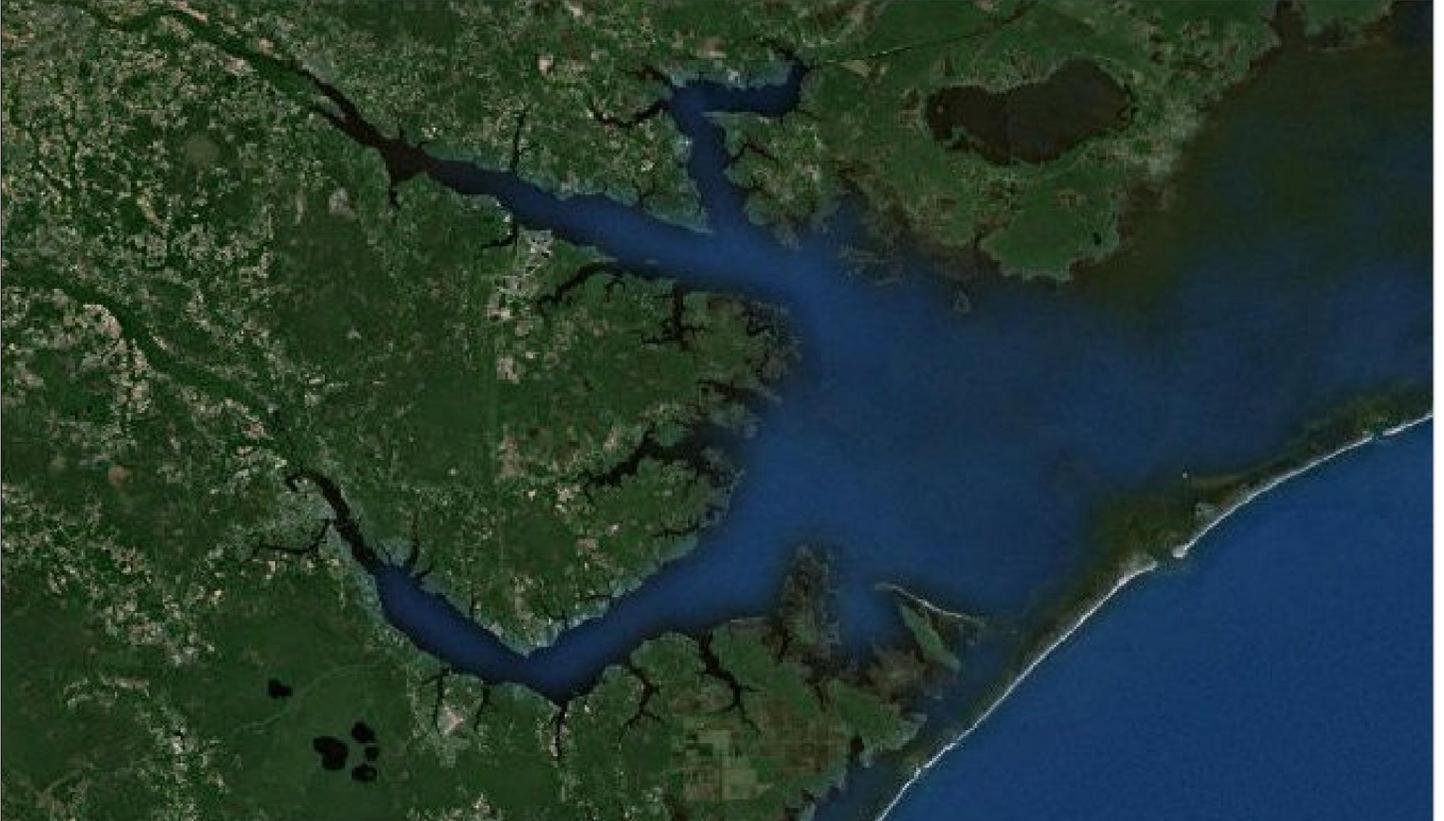


Pamlico Sound Regional



Hazard Mitigation Plan

Draft:
January 19, 2015



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I. 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.”

II. PAMLICO SOUND 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 five-county region including Beaufort County, Carteret County, Craven County, Hyde County, and Pamlico County. All the municipalities within these five counties are also participants in this plan, including Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro, Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, and Vandemere. 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.

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

SECTION 1. INTRODUCTION AND PLANNING PROCESS

Beaufort, Carteret, Craven, Hyde, and Pamlico 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, Craven County will function as lead agency in the development of a plan that will serve the mitigation needs of all five participating counties. Craven County was charged with administratively dealing with all grant program requirements; however, all jurisdictions will be addressed equally through the development of this plan.

III. 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 business 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).

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

SECTION 1. INTRODUCTION AND PLANNING PROCESS

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.

IV. WHAT IS HAZARD MITIGATION AND WHY IS IT IMPORTANT TO THE PAMLICO SOUND REGION?

A. 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.

B. Why is Hazard Mitigation Important to the Pamlico Sound Region?

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

- ▶ Promote the public health, safety, and general welfare of residents and minimize public and private losses due to natural hazards.
- ▶ Reduce the risk and impact of future natural disasters by regulating development in known high hazard areas.
- ▶ Pursue funds to reduce the risk of natural hazards to existing developments where such hazards are clearly identified and the mitigation efforts are cost-effective.
- ▶ Effectively expedite post-disaster reconstruction.
- ▶ Provide education to citizens that empower them to protect themselves and their families from natural hazards.

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

SECTION 1. INTRODUCTION AND PLANNING PROCESS

- ▶ Protect fragile natural and scenic areas within the planning jurisdiction.
- ▶ Improve upon regional emergency service provision and response.

These goals were developed through discussions with the 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.

V. 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 Pamlico Sound 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 a statement of the problem, 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. Community Profiles

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. The demographic composition of each county within the Pamlico Sound region varies greatly and the data within Section 2 outlines the key differences.

Section 3. Hazard Identification and Analysis

This section of the HMP update provides relevant data and narrative descriptions of natural hazards that impact the Pamlico Sound 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 Pamlico Sound Region is addressed as a single entity. The hazards identified and discussed within this section generally impact each individual county equally. Due to this fact 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 Pamlico Sound 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 discrepancies in data that 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 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).

Section 7. Plan Maintenance and Implementation Procedures

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.

VI. INCORPORATION OF EXISTING PLANS, STUDIES, AND REPORTS

Each jurisdiction participating in this plan, including all municipalities, 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. 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. A summary of plans and ordinances currently maintained by each participating jurisdiction is provided in Section 4, Community Capability Assessment.

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

SECTION 1. INTRODUCTION AND PLANNING PROCESS

VII. PLANNING PROCESS

In 2012, Craven County applied for and received a Pre-Disaster Mitigation (PDM) Program grant through the North Carolina Division of Emergency Management (NCEM) for the Pamlico Sound 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 Pamlico Sound Regional Hazard Mitigation Plan was placed in the hands of the Planning Directors and/or Emergency Management Directors for Beaufort, Carteret, Craven, Hyde, and Pamlico counties.

In early 2013, Craven 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 five-county region.

Subsequent to establishing a work authorization with the planning consultant, Craven County called an initial scoping meeting with the project consultant and all regional partners. 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 offices. 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.

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

SECTION 1. INTRODUCTION AND PLANNING PROCESS

Beaufort County Mitigation Advisory Committee

MAC Member

John Pack, Emergency Management Coordinator
Lisa Respass, Emergency Services Specialist
Judith Lennon, Town Clerk
Bubs Carson, Town Administrator
Peter Budge, Building Inspector
Joy McRoy, Town Clerk
Bobbie Jo Ricks, Town Manager
John Rodman, Planning and Development Director
Dennie Dale, Town Clerk

Jurisdiction/Agency

Beaufort County
Beaufort County
Aurora
Bath
Belhaven
Chocowinity
Pantego
Washington
Washington Park

Carteret County Mitigation Advisory Committee

MAC Member

Russell Overman, County Manager
Eugene Foxworth, Planning Director
Jen Sawyer, Emergency Management Coordinator/Planner
Gregg Hartman, Planner
John Ford, Emergency Services Director
Jessica Fiester, Planning Director
Kyle Garner, Town Planner
Elizabeth Sweeney, Town Clerk
Brandon Hawks, Building Inspector
Chris Seaberg, Town Administrator
Jim Jennings, Planning Director
Bryan Chadwick, Town Administrator
Philip Miller, Fire Chief
Sandi Watkins, Planner
Linda Staab, Planning and Inspections Director
David Whitlow, City Manager
Angela Christian, Town Manager
Bea Cunningham, Town Clerk
Chris Jones, Building Inspector

Jurisdiction/Agency

Carteret County
Carteret County
Carteret County
Carteret County
Carteret County
Atlantic Beach
Beaufort
Bogue
Cape Carteret
Cedar Point
Emerald Isle
Indian Beach
Indian Beach
Morehead City
Morehead City
Morehead City
Newport
Peletier
Pine Knoll Shores

Craven County Mitigation Advisory Committee

MAC Member

Donald R. Baumgardner, Planning Director
Chad Strawn, Assistant Planning Director
Stanley Kite, Emergency Services Director
Ira Whitford, Asst. Emergency Services Director
Jason Frederick, Planner II
Elaine Bryan, Town Clerk
Sonja Gaskins, Town Manager
Kathy New, Town Clerk

Jurisdiction/Agency

Craven County
Craven County
Craven County
Craven County
Craven County
Bridgeton
Cove City
Dover

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

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MAC Member

Katrina Marshall, Planning and Inspections Director
Jeff Ruggieri, Director of Development Services
Pete Connet, Interim Town Manager
Marcia Sproul, Town Clerk
Renee Ipock, Town Clerk

Jurisdiction/Agency

Havelock
New Bern
River Bend
Trent Woods
Vanceboro

Hyde County Mitigation Advisory Committee

MAC Member

Kris Noble, Planning Director
Justin Gibbs, Emergency Services Director

Jurisdiction/Agency

Hyde County
Hyde County

Pamlico County Mitigation Advisory Committee

MAC Member

Tim Buck, County Manager
Chris Murray, County Emergency Coordinator
Linda Marshall, Town Clerk
David Peterson, Town Clerk
Mary Potter, Town Clerk
Patricia Prescott, Town Clerk
Booker T. Jones, Sr., Mayor/Manager
Catherine Hurm, Town Manager
Diane Miller, Town Manager
Marie Spain, Town Clerk
Judy Thaanum, Mayor

Jurisdiction/Agency

Pamlico County
Pamlico County
Alliance
Arapahoe
Bayboro
Grantsboro
Mesic
Minnesott Beach
Oriental
Stonewall
Vandemere

Pamlico Sound Regional Mitigation Advisory Committee

MAC Member

Randell Woodruff, County Manager
John Pack, Emergency Management Coordinator
Russell Overman, County Manager
John Ford, Emergency Services Director
Eugene Foxworth, Planning Director
Jack B. Veit, III, County Manager
Donald R. Baumgardner, Planning Director
Chad Strawn, Assistant Planning Director
Stanley Kite, Emergency Services Director
Ira Whitford, Asst. Emergency Services Director
Bill Rich, County Manager
Kris Noble, Planning Director
Justin Gibbs, Emergency Services Director
Tim Buck, County Manager
Chris Murray, County Emergency Coordinator
Dee Sage, Planning & Economic Development Director

Jurisdiction/Agency

Beaufort County Representatives

Carteret County Representatives

Craven County Representatives

Hyde County Representatives

Pamlico County Representatives

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A series of meetings were held to develop the Pamlico Sound Regional Hazard Mitigation Plan. A minimum of two MAC meetings were held in each county. 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. Additionally, four (4) meetings of the Regional MAC were held and two (2) widely advertised public input meetings were convened. The following provides a brief summary of all meetings held and what was addressed at each:

Beaufort County

- ▶ September 16, 2013: The initial meeting of the Beaufort County MAC was held. This meeting was focused on a review of the county's existing plan including: confirmation of critical facilities, a review of the current hazard summary and impact ratings, and a discussion of progress in relation to current mitigation actions.
- ▶ May 27, 2014: The second MAC meeting was rescheduled due to poor attendance.
- ▶ June 10, 2014: At the rescheduled second meeting of the Beaufort County MAC, revised strategies were submitted for review and discussion. Discussion focused on finalizing draft strategies and reviewing the steps necessary to complete the draft plan.

Carteret County

- ▶ October 29, 2013: The initial meeting of the Carteret County MAC focused on a review of the county's existing multi-jurisdictional plan including: confirmation of critical facilities, a review of the current hazard summary and impact ratings, and a discussion of progress in relation to current mitigation actions.
- ▶ June 12, 2014: This meeting served to educate new county staffing about the project in general, including what progress had been made to date.
- ▶ June 27, 2014: At the third meeting of the Carteret County MAC, revised strategies were submitted for review and discussion. Discussion focused on finalizing draft strategies and reviewing the steps necessary to complete the draft plan.

Craven County

- ▶ December 6, 2013: Following selection of a project consultant, Craven County, acting as lead agency, held a coordination meeting with the consultant. This meeting focused on working through project logistics.
- ▶ March 11, 2014: The initial meeting of the Craven County MAC was held. An overview of the project scope and schedule was provided. Participating jurisdictions were asked to review elements of the county's existing plan relevant to their jurisdictions.
- ▶ May 27, 2014: This meeting focused on a review of draft mitigation strategies to be incorporated into the plan. Additionally, the MAC discussed progress that had been made in relation to mitigation activities currently in place. The MAC also discussed review and submittal of the draft plan to NC Emergency Management.

Hyde County

- ▶ January 23, 2014: The initial meeting of the Hyde County MAC was held. This meeting was focused on a review of the county's existing plan including: confirmation of critical facilities, discussion of hazard events since adoption of the existing plan, a review of the current hazard summary and impact ratings, and a discussion of progress in relation to current mitigation actions. The MAC members were requested to review the existing plan policies and provide comments on the effectiveness of existing policies.
- ▶ April 3, 2014: At the second meeting of the Hyde County MAC, the revised strategies were discussed. A schedule for finalizing draft strategies and reviewing the steps necessary to complete the draft plan was discussed. The MAC was provided an update on the posting of the plan on the project website.

Pamlico County

- ▶ July 18, 2013: The initial meeting of the Pamlico County MAC was held. This meeting was focused on a review of the county's existing plan including: confirmation of critical facilities, a review of the current hazard summary and impact ratings, and a discussion of progress in relation to current mitigation actions.
- ▶ May 16, 2014: At the second meeting of the Pamlico County MAC, revised strategies were submitted for review and discussion. Discussion focused on finalizing draft strategies and reviewing the steps necessary to complete the draft plan.

Regional Mitigation Advisory Committee Meetings

- ▶ November 2013: An initial meeting of the Regional MAC was held. Project partners, including representatives of each participating jurisdiction were in attendance. This meeting focused on providing an overview of the project including how the planning process would be carried out.
- ▶ March 21, 2014: A meeting of the Regional MAC was held to provide an update on the project's status. The Regional MAC also discussed draft Regional mitigation strategies for incorporation into the draft plan.
- ▶ May 22, 2014: The Regional MAC convened and finalized the draft Regional mitigation strategies. Additionally, a summary of steps required to finish the project was discussed.
- ▶ June 20, 2014: The final meeting of the Regional MAC was held. At this meeting, an overview of the draft plan was provided in addition to a summary of project closeout procedures.

Regional Project Citizen Participation

In order to solicit public input regarding the Pamlico Sound Regional HMP, two public forums were held; one in New Bern (Craven County) and the other in Newport (Carteret County). These meetings were advertised locally through a newspaper of general circulation in each participating county. Affidavits of publication for the meeting notices have been provided in Appendix C.

- ▶ July 7, 2014: The initial public forum was held in conjunction with the regularly scheduled Craven County Board of Commissioners meeting. The formal meeting was televised locally. No comments from the public were received at this meeting.
- ▶ August 18, 2014: The second public forum was held in the Town of Newport Council Chambers. An overview of the project was provided and no comments from the public were received.

Initial draft sections of the plan were completed and distributed to the MAC on December 16, 2013, with a final draft version of the entire plan being distributed in October 8, 2014, to all Regional MAC members. Additionally, the plan was posted on the Craven County project website (<http://www.pamlicosoundhmp.org>) for review by the following agencies and organizations: NC Forest Service, NC Department of Transportation, NC Cooperative Extension, NC Department of Environment and Natural Resources, American Red Cross, NC Office of Emergency Medical Services, Eastern Regional Advisory Committee (ERAC), and Craven Community College. 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). Comments were received from the North Carolina Forest Service regarding the wildfire discussion which have been incorporated into the plan. No

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other comments have been received to date; however, any comments received prior to adoption and certification will also be incorporated into the plan.

Review comments were received from Regional MAC members by October 31, 2014, and NCEM on December 16, 2014. Revisions were made to the final draft HMP based on these comments (see Appendix D).

VIII. AUTHORITY FOR HMP ADOPTION AND RELEVANT LEGISLATION

This HMP Update will be adopted by the Beaufort, Carteret, Craven, Hyde, and Pamlico County Boards of Commissioners and the governing bodies of each of the 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.

I. INTRODUCTION

As Beaufort, Carteret, Craven, Hyde, and Pamlico Counties collectively comprise the Pamlico Sound Region, general information for the 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 such as population, housing, and economic characteristics.

A. Location

Beaufort, Carteret, Craven, Hyde, and Pamlico Counties are located in eastern North Carolina’s Coastal Plain section (see Figure 1). The North Carolina Railroad, Norfolk-Southern, and Carolina Coastal Railways run through Beaufort, Carteret, and Craven Counties. Roadway transportation for the area is provided by US Route 17 (running in a north-south direction), and 70 and 264 (east-west), and State Highways 24, 32, 33, 43, 45, 55, 58, 92, 94, 99, 304, and 306. General aviation airports in the area include Hyde County Airport in Engelhard, Ocracoke Island Airport in Ocracoke, Warren Field in Washington, and Michael J. Smith Field in Beaufort. Air carrier service is provided by Coastal Carolina Regional Airport in New Bern. The region is also home to two military air fields: Marine Corps Air Station Cherry Point in Havelock and Marine Corps Auxiliary Landing Field Bogue on Bogue Sound.

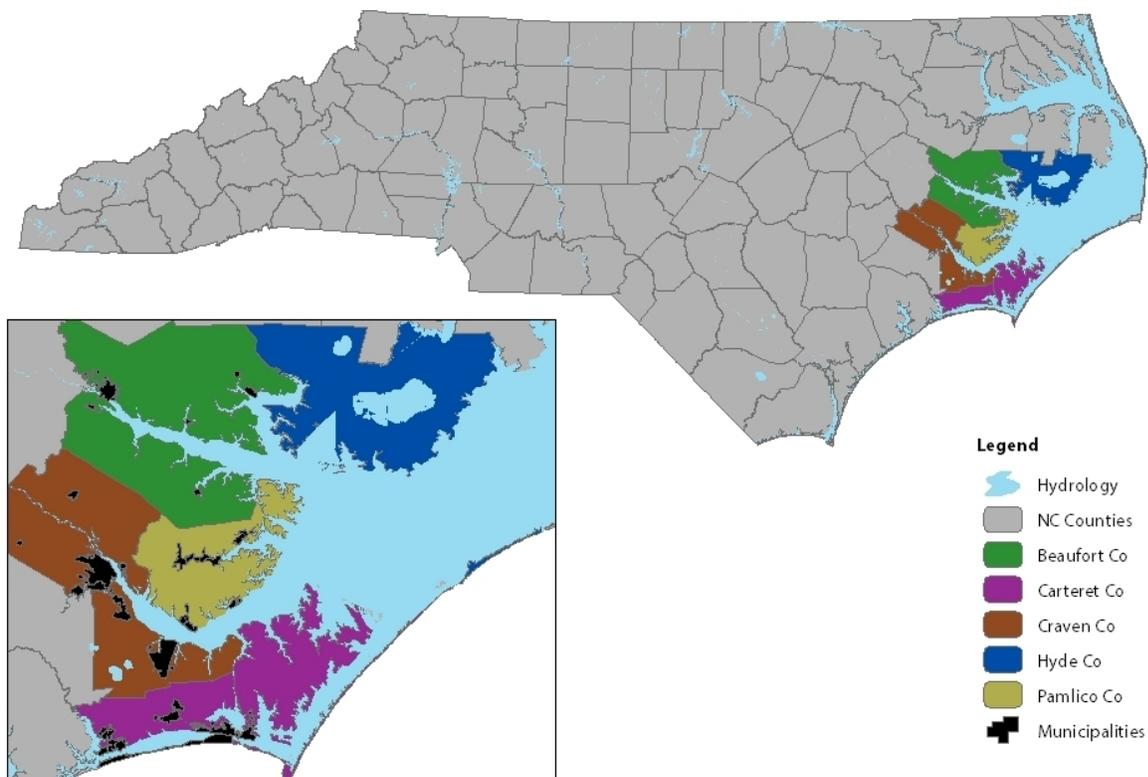


Figure 1. Regional Location Map

B. Topography/Geology

An abundance of water courses surround the area, with the Pamlico Sound to the southeast of Hyde County, the Pamlico and Pungo Rivers in Beaufort County, the Neuse River between Craven and Pamlico counties, the Alligator River to the north of Hyde County, and Alligator Lake and Lake Mattamuskeet occupying a large percentage of Hyde County's area. The area is also rich in wildlife refuges, with the Cedar Island National Wildlife Refuge in Carteret County, the Mattamuskeet and Swan Quarter National Wildlife Refuges in Hyde County, and part of the Pocosin Lakes and Alligator River National Wildlife Refuges lying in Hyde County as well. The area's countryside is enhanced by streams and brooks, natural lakes and ponds, and swampy woodlands.



Mattamuskeet National Wildlife Refuge

Photo Courtesy of US Fish & Wildlife Service



Swan Quarter National Wildlife Refuge

Photo Courtesy of US Fish & Wildlife Service

C. Climate

The Pamlico Sound Region is hot and humid in summer, but the coast is frequently cooled by sea breezes. Winter is cool with occasional brief cold spells. Afternoon thunderstorms are the main form of precipitation during the summer, with most summer precipitation occurring in July and August. Precipitation is generally adequate for all crops, and the region benefits by a lengthy growing season.

The average annual maximum temperature is 72.3 degrees F., and the average minimum temperature is 52 degrees F. In winter, the average daily minimum temperature is 35.2 degrees F. In summer, the average daily maximum temperature is 86.8 degrees F. Rainfall is usually fairly well distributed throughout the year, with an average annual precipitation of 52.64 inches. The average seasonal snowfall is about 2.6 inches.

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SECTION 2. COMMUNITY PROFILES

II. BEAUFORT COUNTY

A. History

Bath County, which is no longer extant, was formed in 1696 and named after John Grenville, Earl of Bath. Most of the first settlers were of English background, mainly moving south to the area on foot from the Virginia Colony. A few came north from the failing colony at Clarendon. By 1705, Bath was divided into three new precincts: Pamptecough (later Beaufort), Wickham (Hyde), and Archdale (Craven). The Indian word, Pamptecough, was gradually anglicized to Pamlico, now the name of the major waterways upon which Pamptecough bordered – the Pamlico Sound and the Pamlico River. The precincts soon became populous enough to designate as counties, at about which time (1712) they were renamed as they are known today.

Beaufort County, named for Henry, Duke of Beaufort, is one of the oldest North Carolina counties, but originally held in its jurisdiction much more land. In 1760, the western portion of Beaufort was cut off with the establishment of Pitt County. The town of Bath, which had been the seat of the older county, became a small, “sleepy” town in the newer county, and the courthouse was eventually moved to the new town of Washington, established in 1771. The new county seat remains the largest town in the county, and is situated on the Pamlico River at the point of its narrowing into the smaller watercourse of the Tar River.

B. Demographic Summary

1. Population

The population for Beaufort County increased by 6.3% from 1990 to 2000, and increased by 6.2% from 2000 to 2010. Table 1 provides a summary of Beaufort County’s population figures by municipality.

Table 1. Beaufort County/Municipalities Population, 1990-2010

	Total Population			Percent Change		
	1990	2000	2010	'90-'00	'00-'10	'90-'10
Aurora	654	583	520	-10.9%	-10.8%	-20.5%
Bath	154	275	249	78.6%	-9.5%	61.7%
Belhaven	2,269	1,968	1,688	-13.3%	-14.2%	-25.6%
Chocowinity	624	733	820	17.5%	11.9%	31.4%
Pantego	171	170	179	-0.6%	5.3%	4.7%
Washington	9,160	9,619	9,477	5.0%	-1.5%	3.5%
Washington Park	486	440	451	-9.5%	2.5%	-7.2%
<i>Subtotal - All Municipalities</i>	13,518	13,788	13,384	2.0%	-2.9%	-1.0%
Unincorporated Areas	28765	31170	34375	8.4%	10.3%	19.5%
Beaufort County (Total)	42,283	44,958	47,759	6.3%	6.2%	13.0%

Source: US Census Bureau.

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Between the years 1990 and 2010, Beaufort County municipalities experienced sporadic growth. Nearly all of the County’s municipalities showed periods of population growth and decline. The Town of Chocowinity, however, was the only town to experience steady increases from 1990 to 2010, and had one of the largest overall increases (31.4%) of all of the County’s municipalities during that time period. Washington, the county seat, has the largest population of the county’s municipalities. The NC Office of State Planning predicts a continuing slight increasing trend for Beaufort County’s overall population, with the total 2015 county population projection estimated at 51,142 persons, a 7.1% increase from the 2010 population.

2. Housing

The number of occupied housing units for the County, as reported in the 2010 American Community Survey, was 20,059, or 82.2% of the total number of housing units. Vacant housing units (4,338) comprised 17.8% of the total number of units. Table 2 summarizes the County’s and municipalities’ dwelling units by tenure. Bath has the highest vacancy rate of Beaufort County’s municipalities, at 43.7%, while Washington has the highest percentage of rental units, at 46.4%. Overall, the County’s 82.2% occupancy rate is relatively high.

Table 2. Beaufort County/Municipalities Summary of Housing Units by Tenure, 2010

	Number of Units	% of Total	
Aurora			
Owner-Occupied Units	107	40.1%	
Renter-Occupied Units	119	44.6%	<i>Aurora’s % of Rental Units 44.6%</i>
Vacant Units	41	15.4%	<i>Aurora’s Vacancy Rate 15.4%</i>
Total Housing Units - Aurora	267	100.0%	<i>Aurora’s % of County 1.1%</i>
Bath			
Owner-Occupied Units	119	53.6%	
Renter-Occupied Units	6	2.7%	<i>Bath’s % of Rental Units 2.7%</i>
Vacant Units	97	43.7%	<i>Bath’s Vacancy Rate 43.7%</i>
Total Housing Units - Bath	222	100.0%	<i>Bath’s % of County 0.9%</i>
Belhaven			
Owner-Occupied Units	451	44.5%	
Renter-Occupied Units	390	38.5%	<i>Belhaven’s % of Rental Units 38.5%</i>
Vacant Units	173	17.1%	<i>Belhaven’s Vacancy Rate 17.1%</i>
Total Housing Units - Belhaven	1,014	100.0%	<i>Belhaven’s % of County 4.2%</i>
Chocowinity			
Owner-Occupied Units	189	61.8%	
Renter-Occupied Units	90	29.4%	<i>Chocowinity’s % of Rental Units 29.4%</i>
Vacant Units	27	8.8%	<i>Chocowinity’s Vacancy Rate 8.8%</i>
Total Housing Units - Chocowinity	306	100.0%	<i>Chocowinity’s % of County 1.3%</i>

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	Number of Units	% of Total	
<i>Pantego</i>			
Owner-Occupied Units	37	39.8%	
Renter-Occupied Units	28	30.1%	<i>Pantego's % of Rental Units 30.1%</i>
Vacant Units	28	30.1%	<i>Pantego's Vacancy Rate 30.1%</i>
Total Housing Units - Pantego	93	100.0%	<i>Pantego's % of Rental Units 0.4%</i>
<i>Washington</i>			
Owner-Occupied Units	2,113	42.5%	
Renter-Occupied Units	2,308	46.4%	<i>Washington's % of Rental Units 46.4%</i>
Vacant Units	552	11.1%	<i>Washington's Vacancy Rate 11.1%</i>
Total Housing Units - Washington	4,973	100.0%	<i>Washington's % of County 20.4%</i>
<i>Washington Park</i>			
Owner-Occupied Units	175	78.8%	
Renter-Occupied Units	28	12.6%	<i>Washington Park's % of Rental Units 12.6%</i>
Vacant Units	19	8.6%	<i>Washington Park's Vacancy Rate 8.6%</i>
Total Housing Units - Washington Park	222	100.0%	<i>Washington Park's % of County 0.9%</i>
<i>Beaufort County</i>			
Owner-Occupied Units	14,728	60.4%	
Renter-Occupied Units	5,331	21.9%	<i>County's % of Rental Units 21.9%</i>
Vacant Units	4,338	17.8%	<i>County's Vacancy Rate 17.8%</i>
Total Housing Units - County	24,397	100.0%	

Source: 2010 US Census.

The County's housing stock is aging – the majority of units (66.7%) were built prior to 1990. Table 3 presents housing units for the County and its municipalities by year the structures were built.

Table 3. Beaufort County/Municipalities Housing Units by Year Structure Built, 2010

Year	# of Structures	% of Total	
<i>Aurora</i>			
2005 or later	3	1.1%	
2000 to 2004	15	5.6%	
1990 to 1999	13	4.9%	
1980 to 1989	32	12.0%	
1970 to 1979	88	33.0%	<i>Largest % of Aurora's units built 1970-1979</i>
1960 to 1969	67	25.1%	
1950 to 1959	31	11.6%	
1940 to 1949	11	4.1%	
1939 or earlier	7	2.6%	
Total Structures	267	100.0%	

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Year	# of Structures	% of Total	
Bath			
2005 or later	0	0.0%	
2000 to 2004	31	14.0%	
1990 to 1999	27	12.2%	
1980 to 1989	9	4.1%	
1970 to 1979	25	11.3%	
1960 to 1969	18	8.1%	
1950 to 1959	27	12.2%	
1940 to 1949	53	23.9%	<i>Largest % of Bath's units built pre-1950</i>
1939 or earlier	32	14.4%	
Total Structures	222	100.0%	
Belhaven			
2005 or later	64	6.3%	
2000 to 2004	197	19.4%	
1990 to 1999	178	17.6%	
1980 to 1989	83	8.2%	
1970 to 1979	91	9.0%	
1960 to 1969	97	9.6%	
1950 to 1959	45	4.4%	
1940 to 1949	121	11.9%	<i>Largest % of Belhaven's units built pre-1950</i>
1939 or earlier	138	13.6%	
Total Structures	1,014	100.0%	
Chocowinity			
2005 or later	21	6.9%	
2000 to 2004	7	2.3%	
1990 to 1999	60	19.6%	
1980 to 1989	30	9.8%	
1970 to 1979	120	39.2%	<i>Largest % of Chocowinity's units built 1970-1979</i>
1960 to 1969	16	5.2%	
1950 to 1959	27	8.8%	
1940 to 1949	13	4.2%	
1939 or earlier	12	3.9%	
Total Structures	306	100.0%	
Pantego			
2005 or later	10	10.8%	
2000 to 2004	12	12.9%	
1990 to 1999	30	32.3%	<i>Largest % of Pantego's units built 1990-1999</i>
1980 to 1989	0	0.0%	
1970 to 1979	10	10.8%	
1960 to 1969	0	0.0%	

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Year	# of Structures	% of Total	
1950 to 1959	0	0.0%	
1940 to 1949	9	9.7%	
1939 or earlier	22	23.7%	
Total Structures	93	100.0%	
Washington			
2005 or later	150	3.0%	
2000 to 2004	160	3.2%	
1990 to 1999	778	15.6%	
1980 to 1989	844	17.0%	
1970 to 1979	895	18.0%	
1960 to 1969	488	9.8%	
1950 to 1959	507	10.2%	<i>Largest % of Washington's units built pre-1960</i>
1940 to 1949	321	6.5%	
1939 or earlier	830	16.7%	
Total Structures	4,973	100.0%	
Washington Park			
2005 or later	3	1.4%	
2000 to 2004	6	2.7%	
1990 to 1999	7	3.2%	
1980 to 1989	15	6.8%	
1970 to 1979	13	5.9%	
1960 to 1969	32	14.4%	
1950 to 1959	57	25.7%	
1940 to 1949	26	11.7%	
1939 or earlier	63	28.4%	<i>Largest % of Washington Park's units built pre-1940</i>
Total Structures	222	100.0%	
Beaufort County			
2005 or later	915	3.8%	
2000 to 2004	2,271	9.3%	
1990 to 1999	4,916	20.2%	
1980 to 1989	4,206	17.2%	<i>Largest % of the County's units built pre-1990</i>
1970 to 1979	3,877	15.9%	
1960 to 1969	2,688	11.0%	
1950 to 1959	2,047	8.4%	
1940 to 1949	1,230	5.0%	
1939 or earlier	2,247	9.2%	
Total Structures	24,397	100.0%	

Source: 2006-2010 American Community Survey.

