and other relevant jurisdictions/agencies to implement the County Emergency Operations Plan over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: B5

Strategy Oak Island 5-3.1.8: The Town Council supports the TIP projects (Second Bridge and 211 Intersection realignment) that help with evacuation of the Island.

Progress: The Town has pro-actively supported the NCDOT in their efforts to implement the County TIP. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC11

Strategy Oak Island 5-3.1.9: The code officers will continue enforcement of an ordinance that prohibits structures on the public beach. It is the policy of the town to prohibit any structure from landing on public property. Public property, in this case is defined as any area seaward of the mean high tide line as surveyed and recorded by the USACE prior to the commencement of the Sea Turtle Habitat Restoration Project and the Section 933 Cape Fear River Dredging Project. Continue enforcement of the other ordinances limit the construction of decks, walkways, and steps of oceanfront structures. These steps were taken to minimize damage created from debris and projectiles during storm events and storm surge. These ordinances are reviewed as necessary, making changes that will better protect the interests of the town and its residents. The town will continue to participate in the Coastal Strom Damage Reduction Project and the Wilmington Sand Management Plan.

Progress: Due to the rapidly changing issues related to shoreline management, this strategy is being eliminated from this update and will be handled on an annual basis through local Capital Improvements funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Oak Island 5-3.1.10: Continue development of a strategic plan/capital improvements program.

Progress: The Town has maintained a CIP over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC16

Strategy Oak Island 5-3.1.11: Present these plans quickly to the public and make sure they are available to all municipal buildings, libraries, and any other public site possible. The Town of Oak Island broadcasts these plans on the town-operated television and radio channels as well as the local radio and news stations. Plan activities to educate the general public of planning for floods, storm events, and evacuations. Implement and assist staff in the organization of public information meetings, holding question and answer forums on preparedness, planning hazards, development, and mitigation.

Progress: This strategy has been carried out as a function of the Town's emergency management program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: R7, BC5, BC46

Strategy Oak Island 5-3.1.12: Ongoing review and updates to the Floodplain Management Plan and Action Plan. Assisting staffs with information gathering to better improve the Town's NFIP CRS rating.

Progress: This strategy is being accomplished through this plan update and therefore will be eliminated. The process for implementation and future updates is outlined in Section 7 of the plan.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Oak Island 5-3.2.1: After any event that causes damages to structures located in what are considered to be in repetitive loss areas, we encourage those people that must replace pilings to raise their non-conforming structures out of the floodplain. As an incentive to do this, the cost of the pilings is not calculated in their repair. The Division of Coastal Management also utilizes these guidelines. Continue enforcement of building codes.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies

(Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28, BC43

Strategy Oak Island 5-3.2.2: Continue to monitor and update the CAMA Land Use Plan in accordance with the state guidelines, preparing for the next update in 2004. (update underway 2008)

Progress: The Town has not updated the local CAMA Land Use Plan; however, the standards outlined in the plan have been enforced. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC8

Strategy Oak Island 5-3.2.3: Continue Planning Board review of current zoning, building and development codes to determine consistency with Land Use and Coastal Management Policies. This process focuses on the codes adopted by the Town Council - zoning ordinance, subdivision regulations, flood damage prevention ordinance (2006), and stormwater ordinance (2009). The Planning Board will make recommendations to the Town Council on any required code adjustments needed to maintain consistency with the Land Use Plan policies, and to minimize impacts of natural hazards.

Progress: The Town has not amended the codes over the last five years; however, these regulations have been enforced. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Oak Island 5-3.2.4: Form an aggressive stormwater committee. (completed) Fill the advertised position of Stormwater Management Coordinator. The stormwater officer will be responsible for planning for and mitigating stormwater runoff problems and implementing the National Pollutant Discharge Elimination System Phase II permit. (completed) The central business district will be receiving sewer within the end of the year. (completed) Initiate planning for a central wastewater treatment system, consisting of a background information, a wastewater master plan, and system design. (under construction) Develop a comprehensive stormwater program. (completed) Develop a water quality improvement plan for Davis Creek. Develop sub basin drainage improvement plan.

Progress: The Town has not established a stormwater management committee; however, local and state stormwater management regulations have been enforced. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Oak Island 5-3.2.5: Secure a second bridge to Oak Island. During the summer months weekend traffic slows to a crawl creating a hazard for vehicles and pedestrians. By securing a second bridge, evacuations, which at this time could take as much as twelve to twenty four hours, could be cut in half. Safety of the residents before an impending storm is the top priority of Oak Island. It is possible that the island could be completely cut off from the mainland for weeks at the time if the current bridge was damaged or became impassable. The Town will cooperate with Brunswick County to develop a regional approval to implementation of the Second Bridge Corridor Plan (done bridge under construction)

Progress: The Town pro-actively supported the NCDOT in their efforts to implement the County TIP. This strategy has been completed and will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Oak Island 5-3.2.6: Implement a beach preservation plan including: (1) the implementation of an ongoing beach preservation program; (2) implementation of the Sea Turtle Habitat Restoration Project; and (3) develop a maintenance program for the long-term success of these projects. Continue participation in the Coastal Storm Damage Reduction Project. Continue participation in the Wilmington Harbor Sand Management.

Progress: Due to the rapidly changing issues related to shoreline management, this strategy is being eliminated from this update and will be handled on an annual basis through local Capital Improvements funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Oak Island 5-3.2.7: Complete Development Services Assessment to the hazards of flooding particular to Oak Island.

Progress: This strategy has been carried out as a function of the Town's Emergency Management Program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Oak Island 5-3.2.8: Continue review and update procedures as provided in the Floodplain Management and CAMA Land Use Plan. Continue to review existing ordinances in regards to hazard mitigation.

Progress: The Town has worked diligently to carry out the terms and policies outlined in the Town's CAMA Land Use Plan and other land use regulatory ordinances.

Status/Corresponding 2015 Strategy: BC8

Strategy Oak Island 5-3.2.9: Continue to enforce local codes on building and development - zoning, subdivision regulations, NC State Building Code, Flood Damage Prevention, Stormwater Regulations, and Dune Protection Regulations.

Progress: The Town has diligently enforced the NC State Building Code and all other local regulations over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Town of Ocean Isle Beach

Strategy Ocean Isle Beach 1.1.1: Educate contractors about principles for quality redevelopment and safe housing development through written materials or a Town-sponsored workshop.

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

Strategy Ocean Isle Beach 1.1.2: Distribute Town-sponsored hazard mitigation materials for the community residents, including information on preparedness for all hazards significant to Ocean Isle Beach on Super Saturday Weekend. These materials can be part of the "Super Saturday Weekend" at Thanksgiving (the weekend most property owners are in Town for annual Homeowner Association meetings) each year.

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC45

Strategy Ocean Isle Beach 1.1.3: Provide all property owners a Flood Ordinance pamphlet containing information on the flood protection ordinance and flood insurance program.

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: R7, BC1

Strategy Ocean Isle Beach 1.1.4: Provide existing homeowners and new home and property buyers with information on quality redevelopment and safe housing development. The information is probably most efficiently dispersed at the Town hall and other community owned, public facilities in Town such as the Coastal Museum, the Community Center, the Fire Department, the Airport, and on the Town's website.

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC45

Strategy Ocean Isle Beach 1.2.1: Manually disperse and have a website posting which provides information about the Ocean Isle Beach Emergency Response Plan (updated by staff yearly) and relevant emergency response actions the public can take. Also ensure each Town department possesses a clear list of department responsibilities as outlined in the plan. Update department contacts as they change.

Progress: The Town has worked closely with Brunswick County Emergency Management, over the last five years, in an effort to provide citizens with accurate information regarding Natural Hazards through the Town's website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1

Strategy Ocean Isle Beach 1.2.2: Manually disperse and have a website posting which provides information about the Town's Community-Based Hazard Mitigation Plan and relevant mitigation measures the public can take. In addition, provide a response/reply section where residents can comment on the effectiveness of the current plan and where they can make suggestions for future revisions on the plan.

Progress: Information regarding the Town's existing plan has been provided to residents over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1

Strategy Ocean Isle Beach 1.3.1: Continue to update the Town of Ocean Isle Beach Emergency Response Plan on an annual basis.

Progress: This strategy has been carried out over the last five years in concert with updates to the County Emergency Operations Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Ocean Isle Beach 1.4.1: Maintain evacuation routes in the event of a hazardous event. The Town should develop a plan of action to facilitate the evacuation of Ocean Isle Beach in case of a hazardous event. The NCDOT in cooperation with the Town have posted the evacuation route with blue evacuation signs on the mainland and island roads. The evacuation route is also posted on the Town's website when there is a threat of evacuation.

Progress: Evacuation routes are reviewed and updated annually as necessary through mandated County Emergency Operations Plan updates in collaboration with NCDPS. The County will continue to address this issue through annual Emergency Operations Plan updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC21

Strategy Ocean Isle Beach 1.4.2: The Town should publicize, on the Town's website, a map of evacuation routes which will facilitate the evacuation of Ocean Isle Beach in case of a hazardous event.

Progress: The Town has maintained an evacuation route map via the County Emergency Services website over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This

change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC21

Strategy Ocean Isle Beach 1.5.1: Provide cell phones, pagers, and radios or other communication equipment to ensure all emergency personnel can communicate during and event. This link should be provided to all town departments as well as other local, state, and federal officials.

Progress: The Town has collaborated with the Brunswick County Emergency Management Department to increase communication capabilities over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC50

Strategy Ocean Isle Beach 2.1.1: Monitor the status of communications for all critical public facilities. Test and monitor communications equipment on a regular basis, not only for maintenance, but to confirm that the equipment continues to match the needs of critical facility expansion or updated operations.

Progress: The Town has collaborated with the Brunswick County Emergency Management Department to increase communication capabilities over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Ocean Isle Beach 2.1.2: Monitor the status of backup generators for all critical public facilities. SCADA monitors the infrastructure daily and automatically notifies the Town if there is a problem or malfunction. Test generators, on a regular basis, not only for maintenance, but to confirm that the equipment continues to match the needs of critical facility expansion or updated operations.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Ocean Isle Beach 2.1.3: Purchase a portable generator to ensure the Town Hall, one of the Town's critical facilities, is always operational during disaster recovery operations.

Progress: This strategy has been completed and therefore will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Ocean Isle Beach 2.1.4: Monitor the status of vehicles for all critical public facilities. Examine vehicles on a regular basis, not only for maintenance, but to confirm that the equipment continues to match the needs of critical facility expansion or updated operations.

Progress: This strategy has been carried out by the Town over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Ocean Isle Beach 3.1.1: Continue to enforce the North Carolina Building Code, CAMA regulations, and the Flood Damage Prevention Ordinance. Require that new structures or structures undergoing significant renovation meet code requirements for coastal areas in accordance with the International Building Codes, CAMA regulations, and local ordinances such as the Flood Ordinance.

Progress: The Town has diligently enforced the NC State Building Code and all local and State CAMA regulations over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC22, BC25, BC28

Strategy Ocean Isle Beach 3.2.1: Monitor trees and branches, in public areas, at risk of breaking or falling in wind, ice, and snow storms. Prune or thin trees or branches when they would pose an immediate threat to property, utility lines, or other significant structures or critical facilities in the Town.

Progress: The Town's Public Works department in conjunction with local utility providers has worked over the last five years to maintain clearance from power lines and critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Ocean Isle Beach 3.3.1: Develop a Debris Management Plan.

Progress: The Town has not developed this plan; however, over the last five years the Town has maintained a contract with a Qualified Post-Disaster Debris Contractor.

Status/Corresponding 2015 Strategy: BC38

Strategy Ocean Isle Beach 4.1.1: Update the current GIS/GPS setup and provide training on said setup to all pertinent town personnel.

Progress: This strategy has been completed and therefore, will be removed through the plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Ocean Isle Beach 4.2.1: Develop a database that identifies each property that has received damage due to hazards identified within this mitigation plan. The database should include a tax identification number of the property, a description of the property damage, the value of the damage, and links to photographs of the damage. Developing this database will allow the Town to easily identify properties at high risk of damage from certain hazards as well as properties which receive repetitive damage from multiple hazards. In an effort to gain historical information, the Town should send a survey to all residents requesting information that should be included in the database.

Progress: The Town addresses this issue on an ongoing basis. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC17

Strategy Ocean Isle Beach 5.1.1: Work with citizens to acquire grants to elevate properties that are at danger of flooding.

Progress: The Town did not treat any repetitive loss properties with elevation over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC26

Strategy Ocean Isle Beach 5.2.1: To apply for grants to move a sewer pump station out of a flood zone in a repetitive flood area to protect infrastructure.

Progress: This strategy has not been carried out; however, the Town will continue to work closely with NCDPS to address this need as necessary. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies

(Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC26

Strategy Ocean Isle Beach 6.1.1: Continue to prioritize beach nourishment and other BMPS as a means of mitigating coastal beach erosion. Beach nourishment has been successfully used, in the past, to increase the amount of sand, to adjust the shoreline profile, to replenish depleted sand supplies and, through literal transport processes to supply sediment to downdrift shorelines.

Progress: Due to the rapidly involving funding and logistical issues related to shoreline management, this strategy is being eliminated from this update and will be handled on an annual basis through local Capital Improvements funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Ocean Isle Beach 6.1.2: Develop a study to identify alternate beach management systems in an effort to limit erosion.

Progress: Due to the rapidly involving funding and logistical issues related to shoreline management, this strategy is being eliminated from this update and will be handled on an annual basis through local Capital Improvements funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Ocean Isle Beach 7.1.1: Develop a tornado warning system. Several options exist for a tornado warning system. The most feasible for Ocean Isle Beach would be to develop a siren to warn of oncoming tornados. This siren would have to differentiate from the fire alarm and be well publicized for citizens to recognize.

Progress: This strategy has not been independently developed by the Town; however, the Town has worked with collaboration with Brunswick County Emergency Management regarding this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC46

Strategy Ocean Isle Beach 8.1.1: In order to minimize injury from lightning strikes, shelters should be placed within each mile in the public open space beach areas that do not have other adequate sources of shelter available. As land is subdivided or recombined for a larger development, this recommendation should be incorporated into the zoning and subdivision ordinances.

Progress: This strategy has been eliminated due to lack of political will.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Ocean Isle Beach 8.1.2: Driving in storm conditions can create hazardous road conditions, including decreased ability for drivers to see road boundaries. To improve road visibility, encourage NCDOT to place new reflector tape or paint poles along road edges and reflectors in the centerline on all major roads in the Town.

Progress: The Town continues to collaborate with the County and NCDOT to address this issue. Some progress has been made; however, it continues to be an issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC11

Strategy Ocean Isle Beach 9.1.1: Continue to encourage proper waste disposal and recycling. In order to protect the vulnerable aquifer from contamination, the Town should do all it can to prevent seepage of wastes and toxic elements into the ground. Proposal disposal of waste and recycling when possible will aid in this effort. This measure may be implemented through a Town policy or through public education measures.

Progress: This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Ocean Isle Beach 10.1.1: Maintain fire event preparedness. The fire department has the responsibility to assure the Town's protection during fire events. Part of this responsibility is dependent upon the department's ability to maintain the materials and a knowledge base for addressing such an event. This responsibility must be supported by provision of adequate funding for the continuing education and materials necessary to maintain this preparedness.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy Ocean Isle Beach 10.2.1: Explore and seek access to all potential sources of information and communication regarding early fire detection.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC35, BC50, BC52

Strategy Ocean Isle Beach 10.2.2: Evaluate and improve fire sighting procedures.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC35, BC52

Strategy Ocean Isle Beach 10.2.3: Ensure the fire hydrants are working properly.

Progress: The Town Public Works department works closely with the Town fire department to inspect all hydrants annually to ensure they are working properly. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy Ocean Isle Beach 11.1.1: Maintain hazardous materials event preparedness. The Town should develop a plan of action to maintain the materials and knowledge base for addressing such a spill, or develop preliminary measures to assist the county till the representatives arrive. This responsibility must be supported by provision of adequate funding for materials and trainings necessary to maintain this preparedness.

Progress: The Town has not completed this effort; however, Town emergency management has worked closely with the County LEPC to address this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Ocean Isle Beach 12.1.1: Maintain nuclear event preparedness. The Town should develop a plan of action to maintain the materials and knowledge base for addressing a nuclear event, or develop preliminary measures to assist the county until the representatives arrive. This responsibility must be supported by provision of adequate funding for materials and trainings necessary to maintain this preparedness. This may be made part of the Towns Emergency Response Plan.

Progress: The Town's police and fire departments have worked over the last five years with the County Local Emergency Planning Committee to address the issue of nuclear event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC49

Town of Sandy Creek

Strategy Sandy Creek P-1: In cooperation with Brunswick County, update the CAMA Land Use Plan.

Progress: The Town continues to collaborate with Brunswick County Planning on update of the CAMA Land Use Plan which was last amended in 2011. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC8

Strategy Sandy Creek P-2: Work with Brunswick County to set up a program to advise/assist property owners in retrofitting homes, businesses, and institutional facilities. (CRS 320)

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC45

Strategy Sandy Creek P-3: In cooperation with Brunswick County, ensure, when possible, that no public facilities are proposed for flood hazard areas. Protect new critical facilities (e.g., schools, hospitals, fire stations, emergency shelters) to 2' above the 500-year flood elevation (5' above BFE). (CRS 430)

Progress: No modifications have been made to Town critical facilities over the last five years; however, the Town continues to utilize the data in this plan when considering development of new critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC3

Strategy Sandy Creek P-4: In cooperation with Brunswick County, continue program for evaluation and improvement of critical facilities (public and private) – roads, bridges, water, sewer, electricity, etc. – and critical services – fire, rescue, medical, etc.

Progress: No modifications have been made to Town critical facilities over the last five years; however, the Town continues to utilize the data in this plan when considering development of new critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through

updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC3

Strategy Sandy Creek P-5: Adopt a Flood Damage Prevention Ordinance to ensure maximum protection from flood hazard events. (CRS 430)

Progress: The Town adopted a FDPO in 2005 and will continue to review and update it as deemed necessary, or when mandated by NCDPS and/or FEMA. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9

Strategy Sandy Creek P-6: As a follow-up to the update of the CAMA Land Use Plan, evaluate the zoning ordinance for its ability to target and direct growth to areas consistent with Land Use Plan policies.

Progress: This strategy has not been carried out to date, but will be considered through implementation of this update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC8, BC10

Town of Shallotte

Strategy Shallotte PI-1: Educate contractors about principles for quality redevelopment and safe housing development through written materials or a City-sponsored workshop.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

Strategy Shallotte PI-2: Hold a Town-sponsored hazard mitigation seminar for the community residents, including information on preparedness, mitigation, and response for all hazards significant to Shallotte.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: Table 6-5 (page 6-40)

Strategy Shallotte PI-3: Provide new home and property buyers with information on quality redevelopment and safe housing development.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC45

Strategy Shallotte PI-4: Manually disperse and have a website posting which provides information about the Town's Emergency Response Plan and relevant emergency response actions the public can take. Also ensure each Town department possesses a clear list of department responsibilities as outlined in the plan. Update department contacts as they change.

Progress: The Town maintains information regarding emergency management procedures and personnel responsibilities on the Town's website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: R7, BC1, BC45

Strategy Shallotte PI-5: Manually disperse and have a website posting which provides information about the Town's Community-Based Hazard Mitigation Plan and relevant mitigation measures the public can take. Provide a response/reply section where residents can comment on the effectiveness of the current plan and where they can make suggestions for future revisions on the plan.

Progress: The Town maintains information regarding emergency management procedures and personnel responsibilities on the Town's website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: R7, BC1, BC45

Strategy Shallotte PI-6: The Town should distribute via gas/electric bills maps of evacuation routes which will facilitate the evacuation of Shallotte in case of a hazardous event.

Progress: This strategy has not been carried out at the local level. The Town relies on Brunswick County Emergency Management to carry out this strategy. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, Table 6-5 (page 6-40)

Strategy Shallotte PI-7: Develop a Town-sponsored website where information relating to hazard mitigation, emergency response, and emergency preparedness can be posted.

Progress: The Town has and will continue to maintain Mitigation and Emergency Response information on the Town's website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: R7, BC1, BC5

Strategy Shallotte PI-8: Work with Brunswick County officials and surrounding communities to distribute materials about the County Water Shortage Response Plan.

Progress: The Town has pro-actively enforced and educated the public about the Water Shortage Response Plan over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: B53

Strategy Shallotte P-1: Continue to update the Town of Shallotte Emergency Response Plan on an annual basis. The Emergency Response Plan should contain detailed information on responsible parties and contact info; this info should be updated as positions and contact information change.

Progress: The Town reviews and updates the local emergency response procedures in conjunction with Brunswick County emergency management annually. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Shallotte P-2: Maintain evacuation routes in the event of a hazardous event.

Progress: The Town has and will continue to work closely with Brunswick County Emergency Management and NCDOT to maintain local evacuation routes. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: B5, B21, B37

Strategy Shallotte P-3: The Town should publicize, on the Town's website, maps of evacuation routes which will facilitate the evacuation of Shallotte in case of a hazardous event.

Progress: The Town has and will continue to work closely with Brunswick County Emergency Management and NCDOT to maintain and publish local evacuation routes. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC21

Strategy Shallotte P-4: Monitor the status of backup generators, communications, and vehicles for all critical public facilities. Test generators, communications equipment, and vehicles on a regular basis, not only for maintenance, but to confirm that the equipment continues to match the needs of critical facility expansion or updated operations.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Shallotte P-5: Purchase, as necessary, backup generators as determined by results of Action P-4.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Shallotte P-6: Install, as necessary, generator quick connects, as determined by results of Action P-4.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators quick connects were installed during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: B51

trategy Shallotte P-7: Continue to contract with Brunswick County to enforce the North Carolina State Building Code. Require that new structures or structures undergoing significant renovation meet code requirements for coastal areas in accordance with the International Building Code.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Shallotte P-8: Monitor trees and branches, in public areas, at risk of breaking or falling in wind, ice, and snow storms. Prune or thin trees or branches when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the Town.

Progress: The Town's Public Works department in conjunction with local utility providers has worked over the last five years to maintain clearance from power lines and critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Shallotte P-9: The Town will take a proactive approach in investigating dangerous damaged structures and should take prompt action in condemning damaged structures that have been abandoned.

Progress: The Town addresses this issue on an ongoing basis due to rapidly changing shoreline migration and erosion issues and concerns. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC30

Strategy Shallotte P-10: Revise the Subdivision Ordinance to require underground utilities in all new residential developments, as well as all residential developments that have suffered major damage or disruption of service due to disasters, to decrease the potential for service interruption due to high wind events, ice storms, snow storms, and the like.

Progress: This strategy was not accomplished due to lack of political will and funding; therefore, it will be eliminated.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Shallotte P-11: Encouraged Brunswick County Electric Corporation to bury current utility lines to decrease the potential for service interruptions due to high wind events, ice storms, snow storms, and the like.

Progress: This strategy was not accomplished due to lack of political will and funding; therefore, it will be eliminated.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Shallotte P-12: Purchase a complete GIS/GPS setup and provide training on said setup to all pertinent Town personnel.

Progress: This strategy has been completed and will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Completed/Eliminated

Strategy Shallotte P-13: Record and maintain all tax parcel information and floodplain locations in a GIS system in order to build the Town's capability to generate maps when needed.

Progress: Over the last five years, Brunswick County, in collaboration with all participating municipalities, worked to expand upon and improve the quality of county-wide GIS data. The County will continue to work closely with municipalities to establish and maintain a robust and comprehensive GIS system. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of

collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC43

Strategy Shallotte P-14: Develop a database that identifies properties with damage due to hazards identified within this plan.

Progress: The Town has not been diligent in carrying out this strategy. These efforts will continue in conjunction with the County GIS. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC17

Strategy Shallotte P-15: Revise the Zoning Ordinance to require the utilization of various pervious surfaces within the floodplain to reduce stormwater runoff.

Progress: This strategy was not accomplished and is being eliminated due to changing views regarding the use of permeable pavement. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Shallotte P-16: Establish a Stormwater Management Ordinance that will require runoff and drainage from development and agriculture activities to be of a quality as near to natural conditions as possible.

Progress: This strategy has been completed and will be enforced through future updates of this plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Shallotte P-17: Continue to implement a 1-foot freeboard but explore the option of instituing a 2-foot freeboard requirement.

Progress: The Town has not established a 2-foot freeboard. The 1-foot freeboard requirement will continue to be enforced and the Town will consider increasing it to 2-feet through this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts

focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9

Strategy Shallotte P-18: Develop a Shoreline Management Plan to address the long-term issue of shoreline erosion.

Progress: Due to the rapidly involving funding and logistical issues related to shoreline management, this strategy is being eliminated from this update and will be handled on an annual basis through local Capital Improvements funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Shallotte P-19: Establish a Shoreline Protection Committee that will work with the Town Council to solicit funds for shoreline preservation, educate the public on shoreline preservation matters, oversee preservation project development, monitor shoreline change, and report any major issues to the Board of Aldermen.

Progress: This strategy has been eliminated in an effort to establish current policy for the Town regarding shoreline stabilization and management.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Shallotte P-20: Encourage NCDOT to install new reflector tape or paint along road edges and in the dividing line on all major roads.

Progress: This strategy has not been accomplished locally. The Town will continue to work with the Cape Fear MPO and NCDOT to carry out this strategy through implementation of this plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC11

Strategy Shallotte P-21: Place shelters every five acres in all public open space areas in order to minimize the injury from lightning strikes.

Progress: This strategy is being eliminated due to the fact that the Town is not implementing this strategy and funding is not available to carry it out.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Shallotte P-22: Require lightning detection devices be installed in public outdoor gathering areas such as school stadiums.

Progress: This strategy is being eliminated due to the fact that the Town is not implementing this strategy and funding is not available to carry it out.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Shallotte P-23: Continue to encourage proper waste disposal and recycling.

Progress: This strategy was deemed a day-to-day function of the Town, and will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Shallotte P-24: Amend the Zoning Ordinance to prohibit underground chemical and gasoline storage, as set forth by the EPA and the NC Building Code, in an effort to minimize risks to natural resources.

Progress: This strategy has not been carried out but the Town works closely with the County LEPC and NCDEQ to enforce these standards. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Shallotte P-25: Amend the Zoning Ordinance to prohibit the storage of toxic wastes within the planning jurisdiction.

Progress: This strategy has not been carried out but the Town works closely with the County LEPC and NCDEQ to enforce these standards. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Shallotte P-26: Continue to implement a recycling program that reduces solid waste disposal that could potentially lead to natural resource contamination.

Progress: This strategy was deemed a day-to-day function of the Town, and will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Shallotte P-27: Encourage intergovernmental cooperation to ensure continued pure supply of potable water.

Progress: The Town continues to work with the County water and sewer districts to ensure a continued supply of potable water. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC2

Strategy Shallotte P-28: Maintain fire event preparedness.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continue involve continued education, training exercises, and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy Shallotte P-29: Explore and seek access to all potential sources of information and communication regarding early fire detection.

Progress: Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continue involve continued education, training exercises, and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC35, BC52

Strategy Shallotte P-30: Evaluate and improve fire fighting procedures.

Progress: Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continue involve continued education, training exercises, and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC52

Strategy Shallotte P-31: Ensure the fire hydrants are working properly.

Progress: The Town public works department works closely with the Town fire department to inspect all hydrants annually to ensure they are working properly. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC52

Strategy Shallotte P-32: Maintain hazardous materials event preparedness.

Progress: The Town has not completed this effort; however, Town emergency management has worked closely with the County LEPC to address this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Shallotte P-33: Continue to implement the recommendations in the Shallotte Thoroughfare Plan adopted in February 2002.

Progress: The Town has and will continue to work with NCDOT to implement the recommendations contained in the Thoroughfare Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC11

Strategy Shallotte P-34: Maintain nuclear event preparedness.

Progress: Progress: The Town's police and fire departments have worked over the last five years with the County Local Emergency Planning Committee to address the issue of nuclear event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC49

Strategy Shallotte NRP-1: Protect and enhance shoreline vegetation.

Progress: The Town has not addressed this issue locally, but will work with NCDEQ regarding shoreline protection. The actions defined under this locally specific strategy statement will continue, but are now

addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC22

Strategy Shallotte NRP-2: Continue to seek funding for implementation of the recommendations in the Waterfront Access and Development Plan.

Progress: This strategy has been deemed irrelevant to the Town's mitigation program and has been eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Shallotte NRP-3: Develop local Water Shortage Response Guidelines (in phases) as a part of the Shallotte Emergency Response Plan as it relates to the expectations of the Town's water supplier.

Progress: This effort was not completed over the last five years and has been deemed redundant to water conservation measures adopted through ordinance; therefore, it will be eliminated.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Shallotte NRP-4: Connect rainwater retention drums to downspouts of each gutter system on every municipal building within Shallotte.

Progress: This strategy was determined not to be a mitigation measure and therefore, is being eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Shallotte ES-1: Develop a tornado and waterspout warning system using the current fire alarm.

Progress: This strategy has not been completed locally, but the Town will work closely with County Emergency Management regarding this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC46

City of Southport

Strategy Southport PI-1: Educate contractors about principles for quality redevelopment and safe housing development through written materials or a City-sponsored workshop.

Progress: The City's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

Strategy Southport PI-2: Hold a City-sponsored hazard mitigation seminar for the community residents, including information on preparedness, mitigation, and response for all hazards significant to Southport.

Progress: The City's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: R7, BC1, BC5

Strategy Southport PI-3: Provide new home and property buyers with information on quality redevelopment and safe housing development.

Progress: The City's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: R7, BC1, BC45

Strategy Southport PI-4: Manually disperse and have a website posting which provides information about the City's Emergency Response Plan and relevant emergency response actions the public can take.

Progress: The City of Southport has maintained information regarding the City's existing Hazard Mitigation Plan and Emergency Response procedures on the City's website over the last five years. Upon adoption, this Regional plan will replace the existing document, and will be disseminated to the public. The City will rely on Brunswick County Emergency Management to provide detailed information regarding County Emergency Management protocol. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: R7, BC1, BC45

Strategy Southport PI-5: Manually disperse and have a website posting which provides information about the City's Hazard Mitigation Plan and relevant mitigation measures that public can take. Provide a response/reply section where residents can comment on the effectiveness of the current plan and where they can make suggestions for future revisions on the plan.

Progress: The City of Southport has maintained information regarding the City's existing Hazard Mitigation Plan on the City's website over the last five years. Upon adoption, this Regional Plan will replace the existing document, and will be disseminated to the public. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: R7, BC1, BC45

Strategy Southport PI-6: The City should distribute via gas/electric bills maps of evacuation routes which will facilitate the evacuation of Southport in case of a hazardous event.

Progress: The City has not carried out this strategy over the last five years. The City has and will continue to rely on Brunswick County Emergency Management for the dissemination of this information. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, BC5, BC45

Strategy Southport PI-7: Work with Brunswick County officials and surrounding communities to distribute materials about the County Water Shortage Response Plan.

Progress: The City has not direct mailed notices to property owners regarding the Water Shortage Response Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a

result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC53

Strategy Southport P-1: Update the City's Emergency Response Plan.

Progress: The City reviews and updates the local Emergency Response procedures in conjunction with Brunswick County Emergency Management annually. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Southport P-2: Maintain evacuation routes in the event of a hazardous event.

Progress: The City maintains links on the municipal website to information regarding evacuation routes necessary in the event of a natural hazard event. This information is updated and maintained by Brunswick County Emergency Management and NCDPS. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC21

Strategy Southport P-3: The City should publicize, on the City's website, maps of evacuation routes which will facilitate the evacuation of Southport in case of a hazardous event.

Progress: The City has maintained links on the municipal website to information regarding evacuation routes necessary in the event of a natural hazard event. This information is updated and maintained by Brunswick County Emergency Management and NCDPS. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC21

Strategy Southport P-4: Monitor the status of backup generators, communications, and vehicles for all critical public facilities.

Progress: The Town carries out routine maintenance on annual basis through the Town's public works department. No new generators were acquired. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Southport P-5: Purchase, as necessary, backup generators as determined by the results of Action P-4.

Progress: The Town carries out routine maintenance on annual basis through the Town's public works department. No new generators were acquired. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Southport P-6: Install, as necessary, generator quick connects, as determined by the results of Action P-3.

Progress: The Town carries out routine maintenance on annual basis through the Town's public works department. No new generator quick connects were acquired. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Southport P-7: Continue to enforce the North Carolina State Building Code. Require that new structures or structures undergoing significant renovation meet code requirements for coastal areas in accordance with the North Carolina State Building Codes.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Southport P-8: Monitor trees and branches, in public areas, at risk of breaking or falling in wind, ice, and snow storms.

Progress: The City's public works department in conjunction with local utility providers has worked over the least five years to maintain clearance from power lines and critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Southport P-9: The City will take a proactive approach in investigating dangerous damaged structures and should take prompt action in condemning damaged structures that have been abandoned.

Progress: The City addresses this issue on an ongoing basis due to shoreline migration and erosion. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC30

Strategy Southport P-10: Record and maintain all tax parcel information and floodplain locations in a GIS system in order to build the City's capability to generate maps when needed.

Progress: The City has not established a comprehensive GIS system and will work closely with the County to maintain and expand upon it. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC43

Strategy Southport P-11: Develop a database that identifies properties with damage due to hazards identified within this mitigation plan.

Progress: The Town addresses this issue on an ongoing basis due to shoreline migration and erosion. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC17

Strategy Southport P-12: Improve the City's tax database to include information that will distinguish property as residential, commercial, industrial, or governmental. This database should also be expanded to identify developed or undeveloped properties.

Progress: The City has completed this effort over the last five years through ongoing land use planning efforts. This database will be updated as land use patterns change over the next five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC17

Strategy Southport P-13: Revise the Zoning Ordinance to require the utilization of various pervious surfaces within the floodplain to reduce stormwater runoff.

Progress: This strategy is being eliminated due to the changing views regarding the use of permeable pavement as an effective method for curbing non-point source stormwater runoff. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Southport P-14: Revise Zoning and Subdivision Ordinances to incorporate shoreline vegetation protection buffers along AECs in order to protect the character and to help mitigate flooding.

Progress: Over the last five years, the City of Southport has relied on NCDEQ and existing coastal CAMA regulations to address shoreline protection measures. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Southport P-15: Revise the Zoning Ordinance and Subdivision Ordinance to increase lot sizes in areas with poor soils.

Progress: This strategy has not been carried out and is being eliminated due to a lack of political will.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Southport P-16: Take a more proactive approach to participation in the Community Rating System.

Progress: The City has participated in the CRS program over the last five years; however, the City will take a stronger approach to program participation through implementation of this plan update.

Status/Corresponding 2015 Strategy: BC1, BC7

Strategy Southport P-17: Develop a plan, which will include annual monitoring of erosion, to address the long-term issue of erosion using several methods of erosion prevention and control.

Progress: Due to the rapidly involving funding and logistical issues related to shoreline management, this strategy is being eliminated from this update and will be handled on an annual basis through local Capital Improvements funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Southport P-18: Encourage NCDOT to install new reflector tape or paint along road edges and in the dividing line on all major roads.

Progress: This strategy has not been accomplished locally; however, the City in collaboration with other County participants will work with NCDOT on this issue through implementation of this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC11

Strategy Southport P-19:: Continue to encourage proper waste disposal and recycling.

Progress: This strategy is considered a day-to-day function of the City and not relevant to the City's mitigation program, therefore, it will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Southport P-20: Amend the zoning ordinance to prohibit underground chemical and gasoline storage that are a risk to groundwater resources.

Progress: The City has not accomplished this strategy, but rather relies on Statewide regulations regarding the installation of underground storage tanks to regulate this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Southport P-21: Amend the zoning ordinance to prohibit the storage of toxic wastes within the planning jurisdiction.

Progress: The City has not accomplished this strategy, but rather relies on Statewide regulations regarding the storage of toxic waste to regulate this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Southport P-22: Encourage intergovernmental cooperation to ensure continued pure supply of potable water.

Progress: The City has worked closely with local water service providers over the least five years to ensure access to a clean and consistent potable water supply. The actions defined under this locally specific strategy

statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC2

Strategy Southport P-23: Amend the Stormwater Management Ordinance to include a list of potentially hazardous materials that should not be deposited into local drainage systems or surface waters.

Progress: The City incorporated restrictions regarding the disposal of hazardous materials into stormwater drainage basins in 2013. Enforcement of these standards continues. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Southport P-24: Maintain fire event preparedness.

Progress: The City's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises, and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy Southport P-25: Explore and seek access to all potential sources of information and communication regarding early fire prevention.

Progress: The City's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises, and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC35, BC52

Strategy Southport P-26: Evaluate and improve fire fighting procedures.

Progress: The City's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises, and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC35, BC52

Strategy Southport P-27: Ensure the fire hydrants are working properly.

Progress: The City's public works department works closely with the City's fire department to inspect all hydrants annually to ensure they are working properly. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy Southport P-28: Update the Disaster Response Plan.

Progress: The City reviews and updates the local emergency response procedures in conjunction with Brunswick County Emergency Management annually. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Southport P-29: Place a fireproof buffer along the railroad tracks in the City limits or ETJ.

Progress: This strategy has not been implemented due to a lack of political will.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Southport P-30: Limit development adjacent to the railroad tracks.

Progress: This strategy has not been implemented due to a lack of political will and the impact it would have on development potential along these corridors; however, the City will continue to consider this strategy through implementation of this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC58

Strategy Southport P-31: Maintain hazardous materials event preparedness.

Progress: The City has not completed this effort; however, City emergency management has worked closely with the County LEPC to address this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Southport P-32: Maintain nuclear event preparedness.

Progress: The City has worked diligently with Brunswick County Emergency Management to maintain nuclear event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC49

Strategy Southport P-33: Place the City's power lines underground.

Progress: This strategy has been eliminated due to a lack of funding and political will.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Southport NRP-1: Develop local Water Shortage Response Guidelines (in different phases) as a part of the Southport Emergency Response Plan as it relates to the expectations of the City's water supplier.

Progress: The City has worked over the last five years to develop and enforce local water shortage response guidelines. The City will continue to work closely with County and Regional water supply entities to address this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC53

Strategy Southport NRP-2: The City should continue their proactive approach to mitigation by connecting Rainwater Retention Drums to the downspouts of each gutter system on every municipal building within Boiling Spring Lakes. The collected water should be used to irrigate all municipal gardens, parks, lawns, and the like.

Progress: This strategy has been eliminated due to a lack of political will and funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Southport ES-1: Develop a tornado and waterspout warning system using the current fire alarm.

Progress: This strategy has not been accomplished; however, the City will continue to work closely with Brunswick County Emergency Management through the County EOP to improve upon waterspout and tornado warning mechanisms. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table

6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC46

Strategy Southport PP-1: Protection of Southport's sewer treatment plant.

Progress: This strategy is being eliminated from the plan due to vague and ambiguous language. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: Eliminated

Town of St. James

Strategy St. James P-1: Continue program for evaluation and improvement of critical facilities (public and private) – roads, bridges, water, sewer, electricity, etc. – and critical services – fire, rescue, medical, etc.

Progress: The Town has worked closely over the last five years to improve upon the stability and effectiveness of critical facilities within and adjacent to the Town of St. James. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC16

Strategy St. James P-2: Consider participation in the Community Rating System using Hazard Mitigation Plan components to fulfill application requirements.

Progress: The Town has not joined the CRS program to date. Participation in the program will be considered through implementation of this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC7

Strategy St. James P-3: In cooperation with Brunswick County, review and update as necessary the Flood Damage Prevention Ordinance to ensure maximum protection from flood hazard events (CRS 430). Consider raising the minimum flood protection level from 1' above base flood elevation to 2' or more above BFE.

Progress: The Town continues to review/update and enforce the local Flood Damage Prevention Ordinance as required by NCDPS and FEMA. No updates have been conducted over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9

Strategy St. James P-4: Employ specific provisions of the zoning ordinance to seek ways to expand the ETJ as well as the existing corporate limits to control land use.

Progress: This strategy is being eliminated from the plan due to the political restrictions surrounding this issue.

Status/Corresponding 2015 Strategy: BC10

Strategy St. James P-5: In cooperation with Brunswick County, review rebuilding activities after major storm events to determine how revisions to existing policies and procedures could help minimize repetitive losses.

Progress: The Town has worked closely with Brunswick County to establish a response and rebuilding plan that will expedite this process following natural hazard events. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC13

Strategy St. James P-6: Consider an inventory of existing lots and structures within flood hazard areas to establish base flood elevation and finished 1st floor elevation.

Progress: This strategy has been accomplished through the NC Flood Maps update process. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC17

Strategy St. James PP-4: The Town will continue to actively participate in the Fire Wise program to reduce and remove debris that has the potential for fire hazards.

Progress: The Town has effectively carried out activities associated with the Firewise program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of

collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC59

Strategy St. James PP-5: The Town will continue to pursue efforts to reduce storm water runoff by draining, in advance of major storm events, the numerous retention ponds located on golf courses to reduce the amount of localized flooding.