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SECTION 2. COMMUNITY PROFILES

3. *Economy*

In 2010, there was a total of 22,148 employed persons in Beaufort County. Of that total, approximately 21, or 0.1%, were employed by the military. Table 4 provides the county's and municipalities' unemployment rates for the civilian labor force for selected years. While the overall unemployment rate increased for the county, the Town of Bath had an impressive 0% unemployment rate for 2010. The Town of Belhaven's unemployment rate increased by 130.7%, and the Town of Aurora's unemployment rate increased by a substantial 360% from 2000 to 2010.

Table 4. Beaufort County/Municipalities Civilian Unemployment Rate, 16 years and over

	2000	2010	% Change
<i>Aurora</i>			
Civilian Labor Force	237	276	16.5%
Number Employed	230	238	3.5%
Number Unemployed	7	38	442.9%
Aurora Unemployment Rate	3.0%	13.8%	360.0%
<i>Bath</i>			
Civilian Labor Force	110	118	7.3%
Number Employed	105	118	12.4%
Number Unemployed	5	0	-100.0%
Bath Unemployment Rate	4.5%	0.0%	-100.0%
<i>Belhaven</i>			
Civilian Labor Force	666	797	19.7%
Number Employed	599	611	2.0%
Number Unemployed	67	186	177.6%
Belhaven Unemployment Rate	10.1%	23.3%	130.7%
<i>Chocowinity</i>			
Civilian Labor Force	323	334	3.4%
Number Employed	303	309	2.0%
Number Unemployed	20	25	25.0%
Chocowinity Unemployment Rate	6.2%	7.5%	20.9%
<i>Pantego</i>			
Civilian Labor Force	68	98	44.1%
Number Employed	62	89	43.5%
Number Unemployed	6	9	50.0%
Pantego Unemployment Rate	8.8%	9.2%	4.5%
<i>Washington</i>			
Civilian Labor Force	3,953	4,145	4.9%
Number Employed	3,479	3,289	-5.5%
Number Unemployed	474	856	80.6%
Washington Unemployment Rate	12.0%	20.7%	72.5%

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	2000	2010	% Change
Washington Park			
Civilian Labor Force	228	240	5.3%
Number Employed	221	231	4.5%
Number Unemployed	7	9	28.6%
Washington Park Unemployment Rate	3.1%	3.8%	22.6%
Beaufort County			
Civilian Labor Force	20,918	22,127	5.8%
Number Employed	18,913	19,756	4.5%
Number Unemployed	1,285	2,371	84.5%
Beaufort County Unemployment Rate	6.4%	10.7%	67.2%
North Carolina Unemployment Rate	3.7%	8.8%	137.8%

Source: 2000 US Census; 2006-2010 American Community Survey 5-Year Estimates.

Beaufort County’s civilian employment is heavily concentrated in the manufacturing and education/health/social service sectors. The largest single employment category is the educational services, and health care and social assistance sector, which constitutes 24.0% of all those employed who are 16 years of age and older. Manufacturing accounts for the second largest category with 14.2%. Of the County’s total 2010 employed labor force, 11.4% were employed in construction industry and 10.4% in the retail trade sector. Table 5 provides a summary of Beaufort County’s employment by industry.

Table 5. Beaufort County Employment by Industry, 2010

Categories	Total Employment	% of Total
Agriculture, forestry, fishing and hunting, and mining	1,443	7.3%
Construction	2,247	11.4%
Manufacturing	2,804	14.2%
Wholesale trade	419	2.1%
Retail trade	2,048	10.4%
Transportation and warehousing, and utilities	701	3.5%
Information	153	0.8%
Finance and insurance, and real estate and rental and leasing	978	5.0%
Professional, scientific, and management, and administrative and waste management services	916	4.6%
Educational services, and health care and social assistance	4,736	24.0%
Arts, entertainment, and recreation, and accommodation and food services	1,338	6.8%
Other services (except public administration)	1,097	5.6%
Public administration	876	4.4%
Total	19,756	100.0%

Source: 2006-2010 American Community Survey 5-Year Estimate.

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Normally, *per capita* income is considered a good indicator of an area’s income producing capability or strength. Table 6 provides a comparison of *per capita* incomes for Beaufort County, municipalities, and North Carolina.

Table 6. Beaufort County and North Carolina *Per Capita* Income, 2000 and 2010

	<i>Per Capita</i> Income		% of State
Aurora			
2000	\$13,252		65.3%
2010	\$18,071		73.0%
Bath			
2000	\$23,029		113.4%
2010	\$46,074	<i>Bath - Highest per capita income in County, 2010</i>	186.2%
Belhaven			
2000	\$11,086	<i>Belhaven - Lowest per capita income in County, 2000</i>	54.6%
2010	\$15,361	<i>Belhaven - Lowest per capita income in County, 2010</i>	62.1%
Chocowinity			
2000	\$11,747		57.8%
2010	\$17,898		72.3%
Pantego			
2000	\$18,030		88.8%
2010	\$19,899		80.4%
Washington			
2000	\$14,319		70.5%
2010	\$18,937		76.5%
Washington Park			
2000	\$31,929	<i>Washington Park - Highest per capita income in County, 2000</i>	157.2%
2010	\$32,683		132.1%
Beaufort County			
2000	\$16,722		82.3%
2010	\$22,728	<i>County’s per capita income increased by 35.9% from 2000-2010</i>	91.8%
North Carolina			
2000	\$20,307		-
2010	\$24,745		-

Source: 2000 US Census; 2006-2010 American Community Survey 5-Year Estimates.

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The Town of Belhaven had the lowest and Bath had the highest *per capita* income of all of the county's municipalities for 2010. Overall, from 2000 to 2010, the gap between Beaufort County *per capita* income level and that of the State narrowed significantly. In addition, the County's *per capita* income increased by \$6,006, or 35.9%.



Beaufort County Courthouse

Photo Courtesy of www.ncdistrictattorney.org



Palmer-Marsh House - 1744

Photo Courtesy of www.nchistoricsites.org

III. CARTERET COUNTY

A. History

Carteret County was named in honor of Sir John Carteret who later became one of the Lords' Proprietors of North Carolina. The county was formed in 1722 out of Craven County. Native inhabitants of the area were the Tuscarora Indians, who lived between the Neuse and Pamlico Rivers in eastern North Carolina. By 1706, white settlers of Huguenot, German, Scotch-Irish, French, and English descent began arriving in the region. Most had migrated southward from northern American colonies rather than from Europe. Also, in 1721, Quakers from Rhode Island arrived, settling on the north side of the Newport River.

Beaufort, the county seat, is the third oldest town in North Carolina. The town was originally known as Fishtown because of the importance the fishing industry played in the area's economy and history. Large plantations producing tobacco, grains, and salted meats were located in the central and western parts of Carteret County. Although the county's land owners occupied large tracts, the plantation houses were plain and were constructed on a smaller scale. Almost from its beginning, Carteret County participated in global trade, exporting fish, lumber from the area's vast forests, and naval stores – tar, pitch, rosin, and turpentine.

As children were preoccupied with working on family farms, formal education was not a priority for the early settlers of Carteret County. The Scotch-Irish, however, established the area's first school at Hunting Quarters – the school later became the first accredited high school in the county. The first Anglican Church was organized in 1724 in Beaufort. However, increasing opposition of Baptists, Quakers, and other denominations contributed to the decreasing number of Anglicans in Carteret County.

Many Carteret County residents served in the Revolutionary War, and naval skirmishes occurred in the county's waters. Constructed between 1826 and 1834, Fort Macon was the site of a major battle during the Civil War. On April 25, 1862, Confederate troops surrendered the fort, and the federal government used Fort Macon as a prison following the war.

Although most of the settlements were developed well before the Civil War, Morehead City was established in 1858. It started as a railroad town and eventually attracted tourists. Today, the tourism industry, rather than agriculture and exporting, provides many economic opportunities for the county's residents.

B. Demographic Summary

1. Population

The population for Carteret County increased by 11.4% from 1990 to 2000, and increased by 11.9% from 2000 to 2010. Table 7 provides a summary of Carteret County’s population figures by municipality.

Table 7. Carteret County/Municipalities Population, 1990-2010

	Total Population			Percent Change		
	1990	2000	2010	'90-'00	'00-'10	'90-'10
Atlantic Beach	1,938	1,781	1,495	-8.1%	-16.1%	-22.9%
Beaufort	3,808	3,771	4,039	-1.0%	7.1%	6.1%
Bogue	450	590	684	31.1%	15.9%	52.0%
Cape Carteret	1,013	1,214	1,917	19.8%	57.9%	89.2%
Cedar Point	628	929	1,279	47.9%	37.7%	103.7%
Emerald Isle	2,434	3,488	3,655	43.3%	4.8%	50.2%
Indian Beach	153	95	112	-37.9%	17.9%	-26.8%
Morehead City	6,046	7,691	8,661	27.2%	12.6%	43.3%
Newport	2,516	3,349	4,150	33.1%	23.9%	64.9%
Peletier	303	487	644	60.7%	32.2%	112.5%
Pine Knoll Shores	1,360	1,524	1,339	12.1%	-12.1%	-1.5%
<i>Subtotal - All Municipalities</i>	20,649	24,919	27,975	20.7%	12.3%	35.5%
Unincorporated Areas	32,657	34,464	38,494	5.5%	11.7%	17.9%
Carteret County (Total)	53,306	59,383	66,469	11.4%	11.9%	24.7%

Source: US Census Bureau.

Carteret County, including all of its municipalities as well as the unincorporated areas, experienced a 24.7% increase in population from 1990 to 2010. With the exception of the municipalities of Atlantic Beach, Indian Beach, and Pine Knoll Shores, all municipalities in Carteret County experienced an increase in population from 1990 to 2010. Morehead City has the largest population of the county’s municipalities. The NC Office of State Planning predicts a continuing slight increasing trend for Carteret County’s overall population, with the total 2015 county population projection estimated at 71,692 persons, a 7.9% increase from the 2010 population.

2. Housing

The number of occupied housing units for the County, as reported in the 2010 American Community Survey, was 28,632, or 60.3% of the total number of housing units. Vacant housing units (18,827) comprised 39.7% of the total number of units. Table 8 summarizes the County’s and municipalities’ dwelling units by tenure. Indian Beach has the highest vacancy rate of Carteret County’s municipalities, at 94.4%, while

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Beaufort has the highest percentage of rental units, at 36.9%. Overall, the County’s 60.3% occupancy rate is relatively high.

Table 8. Carteret County/Municipalities Summary of Housing Units by Tenure, 2010

	Number of Units	% of Total	
Atlantic Beach			
Owner-Occupied Units	605	12.1%	
Renter-Occupied Units	362	7.3%	<i>Atlantic Beach’s % of Rental Units 7.3%</i>
Vacant Units	4021	80.6%	<i>Atlantic Beach’s Vacancy Rate 80.6%</i>
Total Housing Units - Atlantic Beach	4,988	100.0%	<i>Atlantic Beach’s % of County 10.5%</i>
Beaufort			
Owner-Occupied Units	1,054	44.1%	
Renter-Occupied Units	882	36.9%	<i>Beaufort’s % of Rental Units 36.9%</i>
Vacant Units	456	19.1%	<i>Beaufort’s Vacancy Rate 19.1%</i>
Total Housing Units - Beaufort	2,392	100.0%	<i>Beaufort’s % of County 5.0%</i>
Bogue			
Owner-Occupied Units	256	80.3%	
Renter-Occupied Units	26	8.2%	<i>Bogue’s % of Rental Units 8.2%</i>
Vacant Units	37	11.6%	<i>Bogue’s Vacancy Rate 11.6%</i>
Total Housing Units - Bogue	319	100.0%	<i>Bogue’s % of County 0.7%</i>
Cape Carteret			
Owner-Occupied Units	677	61.8%	
Renter-Occupied Units	118	10.8%	<i>Cape Carteret’s % of Rental Units 10.8%</i>
Vacant Units	301	27.5%	<i>Cape Carteret’s Vacancy Rate 27.5%</i>
Total Housing Units - Cape Carteret	1,096	100.0%	<i>Cape Carteret’s % of County 2.3%</i>
Cedar Point			
Owner-Occupied Units	431	38.7%	
Renter-Occupied Units	126	11.3%	<i>Cedar Point’s % of Rental Units 11.3%</i>
Vacant Units	558	50.0%	<i>Cedar Point’s Vacancy Rate 50.0%</i>
Total Housing Units - Cedar Point	1,115	100.0%	<i>Cedar Point’s % of Rental Units 2.3%</i>
Emerald Isle			
Owner-Occupied Units	1,360	20.6%	
Renter-Occupied Units	377	5.7%	<i>Emerald Isle’s % of Rental Units 5.7%</i>
Vacant Units	4,853	73.6%	<i>Emerald Isle’s Vacancy Rate 73.6%</i>
Total Housing Units - Emerald Isle	6,590	100.0%	<i>Emerald Isle’s % of County 13.9%</i>

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	Number of Units	% of Total	
Indian Beach			
Owner-Occupied Units	63	5.1%	
Renter-Occupied Units	6	0.5%	<i>Indian Beach's % of Rental Units 0.5%</i>
Vacant Units	1,164	94.4%	<i>Indian Beach's Vacancy Rate 94.4%</i>
Total Housing Units - Indian Beach	1,233	100.0%	<i>Indian Beach's % of County 2.6%</i>
Morehead City			
Owner-Occupied Units	2,403	43.3%	
Renter-Occupied Units	1,994	36.0%	<i>Morehead City's % of Rental Units 36.0%</i>
Vacant Units	1,149	20.7%	<i>Morehead City's Vacancy Rate 20.7%</i>
Total Housing Units - Morehead City	5,546	100.0%	<i>Morehead City's % of County 11.7%</i>
Newport			
Owner-Occupied Units	829	53.4%	
Renter-Occupied Units	565	36.4%	<i>Newport's % of Rental Units 36.4%</i>
Vacant Units	157	10.1%	<i>Newport's Vacancy Rate 10.1%</i>
Total Housing Units - Newport	1,551	100.0%	<i>Newport's % of County 3.3%</i>
Peletier			
Owner-Occupied Units	252	59.0%	
Renter-Occupied Units	21	4.9%	<i>Peletier's % of Rental Units 4.9%</i>
Vacant Units	154	36.1%	<i>Peletier's Vacancy Rate 36.1%</i>
Total Housing Units - Peletier	427	100.0%	<i>Peletier's % of County 0.9%</i>
Pine Knoll Shores			
Owner-Occupied Units	703	30.7%	
Renter-Occupied Units	121	5.3%	<i>Pine Knoll Shores' % of Rental Units 5.3%</i>
Vacant Units	1,466	64.0%	<i>Pine Knoll Shores' Vacancy Rate 64.0%</i>
Total Housing Units - Pine Knoll Shores	2,290	100.0%	<i>Pine Knoll Shores' % of County 4.8%</i>
Carteret County			
Owner-Occupied Units	21,043	44.3%	
Renter-Occupied Units	7,589	16.0%	<i>County's % of Rental Units 16.0%</i>
Vacant Units	18,827	39.7%	<i>County's Vacancy Rate 39.7%</i>
Total Housing Units - County	47,459	100.0%	

Source: 2010 US Census.

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The County’s housing stock is aging – the majority of units (62.9%) were built prior to 1990. Table 9 presents housing units for the County and its municipalities by year the structures were built.

Table 9. Carteret County/Municipalities Housing Units by Year Structure Built, 2010

Year	# of Structures	% of Total	
Atlantic Beach			
2005 or later	79	1.6%	
2000 to 2004	366	7.3%	
1990 to 1999	521	10.4%	
1980 to 1989	1,655	33.2%	<i>Largest % of Atlantic Beach’s units built pre-1990</i>
1970 to 1979	1,195	24.0%	
1960 to 1969	585	11.7%	
1950 to 1959	457	9.2%	
1940 to 1949	79	1.6%	
1939 or earlier	51	1.0%	
Total Structures	4,988	100.0%	
Beaufort			
2005 or later	110	4.6%	
2000 to 2004	338	14.1%	
1990 to 1999	153	6.4%	
1980 to 1989	344	14.4%	
1970 to 1979	254	10.6%	
1960 to 1969	190	7.9%	
1950 to 1959	329	13.8%	
1940 to 1949	197	8.2%	
1939 or earlier	477	19.9%	<i>Largest % of Beaufort’s units built pre-1940</i>
Total Structures	2,392	100.0%	
Bogue			
2005 or later	16	5.0%	
2000 to 2004	62	19.4%	
1990 to 1999	132	41.4%	<i>Largest % of Bogue’s units built 1990-1999</i>
1980 to 1989	62	19.4%	
1970 to 1979	18	5.6%	
1960 to 1969	14	4.4%	
1950 to 1959	7	2.2%	
1940 to 1949	8	2.5%	
1939 or earlier	0	0.0%	
Total Structures	319	100.0%	

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Year	# of Structures	% of Total	
<i>Cape Carteret</i>			
2005 or later	128	11.7%	
2000 to 2004	168	15.3%	
1990 to 1999	209	19.1%	<i>Largest % of Cape Carteret's units built 1990-1999</i>
1980 to 1989	188	17.2%	
1970 to 1979	189	17.2%	
1960 to 1969	153	14.0%	
1950 to 1959	54	4.9%	
1940 to 1949	3	0.3%	
1939 or earlier	4	0.4%	
Total Structures	1,096	100.0%	
<i>Cedar Point</i>			
2005 or later	69	6.2%	
2000 to 2004	186	16.7%	
1990 to 1999	243	21.8%	
1980 to 1989	286	25.7%	<i>Largest % of Cedar Point's units built 1980-1989</i>
1970 to 1979	150	13.5%	
1960 to 1969	64	5.7%	
1950 to 1959	43	3.9%	
1940 to 1949	71	6.4%	
1939 or earlier	3	0.3%	
Total Structures	1,115	100.0%	
<i>Emerald Isle</i>			
2005 or later	92	1.4%	
2000 to 2004	603	9.2%	
1990 to 1999	2,432	36.9%	<i>Largest % of Emerald Isle's units built 1990-1999</i>
1980 to 1989	2,317	35.2%	
1970 to 1979	869	13.2%	
1960 to 1969	89	1.4%	
1950 to 1959	139	2.1%	
1940 to 1949	49	0.7%	
1939 or earlier	0	0.0%	
Total Structures	6,590	100.0%	
<i>Indian Beach</i>			
2005 or later	20	1.6%	
2000 to 2004	169	13.7%	
1990 to 1999	173	14.0%	
1980 to 1989	543	44.0%	<i>Largest % of Indian Beach's units built pre-1990</i>
1970 to 1979	210	17.0%	
1960 to 1969	103	8.4%	

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Year	# of Structures	% of Total	
1950 to 1959	15	1.2%	
1940 to 1949	0	0.0%	
1939 or earlier	0	0.0%	
Total Structures	1,233	100.0%	
Morehead City			
2005 or later	203	3.7%	
2000 to 2004	576	10.4%	
1990 to 1999	809	14.6%	
1980 to 1989	1,110	20.0%	<i>Largest % of Morehead City's units built 1890-1989</i>
1970 to 1979	685	12.4%	
1960 to 1969	540	9.7%	
1950 to 1959	683	12.3%	
1940 to 1949	423	7.6%	
1939 or earlier	517	9.3%	
Total Structures	5,546	100.0%	
Newport			
2005 or later	161	10.4%	
2000 to 2004	211	13.6%	
1990 to 1999	320	20.6%	<i>Largest % of Newport's units built 1990-1999</i>
1980 to 1989	291	18.8%	
1970 to 1979	189	12.2%	
1960 to 1969	181	11.7%	
1950 to 1959	112	7.2%	
1940 to 1949	43	2.8%	
1939 or earlier	43	2.8%	
Total Structures	1,551	100.0%	
Peletier			
2005 or later	9	2.1%	
2000 to 2004	45	10.5%	
1990 to 1999	146	34.2%	<i>Largest % of Peletier's units built 1990-1999</i>
1980 to 1989	117	27.4%	
1970 to 1979	44	10.3%	
1960 to 1969	17	4.0%	
1950 to 1959	39	9.1%	
1940 to 1949	10	2.3%	
1939 or earlier	0	0.0%	
Total Structures	427	100.0%	

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Year	# of Structures	% of Total	
<i>Pine Knoll Shores</i>			
2005 or later	42	1.8%	
2000 to 2004	110	4.8%	
1990 to 1999	276	12.1%	
1980 to 1989	1,086	47.4%	<i>Largest % of Pine Knoll Shores' units built 1980-1989</i>
1970 to 1979	609	26.6%	
1960 to 1969	160	7.0%	
1950 to 1959	7	0.3%	
1940 to 1949	0	0.0%	
1939 or earlier	0	0.0%	
Total Structures	2,290	100.0%	
<i>Carteret County</i>			
2005 or later	1,814	3.8%	
2000 to 2004	5,375	11.3%	
1990 to 1999	10,384	21.9%	
1980 to 1989	12,405	26.1%	<i>Largest % of the County's units built pre-1990</i>
1970 to 1979	7,561	15.9%	
1960 to 1969	3,577	7.5%	
1950 to 1959	2,923	6.2%	
1940 to 1949	1,475	3.1%	
1939 or earlier	1,945	4.1%	
Total Structures	47,459	100.0%	

Source: 2006-2010 American Community Survey.

3. Economy

In 2010, there was a total of 33,452 employed persons in Carteret County. Of that total, approximately 948, or 2.8%, were employed by the military. Table 10 provides the county's and municipalities' unemployment rates for the civilian labor force for selected years. While the overall unemployment rate increased for the county, the Town of Indian Beach had an impressive 0% unemployment rate for 2010. The Town of Emerald Isle's unemployment rate increased by 241.2%, and the Town of Bogue's unemployment rate increased by a substantial 528.6% from 2000 to 2010.

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Table 10. Carteret County/Municipalities Civilian Unemployment Rate, 16 years and over

	2000	2010	% Change
<i>Atlantic Beach</i>			
Civilian Labor Force	992	1,016	2.4%
Number Employed	938	906	-3.4%
Number Unemployed	54	110	103.7%
Atlantic Beach Unemployment Rate	5.4%	10.8%	100.0%
<i>Beaufort</i>			
Civilian Labor Force	1,717	2,084	21.4%
Number Employed	1,636	1,970	20.4%
Number Unemployed	81	114	40.7%
Beaufort Unemployment Rate	4.7%	5.5%	17.0%
<i>Bogue</i>			
Civilian Labor Force	291	367	26.1%
Number Employed	284	323	13.7%
Number Unemployed	7	44	528.6%
Bogue Unemployment Rate	2.4%	12.0%	400.0%
<i>Cape Carteret</i>			
Civilian Labor Force	478	845	76.8%
Number Employed	460	778	69.1%
Number Unemployed	18	67	272.2%
Cape Carteret Unemployment Rate	3.8%	7.9%	107.9%
<i>Cedar Point</i>			
Civilian Labor Force	461	605	31.2%
Number Employed	444	551	24.1%
Number Unemployed	17	54	217.6%
Cedar Point Unemployment Rate	3.7%	8.9%	140.5%
<i>Emerald Isle</i>			
Civilian Labor Force	1,579	1,784	12.9%
Number Employed	1,525	1,577	3.4%
Number Unemployed	54	207	283.3%
Emerald Isle Unemployment Rate	3.4%	11.6%	241.2%
<i>Indian Beach</i>			
Civilian Labor Force	39	52	33.3%
Number Employed	35	52	48.6%
Number Unemployed	4	0	-100.0%
Indian Beach Unemployment Rate	10.3%	0.0%	-100.0%
<i>Morehead City</i>			
Civilian Labor Force	3,682	4,497	22.1%
Number Employed	3,394	4,053	19.4%
Number Unemployed	288	444	54.2%
Morehead City Unemployment Rate	7.8%	9.9%	26.9%

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	2000	2010	% Change
Newport			
Civilian Labor Force	1,362	1,837	34.9%
Number Employed	1,301	1,677	28.9%
Number Unemployed	61	160	162.3%
Newport Unemployment Rate	4.5%	8.7%	93.3%
Peletier			
Civilian Labor Force	239	283	18.4%
Number Employed	223	271	21.5%
Number Unemployed	16	12	-25.0%
Peletier Unemployment Rate	6.7%	4.2%	-37.3%
Pine Knoll Shores			
Civilian Labor Force	513	578	12.7%
Number Employed	499	548	9.8%
Number Unemployed	14	30	114.3%
Pine Knoll Shores Unemployment Rate	2.7%	5.2%	92.6%
Carteret County			
Civilian Labor Force	28,529	32,504	13.9%
Number Employed	27,110	29,724	9.6%
Number Unemployed	1,419	2,780	95.9%
Carteret County Unemployment Rate	5.0%	8.6%	72.0%
North Carolina Unemployment Rate	3.7%	8.8%	137.8%

Source: 2000 US Census; 2006-2010 American Community Survey 5-Year Estimates.

Carteret 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 19.0% of all those employed who are 16 years of age and older. Retail trade accounts for the second largest category with 12.8%. Of the County’s total 2010 employed labor force, 11.3% were employed in construction industry and 11.2% in the arts/entertainment/recreation and accommodation/food services sector. Table 11 provides a summary of Carteret County’s employment by industry.

Table 11. Carteret County Employment by Industry, 2010

Categories	Total Employment	% of Total
Agriculture, forestry, fishing and hunting, and mining	521	1.8%
Construction	3,366	11.3%
Manufacturing	1,936	6.5%
Wholesale trade	749	2.5%
Retail trade	3,801	12.8%
Transportation and warehousing, and utilities	1,370	4.6%
Information	369	1.2%

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Categories	Total Employment	% of Total
Finance and insurance, and real estate and rental and leasing	1,934	6.5%
Professional, scientific, and management, and administrative and waste management services	2,532	8.5%
Educational services, and health care and social assistance	5,634	19.0%
Arts, entertainment, and recreation, and accommodation and food services	3,331	11.2%
Other services (except public administration)	1,499	5.0%
Public administration	2,682	9.0%
Total	29,724	100.0%

Source: 2006-2010 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 12 provides a comparison of *per capita* incomes for Carteret County, municipalities, and North Carolina.

Table 12. Carteret County and North Carolina *Per Capita* Income, 2000 and 2010

	<i>Per Capita</i> Income	% of State
Atlantic Beach		
2000	\$31,339	154.3%
2010	\$31,196	126.1%
Beaufort		
2000	\$19,356	95.3%
2010	\$28,208	114.0%
Bogue		
2000	\$20,095	99.0%
2010	\$21,726	87.8%
Cape Carteret		
2000	\$26,806	132.0%
2010	\$31,509	127.3%
Cedar Point		
2000	\$25,457	125.4%
2010	\$32,619	131.8%
Emerald Isle		
2000	\$31,316	154.2%
2010	\$34,729	140.3%
Indian Beach		
2000	\$25,826	127.2%
2010	\$28,763	116.2%

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	<i>Per Capita Income</i>		<i>% of State</i>
Morehead City			
2000	\$19,138		94.2%
2010	\$25,963		104.9%
Newport			
2000	\$14,260	<i>Newport - Lowest per capita income in County, 2000</i>	70.2%
2010	\$18,072	<i>Newport - Lowest per capita income in County, 2010</i>	73.0%
Peletier			
2000	\$17,484		86.1%
2010	\$20,007		80.9%
Pine Knoll Shores			
2000	\$34,618	<i>Pine Knoll Shores - Highest per capita income in County, 2000</i>	170.5%
2010	\$43,068	<i>Pine Knoll Shores - Highest per capita income in County, 2010</i>	174.0%
Carteret County			
2000	\$21,260		104.7%
2010	\$26,791	<i>County's per capita income increased by 26.0% from 2000-2010</i>	108.3%
North Carolina			
2000	\$20,307		-
2010	\$24,745		-

Source: 2000 US Census; 2006-2010 American Community Survey 5-Year Estimates.

The Town of Newport had the lowest and Pine Knoll Shores had the highest *per capita* income of all of the county’s municipalities for 2010. Overall, from 2000 to 2010, the gap between Carteret County *per capita* income level and that of the State increased significantly. In addition, the County’s *per capita* income increased by \$5,531, or 26.0%.



Carteret County Courthouse

Photo Courtesy of www.nccourts.org



Fort Macon

Photo Courtesy of www.ncparks.gov

IV. CRAVEN COUNTY

A. History

Craven County was named in honor of William, Earl of Craven, who lived from 1606-1697. His death preceded the establishment of Craven County, and he never had the pleasure of visiting the county which carries his name. The official Craven County seal was designed and adopted in 1981, using the coat-of-arms of the Earl, which is also the coat-of-arms of his nephew, William, Lord Craven, who succeeded him as Lord Proprietor of Carolina. The motto on the seal, “Virtus in Actione Consistit” translates to “Virtue in Consistent Action.”

Craven County, originally included as a precinct of Bath County, was established in its present form in 1712. New Bern became its county seat in 1722, and was also the capital of the colony and first state capital until 1794. Because of its location, situated between the Albemarle and Cape Fear Rivers, Craven County grew in size and importance during the mid-18th century due to the significance of its county seat as a river port. As Craven County moved into the 19th century, it continued to flourish as the developing railroad system served to further New Bern’s commercial dominance, wealth, and cultural sophistication. These influences were also felt in the communities surrounding the city.

During the Civil War, there was significant activity occurring in Craven County, and remains of some of the battlegrounds can still be found.

B. Demographic Summary

1. Population

The population for Craven County increased by 12.1% from 1990 to 2000, and increased by 13.1% from 2000 to 2010. Table 13 provides a summary of Craven County’s population figures by municipality.

Table 13. Craven County/Municipalities Population, 1990-2010

	Total Population			Percent Change		
	1990	2000	2010	'90-'00	'00-'10	'90-'10
Bridgeton	498	328	454	-34.1%	38.4%	-8.8%
Cove City	497	433	399	-12.9%	-7.9%	-19.7%
Dover	451	443	401	-1.8%	-9.5%	-11.1%
Havelock	20,300	22,442	20,735	10.6%	-7.6%	2.1%
New Bern	17,363	23,111	29,524	33.1%	27.7%	70.0%
River Bend	2,408	2,923	3,119	21.4%	6.7%	29.5%
Trent Woods	2,366	4,224	4,155	78.5%	-1.6%	75.6%
Vanceboro	946	898	1,055	-5.1%	17.5%	11.5%
<i>Subtotal - All Municipalities</i>	44,829	54,802	59,842	22.2%	9.2%	33.5%

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	Total Population			Percent Change		
	1990	2000	2010	'90-'00	'00-'10	'90-'10
Unincorporated Areas	36,784	36,721	43,663	-0.2%	18.9%	18.7%
Craven County (Total)	81,613	91,523	103,505	12.1%	13.1%	26.8%

Source: US Census Bureau.

Craven County, including all of its municipalities as well as the unincorporated areas, experienced a 26.8% increase in population from 1990 to 2010. With the exception of the municipalities of Bridgeton, Cove City, and Dover, all municipalities in Craven County experienced an increase in population from 1990 to 2010. New Bern, the county seat, has the largest population of the county's municipalities. The NC Office of State Planning predicts a continuing slight increasing trend for Craven County's overall population, with the total 2015 county population projection estimated at 114,105 persons, a 10.2% increase from the 2010 population.

2. Housing

The number of occupied housing units for the County, as reported in the 2010 American Community Survey, was 40,202, or 90.7% of the total number of housing units. Vacant housing units (4,100) comprised 9.3% of the total number of units. Table 14 summarizes the County's and municipalities' dwelling units by tenure. Bridgeton has the highest vacancy rate of Craven County's municipalities, at 27.8%, while Havelock has the highest percentage of rental units, at 55.3%.