Progress: The Town has pro-actively carried out this process over the last five years in advance of storm events. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC60

Strategy St. James ES-1: In cooperation with Brunswick County, ensure adequate evacuation time in case of major hazard events. The Mayor of St. James can invoke mandatory evacuation when needed.

Progress: The Town has worked closely with Brunswick County Emergency Management to ensure that effective and accessible evacuation routes are maintained and properly advertised. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC21

Strategy St. James ES-2: Evaluate areas with limited evacuation capacity and pursue methods for improving capacity. The Town of St. James has the ability, in case of an emergency evacuation, to open a secondary exit route via the application of gravel to an existing drainage ditch.

Progress: The Town has worked closely with Brunswick County Emergency Management to ensure that effective and accessible evacuation routes are maintained and properly advertised. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5, BC21

Strategy St. James ES-3: Evaluate flood or access problems for critical facilities and develop recommendations for protecting these facilities. Identify alternate command post sites.

Progress: Although the Town has not been able to make any substantive changes regarding critical facility vulnerability, efforts have focused on identifying needs that may be addressed through future plan updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through

updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC3, BC5

Strategy St. James S-1: Continue debris removal program to reduce potential hazards during a hazard event.

Progress: The Town has maintained a contract with a qualified post-disaster debris removal contractor over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC38

Strategy St. James S-2: In cooperation with Brunswick County, continue to support the dredging of waterways to improve function and water quality.

Progress: The Town has supported efforts by Brunswick County and adjacent municipalities to ensure maintenance of waterways in an effort to maintain access to local inlets and waterways. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC40

Strategy St. James PI-1: Develop and implement a hazard awareness program (elevation certificates, FIRM data, bulletin on property protection measures and flood insurance, etc.) that is available through the County's website www.brunsco.net and also available through the St. James website www.townofstjamesnc.org (CRS 310/320/330/340/440).

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC5

Strategy St. James PI-2: Continue to educate town residents of potential effects of hurricanes and other natural disasters through the annual "Hurricane Awareness Symposium."

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, BC5

Town of Sunset Beach

Strategy Sunset Beach 1: All future community/critical facilities developed by the Town of Sunset Beach will be located outside of the defined flood hazard area. This includes all facilities required to provide daily services to Town citizens and visitors.

Progress: Although, the Town has not developed any new critical facilities over the last five years, this strategy will continue to be maintained through this update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC16

Strategy Sunset Beach 2: Sunset Beach will work to make all community/ critical facilities disaster resistant. This effort will include the installation of storm shutters and floodproofing, where deemed necessary.

Progress: The Town received funding through an HMGP grant to install storm shutters on the Town's current municipal building. No other projects were completed, but the Town will continue to seek opportunities to improve the community's overall resiliency. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC16

Strategy Sunset Beach 3: The Sunset Beach Public Works Department will monitor the Town's municipal storm drainage facilities to ensure that the system is functioning properly. This effort may require maintenance to ensure that the system is not contributing to flooding issues during substantial rain events.

Progress: The Town has maintained a pro active approach to stormwater management over the last five years. These efforts have included enforcement of local regulations and NCDENR Coastal Stormwater rules. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Sunset Beach 4: The Sunset Beach Fire Department will inspect all fire hydrants within the Town's corporate limits on a revolving schedule. Through this effort, the Town will aim to inspect each hydrant a minimum of two times per calender year.

Progress: Over the last five years, the Sunset Beach Fire Department has inspected all municipal fire hydrants on an annual basis. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC52

Strategy Sunset Beach 5: Sunset Beach will hold an internal coordination meeting annually during the month of May to address issues related to hurricane season. This meeting will focus on Town policies and procedures relating to preparation and response to tropical storm/hurricane/hurricane events. If deemed necessary, the public will be informed of changes to existing procedures resulting from this annual effort.

Progress: The Town has consistently maintained holding a coordination meeting in approximately May to ensure that appropriate policies and procedures are in place to address issues and potential problems associated with hurricane season. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 6: The Town of Sunset Beach police, fire, and public works departments will attend the annual Brunswick County Hurricane Symposium. The symposium addresses interagency coordination between the Brunswick County Emergency Management Department, all County municipalities, and regional utility companies (telephone, electric, and water/sewer facility operators)

Progress: The Town has actively participated in the Brunswick County Hurricane Symposium annually over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 7: Sunset Beach will maintain a pre-disaster debris management contract with a qualified provider. The Town will review and assess this contract every three years.

Progress: Over the last five years Sunset Beach has maintained a Qualified Post Disaster Debris Management Contractor. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC38

Strategy Sunset Beach 8: The Town will continue to operate and maintain backup generators at all community/critical facilities including the Sunset Beach Fire Department, the Sunset Beach Municipal Building, and the Town's public works facility.

Progress: The Town carries out routine maintenance on an annual basis through the Town's public works department. No new generators were acquired. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC51

Strategy Sunset Beach 9: The Sunset Beach Police and Fire Department will pre-plan for necessary staffing levels in preparation for post-disaster response situations. This effort will ensure that appropriate staff support is available in the event of a tropical storm/hurricane.

Progress: The Town of Sunset Beach has worked closely with Brunswick Emergency Services to ensure proper staffing levels and procedures to effectively deal post disaster response situations. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 10: The Town of Sunset Beach will consider sending the Town's floodplain management staff members to attend the FEMA Certified Floodplain Managers course.

Progress: The Town has not accomplished this strategy, but will aim to provide this educational opportunity to floodplain management staff through this update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9

Strategy Sunset Beach 11: The Sunset Beach Police Department will continue to provide annual in-service training to officers including courses focused on: firearms, hazardous materials, blood-borne pathogens, ethics, dealing with juveniles, and domestic violence. Although all of these disciplines do not address natural hazards, continuing education assists the police department in dealing with a wide range of issues and situations.

Progress: This strategy has been deemed irrelevant to the Town's natural hazard mitigation program and therefore will be eliminated through this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC35

Strategy Sunset Beach 12: The Town of Sunset Beach Fire Department will continue to provide annual training to all firefighters on staff. This training will focus on improving upon response times and dealing with issues resulting from man-made and natural disaster situations.

Progress: The Town of Sunset Beach has provided training to all fire department staff regarding a range of functions focused on response and the minimization of damage relating to future events. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC35

Strategy Sunset Beach 13: The Town of Sunset Beach will provide funding for all staff members/departments to secure certifications and continuing education including building inspections, floodplain management, fire service training, police department training, and emergency management training.

Progress: Over the last five years, the Tow has provided funding for continuing education efforts addressing a range of issues. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2).

This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC35

Strategy Sunset Beach 14: The Town of Sunset Beach will review the Town's Flood Damage Prevention Ordinance annually to ensure that the document is consistent with the latest FEMA and NCEM standards.

Progress: The Town has not updated the local Flood Damage Prevention Ordinance over the last five years; however, an update will be carried out in conjunction with the adoption of updated flood maps. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9

Strategy Sunset Beach 15: The Town of Sunset Beach will continue to require elevation certificates for all development within the defined A, AE, and VE flood hazard areas.

Progress: The Town has required the provision of elevation certificates for all structures located within the defined flood hazard area. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC9, BC14

Strategy Sunset Beach 16: The Town of Sunset Beach will conduct on-site fire inspections on all non-residential structures a minimum of once annually.

Progress: The Sunset Beach Fire Department has pro-actively inspected all non-residential structures over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Sunset Beach 17: The Town of Sunset Beach will continue to enforce the NC State Building Code.

Progress: The Town addresses this issue on an ongoing basis due to shoreline migration and erosion. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result

of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Sunset Beach 18: The Town will consider working with regional partners on the development and adoption of legislation that will enable the Town to enforce the wind-borne debris International Building Code standards throughout the Town's corporate limits (enabling the Town to secure a CRS rating lower than 8).

Progress: This strategy is being eliminated through this plan update due to the political viability of successfully carrying out this strategy.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Sunset Beach 19: The Town will establish funding to work through a comprehensive update of all land development ordinances.

Progress: Over the last five years, the Town has worked through a comprehensive update of all local land development regulations. These standards will continue to be reviewed on an annual basis. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Sunset Beach 20: Sunset Beach will continue to work closely with the Brunswick County Emergency Management Department on improving the County's multi-jurisdictional communications system in an effort to enhance interoperability. The Sunset Beach Fire Chief will attend bi-monthly meetings with the County Emergency Management Department to address this issue.

Progress: The Town of Sunset Beach has worked closely over the last five years with Brunswick County Emergency Services to improve upon regional communication systems. These efforts have resulted in the purchase of new radio technologies which will improve upon communication redundancy. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 21: The Town of Sunset Beach administration and Town Council will advocate the establishment of an 800 MHz communication system for the County, as well as all municipalities. Establishment of this system will make the County compatible with the latest

communications technology and will alleviate many of the issues present in dealing with the existing system.

Progress: The County has acquired this system over the last five years, and has incorporated the Town of Sunset Beach into this communications framework. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC50

Strategy Sunset Beach 22: The Town of Sunset Beach will research the feasibility of establishing an internal communication system that operates independent of the existing County-wide infrastructure.

Progress: This strategy has been deemed unnecessary and therefore will be eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Sunset Beach 23: The Town of Sunset Beach will participate in scheduled conference calls with the County Emergency Operations Center as the imminent threat of severe weather approaches. The call will be scheduled by the County Emergency Management Department and all town departments should be represented.

Progress: The Town of Sunset Beach has carried out this strategy over the last five years through participation in the Brunswick County Emergency Operations Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 24: The Town of Sunset Beach will maintain an internal early warning system to assist in notifying town residents of issues related to natural and man-made hazards. The maintenance of this system should involve an outreach effort to ensure that all residents have their telephone numbers registered in the notification system.

Progress: The Town of Sunset Beach has determined that implementation of a local system will be redundant to the County's Code Red emergency notification system; therefore, this strategy will be eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Sunset Beach 25: The Town will review and update hurricane re-entry and evacuation procedures on an annual basis.

Progress: The Town of Sunset Beach has pro-actively reviewed these policies over the last five years as a component of the County Emergency Operations Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 26: The Sunset Beach Town Council will maintain a staff level Public Information officer charged with disseminating information relating to threats associated with man-made and natural disasters. The Public Information Officer's role and duties are defined within the Town's Hurricane Operations Plan.

Progress: The Town has maintained a designated Public Information Officer charged with disseminating information regarding impending inclement weather and natural hazard events. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 27: The Town of Sunset Beach will provide information relating to natural and man-made disaster situations through all available outlets including news media, the Town's website, and the Town's emergency notification system.

Progress: This strategy has been deemed irrelevant to the Town's Mitigation Program and will be eliminated through this update. This issue will be handled through functions carried out by the Brunswick County LEPC.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Sunset Beach 28: Sunset Beach will maintain a policy of patrolling portions of the Town under mandatory evacuation procedures as the threat of severe weather approaches. This effort will ensure that all residents and visitors within those areas are clearly aware of the evacuation order and will respond accordingly.

Progress: The Town of Sunset Beach has pro-actively carried out this strategy as a function of local emergency management procedures over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 29: The Town will work with local media outlets as well as the Brunswick County Emergency Management Department to promote the importance of hand-held NOAA weather radios. These radio systems provide efficient and prompt notice of approaching severe weather.

Progress: Through Town Hall and other local outreach mechanisms, the Town has promoted the importance an effectiveness of citizens acquiring and utilizing NOAAS weather radios over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 30: As stated previously, the Town of Sunset Beach will establish funding to work through a comprehensive update of all land development ordinances. This effort will include a review of local stormwater and sedimentation control regulations.

Progress: Over the last five years, the Town has worked through a comprehensive update of all local land development regulations. These standards will continue to be reviewed on an annual basis. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Sunset Beach 31: The Town of Sunset Beach will continue to require that all development occurring along Main Street must be located within 150 feet of the property line abutting the right-of-way. This strategy is intended to protect the primary frontal dune structure running the extent of the Island.

Progress: The Town has maintained this ocean front setback requirement through both the local CAMA Land Use Plan and Zoning Regulations over the last five years. Enforcement of this standard will continue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Sunset Beach 32: In working through the revisions of the Town's land development ordinances, the Sunset Beach Planning Board and Town Council will consider increasing the amount of open space required for all subdivisions with ten or more subdivided lots.

Progress: Over the last five years, the Town has worked through a comprehensive update of all local land development regulations. These standards will continue to be reviewed on an annual basis. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Sunset Beach 33: The Town will continue to impose its impervious surface limits whereby a property owner must installed an on-site stormwater retention and/or detention facility if the total impervious surface area exceeds 30% of a given site. These systems must be designed to retain all runoff generated by the impervious coverage in excess of the stated 30%.

Progress: This strategy was incorporated into Land Development Regulation updates completed over the last five years. The Town will continue to enforce this standard through implementation of this plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Sunset Beach 34: The Town of Sunset Beach will continue to work with Brunswick County on the enforcement of their Stormwater Management Ordinance.

Progress: The Town has worked closely with the Brunswick County Planning and Public Works Department to pro-actively enforce County stormwater regulations. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC6

Strategy Sunset Beach 35: The Town of Sunset Beach will continue to work with the NC Department of Environment and Natural Resources on the enforcement of the NC Statewide Stormwater Management Program.

Progress: The Town has worked closely with the NCDENR to pro-actively enforce State Coastal stormwater regulations. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC25

Strategy Sunset Beach 36: The Town of Sunset Beach will maintain a policy of supporting single-family residential development as a desired land use pattern. Residential density and the establishment of non-residential land uses will be significant issues discussed while working through the revision of the Town's land development ordinances.

Progress: The Town has clearly stated this policy in locally adopted land use planning documents. Through implementation of this plan, the Town will maintain the policy of promoting single-family residential development both on and off island. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Sunset Beach 37: The Town of Sunset Beach will assist property owners in applying for post-disaster mitigation funding for acquisition/relocation grant programs following a natural disaster.

Progress: The Town, over the last five years, has maintained a pro-active approach to addressing repetitive loss properties through funding provided through the HMGP program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC23

Strategy Sunset Beach 38: The Town of Sunset Beach will work closely with Brunswick County Emergency Management to maintain clear and accurate records regarding expenses related to post-disaster recovery and clean up. This effort will be focused on ensuring that the Town may recover expenses relating to the disaster situation.

Progress: The Town maintains a policy of establishing clear and accurate records regarding post disaster clean up. Although, this has not been required over the last five years, it is a mandatory practice to ensure proper reimbursement regarding storm clean up. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 39: Sunset Beach will seek out grant funding for the installation of storm shutters on the Town's fire department facility.

Progress: This strategy was completed in 2011, and will be eliminated through this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through

updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC3

Strategy Sunset Beach 40: Sunset Beach will seek grant funding for the acquisition of internal communication system equipment. This effort will work towards the goal of improving upon the Town's emergency response capabilities.

Progress: As stated earlier, the Town has determined that this system will be redundant to the improved County communication system; therefore, it will be eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Sunset Beach 41: Sunset Beach will seek grant funding to acquire equipment needed to provide comprehensive ocean rescue services.

Progress: The Town acquires ocean rescue equipment as necessary through annual budgetary considerations. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC3

Strategy Sunset Beach 42: The Town of Sunset Beach will update its website to include more comprehensive information relating to emergency response and mitigation. This information will cover a wide range of topics including: evacuation procedures, mitigation options, floodplain protection, emergency preparedness, and special needs registry efforts.

Progress: The Town has worked to improve its website consistently over the last five years. These efforts have included expanding upon information regarding Hazard Mitigation and Emergency Management. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC1, BC5

Strategy Sunset Beach 43: Sunset Beach will continue to provide information to citizens following a natural hazard event that outlines the policies regarding evacuation, re-entry, and recovery. This information will be updated annually as procedures change over time.

Progress: The Town of Sunset Beach reviews these policies annually as a component of the County's Emergency Operations Planning efforts. The Town reviews this issue annually, and updates are made as

necessary. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 44: Sunset Beach will maintain information at the local library relating to floodplain protection and mitigation. This effort will be carried out as part of the Town's Community Rating System (CRS) program.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

Strategy Sunset Beach 45: The Town will continue to mail out a Town newsletter quarterly. As an element of this newsletter, the Town will include information relating to emergency preparedness.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1, Table 6-5 (page 6-40)

Strategy Sunset Beach 46: The Town of Sunset Beach will continue to provide day-to-day counseling services to contractors and property owners regarding floodplain protection and mitigation practices. This effort will include site visits when deemed necessary.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in

collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

Strategy Sunset Beach 47: The Town of Sunset Beach will continue to maintain all publicly-owned streets in a manner that will provide efficient and safe ingress and egress for all citizens. Additionally, the Town will maintain a policy of accepting private streets for maintenance assuming those streets are developed to appropriate standards.

Progress: The Town of Sunset Beach Public Works Department has worked diligently over the last five years to carry out this strategy. These efforts will continue through this update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC21

Strategy Sunset Beach 48: The Town of Sunset Beach will incorporate language into the Town's ordinance requiring all new gated communities to provide clear and adequate access for emergency service vehicles.

Progress: This strategy was completed in conjunction with the Zoning Ordinance update referenced previously; therefore, it will be eliminated through this update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Sunset Beach 49: The Town of Sunset Beach will factor protection from natural hazards into discussions involving the update of the Town's land development ordinances. This effort is expected to be completed within the next two years.

Progress: Over the last five years, the Town has worked through a comprehensive update of all local land development regulations. These standards will continue to be reviewed on an annual basis. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC10

Strategy Sunset Beach 50: The Town will maintain a dialogue with regional electric service providers, as well as water and sewer service providers in an effort to better prepare for the impacts associated with natural hazard events.

Progress: The Town meets annually prior to Hurricane Season to effectively address this issue with regards to potential natural hazard events. This has been carried out over the last five years, and will continue through this update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 52: The Town of Sunset Beach will adopt this HMP and work towards the implementation of all strategies. Additionally, the Town will maintain good standing with both the NFIP and CRS programs.

Progress: Through implementation of the Town's existing plan, this strategy has been effectively carried out.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Sunset Beach 53: The Town of Sunset Beach will factor all projects outlined in these strategies into annual budget discussions. Some of the equipment and facility improvements proposed in this plan may require local investment.

Progress: The Town of Sunset Beach considers all recommendation regarding capital expenditures outlined in this plan during annual budget deliberations. This has taken place through implementation of this plan over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC16

Strategy Sunset Beach 54: The Town of Sunset Beach will work closely with the Brunswick County Emergency Management Department to ensure that citizens and visitors have safe and efficient access to shelter facilities.

Progress: The Town has worked with and supported Brunswick County Emergency Management in addressing this issue over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Strategy Sunset Beach 55: The Town will inform citizens of shelter locations and policies through the following: posting on the Town's website, materials provided when receiving re-entry permits, the Town's quarterly newsletter, the Town's designated Public Information Officer.

Progress: The Town has worked with and supported Brunswick County Emergency Management in addressing this issue over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC5

Town of Varnamtown

Strategy Varnamtown P-1: Update Land Use Plan.

Progress: The Town did not update the Land Use Plan over the last five years. The Town will consider this effort through implementation of this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC8

Strategy Varnamtown P-2: Ensure that mobile/manufactured homes are installed and secured properly.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. All manufactured homes are tied down in accordance with NC State Building Code. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Varnamtown P-3: Continue to encourage NC State Building Code enforcement for wind restriction.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. All manufactured homes are tied down in accordance with NC State Building Code. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC28

Strategy Varnamtown S-1: Support Brunswick County debris removal program to correct problem sites.

Progress: The Town has pro-actively supported Brunswick County efforts to address the issue of debris removal following natural hazard events. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC38

Strategy Varnamtown S-2: Support the dredging of waterways to improve function and water quality.

Progress: The Town has supported the efforts of the US Army Corps of Engineers to maintain clear and passable waterways through selective dredging efforts. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-2). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: BC40

Strategy Varnamtown S-3: Support the Brunswick County Appearance Commission.

Progress: This strategy has been eliminated from the plan because this strategy is not considered a mitigation measure.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Varnamtown PI-1: Continue to provide flood maps for staff and public use.

Progress: The Town's Planning Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: BC1

NEW HANOVER COUNTY MITIGATION PROGRESS REPORT

The following provides a summary of progress achieved with regard to the strategies adopted through the 2010 New Hanover County Multi-Jurisdictional Hazard Mitigation Plan.

New Hanover County

Strategy 1: Maintain the County's Continuity of Government Plan (COOP) by ensuring that updates are completed by all county departments at least twice a year. In FY2004, the County received grant funding to develop a COOP for the 8 departments most critical to hazard response in the County government. In order for the County to be completely prepared, all departments must be included in the COOP, which also needs to be exercised.