Table 14. Craven County/Municipalities Summary of Housing Units by Tenure, 2010

	Number of Units	% of Total	
<i>Bridgeton</i>			
Owner-Occupied Units	97	50.0%	
Renter-Occupied Units	43	22.2%	<i>Bridgeton's % of Rental Units 22.2%</i>
Vacant Units	54	27.8%	<i>Bridgeton's Vacancy Rate 27.8%</i>
Total Housing Units - Bridgeton	194	100.0%	<i>Bridgeton's % of County 0.4%</i>
<i>Cove City</i>			
Owner-Occupied Units	143	62.2%	
Renter-Occupied Units	60	26.1%	<i>Cove City's % of Rental Units 26.1%</i>
Vacant Units	27	11.7%	<i>Cove City's Vacancy Rate 11.7%</i>
Total Housing Units - Cove City	230	100.0%	<i>Cove City's % of County 0.5%</i>
<i>Dover</i>			
Owner-Occupied Units	155	60.1%	
Renter-Occupied Units	79	30.6%	<i>Dover's % of Rental Units 30.6%</i>
Vacant Units	24	9.3%	<i>Dover's Vacancy Rate 9.3%</i>
Total Housing Units - Dover	258	100.0%	<i>Dover's % of County 0.6%</i>

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	Number of Units	% of Total	
Havelock			
Owner-Occupied Units	2,799	40.9%	
Renter-Occupied Units	3,785	55.3%	<i>Havelock's % of Rental Units 55.3%</i>
Vacant Units	260	3.8%	<i>Havelock's Vacancy Rate 3.8%</i>
Total Housing Units - Havelock	6,844	100.0%	<i>Havelock's % of County 15.4%</i>
New Bern			
Owner-Occupied Units	6,751	46.5%	
Renter-Occupied Units	6,287	43.3%	<i>New Bern's % of Rental Units 43.3%</i>
Vacant Units	1,466	10.1%	<i>New Bern's Vacancy Rate 10.1%</i>
Total Housing Units - New Bern	14,504	100.0%	<i>New Bern's % of Rental Units 32.7%</i>
River Bend			
Owner-Occupied Units	965	59.6%	
Renter-Occupied Units	503	31.1%	<i>River Bend's % of Rental Units 31.1%</i>
Vacant Units	150	9.3%	<i>River Bend's Vacancy Rate 9.3%</i>
Total Housing Units - River Bend	1,618	100.0%	<i>River Bend's % of County 3.7%</i>
Trent Woods			
Owner-Occupied Units	1,599	88.6%	
Renter-Occupied Units	131	7.3%	<i>Trent Woods' % of Rental Units 7.3%</i>
Vacant Units	75	4.2%	<i>Trent Woods' Vacancy Rate 4.2%</i>
Total Housing Units - Trent Woods	1,805	100.0%	<i>Trent Woods' % of County 4.1%</i>
Vanceboro			
Owner-Occupied Units	175	48.7%	
Renter-Occupied Units	142	39.6%	<i>Vanceboro's % of Rental Units 39.6%</i>
Vacant Units	42	11.7%	<i>Vanceboro's Vacancy Rate 11.7%</i>
Total Housing Units - Vanceboro	359	100.0%	<i>Vanceboro's % of County 0.8%</i>
Craven County			
Owner-Occupied Units	25,524	57.6%	
Renter-Occupied Units	14,678	33.1%	<i>County's % of Rental Units 33.1%</i>
Vacant Units	4,100	9.3%	<i>County's Vacancy Rate 9.3%</i>
Total Housing Units - County	44,302	100.0%	

Source: 2010 US Census.

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

SECTION 2. COMMUNITY PROFILES

The County’s housing stock is aging – the majority of units (60.9%) were built prior to 1990. Table 15 presents housing units for the County and its municipalities by year the structures were built.

Table 15. Craven County/Municipalities Housing Units by Year Structure Built, 2010

Year	# of Structures	% of Total	
<i>Bridgeton</i>			
2005 or later	3	1.5%	
2000 to 2004	30	15.5%	
1990 to 1999	11	5.7%	
1980 to 1989	40	20.6%	<i>Largest % of Bridgeton’s units built pre-1990</i>
1970 to 1979	31	16.0%	
1960 to 1969	16	8.2%	
1950 to 1959	18	9.3%	
1940 to 1949	6	3.1%	
1939 or earlier	39	20.1%	
Total Structures	194	100.0%	
<i>Cove City</i>			
2005 or later	18	7.8%	
2000 to 2004	0	0.0%	
1990 to 1999	39	17.0%	
1980 to 1989	24	10.4%	
1970 to 1979	75	32.6%	<i>Largest % of Cove City’s units built pre-1980</i>
1960 to 1969	15	6.5%	
1950 to 1959	27	11.7%	
1940 to 1949	7	3.0%	
1939 or earlier	25	10.9%	
Total Structures	230	100.0%	
<i>Dover</i>			
2005 or later	0	0.0%	
2000 to 2004	14	5.4%	
1990 to 1999	31	12.0%	
1980 to 1989	16	6.2%	
1970 to 1979	26	10.1%	
1960 to 1969	30	11.6%	
1950 to 1959	53	20.5%	<i>Largest % of Dover’s units built pre-1960</i>
1940 to 1949	35	13.6%	
1939 or earlier	53	20.5%	
Total Structures	258	100.0%	

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Year	# of Structures	% of Total	
<i>Havelock</i>			
2005 or later	598	8.7%	
2000 to 2004	810	11.8%	
1990 to 1999	1,180	17.2%	
1980 to 1989	1,343	19.6%	
1970 to 1979	1,432	20.9%	<i>Largest % of Havelock's units built 1970-1979</i>
1960 to 1969	459	6.7%	
1950 to 1959	711	10.4%	
1940 to 1949	268	3.9%	
1939 or earlier	43	0.6%	
Total Structures	6,844	100.0%	
<i>New Bern</i>			
2005 or later	1,079	7.4%	
2000 to 2004	1,911	13.2%	
1990 to 1999	2,362	16.3%	<i>Largest % of New Bern's units built 1990-1999</i>
1980 to 1989	2,142	14.8%	
1970 to 1979	2,104	14.5%	
1960 to 1969	1,492	10.3%	
1950 to 1959	1,386	9.6%	
1940 to 1949	756	5.2%	
1939 or earlier	1,272	8.8%	
Total Structures	14,504	100.0%	
<i>River Bend</i>			
2005 or later	27	1.7%	
2000 to 2004	97	6.0%	
1990 to 1999	338	20.9%	
1980 to 1989	569	35.2%	<i>Largest % of River Bend's units built 1980-1989</i>
1970 to 1979	488	30.2%	
1960 to 1969	99	6.1%	
1950 to 1959	0	0.0%	
1940 to 1949	0	0.0%	
1939 or earlier	0	0.0%	
Total Structures	1,618	100.0%	
<i>Trent Woods</i>			
2005 or later	16	0.9%	
2000 to 2004	41	2.3%	
1990 to 1999	251	13.9%	
1980 to 1989	353	19.6%	
1970 to 1979	609	33.7%	<i>Largest % of Trent Woods' units built 1970-1979</i>
1960 to 1969	355	19.7%	

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Year	# of Structures	% of Total	
1950 to 1959	137	7.6%	
1940 to 1949	15	0.8%	
1939 or earlier	28	1.6%	
Total Structures	1805	100.0%	
Vanceboro			
2005 or later	11	3.1%	
2000 to 2004	14	3.9%	
1990 to 1999	32	8.9%	
1980 to 1989	75	20.9%	<i>Largest % of Vanceboro's units built pre-1990</i>
1970 to 1979	49	13.6%	
1960 to 1969	67	18.7%	
1950 to 1959	62	17.3%	
1940 to 1949	15	4.2%	
1939 or earlier	34	9.5%	
Total Structures	359	100.0%	
Craven County			
2005 or later	3,197	7.2%	
2000 to 2004	5,031	11.4%	
1990 to 1999	9,080	20.5%	
1980 to 1989	8,289	18.7%	<i>Largest % of the County's units built pre-1990</i>
1970 to 1979	7,899	17.8%	
1960 to 1969	3,706	8.4%	
1950 to 1959	3,374	7.6%	
1940 to 1949	1,758	4.0%	
1939 or earlier	1,968	4.4%	
Total Structures	44,302	100.0%	

Source: 2006-2010 American Community Survey.

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

SECTION 2. COMMUNITY PROFILES

3. *Economy*

In 2010, there was a total of 49,077 employed persons in Craven County. Of that total, approximately 6,217, or 12.7%, were employed by the military. The number employed increased by 8.5% from 2000 to 2010. Table 16 provides the county’s and municipalities’ unemployment rates for the civilian labor force for selected years. While the overall unemployment rate increased for the county, the Town of River Bend had an impressive 1.7% unemployment rate for 2010. The Town of Trent Woods’ unemployment rate increased by 86.7%, and the Town of New Bern’s unemployment rate increased by 93.7% from 2000 to 2010.

Table 16. Craven County/Municipalities Civilian Unemployment Rate, 16 years and over

	2000	2010	% Change
<i>Bridgeton</i>			
Civilian Labor Force	176	156	11.4%
Number Employed	162	142	12.3%
Number Unemployed	14	14	0.0%
Bridgeton Unemployment Rate	8.0%	9.0%	12.5%
<i>Cove City</i>			
Civilian Labor Force	173	319	84.4%
Number Employed	173	278	60.7%
Number Unemployed	0	41	–
Cove City Unemployment Rate	0.0%	12.9%	–
<i>Dover</i>			
Civilian Labor Force	195	268	37.9%
Number Employed	178	242	35.9%
Number Unemployed	17	26	52.9%
Dover Unemployment Rate	8.7%	9.7%	11.5%
<i>Havelock</i>			
Civilian Labor Force	6,801	7,268	6.9%
Number Employed	6,396	6,472	1.2%
Number Unemployed	405	796	96.5%
Havelock Unemployment Rate	6.0%	11.0%	83.3%
<i>New Bern</i>			
Civilian Labor Force	10,177	13,095	28.7%
Number Employed	9,538	11,503	20.6%
Number Unemployed	639	1,592	149.1%
New Bern Unemployment Rate	6.3%	12.2%	93.7%
<i>River Bend</i>			
Civilian Labor Force	1,187	1,157	-2.5%
Number Employed	1,169	1,137	-2.7%
Number Unemployed	18	20	11.1%
River Bend Unemployment Rate	1.5%	1.7%	13.3%

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	2000	2010	% Change
<i>Trent Woods</i>			
Civilian Labor Force	1943	1853	-4.6%
Number Employed	1914	1802	-5.9%
Number Unemployed	29	51	75.9%
Trent Woods Unemployment Rate	1.5%	2.8%	86.7%
<i>Vanceboro</i>			
Civilian Labor Force	401	374	-6.7%
Number Employed	375	336	-10.4%
Number Unemployed	26	38	46.2%
Vanceboro Unemployment Rate	6.5%	10.2%	56.9%
<i>Craven County</i>			
Civilian Labor Force	37,733	42,860	13.6%
Number Employed	35,725	38,796	8.6%
Number Unemployed	2,008	4,064	102.4%
Craven County Unemployment Rate	5.3%	9.5%	79.2%
North Carolina Unemployment Rate	3.7%	8.8%	137.8%

Source: 2000 US Census; 2006-2010 American Community Survey 5-Year Estimates.

Craven County’s civilian employment is heavily concentrated in the public administration and education/health/social assistance sectors. The largest single employment category is the educational services, and health care and social assistance sector, which constitutes 21.3% of all those employed who are 16 years of age and older. Public administration accounts for the second largest category with 12.0%. Of the County’s total 2010 employed labor force, 11.3% were employed in manufacturing sector and 10.2% in the arts/entertainment/recreation and accommodation/food services sector. Table 17 provides a summary of Craven County’s employment by industry.

Table 17. Craven County Employment by Industry, 2010

Categories	Total Employment	% of Total
Agriculture, forestry, fishing and hunting, and mining	789	2.0%
Construction	2,904	7.5%
Manufacturing	4,380	11.3%
Wholesale trade	751	1.9%
Retail trade	3,838	9.9%
Transportation and warehousing, and utilities	2,019	5.2%
Information	683	1.8%
Finance and insurance, and real estate and rental and leasing	1,604	4.1%
Professional, scientific, and management, and administrative and waste management services	2,983	7.7%
Educational services, and health care and social assistance	8,262	21.3%

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Categories	Total Employment	% of Total
Arts, entertainment, and recreation, and accommodation and food services	3,962	10.2%
Other services (except public administration)	1,981	5.1%
Public administration	4,640	12.0%
Total	38,796	100.0%

Source: 2006-2010 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 18 provides a comparison of *per capita* incomes for Craven County, municipalities, and North Carolina.

Table 18. Craven County and North Carolina *Per Capita* Income, 2000 and 2010

	<i>Per Capita</i> Income		% of State
<i>Bridgeton</i>			
2000	\$17,308		85.2%
2010	\$26,416		106.8%
<i>Cove City</i>			
2000	\$13,893	<i>Cove City - Lowest per capita income in County, 2000</i>	68.4%
2010	\$17,926		72.4%
<i>Dover</i>			
2000	\$14,384		70.8%
2010	\$17,228		69.6%
<i>Havelock</i>			
2000	\$15,586		76.8%
2010	\$21,087		85.2%
<i>New Bern</i>			
2000	\$18,499		91.1%
2010	\$24,141		97.6%
<i>River Bend</i>			
2000	\$27,990		137.8%
2010	\$26,311		106.3%
<i>Trent Woods</i>			
2000	\$36,690	<i>Trent Woods - Highest per capita income in County, 2000</i>	180.7%
2010	\$46,925	<i>Trent Woods - Highest per capita income in County, 2010</i>	189.6%
<i>Vanceboro</i>			
2000	\$14,327		70.6%
2010	\$16,184	<i>Vanceboro - Lowest per capita income in County, 2010</i>	65.4%

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SECTION 2. COMMUNITY PROFILES

	<i>Per Capita Income</i>		<i>% of State</i>
Craven County			
2000	\$18,426		90.7%
2010	\$24,591	<i>County's per capita income increased by 33.5% from 2000-2010</i>	99.4%
North Carolina			
2000	\$20,307		-
2010	\$24,745		-

Source: 2000 US Census; 2006-2010 American Community Survey 5-Year Estimates.

The Town of Vanceboro had the lowest and Trent Woods had the highest *per capita* income of all of the county's municipalities for 2010. Overall, from 2000 to 2010, the gap between Craven County *per capita* income level and that of the State narrowed significantly. In addition, the County's *per capita* income increased by \$6,165, or 33.5%.



Craven County Courthouse

Photo Courtesy of www.nccourts.org



Tryon Palace

Photo Courtesy of www.tryonpalace.org

V. HYDE COUNTY

A. History

Hyde County is one of the oldest counties in North Carolina, originally included in Bath County. In 1705, Bath County was divided into three precincts, one of them being “Wickam.” In 1711, Wickham was changed to “Hyde,” in honor of Edward Hyde, a cousin of Queen Anne who was made Colonial governor of North Carolina.

A fact not generally known is that Bath, the oldest town in North Carolina and in Colonial days the state seat of government, was at one time in the old Hyde Precinct. Hyde County’s first seat of government was in Woodstock (now in Beaufort County). It was eventually moved to Germantown and then to Lake Landing. In 1836, it was moved to Swan Quarter, its present location.

Many refer to Hyde County as the “land of many waters,” as it is surrounded by the Pamlico Sound, the Alligator and Pungo Rivers, and is home to North Carolina’s largest natural lake, Lake Mattamuskeet. It is also bisected by the 3,000-mile long Atlantic Intracoastal Waterway which facilitates navigation along the eastern seaboard of the United States. Blessed with the bounties of nature, this unspoiled region was referred to as “the land of the huntsman’s delight,” and also known as the “Canada Goose Hunting Capital of the World.” In its heyday, Mattamuskeet Lodge hosted hunters from throughout the world. Located in the Atlantic flyway, the County is still the annual migration home for thousands of tundra swan from Alaska, Canada geese, and over 200 species of other waterfowl.

Ocracoke Island was a part of Carteret County until 1845 when it was annexed to Hyde County. Some of the earliest recorded names for Ocracoke Island (Wokokon, Wocokon) reflect the Island’s Native American connection. Ocracoke’s first residents were members of the pre-Columbian Wocon tribe. Eventually the “W” was dropped and spellings such as “Okok” and “Ocrokok” evolved into the present-day. The European history of the Island begins on November 11, 1719, when John Lovick, Secretary of the Colony of North Carolina and a Deputy of the Lords Proprietors, was granted the Island of Ocracoke, containing 2,110 acres. During the early eighteenth century, Ocracoke was used chiefly for raising cattle and sheep. Because larger vessels were unable to navigate the shallow Pamlico Sound, Ocracoke Island soon became a settlement for pilots who transported sought-after goods to ports on the North Carolina mainland.

There are no incorporated municipalities in Hyde County. Swan Quarter serves as the county seat, and Engelhard is Hyde County’s largest village. In addition, there are the communities of Scranton, Fairfield, Ponzer, and Ocracoke.

B. Demographic Summary

1. Population

Table 19 provides a summary of Hyde County population figures for 1990, 2000, and 2010. The population for Hyde County increased by 7.7% from 1990 to 2000, and decreased by 0.3% from 2000 to 2010. The NC Office of State Planning predicts a continuing slight decreasing trend for Hyde County’s overall population, with the total 2015 county population projection estimated at 5,710 persons, a 1.7% decrease from the 2010 population.

Table 19. Hyde County Population, 1990-2010

	Total Population			Percent Change		
	1990	2000	2010	'90-'00	'00-'10	'90-'10
Hyde County	5,411	5,826	5,810	7.7%	-0.3%	7.4%

Source: US Census Bureau.

There are reasons for Hyde County’s decline in population. First, there are very limited employment opportunities within the county. Most mainland residents have traditionally made their living through farming or commercial fishing, industries not as prosperous as they once were. Those who live on Ocracoke Island depend heavily on the seasonal tourist industry. This lack of stable employment opportunities has forced non-retired people to look elsewhere for a place to live and work. Secondly, while other areas have seen significant economic growth, Hyde County remains very rural and is isolated from mainstream shopping, medical facilities, and daily routines. This isolation has driven some residents to relocate to other areas where much needed goods and services are most easily accessible.

There are no incorporated municipalities in Hyde County; however, the US Census Bureau recognizes Census Designated Places (CDP) as the statistical counterparts of incorporated places such as cities, towns, and villages. CDPs are populated areas that lack separate municipal government, but which otherwise physically resemble incorporated places. The US Census provides 2010 data for the following CDPs in Hyde County: Engelhard CDP, Fairfield CDP, Ocracoke CDP, and Swan Quarter CDP (see Table 20).

Table 20. Hyde County Census Designated Places Population, 2010

	2010 Population	% of County
Engelhard CDP	445	7.7%
Fairfield CDP	258	4.4%
Ocracoke CDP	948	16.3%
Swan Quarter CDP	324	5.6%

Source: US Census Bureau.

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SECTION 2. COMMUNITY PROFILES

2. Housing

The number of occupied housing units for the County, as reported in the 2010 American Community Survey, was 1,921, or 59.7% of the total number of housing units. Vacant housing units (1,295) comprised 40.3% of the total number of units. Table 21 summarizes the County’s and municipalities’ dwelling units by tenure. Ocracoke CDP has the highest vacancy rate of Hyde County’s CDPs, at 71.6%, while Engelhard CDP has the highest percentage of rental units, at 26.5%.

Table 21. Hyde County/Census Designated Places Summary of Housing Units by Tenure, 2010

	Number of Units	% of Total	
Engelhard CDP			
Owner-Occupied Units	95	39.9%	
Renter-Occupied Units	63	26.5%	<i>Engelhard CDP’s % of Rental Units 26.5%</i>
Vacant Units	80	33.6%	<i>Engelhard CDP’s Vacancy Rate 33.6%</i>
Total Housing Units - Engelhard CDP	238	100.0%	<i>Engelhard CDP’s % of County 7.4%</i>
Fairfield CDP			
Owner-Occupied Units	236	94.8%	
Renter-Occupied Units	13	5.2%	<i>Fairfield CDP’s % of Rental Units 5.2%</i>
Vacant Units	0	0.0%	<i>Fairfield CDP’s Vacancy Rate 0.0%</i>
Total Housing Units - Fairfield CDP	249	100.0%	<i>Engelhard CDP’s % of County 7.7%</i>
Ocracoke CDP			
Owner-Occupied Units	132	17.9%	
Renter-Occupied Units	77	10.4%	<i>Ocracoke CDP’s % of Rental Units 10.4%</i>
Vacant Units	528	71.6%	<i>Ocracoke CDP’s Vacancy Rate 71.6%</i>
Total Housing Units - Ocracoke CDP	737	100.0%	<i>Ocracoke CDP’s % of County 22.9%</i>
Swan Quarter CDP			
Owner-Occupied Units	146	49.7%	
Renter-Occupied Units	59	20.1%	<i>Swan Quarter CDP’s % of Rental Units 20.1%</i>
Vacant Units	89	30.3%	<i>Swan Quarter CDP’s Vacancy Rate 30.3%</i>
Total Housing Units - Swan Quarter CDP	294	100.0%	<i>Swan Quarter’s % of County 9.1%</i>
Hyde County			
Owner-Occupied Units	1,587	49.3%	
Renter-Occupied Units	334	10.4%	<i>County’s % of Rental Units 10.4%</i>
Vacant Units	1,295	40.3%	<i>County’s Vacancy Rate 40.3%</i>
Total Housing Units - County	3,216	100.0%	

Source: 2010 US Census.

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The County’s housing stock is aging – the majority of units (69.4%) were built prior to 1990. Table 22 presents housing units for the County and its CDPs by year the structures were built.

Table 22. Hyde County/Census Designated Places Housing Units by Year Structure Built, 2010

Year	# of Structures	% of Total	
Engelhard CDP			
2005 or later	0	0.0%	
2000 to 2004	3	1.3%	
1990 to 1999	41	17.2%	
1980 to 1989	0	0.0%	
1970 to 1979	32	13.4%	
1960 to 1969	0	0.0%	
1950 to 1959	53	22.3%	
1940 to 1949	71	29.8%	<i>Largest % of Engelhard CDP’s units built pre-1950</i>
1939 or earlier	38	16.0%	
Total Structures	238	100.0%	
Fairfield CDP			
2005 or later	0	0.0%	
2000 to 2004	22	8.8%	
1990 to 1999	52	20.9%	
1980 to 1989	0	0.0%	
1970 to 1979	50	20.1%	
1960 to 1969	29	11.6%	
1950 to 1959	0	0.0%	
1940 to 1949	0	0.0%	
1939 or earlier	96	38.6%	<i>Largest % of Fairfield CDP’s units built pre-1940</i>
Total Structures	249	100.0%	
Ocracoke CDP			
2005 or later	0	0.0%	
2000 to 2004	40	5.4%	
1990 to 1999	191	25.9%	
1980 to 1989	109	14.8%	
1970 to 1979	76	10.3%	
1960 to 1969	69	9.4%	
1950 to 1959	0	0.0%	
1940 to 1949	33	4.5%	
1939 or earlier	219	29.7%	<i>Largest % of Ocracoke CDP’s units built pre-1940</i>
Total Structures	737	100.0%	

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Year	# of Structures	% of Total	
Swan Quarter CDP			
2005 or later	0	0.0%	
2000 to 2004	14	4.8%	
1990 to 1999	78	26.5%	
1980 to 1989	0	0.0%	
1970 to 1979	48	16.3%	
1960 to 1969	0	0.0%	
1950 to 1959	18	6.1%	
1940 to 1949	0	0.0%	
1939 or earlier	136	46.3%	<i>Largest % of Swan Quarter CDP's units built pre-1940</i>
Total Structures	294	100.0%	
Hyde County			
2005 or later	50	1.6%	
2000 to 2004	276	8.6%	
1990 to 1999	655	20.4%	
1980 to 1989	264	8.2%	<i>Largest % of the County's units built pre-1990</i>
1970 to 1979	537	16.7%	
1960 to 1969	387	12.0%	
1950 to 1959	142	4.4%	
1940 to 1949	130	4.0%	
1939 or earlier	775	24.1%	
Total Structures	3,216	100.0%	

Source: 2006-2010 American Community Survey.

3. Economy

In 2010, there was a total of 2,055 employed persons in Hyde County. The number employed decreased by 12.9% from 2000 to 2010. Table 23 provides the county's unemployment rates for the civilian labor force for selected years.

Table 23. Hyde County Civilian Unemployment Rate, 16 years and over

Hyde County	2000	2010	% Change
Civilian Labor Force	2,360	2,055	-12.9%
Number Employed	2,236	1,956	-12.5%
Number Unemployed	124	99	-20.2%
Hyde County Unemployment Rate	5.3%	4.8%	-9.4%
North Carolina Unemployment Rate	3.7%	8.8%	137.8%

Source: 2000 US Census; 2006-2010 American Community Survey 5-Year Estimates.

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SECTION 2. COMMUNITY PROFILES

Hyde County's civilian employment is heavily concentrated in the agriculture/forestry/fishing and hunting/mining and education/health/social assistance sectors. The largest single employment category is the educational services, and health care and social assistance sector, which constitutes 23.7% of all those employed who are 16 years of age and older. Agriculture, forestry, fishing and hunting, and mining accounts for the second largest category with 16.9%. Of the County's total 2010 employed labor force, 11.4% were employed in public administration sector and 9.2% in the arts/entertainment/recreation and accommodation/food services sector. Table 24 provides a summary of Hyde County's employment by industry.

Table 24. Hyde County Employment by Industry, 2010

Categories	Total Employment	% of Total
Agriculture, forestry, fishing and hunting, and mining	330	16.9%
Construction	82	4.2%
Manufacturing	105	5.4%
Wholesale trade	46	2.4%
Retail trade	145	7.4%
Transportation and warehousing, and utilities	102	5.2%
Information	0	0.0%
Finance and insurance, and real estate and rental and leasing	41	2.1%
Professional, scientific, and management, and administrative and waste management services	162	8.3%
Educational services, and health care and social assistance	464	23.7%
Arts, entertainment, and recreation, and accommodation and food services	179	9.2%
Other services (except public administration)	77	3.9%
Public administration	223	11.4%
Total	1,956	100.0%

Source: 2006-2010 American Community Survey 5-Year Estimate.

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Normally, *per capita* income is considered a good indicator of an area's income producing capability or strength. Table 25 provides a comparison of *per capita* incomes for Hyde County and North Carolina.

Table 25. Hyde County and North Carolina *Per Capita* Income, 2000 and 2010

Year	Hyde County	North Carolina
2000	\$13,164	\$20,307
2010	\$14,992	\$24,745

Source: 2000 US Census; 2006-2010 American Community Survey 5-Year Estimates.

Overall, from 2000 to 2010, the gap between Hyde County *per capita* income level and that of the State increased significantly. In addition, the County's *per capita* income only increased by \$1,828, or 13.9%.



Hyde County Courthouse

Photo Courtesy of www.hydecountync.gov



Lake Mattamuskeet

Photo Courtesy of www.hydecounty.org

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

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VI. PAMLICO COUNTY

A. History

Pamlico County, a peninsula reaching out into the Pamlico Sound, was formed from part of Craven County in 1872 and from parts of Beaufort County in 1874 and 1875. It has a total area of 562 square miles and is bordered by water: Upper Broad Creek forms the county's western boundary with Craven County; Goose Creek separates Beaufort County and Pamlico County; Pamlico Sound lies to the east; and the Neuse River to the south. Of the 562 square miles, only 337 square miles are land area.

The first permanent European settlers arrived in the early 1700s. The area was inhabited by the Pampticoe Indians, part of the Algonquin Indian Nation, from whom Pamlico got its name. These Indians referred to the area as "TaTakua" or where the land and sea meet the sky. After the Tuscarora War in 1711, Scotch and English colonists came to the area. The earliest settlements were at the heads of the rivers, creeks, and bays. The interior of the county was settled as the road system was developed.

B. Demographic Summary

1. Population

The population for Pamlico County increased by 13.8% from 1990 to 2000, and increased by 1.6% from 2000 to 2010. Table 26 provides a summary of Pamlico County's population figures by municipality.

Table 26. Pamlico County/Municipalities Population, 1990-2010

	Total Population			Percent Change		
	1990	2000	2010	'90-'00	'00-'10	'90-'10
Alliance	681	785	776	15.3%	-1.1%	14.0%
Arapahoe	450	436	556	-3.1%	27.5%	23.6%
Bayboro	733	741	1,263	1.1%	70.4%	72.3%
Grantsboro	*	754	688	-	-8.8%	-
Mesic	310	257	220	-17.1%	-14.4%	-29.0%
Minnesott Beach	266	311	440	16.9%	41.5%	65.4%
Oriental	786	875	900	11.3%	2.9%	14.5%
Stonewall	279	285	281	2.2%	-1.4%	0.7%
Vandemere	315	289	245	-8.3%	-15.2%	-22.2%
<i>Subtotal - All Municipalities</i>	3,820	4,733	5,369	23.9%	13.4%	40.6%
Unincorporated Areas	7,548	8,201	7,775	8.7%	-5.2%	3.0%
Pamlico County (Total)	11,368	12,934	13,144	13.8%	1.6%	15.6%

*Incorporated in 1997; therefore, 1990 Census data is not available.

Source: US Census Bureau.

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Pamlico County, including all of its municipalities as well as the unincorporated areas, experienced a 15.6% increase in population from 1990 to 2010. With the exception of the municipalities of Mesic and Vandemere, all municipalities in Pamlico County experienced an increase in population from 1990 to 2010. Bayboro, the county seat, has the largest population of the county’s municipalities. The NC Office of State Planning predicts a continuing slight increasing trend for Pamlico County’s overall population, with the total 2015 county population projection estimated at 13,370 persons, a 1.7% increase from the 2010 population.

2. Housing

The number of occupied housing units for the County, as reported in the 2010 American Community Survey, was 5,463, or 73.4% of the total number of housing units. Vacant housing units (1,986) comprised 26.7% of the total number of units. Table 27 summarizes the County’s and municipalities’ dwelling units by tenure. Vandemere has the highest vacancy rate of Pamlico County’s municipalities, at 37.1%, while Stonewall has the highest percentage of rental units, at 43.1%.

Table 27. Pamlico County/Municipalities Summary of Housing Units by Tenure, 2010

	Number of Units	% of Total	
Alliance			
Owner-Occupied Units	235	65.3%	
Renter-Occupied Units	90	25.0%	<i>Alliance’s % of Rental Units 25.0%</i>
Vacant Units	35	9.7%	<i>Alliance’s Vacancy Rate 9.7%</i>
Total Housing Units - Alliance	360	100.0%	<i>Alliance’s % of County 4.8%</i>
Arapahoe			
Owner-Occupied Units	190	67.6%	
Renter-Occupied Units	55	19.6%	<i>Arapahoe’s % of Rental Units 19.6%</i>
Vacant Units	36	12.8%	<i>Arapahoe’s Vacancy Rate 12.8%</i>
Total Housing Units - Arapahoe	281	100.0%	<i>Arapahoe’s % of County 3.8%</i>
Bayboro			
Owner-Occupied Units	249	61.3%	
Renter-Occupied Units	105	25.9%	<i>Bayboro’s % of Rental Units 25.9%</i>
Vacant Units	52	12.8%	<i>Bayboro’s Vacancy Rate 12.8%</i>
Total Housing Units - Bayboro	406	100.0%	<i>Bayboro’s % of County 5.5%</i>
Grantsboro			
Owner-Occupied Units	219	67.8%	
Renter-Occupied Units	59	18.3%	<i>Grantsboro’s % of Rental Units 18.3%</i>
Vacant Units	45	13.9%	<i>Grantsboro’s Vacancy Rate 13.9%</i>
Total Housing Units - Mesic	323	100.0%	<i>Grantsboro’s % of County 4.3%</i>

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	Number of Units	% of Total	
Mesic			
Owner-Occupied Units	110	58.2%	
Renter-Occupied Units	39	20.6%	<i>Mesic's % of Rental Units 20.6%</i>
Vacant Units	40	21.2%	<i>Mesic's Vacancy Rate 21.2%</i>
Total Housing Units - Mesic	189	100.0%	<i>Mesic's % of County 2.5%</i>
Minnesott Beach			
Owner-Occupied Units	172	58.1%	
Renter-Occupied Units	34	11.5%	<i>Minnesott Beach's % of Rental Units 11.5%</i>
Vacant Units	90	30.4%	<i>Minnesott Beach's Vacancy Rate 30.4%</i>
Total Housing Units - Minnesott Beach	296	100.0%	<i>Minnesott Beach's % of Rental Units 4.0%</i>
Oriental			
Owner-Occupied Units	373	60.2%	
Renter-Occupied Units	97	15.6%	<i>Oriental's % of Rental Units 15.6%</i>
Vacant Units	150	24.2%	<i>Oriental's Vacancy Rate 24.2%</i>
Total Housing Units - Oriental	620	100.0%	<i>Oriental's % of County 8.3%</i>
Stonewall			
Owner-Occupied Units	50	38.5%	
Renter-Occupied Units	56	43.1%	<i>Stonewall's % of Rental Units 43.1%</i>
Vacant Units	24	18.5%	<i>Stonewall's Vacancy Rate 18.5%</i>
Total Housing Units - Stonewall	130	100.0%	<i>Stonewall's % of County 1.7%</i>
Vandemere			
Owner-Occupied Units	97	61.0%	
Renter-Occupied Units	3	1.9%	<i>Vandemere's % of Rental Units 1.9%</i>
Vacant Units	59	37.1%	<i>Vandemere's Vacancy Rate 37.1%</i>
Total Housing Units - Vandemere	159	100.0%	<i>Vandemere's % of County 2.1%</i>
Pamlico County			
Owner-Occupied Units	4,460	59.9%	
Renter-Occupied Units	1,003	13.5%	<i>County's % of Rental Units 13.5%</i>
Vacant Units	1,986	26.7%	<i>County's Vacancy Rate 26.7%</i>
Total Housing Units - County	7,449	100.0%	

Source: 2010 US Census.