Progress: The COOP was revised and updated to include all County departments in January 2005; the COOP was exercised in August 2005. A web-based system that allows county departments to update their plans on the web was developed in 2008. Department's COOP checklists are updated at least twice per year. In May 2012, these checklists were moved to the County's SharePoint site. Through this planning process, this strategy will now apply to all participating municipalities who request assistance from the County in establishing their own respective COOP (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC1

Strategy 2: Enhance the survivability of critical IT services by installing redundant capability ("hot site") at our remote operating site. Conduct a risk analysis of IT systems to include Business Continuity Planning, Facilities Management, Security and other Emergency Management Issues.

Progress: Funding was secured in the new building project to mitigate some of the risks that we had in the old computer room. We now have a data center that has fully redundant power including a backup generator with a 72 hour tank. This will allow us to operate the computer room during emergency events. In 2012, we also completed a project to create redundant paths for our fiber optic network which connects the main county facilities (Judicial Building, DSS, Health, and Government Center). This gives us fail over in case of a fiber break along one of the paths. In fiscal year 2007/2008, IT conducted meetings with County Departments to assess the criticality of applications and services hosted by the department. The result of these meetings was a budget plan for the next three years to address vulnerabilities to the County's most critical applications and services. Completion of the plans will be contingent on budgetary funding. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC2

Strategy 3: Install permanent generators to all five emergency shelters. Pursue funding for a permanent generator at the New Hanover County Senior Center. Currently, the 5 County school shelters have transfer switches, as does the Senior Center. However, the County has no facility with a permanently installed generator that can be activated as a shelter on short notice. The County's priority is to have permanently installed generators at all 5 school shelters, the senior center and the animal shelter.

Progress: Permanent generators have been installed at Johnson Pre-K Center, Noble Middle, Eaton Elementary, Codington Elementary, and Trask Middle Schools, completing the plan to install permanent generators at all five of NHC's emergency shelters. Permanent generators have been installed at the New Hanover County Animal Services Unit and the Cape Fear Museum.

Status/Corresponding 2015 Strategy: NHC3

Strategy 4: Install microwave links between the County radio system and the 911 system. The County has no communications redundancy. This project would install microwave links between the 911 center and the 2 communications towers that provide countywide coverage, and between the 2 communications towers.

Progress: This was completed prior to November 1, 2006.

Status/Corresponding 2015 Strategy: Completed

Strategy 5: Continue to promote rip current awareness within the county by partnering with various beach services and the National Weather Service. Emphasis should be placed on educating children, the local public and tourists. The County has 3 Atlantic beaches which frequently experience RIP currents. Public notification of rip current location in real time in the form of Public Service Announcements and signage at beach access points would increase awareness of the hazard.

Progress: New Hanover County was the test site for the east coast of the U.S. RIP Current Advisory Strategies Team developed the initiatives, such as posters in all classrooms in the County, and signage at all 3 beaches. All initiatives completed prior to summer 2006. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC4

Strategy 6: Drainage project at Crosswinds Subdivision. Houses are being flooded & damaged from floodwaters during rain storms much smaller than major events. Streets are flooded preventing access by emergency and other vehicles. This project would enlarge & install pipe in the drainage outfall to allow larger storms to drain.

Progress: This has not been done. No funds have been identified.

Status/Corresponding 2015 Strategy: NHC5

Strategy 7: Buyout of house located in Crosswinds subdivision adjacent to drainage ponds. This house is not in a 100-year floodplain, and yet it has sustained repetitive losses from periodic flooding. Since it is not eligible for buyout under FEMA regulations, we would like to use other funds to acquire this property.

Progress: This has not been done. No funds have been identified.

Status/Corresponding 2015 Strategy: NHC12

Strategy 8: Retrofit/Elevation Projects for 5 Wastewater pumping stations (80, 81, 48, 92 & 35). All 5 of these pumping stations (#80, 81, 48, 92, and 35) are located in the 100 year floodplain and routinely flood during hurricane hazards such as flooding and storm surge. For each pump station, the top of the pump station wetwell, the valve box & the control panel slab will be raised above elevation of 12.5 msl.

Progress: Preparation of the next edition of the Authority Master Plan is on hold pending completion of the City and County Comprehensive Plans and the CAMA Plan Update. The next edition of the Authority Master Plan will address sea level rise relative to facilities. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC7, NHC12

Strategy 9: Beaver Management Program - The Beaver population of New Hanover County has been rapidly increasing. Detrimental impacts include damage to roads, drainage systems, landscape plantings & other property.

Progress: NHC has a current contract with the U.S. Department of Agriculture for beaver and beaver dam removal in New Hanover County drainage ways. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC8

Strategy 10: Update flood maps to accurately reflect changes in elevation and flood patterns due to natural or man-made forces. New Hanover County has experienced rapid development over the past 10 years, resulting in changes in the course of streams and coastal waters, altering the shape of the floodplain. Remapping and correcting flood maps on a regular basis will allow County officials to plan appropriate land uses for flood prone areas.

Progress: New Hanover County and its municipalities are currently in the preliminary comment period and anticipate adoption of new Special Flood Hazard Data soon after adoption of this plan. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC9

Strategy 11: Revise Stormwater Management Ordinance. The County passed a storm water management ordinance on September 30, 2000 in order to regulate storm water runoff. However, development prior to 9/30/2000 was not required to manage storm water. Additionally, no systematic method for storm water management exists. And, there is no mechanism for ensuring that storm water construction projects to mitigate the effects of storm water runoff are funded. A utility

would provide county wide storm water management including retrofitting areas without any storm water collection system.

Progress: The revision of the ordinance has not been made yet and there is no status change on creating a Stormwater Utility. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC10

Strategy 12: Hire a consultant to identify critical facility structures for susceptibility to hazard damage & set a priority schedule for retrofitting. New Hanover County has completed a critical facilities inventory. A vulnerability assessment has been conducted on the entire system, including plants, pump stations, lines and manholes based on multiple scenarios of sea level rise and storm events. However, we need to have current information relative to an estimated cost for retrofitting each one.

Progress: New Hanover County, City of Wilmington and CFPUA received an allocation for technical assistance provided by FEMA and EPA in order to assess the area's water and sewer vulnerability to sea level rise and storm surges. A consultant was hired to conduct that analysis, a 2-day workshop was held with key staff to provide input into the vulnerability assessment and adaptation (mitigation) strategies and a final report along with inundation modeling data was delivered in March 2013. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC11, NHC12

Strategy 13: Retrofit the Government Center to wind and seismic standards. The County Administrative Annex has been moved to a new building at 230 Government Center Drive. The building used to house a retail store and was converted to office space. However, the building does not meet current standards for wind and seismic hazards.

Progress: This project has not yet been budgeted. No funds have become available for which this project would be eligible. Priority should be changed to Low at this point.

Status/Corresponding 2015 Strategy: Eliminated

Strategy 14: Complete open space plan that gives major consideration to hazard vulnerability for conservation and acquisition. New Hanover County's coastal waters & floodplains are some of the most sought after lands for development. These same lands provide valuable buffers between the water and residential development. Preserving these lands as open space would eliminate future development and potential catastrophic losses of private property.

Progress: The County adopted the Wilmington-New Hanover County Comprehensive Greenway Plan on March 11, 2013. This plan gives major consideration to hazard vulnerability for conservation and acquisition. The County is also working toward buying highly vulnerable properties and using those properties for open space. In 2012, the County received a sub-grant award from the Nature Conservancy

to purchase a 10-acre tract of land on Smith Creek that is primarily within the 100-year floodplain and partially comprised of wetlands. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC18, NHC19, NHC20, NHC21

Strategy 15: Continue acquisition, elevation &/or retrofitting of hazard prone properties. Notify repetitive loss property owners to see if they are interested in participating in future programs. New Hanover County has 289 repetitive loss properties.

Progress: The County has sent notices to repetitive loss and severe repetitive loss property owners to educate them of the options available to them. Additional properties have not been acquired, elevated or retrofitted since adoption of the Hazard Mitigation Plan. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC12

Strategy 16: Develop & conduct a public awareness campaign emphasizing the economic benefits of participation in the CRS program.

Progress: Public information concerning the economic benefits of participation in the CRS has been created and is available on the County's website. This information is also included on a mailing sent to all residents who own property in the special flood hazard area in New Hanover County. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC13

Strategy 17: Develop & conduct a public awareness campaign regarding potential hazards of urban/wildfire interface.

Progress: New Hanover County Fire Services' public awareness campaign is ongoing. A video was developed and is shown on the County's cable TV station. New educational materials are continually being generated. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC14

Strategy 18: Ensure that standards for Firewise Communities/USA are routinely included in subdivision review process, i.e., addressed in local subdivision ordinance.

Progress: This is an ongoing process that is an important part of the Subdivision Review Process. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC15

Strategy 19: Flooding has led to septic failures in many areas. Specific areas where study is most necessary: Monterey Heights, Middle Sound, Murrayville Road (new school site), Castle Hayne, Masonboro Sound, and Hwy. 421 south of Echo Farms subdivision.

Progress: New Hanover County applied for and is currently approved to receive a loan from the NC Clean Water Revolving Fund Program in order to install sewer in the Marquis Hills and Heritage Park areas of the County. The County also plans to apply for grant funds to supplement this project. Construction is anticipated to begin within one year. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC5, NHC10, NHC16

Strategy 20: Utilize NHC TV for public service announcements. Education program would advise residents of actions they can take to help prevent flooding in their neighborhoods or on their property. Showing a video on County Cable Channel would be a good mechanism for getting the word out.

Progress: NHC TV is utilized for many different purposes including educating the public about flooding and hazard mitigation. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC17

Strategy 21: Discourage high intensity uses and large structures from being constructed within the 100-year floodplain (1% annual chance floodplain), erosion prone areas, and other locations susceptible to hurricane and flooding hazards.

Progress: The New Hanover County Zoning Ordinance continues to not allow High Density development within the 100 year floodplain. Through the County's Exceptional Design Zoning District, development of any kind is not allowed in the 100 year floodplain in this district. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC18, NHC21

Strategy 22: Following a storm event, take advantage of opportunities to acquire or purchase land located in storm hazard areas which are rendered unbuildable or have sustained substantial damage. The property should satisfy objectives including, but not limited to the conservation of open space and scenic areas and the provision of public water access.

Progress: The County continues to provide outreach to citizens following storm events to make them aware of pre and post disaster grant opportunities. There have not been any significant storm events this year that have rendered land unbuildable or that have caused substantial damage to structures. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC19

Strategy 23: Declare a moratorium on the acceptance of any request for rezoning in flood prone areas other than for rezoning to a less intense use.

Progress: The County continues to discourage high density development in the floodplain within the New Hanover County Zoning Ordinance. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: Eliminated

Strategy 24: Declare a moratorium on the permitting of any new construction, new utility hook-ups, or redevelopment construction that would increase the intensity of the land use existing in disaster prone areas.

Progress: The County continues to discourage high density development in the floodplain within the New Hanover County Zoning Ordinance. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: Eliminated

Strategy 25: Request that new assessments of hazard areas be performed periodically due to the changes to the floodplain, shoreline and inlets caused by natural and man-made forces.

Progress: New Hanover County has received preliminary data on updated Special Flood Hazard Areas, and will be working on a public outreach program throughout 2014 to introduce these new SFHA's. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC20

Strategy 26: Limit density to 2.5 units/acre or less in areas classified as conservation on the CAMA land use map (including areas in the 100 year, or 1% annual chance floodplain). Develop a program for density tradeoffs to encourage development outside the floodplain.

Progress: The County continues to discourage high density development in the floodplain within the New Hanover County Zoning Ordinance. Density is limited within the conservation land classification to 2.5 units/acre or less. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC21

Strategy 27: Maintain annual review process for New Hanover County Health Department's (NHCHD) Preparedness Plans to include the NHCHD Emergency Response, Community Containment, Mass Prophylaxis, Pandemic Influenza, Strategic National Stockpile and Local Receiving Site plans, the Response Plans Development Review policy and the Epidemiology (EPI) Team Policy.

Progress: NHCHD maintains a review process policy and reviews the Emergency Operations Plan and Annexes on an annual basis, other preparedness plans are reviewed annually. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC22

Strategy 28: Install upgraded generator in Health Department located at 2029 S. 17th St. Wilmington, NC 28401.

Progress: New Hanover County Property Management upgraded the Health Department's generator capacity in October 2009. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: Completed

Strategy 29: National Incident Management System (NIMS) training for County personnel which includes ICS 100, ICS 200, ICS 300, ICS 400, IS 700, and IS 800.

Progress: NIMS Training is required for County personnel. Based on the 2012 report, over 90% of required NIMS courses have been completed. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC23

Strategy 30: Sustain radio communications system through maintenance contracts and system upkeep. Enhance capabilities by upgrading current software to latest version and addition of integrated voice and data (IV&D) features.

Progress: The radio system has been sustained through regular maintenance contracts and software refreshes. Funding has not been allocated to upgrade to integrated voice and data (IV&D) features. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: NHC24

Strategy 31: Potential consideration to relocate Wrightsville Beach Elementary School from the barrier island where it is currently located to the mainland. Wrightsville Beach Elementary School is located on a barrier island off of the coast of New Hanover County, NC. The relocation of the school to the mainland would mitigate potential structural damage and may prevent (mitigate) loss of service resulting from hurricanes, flooding, tsunamis, and nor'easters. School was closed for 6 months following Hurricane Fran in 1996.

Progress: WBES is not under consideration for relocation at this time. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: Eliminated

Strategy 32: Potential consideration to relocate Carolina Beach Elementary School from the barrier island where it is currently located to the mainland. Carolina Beach Elementary School is located on a barrier island off of the coast of New Hanover County, NC. The relocation of the school to the mainland would mitigate potential structural damage and may prevent (mitigate) loss of service resulting from hurricanes, flooding, tsunamis, and nor'easters.

Progress: CBES is not under consideration for relocation at this time. Through this planning process, this strategy will now apply to all participating municipalities as well as unincorporated New Hanover County (see Table 6-3).

Status/Corresponding 2015 Strategy: Eliminated

Town of Carolina Beach

Strategy CB 1: Educate contractors about principles for quality redevelopment and safe housing development through written materials or a Town-sponsored workshop.

Progress: The Planning and Development Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintains a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC25, NHC26

Strategy CB 2: Hold a Town-sponsored hazard mitigation seminar for the community residents, including information on preparedness for all hazards significant to Carolina Beach.

Progress: The Planning and Development Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintains a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC13, NHC14, NHC17, NHC25, NHC26, NHC28

Strategy CB 3: Provide new home and property buyers with information on quality redevelopment and safe housing development. The information is probably most efficiently dispersed at the Town hall and other community owned, public facilities in Town.

Progress: The Planning and Development Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The department also maintains a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC13, NHC25

Strategy CB 4: Manually disperse and have a website posting which provides information about the Town's Emergency Response and Re-Entry Plan and relevant emergency response actions the public can take. Also, ensure each Town department possesses a clear list of department responsibilities as outlined in the plan. Update department contacts as they change.

Progress: The Town has maintained this information on the Town website over the last five years and will continue to update the website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC26, NHC27, NHC28

Strategy CB 5: Manually disperse and have a website posting which provides information about the Town's Community Based Hazard Mitigation Plan and relevant mitigation measures the public can take. In addition, provide a response/reply section where residents can comment on the effectiveness of the current plan and where they can make suggestions for future revisions on the plan.

Progress: The Town has maintained this information on the Town website over the last five years and will continue to update the website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC26, NHC27, NHC28

Strategy CB 6:Update the Town of Carolina Beach Emergency Response & Re-Entry Plan on an annual basis. The Emergency Response & Re-Entry Plan should contain detailed information on responsible parties and contact information; this information should be updated as positions and contact information changes.

Progress: The Town reviews and updates the local emergency response procedures in conjunction with New Hanover County emergency management annually. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC27

Strategy CB 7: Maintain evacuation routes in the event of a hazardous event.

Progress: Evacuation routes are reviewed and updated annually as necessary through mandated County Emergency Operations Plan updates in collaboration with NCDPS. The County/Town will continue to address this issue through annual Emergency Operations Plan updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC27, NHC29, NHC30

Strategy CB 8:The Town should publicize, on the Towns website, maps of evacuation routes which will facilitate the evacuation of Carolina Beach in case of a hazardous event.

Progress: All evacuation routes have been mapped by the New Hanover County GIS department and are reviewed and updated annually as needed. The County/Town will continue to address this issue through annual Emergency Operations Plan updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC30

Strategy CB 9: The Town should distribute via water bills and Town newsletters, maps of evacuation routes which will facilitate the evacuation of Carolina Beach in case of a hazardous event.

Progress: The Town has carried out this strategy annually over the last five years as a function of the Town's CRS program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC26, NHC30

Strategy CB 10: Monitor the status of backup generators, communications, and vehicles for all critical public facilities. Test generators, communications equipment, and vehicles on a regular basis, not only for maintenance, but to confirm that the equipment continues to match the needs of critical facility expansion or updated operations.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC3, NHC24, NHC32

Strategy CB 11: Purchase, as necessary, backup generators as determined by the results of Action 10.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC3, NHC32

Strategy CB 12: Install, as necessary, generator quick connects, as determined by the results of Action 10.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generator quick connects were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC3, NHC32

Strategy CB 13: Revise the CAMA Land Use Plan (1997, 8-35) strategy to consider a policy to prohibit redevelopment in high hazard areas.

Progress: This strategy was not carried out over the last five years; however, due to updated CAMA planning regulations, the Town will consider revision to the Land Use Plan through implementation of this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC18, NHC21

Strategy CB 14: Revise the CAMA Land Use Plan (1997, 8-36) to include training for those persons in charge of the "building permit triage" to prevent the issuance of permits in areas where permits should not be issued.

Progress: This strategy was not carried out over the last five years; however, due to updated CAMA planning regulations, the Town will consider revision to the Land Use Plan through implementation of this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC18, NHC21

Strategy CB 15: Continue to enforce the North Carolina State Building Code. Require that new structures or structures undergoing significant renovation meet code requirements for coastal areas in accordance with the North Carolina State Building Codes.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC6

Strategy CB 16: Monitor trees and branches in public areas at risk of breaking or falling in wind, ice, and snow storms. Prune or thin trees or branches when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the Town.

Progress: The Town's Public Works department in conjunction with local utility providers has worked over the last five years to maintain clearance from power lines and critical facilities. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC33

Strategy CB 17: The Town will take a proactive approach in investigating dangerous damaged structures and should take prompt action in condemning damaged structures that have been abandoned.

Progress: The Town addresses this issue on an ongoing basis due to shoreline migration and erosion. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result

of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC12

Strategy CB 18: Purchase a complete GIS/GPS setup and provide training on said setup to all pertinent town personnel.

Progress: The Town has completed the acquisition and installation of a comprehensive town-wide GIS system. The Town will continue to work closely with the County to improve upon the functionality and effectiveness of this program.

Status/Corresponding 2015 Strategy: Completed

Strategy CB 19:Record and maintain all tax parcel information and floodplain locations in a GIS system in order to build the Towns capability to generate maps when needed.

Progress: The Town has completed the acquisition and installation of a comprehensive town-wide GIS system. The Town will continue to work closely with the County to improve upon the functionality and effectiveness of this program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC2

Strategy CB 20: Develop a database that identifies each property that has received damage due to hazards identified within this mitigation plan. The database should also include a tax identification number of the property, a description of the property damage, the value of the damage, and links to photographs of the damage.

Progress: The Town addresses this issue on an ongoing basis. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC12

Strategy CB 21: Revise the Zoning and Subdivision Ordinance to require the utilization of various pervious surfaces within the floodplain in order to reduce stormwater runoff. This should include utilizing the use of various pervious surfaces in parking lots in recreational areas near the floodplain.

Progress: The Town has not accomplished this strategy; however, the Town will consider changes to land development regulations that will assist with mitigation efforts. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in

the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC18, NHC21

Strategy CB 22: The Town should support the policy identified in the CAMA Land Use Plan (1997, 8-3), "Development will be "discouraged" in locations where stormwater runoff related flooding exists, unless appropriate corrective improvements are to be completed as part of the project."

Progress: Over the last five years, Town staff have informed residents and developers of this issue; however, the CAMA Land Use Plan does not enable the Town to restrict development outside of defined Areas of Environmental Concern. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC18

Strategy CB 23: Protect/Enhance Shoreline Vegetation (Already required by CAMA in the estuarine area). The Town should revise its zoning and subdivision ordinance to incorporate shoreline vegetation protection buffers along the AEC's and Canals in order to protect the character and to help mitigate flooding.

Progress: This strategy has not been accomplished. The Town relies on CAMA as well as other NCDEQ regulations to address this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC18

Strategy CB 24: The Town will seek to elevate flood-prone structures. Specifically structures that are identified as repetitive losses in the area. It is understood that funding through FEMA under the HMGP and FMA programs are voluntary, as a result all elevations will be based on funding availability, political will, and private property initiative.