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SECTION 2. COMMUNITY PROFILES

The County’s housing stock is aging – the majority of units (60.5%) were built prior to 1990. Table 28 presents housing units for the County and its municipalities by year the structures were built.

Table 28. Pamlico County/Municipalities Housing Units by Year Structure Built, 2010

Year	# of Structures	% of Total	
Alliance			
2005 or later	0	0.0%	
2000 to 2004	63	17.5%	
1990 to 1999	59	16.4%	
1980 to 1989	80	22.2%	<i>Largest % of Alliance’s units built 1980-1989</i>
1970 to 1979	65	18.1%	
1960 to 1969	33	9.2%	
1950 to 1959	20	5.6%	
1940 to 1949	10	2.8%	
1939 or earlier	30	8.3%	
Total Structures	360	100.0%	
Arapahoe			
2005 or later	0	0.0%	
2000 to 2004	4	1.4%	
1990 to 1999	52	18.5%	
1980 to 1989	84	29.9%	<i>Largest % of Arapahoe’s units built pre-1990</i>
1970 to 1979	42	14.9%	
1960 to 1969	22	7.8%	
1950 to 1959	32	11.4%	
1940 to 1949	10	3.6%	
1939 or earlier	35	12.5%	
Total Structures	281	100.0%	
Bayboro			
2005 or later	3	0.7%	
2000 to 2004	48	11.8%	
1990 to 1999	63	15.5%	
1980 to 1989	65	16.0%	<i>Largest % of Bayboro’s units built pre-1990</i>
1970 to 1979	66	16.3%	
1960 to 1969	91	22.4%	
1950 to 1959	20	4.9%	
1940 to 1949	0	0.0%	
1939 or earlier	50	12.3%	
Total Structures	406	100.0%	

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Year	# of Structures	% of Total	
Grantsboro			
2005 or later	15	4.4%	
2000 to 2004	21	6.1%	
1990 to 1999	42	12.2%	
1980 to 1989	38	11.1%	
1970 to 1979	71	20.7%	<i>Largest % of Grantsboro's units built pre-1980</i>
1960 to 1969	30	8.7%	
1950 to 1959	52	15.2%	
1940 to 1949	19	5.5%	
1939 or earlier	55	16.0%	
Total Structures	343	100.0%	
Mesic			
2005 or later	8	4.2%	
2000 to 2004	14	7.4%	
1990 to 1999	39	20.6%	
1980 to 1989	25	13.2%	<i>Largest % of Mesic's units built pre-1990</i>
1970 to 1979	28	14.8%	
1960 to 1969	19	10.1%	
1950 to 1959	23	12.2%	
1940 to 1949	27	14.3%	
1939 or earlier	6	3.2%	
Total Structures	189	100.0%	
Minnesott Beach			
2005 or later	7	2.4%	
2000 to 2004	35	11.8%	
1990 to 1999	72	24.3%	
1980 to 1989	50	16.9%	
1970 to 1979	97	32.8%	<i>Largest % of Minnesott Beach's units built 1970-1979</i>
1960 to 1969	16	5.4%	
1950 to 1959	14	4.7%	
1940 to 1949	3	1.0%	
1939 or earlier	2	0.7%	
Total Structures	296	100.0%	

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Year	# of Structures	% of Total	
<i>Oriental</i>			
2005 or later	15	2.4%	
2000 to 2004	69	11.1%	
1990 to 1999	122	19.7%	
1980 to 1989	189	30.5%	<i>Largest % of Oriental's units built 1980-1989</i>
1970 to 1979	103	16.6%	
1960 to 1969	11	1.8%	
1950 to 1959	0	0.0%	
1940 to 1949	19	3.1%	
1939 or earlier	92	14.8%	
Total Structures	620	100.0%	
<i>Stonewall</i>			
2005 or later	0	0.0%	
2000 to 2004	17	13.1%	
1990 to 1999	23	17.7%	
1980 to 1989	20	15.4%	
1970 to 1979	30	23.1%	<i>Largest % of Stonewall's units built 1970-1979</i>
1960 to 1969	6	4.6%	
1950 to 1959	16	12.3%	
1940 to 1949	4	3.1%	
1939 or earlier	14	10.8%	
Total Structures	130	100.0%	
<i>Vandemere</i>			
2005 or later	0	0.0%	
2000 to 2004	7	4.4%	
1990 to 1999	33	20.8%	
1980 to 1989	18	11.3%	<i>Largest % of Vandemere's units built pre-1990</i>
1970 to 1979	32	20.1%	
1960 to 1969	32	20.1%	
1950 to 1959	21	13.2%	
1940 to 1949	9	5.7%	
1939 or earlier	7	4.4%	
Total Structures	159	100.0%	

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Year	# of Structures	% of Total	
Pamlico County			
2005 or later	276	3.7%	
2000 to 2004	581	7.8%	
1990 to 1999	2,082	28.0%	
1980 to 1989	1,481	19.9%	<i>Largest % of the County's units built pre-1990</i>
1970 to 1979	1,185	15.9%	
1960 to 1969	610	8.2%	
1950 to 1959	485	6.5%	
1940 to 1949	211	2.8%	
1939 or earlier	538	7.2%	
Total Structures	7,449	100.0%	

Source: 2006-2010 American Community Survey.

3. Economy

In 2010, there was a total of 5,667 employed persons in Pamlico County. Of that total, approximately 22, or 0.2%, were employed by the military. The number employed increased by 4.4% from 2000 to 2010. Table 29 provides the county's and municipalities' unemployment rates for the civilian labor force for selected years. While the overall unemployment rate increased slightly for the county, the Town of Oriental had an impressive 1.2% unemployment rate for 2010. The Town of Stonewall's unemployment rate increased by 267.4%, and the Town of Arapahoe's unemployment rate increased by a substantial 467.8% from 2000 to 2010.

Table 29. Pamlico County/Municipalities Civilian Unemployment Rate, 16 years and over

	2000	2010	% Change
Alliance			
Civilian Labor Force	275	397	44.4%
Number Employed	255	378	48.2%
Number Unemployed	20	19	-5.0%
Alliance Unemployment Rate	7.3%	4.8%	-34.2%
Arapahoe			
Civilian Labor Force	212	201	-5.2%
Number Employed	206	169	-17.0%
Number Unemployed	6	32	433.3%
Arapahoe Unemployment Rate	2.8%	15.9%	467.8%
Bayboro			
Civilian Labor Force	329	360	9.4%
Number Employed	308	316	2.6%
Number Unemployed	21	44	109.5%
Bayboro Unemployment Rate	6.4%	12.2%	90.6%

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	2000	2010	% Change
Grantsboro			
Civilian Labor Force	*	320	–
Number Employed		290	
Number Unemployed		30	
Grantsboro Unemployment Rate	*	9.4%	–
Mesic			
Civilian Labor Force	90	158	75.6%
Number Employed	85	143	68.2%
Number Unemployed	5	15	200.0%
Mesic Unemployment Rate	5.6%	9.5%	69.6%
Minnesott Beach			
Civilian Labor Force	149	189	26.8%
Number Employed	147	185	25.9%
Number Unemployed	2	4	100.0%
Minnesott Unemployment Rate	1.3%	2.1%	61.5%
Oriental			
Civilian Labor Force	293	412	40.6%
Number Employed	273	407	49.1%
Number Unemployed	20	5	-75.0%
Oriental Unemployment Rate	6.8%	1.2%	-82.4%
Stonewall			
Civilian Labor Force	140	120	-14.3%
Number Employed	134	101	-24.6%
Number Unemployed	6	19	216.7%
Stonewall Unemployment Rate	4.3%	15.8%	267.4%
Vandemere			
Civilian Labor Force	149	91	-38.9%
Number Employed	135	78	-42.2%
Number Unemployed	14	13	-7.1%
Vandemere Unemployment Rate	9.4%	14.3%	52.1%
Pamlico County			
Civilian Labor Force	5,337	5,645	5.8%
Number Employed	5,035	5,257	4.4%
Number Unemployed	302	388	28.5%
Pamlico County Unemployment Rate	5.7%	6.9%	21.1%
North Carolina Unemployment Rate	3.7%	8.8%	137.8%

*Incorporated in 1997, unemployment data for 2000 unavailable.

Source: 2000 US Census; 2006-2010 American Community Survey 5-Year Estimates.

Pamlico County’s civilian employment is heavily concentrated in the manufacturing and education/health/social assistance sectors. The largest single employment category is the educational services, and health care and social assistance sector, which constitutes 21.9% of all those employed who are 16 years of age and older. Manufacturing accounts for the second largest category with 15.2%. Of the County’s total 2010 employed labor force, 10.3% were employed in retail trade sector and 10.2% in the construction industry. Table 30 provides a summary of Pamlico County’s employment by industry.

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Table 30. Pamlico County Employment by Industry, 2010

Categories	Total Employment	% of Total
Agriculture, forestry, fishing and hunting, and mining	234	4.5%
Construction	536	10.2%
Manufacturing	800	15.2%
Wholesale trade	67	1.3%
Retail trade	542	10.3%
Transportation and warehousing, and utilities	415	7.9%
Information	34	0.6%
Finance and insurance, and real estate and rental and leasing	228	4.3%
Professional, scientific, and management, and administrative and waste management services	429	8.2%
Educational services, and health care and social assistance	1,153	21.9%
Arts, entertainment, and recreation, and accommodation and food services	449	8.5%
Other services (except public administration)	172	3.3%
Public administration	198	3.8%
Total	5,257	100.0%

Source: 2006-2010 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 31 provides a comparison of *per capita* incomes for Pamlico County, municipalities, and North Carolina.

Table 31. Pamlico County and North Carolina Per Capita Income, 2000 and 2010

	Per Capita Income		% of State
Alliance			
2000	\$15,951		78.5%
2010	\$17,556		70.9%
Arapahoe			
2000	\$17,043		83.9%
2010	\$16,748		67.7%
Bayboro			
2000	\$13,709		67.5%
2010	\$12,144	Bayboro - Lowest per capita income in County, 2010	49.1%
Grantsboro			
2000	*		—
2010	\$22,062		89.2%

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

SECTION 2. COMMUNITY PROFILES

	<i>Per Capita Income</i>		<i>% of State</i>
Mesic			
2000	\$15,253		75.1%
2010	\$18,722		75.7%
Minnesott Beach			
2000	\$27,259	<i>Minnesott Beach - Highest per capita income in County, 2000</i>	134.2%
2010	\$38,570		155.9%
Oriental			
2000	\$25,949		127.8%
2010	\$44,802	<i>Oriental - Highest per capita income in County, 2010</i>	181.1%
Stonewall			
2000	\$16,425		80.9%
2010	\$13,902		56.2%
Vandemere			
2000	\$13,570	<i>Vandemere - Lowest per capita income in County, 2000</i>	66.8%
2010	\$17,021		68.8%
Pamlico County			
2000	\$18,005		88.7%
2010	\$23,320	<i>County's per capita income increased by 29.5% from 2000-2010</i>	94.2%
North Carolina			
2000	\$20,307		-
2010	\$24,745		-

Source: 2000 US Census; 2006-2010 American Community Survey 5-Year Estimates.

The Town of Bayboro had the lowest and Oriental had the highest *per capita* income of all of the county's municipalities for 2010. Overall, from 2000 to 2010, the gap between Pamlico County *per capita* income level and that of the State narrowed significantly. In addition, the County's *per capita* income increased by \$5,315, or 29.5%.



Pamlico County Courthouse

Photo Courtesy of www.nccourts.org



China Grove (Arapahoe, Pamlico County, NC) circa 1800

Photo Courtesy of NC State Historic Preservation Office

I. INTRODUCTION

As part of the Beaufort, Carteret, Craven, Hyde, and Pamlico counties hazard mitigation efforts and the preparation of this plan, the five-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 Pamlico Sound 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 Pamlico Sound Region. A rating system that evaluates the potential for occurrence for each identified threat is provided (see Table 39). The following natural hazards were determined to be of concern for the five-county region:

1. Hurricanes
2. Nor'easters
3. Flooding
4. Severe Winter Storms
5. Thunderstorms/Windstorms
6. Tornados
7. Wildfire
8. Earthquakes
9. Dam/Levee Failure
10. Tsunamis
11. Droughts/Heat Waves
12. Coastal Hazards

A detailed explanation of these hazards and how they have impacted the five-county 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.

II. HURRICANES

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 Hurricane Wind Scale, ranging from 1 (minimal) to 5 (catastrophic). The following scale categorizes hurricane intensity linearly based upon maximum sustained winds, minimum barometric pressure and storm surge potential.

- ▶ **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.

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- ▶ **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.

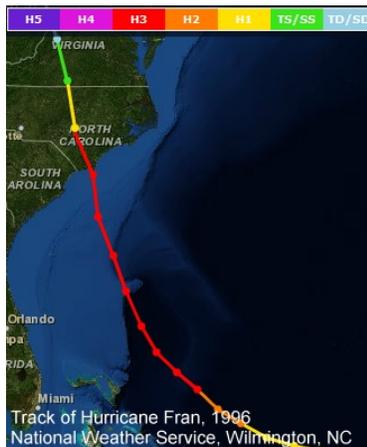
North Carolina has had an extensive hurricane history dating back to colonial times. During the nineteenth century, storms occurred in 1837, 1846, 1856, 1879, 1883, and 1899. During the 1950s, North Carolina was impacted by several hurricanes, including Hazel, Connie, Diane, and Lone. Between 1960 - 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, including several major storms, with Emily (1993), Opal (1995), Bertha (1996), Fran (1996), Bonnie (1998), Dennis (1999), Floyd (1999), Irene (1999), Isabel (2003), Alex (2004), Charley (2004), Ophelia (2005), Ernesto (2006), Irene (2011), and Sandy (2012) all leaving their mark on North Carolina. These storms had varying impacts on the five-county region of Beaufort, Carteret, Craven, Hyde, and Pamlico counties. Following are brief descriptions of several storms in recent history which had a significant impact on the region.

A. 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 between Surf City and North Topsail Beach 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. An 8-10 foot storm surge struck Swansboro and Emerald Isle. Water flowed through the streets of Belhaven in Beaufort County where the surge was around 7 feet. In New Bern, numerous boats were sunk or damaged at three private marinas. Fishing piers were demolished all along the coast. New River (Marine Corps Air Station in Jacksonville) reported a peak wind gust of 108 mph. Rainfall across the region ranged from 8 inches in the Hofmann Forest to 6-1/2 inches in Broad Creek to over 5-1/2 inches in Snow Hill and Washington.



B. August 23 to September 5, 1996 (Hurricane Fran)

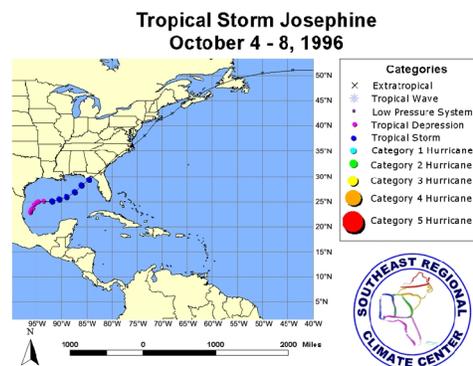


Hurricane Fran was the most destructive hurricane of the 1996 season. The storm was created on August 23, reaching hurricane status on August 29, while about 450 miles to the northeast of the Leeward Islands. It strengthened to a Category Three hurricane northeast of the central Bahamas on September 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 Carteret County, Emerald Isle reported 67 homes destroyed and 409 with major damage. Thirty-three mobile homes were destroyed. The Emerald Isle fishing pier was destroyed, and Bogue Sound Pier lost 150 feet. Erosion along the dunes ranged from 5 to 20 feet. Winds gusted to 100 mph at Atlantic Beach. Storm surges approaching nine (9) feet flooded portions of Washington and Belhaven. New Bern had a storm surge on the Neuse River of 10 feet. 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.

C. October 4 to 8, 1996 (Tropical Storm Josephine)

Tropical Storm Josephine formed over the Gulf of Mexico on October 4, 1996. Josephine made landfall in Taylor County, northern Florida, on October 7th as a strong tropical storm with maximum sustained winds of 70 mph that produced coastal flooding and an estimated \$130 million in damages. The storm quickly weakened after coming inland as it moved up the United States east coast.



Damages in North Carolina associated with this storm were fairly minimal. However, heavy rains - as much as 6 inches - flooded roads and brought new concerns about rising rivers that had just fallen back to within their banks after Hurricane Fran.

D. August 19 to 30, 1998 (Hurricane Bonnie)

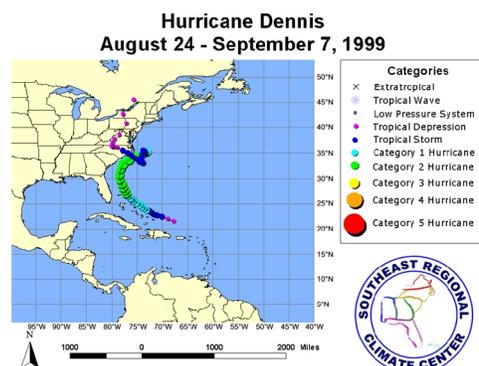


Hurricane Bonnie originated as a tropical wave over Africa. It slowly increased speed and made its way across the Atlantic, near the Leeward Islands and then Hispaniola. It made landfall near Wilmington as a border Category 2/3 hurricane with approximately 115 mph winds and a diameter of 400 miles on August 27, 1998. Rainfall totals between 8-11 inches were recorded in portions of eastern North Carolina. Storm tides of 5 to 8 feet above normal were reported mainly in eastern beaches of Brunswick County, NC, while a storm surge of 6 feet was reported at Pasquotank and Camdem counties in the Albemarle Sound. A tornado was reported in the Town of Edenton in Chowan County, NC.

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 insured losses do not include flooding and agricultural damages, which were extensive due to the vast amount of rain and high winds. There were trees down, roofs torn off, structural damage, and widespread power outages. North Carolina Governor Jim Hunt asked that the areas be declared natural disaster areas. Belhaven was the hardest hit area where the storm surge flooded 2/3 of the homes in the area with water levels as high as 6 feet above normal. Other coastal flooding was reported in Manns Harbor and Stumpy Point in Dare County, Washington in Beaufort County, near Hobucken in Pamlico County, Swansboro in Onslow County, and along the south shore of the Albemarle Sound in Washington and Tyrrell Counties.

E. 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.



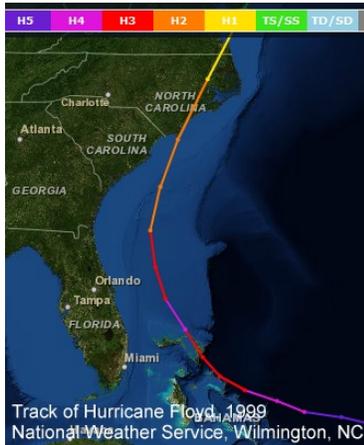
For most counties Tropical Storm Dennis left relatively little in its wake although on the Outer Banks beach erosion and the storm tide effects were extreme. Unfortunately, the hurricane approached eastern North Carolina during one of the highest astronomical tides of the month. For almost a week after Tropical Storm

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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.

F. September 7 to 18, 1999 (Hurricane Floyd)



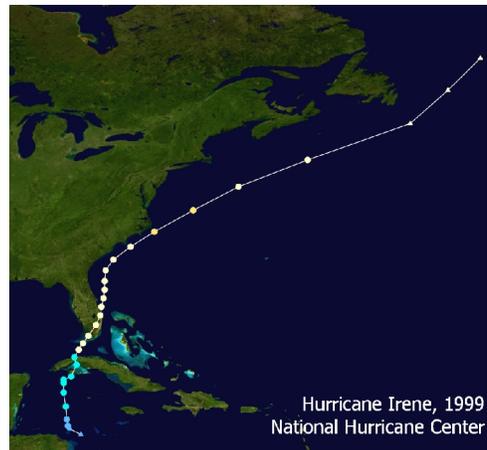
Hurricane Floyd brought flooding rains, high winds, and rough seas to a good portion of the United States coastline from September 14th through the 18th. Although Hurricane Floyd reached Category 4 intensity in the Bahamas, it weakened to a Category 2 hurricane by the time it made landfall in North Carolina. 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.

In Carteret County, Pine Knoll Shores lost approximately 50 feet of beach. Emerald Isle lost an average of 14 feet and 52 public beach access walkways. The Oceanana Pier on Atlantic Beach lost a 200 foot section and the remaining 200 foot section of Iron Steamer Pier that Hurricane Bonnie spared was also wiped out. Along the Albemarle Sound, storm tides were about 5 to 6 feet above normal. The Pamlico River storm tides were around 6 to 8 feet above normal. Water levels were especially high in Hyde County. Along the Neuse River, storm tides were also near 6 to 8 feet above normal. Extreme flooding was experienced across most counties. Inland flooding exceeded Hurricanes Bertha, Fran, Bonnie, and Dennis combined. Most counties reported their worst flooding ever. The Tar River in Greenville and the Neuse River in Kinston were nearly 15 feet above their flood stages. The Tar River remained above flood stage for nearly two weeks while the Neuse River remained above flood stage for over a month. Unbelievable numbers of homes were covered with water and over half a million customers throughout the warning area were without power. Unofficially the flooding from Hurricane Floyd has been compared to a 500-year flood.

G. October 13 to 18, 1999 (Hurricane Irene)

Hurricane Irene formed from a broad area of low pressure in the southwest Caribbean on October 13th. It became a tropical storm on the same day and moved northward across western Cuba on the 14th with 70 mph winds. It became a 75-mph hurricane on the 15th and moved northeastward across south Florida. Irene dumped 10 to 20 inches of rain along its path resulting in considerable freshwater flooding. The US damage estimate is \$800 million (almost all in Florida) and there were eight indirect deaths from electrocution and drowning.

Irene moved from Florida into the Atlantic on the 16th. It moved northward toward the Carolinas but turned northeastward on the 17th. It brushed the Outer Banks of North Carolina with tropical storm force winds on the 18th while intensifying rapidly to 110 mph. Hurricane Irene dropped five to ten inches of rain across portions of South and North Carolina. The greatest rainfall estimates were over Craven, Pitt, Beaufort, Martin, Dare, and Hyde counties. Craven and Lenoir counties were obviously the most affected. River levels remained above flood stage on the Neuse River since before Hurricane Floyd. Additionally, major flooding occurred along the Swift Creek near Vanceboro back to levels similar to but not as bad as Hurricane Floyd. Continuing northeastward, Irene was absorbed by an extratropical low near Newfoundland. The combined system became an intense extratropical storm over the far north Atlantic Ocean.



H. 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. Major ocean overwash and beach erosion occurred along the North Carolina Outer Banks where waves up to 20 feet accompanied a 6 to 8 foot storm surge. Eastern Carteret, eastern Pamlico, southern Craven, Beaufort, and Hyde counties experienced significant storm surge damage with hundreds of homes flooded in most of these counties. The highest storm surges were experienced in the lower reaches of the Neuse River where water levels rose to as high as 10.5 feet at the mouth of Adams Creek. Storm surge values ranged from 6 to 10 feet across eastern Pamlico County with the highest water levels recorded near Oriental. A 4 to 7 foot storm surge occurred across Core Sound in eastern Carteret County, except water levels rose between 8 and 10 feet along the South River and Big Creek. Storm surge values were around 7 feet in portions of Beaufort County in

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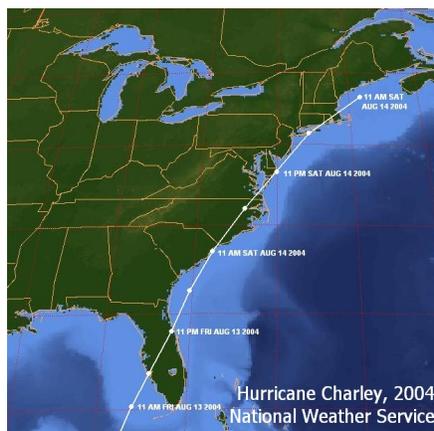
Washington and Belhaven. Virtually every business on Main Street in Belhaven was flooded with 2 to 3 feet of water. Storm surges from 2 to 6 feet occurred across Hyde County with the highest water levels recorded in Swan Quarter in the southwest part of the county where hundreds of homes and businesses flooded. Wind damage was more significant across Hyde, Washington, Tyrrell, Martin, and the Outer Bank counties where wind gusts of around 100 mph occurred. Hurricane force winds resulted in structural damage to homes. Numerous trees and power lines were downed across the area resulting in a loss of electricity for several weeks in some locations.

I. July 31 to August 4, 2004 (Hurricane Alex)

Hurricane Alex, a Category Two storm with 100 mph sustained winds, brushed the Outer Banks of North Carolina during the late morning to early afternoon hours on August 3rd. The most significant impacts occurred along the Outer Banks from Ocracoke to Buxton where winds gusted to near 100 mph and soundside flooding was estimated between 4 to 6 feet. Winds and storm surge resulted in damage to over 100 homes and businesses. Nearly 500 cars were completely flooded on Ocracoke, and in the Hatteras Village area with damage estimated near 7.5 million dollars. Storm surge along the coast, along the lower reaches of the Neuse and Pamlico Rivers, and across other counties adjacent to the Pamlico and Albemarle Sounds were estimated at 1 to 3 feet where no significant damage occurred. Four to eight inches of rainfall was estimated across eastern Craven and Carteret counties extending northeast and including Dare and Hyde counties.



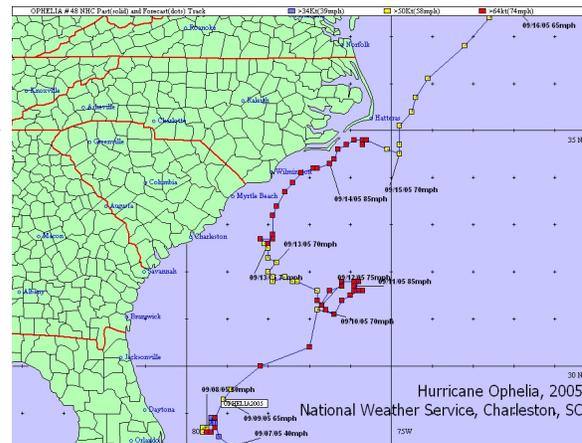
J. August 9 to August 15, 2004 (Hurricane Charley)



Charley moved northeast across the coastal plains of eastern North Carolina during the afternoon hours on August 14th. Onslow County received the most damage, with estimates over \$5 million, as winds gusted to near hurricane force toppling trees and power lines with structural damage to homes and businesses. Winds gusted to 60-70 mph across inland areas near the center of the storm resulting in wind damage to structures, and damage to crops reaching into the millions. Water levels rose up to two feet across the lower reaches of the Neuse and Pamlico Rivers, and across the Outer Banks. Storm total rainfall, estimated between 4 to 6 inches, occurred across a large part of the area resulting in freshwater flooding in seven counties across the coastal plains. Five weak tornados were reported across the area associated with Charley with damage reported. The most significant damage related to a tornado occurred along the Outer Banks.

K. 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 13th. The hurricane remained offshore brushing the southern coastal counties of Onslow and Carteret on the 14th and 15th. Highest winds and damages occurred across this area where winds gusted to near 100 mph, and storm surges of up to 6 feet resulted in structural damages totaling near \$35 million. The highest surge was reported along the lower reaches of the Neuse River where water levels rose to eight feet during the night of the 14th. Ophelia brushed by Outer Banks Hyde and Dare counties on the 16th with hurricane force wind gusts. The combination of surge from Pamlico Sound and heavy storm total rainfall, from 4 to 9 inches, resulted in the flooding of streams, roads, and lower elevations in Beaufort, Carteret, Craven, Jones, Onslow, and Pamlico counties.



L. 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 Onslow County. Minor storm surge flooding and beach erosion occurred along the Onslow and Carteret County coastlines and the Neuse River. Storm total rainfall ranged from 4 inches to near 10 inches. This heavy rainfall resulted

in extensive freshwater flooding and eventual river flooding across the area with some primary and many secondary roads flooded. The most significant storm surge effects occurred along the Pamlico and Pungo Rivers in Beaufort County where estimated water level rises of 4 to 6 feet resulted in flooding of many roads, low-lying areas, homes, and businesses in Washington, Whichards Beach, and Belhaven. Highest wind gusts occurred in the coastal plains counties. Minor wind or flooding damages were reported in many counties in eastern North Carolina.

M. 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 381 million dollars. Storm surge damages were estimated at 240 million dollars. The highest official sustained wind measured was 73 mph at Cedar Island. The highest storm surges of 8 to 11 feet occurred along the Pamlico Sound, and the lower reaches of the Neuse and Pamlico Rivers. Storm total rainfall ranged from 5.2 to 15.74 inches across the area with the heaviest rainfall across Pamlico, Beaufort, and Craven counties.

N. October 22 to 31, 2012 (TS/Hurricane Sandy)

Hurricane Sandy was one of the largest hurricanes on record to affect eastern North Carolina. The main impacts were felt on October 28th through October 29th as the center of Sandy passed no closer than 200 miles east of the area. The main impact was caused from a sound-side storm surge of 4 to 6 feet along portions of the Outer Banks and southern portions of the Pamlico Sound, and an ocean-side surge along the Dare County Outer Banks from Hatteras north to Kitty Hawk. Damages from surge were estimated near 13 million dollars with the main damages occurring along US 158 north of Oregon Inlet in Kitty Hawk where Highway 12 was destroyed, and had to be closed. Another 1 million dollars in damages was estimated from wind damage. Surges as high as 6 feet were estimated along the southern Pamlico Sound along the lower reaches of the Neuse River at Cherry Branch in Craven County.



O. 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, Irene, and Sandy.

P. 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 Pamlico Sound region is located in the eastern North Carolina coastal plain. The Pamlico Sound borders Hyde County to the southeast, the Pamlico and Pungo Rivers border Beaufort County, the Neuse River lies between Craven and Pamlico counties, the Alligator River lies to the north of Hyde County, and Alligator Lake and Lake Mattamuskeet occupy a large percentage of Hyde County’s area. The geographic location of the Pamlico Sound region to the coast greatly 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 Pamlico Sound region was Hurricane Floyd, which was a large Category 2 hurricane when it passed through the region. Using Table 40 as a guide, it was determined that hurricanes are “likely” to occur in the Pamlico Sound region.

III. NOR’EASTERS

In the past decade, research meteorologists have recognized the significance of nor’easters and their potential to cause damage along the coast. Nor’easters share many of the same characteristics of hurricanes. However, unlike hurricanes, these storms are extratropical, deriving their strength from horizontal gradients in temperature. The presence of the warm Gulf Stream waters off the eastern seaboard during the winter acts to dramatically increase surface horizontal temperature gradients within the coastal zone. During winter offshore cold periods, these horizontal temperature gradients can result in rapid and intense destabilization of the atmosphere directly above and shoreward of the Gulf Stream. This period of instability often precedes wintertime coastal extratropical cyclone development.

It is the temperature structure of the continental air mass and the position of the temperature gradient along the Gulf Stream that drives this cyclone development. As a low pressure deepens, winds and waves can uninhibitedly increase and cause serious damage to coastal areas as the storm generally moves to the northeast. The proximity of North Carolina’s coast to the Gulf Stream makes it particularly prone to nor’easters. The Dolan-Davis Nor’easter Intensity Scale categorizes nor’easters based upon levels of coastal degradation (see Table 32).

Table 32. The Dolan-Davis Nor’easter Intensity Scale

Storm Class	Beach Erosion	Dune Erosion	Overwash	Property Damage
1 (Weak)	Minor changes	None	No	No
2 (Moderate)	Modest; mostly to lower beach	Minor	No	Modest
3 (Significant)	Erosion extends across beach	Can be significant	No	Loss of many structures at local level

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Storm Class	Beach Erosion	Dune Erosion	Overwash	Property Damage
4 (Severe)	Severe beach erosion and recession	Severe dune erosion or destruction	On low beaches	Loss of structures at community-scale
5 (Extreme)	Extreme beach erosion	Dunes destroyed over extensive areas	Massive in sheets and channels	Extensive at regional-scale; millions of dollars

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

A number of notable nor'easters have impacted North Carolina in recent decades, including the Ash Wednesday Storm of March 1962, but they were typically only of local concern. One exception to this was the nor'easter of late October and early November, 1990, which loosened a dredge barge that struck and destroyed approximately five roadway segments of the Bonner Bridge in Dare County. Another nor'easter struck the Outer Banks on Halloween, 1991, causing substantial beach erosion. More recently, a nor'easter buffeted the North Carolina coast on May 6, 2005, with hurricane force wind gusts, torrential rain, and high surf.

Although nor'easters are more diffuse and less intense than hurricanes, they occur more frequently and cover larger areas and longer coastal reaches at one time. As a result, the likelihood of a nor'easter occurring in the Pamlico Sound Region is similar to that of a hurricane. However, the potential for significant damage to the region resulting from a nor'easter is much less than that of a hurricane.

Analysis of nor'easter frequency by researchers reveals fewer nor'easters during the 1980s. However, the frequency of major nor'easters (class 4 and 5 on the Dolan-Davis scale) has increased in recent years. In the period 1987 to 1993, at least one class 4 or 5 storm has occurred each year along the Atlantic seaboard of the United States, a situation duplicated only once in the last 50 years. The likelihood of occurrence, based on Table 40, is "likely."

IV. 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. However, in coastal areas, storm surge and wind-driven waves are significant components of flooding. 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.

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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.

Periodic flooding of lands adjacent to non-tidal rivers and streams is a natural and inevitable occurrence. 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. Riverine flooding is a function of precipitation levels and water runoff volumes within the watershed of the stream or river. The recurrence interval of a flood is defined as the average time interval, in years, expected to take place between the occurrence of 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 Pamlico Sound 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:** The base floodplain where base flood elevations are provided.
- ▶ **Zone VE:** Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
- ▶ **Zone X-500:** Areas of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods.
- ▶ **Zone X:** Areas of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.

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Coastal flooding is typically a result of storm surge, wind-driven waves, and heavy rainfall. These conditions are produced by hurricanes during the summer and fall, and nor'easters and other large coastal storms during the winter and spring. Storm surges may overrun barrier islands and push sea water up coastal rivers and inlets, blocking the downstream flow of inland runoff. Thousands of acres of crops and forestlands may be inundated by both saltwater and freshwater. Escape routes, particularly from barrier islands, may be cut off quickly, stranding residents in flooded areas and hampering rescue efforts.

Urban flooding occurs where there has been development within stream floodplains. 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.

From 1996-2013, the five-county region experienced forty-seven (47) flooding events that were reported to the National Climatic Data Center (see Appendix E for a detailed description of hazard events). On September 25, 1999, the flood level during Hurricane Floyd was approximately 12 feet above flood stage near New Bern. 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 Pamlico Sound Region are storm surge inundation, riverine flooding, and local ponding of stormwater runoff. Storm surge from the Atlantic Ocean propagates into the Pamlico Sound, which further propagates into rivers and creeks throughout the region; riverine flooding from heavy rainfall also occurs throughout the many creeks and streams within the region. Not all storms which pass close to the Pamlico Sound Region produce extremely high surge. Similarly, storms which produce flooding conditions in one area may not necessarily produce flooding conditions in other parts of the region. Based on Table 40, the likelihood of occurrence of flooding in the Pamlico Sound Region is "highly likely."

V. SEVERE WINTER STORMS

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, falling and blowing snow, and a maximum temperature of 20° Fahrenheit. 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.

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. On occasion, the Pamlico Sound Region has had moderate winter weather as a result of a nor'easter originating in the Gulf Stream and producing frozen precipitation. Winter storms can paralyze a community by shutting down normal day-to-day operations. Winter storms 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. From 1996-2013, there were twenty-nine (29) occurrences of severe winter weather within the Pamlico Sound Region (see Appendix E for a detailed description of hazard events). The extent of winter storms can be measured by the amount of snowfall received (in inches). The most significant recorded snow depth over the last 20 years took place in December, 2013, with recorded depths averaging 6-8 inches within the five-county area.

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. These storms can contain strong waves and result in extensive beach erosion and flooding. Freezing rain and ice storms typically occur once every several years at coastal locations, and severe snowstorms have been recorded occasionally in coastal areas.

The Pamlico Sound 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. Based on historic information and the geographic location of the five-county area, the likelihood of occurrence for a severe winter storm is "likely."

VI. SEVERE THUNDERSTORMS/WINDSTORMS

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. The National Weather Service recorded 19,814 incidents of property damage between 1959 and 1994. 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).

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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 Pamlico Sound Region is extremely susceptible to thunderstorms and windstorms, suffering 196 such events from 1996 to 2013. These storms have caused five deaths, 47 injuries, and almost \$7,500,000 in property damage regionally. Thunderstorm extent is defined by the number of thunder events and wind speeds reported. According to the 60-year history from the National Climatic Data Center, the strongest recorded thunderstorm wind in the Pamlico Sound region was reported on January 12, 1996, at 91 knots (approximately 105 mph). Additionally, the Pamlico Sound Region suffered 229 hail events from 1996 to 2013 (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 Pamlico Sound region was 2.75 inches. Based on Table 40, the likelihood of occurrence is “highly likely.”

VII. 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 than 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 they can be projected outward at high velocities. Typically, tornados are accompanied by heavy rain.

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.

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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 33.

Table 33. 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 one hundred thirteen (113) tornado events have been documented by the National Climatic Data Center in the Pamlico Sound Region since 1996, resulting in twelve injuries and approximately \$12.2 million in property damage (see Appendix E for detailed descriptions of hazard events). Tornado hazard extent is measured by the Enhanced Fujita Tornado Scale (see Table 31). The greatest magnitude reported was an EF2 tornado, which touched down on April 16, 2011, in Craven County, resulting in seven (7) injuries and

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\$4,000,000 in property damage. In conclusion, tornados represent a significant threat to the Pamlico Sound Region due primarily to their relative frequency and large impact. Based on Table 40, the likelihood of occurrence is “likely.”

VIII. WILDFIRE

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. The worst fire conditions for the Region and the surrounding area is during the spring (typically mid-February to the end of May). During this time frame, the region experiences lower relative humidity and higher winds. These two factors along with dormant brush from the winter can increase susceptibility to wildfires in the spring.

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.

According to *Forest Statistics for North Carolina, 2002*, published by the USDA-Forest Service, 1,065,600 acres of the Region’s total acreage (1,922,800 acres) are in forestland. This represents approximately 55.4% of the Region. Table 34 provides acres of timberland by ownership class.

Table 34. Beaufort, Carteret, Craven, Hyde, and Pamlico Counties Acres of Timberland by Ownership Class

County	All Classes	Ownership Class					
		National Forest	Miscellaneous Federal	State	County and Municipal	Forest Industry	Private Ownership
<i>Thousand acres</i>							
Beaufort	271.6	–	–	0.2	–	106.8	164.6
Carteret	141.6	44.1	0.9	–	–	32.6	64.0
Craven	275.1	48.6	18.6	–	2.6	117.3	87.9
Hyde	230.6	–	64.1	5.2	–	35.3	125.9
Pamlico	106.9	–	–	5.0	–	14.9	87.0

Source: *Forest Statistics for North Carolina, 2002*.

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Wildfire data was provided by the NC Forest Service and is reported annually by county from 1996 to 2014. The total number of fires to occur in the Pamlico Sound Region during that time period was 2,238 fires, burning a total of 40,734 acres. These fires damaged 43,285 acres of timber, 30 homes, and 140 structures. An additional 21 structures and 80 vehicles were destroyed. The worst wildfire on record was the Fish Day Fire which burned 24,000 acres in 1994 in Craven and Carteret counties (also included a small portion of Jones County). 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 Pamlico Sound 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. For the Pamlico Sound Region, it is estimated that 216,905 people or 92% of the total project area population (236,599) live within the "urban/wildland interface."

Overall, however, the risk of wildfire damages in the Pamlico Sound 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 40, the likelihood of occurrence is "likely."

IX. 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 generally follow the outlines of the continents.

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 35 provides a summary of the Modified Mercalli Scale of Earthquake Intensity and its relation to the Richter Scale.

Table 35. 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	

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Scale	Intensity	Description of Effects	Maximum Acceleration (mm/sec)	Corresponding Richter Scale
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, North Carolina Division of Emergency Management.

Earthquakes are relatively infrequent but not uncommon in North Carolina. Earthquake extent can be measured by the Richter Scale and the Modified Mercalli Intensity (MMI) Scale (see Table 35) and the distance from the epicenter from the Pamlico Sound region. The earliest North Carolina earthquake on record is that of March 8, 1735, near Bath (Beaufort County). 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. There is no history of damage in the Pamlico Sound Region resulting from earthquakes.

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.

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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. Beaufort, Carteret, Craven, Hyde, and Pamlico counties are located in the portion of North Carolina that is less susceptible to the effects of earthquakes. The likelihood of occurrence for earthquakes is "unlikely."

X. 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 Land Resources of the NC Department of Environmental and Natural Resources, there are twenty-eight dams located in the Pamlico Sound Region. The majority of these dams (20) are located in Beaufort County and an additional five are situated such that a Beaufort County municipality is the nearest municipality to be affected by a dam failure. Table 36 provides information regarding those dams.

Table 36. Dams in or Affecting the Pamlico Sound Region

State ID Code	Dam Name	River or Stream	Dam Status	Hazard Classification	Nearest Town
BEAUF-001	PCS Phosphate Clay Pond Dam #1	Pamlico River	Reclaimed	Low	Pamlico Beach
BEAUF-002	Texasgulf Clay Pond Dam #2	Pamlico River	Reclaimed	Low	Pamlico Beach
BEAUF-003	Texasgulf Clay Pond Dam #3	Pamlico	Reclaimed	Low	Pamlico Beach

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State ID Code	Dam Name	River or Stream	Dam Status	Hazard Classification	Nearest Town
BEAUF-004	Texasgulf Clay Pond Dam #4a	Pamlico	Reclaimed	Low	Pamlico Beach
BEAUF-005	Taylor Pond Dam	Taylors Gut	Exempt-HB Size	Low	Red Bug Point
BEAUF-006	PCS Phosphate R1 & R2 Blend Dike	Pamlico	Impounding	High	Pamlico
BEAUF-007	PCS Phosphate 4b	South Creek	Reclaimed	Low	
BEAUF-008	PCS Phosphate 5a Blend Dike	South Creek	Reclaimed	Low	
BEAUF-009	PCS Phosphate 5b Blend Dike	South Creek	Impounding	Low	
BEAUF-010	PCS Phosphate R7 Blend Dike		Impounding	High	
BEAUF-011	PCS Phosphate 1a Cooling Pond Dike	Offstream	Drained	High	
BEAUF-012	PCS Phosphate R-5 Dike		Impounding	High	
BEAUF-013	PCS Phosphate R-8 Dike	Porters Creek	Exempt	Low	
BEAUF-014	PCS Phosphate R-6 Dike		Exempt	Low	
BEAUF-015	PCS Phosphate R-4 Dike		Exempt	Low	
BEAUF-016	PCS Phosphate R-3 Dike		Exempt	Low	
BEAUF-017	PCS Phosphate Gypsum Stack #6		Exempt	Low	
BEAUF-018	PCS Phosphate Gypsum Stack #5		Exempt	Low	
BEAUF-019	PCS Phosphate Gypsum Stack 3/4		Exempt	Low	
BEAUF-020	PCS Phosphate R-1 Dike		Exempt	Low	
CARTE-001	Walker Millpond Dam	Black Creek	Impounding	High	Morehead City
CRAVE-001	Carolina Pines Pond Dam	Anderson Creek - Tr	Exempt-HB Size	Low	Cherry Point
CRAVE-002	Mclawhorn Pond Dam	Trent River - Tr	Exempt-HB Size	Low	Trent Woods
CRAVE-003	River Bluffs Dam	Neuse River - Tr	Breached	Low	Havelock
CRAVE-004	Carolina Commons Dam	Brice Creek	Drained	High	James City
HYDE-001	COOP Plan		Exempt	Low	
PAMLI-001	Indian Development Corp. Dam	Alligator Gut	Exempt	Low	Minnesott
PAMLI-002	Pamlico Regional Wastewater Dike	Bay River	Impounding	High	Bayboro
PITT-005	Sheppard Millpond Dam	Briery Swamp	Impounding	High	Washington
PITT-006	White Pond Dam #1	Tar River - Tr	Exempt	Low	Washington
PITT-007	White Pond Dam #2	Tar River - Tr	Exempt	Low	Washington
PITT-008	Lake Kristi Dam	Juniper Branch - Tr	Exempt-HB Size	Intermediate	Washington
PITT-010	Timberlake Dam	Chicod Creek - Tr	Exempt-HB Size	Low	Washington

Source: North Carolina Dam Inventory September 23, 2013, North Carolina Dam Safety Program.

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Sixteen (16) 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. Twenty-four of the thirty-three dams have a low hazard classification, one has an intermediate classification, and eight have a high classification.

As of 2010, North Carolina had 1,152 “high hazard” dams – the largest number of “high hazard” dams in the United States. Another 748 dams in the State are classified as “intermediate hazard,” meaning that significant property damage would occur in the event of a dam failure. There have been no historical occurrences of dam/levee failure impacting the Pamlico Sound region. Thus, no data has been reported regarding this issue. 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 12 feet. The likelihood of occurrence of a dam failure affecting the Pamlico Sound Region is “unlikely.”

XI. TSUNAMIS

A tsunami is a series of waves in a large body of water generated by a disturbance that vertically displaces large amounts of water. Tsunamis are typically caused by earthquakes but can also occur as a result of landslides, volcanic eruptions, explosions, and the impact of cosmic bodies such as meteorites.

Tsunamis have very long wavelengths and periods, and can have an average speed of 450 miles per hour. They can travel unnoticed in deep ocean waters sometimes with a wave height of only twelve inches. However, when the waves reach shallower water the wave speed slows and the wave height increases significantly. Some tsunamis can reach 100 feet in height and can cause devastation to a coastline.

An indication of an approaching tsunami would be rapid change in water levels on the coastline. The successive crests and troughs can occur from five to ninety minutes apart. Typically the first wave is not the biggest one; therefore, it is not safe to return to the area until authorities deem it safe to return. Areas less than fifty feet above sea level and one mile inland would be at greatest risk for the impact of a tsunami.

There are two types of bulletins to inform an area of the possibility of a tsunami. A Tsunami Watch Bulletin is released following an earthquake of a 6.75 or greater and a Tsunami Warning Bulletin is released when information from a tidal station indicates that the characteristics of the sea match those of a destructive tsunami. Unfortunately 75% of all warnings since 1948 have been false alarms. At the time the current Multi-Jurisdictional Hazard Mitigation Plans were adopted, a Tsunami Warning System was not available on the East Coast of the United States. However, due to the devastation of the Tsunami in South East Asia in December, 2004, NOAA has taken steps to expand the US Tsunami Detection and Warning System. In April, 2006, NOAA finished installation of five (5) Deep-Ocean Assessment and Reporting of Tsunami (DART) buoy stations off the East and Gulf Coasts of the US and in the Caribbean sea that can relay wave information (see Figure 2). In the remote chance that a tsunami were to be detected heading toward the East Coast, alerts would be sent out over the National Weather Service radio network that is used to warn of tornadoes, hurricanes, and other weather hazards.

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The only tsunami ever reported on the east coast was in 1929. The tsunami resulted from an earthquake in the Grand Banks of Newfoundland. The quake was felt as far away as Charleston, South Carolina. This tsunami caused considerable property damage and loss of life.

Tsunamis can devastate coastlines, destroy property, and cause an extensive loss of life. It is very hard to detect a tsunami because of its small wave height as it travels through deep water. They are also difficult to predict because of the difficulty in predicting earthquakes.

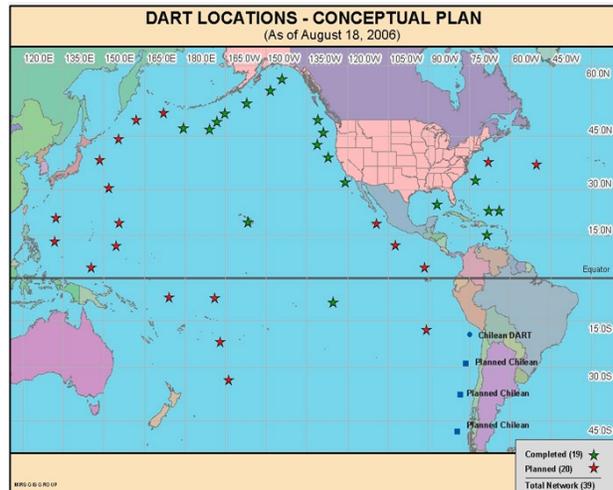


Figure 2. DART Locations - Conceptual Plan

Source: National Oceanic and Atmospheric Administration.

In the United States, the areas that are most likely to experience a tsunami are on the West Coast. Alaska, Hawaii, Washington, Oregon, and California have received the majority of the tsunamis. Tsunamis are rare on the East Coast. However, there is a fault line in the Atlantic Ocean off the coast of the United States, and cracks have recently been discovered on the continental shelf off the coast of North Carolina and Virginia. According to NCEM, these cracks suggest instability in the continental shelf. If the sea floor falls, it could result in a tsunami along the coast. Based on Table 40, the likelihood of occurrence for tsunamis in the Pamlico Sound Region is “unlikely.”

XII. COASTAL HAZARDS

A. Coastal or Estuarine Erosion

In assessing the erosion hazard in the Pamlico Sound Region, it is important to realize that there is a temporal or time aspect associated with the average rate at which a shoreline is either eroding or accreting. Over a long-term period (years), a shoreline is considered eroding, accreting, or stable. When evaluating coastal/estuarine erosion in the community, it is important to focus on the long-term erosion situation. However, it is important to understand that storms can erode a shoreline that is, over the long-term, classified as accreting, and vice versa.

Coastal erosion is the wearing away of land and the removal of beach or dune sediments by wave action, tidal currents, wave currents or drainage. Waves, generated by storms, wind, or fast moving motor craft, cause coastal erosion, which may take the form of long-term losses of sediment and rocks, or merely the temporary redistribution of coastal sediments; erosion in one location may result in accretion nearby.

Erosion is measured as a rate, with respect to either a linear retreat (i.e., feet of shoreline recession per year) or volumetric loss (i.e., cubic yards of eroded sediment per linear foot of shoreline frontage per year). Erosion rates are not uniform, and vary over time at any single location. Annual variations are the result of seasonal changes in wave action and water levels.

Erosion is caused by coastal storms and flood events; changes in the geometry of tidal inlets, river outlets, and bay entrances; man-made structures and human activities such as shore protection structures and dredging; long-term erosion; and local scour around buildings and other structures.

Shoreline erosion is a natural hazard within the Pamlico Sound Region. Erosion of coastal and estuarine shorelines is an ongoing and natural process within the northeastern North Carolina coastal system. Erosion rates are extremely variable, but the majority of the coastal/estuarine shorelines are currently eroding. For all coastal communities in the Pamlico Sound region, the average minimum and maximum blocked erosion rate is two (2) feet per year. Given the Pamlico Sound Region's proximity to the Atlantic Ocean and the large number of waterbodies in and surrounding the counties, the likelihood of occurrence for coastal/estuarine erosion is "possible."

B. Rip Currents

Rip currents can occur along any coastline that features breaking waves. Scientific investigations of wave and current interactions along the coast have shown that rip currents are likely present on most beaches every day as a component of the complex pattern of nearshore circulation. As waves travel from deep to shallow water, they eventually break near the shoreline. As waves break, they generate currents that flow in both the offshore (away from the coast) and the alongshore directions. Currents flowing away from the coast are called rip currents. Rip current strength and speed varies. This variability makes rip currents especially dangerous to uninformed beachgoers.

The National Weather Service issues a Surf Zone Forecast that includes the rip current risk for many beaches. Rip current risk definitions are as follows:

- ▶ **Low Risk:** Wind and/or wave conditions are not expected to support the development of rip currents. However, rip currents may occur at any time, especially in the vicinity of groins, jetties, and piers. Typically, rip currents that form during these days are weak and may only pose threats to very weak swimmers or toddlers. During low risk days the potential for life threatening rip currents is at a minimum and rescues by area life guards would be very low if any at all.
- ▶ **Moderate Risk:** Some or all of the conditions that support stronger rip currents are becoming factors, thus the magnitude of rip currents will likely increase. At this stage, persons entering the surf are urged to exercise caution. The number of rescues by area life guards may increase proportionally on moderate risk days.
- ▶ **High Risk:** Wind and/or wave conditions are expected to support the development of very strong rip currents. This category implies that rip currents are life threatening to all people who enter the surf. There may be a high number of rescues on high risk days.

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The United States Lifesaving Association estimates that the annual number of deaths due to rip currents on the nation’s beaches exceeds 100. Rip currents account for over 80% of rescues performed by surf beach lifeguards. The following table provides a description of the rip currents which have occurred in the Pamlico Sound Region since 2002.

Table 37. Pamlico Sound Region Rip Currents, 2002-2013

Location	Date	Deaths	Injuries	Damages (Property)
Carteret County	5/31/2002	1	0	0
Carteret County	7/23/2002	1	0	0
Carteret County	7/18/2004	1	0	0
Hyde County	7/28/2004	1	0	0
Carteret County	7/24/2006	1	0	0
Carteret County	5/5/2007	1	0	0
Hyde County	5/27/2007	1	0	0
Hyde County	7/4/2007	1	0	0
Hyde County	8/7/2010	1	0	0
Carteret County	8/24/2010	1	0	0
Carteret County	6/1/2013	1	0	0
Carteret County	7/11/2013	1	0	0

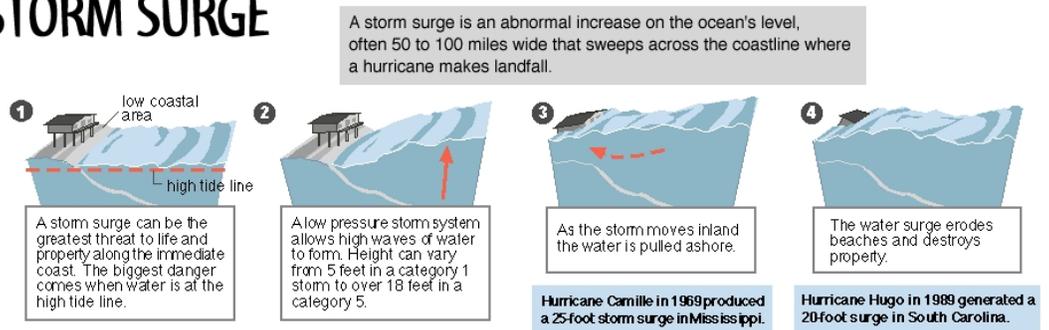
Source: National Oceanic and Atmospheric Administration.

The probability of rip currents impacting the Pamlico Sound coastline is “possible” (see Table 40).

C. 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.

STORM SURGE



Source: FEMA

APINicole Davis

Figure 3. Storm Surge Source: Federal Emergency Management Agency.

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.

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 Pamlico Sound Region has an expected storm surge elevation with a 10-year recurrence interval of 1.5 to 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 "possible" (see Table 40). This impact can be seen on the Hurricane Storm Surge Inundation Maps (Slow and Fast Models) included in the Vulnerability section of this plan (see Appendix A). The Region has experienced several storm surge events since 2001. (see Table 38).

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Table 38. Storm Surge Affecting the Pamlico Sound Region, 2001-2013

Location	Date	Type	Property Damage
Beaufort County	3/21/2001	Storm Surge/Tide	\$0
Carteret, Craven, Pamlico Counties	2/27/2004	Storm Surge/Tide	\$0
Carteret, Craven, Pamlico Counties	4/15/2005	Storm Surge/Tide	\$40,000
Carteret, Craven, Hyde, Pamlico Counties	5/6/2005	Storm Surge/Tide	\$0
Carteret, Hyde Counties	7/20/2008	Storm Surge/Tide	\$0
Regional Event (All Counties)	8/26/2011	Storm Surge/Tide	\$167,200,000
Hyde County	10/28/2012	Storm Surge/Tide	\$100,000

Source: National Oceanic and Atmospheric Administration.

XIII. 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.

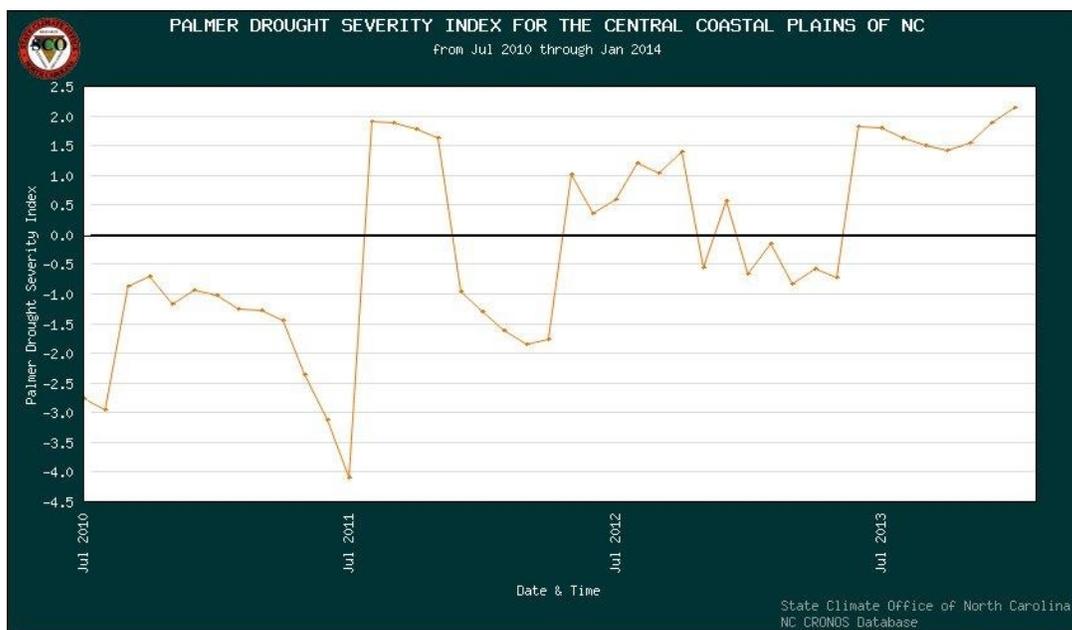
According to the NC Drought Management Advisory Council, there are four categories of drought. From least detrimental to worst, the drought categories are moderate, severe, extreme, and exceptional. State and federal officials use the different drought categories as a barometer to assist local governments and other water users in taking appropriate drought response actions. For instance, drought officials

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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 throughout the region since adoption of the last plan.



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 National Climatic Data Center indicated that all the counties within the Pamlico Sound Region experienced severe drought conditions during the summer months of 2011 (-4.1 PDSI in July 2011). Drought effects are often severe. Drought can last for extended periods and it affects all citizens, businesses and government. Beaufort, Carteret, Craven, Hyde, and Pamlico 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 40, the likelihood of occurrence for drought is “possible.”

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XIV. 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 Pamlico Sound Region.
Volcanoes	There is no history of volcanic activity in the Pamlico Sound Region.
Sinkholes	There is no history of sinkhole activity in the Pamlico Sound Region.

XV. RANKING OF NATURAL HAZARD POTENTIAL

The hazards outlined within the preceding sections, as well as hazards that have occurred in years prior to 2008 (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 1996. These factors have been ranked on a scale of 1 (High) to 12 (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 39. Pamlico Sound Region Ranking of Hazard Potential

Hazard	Ranking by Frequency	Ranking by Injuries	Ranking by Deaths	Ranking by	Total All Factors
				Property Damage Loss	
Thunderstorms/ Windstorms	1	1	3	4	9
Hurricanes	5	4	4	1	14
Coastal Hazards	6	5*	1	2	14
Severe Winter Storms	4	2	2	6	14
Tornados	2	3	6*	3	14
Flooding	3	5*	5	5	18
Droughts/Heat Waves	7	5*	6*	7	25
Earthquakes**	8*	6*	7*	8*	29
Nor'easters**	8*	6*	7*	8*	29
Dam/Levee Failure**	8*	6*	7*	8*	29
Tsunamis**	8*	6*	7*	8*	29
Wildfire**	8*	6*	7*	8*	29

*Indicates a tie score.

**Due to the lack of historical data, nor'easters, wildfire, earthquakes, dam/levee failure, and tsunamis were given the same score for all factors.

Source: National Oceanic and Atmospheric Administration.

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XVI. 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 2008.

Table 40. Pamlico Sound 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	Likely	Severe	Critical
Nor'easters	Likely	Moderate	Critical
Flooding	Highly Likely	Severe	Critical
Severe Winter Storms	Likely	Severe	Limited
Thunderstorms/Windstorms	Highly Likely	Severe	Limited
Tornados	Likely	Severe	Critical
Wildfire	Likely	Moderate	Limited
Earthquakes	Unlikely	Moderate	Limited
Dam/Levee Failure	Unlikely	Moderate	Negligible
Tsunamis	Unlikely	Moderate	Limited
Droughts/Heat Waves	Possible	Moderate	Negligible
Coastal Hazards	Possible	Severe	Negligible

NOTES:

¹ Likelihood of occurrence was estimated using historic data and the following chart (based on the 2008 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 39 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, 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

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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 2008 plans):

Level	Area Affected	Impact
Catastrophic	More than 50%	<ul style="list-style-type: none">• Multiple deaths• Complete shutdown of facilities for 30 days or more• More than 50 percent of property is severely damaged
Critical	25 to 50%	<ul style="list-style-type: none">• Multiple severe injuries• Shutdown of critical facilities for 1-2 weeks• More than 25 percent of property is severely damaged
Limited	10 to 25%	<ul style="list-style-type: none">• 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%	<ul style="list-style-type: none">• 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	

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SECTION 4. COMMUNITY CAPABILITY ASSESSMENT

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 Beaufort, Carteret, Craven, Hyde, and Pamlico 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 subsections:

- I) Agency/Organizational Review
- II) Existing Policies and Program Review
- III) Community Capability Assessment
- IV) Legal Capability Review
- V) Fiscal Capability Review
- VI) Political Acceptability Review

Elements I and II noted above are further broken down by County and subsequently each participating municipal jurisdiction within each County. Under the Agency/Organization Review section, the review of each municipality is provided in a summary format due to the significant number of entities involved in this plan. This plan denotes the programs and policies in place within each jurisdiction; however, further information relating to these documents is available through each respective governments administration.

I. 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.

A. Beaufort County

1. Unincorporated Beaufort County

The Beaufort County Administrative Offices are located at 121 W. Third Street, Washington. The County operates under a Board of Commissioners-Manager form of government. Table 41 below 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.

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SECTION 4. COMMUNITY CAPABILITY ASSESSMENT

Table 41. Agency/Organizational Review for Beaufort County

County Department	Description
Planning and Zoning (includes building inspections)	The Planning Section of this department serves as staff for the Planning Board and the Board of Commissioners on land use regulation enforcement. These regulations include Subdivision Regulations, Flood Damage Prevention Ordinance, and various nuisance ordinances. The Planning Department is the first agency involved in the permitting process. After receiving an application, staff determines if the project is within the county's jurisdiction. If not, then the applicant must receive approval from the appropriate municipality. The Inspections Department issues permits (building, electrical, plumbing, mechanical, fire, and mobile home setup) for Beaufort County, as well as all participating municipalities with the exception of the City of Washington and the Towns of Belhaven and Washington Park.
Engineering (includes capital improvements)	Beaufort County does not maintain in-house engineering capabilities. These services are contracted on an "as-needed" basis.
Sewer	Beaufort County does not maintain or provide central sewer service.
Water	Water to unincorporated portions of the county is provided through Beaufort County. Several of the county's municipalities provide water service independently, including the City of Washington.
Fire	The unincorporated areas of Beaufort County are served by ten volunteer fire departments manned predominantly by citizen volunteers. Three EMS providers answer emergency medical calls. The majority of EMS service is also provided by volunteers. This fact poses growing limitations for adequate daytime fire, rescue, and EMS services since most volunteers work (often elsewhere) during the day. NCFCS has jurisdiction to suppress all wildfires in cooperation with local Fire Departments and Emergency Management officials.
Law Enforcement	The Beaufort County Sheriff's Department provides law enforcement services throughout the county with a staff of 47 (excluding detention center and communications positions). The department provides communications support, traffic control, evacuation support, shelter security, prisoner transport, and related emergency management services during emergencies and disaster events.
Emergency Services	The Beaufort County Emergency Management Department is the main contact with the eastern branch office of the NC Division of Emergency Management for the procurement and management of state emergency and disaster resource response. The Emergency Management Director and the County Fire Marshall are the county's only EM employees, and are responsible for the supervision of all county emergency operations and hazard mitigation activities, including maintenance of the county's Emergency Operations Plan and this mitigation plan. The Director is responsible for maintenance of the county's Emergency Operations Center and makes decisions regarding food, supplies, and other incidental needs for the Emergency Operations Center during disaster events. The Director also maintains a list of government and private resources in the county. The Director coordinates the Incident Command (IC) System and National Incident Management System (NIMS) during disaster events and serves as principal liaison between local and state command groups during emergency operations. The Emergency Management Department also provides public outreach for hazard mitigation issues on the county's website and through printed media and public access television.
Electricity	Electric service in the county is provided by several different providers including Tideland Electric, Progress Energy, the Town of Belhaven, and the City of Washington.
Roads/Streets	Beaufort County does not own or maintain any roads, streets, or highways. All right-of-ways located outside of municipalities are maintained by NCDOT.
Stormwater Management/ Drainage Maintenance	Beaufort County supports state regulations related to stormwater runoff resulting from development (Stormwater Disposal Policy 15A NCAC 2H.001-.1003) and the NCDENR Coastal Stormwater Rules; however, there is currently no county-wide stormwater management program.