Progress: Over the last five years, Carolina Beach has elevated one single-family residential homes. The Town will continue to maintain a pro-active stance regarding structural mitigation. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC12

Strategy CB 25: Continue to prioritize beach nourishment as a means of mitigating coastal beach erosion.

Progress: Due to the rapidly involving funding and logistical issues related to shoreline management, this strategy is being eliminated from this update and will be handled on an annual basis through local Capital Improvements funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy CB 26: Develop a Beach Management Plan which will include annual monitoring of literal drift erosion, to address the long-term issue of beach erosion.

Progress: Due to the rapidly involving funding and logistical issues related to shoreline management, this strategy is being eliminated from this update and will be handled on an annual basis through local Capital Improvements funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy CB 27: Establish a Shoreline Protection Committee that will work closely with the Town Council to solicit funds for beach preservation projects, educate the public on beach preservation matters, oversee re-nourishment project development, monitor shoreline change and report any major issues to the Town Council.

Progress: Due to the rapidly involving funding and logistical issues related to shoreline management, this strategy is being eliminated from this update and will be handled on an annual basis through local Capital Improvements funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy CB 28: Work with New Hanover County officials and surrounding communities to distribute materials about the County Water Shortage Response Plan.

Progress: The Town has not direct mailed notices to property owners regarding the Water Shortage Response Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC34

Strategy CB 29: Develop local Water Shortage Response Guidelines (in different phases) as a part of the Carolina Beach Emergency Response Plan as it relates to the expectations of the Town's water supplier.

Progress: This effort was not completed over the last five years and has been deemed redundant to water conservation measures adopted through ordinance in 2007; therefore, it will be eliminated. The actions

defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: Eliminated

Strategy CB 30: The Town should continue their proactive approach to mitigation by connecting Rainwater Retention Drums to the down spouts of each gutter system on every municipal building within Carolina Beach.

Progress: This strategy has been eliminated due to a lack of funding and staffing for the installation and maintenance of these systems.

Status/Corresponding 2015 Strategy: Eliminated

Strategy CB 31: Develop a tornado and waterspout warning system.

Progress: The Town has accomplished this strategy through the local fire department. Several staff members are currently trained in early detection. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC17, NHC24, NHC26, NHC30

Strategy CB 32: To improve road visibility, encourage the Department of Transportation to place new reflector tape or paint along road edges and in the dividing line. This should be done on all major roads through Town.

Progress: The Town continues to collaborate with the County and NCDOT to address this issue. Some progress has been made; however, it continues to be an issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the Regional Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC29

Strategy CB 33: In order to minimize injury from lightning strikes, shelters should be placed every five acres in all public open space areas. This recommendation should be incorporated into the zoning and subdivision ordinances.

Progress: This strategy has been eliminated from the plan. This decision was based on the fact that the recommended standard was deemed too costly, and ultimately proved to be an unrealistic recommendation.

Status/Corresponding 2015 Strategy: Eliminated

Strategy CB 34: The Zoning Ordinance should require that lightning detection devices be installed in public outdoor gathering areas such as school stadiums.

Progress: This strategy was eliminated by the MAC, because adoption of this standard would result in increased development cost that could potentially slow or limit growth throughout the Town's Planning Jurisdiction.

Status/Corresponding 2015 Strategy: Eliminated

Strategy CB 35: Develop a policy to require proper waste disposal and recycling.

Progress: This strategy was eliminated due to the fact that this effort is established as a basic municipal service that is not deemed relevant to the Town's mitigation efforts.

Status/Corresponding 2015 Strategy: Eliminated

Strategy CB 36: The Town shall work with other appropriate governmental bodies, namely New Hanover County and surrounding communities to provide for a continued pure supply of potable water.

Progress: The City of Wilmington has worked diligently over the last five years to ensure that there is a safe sanitary water supply for the Town. This effort has included collaboration with the Cape Fear Public Utility Authority. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC34

Strategy CB 37: The fire department has the responsibility to assure the Town's protection during fire events. Part of this responsibility is dependent upon the department's ability to maintain the materials and a knowledge base for addressing such an event. This responsibility must be supported by provision of adequate funding for the continuing education and materials necessary to maintain this preparedness.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC14, NHC15, NHC31

Strategy CB 38: Explore and seek access to all potential sources of information and communication regarding early fire detection.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC14, NHC31

Strategy CB 39: Evaluate and improve fire fighting procedures.

Progress: The Town's fire department works to improve fire event preparedness on a day-to-day basis. These efforts involve continued education, training exercises and outreach. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC31

Strategy CB 40: Ensure the fire hydrants are working properly.

Progress: The Town Public Works department works closely with the Town fire department to inspect all hydrants annually to ensure they are working properly. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC31

Strategy CB 41: The Town should develop a plan of action to maintain the materials and knowledge base for addressing a HAZMAT spill, or develop preliminary measures to assist the county until the representatives arrive.

Progress: The Town has worked closely with the New Hanover County LEPC to address hazards associated with hazardous materials, HAZMAT, and/or dangerous spills. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC35

Strategy CB 42: The Town may consider supporting offshore drilling for gas and oil based on justifiable need and economic conditions. Other policies promoting renewable energy would be preferred. The Town does not support or permit oil refineries, storage facilities, or staging areas in the town.*

Progress: This strategy has been eliminated from the plan, because this was not deemed an appropriate avenue to address this sensitive environmental issue.

Status/Corresponding 2015 Strategy: Eliminated

Strategy CB 43: The Town should develop a plan of action to maintain the materials and knowledge base for addressing a nuclear event, or develop preliminary measures to assist the county until the representatives arrive to maintain nuclear event preparedness.

Progress: The Town's police and fire departments have worked over the last five years with the County Local Emergency Planning Committee to address the issue of nuclear event preparedness. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC35

Town of Kure Beach

Strategy KB 1: Relocate the Riggins condominium complex, consisting of four residential properties, away from identified flood hazard area.

Progress: This project was never completed due to a lack of interest by property owners. The Town will maintain a general policy of carrying out structural mitigation projects moving forward. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC12

Strategy KB 2: Enhance public education and awareness strategies for disaster preparedness and prevention through hosting public meetings/workshops with guest speakers, in addition to providing additional literature on natural hazards and mitigation techniques.

Progress: The Town has not carried out education and awareness programs. Over the last five years, the Town has relied on New Hanover County emergency management for this function. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of

collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC4, NHC13, NHC14, NHC17, NHC26

Strategy KB 3: Enhance GIS capabilities for the Kure Beach Public Works Department through the addition of hazards specific spatial data to existing databases.

Progress: The Town has worked in conjunction with New Hanover County over the last five years to expand upon the Town's GIS system and spatial data resources. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC2

Strategy KB 4: Increase wildfire risk awareness and seek recognition through "Firewise Communities USA," in addition to developing strategies to buffer structures located on the urban wildland interface by cooperation with New Hanover County and the federal government.

Progress: The Town has not taken steps to be recognized as a "Firewise Community;" however, the Town does work annually with the NC Department of Forest Services to provide education and outreach to local residents. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC14, NHC15

Strategy KB 5: Design, build and maintain a managed stormwater system that is compliant with EPA's Stormwater Phase II requirements to minimize increased stormwater flooding due to increased construction.

Progress: This strategy has not been completed due to the exorbitant expense of designing and building a new system; and will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy KB 6: Continue to upgrade building codes and safety standards in cooperation with New Hanover County. Continue to upgrade and modify the Kure Beach building code to enhance the ability of structures to withstand storms.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. It should be noted that no locally specific standards were adopted. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This

change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC6

Strategy KB 7: Pursue elevation projects for any identified repetitive loss properties where the homeowner has expressed interest in such a project.

Progress: No elevation projects were funded or treated over the last five years; however, as previously stated, the Town will maintain a pro-active approach towards structural elevation for repetitively damage residential structures. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC12

City of Wilmington

Strategy ILM 1: IT Disaster Recovery / Business Continuity Planning Critically review the City's IT Systems, Infrastructure and Policies and develop a DR/BC Plan. Funds for this have been included in our requested budget and we have made some initial contacts to be included in a pilot program provided by the Institute of Governments Center For Public Technology.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 2: Pursue overall upgrade to IT system redundancy improvements to the network infrastructure, including: (1) improved switching equipment and related components; (2) a strategically expanded network to provide multiple routing alternatives through looping and expanding our fiber optics system; and (3) the implementation of a dedicated generator back-up.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated Countywide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 3: Implement program and system to transfer financial systems data to a hosted disaster recovery service.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated Countywide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 4: Replacement of all major City radios to the upgraded Motorola digital radio network.

Progress: This strategy has been completed since the last Plan update in 2011; however, the City will continue to maintain and upgrade the system as needed. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC24

Strategy ILM 5: Prepare and maintain a current list of all City employees by job classification with contact information to facilitate calling in resources for emergency response.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated Countywide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Eliminated

Strategy ILM 6: Provide special vehicle placards for City employees designated to respond in emergency situations to restricted areas or during periods of curfews.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated Countywide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Eliminated

Strategy ILM 7: Post information on the City's web page and Intranet to assist citizens in preparing for emergency situations.

Progress: This strategy has been completed since the last Plan update in 2011. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC28, NHC30, NHC38

Strategy ILM 8: Develop and maintain internal policies and procedures to support City employees in responding to emergency situations. Policies and procedures will include, but will not be limited to an Inclement Weather Policy.

Progress: This strategy has been completed since the last Plan update in 2011. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative

efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC36

Strategy ILM 9: Training for City personnel through FEMA's Emergency Management Institute (EMI) including ICS 100, ICS 200, ICS 300, ICS 400, ICS 400, IS 700, and IS 800

Progress: This strategy has been completed since the last Plan update in 2011. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC37

Strategy ILM 10: As part of the City of Wilmington Operation Center Project, the City of Wilmington is constructing all buildings with backup generators. Two of the buildings will be constructed to earthquake standards to protect the City of Wilmington's Traffic Control Center and the Operations Emergency Operations Center (EOC) for the field operation groups. This purchase of the property was chosen with connection to major thoroughfares so response vehicles could deploy easier during an emergency event. Presently responding divisions are in residential areas with numerous trees.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 11: Complete Walnut Street Wastewater Pump Station Improvements Project, which includes the addition of a fourth pump and a new in-stream waste grinder. Floodproofing and structural upgrades to the existing superstructure, replacement of the existing motor control center, HVAC upgrades, and replacement of pump isolation valves will also be included.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 12: Partner with the County to develop public information campaign utilizing external communications vehicles such as GTV-8 and NHCTV, city and county web sites and TV/Radio public service announcements. Campaign would address ongoing mitigation efforts, as well as ways to prepare for hurricane season.

Progress: This strategy has been completed since the last Plan update in 2011. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language

presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC17, NHC28, NHC30

Strategy ILM 13: Partner with the County to incorporate hazard mitigation educational materials in existing communication vehicles such as city newsletter, city/county water bills, city/county Web sites, bills and speaking engagements.

Progress: This strategy has been completed since the last Plan update in 2011. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC38

Strategy ILM 14: Seagate Drainage Project - flooding mitigation of major NCDOT thoroughfare and volunteer fire station.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 15: Engineering Feasibility Study for New Center Drive - flooding mitigation of major NCDOT thoroughfare and City pump station.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 16: Market Northwoods Drainage Project - flooding mitigation of properties along major NCDOT thoroughfare.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 17: Hinton Ave/Michelle Dr Drainage Project - flooding mitigation in residential area.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 18: Cedar Ave & Sweetwater Outfall Drainage Project - flooding mitigation of NCDOT major thoroughfare through commercial area.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 19: Heidi Drive Drainage Project – flooding mitigation in single family neighborhood.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 20: Market Street/Inland Greens Drainage Project - First phase of project to mitigate flooding mitigation in single family neighborhood and along Cardinal Drive.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 21: Plaza East Drainage Project - flooding mitigation of major drainage outfall through commercial area.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 22: Lincoln Outfall Project – Stream bank stabilization project in single-family neighborhood.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 23: Doctors Branch bank Stabilization Project. – Stream restoration and bank stabilization project in single-family and multi-family neighborhood.

Progress: The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC5, NHC10

Strategy ILM 24: Longstreet Canal Drainage Project - Flooding mitigation and erosion stabilization of major drainage outfall through residential area.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 25: Dupree Dr Drainage Project - flooding mitigation through residential area because of lack of drainage system.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 26: Cavalier Drive Drainage Project – flooding mitigation in single-family neighborhood.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 27: Wisteria/Clearbrook Drainage Project – flooding mitigation in single-family neighborhood.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 28: Burnt Mill Tidegate Project – Restoration and rehabilitation of tidegate structure and repair of breached area around tidegate that reduces flooding in Burnt Mill Creek area.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 29: Mineral Springs 02-03 Project – flooding mitigation in commercial area.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 30: Benda Drive Drainage Project – flooding mitigation in single-family neighborhood.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 31: Cardinal/George Trask Project – flooding mitigation in single-family neighborhood.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Strategy ILM 32: Hunters Trail Culvert Replacement Project – flooding mitigation in single-family and multi-family neighborhood.

Progress: This strategy has been completed since the last Plan update in 2011; therefore it will be eliminated from the updated County-wide and City of Wilmington strategy tables.

Status/Corresponding 2015 Strategy: Completed

Town of Wrightsville Beach

Strategy WB 1: Support the New Hanover County Emergency Operations Plan, adopted January 2003.

Progress: The Town of Wrightsville Beach has participated in the annual implementation of the New Hanover County EOP over the last five years, including all annexes such as the Tsunami Ready Plan currently in place for the County and the provision of E-911 services. This effort has included participation in exercises and collaboration regarding annual updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC27

Strategy WB 2: Support the Tsunami Ready Plan for New Hanover County, adopted 2008.

Progress: The Town of Wrightsville Beach has participated in the annual implementation of the New Hanover County EOP over the last five years, including all annexes such as the Tsunami Ready Plan currently in place for the County and the provision of E-911 services. This effort has included participation in exercises and collaboration regarding annual updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC18, NHC27

Strategy WB 3: Maintain a post disaster recovery contract with a qualified service provider, to include the provision of essential services and equipment (i.e., generators).

Progress: Wrightsville Beach has maintained a contract with a Qualified Post-Disaster Debris Contractor over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC3, NHC27

Strategy WB 4: Request funding for an Emergency Operations Center, to be located off the island in an effort to serve the town during extreme weather events.

Progress: This strategy has been deemed impractical and too costly, and will therefore be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy WB 5: Monitor the status of backup generators, communications, and vehicles for all critical public facilities. Test generators, communications equipment, and vehicles on a regular basis, not only for maintenance, but to confirm that the equipment continues to match the needs of critical facility expansion or updated operations.

Progress: The Town carries out routine maintenance on an annual basis through the Town's Public Works department. No new generators were acquired during the implementation period. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC3, NHC11

Strategy WB 6: Continue to invest in equipment that will ensure uninterrupted communications, to include continued support of the Town's exiting satellite telephone system.

Progress: No new communications equipment has been purchased by the Town over the last five years; however, the Town has completed construction of the Town's new public safety center which provides improved emergency services to town residents and visitors. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC24

Strategy WB 7: Continue to support the efforts of the New Hanover County Emergency Management Department's role in providing Emergency 911 services to the Town. The Town will maintain its internal emergency response communications system as a backup in the event that it is needed.

Progress: The Town of Wrightsville Beach has participated in the annual implementation of the New Hanover County EOP over the last five years, including all annexes such as the Tsunami Ready Plan currently in place for the County and the provision of E-911 services. This effort has included participation in exercises and collaboration regarding annual updates. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative

efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC24

Strategy WB 8: Seek grant funding for the acquisition and installation of a new repeater system for the Police Department communications system.

Progress: This strategy was completed in conjunction with development of the new public safety center, and will therefore be eliminated from this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy WB 9: Support storm hazard mitigation policies provided in the 2006 Wrightsville Beach CAMA Land Use Plan.

Progress: This strategy has been carried out through planning and zoning efforts over the last five years. No updates have been made to the Town's CAMA Land Use Plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC18, NHC21

Strategy WB 10: Continue to enforce the International Building Code, to include requiring that new structures or structures undergoing significant renovation (renovations or expansion exceeding 50% of fair market value) meet code requirements for coastal areas.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC6

Strategy WB 11: Continue to require the provision of an elevation certificate for all development within a Special Flood Hazard Area (SFHA). All elevation certificates will be submitted on an official FEMA Elevation Certificate form.

Progress: The Town has continued, over the last five years, requiring an elevation certificate for all properties located in the flood hazard area. This action is carried out as a function of the Town's Community Rating System program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC6, NHC13

Strategy WB 12: Monitor repetitive loss areas as indicated on Map 7. When necessary, the Town will assist repetitive loss property owners with securing assistance to address either elevation or acquisition of their floodprone property.

Progress: The Town pro-actively seeks out funding for the elevation of repetitive loss structures. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC12

Strategy WB 13: Continue to support the efforts of the NC Office of Dam Safety (NCODS) in their efforts to inspect and maintain structurally sound levee and dam facilities throughout the State.

Progress: The Town has continued, over the last five years, to support the NC Office of Dam Safety's efforts. This action is carried out as a function of the Town's CRS program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: Table 6-5 (page 6-40)

Strategy WB 14: Require the Town Public Works Department to routinely monitor and prune trees and branches on public property, and within the right-of-way to minimize potential damage in the event of a wind or ice storm. Additionally, support the efforts of Progress Energy to keep all utility easements free from encroaching trees and limbs.

Progress: This strategy is considered a day-to-day function of the Public Works department. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC33

Strategy WB 15: Continue to maintain all properties acquired through HMGP funding or other sources aimed at addressing natural hazard mitigation as open space in perpetuity.

Progress: The Town has maintained this policy over the last five years and will continue to do so regarding all properties acquired through HMGP programs. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC19

Strategy WB 16: Continue to require fire suppression sprinkler systems within all substantially modified or new commercial development and residential construction exceeding two units (three or more). Encourage installation in single-family and duplex residences.

Progress: This strategy is carried out through enforcement of the NC State Building Code. These standards have been imposed over the last five years and will continue through this update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC6

Strategy WB 17: Consider increasing the size of water lines and water mains on the south end of the island. This action is desired to address fire flow demands that continue to increase as new residential structure sizes expand in square footage.

Progress: This strategy will not be implemented due to the exorbitant cost associated with this project.

Status/Corresponding 2015 Strategy: Eliminated

Strategy WB 18: Continue to maintain the facilities and support the efforts of the Wilmington Municipal Fire Department to provide maritime fire protection services within Wrightsville Beach.

Progress: The Town has been diligent in carrying out this strategy through development of the Wrightsville Beach Public Safety Center. This facility was completed over the last planning period, and will assist in fire protection moving forward. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC31

Strategy WB 19: Improve Community Rating System (CRS) status.

Progress: The Town's CRS status has not improved over the last five years; however, the Town hopes to improve the rating through recently established guidelines regarding the CRS program. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC25, NHC31, Table 6-5 (page 6-40)

Strategy WB 20: Consider working with regional partners on the development and adoption of legislation that will enable the Town to enforce the wind-borne debris International Building Code standards throughout the Town's corporate limits (enabling the town to secure a CRS rating of 5).

Progress: This strategy has been deemed too difficult to achieve from a political standpoint and will therefore be eliminated from this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy WB 21: Work to maintain the Town's status as a Cooperating Technical Partner under the terms of the NFIP Community Rating System (CRS).

Progress: The Town has maintained this status through participation in the CRS program over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC9, NHC12, NHC13, NHC18

Strategy WB 22: Monitor the Town's water supply to determine if aquifers are threatened or if other alternatives are required.

Progress: The Town has carried out this strategy through local and regional water supply protection measures. Through implementation of the Town' sWater Supply Shortage Plan, these efforts will continue but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC34

Strategy WB 23: Continue to seek funding sources for the elevation or retrofitting of existing sewer lift stations in an effort to reduce or eliminate the impacts from flooding. The lift stations and the need/priority for elevation are outlined on Map 8.

Progress: No sewer infrastructure components have been treated over the last five years; however, the need still exists and the Town will monitor the situation through this update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC7

Strategy WB 24: Update the Town's Flood Damage Prevention Ordinance in conjunction with the development of a Unified Development Ordinance (UDO).

Progress: The Town did not update the FDPO in conjunction with development of the UDO, but did update the Ordinance in conjunction with the FIRM map update process. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC9, NHC18

Strategy WB 25: Request Hazard Mitigation Assistance (HMA) funding for elevation/floodproofing of repetitive loss properties.