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SECTION 4. COMMUNITY CAPABILITY ASSESSMENT

2. Beaufort County Municipalities

The following provides an overview of capability for each participating municipal jurisdiction:

Municipality	Type of Government	Police	Fire	EMS	Water	Sewer
Aurora	Mayor-Council	X	X	X		
Bath	Mayor-Council		X	X	X	X
Belhaven	Council-Manager	X	X	X	X	X
Chocowinity	Mayor-Council	X	X	X	X	X
Pantego	Council-Manager		X			
Washington	Council-Manager	X	X	X	X	X
Washington Park	Mayor-Council					

B. Carteret County

1. Unincorporated Carteret County

The Carteret County Administration Building is located at Courthouse Square in Beaufort, NC. The County operates under a Board of Commissioners-Manager form of government. Table 42 below 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 42. Agency/Organizational Review for Carteret County

County Department	Description
Planning and Zoning (includes building inspections)	Planning and Development Department responsibilities include: administering and enforcing the county’s development and zoning ordinances for the unincorporated areas of Carteret County; administering and enforcing the NC Building Code for the unincorporated areas of Carteret County; local administration of the county’s CAMA, Community Rating System, and FEMA regulations; reviewing development applications for compliance with the county’s zoning ordinance, flood damage prevention and protection ordinance, subdivision regulations, group housing ordinance, mobile home park ordinance, RV park ordinance, and the county’s CAMA land use plan; issuing appropriate permits within their authority. Planning staff provides support to the Planning Commission and the Board of Adjustment, and offer recommendations regarding development applications to these citizen boards, as well as the Board of Commissioners. Inspection staff within the department are responsible for completing building, electrical, mechanical, and plumbing inspections to the unincorporated areas of the county in accordance with the NC Building Code; inspecting mobile home parks and RV parks annually; issuing permits; performing inspections of all Carteret County Public Schools twice a year; providing inspection services to the towns of Cedar Point, Peletier, Bogue, and Indian Beach.
Engineering (includes capital improvements)	Carteret County does not maintain in-house engineering services. These services are contracted with private providers as the need arises. Budgeting for these projects are addressed through the county’s annual budgeting process.
Sewer	Sewer service is provided by Beaufort, Morehead City, and Newport.

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

SECTION 4. COMMUNITY CAPABILITY ASSESSMENT

County Department	Description
Water	Water to unincorporated portions of the county is provided through Carteret County Water System. Several of the county’s municipalities provide water service independently including Morehead City, Beaufort, Atlantic Beach, and Newport.
Fire	The Carteret County Office of the Fire Marshal’s purpose is to protect life and property from fire, explosion, and natural hazards by enforcement of the State Fire Prevention Code, public fire prevention and safety education, and investigation of fire and explosive incidents. Fire marshals are certified by the North Carolina Code Qualification Board to enforce the North Carolina State Fire Code. All fire marshals are certified firefighters, fire officers, hazardous material incident commanders, and technicians. In conducting fire investigations, fire marshals are NC Department of Insurance Certified Fire Investigators with experience in fire scene examinations and courtroom testimony. Fire Marshals are also certified in fire service disciplines by the International Fire Service Accreditation Congress. Fire Marshal Services include Fire Investigations, Fire Code Safety Inspections, Fire Prevention Education, Burning permits, and assist fire departments and communities in lowering their Fire Insurance Ratings. NCFCS has jurisdiction to suppress all wildfires in cooperation with local Fire Departments and Emergency Management officials.
Law Enforcement	The Carteret County Sheriff’s Office employs 52 full-time law enforcement officers and 30 civilian employees for a total of 82 full-time employees. The mission of the Sheriff’s Office is to serve and protect the citizens of the county, state, and country. The office will secure an effective administration of the criminal laws of the county and state by investigating crimes, identifying suspects, apprehending criminals and preparing evidence for the court system.
Emergency Services	911 Emergency Communications provide the vital link between the public and emergency responders by processing all 911 and non-emergency calls to acquire and disseminate information while efficiently dispatching appropriate emergency services. Emergency Management maintains a high level of preparedness, identifies vulnerabilities, effectively mitigates disasters, provides public education, responds to all-hazard emergency situations, and facilitates effective recovery efforts following any all-hazard incident. Emergency Medical Services ensures standardized, quality pre-hospital patient care by administering and coordinating a county system of emergency medical care and disaster medical response.
Electricity	Electric service within the county is provided by several different providers including Duke Energy Progress and Carteret-Craven Electric Membership Corporation.
Roads/Streets	Carteret County does not own or maintain any public right-of-ways. The participating municipal jurisdictions are responsible for maintaining the town right-of-ways serving their respective jurisdiction.
Stormwater Management/ Drainage Maintenance	Carteret County supports state regulations related to stormwater runoff resulting from development (Stormwater Disposal Policy 15A NCAC 2H.001-.1003) and the NCDENR Coastal Stormwater Rules; however, there is currently no county-wide stormwater management program.

2. Carteret County Municipalities

The following provides an overview of capability for each participating municipal jurisdiction:

Municipality	Type of Government	Police	Fire	EMS	Water	Sewer
Atlantic Beach	Council-Manager	X	X	X	X	
Beaufort	Commissioner-Manager	X	X		X	X
Bogue	Mayor-Council					

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Municipality	Type of Government	Police	Fire	EMS	Water	Sewer
Cape Carteret	Mayor-Council	X				
Cedar Point	Mayor-Council					
Emerald Isle	Council-Manager	X	X			
Indian Beach	Mayor-Council	X	X	X		
Morehead City	Council-Manager	X	X	X	X	X
Newport	Council-Manager	X	X		X	X
Peletier	Mayor-Council					
Pine Knoll Shores	Council-Manager	X	X	X	X	

C. Craven County

1. Unincorporated Craven County

The Craven County Administration Building is located at 406 Craven Street, New Bern. The County operates under a Board of Commissioners-Manager form of government. Table 43 below 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 43. Agency/Organizational Review for Craven County

County Department	Description
Planning and Zoning (includes building inspections)	Craven County has adopted a certified CAMA Land Use Plan, subdivision ordinance, mobile home park ordinance, Marine Corps Air Station zoning ordinance, regional airport height control zoning ordinance, and a flood damage prevention ordinance which it administers through its seven-person Planning Department. The County also has an appointed, eight-member Planning Board. Inspections and permitting (building, plumbing, HVAC) are administered to State standards through the four-person Craven County Inspections Department.
Engineering (includes capital improvements)	The County does not have a licensed professional engineer on County staff, and contracts for engineering services on an "as-needed" basis. The County annually adopts a Capital Improvements Program, which is administered by the Planning and Inspections Department.
Sewer	The county does not operate sewage collection or treatment facilities.
Water	The Craven County water system serves Townships 1, 3, 5, 6, 7, 9, and a portion of Township 8. Township 2 is served by a private system, First Craven Sanitary District, and by the Town of Bridgeton. The cities of New Bern and Havelock; the towns of Vanceboro, Cove City and Dover; and the Marine Corps Air Station Cherry Point all operate their own municipal water systems. The Town of River Bend operates its own municipal water system.

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County Department	Description
Fire	Craven County has a total of fifteen (15) fire districts/departments, all but two (2) of which operate on a volunteer basis (New Bern and Havelock have professional fire services). Cherry Point has a federally-supported fire department. Each district has its own separate taxing district and rate. Currently, fire protection is adequate to meet demand and there are no plans in the immediate future to add new districts. Equipment acquisition is handled on an as-needed basis. NCFS has jurisdiction to suppress all wildfires in cooperation with local Fire Departments and Emergency Management officials.
Law Enforcement	Law enforcement is provided to the County by the Craven County Sheriff's Department. The department is located at the Craven County Judicial Center, 1100 Clarks Road in New Bern. The department has three (3) divisions: Administration, Jail, and School Resource Officers. The Administration Division consists of the Sheriff, Chief Deputy, Criminal Division Commander, Investigative Division Commander, Civil Division Commander, Administrative Division Commander, six (6) administrative staff positions, and one (1) Chaplain/ Administrative Assistant. The Jail Division has forty-seven (47) people on staff. The Jail is located at the Craven County Judicial Center on Clarks Road and is certified for 292 beds. The Department also has a 40-bed work release facility on Alligator Road. The School Resource Officer Division has four (4) resource officers assigned to schools outside of municipal limits.
Emergency Services	The Emergency Services Department is the leading agency that provides direction and coordination of public safety. Consolidated under one departmental management is the Craven County Communications Center, Emergency Management, Emergency Medical Services and Fire Marshal. The Emergency Services coordinates with 12 rescue agencies, 14 Fire departments and several Community Emergency Response Teams (CERT). These agencies work together to provide the citizens with complete and unified emergency services during any emergency or disaster that may be a threat to life and property.
Electricity	Six entities provide electricity generation and distribution services to the County – Progress Energy (private), the City of New Bern (municipal) and three cooperatives (Jones-Onslow EMC, Tideland EMC, and Carteret-Craven EMC).
Roads/Streets	The County does not own or maintain streets – this function is served by NCDOT and select municipalities.
Stormwater Management/ Drainage Maintenance	Craven County supports state regulations relating to stormwater runoff resulting from development (Stormwater Disposal Policy 15A NCAC 2H.001-.1003) and the Neuse River buffer rules, but currently there is no county-wide stormwater management program.

2. Craven County Municipalities

The following provides an overview of capability for each participating municipal jurisdiction:

Municipality	Type of Government	Police	Fire	EMS	Water	Sewer
Bridgeton	Mayor-Council	X	X	X		X
Cove City	Council-Manager		X	X		
Dover	Mayor-Council		X			
Havelock	Council-Manager	X	X	X	X	X
New Bern	Council-Manager	X	X	X	X	X
River Bend	Council-Manager	X			X	X
Trent Woods	Mayor-Council	X	X			
Vanceboro	Mayor-Council	X	X	X	X	X

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D. Hyde County

The Hyde County Government Center is located at 30 Oyster Creek Road, Swan Quarter. The County operates under a Board of Commissioners-Manager form of government. Table 44 below 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. There are no incorporated municipalities in Hyde County.

Table 44. Agency/Organizational Review for Hyde County

County Department	Description
Planning and Zoning (includes building inspections)	<p>The Planning & Economic Development Department administers the Subdivision and Manufactured Home Parks Ordinances for the county and provides staff support for the County Board of Commissioners. These ordinances support and guide the proper subdivision and development of land within the jurisdiction of the county in order to promote the public health, safety, and general welfare of the citizens.</p> <p>Building permits must be obtained from the Inspections Office. An inspections of the building site must be done prior to the permit being issued. A fire inspection is also required and can be arranged through the Inspections Office as well. Elevation maps are available to the public for viewing; however, to obtain an Elevate Certificate, the property must be surveyed by a licensed surveyor. The purpose of the Code Enforcement Officer is to enforce state and county building codes. These codes are designed to protect the homeowner and the local environment.</p>
Engineering (includes capital improvements)	Hyde County does not provide in-house engineering services. These services are contracted on an as-needed basis.
Electric, Water, and Sewer	<p>Hyde County water system production is processed by two state-of-the-art water treatment plants known as Reverse Osmosis. One is located in the Ponzer area just off NC Highway 45, and the other is located just off State Road 1305 in the Fairfield area. There are two production wells located near each treatment plant, and these wells operate on alternating days. Current service areas on the mainland are near Ponzer, Fairfield, Swan Quarter, and Engelhard. The County’s water system has approximately 2,000 service connections and a capacity of 1,152,000 gallons per day. The system operates and maintains approximately 380 miles of water lines. In June 2002, a sanitary sewer system began operation in the Swan Quarter area. The system serves approximately 250 customers and is permitted to discharge 39,000 gallons per day of treated effluent. The system is operated by the Swan Quarter Sanitary District. On Ocracoke Island, wastewater disposal is provided by privately-owned, on-site septic systems or small package systems. Electrical power service is provided to all of Hyde County by the Tideland Electric Membership Corporation (EMC). Tideland EMC is a distribution electric cooperative that purchases its power from Duke Energy Progress and serves over 21,000 accounts in six northeastern North Carolina counties.</p>

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County Department	Description
Fire	On the mainland of Hyde County, fire suppression services are provided by five volunteer fire departments, as follows: Engelhard, Swan Quarter, Fairfield, Scranton, and Pungo River. Pungo River is based in eastern Beaufort County (near the Pungo community) and serves the northwestern portion of Hyde County. The remaining departments are based in Hyde County and serve the aforementioned communities and surrounding areas (up to approximately six miles from each fire house). The County Emergency Management Director serves as the Fire Marshal and supports the aforementioned volunteer fire departments. Ocracoke Island is served by the Ocracoke Volunteer Fire Department located on State Route 1324 (Firehouse Road). Through a mutual aid agreement with the National Park Service, the Ocracoke VFD maintains a 250-gallon per minute trailer-mounted pump to assist it with maintaining/establishing water pressure. Emergency Medical Services (EMS) are provided on the mainland through the County and are dispatched by the Sheriff’s Department (via 9-1-1). The county contracts EMS to the Ocracoke Health Center (Ocracoke EMS) for Ocracoke Island and to Belhaven Fire and EMS for mainland areas of the county west of the Walter B. Jones Intracoastal Waterway Bridge. Hyde County EMS serves the remainder of the county. NCFCS has jurisdiction to suppress all wildfires in cooperation with local Fire Departments and Emergency Management officials.
Law Enforcement	Because there are no incorporated towns in Hyde County, there are no municipal police departments. The Hyde County Sheriff’s Office has the responsibility to cover the entire county, with the assistance of the North Carolina State Highway Patrol, the North Carolina Marine Patrol, the North Carolina Wildlife Commission, and the National Park Service on Ocracoke Island. There are currently three full-time State Trooper positions in Hyde County. The Sheriff’s Department employs twelve sworn officers - the Sheriff, one chief deputy, three sergeants, six deputies, and a DARE drug education officer. The department also employs three auxiliary officers who can be used seasonally, in emergency situations, or to fill in for full-time officers in case of sickness or vacation. The department employs five dispatchers who also serve as jailers and three auxiliary jailers/dispatchers.
Roads/Streets	Hyde County does not own or maintain any roads, streets, or highways. All right-of-ways are maintained by NCDOT.
Stormwater Management/ Drainage Maintenance	Hyde County supports state regulations relating to stormwater runoff resulting from development (Stormwater Disposal Policy 15A NCAC 2H.001-.1003) and the Neuse River buffer rules, but currently there is no county-wide stormwater management program.

E. Pamlico County

1. Unincorporated Pamlico County

The Pamlico County Offices are located at 302 Main Street, Bayboro. The County operates under a Board of Commissioners-Manager form of government. Table 45 below 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.

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Table 45. Agency/Organizational Review for Pamlico County

County Department	Description
Planning and Zoning (includes building inspections)	The Planning Department seeks to provide effective and efficient services in the form of planning and sound economic development for the future of Pamlico County. In an effort to achieve these goals, the Planning Department implements the land use ordinances of the county. These plans and regulations include the 1992 Land Use Plan, the Pamlico County Subdivision Regulations, the Pamlico County Water Supply System Extension Policy, the Pamlico County Environmental Impact Statement Ordinance, and the Pamlico County Mobile Home Park Ordinance. The Building Inspections Department enforces all state building, electrical, plumbing, insulation, structural and mechanical codes to ensure compliance with minimum construction standards. In addition to these codes, the Department is also involved in the National Flood Insurance Program and administers this program to citizens. In compliance with CAMA, the Pamlico County Building Inspector issues permits for all developments which meet CAMA regulatory definition of a minor permit. The Building Inspector is also responsible for conducting fire inspections of county schools twice a year to ensure their compliance with all fire regulations.
Engineering (includes capital improvements)	Pamlico County does not maintain in-house engineering capabilities. These services are contracted on an "as-needed" basis.
Sewer	The Bay River Metropolitan Sewerage District is an independent local government agency which provides and administers the sewage collection and treatment systems which are located inside the district's boundaries. The service area includes Grantsboro, Alliance, Bayboro, Stonewall, Oriental, Maribel, Vandemere, Cash Corner, and Mesic. The Bay River Metropolitan Sewerage District's purpose is to promote the general health and welfare of the local government and to protect the Bay River from pollution caused by failing septic fields and illegal discharges.
Water	The Pamlico County Water System (PCWS) was founded in 1980 with the mission of supplying clean, safe drinking water to the citizens of Pamlico County. The system had an initial customer base of 2,650 and had approximately 200 miles of distribution lines. Water was supplied via two newly built treatment facilities and the "Old Town of Bayboro" plant. The source of the water supply is currently from ground water that is pumped from the Castle Hayne aquifer. The water is then treated from five water treatment facilities and distributed county-wide to customers through approximately 300 plus miles of water distribution lines. PCWS currently provides service to more than 5,000 homes and businesses. PCWS is a self-supporting agency which depends on customer rates and fees to support its operation. No tax dollars are used to pay for PCWS's operations.
Fire	Fire protection is provided by ten (10) all-volunteer departments. They are on-call 24 hrs per day to fight fires, help with extrication, traffic control and other emergencies. Pamlico Rescue, based in Bayboro, responds to medical emergencies for all of Pamlico and, for serious cases, provide, Advance Life Saving (ALS) and ambulance service for the County. In the Southeast Pamlico VFD and Arapahoe VFD areas, a team of First Responders provides medical treatment until Pamlico Rescue ambulance arrives on the scene. For major trauma cases, Eastcare will airlift patients by helicopter to appropriate trauma centers. NCFS has jurisdiction to suppress all wildfires in cooperation with local Fire Departments and Emergency Management officials.
Law Enforcement	The Sheriff's Department's foremost goal is to protect and to serve the public. To this end, it is diligent in protecting lives, property, and information. IN addition, it also serves the public in day-to-day concerns or needs. In order to receive a permit to purchase a handgun or carry a concealed handgun, citizens must go through the Sheriff's Department. Finger printing for child protective services and day care providers is also done at the Sheriff's Department. Escorts to and from funerals and tours of the jail for schools can be provided. DARE officers visit schools to educate youth on various safety issues or law enforcement issues. A K-9 unit has been added to the Department. An animal control officer is also on duty to assist citizens with any animal problems.

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County Department	Description
Emergency Services	The Emergency Management Department is dedicated to sound emergency management of all aspects. Responsibilities of this office include general emergency management and the Fire Marshal. Under FEMA regulations, the Emergency Management office is responsible for the following functions: the development and maintenance of programs and systems for effective coordination of community resources in all phases of emergency management, the planning and preparation of population protection, including evacuation and sheltering, the appropriate response to national security emergencies, disaster response, and recovery and the promotion of public awareness. As Fire Marshal, the Emergency Management Coordinator works to keep the County Manager and the Board of Commissioners informed of the status of rural fire departments, areas of concern and fire prevention planning. The Fire Marshal also assists with the coordination of fire alarms in the county, the development of Arson Task Forces, the organization of fire prevention programs and the procurement of funds for rural fire departments. In addition, the Fire Marshal maintains all fire incident reports and assists with the inspection of fire scenes.
Electricity	Electric service within the county is provided by several different providers including Duke Energy Progress and Tideland Electric Membership Corporation.
Roads/Streets	Pamlico County does not own or maintain any roads, streets, or highways. All right-of-ways located outside of municipalities are maintained by NCDOT.
Stormwater Management/ Drainage Maintenance	Pamlico County supports state regulations related to stormwater runoff resulting from development (Stormwater Disposal Policy 15A NCAC 2H.001-.1003) and the NCDENR Coastal Stormwater Rules; however, there is currently no county-wide stormwater management program.

2. Pamlico County Municipalities

The following provides an overview of capability for each participating municipal jurisdiction:

Municipality	Type of Government	Police	Fire	EMS	Water	Sewer
Alliance	Mayor-Council					
Arapahoe	Mayor-Council		X			
Bayboro	Mayor-Council					
Grantsboro	Mayor-Council		X	X		
Mesic	Mayor-Council					
Minnesott Beach	Council-Manager					
Oriental	Council-Manager	X	X		X	
Stonewall	Mayor-Council					
Vandemere	Mayor-Council		X			

II. 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.

A. 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 Beaufort, Carteret, Craven, Hyde, and Pamlico Counties.

B. 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 Section III.

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.

C. 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 Section III.

D. 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 Section III.

E. 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.

F. Coastal Area Management Act (CAMA) Plans

In 1972, Congress enacted the Coastal Zone Management Act (CZMA) to protect the coastal environment from growing demands associated with residential, recreational, commercial, and industrial uses (e.g., State and Federal offshore oil and gas development). Through the CZMA, states are encouraged to develop coastal zone management programs (CZMPs) to allow economic growth that is compatible with the protection of natural resources, the reduction of coastal hazards, the improvement of water quality, and sensible coastal development. The CZMA provides financial and technical incentives for coastal states to manage their coastal zones in a manner consistent with CZMA standards and goals.

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The nation’s coastal and ocean resources are under increasing pressure from population growth and development. Coastal areas host over 50% of the total U.S. population within only 17% of the nation’s land area. Between 1994 and 2015, coastal population is projected to increase by 28 million people. This movement to the coast has presented difficult challenges for coastal resource managers.

The Coastal Zone Management Program (CZMP) is authorized by the Coastal Zone Management Act of 1972 and administered at the federal level by the Coastal Programs Division (CPD) within the National Oceanic and Atmospheric Administration's (NOAA’s) Office of Ocean and Coastal Resource Management (OCRM). The CZMP's leaves day-to-day management decisions at the state level in the 34 states and territories with federally approved coastal management programs. Currently, 95,376 national shoreline miles (99.9%) are managed by the Program.

In 1974, the state of North Carolina adopted the Coastal Area Management Act (CAMA) in compliance with the CZMA. CAMA established a cooperative program of coastal area management between local and State governments. Communities with adopted CAMA Land Use Plans are indicated in Section III.

III. 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 46. Beaufort County Jurisdictional Functions/Capabilities

	Beaufort County	Aurora	Bath	Belhaven	Chocowinity	Pantego	Washington	Washington Park
Comprehensive Land Use Plan (LUP)	X	X	X	X	X	X	X	X
Parks and Recreation/ Open Space Plan				X			X	
Zoning Ordinance		X	X	X	X	X	X	X
Subdivision Ordinance	X	X	X	X	X	X	X	X
Stormwater Ordinance	X							
Floodplain Ordinance		X	X	X	X	X	X	X
NFIP Participant	X	X	X	X	X	X	X	X
CRS Participant				X			X	X
Capital Improvements Plan				X			X	
Building Inspections/ Permitting	X			X			X	
Engineering								

Source: Holland Consulting Planners, Inc.

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SECTION 4. COMMUNITY CAPABILITY ASSESSMENT

Table 47. Carteret County Jurisdictional Functions/Capabilities

	Carteret County	Atlantic Beach	Beaufort	Bogue	Cape Carteret	Cedar Point	Emerald Isle	Indian Beach	More-head City	Newport	Peletier	Pine Knoll Shores
Comprehensive Land Use Plan (LUP)	X	X	X	X	X	X	X	X	X	X	X	X
Parks and Recreation/ Open Space Plan		X	X						X	X		X
Zoning Ordinance	X	X	X			X		X	X	X		X
Subdivision Ordinance	X	X	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	X
NFIP Participant	X	X	X	X	X	X	X	X	X	X	X	X
CRS Participant	X	X	X		X	X	X		X	X		X
Capital Improvements Plan			X						X			
Building Inspections/ Permitting	X	X	X		X	X			X	X		X
Engineering												

Source: Holland Consulting Planners, Inc.

Table 48. Craven County Jurisdictional Functions/Capabilities

	Craven County	Bridgeton	Cove City	Dover	Havelock	New Bern	River Bend	Trent Woods	Vanceboro
Comprehensive Land Use Plan (LUP)	X	X	X	X	X	X	X	X	X
Parks and Recreation/ Open Space Plan					X	X			
Zoning Ordinance		X	X	X	X	X	X	X	X
Subdivision Ordinance		X			X	X	X	X	
Stormwater Ordinance					X	X	X	X	
Floodplain Ordinance		X	X		X	X	X	X	X
NFIP Participant	X	X	X	*	X	X	X	X	X
CRS Participant	X				X	X	X		
Capital Improvements Plan					X		X		
Building Inspections/ Permitting	X	X	X	X	X	X	X	X	X
Engineering									

*The Town of Dover does not participate in the NFIP because there are no special flood hazard areas located within their corporate limits.

Source: Holland Consulting Planners, Inc.

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SECTION 4. COMMUNITY CAPABILITY ASSESSMENT

Table 49. Hyde County Jurisdictional Functions/Capabilities

	Hyde County
Comprehensive Land Use Plan	X
Parks and Recreation/ Open Space Plan	X
Zoning Ordinance	
Subdivision Ordinance	X
Stormwater Ordinance	
Floodplain Ordinance	X
NFIP Participant	X
CRS Participant	X
Capital Improvements Plan	
Building Inspections/ Permitting	X
Engineering	

Source: Holland Consulting Planners, Inc.

Table 50. Pamlico County Jurisdictional Functions/Capabilities

	Pamlico County	Alliance	Arapahoe	Bayboro	Grantsboro	Mesic	Minnesott Beach	Oriental	Stonewall	Vandemere
Comprehensive Land Use Plan (LUP)	X	X	X	X	X	X	X	X	X	X
Parks and Recreation/ Open Space Plan								X		X
Zoning Ordinance				X		X	X	X		X
Subdivision Ordinance	X	X	X	X	X	X	X	X	X	X
Stormwater Ordinance										
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	X	X	X
Capital Improvements Plan										
Building Inspections/ Permitting	X									
Engineering										

Source: Holland Consulting Planners, Inc.

IV. LEGAL CAPABILITY REVIEW

The following overview provides an account of the legal mechanisms available to Beaufort, Carteret, Craven, Hyde, and Pamlico 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:

A. Regulations

1. 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.

2. 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.

3. 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 Section III.

Zoning: See Section II.C 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 Section II.D above.

B. 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.

C. 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.

D. 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.

V. 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.

VI. 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.

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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.

I. INTRODUCTION

This section of the Hazard Mitigation Plan will assist with gauging the present level of vulnerability throughout the Pamlico Sound 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 2014 development characteristics of each County. This section has been compiled with the most recent and available geospatial data from local, state, and regional sources. The presentation of the information is consistent in an effort to allow efficient updating of the plan as the region moves forward.

The development of Section 5 also involved the review and update of the critical facilities inventory initially established through each respective jurisdiction's mitigation planning processes. This section of the plan outlines the methodology utilized to prepare the vulnerability analysis and data 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.

II. 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. As noted, the source quality of this data vary by jurisdiction. Due to the regional nature of this plan, some of the county Hazard Vulnerability Analyses may vary substantially from the jurisdiction's 2010/2011 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. The resulting methodology will provide for consistency during future updates.

A. 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 Beaufort, Carteret, Craven, Hyde, and Pamlico Counties overall, but may have significant impacts on specific portions of the Counties: severe winter storms, thunderstorms/windstorms, tornados, wildfire, nor'easters, dam/levee failures, tsunamis, and earthquakes. Hurricanes/tropical storms are also consider 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 area impacted by these hazards.

1. Beaufort County Existing Vulnerability

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

Table 51. Beaufort County Non-Specific Hazards Development Vulnerability

Location	Developed			Undeveloped	
	# of Properties	Acres	Building Value	# of Properties	Acres
Unincorporated County	19,433	149,511.30	\$1,725,026,642	16,873	386,286.92
Aurora	319	258.64	\$27,079,700	168	310.22
Bath	224	161.87	\$34,817,496	88	59.06
Belhaven	1,003	539.25	\$83,136,925	623	465.53
Chocowinity	374	473.01	\$50,031,600	170	130.92
Pantego	126	188.05	\$7,773,780	83	178.42
Washington	4,190	4,934.71	\$710,212,817	1,075	1,115.10
Washington Park	235	107.13	\$30,516,240	69	20.89
Beaufort County Total	25,904	156,173.96	\$2,668,595,200	19,149	388,567.06

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

2. Beaufort County Future Vulnerability

At this time, Beaufort County does 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 will continue to work on improving its GIS capabilities and aim to incorporate this element into future updates of this plan.

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SECTION 5. VULNERABILITY ASSESSMENT

3. Carteret County Existing Vulnerability

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

Table 52. Carteret County Non-Specific Hazards Development Vulnerability

Location	Developed			Undeveloped	
	# of Properties	Acres	Building Value	# of Properties	Acres
Unincorporated County	28,994	101,773.80	\$5,046,636,488	20,553	1,295,092.86
Atlantic Beach	3,980	520.15	\$841,428,142	885	1,401.51
Beaufort	2,344	883.63	\$381,824,788	808	1,384.01
Bogue	350	328.75	\$45,172,729	213	1,304.60
Cape Carteret	1,056	945.37	\$187,959,062	505	449.88
Cedar Point	821	555.99	\$159,583,957	354	519.54
Emerald Isle	5,705	1,503.02	\$1,462,349,537	1,684	1,131.07
Indian Beach	860	91.65	\$305,287,366	161	234.21
Morehead City	4,581	2,059.47	\$1,023,782,921	1,506	1,687.64
Newport	1,330	728.77	\$163,426,268	273	3,403.19
Peletier	303	764.93	\$30,146,786	243	1,322.61
Pine Knoll Shores	2,000	544.98	\$637,140,284	391	700.47
Carteret County Total	52,324	110,700.51	\$10,284,738,328	27,576	1,308,631.59

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

4. Carteret County Future Vulnerability

At this time, Carteret County does 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 will continue to work on improving its GIS capabilities and aim to incorporate this element into future updates of this plan.

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5. Craven County Existing Vulnerability

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

Table 53. Craven County Non-Specific Hazards Development Vulnerability

Location	Developed			Undeveloped	
	# of Properties	Acres	Building Value	# of Properties	Acres
Unincorporated County	19,485	125,963.28	\$2,194,005,883	9,402	287,552.90
Bridgeton	316	365.42	\$33,092,446	124	478.53
Cove City	250	174.89	\$12,132,716	123	209.35
Dover	234	186.65	\$11,017,715	129	367.00
Havelock	4,900	9,966.00	\$1,093,902,078	285	436.71
New Bern	12,714	10,451.80	\$2,153,480,928	3,393	6,106.50
River Bend	1,614	1,034.25	\$213,463,487	176	397.42
Trent Woods	1,923	1,421.59	\$363,198,862	246	224.28
Vanceboro	559	970.23	\$37,564,324	210	446.33
Craven County Total	41,995	150,534.11	\$6,111,858,439	14,088	296,219.02

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

6. Craven County Future Vulnerability

At this time, Craven County does 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 will continue to work on improving its GIS capabilities and aim to incorporate this element into future updates of this plan.

7. Hyde County Existing Vulnerability

The following provides an overview of development vulnerability with respect to non-specific hazards for Hyde County (NOTE: There are no incorporated jurisdictions in the county).

Table 54. Hyde County Non-Specific Hazards Development Vulnerability

Location	Developed			Undeveloped	
	# of Properties	Acres	Building Value	# of Properties	Acres
Hyde County	3,085	125,577.59	\$269,252,747	4,887	301,397.00

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

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8. Hyde County Future Vulnerability

At this time, Hyde County does 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 will continue to work on improving its GIS capabilities and aim to incorporate this element into future updates of this plan.

9. Pamlico County Existing Vulnerability

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

Table 55. Pamlico County Non-Specific Hazards Development Vulnerability

Location	Developed			Undeveloped	
	# of Properties	Acres	Building Value	# of Properties	Acres
Unincorporated County	6,065	41,632.36	\$504,184,081	5,576	162,792.07
Alliance	343	625.49	\$31,350,824	153	415.10
Arapahoe	131	261.96	\$11,945,506	47	129.42
Bayboro	394	631.97	\$84,480,204	199	372.57
Grantsboro	365	799.76	\$32,319,793	237	1,463.27
Mesic	160	271.20	\$8,415,615	105	392.41
Minnesott Beach	373	1,273.12	\$72,202,605	727	892.74
Oriental	1,207	441.76	\$120,468,187	431	329.91
Stonewall	164	332.77	\$13,545,467	982	672.80
Vandemere	192	405.92	\$12,227,753	214	526.71
Pamlico County Total	9,394	46,676.31	\$891,140,035	8,671	167,987.00

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

10. Pamlico County Future Vulnerability

At this time, Pamlico County does 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 will continue to work on improving its GIS capabilities and aim to incorporate this element into future updates of this plan.

B. Flooding

Flooding primarily impacts the Pamlico Sound 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 localized and/or widespread 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.

1. 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 “X-500” have an approximately 0.02, or 1 in 500, chance of flooding each year. Table 56 provides the acreage within each County located within a flood hazard area.

Table 56. Pamlico Sound Region Flood Hazard Areas

Type	Beaufort County		Carteret County		Craven County		Hyde County		Pamlico County	
	Acre	% of County	Acre	% of County	Acre	% of County	Acre	% of County	Acre	% of County
A	1.34	0.0%	0.00	0.0%	14,915.28	3.3%	5,360.94	1.2%	55.96	0.0%
AE	130,013.09	24.3%	469,587.86	33.1%	73,918.21	16.1%	352,703.68	79.8%	90,314.52	41.4%
AEFW	3,987.33	0.7%	62,132.12	4.4%	10,115.18	2.2%	0.00	0.0%	372.56	0.2%
AO	0.00	0.0%	17,143.91	1.2%	0.00	0.0%	0.00	0.0%	0.00	0.0%
VE	0.00	0.0%	38,389.33	2.7%	0.00	0.0%	6,850.65	1.6%	1,948.33	0.9%
X-500	19,062.85	3.6%	327,126.71	23.0%	11,255.21	2.5%	5,317.39	1.2%	9,759.33	4.5%
Total	153,064.61	28.6%	914,379.93	64.4%	110,203.88	24.0%	370,232.66	83.8%	102,450.70	47.0%

Source: FEMA, HCP, Inc.

2. Beaufort County Existing Vulnerability

The following provides an overview of existing conditions for portions of Beaufort County located within a defined flood hazard area, utilizing the same methodology outlined in Section A.1 for Beaufort County. Data is not currently available to provide a more detailed breakdown.

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Table 57. Beaufort County Floodprone Structures

Location	Developed			Undeveloped	
	# of Properties	Acres	Building Value	# of Properties	Acres
Unincorporated County	8,620	90,568.92	\$755,704,544	8,448	210,090.31
Aurora	192	190.78	\$25,679,786	108	382.31
Bath	191	188.00	\$26,206,605	62	76.40
Belhaven	1,003	539.25	\$83,136,925	623	465.53
Chocowinity	66	198.02	\$24,508,103	35	37.38
Pantego	176	308.85	\$11,225,048	108	347.45
Washington	3,901	7,272.33	\$702,466,089	902	956.53
Washington Park	266	138.34	\$33,979,019	81	25.54
Beaufort County Total	14,415	99,404.49	\$1,662,906,119	10,367	212,381.45

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

3. Beaufort County Future Vulnerability

At this time, Beaufort 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.

4. Carteret County Existing Vulnerability

The following provides an overview of existing conditions for portions of Carteret County located within a defined flood hazard area, utilizing the same methodology outlined in Section A.1 for Carteret County. Data is not currently available to provide a more detailed breakdown.

Table 58. Carteret County Floodprone Structures

Location	Developed			Undeveloped	
	# of Properties	Acres	Building Value	# of Properties	Acres
Unincorporated County	28,994	101,773.80	\$5,046,636,488	20,553	1,295,092.86
Atlantic Beach	3,980	520.15	\$841,428,142	885	1,401.51
Beaufort	2,344	883.63	\$381,824,788	808	1,384.01
Bogue	350	328.75	\$45,172,729	213	1,304.60
Cape Carteret	1,056	945.37	\$187,959,062	505	449.88
Cedar Point	821	555.99	\$159,583,957	354	519.54
Emerald Isle	5,705	1,503.02	\$1,462,349,537	1,684	1,131.07
Indian Beach	860	91.65	\$305,287,366	161	234.21

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Location	Developed			Undeveloped	
	# of Properties	Acres	Building Value	# of Properties	Acres
Morehead City	4,581	2,059.47	\$1,023,782,921	1,506	1,687.64
Newport	1,330	728.77	\$163,426,268	273	3,403.19
Peletier	303	764.93	\$30,146,786	243	1,322.61
Pine Knoll Shores	2,000	544.98	\$637,140,284	391	700.47
Carteret County Total	52,324	110,700.51	\$10,284,738,328	27,576	1,308,631.59

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

5. Carteret County Future Vulnerability

At this time, Carteret 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.

6. Craven County Existing Vulnerability

The following provides an overview of existing conditions for portions of Craven County located within a defined flood hazard area, utilizing the same methodology outlined in Section A.1 for Craven County. Data is not currently available to provide a more detailed breakdown.

Table 59. Craven County Floodprone Structures

Location	Developed			Undeveloped	
	# of Properties	Acres	Building Value	# of Properties	Acres
Unincorporated County	6,264	79,099.03	\$811,680,298	4,033	195,717.36
Bridgeton	307	363.39	\$32,286,126	123	478.41
Cove City	0	0.00	\$0	0	0.00
Dover	0	0.00	\$0	0	0.00
Havelock	328	7,781.88	\$555,713,790	49	26.90
New Bern	3,626	4,850.38	\$650,897,217	1,345	3,388.59
River Bend	719	519.04	\$98,400,850	69	171.16
Trent Woods	594	680.24	\$141,610,671	113	146.94
Vanceboro	125	302.81	\$7,835,261	76	322.02
Craven County Total	11,963	93,596.77	\$2,298,424,213	5,808	200,251.38

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

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7. Craven County Future Vulnerability

At this time, Craven 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.

8. Hyde County Existing Vulnerability

The following provides an overview of existing conditions for portions of Hyde County located within a defined flood hazard area, utilizing the same methodology outlined in Section A.1 for Hyde County. Data is not currently available to provide a more detailed breakdown.

Table 60. Hyde County Floodprone Structures

Location	Developed			Undeveloped	
	# of Properties	Acres	Building Value	# of Properties	Acres
Hyde County	2,981	124,358.23	\$263,521,377	4,734	279,774.77

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

9. Hyde County Future Vulnerability

At this time, Hyde 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.

10. Pamlico County Existing Vulnerability

The following provides an overview of existing conditions for portions of Pamlico County located within a defined flood hazard area, utilizing the same methodology outlined in Section A.1 for Pamlico County. Data is not currently available to provide a more detailed breakdown.

Table 61. Pamlico County Floodprone Structures

Location	Developed			Undeveloped	
	# of Properties	Acres	Building Value	# of Properties	Acres
Unincorporated County	3,474	29,280.79	\$260,331,882	3,473	113,195.46
Alliance	198	697.71	\$20,573,625	98	509.02
Arapahoe	0	0.00	\$0	0	0.00
Bayboro	410	923.63	\$128,071,642	252	703.65

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Location	Developed			Undeveloped	
	# of Properties	Acres	Building Value	# of Properties	Acres
Grantsboro	12	10.12	\$3,720,174	16	334.12
Mesic	160	271.20	\$8,415,615	104	392.40
Minnesott Beach	175	2,149.71	\$47,422,973	344	476.86
Oriental	957	500.12	\$118,176,117	454	375.52
Stonewall	191	592.35	\$20,151,809	1,048	1,020.15
Vandemere	178	403.98	\$11,779,818	213	526.31
Pamlico County Total	5,755	34,829.61	\$618,643,655	6,002	117,533.49

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

11. Pamlico County Future Vulnerability

At this time, Pamlico 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.

C. Drought/Extreme Heat

No analysis was performed to address the drought/extreme heat hazard within the Pamlico Sound Region. All properties and citizens are equally vulnerable to this risk within Beaufort, Carteret, Craven, Hyde, and Pamlico Counties. The Counties and the participating municipalities 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, the Region has not been required to impose water restrictions. The Regional MAC will continue to work closely with all participating jurisdictions to ensure that water resources are protected.

III. FRAGILE AREAS

Fragile areas are areas which could easily be damaged or destroyed by inappropriate, unplanned, or poorly planned development. The environmentally sensitive areas located in the Pamlico Sound Region include predominantly 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.

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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 Pamlico Sound Region. Specific wetlands locations must be delineated in the field on case-by-case basis by the US Army Corps of Engineers.

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. The Tar-Pamlico River Basin Riparian Buffer Rules are examples of these protection programs.

IV. 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 Pamlico Sound 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 Beaufort, Carteret, Craven, Hyde, and Pamlico Counties (including all participating municipalities). Critical facilities located throughout each County are mapped in Appendix A. The critical facilities listing and associated maps were compiled by the MAC through the planning process associated with this update.

Table 62. Pamlico Sound Region Critical Facilities

Map ID	Facility	Type	Location	County
BEAUFORT COUNTY (SEE MAPS 2-8)				
1	Aurora Fire Department and Rescue Squad	Emergency Services	Aurora	Beaufort
2	Aurora Police Department	Emergency Services	Aurora	Beaufort
3	Bath Community Rescue Squad	Emergency Services	Bath	Beaufort
4	Bath Volunteer Fire Department	Emergency Services	Bath	Beaufort
5	Pamlico Beach Fire Department and Rescue Squad	Emergency Services	Belhaven	Beaufort
6	Sidney Volunteer Fire Department, Inc.	Emergency Services	Belhaven	Beaufort
7	Pungo District Hospital	Emergency Services	Belhaven	Beaufort
8	Belhaven Police Department	Emergency Services	Belhaven	Beaufort
9	Belhaven Fire and Rescue	Emergency Services	Belhaven	Beaufort
10	Blounts Creek Volunteer Fire Department and Emergency Medical Services	Emergency Services	Blounts Creek	Beaufort
11	Chocowinity Fire Department - Wilmar Substation	Emergency Services	Chocowinity	Beaufort

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Map ID	Facility	Type	Location	County
12	Chocowinity Emergency Medical Services, Inc.	Emergency Services	Chocowinity	Beaufort
13	Chocowinity Volunteer Fire Department	Emergency Services	Chocowinity	Beaufort
14	Chocowinity Police Department	Emergency Services	Chocowinity	Beaufort
15	Aurora Fire Department - Edward Substation	Emergency Services	Edward	Beaufort
16	Pantego Fire Department	Emergency Services	Pantego	Beaufort
17	Pungo River Volunteer Fire Department, Inc.	Emergency Services	Pantego	Beaufort
18	Pinetown Rescue and Emergency Medical Services	Emergency Services	Pinetown	Beaufort
19	Pinetown Volunteer Fire Department	Emergency Services	Pinetown	Beaufort
20	Long Acre Volunteer Fire Department, Inc.	Emergency Services	Plymouth	Beaufort
21	North Carolina Park Rangers - Goose Creek Park	Emergency Services	Washington	Beaufort
22	Broad Creek Emergency Medical Services, Inc.	Emergency Services	Washington	Beaufort
23	Bunyan Volunteer Fire Department, Inc.	Emergency Services	Washington	Beaufort
24	Beaufort County Community College Police Department	Emergency Services	Washington	Beaufort
25	Beaufort County Sheriff's Department	Emergency Services	Washington	Beaufort
26	Washington Police Department	Emergency Services	Washington	Beaufort
27	Washington Fire and Rescue	Emergency Services	Washington	Beaufort
28	Coastal Medical Transport, Inc.	Emergency Services	Washington	Beaufort
29	Beaufort County Hospital	Emergency Services	Washington	Beaufort
30	United States Fish and Wildlife Service - Office of Law Enforcement	Emergency Services	Washington	Beaufort
31	Tar Heel Medical Transport	Emergency Services	Washington	Beaufort
32	NC State Highway Patrol Troop A District IV	Emergency Services	Washington	Beaufort
33	Clarks Neck Volunteer Fire Department, Inc. Station 2	Emergency Services	Washington	Beaufort
34	Old Ford Volunteer Fire Department, Inc.	Emergency Services	Washington	Beaufort
35	SW Snowden Elementary	Schools	Aurora	Beaufort
36	Bath Elementary	Schools	Bath	Beaufort
37	Southside High	Schools	Chocowinity	Beaufort
38	Chocowinity Primary	Schools	Chocowinity	Beaufort
39	Chocowinity Middle	Schools	Chocowinity	Beaufort
40	Northside High	Schools	Pinetown	Beaufort
41	Northeast Elementary	Schools	Pinetown	Beaufort
42	Beaufort County Early College High	Schools	Washington	Beaufort
43	Washington Montessori	Schools	Washington	Beaufort
44	Eastern Elementary	Schools	Washington	Beaufort
45	BC Ed Tech Center	Schools	Washington	Beaufort
46	Washington High	Schools	Washington	Beaufort
47	John C Tayloe Elementary	Schools	Washington	Beaufort
48	PS Jones Middle	Schools	Washington	Beaufort

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Map ID	Facility	Type	Location	County
49	John Small Elementary	Schools	Washington	Beaufort
50	Beaufort County Emergency Management	Government	Washington	Beaufort
51	Aurora Town Hall	Government	Aurora	Beaufort
52	Bath Town Hall	Government	Bath	Beaufort
53	Belhaven Town Hall	Government	Belhaven	Beaufort
54	Chocowinity Town Hall	Government	Chocowinity	Beaufort
55	Pantego Town Hall	Government	Pantego	Beaufort
56	Washington City Hall	Government	Washington	Beaufort
57	Washington Park Town Hall	Government	Washington	Beaufort

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Map ID	Facility	Type	Location	County
CARTERET COUNTY (SEE MAPS 10-14)				
1	Atlantic Fire Department, Inc.	Emergency Services	Atlantic Beach	Carteret
2	Fort Macon State Park Ranger Station	Emergency Services	Atlantic Beach	Carteret
3	United States Coast Guard - Fort Macon	Emergency Services	Atlantic Beach	Carteret
4	Atlantic Beach Fire Department	Emergency Services	Atlantic Beach	Carteret
5	Atlantic Beach Police Department	Emergency Services	Atlantic Beach	Carteret
6	Beaufort Fire Department	Emergency Services	Beaufort	Carteret
7	Beaufort Police Department	Emergency Services	Beaufort	Carteret
8	Carteret County Sheriff's Department	Emergency Services	Beaufort	Carteret
9	Beaufort Emergency Medical Services, Inc.	Emergency Services	Beaufort	Carteret
10	Otway Volunteer Fire and Rescue Department, Inc.	Emergency Services	Beaufort	Carteret
11	North River and Laurel Road Volunteer Fire Department	Emergency Services	Beaufort	Carteret
12	NC Division of Forest Resources District 4 - Carteret County	Emergency Services	Beaufort	Carteret
13	South River-Merrimon Fire and Emergency Medical Services, Inc.	Emergency Services	Beaufort	Carteret
14	Cape Carteret Police Department	Emergency Services	Cape Carteret	Carteret
15	Cedar Island Volunteer Fire Department	Emergency Services	Cedar Island	Carteret
16	Davis Volunteer Fire Department, Inc.	Emergency Services	Davis	Carteret
17	United States Coast Guard - Emerald Isle Station	Emergency Services	Emerald Isle	Carteret
18	Emerald Isle Emergency Medical Services, Inc.	Emergency Services	Emerald Isle	Carteret
19	Emerald Isle Fire Department Station 1 - Headquarters	Emergency Services	Emerald Isle	Carteret
20	City of Emerald Isle Police Department	Emergency Services	Emerald Isle	Carteret
21	Emerald Isle Fire Department - Station 2	Emergency Services	Emerald Isle	Carteret
22	Cape Lookout National Seashore - Headquarters	Emergency Services	Harkers Island	Carteret
23	Harkers Island Fire and Rescue Squad	Emergency Services	Harkers Island	Carteret
24	Indian Beach Police Department	Emergency Services	Indian Beach	Carteret
25	Salter Path Volunteer Fire and Emergency Medical Services Department	Emergency Services	Indian Beach	Carteret
26	Marshallberg Volunteer Fire Department, Inc.	Emergency Services	Marshallberg	Carteret
27	Morehead City Police Department	Emergency Services	Morehead City	Carteret
28	North Carolina State Port Authority - Morehead City	Emergency Services	Morehead City	Carteret
29	Morehead City Fire and Emergency Medical Services Department - Station 1	Emergency Services	Morehead City	Carteret
30	Morehead City Fire and Emergency Medical Services Department - Station 2	Emergency Services	Morehead City	Carteret
31	Carteret General Hospital	Emergency Services	Morehead City	Carteret
32	United States Customs and Border Protection - Port of Entry - Morehead City - Beaufort	Emergency Services	Morehead City	Carteret

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Map ID	Facility	Type	Location	County
33	Medical Transport Solutions	Emergency Services	Morehead City	Carteret
34	Morehead City Fire and Emergency Medical Services Department - Station 3	Emergency Services	Morehead City	Carteret
35	Wildwood Volunteer Fire Department	Emergency Services	Morehead City	Carteret
36	North Carolina State Highway Patrol Troop A District VIII	Emergency Services	Morehead City	Carteret
37	Broad and Gales Creek Volunteer Fire Department	Emergency Services	Newport	Carteret
38	Broad and Gales Creek Rescue Squad	Emergency Services	Newport	Carteret
39	Mill Creek Fire and Rescue Department	Emergency Services	Newport	Carteret
40	Newport Fire Department	Emergency Services	Newport	Carteret
41	Newport Police Department	Emergency Services	Newport	Carteret
42	Newport Fire Department - Substation	Emergency Services	Newport	Carteret
43	Pine Knoll Shores Police Department - Headquarters	Emergency Services	Pine Knoll Shores	Carteret
44	Pine Knoll Shores Fire and Emergency Medical Services Department	Emergency Services	Pine Knoll Shores	Carteret
45	Sealevel Fire Rescue and Community Center	Emergency Services	Sealevel	Carteret
46	Stacy Volunteer Fire Department, Inc.	Emergency Services	Stacy	Carteret
47	Stella Volunteer Fire Department	Emergency Services	Stella	Carteret
48	Western Carteret Fire and Emergency Medical Services	Emergency Services	Swansboro	Carteret
49	Atlantic Elementary	Schools	Atlantic Beach	Carteret
50	Beaufort Elementary	Schools	Beaufort	Carteret
51	Beaufort Middle	Schools	Beaufort	Carteret
52	Tiller School	Schools	Beaufort	Carteret
53	East Carteret High	Schools	Beaufort	Carteret
54	White Oak Elementary	Schools	Cape Carteret	Carteret
55	Harkers Island Elementary	Schools	Harkers Island	Carteret
56	Cape Lookout Marine Science High	Schools	Morehead City	Carteret
57	Morehead Elementary at Camp Glenn	Schools	Morehead City	Carteret
58	Morehead City Middle	Schools	Morehead City	Carteret
59	Morehead City Primary	Schools	Morehead City	Carteret
60	West Carteret High	Schools	Morehead City	Carteret
61	Croatan High	Schools	Newport	Carteret
62	Bogue Sound Elementary	Schools	Newport	Carteret
63	Broad Creek Middle	Schools	Newport	Carteret
64	Newport Middle	Schools	Newport	Carteret
65	Newport Elementary	Schools	Newport	Carteret
66	Smyrna Elementary	Schools	Smyrna	Carteret
67	Carteret County Emergency Operations Center	Government	Beaufort	Carteret
68	Atlantic Beach Town Hall	Government	Atlantic Beach	Carteret

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Map ID	Facility	Type	Location	County
69	Beaufort Town Hall	Government	Beaufort	Carteret
70	Bogue Town Hall	Government	Bogue	Carteret
71	Cape Carteret Town Hall	Government	Cape Carteret	Carteret
72	Cedar Point Town Hall	Government	Cedar Point	Carteret
73	Emerald Isle Town Hall	Government	Emerald Isle	Carteret
74	Indian Beach Town Hall	Government	Indian Beach	Carteret
75	Morehead City Town Hall	Government	Morehead City	Carteret
76	Newport Town Hall	Government	Newport	Carteret
77	Pine Knoll Shores Town Hall	Government	Pine Knoll Shores	Carteret
78	Peletier Town Hall	Government	Peletier	Carteret

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Map ID	Facility	Type	Location	County
CRAVEN COUNTY (SEE MAPS 16-23)				
1	Tri-Community Volunteer Fire District	Emergency Services	Bridgeton	Craven
2	Bridgeton Rescue Squad	Emergency Services	Bridgeton	Craven
3	Marine Corp Air Station Cherry Point Fire Department Station 3-DOD	Emergency Services	Cherry Point	Craven
4	Naval Hospital Cherry Point-DOD	Emergency Services	Cherry Point	Craven
5	Marine Corp Air Station Cherry Point Fire Department Station 1-DOD	Emergency Services	Cherry Point	Craven
6	Marine Corp Air Station Cherry Point Fire Department Station 2-DOD	Emergency Services	Cherry Point	Craven
7	Cove City Fire and Rescue, Inc.	Emergency Services	Cove City	Craven
8	Cove City Rescue Squad	Emergency Services	Cove City	Craven
9	Number 9 Township Volunteer Fire Department	Emergency Services	Cove City	Craven
10	Dover Volunteer Fire Department	Emergency Services	Dover	Craven
11	Fort Barnwell Volunteer Fire Department	Emergency Services	Dover	Craven
12	Fort Barnwell Rescue Squad	Emergency Services	Dover	Craven
13	Fort Barnwell Volunteer Fire Department	Emergency Services	Dover	Craven
14	Little Swift Creek Volunteer Fire Department - Main Station	Emergency Services	Ernul	Craven
15	Little Swift Creek Volunteer Fire Department	Emergency Services	Ernul	Craven
16	Harlowe Volunteer Fire Department	Emergency Services	Havelock	Craven
17	City of Havelock Police Department	Emergency Services	Havelock	Craven
18	Havelock Fire and Rescue	Emergency Services	Havelock	Craven
19	Township 6 Fire Department	Emergency Services	New Bern	Craven
20	Harlow Volunteer Fire Department	Emergency Services	New Bern	Craven
21	Harlow Volunteer Fire Department	Emergency Services	New Bern	Craven
22	Township 6 Fire Department	Emergency Services	New Bern	Craven
23	United States Forest Service - Croatan National Forest Croatan Ranger District	Emergency Services	New Bern	Craven
24	Number 7 Township Volunteer Fire Department	Emergency Services	New Bern	Craven
25	New Bern Fire Rescue Department Station 2	Emergency Services	New Bern	Craven
26	Number 7 Township Volunteer Fire Department	Emergency Services	New Bern	Craven
27	Rhems Volunteer Fire Department	Emergency Services	New Bern	Craven
28	Town of River Bend Police Department	Emergency Services	New Bern	Craven
29	Number 7 Township Rescue Squad, Inc.	Emergency Services	New Bern	Craven
30	Number 7 Township Volunteer Fire Department	Emergency Services	New Bern	Craven
31	Rhems Volunteer Fire Department	Emergency Services	New Bern	Craven
32	Tri-Community Volunteer Fire District	Emergency Services	New Bern	Craven
33	West of New Bern Volunteer Fire Department	Emergency Services	New Bern	Craven
34	New Bern Fire Rescue Department Station 1	Emergency Services	New Bern	Craven

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Map ID	Facility	Type	Location	County
35	Craven County Sheriff's Department/Craven County Jail	Emergency Services	New Bern	Craven
36	United States Marshals Service - New Bern	Emergency Services	New Bern	Craven
37	City of New Bern Police Department	Emergency Services	New Bern	Craven
38	Craven Regional Medical Center	Emergency Services	New Bern	Craven
39	North Carolina State Highway Patrol Troop A District VI	Emergency Services	New Bern	Craven
40	Craven Regional Emergency Medical Services	Emergency Services	New Bern	Craven
41	New Bern Fire Rescue Department Station 4	Emergency Services	New Bern	Craven
42	Alcohol Law Enforcement District II - New Bern	Emergency Services	New Bern	Craven
43	West of New Bern Volunteer Fire Department	Emergency Services	New Bern	Craven
44	West of New Bern Volunteer Fire Department	Emergency Services	New Bern	Craven
45	Tri-Community Volunteer Fire District - Main Station	Emergency Services	New Bern	Craven
46	Little Swift Creek Volunteer Fire Department	Emergency Services	New Bern	Craven
47	Tri-Community Volunteer Fire District	Emergency Services	New Bern	Craven
48	Number 9 Township Volunteer Fire Department	Emergency Services	New Bern	Craven
49	New Bern Craven County Rescue Squad	Emergency Services	New Bern	Craven
50	City of Trent Woods Police Department	Emergency Services	Trent Woods	Craven
51	Vanceboro Rural Volunteer Fire Department - Station 3	Emergency Services	Vanceboro	Craven
52	North Carolina Division of Forest Resources District 4 - Craven County	Emergency Services	Vanceboro	Craven
53	Little Swift Creek Volunteer Fire Department	Emergency Services	Vanceboro	Craven
54	Vanceboro Rescue Squad	Emergency Services	Vanceboro	Craven
55	Vanceboro Rural Volunteer Fire Department - Station 1	Emergency Services	Vanceboro	Craven
56	Craven County Detention Center Work Release	Emergency Services	Vanceboro	Craven
57	Vanceboro Rural Volunteer Fire Department - Station 2	Emergency Services	Vanceboro	Craven
58	Vanceboro Rural Volunteer Fire Department - Station 4	Emergency Services	Vanceboro	Craven
59	James W Smith Elementary	Schools	Cove City	Craven
60	Havelock Elementary	Schools	Havelock	Craven
61	Havelock Middle	Schools	Havelock	Craven
62	Early College EAST High	Schools	Havelock	Craven
63	Havelock High	Schools	Havelock	Craven
64	Roger R Bell Elementary	Schools	Havelock	Craven
65	Graham A Barden Elementary	Schools	Havelock	Craven
66	Arthur W Edwards Elementary	Schools	Havelock	Craven
67	W Jesse Gurganus Elementary	Schools	Havelock	Craven
68	Tucker Creek Middle	Schools	Havelock	Craven
69	Creekside Elementary	Schools	New Bern	Craven
70	Brinson Memorial Elementary	Schools	New Bern	Craven
71	Albert H Bangert Elementary	Schools	New Bern	Craven

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Map ID	Facility	Type	Location	County
72	Ben D Quinn Elementary	Schools	New Bern	Craven
73	New Bern High	Schools	New Bern	Craven
74	Trent Park Elementary	Schools	New Bern	Craven
75	Craven Early College High	Schools	New Bern	Craven
76	Grover C Fields Middle	Schools	New Bern	Craven
77	H J MacDonald Middle	Schools	New Bern	Craven
78	J T Barber Elementary	Schools	New Bern	Craven
79	Bridgeton Elementary	Schools	New Bern	Craven
80	Oaks Road Elementary	Schools	New Bern	Craven
81	West Craven Middle	Schools	New Bern	Craven
82	West Craven High	Schools	Vanceboro	Craven
83	Vanceboro FarmLife Elementary	Schools	Vanceboro	Craven
84	Craven County Emergency Management	Government	New Bern	Craven
85	Bridgeton Town Hall	Government	Bridgeton	Craven
86	Cove City Town Hall	Government	Cove City	Craven
87	Dover Town Hall	Government	Dover	Craven
88	Havelock Town Hall	Government	Havelock	Craven
89	New Bern City Hall	Government	New Bern	Craven
90	River Bend Town Hall	Government	River Bend	Craven
91	Trent Woods Town Hall	Government	Trent Woods	Craven
92	Vanceboro Town Hall	Government	Vanceboro	Craven

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Map ID	Facility	Type	Location	County
HYDE COUNTY (SEE MAP 25)				
1	Engelhard Volunteer Fire Department Incorporated	Emergency Services	Engelhard	Hyde
2	Fairfield Volunteer Fire Department	Emergency Services	Fairfield	Hyde
3	Hyde County Emergency Medical Services	Emergency Services	Swan Quarter	Hyde
4	Hyde County Sheriff's Office – Ocracoke Island Station	Emergency Services	Ocracoke	Hyde
5	Hyde County Sheriff's Office – Hyde County Jail	Emergency Services	Swan Quarter	Hyde
6	National Park Service – Cape Hatteras National Seashore – Ocracoke Island Ranger Station	Emergency Services	Ocracoke	Hyde
7	North Carolina Division of Forest Resources District 13 - Hyde County	Emergency Services	Scranton	Hyde
8	Ocracoke Island Emergency Medical Services District 2	Emergency Services	Ocracoke	Hyde
9	Ocracoke Volunteer Fire Department	Emergency Services	Ocracoke	Hyde
10	Scranton Volunteer Fire Department	Emergency Services	Scranton	Hyde
11	Swan Quarter Volunteer Fire Department Incorporated	Emergency Services	Swan Quarter	Hyde
12	Ocracoke School	Schools	Ocracoke	Hyde
13	Mattamuskeet Elementary	Schools	Swan Quarter	Hyde
14	Mattamuskeet Early College High	Schools	Swan Quarter	Hyde
15	Hyde County Emergency Operations Center	Government	Swan Quarter	Hyde
16	Hyde County Emergency Operations Center-Alternate	Government	Swan Quarter	Hyde

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Map ID	Facility	Type	Location	County
PAMLICO COUNTY (SEE MAPS 27-31)				
1	Arapahoe Volunteer Fire Department Incorporated	Emergency Services	Arapahoe	Pamlico
2	Pamlico County Sheriff's Department	Emergency Services	Bayboro	Pamlico
3	Pamlico Rescue Squad	Emergency Services	Bayboro	Pamlico
4	Triangle Volunteer Fire Department Incorporated	Emergency Services	Bayboro	Pamlico
5	Grantsboro-Silverhill Volunteer Fire Department and Emergency Services Incorporated	Emergency Services	Grantsboro	Pamlico
6	Goose Creek Island Volunteer Fire Department	Emergency Services	Lowland	Pamlico
7	Florence-Whortonsville Volunteer Fire Department Incorporated	Emergency Services	Merritt	Pamlico
8	Reelsboro Fire Department Incorporated	Emergency Services	New Bern	Pamlico
9	Olympia Volunteer Fire Department	Emergency Services	New Bern	Pamlico
10	Oriental Police Department	Emergency Services	Oriental	Pamlico
11	Southeast Pamlico Volunteer Fire Department Incorporated	Emergency Services	Oriental	Pamlico
12	Vandemere Fire Department Incorporated	Emergency Services	Vandemere	Pamlico
13	Arapahoe Charter School	Schools	Arapahoe	Pamlico
14	Pamlico County Middle	Schools	Bayboro	Pamlico
15	Fred A. Anderson Elementary	Schools	Bayboro	Pamlico
16	Pamlico County Primary	Schools	Bayboro	Pamlico
17	Pamlico County High	Schools	Bayboro	Pamlico
18	Pamlico County Emergency Management Agency	Government	Bayboro	Pamlico
19	Pamlico County Emergency Operations Center – Alternate	Government	Bayboro	Pamlico
20	Alliance Town Hall	Government	Alliance	Pamlico
21	Arapahoe Town Hall	Government	Arapahoe	Pamlico
22	Bayboro Town Hall	Government	Bayboro	Pamlico
23	Grantsboro Town Hall	Government	Grantsboro	Pamlico
24	Minnesott Beach Town Hall	Government	Minnesott Beach	Pamlico
25	Mesic Town Hall	Government	Mesic	Pamlico
26	Oriental Town Hall	Government	Oriental	Pamlico
27	Stonewall Town Hall	Government	Stonewall	Pamlico
28	Vandemere Town Hall	Government	Vandemere	Pamlico

Source: Beaufort, Carteret, Craven, Hyde, and Pamlico Counties including 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 and security concerns.

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V. 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 63 provides the RL properties located within Beaufort, Carteret, Craven, Hyde, and Pamlico Counties.

Table 63. Pamlico Sound Region Repetitive Loss Properties

County	Non-Residential	Residential	Total
Unincorporated Beaufort County	15	688	703
Aurora	0	1	1
Bath	1	1	2
Belhaven	45	258	303
Chocowinity	0	0	0
Pantego	0	0	0
Washington	26	128	154
Washington Park	0	65	65
Unincorporated Carteret County	10	455	465
Atlantic Beach	8	72	80
Beaufort	1	14	15
Bogue	0	6	6
Cape Carteret	0	10	10
Cedar Point	1	39	40
Emerald Isle	3	114	117
Indian Beach	0	0	0
Morehead City	3	28	31
Newport	0	2	2
Peletier	0	1	1
Pine Knoll Shores	1	7	8
Unincorporated Craven County	3	167	170
Bridgeton	0	7	7
Cove City	0	0	0
Dover	0	1	1
Havelock	0	13	13
New Bern	3	140	143
River Bend	0	37	37
Trent Woods	0	9	9
Vanceboro	0	0	0
Hyde County	2	11	13

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County	Non-Residential	Residential	Total
Unincorporated Pamlico County	7	361	368
Alliance	0	0	0
Arapahoe	0	0	0
Bayboro	0	6	6
Grantsboro	0	0	0
Mesic	0	1	1
Minnesott Beach	0	0	0
Oriental	17	232	249
Stonewall	0	3	3
Vandemere	4	30	34

Source: NC Emergency Management.