Progress: The Town has maintained this policy over the last five years and will continue to do so regarding all properties acquired through HMGP programs. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC12

Strategy WB 26: Request Hazard Mitigation Assistance (HMA) funding for the elevation of structures substantially damaged during a natural hazard event.

Progress: The Town has maintained this policy over the last five years and will continue to do so regarding all properties acquired through HMGP programs. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC12

Strategy WB 27: Request Hazard Mitigation Assistance (HMA) funding for wind proofing of critical facilities.

Progress: The Town has maintained this policy over the last five years and will continue to do so regarding all properties acquired through HMGP programs. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC12

Strategy WB 28: Continue to provide technical information to builders, developers, & architects in an effort to familiarize them with NFIP land use and building standards and principles for quality redevelopment and safe housing development through written materials or a Town-sponsored workshop.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: NHC25

Strategy WB 29: Advertise the availability of flood insurance once annually through direct mailings, coordination with local real estate agents, and on the Town's website.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: NHC13, NHC17, NHC25

Strategy WB 30: Distribute a flood protection flyer through a community newsletter, utility bill, or other document that is distributed to all residences once annually. The flyer will include the following information: flood safety, flood insurance, property protection, floodplain development requirements, and drainage system maintenance. This information will also be made available at the Town's municipal building.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: NHC13, NHC17, NHC25

Strategy WB 31: Provide information to all individuals inquiring about issues relating to floodplain development. This effort will involve educating citizens about the development constraints and requirements regarding development within a Special Flood Hazard Area (SFHA). This service will be advertised on the Town's website, and once annually in the local newspaper.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: NHC13, NHC17, NHC25

Strategy WB 32: Ensure that the local New Hanover County Public Library maintains documents about flood insurance, flood protection, floodplain management, and natural and beneficial functions of floodplains. Many documents are free of charge from FEMA. The Town will maintain a disclosure statement from the library that these material are available, and have been incorporated into the library's resource inventory system.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: NHC13, NHC25

Strategy WB 33: Provide local real estate agents with handouts that will advise potential buyers to investigate the flood hazard for the property they are considering purchasing. Additionally, the town will secure disclosure statements from all real estate agencies participating in this effort stating that it is the organization's policy to inform clients about issues relating to developing and/or purchasing property within the floodplain.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in

collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: NHC13, NHC25

Strategy WB 34: Maintain current and accurate information at the municipal building, as well as on the Town's website, regarding the following: mitigation activities, the availability of NFIP flood insurance, emergency operations policies, and evacuation and reentry information.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: NHC13, NHC26, NHC27, NHC28

Strategy WB 35: Continue to maintain accurate and updated Flood Insurance Rate Map (FIRM) information on a Geographic Information System (GIS). This system will be utilized for day-to-day floodplain management activities.

Progress: The Town has maintained flood insurance rate information on the Town's website, as well as through the State of NC website (http://www.ncfloodmaps.com/) over the last five years. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC2, NHC9

Strategy WB 36: Continue to implement the activities outlined within the standing NPDES Permit issued through the North Carolina Department of Environment and Natural Resources. These efforts provide a comprehensive approach to stormwater management planning.

Progress: The Town has continued to carry out activities outlined within the Town's NPDES Stormwater Permit over the last five years. This effort has included strict enforcement of the Town's Stormwater Management Ordinance. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC5

Strategy WB 37: Continue to enforce the Town's Stormwater Management Ordinance. This ordinance enforces standards relating to post development runoff conditions, as well as protection of the Town's MS4 against illicit discharges and dumping.

Progress: The Town has continued to carry out activities outlined within the Town's NPDES Stormwater Permit over the last five years. This effort has included strict enforcement of the Town's Stormwater Management Ordinance. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-3). This change is a result of collaborative efforts focused on developing an effective Regional Plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: NHC10

PENDER COUNTY MITIGATION PROGRESS REPORT

The following provides a summary of progress achieved with regard to the strategies adopted through the 2010 Pender County Multi-Jurisdictional Hazard Mitigation Plan.

Pender County

Strategy 1.1: In concert with the American Red Cross (ARC), maintain a continuously updated list of all ARC approved shelters.

Progress: The County has maintained an updated list of all ARC approved shelters over the last five years as a component of the Couny's ongoing Emergency Operations Planning. The County will revisit this issue on annual basis in conjunction with EOP updates.

Status/Corresponding 2015 Strategy: PC1

Strategy 1.2: Continuously maintain, on the County's website, instructional information on ensuring that onsite sheltering is as safe an option as possible.

Progress: This strategy was deemed redundant to other strategies outlined through the update. Due to this fact the strategy is being eliminated from the plan.

Status/Corresponding 2015 Strategy: Eliminated

Strategy 2.1: Maintain continuous contact/working relationship with electric service providers in the County to address the following (1) disaster preparedness techniques (e.g., tree trimming, vegetation planting requirements, pole replacement), (2) Identify critical electrical facilities needing retrofit or upgrade and map with elevation reference marks and, (3) communication with County officials during and immediately after a natural hazard event that results in loss of electrical power. The MAC will meet at least once per year with electric service providers.

Progress: The County, in conjunction with participating municipalities, has maintained a working relationship with electric service providers through annual EOP processes and procedures reviewed on an annual basis. These efforts include holding an annual coordination meeting prior to the start of hurricane season.

Status/Corresponding 2015 Strategy: PC2

Strategy 2.2: Improve capability of secondary power source at all Pender County and Municipal critical facilities (all buildings).

Progress: Pender County has worked closely with the Towns, as well as NCDPS to ensure that alternative power sources are available at all critical facilities.

Status/Corresponding 2015 Strategy: PC3

Strategy 2.3: Retrofit all Pender County and Municipal facilities for lightning protection (existing buildings).

Progress: This strategy has eliminated through the plan update due to a lack of funding and logistical difficulties.

Status/Corresponding 2015 Strategy: Eliminated

Strategy 3.1: Support conservation easements on all floodprone property and impose such easements on all properties acquired with public assistance funds.

Progress: The County, as well as all participating jurisdictions, have maintained this policy over the last five years in an effort to minimize development in the floodplain.

Status/Corresponding 2015 Strategy: PC4

Strategy 3.2: Integrate new greenway and public park improvements into comprehensive planning and capital improvement efforts (including coordination with all local certified CAMA land use plans).

Progress: This strategy has been removed due to a lack of success in carrying this out over the past two planning periods. The County will revisit this through future Comprehensive Planning Processes, but this strategy will not be carried forward through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy 3.3: Provide annual review of development restrictions in floodplain areas and maintain initiatives to ensure limited residential and commercial development in the floodplains and protection of critical facilities. Specifically, address soil testing for engineered foundations, minimum lot size, critical facility protection, manufactured home park requirements including anchoring and elevation, and freeboard requirements (new buildings).

Progress: The County, as well as participating municipalities, have reviewed all land development regulations to ensure that to the maximum extent practicable, floodplain development is limited. These efforts included review of the County's Flood Damage Prevention Ordinance as required through NCDPS and FEMA. No changes were made over the last five years.

Status/Corresponding 2015 Strategy: PC5

Strategy 3.4: Maintain all properties acquired through HMGP Funding or other sources aimed at addressing natural hazard mitigation as open space in perpetuity.

Progress: The County maintained all parcels acquired through HMGP funds as open space. When possible, these sites will be utilized in a manner compatible with FEMA reuse standards; however, this effort has not been achieved over the last five years.

Status/Corresponding 2015 Strategy: PC6

Strategy 4.1: Review "firewise" zoning and subdivision standards and recommend their appropriateness for incorporation into existing (or new) zoning, subdivision, or UDO ordinances. (Source: http://www.firewise.org) This will include the establishment of buffers around National Forest Areas and extreme wildfire areas, improved subdivision design, and other identified mitigation actions. All plans to be reviewed by local Fire Department (new buildings).

Progress: This strategy has not been carried out to date, and there is no intention to proceed with this effort.

Status/Corresponding 2015 Strategy: Eliminated

Strategy 5.1: Annually review County and Municipal Zoning, Subdivision, UDO, and Flood Damage Prevention Ordinances for improved control of flooding hazards, including identifying/responding to new flood data.

Progress: This strategy was deemed redundant to strategy eight outlined above and therefore has been eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy 5.2: Adopt and annually update a capital improvement plan with an emphasis on mitigation for critical facilities including relocation and retrofitting (existing buildings). (NOTE: Subject to funding availability)

Progress: The County has maintained this strategy through the annual budget deliberation. The recommendations and data outlined in the 2011 HMP were factored into this discussion.

Status/Corresponding 2015 Strategy: PC7

Strategy 5.3: At the staff level, work with the North Carolina Department of Transportation (NCDOT) to identify and develop resolutions for drainage issues created by NCDOT facilities, including inspections of channels, retention basins, and, as needed, pursue debris removal.

Progress: No progress has been made regarding this strategy over the last five years; however, the County will continue to work closely with NCDOT to resolve these issues.

Status/Corresponding 2015 Strategy: PC8

Strategy 5.4: Apply for all available funding from the Hazard Mitigation Grant Program (HMGP) and funds to assist with the mitigation of severe repetitive loss properties to relocate structures out of the floodplain (existing buildings).

Progress: Over the last five years, the County has not received any HMGP funding to treat repetitive loss properties.

Status/Corresponding 2015 Strategy: PC9

Strategy 5.5: Require a finished floor elevation certificate for all development within the special flood hazard area (SFHA) within both incorporated and unincorporated portions of the County. All elevation certificates should be submitted on an official FEMA elevation certificate. No certificate of occupancy shall be issued for any development within a defined special flood hazard area without the submittal of the required elevation certificate (new buildings).

Progress: The County has continued to implement this strategy in concert with the NFIP program over the last five years.

Status/Corresponding 2015 Strategy: PC10

Strategy 5.6: Continue to comply with North Carolina State Coastal stormwater regulations.

Progress: The County has continued to maintain this strategy in concert with NCDEQ over the last five years.

Status/Corresponding 2015 Strategy: PC11

Strategy 5.7: Continuously maintain information concerning the County's flood data maintenance efforts, including GIS/tax parcel data.

Progress: The County has continued to maintain updated tax parcel information in an effort to ensure effective monitoring and analysis throughout flood prone portions of the County.

Status/Corresponding 2015 Strategy: PC12

Strategy 6.1: Maintain a map information service involving the following: (1) Provide information relating to Flood Insurance Rate Maps (FIRMs) to all inquirers, including providing information on whether a given property is located within a flood hazard area, (2) Provide information regarding the flood insurance purchase requirement on the county's website, (3) Maintain historical and current FIRM's, (4) Locally advertise annually in the local newspaper, (5) Provide information to inquirers about local floodplain management requirements, (6) Include in the county's newsletter (all property owners) and on the county's website a letter on flood insurance, (7) Notify property owners within a floodprone area that they are subject to flooding (all buildings).

Progress: This strategy has continued to be implemented by the County, as well as participating municipalities, in an effort to promote sound development throughout the County's flood hazard area.

Status/Corresponding 2015 Strategy: PC13

Strategy 6.2: Make information regarding hazards and development regulations within the floodplains available through the following: (1) The County Planning Director will ensure that the local library maintains information relating to flooding and flood protection and (2) The County will provide a link on their website to FEMA resources addressing flooding and flood protection (all buildings).

Progress: This strategy has been maintained as a day-to-day function of County service delivery. This fact is reflected in the updated plan.

Status/Corresponding 2015 Strategy: PC14

Strategy 6.3: Provide comprehensive services regarding planning and development activities within the defined SFHA. These services will include (1) Providing site specific flood and flood-related information on an as needed basis, (2) Building inspections department will maintain a list of contractors with experience in floodproofing and retrofit techniques, (3) Building inspections department will maintain materials providing an overview of how to select a qualified contractor, (4) Make site visits upon request to review occurrences of flooding, drainage, and sewer problems--if applicable, inspector should provide one-on-one advice to the property owner, (5) Provide advice and assistance regarding CRS Activity 530, (6) Advertise the availability of services annually within the local newspaper, and (7) Maintain a log of all individuals assisted through these services, including site visits (all buildings).

Progress: This strategy has been maintained as a day-to-day function of County service delivery. This is reflected in the updated plan.

Status/Corresponding 2015 Strategy: PC15

Strategy 6.4: Pender County will work with local real estate agencies to ensure that agents are informing clients when property for sale is located within an SFHA. The County will provide these agencies with brochures documenting the concerns relating to development located within flood prone areas. (all buildings)

Progress: Pender County has continued to carry out this strategy as a component of the Community Rating System Program. The County assists County CRS communities with carrying out this activity.

Status/Corresponding 2015 Strategy: PC16

Strategy 6.5: Coordinate with the Pender County School System Hazards Awareness Educational Programs for use by educators within the Pender County School System.

Progress: This strategy has been carried out as a component of the County's Emergency Operations Planning Program over the last five years.

Status/Corresponding 2015 Strategy: PC17

Strategy 6.6: Post educational information on the County's website addressing the hazards associated with wildfires, hail, tsunamis, and storm surge.

Progress: This strategy has been carried out as a component of the County's Emergency Operations Planning Program.

Status/Corresponding 2015 Strategy: PC18

Strategy 7.1: Continue to rely on the Pender County Emergency Operations Plan (EOP) for effective disaster event communication.

Progress: This strategy has been carried out, including annual updates, in conjunction with all participating jurisdictions.

Status/Corresponding 2015 Strategy: PC19

Strategy 7.2: Maintain a registry of special needs individuals which has been coordinated with the Pender County Department of Social Services. This list will include: (1) Persons on life support systems, (2) Persons dependent on electricity for medical equipment, and (3) Persons with severe mental handicap or mental illness. Coordinate with current county system and local plans. Connect with county CTY (Call Back Program).

Progress: Pender County in conjunction with all participating jurisdictions has worked to promote and solicit participants into the Special Medical Needs program on an annual basis.

Status/Corresponding 2015 Strategy: PC20

Strategy 7.3: Pender County, in conjunction with all participating municipal jurisdictions participating in this document, will work on the five year implementation of this plan. At the end of this five year period, the county will undertake efforts to update this plan including the following ten planning steps: (1) Organize to prepare the plan, (2) Involve the public, (3) Coordinate with other agencies, (4) Assess the hazard, (5) Assess the problem, (6) Set goals, (7) Review possible activities, (8) Draft an action plan, (9) Adopt the plan, and (10) Implement, evaluate, and revise.

Progress: Pender County has carried out this strategy as a requirement and component of plan implementation.

Status/Corresponding 2015 Strategy: PC21

Strategy 8.1: Support storm hazard mitigation policies provided in the 2004 Pender County CAMA Land Use Plan, including redevelopment policies.

Progress: Pender County acknowledges the strategies and data in this plan through all Comprehensive Planning updates, and will continue to do so. Due to this fact, this strategy has been eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy 8.2: Continue to enforce the International Building Code, to include requiring that new structures or structures undergoing significant renovation (renovations or expansion exceeding 50% of fair market value) meet code requirements for coastal and noncoastal areas (all buildings).

Progress: Pender County, as well as all participating jurisdictions, have continued to enforce the International/NC State Building Code.

Status/Corresponding 2015 Strategy: PC22

Strategy 8.3: Continue to support the NC Office of Dam Safety's efforts to monitor and inspect all dams throughout the state. The county will rely on this agency to ensure that all dam facilities, both public and private, are properly maintained and stable (all buildings).

Progress: Pender County has carried out this strategy as a component of the Community Rating System Program. The County assists County CRS communities with carrying out this activity.

Status/Corresponding 2015 Strategy: PC23

Strategy 8.4: Request Hazard Mitigation Assistance (HMA) funding for the elevation/floodproofing of repetitive loss properties (existing buildings).

Progress: Pender County, in collaboration with participating municipalities, have pro-actively addressed elevation/acquisition efforts for structures deemed to be Repetitive Loss Properties. The County received award in late 2015 of an FY14 FMA project consisting of five acquisitions and six elevations.

Status/Corresponding 2015 Strategy: PC24

Strategy 8.5: Request Hazard Mitigation Assistance (HMA) funding for wind proofing of critical facilities (existing buildings).

Progress: This strategy was not completed over the last five years. The Town will continue to seek funding under implementation of this update.

Status/Corresponding 2015 Strategy: PC25

Strategy 8.6: Consider working with regional partners on the development and adoption of legislation that will enable the County to enforce the wind-borne debris international Building Code standards throughout the County (enabling the County to secure a CRS Rating of 5).

Progress: This strategy has been eliminated from the plan, due to the fact that this strategy is not considered politically feasible.

Status/Corresponding 2015 Strategy: Eliminated

Strategy 9.1: Continue to implement the activities outlined within the standing NPDES Permit issued through the North Carolina Department of Environmental and Natural Resources. These efforts provide a comprehensive approach to stormwater management planning.

Progress: Pender County is not currently an NPDES community, and therefore this strategy has been removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy 9.2: Continue to maintain state approved water supply plans.

Progress: This strategy has been maintained by Pender County, as well as all municipal entities within the County that maintain a locally maintained public water system.

Status/Corresponding 2015 Strategy: PC26

Strategy 9.3: Adopt water shortage response plans and water shortage ordinances.

Progress: A water shortage response plan was adopted by Pender County in 2011. The ordinance continues to be enforced.

Status/Corresponding 2015 Strategy: PC27

Strategy 9.4: Monitor the county's water supplies to determine if aquifers are threatened or if other alternatives are required.

Progress: This strategy has been eliminated due to the fact that this issue falls under the jurisdiction of NCDENR and is handled at the regional level.

Status/Corresponding 2015 Strategy: Eliminated

Strategy 9.5: Continue to seek funding sources for the elevation or retrofitting of existing sewer lift stations in an effort to reduce or eliminate the impacts from flooding.

Progress: Pender County, in collaboration with participating municipalities, have pro-actively addressed elevation/acquisition efforts for structures deemed to be Repetitive Loss Properties over the last five years.

Status/Corresponding 2015 Strategy: PC28

Town of Surf City

Strategy Surf City 1.1.1: Hold a community sponsored hazard mitigation seminar for the community residents, including information on preparedness for all hazards significant to Surf City.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: PC18

Strategy Surf City 1.1.2: Educate contractors about principles for quality redevelopment and safe housing development through written materials or a community sponsored workshop.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: PC13, PC14, PC15

Strategy Surf City 1.1.3: Provide new home and property buyers with information on quality redevelopment and safe housing development. The information is probably most efficiently dispersed at the community administration buildings.

Progress: The Town's Planning and Inspections Department maintains a well-trained staff which provides comprehensive services to property owners regarding building and development. These services include guidance regarding development in the defined flood hazard areas. The departments also maintain a library of materials available for review by citizens and builders. These materials are also made available through local library branches and provided to local real estate agents in an effort to provide comprehensive education and outreach regarding development in hazard prone areas. The County, in collaboration with participating municipal jurisdictions, will continue to maintain and provide this information through respective local planning and inspections offices throughout the County.

Status/Corresponding 2015 Strategy: PC14, PC15

Strategy Surf City 1.2.1: Manually disperse and have a website posting which provides information about the Community-Based Hazard Mitigation Plan for Surf City and relevant mitigation measures the public can take. In addition, provide a response/reply section where residents can comment on the effectiveness of the current plan and where they can make suggestions for future revisions oon the plan.

Progress: The Town has maintained this information on the Town website over the last five years and will continue to update the website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: PC14, PC18

Strategy Surf City 1.2.2: Manually disperse and have a website posting which provides information about the Multi-Hazard Recovery Plan for Surf City.

Progress: The Town has maintained this information on the Town website over the last five years and will continue to update the website. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: PC14, PC18

Strategy Surf City 2.1.1: Purchase a complete GIS/plotter setup and provide training on said set up to all pertinent Town personnel.

Progress: This strategy has been completed and therefore, will be removed through the plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Surf City 2.1.2: Purchase a GPS system for the Public Works Department, Police Department, and Community Development Department.

Progress: This strategy has been completed and therefore, will be removed through the plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Surf City 2.1.3: Secure the services of two interns to assist in plotting latitude and longitude of all community structures to develop a data base of structures that could potentially be damaged by a disaster. This will ensure data is immediately available and accurate in order to apply to FEMA funding in the future.

Progress: This strategy has not been completed and will be eliminated since current full-time staff handles this function.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Surf City 2.1.4: Purchase a Command Mobile Unit (CMU) for use by the Police Department and Fire Department during and following a disaster.

Progress: This strategy was completed in 2011, and therefore, will be eliminated.

Status/Corresponding 2015 Strategy: Completed/Eliminated

Strategy Surf City 2.1.5: Purchase a loader for the Public Works Department in an effort to remove sand from the roads (thereby reopening them) and to replace sand back on the beach (lessening the potential for additional berm damage) in a more timely fashion after a severe disaster.

Progress: This strategy was completed in 2012, and therefore, will be eliminated.

Status/Corresponding 2015 Strategy: Completed/Eliminated

Strategy Surf City 2.1.6: Purchase a hand held radio for the Public Works Department in an effort to continue communications between primary town personnel during and following a disaster.

Progress: This strategy was completed in 2012, and therefore, will be eliminated.

Status/Corresponding 2015 Strategy: Completed/Eliminated

Strategy Surf City 2.1.7: Purchase backup generators for 3 sub-stations (15kw) in an effort to mitigate the potential for overflow during a flooding event and to ensure continued service following a disaster.

Progress: This strategy was completed in 2013, and therefore, will be eliminated.

Status/Corresponding 2015 Strategy: Completed/Eliminated

Strategy Surf City 2.1.8: Purchase a generator for the Police Department (50kw) to ensure communications equipment remains in operation during and following a disaster.

Progress: This strategy was completed in 2013, and therefore, will be eliminated.

Status/Corresponding 2015 Strategy: Completed/Eliminated

Strategy Surf City 2.1.9: Install System Control and Data Acquisition (SCADA) System to assist in keeping the water and sewer systems in working order before, during, and following a disaster.

Progress: This strategy has not been accomplished and will be eliminated because of lack of funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Surf City 3.1.1: Replace the Police Department.

Progress: This strategy has not been accomplished and will be eliminated because of lack of funding.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Surf City 3.1.2: Elevate Town Hall.

Progress: This strategy has not been completed to date, but the Town will aim to accomplish this effort through implementation of this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: PC9, PC24

Strategy Surf City 3.2.1: Participate in the CRS program and develop a CRS plan to assist in mitigating repetitive losses in Surf City.

Progress: The Town has not joined the CRS program to date. The Town will consider joining through this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: Table 6-5 (page 6-40)

Strategy Surf City 3.2.2: Develop a stand-by application for submission to the Hazard Mitigation Grant Program for elevation of structures in the identified areas of repetitive damage.

Progress: This strategy has not been completed; however, NCDPS now handles this function.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Surf City 3.2.3: Develop a stand-by application for submission to the Hazard Mitigation Grant Program for acquisition of structures in the identified areas of repetitive damage.

Progress: This strategy has not been completed; however, NCDPS now handles this function.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Surf City 3.3.1: Implement the recommendations set forth in the Stormwater Management Study and any subsequent amendments that will reduce the potential for damage as a result of improper stormwater drainage.

Progress: Portions of this strategy have been implemented; however, the County continues to carry out implementation. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: PC7

Strategy Surf City 3.3.2: Continue to seek alternate funding sources to implement the recommendations set forth in the Stormwater Management Study from 2000 and any subsequent amendments.

Progress: Portions of this strategy have been implemented; however, the County continues to carry out implementation. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: PC7, PC11

Strategy Surf City 4.1.1: Update and revise the Zoning Ordinance and its subsequent maps.

Progress: The Town has not updated local zoning regulations; however, the Town will aim to budget funding for this effort through implementation of this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: PC5

Strategy Surf City 4.1.2: Update and revise the local Subdivision Ordinance.

Progress: The Town has not updated local zoning regulations; however, the Town will aim to budget funding for this effort through implementation of this plan update. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: PC5

Strategy Surf City 4.1.3: Update and revise the CAMA Land Use Plan.

Progress: The Town has not updated local zoning regulations; however, the Town will aim to budget funding for this effort through implementation of this plan update. The actions defined under this

locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: PC5

Strategy Surf City 4.2.1: Develop a Multi-Hazard Disaster Recovery Plan to replace the existing Hurricane Plan.

Progress: This strategy has not been accomplished; however, this Regional HMP should serve to address this issue.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Surf City 5.1.1: Continue to enforce the North Carolina State Building Code. Require that new structures or structures undergoing significant renovation meet code requirements for coastal areas in accordance with the International Building Codes.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: PC22

Strategy Surf City 5.1.2: Reduce the potential for wind borne missals by taking a pro-active approach to investigating and condemning structures that are substantially damaged and unsuitable for habitation.

Progress: The County, as well as all participating jurisdictions, actively enforce the building code and adopt amendments and changes as required. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: PC22

Strategy Surf City 6.1.1: Develop local Water Shortage Response Guidelines (in different phases) as a part of the Surf City Multi-Hazard Disaster Recovery Plan as it relates to the expectations of the Town's water supplier.

Progress: This effort was completed in 2012 and will be implemented through future updates of this plan. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is

a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: PC27

Strategy Surf City 7.1.1: Maintain hazardous materials event preparedness. The Town should develop a plan of action to maintain the materials and knowledge base for addressing such a spill, or develop preliminary measures to assist the county until the representatives arrive. This responsibility must be supported by provision of adequate funding for materials and trainings necessary to maintain this preparedness.

Progress: The Town has not completed this effort; however, Town emergency management has worked closely with the County LEPC to address this issue. The actions defined under this locally specific strategy statement will continue, but are now addressed through updated language presented in the County-wide Mitigation Strategies (Table 6-4). This change is a result of collaborative efforts focused on developing an effective Regional plan with effective intergovernmental coordination and cooperation.

Status/Corresponding 2015 Strategy: PC19

Strategy Surf City 7.2.1: The Town must inspect all propane tanks located within the town limits of Surf City to ensure they are secured as established through state regulations. Town officials have identified their concern is primarily related to tanks floating through town during high water events. However, this strategy will also prevent said tanks from being blown over due to high wind events.

Progress: It has been determined that staff does not have the resources to carry out this strategy. This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Surf City 7.2.2: The Town should annually inspect all propane tanks located within the town limits of Surf City to ensure there are adequate valve systems.

Progress: It has been determined that staff does not have the resources to carry out this strategy. This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Surf City 7.2.3: Secure interns to identify via GPS properties with privately-owned propane tanks.

Progress: It has been determined that staff does not have the resources to carry out this strategy. This strategy was deemed not relevant to mitigation activities and therefore, will be removed through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

Strategy Surf City 8.1.1: Increase the number of paid staff positions by adding one additional position.

Progress: This strategy has been deemed irrelevant to the Town's mitigation program and will be eliminated through this plan update.

Status/Corresponding 2015 Strategy: Eliminated

APPENDIX H.

CRS STEP 7 (REVIEW OF POSSIBLE ALTERNATIVES FOR MITIGATION PROGRAM EXPANSION)

INTRODUCTION

Throughout the Southeastern NC Region, there are 31 communities out of 32 involved in the Regional Mitigation planning process that participate in the National Flood Insurance Program. Of these, only 14 are participants in the Community Rating System (CRS) – Brunswick County, Calabash, Caswell Beach, Holden Beach, Oak Island, Ocean Isle Beach, Southport, Sunset Beach, New Hanover County, Carolina Beach, Kure Beach, Wrightsville Beach, Pender County, and Topsail Beach. Through the implementation of this plan, all current NFIP participants will consider potential participation in the CRS program. All existing CRS participants will continue to address all practicable CRS activities in an effort to mitigate the impacts of flooding on the respective community.

The following provides a summary of activities discussed throughout the context of the Southeastern NC Regional Hazard Mitigation Plan (RHMP) planning process. Community Rating System (CRS) guidance requires that all activities incorporated or eliminated through the planning process must be summarized in an effort to show that a thorough discussion of potential solutions, policy considerations and capital projects was carried out through the course of plan development. CRS guidance requires that the following six focus areas must be specifically addressed:

- Prevention/Regulatory Standards
- Property Protection Activities
- Protection of Natural/Environmental Functions
- Emergency Services Activities
- Structural Projects
- Public Information Activities

The following summary identifies the activities that have been incorporated or eliminated (refer to Appendix G) from this plan update under each of the above-referenced focus areas. This summary identifies where in the plan these issues are discussed and what current strategies have been defined under the six specified categories.

PREVENTION/REGULATORY STANDARDS

The Southeastern NC RHMP comprehensively addresses the issue of land use/floodplain regulatory standards. This element is accounted for within the context of this plan as follows:

- Section 4: Existing Policies, Programs and Ordinances (page 4-7)
- Section 6: Tables 6-2, 6-3, and 6-4
- Appendix G: Mitigation Progress Report

These sections of the Southeastern NC RHMP outline the utilization and status of policy/regulatory standards for all participating communities. The discussion of documents include the following local ordinances: Flood Damage Prevention Ordinance, North Carolina State Building Code, Subdivision Regulations, and Zoning Regulations. In addition to a summary of how these regulatory tools relate to effective mitigation, a summary of each community's ability to implement, enforce, and carry out the intent of these regulations is provided. Not all communities have adopted and implemented all of these tools (refer

to Tables 4-7 through 4-9) and the potential need for additional regulations at the local level was a key topic of debate during development of the Southeastern NC RHMP.

A review of past mitigation efforts and their relevance to each community's current planning efforts and Floodplain Management Program has been provided in Appendix G: Mitigation Status Report of this plan. A range of alternatives regarding prevention/regulatory tools available to further local mitigation efforts were discussed during the planning process including the following (not all of these options have been incorporated into the plan update):

- Establishment of floodplain data (statistical and mapping)
- Preservation of open space
- Establishment of floodplain regulations
- Increased setbacks (in relation to defined floodplains)
- Establishment of land development regulations
- Establishment of stormwater management regulations
- Enforcement of building codes
- Investment of capital improvements (drainage and stormwater)

Based on a comprehensive review of possible options under Prevention and Regulatory measures, the following are recommended strategies to be implemented. These strategies and their relevance to the Community Rating System program are outlined in the Table 6-2 (Brunswick County, pages 6-7 to 6-26), Table 6-3 (New Hanover County, pages 6-27 to 6-33), and Table 6-4 (Pender County, pages 6-34 to 6-39).

- Brunswick County (including Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown): BC8, BC9, BC10, BC12, BC14, BC22, BC 24, BC25, BC30, BC31, BC39, BC44
- Southport: BC58
- St. James: BC59
- New Hanover County (including Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach): NHC6, NHC9, NHC10, NHC15, NHC18, NHC21, NHC33
- Pender County (including Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha): PC5, PC10, PC11, PC22

PROPERTY PROTECTION ACTIVITIES

The Southeastern NC RHMP comprehensively addresses the issue of Property Protection. This element is accounted for within the context of this plan as follows:

- Section 4: Agency Organizational Review, Community Capability Assessment, Legal Capability Review, Fiscal Capability Review, Political Acceptability Review
- Section 5: Critical Facilities, Repetitive Loss Structures, Key Issues Regarding Thunderstorms/ Windstorms, Lightning and Hail, Change in Land Use Form
- Section 6: Tables 6-2, 6-3, and 6-4, Summary of CRS Rating of Strategies
- Appendix G: Mitigation Progress Report

These sections of the Southeastern NC RHMP provide an overview of each participating jurisdictions efforts to provide services and outreach aimed at reducing the vulnerability of the community to natural disasters, in particular severe flooding events. Each participating NFIP community has a responsibility to educate the public and regulate development throughout defined flood hazard areas. Although not all communities are participants, each County maintains a comprehensive Inspections Department charged with addressing these issues.

Those communities that are currently CRS participants continue to maintain a more stringent Mitigation/Flood Management Planning Program. These efforts are detailed throughout the sections outlined above and serve to provide pre- and post-disaster services relating to development and redevelopment within portions of each County recognized as Flood Hazard Areas by FEMA.

A review of past mitigation efforts and their relevance to each community's current planning efforts and Floodplain Management Program has been provided in Appendix G: Mitigation Progress Report. A range of alternatives regarding Property Protection efforts available to further local mitigation programs were discussed during the planning process including the following (not all of these options have been incorporated into the plan update):

- Relocation
- Acquisition
- Structural Elevation
- Retrofitting
- Infrastructure Protection/Elevation/Relocation
- Insurance Rate Reduction

Based on a comprehensive review of possible options under Property Protection activities, the following are recommended strategies to be implemented. These strategies and their relevance to the Community Rating System Program are outlined in Table 6-2 (Brunswick County, pages 6-7 to 6-26), Table 6-3 (New Hanover County, pages 6-27 to 6-33), and Table 6-4 (Pender County, pages 6-34 to 6-39).

- Brunswick County (including Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown): BC13, BC17, BC23, BC26, BC28
- Bald Head Island: BC54
- New Hanover County (including Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach): NHC7, NHC12, NHC19, NHC20
- Pender County (including Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha): PC2, PC4, PC6, PC9, PC21, PC24, PC25, PC28

PROTECTION OF NATURAL/ENVIRONMENTAL FUNCTIONS

The Southeastern NC RHMP comprehensively addresses the issue of Protecting Natural/Environmental Functions. This element is accounted for within the context of this plan as follows:

- Section 3: Hazard Identification and Analysis
- Section 4: Community Capability Assessment
- Section 5: Vulnerability Assessment
- Section 6: Tables 6-2, 6-3, and 6-4, Summary of CRS Rating of Strategies
- Appendix G: Mitigation Progress Report

The discussion of protecting natural/environmental functions throughout this plan is folded into the review of other activities and functions, in particular the overview of policy and regulatory controls. A majority of environmental protection efforts are handled through either ongoing stewardship efforts or regulatory controls (i.e., stormwater regulations).

A review of past mitigation efforts and their relevance to each community's current and past environmental protection efforts has been provided in Appendix G, Mitigation Progress Report of this plan. A range of alternatives regarding environmental protection were discussed during the planning process including the following (not all of these options have been incorporated into the plan update):

- Wetlands protection
- Water quality improvement
- Erosion and sediment control
- Coastal barrier protection
- Natural area preservation
- Environmental corridors
- Natural area restoration
- Natural functions protection

Based on a comprehensive review of possible options under Protection of Natural/Environmental functions, the following are recommended strategies to be implemented. These strategies and their relevance to the Community Rating System Program are outlined in Table 6-2 (Brunswick County, pages 6-7 to 6-26), Table 6-3 (New Hanover County, pages 6-27 to 6-33), and Table 6-4 (Pender County, pages 6-34 to 6-39).

- Brunswick County (including Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown): BC4, BC6, BC18, BC19, BC20, BC27, BC32, BC40, BC41, BC42, BC53
- St. James: BC60
- New Hanover County (including Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach): NHC8, NHC34
- Pender County (including Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha): PC8, PC27

EMERGENCY SERVICES ACTIVITIES

The Southeastern NC RHMP comprehensively addresses the issue of emergency services activities. This element is accounted for within the context of this plan as follows:

- Section 4: Agency/Organizational Review, Community Capability Assessment
- Section 5: Critical Facilities, Key Issues Regarding Thunderstorms/Windstorms, Lightning, and Hail
- Section 6: Tables 6-2, 6-3, and 6-4
- Appendix G: Mitigation Progress Report

The Southeastern RHMP involves an overview of emergency management activities and services that relate to pre- and post-disaster recovery efforts. Although emergency management does not tie directly into long range mitigation planning, response capabilities do serve a vital role in minimizing the threat to life and property during and immediately following severe flooding events. The mitigation planning process provides a linkage between regional/local Emergency Management, Land Use, and Mitigation Planning efforts.

A review of past mitigation efforts and their relevance to each community's current and past emergency service activities has been provided within Appendix G, Mitigation Progress Report of this plan. A range of alternatives regarding environmental protection were discussed during the planning process including the following (not all of these options have been incorporated into the plan update):

- Hazard threat recognition
- Critical facilities protection
- Hazard warning
- Health and safety maintenance
- Hazard response operations
- Post-disaster mitigation actions

Based on a comprehensive review of possible options under Emergency Services activities, the following are recommended strategies to be implemented. These strategies and their relevance to the Community Rating System Program are outlined in Table 6-2 (Brunswick County, pages 6-7 to 6-26), Table 6-3 (New Hanover County, pages 6-27 to 6-33), and Table 6-4 (Pender County, pages 6-34 to 6-39).

- Brunswick County (including Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown): BC5, BC21, BC29, BC33, BC34, BC35, BC36, BC37, BC38, BC46, BC49, BC50, BC51, BC52
- Bald Head Island: BC55
- Sunset Beach: BC62, BC63
- Ocean Isle Beach: BC66
- New Hanover County (including Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach): NHC1, NHC3, NHC22, NHC23, NHC24, NHC27, NHC28, NHC31, NHC32, NHC35
- Wilmington: NHC36, NHC37
- Pender County (including Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha): PC1, PC3, PC14, PC17, PC19, PC20, PC23

STRUCTURAL PROJECTS

The Southeastern NC RHMP comprehensively addresses the issue of structural mitigation projects. This element is accounted for within the context of this plan as follows:

- Section 4: Community Capability Assessment
- Section 5: Critical Facilities, Key Issues Regarding Thunderstorms/Windstorms, Lightning, and Hail
- Section 6: Tables 6-2, 6-3, and 6-4
- Appendix G: Mitigation Progress Report

The discussion of structural mitigation projects is very similar to the overview of property protection measures discussed above. In terms of the overall review of activities, the planning team considered these issues in conjunction with one another, therefore, the specific portions of the plan relevant to this issue are summarized in similar fashion. It should be noted that the only significant structural project, aside from building elevation, relates to storm drainage system improvements. In many cases stormwater drainage problems are caused by roadway/highway drainage problems that do not fall under the jurisdiction of the local unit of government.

A review of past mitigation efforts and their relevance to each community's current planning efforts and Floodplain Management Program has been provided within Appendix G, Mitigation Progress Report of this plan. A range of alternatives regarding structural mitigation projects was discussed during the planning process including the following (not all of these options have been incorporated into the plan update):

- Reservoirs
- Channel modifications
- Levees/floodwalls
- Storm drain improvement

Based on a comprehensive review of possible options under Structural Mitigation projects, the following are recommended strategies to be implemented. These strategies and their relevance to the Community Rating System Program are outlined in Table 6-2 (Brunswick County, pages 6-7 to 6-26), Table 6-3 (New Hanover County, pages 6-27 to 6-33), and Table 6-4 (Pender County, pages 6-34 to 6-39).

- Brunswick County (including Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown): BC2, BC3, BC11, BC15, BC16
- Holden Beach: BC56
- Northwest: BC57
- Sunset Beach: BC61
- New Hanover County (including Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach): NHC5, NHC11, NHC16, NHC29
- Pender County (including Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha): PC7, PC26

PUBLIC INFORMATION ACTIVITIES

The Southeastern NC RHMP comprehensively addresses the issue of public information activities. This element is accounted for within the context of this plan as follows:

- Section 4: Community Capability Assessment
- Section 6: Tables 6-2, 6-3, and 6-4
- Section 7: Plan Maintenance & Implementation Procedures
- Appendix G: Mitigation Progress Report

The issue of public education and outreach is critical to both an effective mitigation program and participation in the CRS program. Each community participating in this plan, especially those participating in the NFIP program carry out a range of activities aimed at furthering the public's understanding of floodplain management and protection. These efforts range from engaging the public through outreach activities to mailing out literature to increase awareness about public safety regarding floodplains.

A review of past mitigation efforts and their relevance to each community's current planning efforts and Floodplain Management Program has been provided in Appendix G, Mitigation Progress Report of this plan. A range of alternatives regarding public education and awareness was discussed during the planning process including the following (not all of these options have been incorporated into the plan update):

- Map information
- Library
- Outreach projects
- Technical assistance
- Real estate disclosure
- Environmental education

Based on a comprehensive review of possible options under Public Information activities, the following are recommended strategies to be implemented. These strategies and their relevance to the Community Rating System Program are outlined in Table 6-2 (Brunswick County, pages 6-7 to 6-26), Table 6-3 (New Hanover County, pages 6-27 to 6-33), and Table 6-4 (Pender County, pages 6-34 to 6-39).

- Brunswick County (including Bald Head Island, Belville, Boiling Spring Lakes, Bolivia, Calabash, Carolina Shores, Caswell Beach, Holden Beach, Leland, Navassa, Northwest, Oak Island, Ocean Isle Beach, Sandy Creek, Shallotte, Southport, St. James, Sunset Beach, and Varnamtown): BC1, BC43, BC45, BC47, BC48, BC64
- Ocean Isle Beach: BC65
- New Hanover County (including Carolina Beach, Kure Beach, Wilmington, and Wrightsville Beach): NHC2, NHC4, NHC13, NHC14, NHC17, NHC25, NHC26, NHC30
- Wilmington: NHC38
- Pender County (including Atkinson, Burgaw, St. Helena, Surf City, Topsail Beach, and Watha): PC12, PC13, PC15, PC16, PC18

APPENDIX I.

ADOPTION RESOLUTIONS

County of Brunswick

Office of the County Commissioners

RESOLUTION ADOPTING THE
SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, Brunswick County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3 and 4 of Article 18 of Chapter 153A; and Article 6 of Chapter 153A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b) (2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, Brunswick County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Commissioners of Brunswick County to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the county.

NOW, THEREFORE, be it resolved that the Board of Commissioners of Brunswick County hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Vests the Director of Economic Development & Planning with the responsibility, authority, and the means to:
   a. Inform all concerned parties of this action.
   b. Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Director of Economic Development & Planning to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Brunswick County Board of Commissioners for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this the 4th day of April 2016.

Scott Phillips, Chairman
Brunswick County Board of Commissioners

ATTEST:

Marjorie C. Stephenson, NCCCC
Clerk to the Board

Village of Bald Head Island

RESOLUTION ADOPTING THE
SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Village of Bald Head Island are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Village of Bald Head Island actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Village Council of the Village of Bald Head Island hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Village of Bald Head Island; and

3. Vests the Village Manager with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Village Manager to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Village of Bald Head Island Village Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 15 day of April, 2016.

Mayor, Village of Bald Head Island

ATTEST:

Village Clerk

(SEAL)

VILLAGE OF BALD HEAD ISLAND
SEAL
NORTH CAROLINA

R16-05

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Belville actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Belville Board of Commissioners hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Belville; and

3. Vests the Town Administrator with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Administrator to assure that, in cooperation with Brunswick County), the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Belville Board of Commissioners for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 28th day of March, 2016.

Mike Allen
Mayor, Town of Belville

ATTEST:

Athina Williams, Town Clerk

TOWN OF BELVILLE
CORPORATE
SEAL
NORTH CAROLINA

Resolution #2016-04

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the City of Boiling Spring Lakes actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Board of Commissioners of the City of Boiling Spring Lakes hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the City of Boiling Spring Lakes; and

3. Vests the City Manager with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.

   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the City Manager to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of the City of Boiling Spring Lakes for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 5th **day of** April, **2016.**

Craig M. Caster

Craig M. Caster, Mayor

ATTEST:

Jane McMinn

Jane McMinn, City Clerk

CITY OF BOILING SPRING LAKES (SEAL) OFFICIAL SEAL NC

(Town of Bolivia)

RESOLUTION ADOPTING THE
SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within (Brunswick) are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the (Town of Bolivia) actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the (Town of Bolivia) hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the (Town of Bolivia); and

3. Vests the (Ella Jane Marston) with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the (Ella Jane Marston) to assure that, in cooperation with (Brunswick), the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the (Town of Bolivia) Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 12th day of April, 2016.

Ella Jane Marston

Mayor, (Town of Bolivia)

ATTEST:

Town Clerk (SEAL)

TOWN OF BOLIVIA
CORPORATE
SEAL
BRUNSWICK COUNTY, NC

Town of Calabash
North Carolina

Resolution No. 2016-03
Date Adopted: May 10, 2016

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41 (b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Calabash actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

Town of Calabash
North Carolina

Resolution No. 2016-03
Date Adopted: May 10, 2016

NOW THEREFORE, BE IT RESOLVED that the Board of Commissioners of the Town of Calabash hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Calabash; and

3. Vests the Town Administrator with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Administrator to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of the Town of Calabash for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 10th day of May, 2016.

TOWN OF CALABASH

Mary Louise Knight

Mary Louise Knight, Mayor

ATTEST:

Sue Stuhr

Sue Stuhr, Town Clerk

(SEAL)

THE TOWN OF CALABASH
CORPORATE
SEAL
BRUNSWICK COUNTY N. C.

TOWN OF CAROLINA SHORES BOARD OF COMMISSIONERS

A RESOLUTION
ADOPTING THE SOUTHEASTERN REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Carolina Shores, Brunswick County, North Carolina are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the Town of Carolina Shores has participated with Brunswick County and both desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Carolina Shores in partnership with Brunswick County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town Board of Commissioners to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town; and

WHEREAS, the Town of Carolina Shores actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Board of Commissioners of the Town of Carolina Shores does hereby:

1. Adopt the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to theTown of Carolina Shores; and

3. Vests the Town's Director of Emergency Services with the responsibility, authority, and the means to:
    a. Inform all concerned parties of this action.
    b. Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town's Director of Emergency Services to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Carolina Shores Board of Commissioners for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

In the COUNTY OF BRUNSWICK

Adopted this 7th Day of April, 2016

TOWN OF CAROLINA SHORES BOARD OF COMMISSIONERS

By: Joyce A. Dunn

Ms. Joyce Dunn, Mayor

Nicole R. Marks

Nicole Marks, Clerk to the Board

The Town of Carolina Shores CORPORATE SEAL Brunswick County, NC

Town of Caswell Beach
1100 Caswell Beach Road • Caswell Beach, NC 28465
(910) 278-5471 • Fax: 1-866-271-3641 • Website: www.caswellbeach.org

RESOLUTION No. 2016-006

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Caswell Beach actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Board of Commissioners of the Town of Caswell Beach hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Caswell Beach and

3. Vests the Town Administrator with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Administrator to assure that, in cooperation with Brunswick County the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Caswell Beach Board of Commissioners for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 14 day of April, 2016.

TOWN OF CASWELL BEACH

Deborah G. Ahlers, Mayor

ATTEST:

H. Chad Hicks, Town Administrator/Clerk

(SEAL)

TOWN OF CASWELL BEACH CHARTERED 1975 NORTH CAROLINA

RESOLUTION 16-06

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Holden Beach actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town of Holden Beach Board of Commissioners hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Holden Beach; and

3. Vests the Planning and Inspections Director with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Planning and Inspections Director to assure that, in cooperation with Brunswick County the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Holden Beach Board of Commissioners for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 19th day of April, 2016.

J. Alan Holden
Mayor, Town of Holden Beach

ATTEST:

Kathy Funnell
Town Clerk (SEAL)

TOWN OF HOLDEN BEACH
SEAL
ESTABLISHED FEBRUARY 14, 1969
HOLDEN BEACH, NC

Resolution R16-32

Town Council
Town of Leland
North Carolina

Introduced by: Public Service Manager **Date:** 04/21/2016

Resolution Adopting the Southeastern NC Regional Hazard Mitigation Plan

INTENT/PURPOSE:

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

Resolution R16-32

Town Council
Town of Leland
North Carolina

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Leland actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

THEREFORE, BE IT RESOLVED:
The Town of Leland Town Council:

- Adopts the Southeastern NC Regional Hazard Mitigation Plan.
- Separately adopts the sections of the plan that are specific to the Town of Leland.
- Vests the Town Manager with the responsibility, authority, and the means to:
  - Inform all concerned parties of this action.
  - Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.
- Appoints the Town Manager to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Leland Town Council for consideration.
- Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Brenda Bozeman, Mayor

Adopted at a regular meeting
On April 21, 2016

Attest:

Sabrena Reinhardt, Town Clerk

TOWN OF NAVASSA

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Navassa actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of Navassa hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Navassa; and

3. Vests the Town Planner with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Planner to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Navassa Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 28 day of April, 2016.

Eulis A Willis
Mayor, Eulis Willis

ATTEST:

Charlena R. Alston
Town Clerk (SEAL)

TOWN OF NAVASSA PEOPLE WORKING FOR PEOPLE SEAL

CITY OF NORTHWEST

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the City of Northwest actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the City of Northwest hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the City of Northwest; and

3. Vests Councilman James W. McKoy with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints Councilman James W. McKoy to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the City of Northwest Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 26 day of April, 2016.

James W. Knox
Mayor, City of Northwest

ATTEST:

Susan K. Spicer
Town Clerk

CITY OF NORTHWEST INCORPORATED JUNE 1993 OFFICIAL SEAL BRUNSWICK COUNTY, NC
(SEAL)

R-2016-6

TOWN OF OAK ISLAND
RESOLUTION ADOPTING THE
SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Oak Island actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Oak Island hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Oak Island; and

3. Vests Steven Edwards with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints Steven Edwards to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Oak Island Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 12th day of April, 2016.

Cin Brochure, Mayor, Town of Oak Island

ATTEST:

Lisa P. Stites, CMC, Town Clerk

TOWN OF OAK ISLAND
CHARTERED
1999
NORTH CAROLINA

(SEAL)

oceanisle
BEACH

Town of Ocean Isle Beach

Resolution No. 2016 - 4
Date Adopted: April 12th, 2016

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Ocean Isle Beach actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Ocean Isle Beach hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Ocean Isle Beach and

3. Vests the Planning & Inspections Director with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Planning & Inspections Director to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Ocean Isle Beach Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 12 day of April, 2016.

TOWN OF OCEAN ISLE BEACH SEAL NORTH CAROLINA

Debbie B. Smith
Mayor, Town of Ocean Isle Beach

ATTEST:

Casey B. Reeves
Town Clerk (SEAL)

RESOLUTION No. R-2016-2

TOWN OF SANDY CREEK
BRUNSWICK COUNTY, NORTH CAROLINA

A RESOLUTION ADOPTING THE SOUTHEASTERN NC REGINAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Sandy Creek actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Sandy Creek hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Sandy Creek; and

3. Vests the Mayor Brandon Colby with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Mayor, Brandon Colby to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Sandy Creek Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 11th day of April, 2016.

Brandon Colby, Mayor
Town of Sandy Creek

ATTEST:

Martina M. Colby, Town Clerk

TOWN OF SANDY CREEK, NC
(SEAL) OFFICIAL SEAL
INC. 1988

TOWN OF SHALLOTTE
RESOLUTION 16-03

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Shallotte actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Shallotte hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Shallotte; and

3. Vests the Planning Administrator with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Planning Administrator to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Shallotte Board of Aldermen for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

TOWN OF SHALLOTTE CORPORATION SEAL 1899 NORTH CAROLINA

Adopted this 4th day of APRIL, 2016.

Walter Eccard
Mayor, Town of Shallotte

ATTEST:

Sandy Strickland
Town Clerk (SEAL)

CITY OF SOUTHPORT

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the City of Southport actively participated in the planning process for the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA.

NOW, THEREFORE, be it resolved that the Board of Aldermen of the City of Southport hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the City of Southport; and

3. Vests the City Manager with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the City Manager to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the City of Southport Board of Aldermen for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 14th day of April, 2016.

City of Southport

J.V. Dove

J.V. Dove, Mayor

ATTEST:

Michele Windham

Michele Windham, City Clerk

CITY OF SOUTHPORT CORPORATE SEAL 1792 NORTH CAROLINA

Town of St. James

RESOLUTION ADOPTING THE
SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN
RESOLUTION 2016-06

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b) (2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of St. James actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of St. James hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of St. James; and

3. Vests Don McGuire with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints Don McGuire to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of St. James Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 3rd day of May, 2016.

Rebecca Dus Mayor, Town of St. James

ATTEST:

Town Clerk

(S TOWN of ST. JAMES, NC INC. 1999

RESOLUTION ADOPTING THE
SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Sunset Beach actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE BE IT RESOLVED that the Town Council of the Town of Sunset Beach hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Sunset Beach and

3. The Director of Planning and Inspections is responsible for:

   (a) Informing all concerned parties of this action.
   (b) Cooperating with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. The Town of Sunset Beach, in cooperation with Brunswick County, will review annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations.

5. The Town of Sunset Beach agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 19th day of April, 2016

TOWN OF SUNSET BEACH

Ron Watts
Mayor

ATTEST:

Lisa H. Anglin

Town Clerk

Town of Varnamtown

RESOLUTION ADOPTING THE
SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Brunswick County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Varnamtown actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Varnamtown hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Varnamtown; and

3. Vests the Ennis Swain with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Ennis Swain to assure that, in cooperation with Brunswick County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Varnamtown Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 18th day of April, 2016.

Judy Galloway

Mayor, Town of Varnamtown

ATTEST:

Cassandra Parrish

Town Clerk (SEAL)

NEW HANOVER COUNTY BOARD OF COMMISSIONERS

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within New Hanover County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, New Hanover County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3 and 4 of Article 18 of Chapter 153A; and Article 6 of Chapter 153A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five-year cycle; and

WHEREAS, New Hanover County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the Board of Commissioners of New Hanover County to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the county.

NOW, THEREFORE, BE IT RESOLVED, that the New Hanover County Board of Commissioners hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Vests the Emergency Management Director with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Emergency Management Director to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the New Hanover County Board of Commissioners for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

ADOPTED this the 20th day of June, 2016.

NEW HANOVER COUNTY

Beth Dawson

Beth Dawson, Chairman

ATTEST:

Teresa P Elmore

Teresa P. Elmore, Clerk to the Board

Resolution 16-2023

Town of Carolina Beach
Town Council

RESOLUTION ADOPTING THE

SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within New Hanover County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

Resolution 16-2023

Town of Carolina Beach
Town Council

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Carolina Beach actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Carolina Beach hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Carolina Beach; and

3. Vests the Planning & Development Director or his designee with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.

   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Planning & Development Director or his designee to assure that, in cooperation with New Hanover County the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Carolina Beach Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 12 day of April, 2016.

Dan Wilcox, Mayor

Kimberlee Ward

Attest: Kimberlee Ward, Town Clerk

TOWN OF CAROLINA BEACH OFFICIAL SEAL NORTH CAROLINA

TOWN COUNCIL
TOWN OF KURE BEACH, NC

RESOLUTION R16-08

ADOPTING THE SOUTHEASTERN NC
REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within New Hanover County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

RESOLUTION R16-08

ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the Town of Kure Beach actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, BE IT RESOLVED THAT the Kure Beach Town Council hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Kure Beach; and

3. Vests the Kure Beach Emergency Operations Coordinator with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Kure Beach Emergency Operations Coordinator to assure that, in cooperation with New Hanover County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Kure Beach Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted by the Kure Beach Town Council this 21st day of April, 2016.

Emilie Swearingen, Mayor

Attest: Nancy Hewitt, Deputy Town Clerk

TOWN OF KURE BEACH INCORPORATED 1947 STATE OF NORTH CAROLINA

Resolution

City Council
City of Wilmington
North Carolina
R-2016-44

Introduced By: Sterling B. Cheatham, City Manager **Date:** 4/5/2016

Resolution Adopting the Southeastern NC Regional Hazard Mitigation Plan (OBG-3-416)

LEGISLATIVE INTENT/PURPOSE:

WHEREAS, the citizens and property within the City of Wilmington are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the City and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the City and participating municipal jurisdictions within the region have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

CERTIFIED TO BE A TRUE COPY
CITY CLERK

WHEREAS, it is the intent of the City Council to fulfill this obligation in order that the city and county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the City of Wilmington actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

THEREFORE, BE IT RESOLVED that the City Council of Wilmington hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the City of Wilmington; and

3. Vests the City Manager with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.
(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the City Manager to assure that, in cooperation with New Hanover County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Wilmington City Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted at a regular meeting
on April 5, 2016

Bill Saffo, Mayor

Attest:

Penelope Spicer-Sidbury, City Clerk

RESOLUTION NO. (2016) 1972

Board of Aldermen
Town of Wrightsville Beach, North Carolina
Date: March 10, 2016

A RESOLUTION OF THE BOARD OF ALDERMEN OF
THE TOWN OF WRIGHTSVILLE BEACH, NORTH CAROLINA
ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within New Hanover County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said Plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Wrightsville Beach actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all of their part of the multi-jurisdictional planning elements required by FEMA.

NOW, THEREFORE, BE IT RESOLVED by the Board of Aldermen of the Town of Wrightsville Beach as follows:

1. The Southeastern NC Regional Hazard Mitigation Plan is hereby adopted.

2. The sections of the Plan that are specific to the Town of Wrightsville Beach are hereby adopted separately.

3. The Town Manager is hereby vested with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.

   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. The Town Manager is hereby appointed to assure that, in cooperation with New Hanover, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Wrightsville Beach Board of Aldermen for consideration.

5. The Board of Aldermen hereby agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

This Resolution adopted this 10th day of March, 2016.

William J. Blair III, Mayor

ATTEST:

Sylvia J. Holleman, Town Clerk

TOWN OF WRIGHTSVILLE BEACH
INCORPORATED
1899
STATE OF NORTH CAROLINA
(SEAL)

RESOLUTION OF ADOPTION
Pender County, NC
HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Pender County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to hurricanes; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Pender County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Pender County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Pender County Board of Commissioners hereby:

1. Adopts the Southeastern Regional Hazard Mitigation Plan; and

2. Vests Pender County Emergency Management with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Pender County Emergency Management to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Pender County Board of Commissioners for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted this the 18th day of April, 2016.

George R. Brown, Chairman
Pender County Board of Commissioners

Attest:

Melissa Pedersen
Clerk to the Board

TOWN OF ATKINSON

RESOLUTION ADOPTING THE
SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Pender County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Atkinson actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Atkinson hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Atkinson; and

3. Vests the Town Clerk with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Clerk to assure that, in cooperation with Pender County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Atkinson Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 8 day of Sept. 2016.

Mayor, Town of Atkinson

ATTEST:

Town Clerk (SEAL)

Town of Burgaw

RESOLUTION 2016-10
ADOPTING THESOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Pender County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Pender County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Burgaw actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW THEREFORE BE IT RESOLVED BY THE TOWN OF BURGAW BOARD OF COMMISSIONERS THAT:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Burgaw; and

3. Vests the Town Manager with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Manager to assure that, in cooperation with Pender County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Burgaw Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 12th day of April, 2016.

Eugene Mulligan, Mayor

ATTEST:

Sylvia Raynor, Town Clerk (SEAL)

TOWN OF BURGAW
PENDER
COUNTY
NORTH CAROLINA

VILLAGE of ST. HELENA

RESOLUTION ADOPTING THE
SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Village of St. Helena are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41 (b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five-year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Village of St. Helena actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Village Council of the Village of St. Helena hereby;

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Village of St. Helena; and

3. Vests the Mayor with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Mayor to assure that, in cooperation with Pender County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Village of St. Helena Village Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 21st day of July, 2016

Mayor, Village of St. Helena

ATTEST:

Mary D. Bakan

Village Clerk

VILLAGE OF ST. HELENA
PENDER COUNTY
(SEAL)
NORTH CAROLINA

SURF CITY

NORTH CAROLINA

RESOLUTION No. 2016-18

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Pender County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town Council to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Surf City actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Surf City hereby:

PO Box 2475
Surf City, NC 28445

Phone: (910) 328-4131
Fax: (910) 328-1746

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Surf City; and

3. Vests the Laurence Bergman with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Laurence Bergman to assure that, in cooperation with Pender County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Surf City Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 7th day of May, 2016.

A.D. (Zander) Guy Jr., Mayor

Attest: SE Hobbs

Stephanie Edwards Hobbs, Town Clerk

TOWN OF SURF CITY 1949

PO Box 2475
Surf City, NC 28445

Phone: (910) 328-4131
Fax: (910) 328-1746

TOWN OF TOPSAIL BEACH NORTH CAROLINA

INCORPORATED 1963

RESOLUTION NO. 2-4-13a-16

RESOLUTION ADOPTING THE SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Pender County are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the Town of Topsail Beach actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Board of Commissioners of the Town of Topsail Beach hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Topsail Beach; and

3. Vests the Town Manager with the responsibility, authority, and the means to:

    (a) Inform all concerned parties of this action.
    (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Manager to assure that, in cooperation with Pender County, the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Topsail Beach Board of Commissioners for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 13th day of April, 2016.

Howard Braxton Jr., Mayor

ATTEST:

Christina Watkins, Town Clerk, CMC

Town of Watha

~~(Insert Municipality)~~

RESOLUTION ADOPTING THE
SOUTHEASTERN NC REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within (~~Insert County~~ Town of Watha) are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, droughts/heat waves, and severe winter weather; and

WHEREAS, the County and participating municipal jurisdictions desire to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6 of Article 1A of Chapter 166A of the North Carolina General Statutes, stated in Item 19.41(b)(2): "For a state of emergency declared pursuant to G.S. 166A-19.20(a) after the deadline established by the Federal Emergency Management Agency pursuant to the Disaster Mitigation Act of 2002, P.L. 106-390, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County and its participating municipal jurisdictions have performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and have updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the County Board of Commissioners to fulfill this obligation in order that the county will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, the (~~Insert Municipality~~ Town of Watha) actively participated in the planning process of the Southeastern NC Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the (~~Insert Municipality~~ Town of Watha) hereby:

1. Adopts the Southeastern NC Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the (~~Insert Municipality~~ Town of Watha); and

3. Vests the (~~Insert Responsible Person~~ Mayor) with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.

   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the (~~Insert Responsible Person~~ Mayor) to assure that, in cooperation with (~~Insert County~~ Pendenca), the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the (~~Insert Municipality~~ Town of Watha) Town Council for consideration.

5. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the 2016 Southeastern NC Regional Hazard Mitigation Plan.

Adopted this 4 day of April, 2016.

Mayor, (~~Insert Municipality Name~~ Town of Watha)

ATTEST:

Town Clerk (SEAL)