VI. KEY ISSUES REGARDING HURRICANES/THUNDERSTORMS

This section is intended to address the key issues regarding each participating jurisdictions' most vulnerable structures and key infrastructure. These issues and, in turn, strategies (see Section 6) are intended to address the community's vulnerability to flooding associated with hurricanes and thunderstorms. These hazards have been identified as the region's most significant hazard as defined in Table 39, page 3-31.

A. Beaufort County

Efforts to address the following key issues will be overseen by Beaufort County Administration. However, the Towns of Aurora, Bath, Belhaven, Chocowinity, Pantego, and Washington Park, and the City of Washington will also benefit from these efforts.

- ▶ Beaufort County, in concert with the participating municipalities listed above, will monitor the ongoing status and condition of all repetitive loss properties as outlined in Table 63, page 5-22 (if applicable).
- ▶ Beaufort County will work closely with the Pamlico Beach Fire Department and Rescue Squad, Sidney Volunteer Fire Department, Pungo River Volunteer Fire Department, Aurora Fire Department and Rescue Squad, Aurora Police Department, SW Snowden Elementary, Aurora Town Hall, Belhaven Police Department, Belhaven Fire and Rescue, Belhaven Town Hall, Pantego Fire Department, Pantego Town Hall, Beaufort County Sheriff's Department, Washington Police Department, Washington Fire and Rescue, Coastal Medical Transport, Tar Heel Medical Transport, Eastern Elementary, John C. Tayloe Elementary, Beaufort County Emergency Management, Washington City Hall, and Washington Park Town Hall to mitigate flood damage to these facilities or, if possible, relocate these facilities outside the flood hazard area. This issue will be revisited following all tropical storm and hurricane events.

B. Carteret County

Efforts to address the following key issues will be overseen by Carteret County Administration. However, the Towns of Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, and Pine Knoll Shores will also benefit from these efforts.

- ▶ Carteret County, in concert with the participating municipalities listed above, will monitor the ongoing status and condition of all repetitive loss properties as outlined in Table 63, page 5-22 (if applicable).
- ▶ Carteret County will work closely with the Otway Volunteer Fire and Rescue, North River and Laurel Road Volunteer Fire Department, South River/Merrimon Fire and EMS, Cedar Island Volunteer Fire Department, Davis Volunteer Fire Department, Marshallberg Volunteer Fire Department, Sealevel Fire and Rescue, Stacy Volunteer Fire Department, Smyrna Elementary, Atlantic Beach Fire Department, Atlantic Beach Police Department, Beaufort Police Department, Beaufort EMS, Morehead City Police Department, NC Port Authority, Beaufort Middle School, Carteret County Emergency Operations Center, Atlantic Beach Town Hall, Beaufort Town Hall, Indian Beach Police Department, Salter Path Volunteer Fire Department and EMS, Indian Beach Town Hall, and Pine Knoll Shores Town Hall to mitigate flood damage to these facilities or, if possible, relocate these facilities outside the flood hazard area. This issue will be revisited following all tropical storm and hurricane events.

C. Craven County

Efforts to address the following key issues will be overseen by Craven County Administration. However, the Towns of Bridgeton, Cove City, Dover, Trent Woods, and Vanceboro, and the Cities of Havelock and New Bern will also benefit from these efforts.

- ▶ Craven County, in concert with the participating municipalities listed above, will monitor the ongoing status and condition of all repetitive loss properties as outlined in Table 63, page 5-22 (if applicable).
- ▶ Craven County will work closely with the Fort Barnwell Rescue Squad, Harlow Volunteer Fire Department, Township 7 Volunteer Fire Department, Little Creek Volunteer Fire Department, Vanceboro Rural Volunteer Fire Department, West Craven High School, Tri-Community Volunteer Fire Department, Bridgeton Rescue Squad, Town of River Bend Police Department, Albert H. Bangert Elementary School, JT Barber Elementary School, and Oaks Road Elementary to mitigate flood damage to these facilities or, if possible, relocate these facilities outside the flood hazard area. This issue will be revisited following all tropical storm and hurricane events.

D. Hyde County

Efforts to address the following key issues will be overseen by Hyde County Administration.

- ▶ Hyde County will monitor the ongoing status and condition of all repetitive loss properties as outlined in Table 63, page 5-22 (if applicable).
- ▶ Hyde County will work closely with the Engelhard Volunteer Fire Department, Fairfield Volunteer Fire Department, Hyde County EMS, Hyde County Sheriff - Ocracoke Island, Hyde County Sheriff, Ocracoke Island EMS, Ocracoke Volunteer Fire Department, Scranton Volunteer Fire Department, Swan Quarter Volunteer Fire Department, Ocracoke School, Mattamuskeet Elementary School, and Mattamuskeet Early College High School to mitigate flood damage to these facilities. This issue will be revisited following all tropical storm and hurricane events.

E. Pamlico County

Efforts to address the following key issues will be overseen by Pamlico County Administration. However, the Towns of Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, and Vandemere will also benefit from these efforts.

- ▶ Pamlico County, in concert with the participating municipalities listed above, will monitor the ongoing status and condition of all repetitive loss properties as outlined in Table 63, page 5-23 (if applicable).
- ▶ Pamlico County will work closely with the Goose Creek Island Volunteer Fire Department, Florence-Whortonsville Volunteer Fire Department, Southeast Pamlico Volunteer Fire Department, Pamlico County Middle School, Bayboro Town Hall, Stonewall Town Hall, Vandemere Fire Department, Mesic Town Hall, and Vandemere Town Hall to mitigate flood damage to these facilities or, if possible, relocate these facilities outside the flood hazard area. This issue will be revisited following all tropical storm and hurricane events.

VII. 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 five-county region. In some limited instances, such as in coastal beach communities, modest development has occurred; however, this development has occurred within each city's urban center outside of portions of the city subject to periodic flooding.

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 64 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 62 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 64. Pamlico Sound Region Development Activity

Participating Jurisdiction	Non-Specific Hazard Area	Flood Hazard Area
Beaufort County	No/Low	No/Low
Aurora	No/Low	No/Low
Bath	No/Low	No/Low
Belhaven	No/Low	No/Low
Chocowinity	No/Low	No/Low
Pantego	No/Low	No/Low
Washington	No/Low	No/Low
Washington Park	No/Low	No/Low

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Participating Jurisdiction	Non-Specific Hazard Area	Flood Hazard Area
Carteret County	Moderate	No/Low
Atlantic Beach	No/Low	No/Low
Beaufort	No/Low	No/Low
Bogue	No/Low	No/Low
Cape Carteret	No/Low	No/Low
Cedar Point	No/Low	No/Low
Emerald Isle	No/Low	No/Low
Indian Beach	No/Low	No/Low
Morehead City	No/Low	No/Low
Newport	No/Low	No/Low
Peletier	No/Low	No/Low
Pine Knoll Shores	No/Low	No/Low
Craven County	Moderate	No/Low
Bridgeton	No/Low	No/Low
Cove City	No/Low	No/Low
Dover	No/Low	No/Low
Havelock	No/Low	No/Low
New Bern	Moderate	No/Low
River Bend	No/Low	No/Low
Trent Woods	No/Low	No/Low
Vanceboro	No/Low	No/Low
Hyde County	No/Low	No/Low
Pamlico County	No/Low	No/Low
Alliance	No/Low	No/Low
Arapahoe	No/Low	No/Low
Bayboro	No/Low	No/Low
Grantsboro	No/Low	No/Low
Mesic	No/Low	No/Low
Minnesott Beach	No/Low	No/Low
Oriental	No/Low	No/Low
Stonewall	No/Low	No/Low
Vandemere	No/Low	No/Low

Source: Regional and County MACs.

I. 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. 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. Craven County will take the lead in undertaking all strategies outlined within this plan relating to the region overall, with support and assistance from Beaufort, Carteret, Hyde, and Pamlico 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, Town 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.

II. 2010/2011 MITIGATION PROGRESS REPORTS

A. 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, all five Counties have 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.

B. Monitoring and Evaluation

Beaufort, Carteret, Craven, Hyde, and Pamlico 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.

C. Incorporation of Mitigation Plan into Other Planning Mechanisms

Over the last five years, Beaufort, Carteret, Craven, Hyde, and Pamlico 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.

D. 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.

III. 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. Reduce the risk of loss of life and personal injury from natural hazards.
2. Reduce the risk and impact of future natural disasters by regulating development in known high hazard areas.
3. Maintain critical facilities in functional order.
4. Protect infrastructure from damage.
5. Ensure that hazard mitigation is considered when redevelopment occurs after a natural disaster.
6. Provide education to citizens that empowers them to protect themselves and their families from natural hazards.
7. Fulfill Federal and State requirements for receipt of future disaster recovery and hazard mitigation assistance.
8. Improve interjurisdictional cooperation and coordination, especially regarding the reduction of natural hazard impacts.

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SECTION 6. MITIGATION STRATEGIES

Tables 65 to 70 outlines all implementing strategies developed through the Pamlico Sound 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 2015/2016 and 2016/2017 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 2016/2017 to 2017/2018:
 - 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 2018/2020):
 - 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 within this section of the plan. These implementing strategies are intended to address 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, Beaufort County mitigation strategies, Carteret County mitigation strategies, Craven County mitigation strategies, Hyde County mitigation strategies and Pamlico County mitigation strategies.

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SECTION 6. MITIGATION STRATEGIES

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 66-70 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
- ▶ NCDENR - NC Department of Environment and Natural Resources
- ▶ NCDOT - NC Department of Transportation
- ▶ NCDPS - NC Department of Public Safety
- ▶ NCDPH - NC Department of Public Health
- ▶ NCCE - NC Cooperative Extension
- ▶ NCFS - NC Forest Service
- ▶ ARC - American Red Cross

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Table 65. Pamlico Sound Regional Mitigation Strategies

Number	Strategy	Responsible Party/Dept.
R1	Participating Counties will work together to educate citizens about the availability of their respective Special Needs Registry. These efforts will involve not only education, but outreach regarding how and where to enroll appropriately to ensure that assistance will be provided in the event of a natural or man-made disaster requiring evacuation and sheltering.	<ul style="list-style-type: none"> ■ 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.	<ul style="list-style-type: none"> ■ 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).	<ul style="list-style-type: none"> ■ 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.	<ul style="list-style-type: none"> ■ 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.	<ul style="list-style-type: none"> ■ 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.	<ul style="list-style-type: none"> ■ Participating County Administrations ■ NC Department of Transportation ■ NC Department of Environment and Natural Resources ■ 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.	<ul style="list-style-type: none"> ■ 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.	<ul style="list-style-type: none"> ■ Participating County Emergency Management ■ Participating County Administration
R9	Participating Counties will work together on all future regional planning efforts relating to land use, emergency management, and stormwater management.	<ul style="list-style-type: none"> ■ Participating County Administration
R10	Participating Counties will maintain representation on the Pamlico Sound Regional Mitigation Advisory Committee and will participate in the five year update of this plan.	<ul style="list-style-type: none"> ■ Pamlico Sound Regional Mitigation Advisory Committee
R11	Participating Counties will consider preparing a regional plan in concert with the NC Forest Service to deal with wildfire mitigation. This plan will consider things such as fuel reduction programs and educating homeowners to the risk of wildfires.	<ul style="list-style-type: none"> ■ Participating County Administration ■ NC Forest Service

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SECTION 6. MITIGATION STRATEGIES

Table 66. Beaufort 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
B1	Continue to include hazard mitigation policies in all CAMA Land Use Plan updates.	1, 2, 5, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Administration ▪ Municipal Administrations 	GF, NCDENR
B2	Continue to coordinate all development/planning decisions with review of appropriate CAMA LUP's including stated redevelopment policies and actions.	1, 2, 5, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Administration ▪ Beaufort County Planning Dept. ▪ Washington Planning Dept. ▪ Municipal Administrations 	GF, NCDENR
B3	Maintain reciprocal mutual aid agreements with surrounding communities for fire protection and emergency response.	1, 3, 7, 8	1, 2, 3, 4, 5, 6, 7	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Emergency Services ▪ Beaufort County Fire Marshal 	GF
B4	Evaluate adequacy of existing local early warning and emergency response communications equipment and prepare annual capital improvements plans to improve early warning and communication effectiveness before, during, and following disaster events.	1, 3, 6, 8	1, 2, 3, 4, 5, 6, 7, 8, 10	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	Medium	<ul style="list-style-type: none"> ▪ Beaufort County Emergency Services ▪ Beaufort County Sheriff's Dept. ▪ Municipal Administrations 	GF, NCDPS
B5	Develop standard protocols for training/certification of volunteer staff for shelter management, traffic control, first aid, etc., to improve volunteer response capability during and following disaster events, including coordination with American Red Cross personnel on an annual basis	1, 2, 6, 7	1, 2, 3, 4, 5, 6, 7, 8, 10	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Emergency Services ▪ Beaufort County Social Services ▪ Beaufort County Schools ▪ Municipal Administrations ▪ American Red Cross 	GF, NCDPS, ARC
B6	Complete an annual evaluation of each designated emergency shelter, including structural inspection, resource inventory, staffing plan, and vulnerability assessment, including coordination with American Red Cross personnel.	1, 2, 4, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Emergency Services ▪ Municipal Administrations ▪ American Red Cross 	GF, NCDPS, ARC

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
B7	Maintain information on county and local websites concerning location of approved shelter facilities and to ensure citizens that shelter facilities are the safest option in a major disaster event.	1, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services ■ Beaufort County Social Services ■ Beaufort County Schools ■ Municipal Administrations ■ American Red Cross 	GF, ARC
B8	Provide citizens and visitors with maps of evacuation routes which will facilitate the evacuation of the county in case of a hazardous event.	1, 4, 6, 7	1, 2, 3, 6, 7, 10	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	Medium	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services ■ Municipal Administrations ■ NC Department of Transportation 	GF, NCDPS
B9	Continue to ensure adequate evacuation warning in case of major hazard event.	1, 4, 6, 7	1, 2, 3, 6, 7, 10	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services ■ Municipal Administrations 	GF, NCDPS, NCDOT
B10	Continue to monitor and establish programs to maintain continuity of government operations through the County's COOP.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	Medium	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services ■ Municipal Administrations 	GF, NCDPS
B11	Continue to support and participate in the directives of the County Emergency Operations Plan (EOP). The EOP includes evacuation procedures and response to hazards not addressed in this plan such as hazardous materials, petroleum products, hazardous waste, nuclear threat/attack, and civil disorder. The County will review and update the EOP annually to ensure that it coordinates with the most recent NCEM and NCOEMS directives.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services ■ Municipal Administrations 	GF, NCDPS

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
B12	Continue to apply for grant funds, allocate local funding, and work with local electric service providers to procure and maintain back-up generators/transfer switches for all critical public facilities, with an emphasis on emergency services facilities, critical water/sewer facilities, and shelter facilities. Evaluate the equipment on a regular basis to assure it continues to meet the needs of the operations occurring at each facility. Back-up generators are still needed at the following facilities: Southside High School, S.W. Snowden Elementary School, and John Cotten Tayloe Elementary School.	1, 4, 5, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	Medium	<ul style="list-style-type: none"> ▪ Beaufort County Emergency Services ▪ Beaufort County Planning Dept. ▪ Municipal Administrations 	GF, NCDPS, NCDOT, HMGP
B13	Hold an annual public hazard mitigation meeting, attended by the MAC and participating jurisdictions, to educate the public and elected officials and receive comments about the location of high risk facilities/development, the jurisdictions' overall vulnerability to natural and man-made hazards, and the jurisdictions' hazards mitigation efforts.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	Medium	<ul style="list-style-type: none"> ▪ Beaufort County Emergency Services ▪ Beaufort County MAC ▪ Municipal Administrations 	GF
B14	Maintain the Hazard Mitigation Advisory Committee (MAC) and hold annual MAC meetings to continue relationship-building and communicate about mitigation measures taking place throughout the community.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Emergency Services ▪ Beaufort County MAC ▪ Municipal Administrations 	GF

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
B15	Work on the five-year implementation of the plan. At the end of this five-year period, the County will undertake efforts to update this plan including the following ten (10) 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, 7, 8, 9, 10, 11, 12, 13	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Emergency Services ▪ Beaufort County MAC ▪ Municipal Administrations 	GF, NCDPS, HMGP, PDM
B16	Maintain continual 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) Identification of critical electrical facilities needing retrofit or upgrade and map with elevation reference marks; (3) Identification of problem areas and potential solutions; and (4) Communication with county officials during and immediately after a natural hazard event that results in loss of electrical power.	1, 4, 7, 8	1, 2, 4, 5, 6	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Emergency Services ▪ Beaufort County MAC ▪ Municipal Administrations ▪ Local Electric Service Providers 	GF
B17	Monitor trees and vegetation on publicly-owned property to assure that no property or utility damage will occur as a result of diseased or dying trees or other vegetation. This strategy only applies to the municipal jurisdictions.	1, 4, 5, 7	1, 2, 4, 5, 6	Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	Medium	<ul style="list-style-type: none"> ▪ Municipal Administrations ▪ Local Electric Service Providers 	Electric Service Providers

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
B18	Continue to maintain all property acquired with public mitigation funds within the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. Continue to pro-actively establish open space within the floodplain and floodway as grant funds become available to carry out this initiative.	1, 2, 5, 6, 7	1, 2, 3, 5, 9, 10, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Administration ▪ Beaufort County Planning Dept. ▪ Municipal Administrations ▪ Municipal Planning Departments 	GF
B19	Integrate new greenway and public park improvements into comprehensive planning and capital improvement efforts (including coordination with all local certified CAMA Land Use Plans).	1, 2, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	Low	<ul style="list-style-type: none"> ▪ Beaufort County Administration ▪ Beaufort County Planning Dept. ▪ Municipal Administrations ▪ Municipal Planning Departments 	GF, NCDENR
B20	Annually review local floodplain ordinances to provide improved flood protection standards and require freeboard for retrofitting and new construction as required by NC State Building Code. The County will consider increasing the county freeboard requirement from 12 inches to 24 inches.	1, 2, 5, 7	1, 2, 3, 5, 9, 10, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Building Inspections ▪ Belhaven Building Inspections ▪ Washington Building Inspections 	GF, NCDPS
B21	Maintain and improve the capabilities of local Geographic Information System (GIS) with respect to risk mapping and the availability of flood hazard data and other hazard information to the public.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 5, 9, 10, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Tax Department ▪ Belhaven Building Inspection ▪ Washington Planning Department 	GF

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
B22	Continue to 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 SFHA without the submittal of the required elevation certificate. All elevation certificates shall be kept on file by the county or municipality.	1, 2, 6, 7	1, 2, 3, 5, 9, 10, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Building Inspections ▪ Belhaven Building Inspections ▪ Washington Building Inspections 	GF, NCDPS
B23	Maintain current listings of Severe Repetitive Loss properties and conduct annual outreach activities to encourage homeowners to participate in FEMA-sponsored residential acquisition and elevation programs; continue to apply for HMGP/HMA funding for residential acquisition and elevation.	1, 2, 7	1, 2, 3, 5, 9, 10, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Administration ▪ Municipal Administrations 	GF, NCDPS, HMGP, PDM, UHMA
B24	Encourage County Commissioners and elected officials of non-CRS communities to participate in the Community Rating System.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 5, 9, 10, 12	Beaufort County, Aurora, Bath, Chocowinity, Pantego	Medium	<ul style="list-style-type: none"> ▪ Beaufort County Board of Commissioners ▪ Beaufort County Administration ▪ Beaufort County Emergency Services ▪ Beaufort County MAC ▪ Municipal Governing Boards ▪ Municipal Administrations 	GF, NCDPS, HMGP, PDM, UHMA

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
B25	Maintain a map information service involving the following: (1) Provide information relating to Flood Insurance Rate Maps (FIRM) to all inquirers, including a provision of information on whether a given property is located within a flood hazard area, (2) Provide information regarding the flood insurance purchase requirement, (3) Maintain historical and current FIRMs, (4) Advertise once annually in the local newspaper the availability of FIRMs, and (5) Provide information to inquirers about local floodplain management requirements.	1, 2, 4, 6	1, 2, 3, 5, 9, 10, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Administration ▪ Municipal Administrations 	GF
B26	Provide information on county/city/town websites informing the public where they can obtain information about their property's location within respect to the special flood hazard area, and where they can obtain information about the incidence of flood events and losses incurred during historic flood events.	1, 2, 4, 6	1, 2, 3, 5, 9, 10, 12	Beaufort County, Belhaven, Washington, Washington Park (CRS Action)	Medium	<ul style="list-style-type: none"> ▪ Beaufort County Planning Department ▪ Belhaven Administration ▪ Washington Planning Department 	GF, NCDPS
B27	Continue to 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 the floodprone areas and ways that homeowners may make their home more disaster resistant to strong winds, lightning, and heavy rains.	1, 2, 4, 6	1, 2, 3, 5, 9, 10, 12	Beaufort County, Belhaven, Washington, Washington Park	High	<ul style="list-style-type: none"> ▪ Beaufort County Emergency Services ▪ Belhaven Administration ▪ Washington Planning Department 	GF, NCDPS

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
B28	Make information regarding hazards and development regulations within floodplains available through the following: (1) Ensure that local libraries maintain information relating to flooding and flood protection, (2) Provide a link on the municipal website to FEMA resources addressing flooding and flood protection, evacuation procedures, disaster preparedness, and post-disaster recovery, and (3) Provide website links to relevant hazard mitigation measures.	1, 2, 4, 6	1, 2, 3, 5, 9, 10, 12	Belhaven, Washington, Washington Park	High	<ul style="list-style-type: none"> ■ Belhaven Administration ■ Washington Administration 	GF, NCDPS
B29	Promote national “awareness” weeks (i.e., hurricane preparedness, severe weather preparedness, etc.) through local media. (“Awareness” weeks are listed on the National Weather Service website at http://www.nws.noaa.gov/os/severeweather/severewxcal.shtml)	1, 2, 6, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	Medium	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services 	GF, NCDPS
B30	Educate the general public to the importance of weather alert radios and systems that can operate on alternative power and can provide up-to-the-moment information regarding locations of severe storms and possible tornadoes.	1, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	Low	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services 	GF, NCDPS, ARC
B31	Maintain a Hazardous Material Action Plan that addresses the proper containment of spills, etc. This effort will be coordinated with the county LEPC.	1, 2, 6, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services ■ Washington Fire Department 	GF, NCDPS
B32	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 upstream dam facilities, both public and private, are properly maintained and stable.	1, 2, 7	9	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	Low	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services 	GF, NCDENR

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
B33	Continue to inventory and map Beaufort County's significant man-made hazards and coordinate reporting requirements, monitoring, and emergency response in accordance with the county's Emergency Operations Plan.	1, 2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services ■ Beaufort County LEPC 	GF
B34	Provide manufactured home vendors, lenders, and buyers with information on proper construction, installation, and foundation specifications in accordance with appropriate HUD/FHA/FEMA and NC Department of Insurance requirements; provide information to the public related to wind-resistant construction methods.	1, 2, 5, 7	1, 2, 5, 6	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	Medium	<ul style="list-style-type: none"> ■ Beaufort County Building Inspections ■ Belhaven Building Inspections ■ Washington Building Inspections 	GF, NCDPS
B35	Monitor natural and man-made drainage structures to ensure they are clear and functioning properly; prioritize needed drainage projects and review funding alternatives annually.	1, 2, 8	1, 2, 3, 5, 9, 10, 12	Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ■ Municipal Administrations 	GF, NCDENR, NCDOT
B36	Improve monitoring of hazardous material transport at Norfolk Southern Railroad railyard facility near Chocowinity; improve communication with railroad officials and public information efforts related to this activity.	1, 2, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services ■ Beaufort County LEPC 	GF, NCDPS
B37	Improve monitoring of hazardous material manufacturing, storage, and transport at PotashCorp facility and associated Norfolk Southern Railroad operations near Aurora; improve communication with corporate and railroad officials and public information efforts related to this activity.	1, 2, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services ■ PotashCorp ■ Norfolk Southern Railroad 	GF, NCDPS
B38	Work with citizen representatives and PotashCorp personnel to assess and improve emergency response procedures and specific mitigation actions related to the possible release of hazardous materials at the PotashCorp facility near Aurora.	1, 2, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Beaufort County, Aurora, Bath, Belhaven, Chocowinity, Pantego, Washington, Washington Park	High	<ul style="list-style-type: none"> ■ Beaufort County Emergency Services 	GF, NCDPS

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SECTION 6. MITIGATION STRATEGIES

Table 67. Carteret 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
CA1	Address the sheltering needs of County residents. Continue to work on improving the preparedness of all existing shelter facilities, including the installation of on-site transformers at all shelter locations. Maintain updated information regarding all shelters on the County website. Continue support of the NC Coastal Region Evacuation and Sheltering (CRES) plan aimed at providing inland sheltering resources for coastal counties and preparation and adoption of a county sheltering plan.	1, 2, 4, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Emergency Services ▪ Carteret County Social Services 	GF, NCDPS, ARC
CA2	Provide information regarding evacuation procedures and routes through County and municipal websites, as well as other means when feasible. These efforts will involve assisting the Towns of Atlantic Beach, Cape Carteret, Indian Beach, Morehead City, and Pine Knoll Shores with efforts relating to bridge closures and re-entry policies and procedures. As part of these efforts, the County will make handouts available for citizens and visitors outlining evacuation routes and procedures.	1, 2, 4, 7, 8	1, 2, 3, 5, 6	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Emergency Services ▪ NC Highway Patrol ▪ Atlantic Beach Administration ▪ Cape Carteret Administration ▪ Indian Beach Administration ▪ Morehead City Administration ▪ Pine Knoll Shores Administration 	GF, NCDPS
CA3	Continue to maintain the County's Continuity of Operations Plan in an effort to ensure ongoing governmental operations following a natural or man-made disaster event. The County, in conjunction with all participating municipal jurisdictions, will review this plan annually and update as deemed necessary.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Emergency Services ▪ Municipal Administrations 	GF, NCDPS

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CA4	Annually review and update the County's Emergency Operations Plan (EOP) to ensure compliance with all NCEM and NCOEMS procedures and policies. Through these updates, the County will work closely with all participating municipalities to ensure that all jurisdictions continue to be educated and prepared for activation of the EOP in the event of a disaster event.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Emergency Services 	GF, NCDPS
CA5	Maintain, and where necessary, establish backup generators at all identified critical facilities. Additionally, County Emergency Services will evaluate the equipment on a regular basis to assure it continues to meet operational demands at county facilities.	4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Emergency Services ▪ Independent Facility Operators ▪ Town Public Utilities 	GF, NCDPS, NCDOT, HMGP
CA6	Maintain a contract with a qualified post-disaster recovery service provider. This contract will include the provision of essential services and equipment, including generators, and will include documentation required for reimbursement from FEMA/NCEM.	2, 4, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Governing Board ▪ Municipal Governing Boards 	GF, HMGP
CA7	Hold a public information meeting (once annually) aimed at educating the public and elected officials about the jurisdictions' overall vulnerability to natural and man-made hazards, and the jurisdictions' hazard mitigation efforts.	1, 2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	Medium	<ul style="list-style-type: none"> ▪ Carteret County Emergency Services ▪ Carteret County Planning ▪ Municipal Administrations 	GF

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CA8	Maintain the County's Mitigation Advisory Committee (MAC) in an effort to coordinate implementation and update of the Pamlico Sound Regional Hazard Mitigation Plan.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County MAC 	GF, NCDPS
CA9	Continue to work on the five-year implementation of the HMP. At the end of this five-year period, the County will undertake efforts to update the plan including the following ten (10) 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, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Emergency Services ▪ Carteret County MAC ▪ Municipal Administrations 	GF, NCDPS, HMGP, PDM, UHMA
CA10	Continue to maintain the County's Crisis Management System in an effort to efficiently deal with emergency situations. These efforts will involve training for officials and relevant staff regarding use of the program.	2, 4, 6, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Emergency Services ▪ Carteret County Planning 	GF, NCDPS

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CA11	Meet annually with all electric service providers operating within the County prior to hurricane season, in preparation for the effects of severe weather, and will provide the preliminary planning steps required for effective post-disaster recovery.	1, 4, 5, 6, 7	1, 2, 3, 5, 6	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Emergency Services ▪ Municipal Administrations 	GF, NCDPS, Electric Service Providers
CA12	Maintain all property acquired within the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. Continue to proactively establish open space within the floodplain and floodway as HMGP grant funds become available to carry out this initiative.	2, 5, 6, 7, 8	1, 2, 3, 5, 9, 10	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning ▪ Municipal Administrations 	GF, NCDPS
CA13	Integrate, when feasible, new greenway and public park improvements into comprehensive planning and capital improvement efforts (including coordination with the County's certified CAMA Land Use Plans).	1, 2, 6, 7	1, 2, 3, 5, 9, 10	Carteret County, Morehead City	Medium	<ul style="list-style-type: none"> ▪ Carteret County Parks and Recreation ▪ Carteret County Planning ▪ Morehead City Parks and Recreation 	GF, NCDENR
CA14	Maintain reciprocal mutual aid agreements with all neighboring communities in an effort to ensure adequate fire protection throughout the County. Additionally, all jurisdictions will provide preventive maintenance efforts to ensure the fire hydrants and equipment are working properly.	1, 2, 4, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Emergency Services ▪ Municipal Administrations ▪ Volunteer Fire Departments 	GF, NCDPS

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CA15	Review and update respective Flood Damage Prevention Ordinances as deemed necessary. Once annually, all jurisdictions will conduct a review to ensure that the current FDPO is compliant with all FEMA and NCEM mandates.	1, 2, 4, 5	1, 2, 3, 5, 9, 10	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning ▪ Municipal NFIP participants 	GF, NCDPS
CA16	Maintain and map GIS-based data related to floodplain management and mitigation. These efforts will involve maintaining the most recent Flood Insurance Rate Maps (FIRMs), as well as GIS locations for each property either acquired or mitigated under current or prior year mitigation grant projects. Repetitive loss areas will also be mapped through this process.	2, 4, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning ▪ Carteret County Information Technology Department ▪ Carteret County Tax Department ▪ Municipal Administrations 	GF, NCDPS
CA17	Continue to require a finished floor elevation certificate for all development within the Special Flood Hazard Area (SFHA) in both incorporated and unincorporated portions of the County. All elevation certificates will be submitted on an official FEMA elevation certificate. All elevation certificates shall be kept on file by the County or municipalities.	1, 2, 3, 4, 6	1, 2, 3, 5, 9, 10	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Inspections ▪ Municipal Building Inspections 	GF
CA18	Establish and/or maintain reconstruction policies that include procedures for issuance of building permits after a natural disaster.	1, 2, 4, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning ▪ Municipal Administrations 	GF

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SECTION 6. MITIGATION STRATEGIES

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CA19	Strive to maintain respective CRS ratings through implementation of a comprehensive floodplain management program.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 5, 9, 10	Carteret County, Atlantic Beach, Beaufort, Cape Carteret, Cedar Point, Emerald Isle, Morehead City, Newport, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning ▪ Municipal Administrations 	GF, NCDPS, HMGP, PDM, UHMA
CA20	Maintain a map information service involving the following: (1) Provide information relating to Flood Insurance Rate Maps (FIRMs) to all inquirers, including a provision of information on whether a given property is located with a flood hazard area; (2) Provide information regarding the flood insurance purchase requirement; (3) Maintain historical and current FIRMs; (4) Advertise once annually in the local newspaper the availability of FIRMs; and (5) Provide information to inquirers about local floodplain management requirements.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 5, 9, 10	Carteret County, Atlantic Beach, Beaufort, Cape Carteret, Cedar Point, Emerald Isle, Morehead City, Newport, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning ▪ Municipal Administrations 	GF, NCDPS
CA21	Mail a notice annually to all property owners in an effort to educate citizens about dangers associated with flooding in low-lying coastal areas.	1, 2, 5, 7	1, 2, 3, 5, 9, 10	Carteret County, Atlantic Beach, Beaufort, Cape Carteret, Cedar Point, Emerald Isle, Morehead City, Newport, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning ▪ Municipal Administrations 	GF, NCDPS

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CA22	Continue to work with local real estate agencies to ensure that agents are informing clients when property for sale is located within a SFHA. The County will provide these agencies with brochures documenting the concerns relating to development located with the floodprone areas and ways that homeowners may make their home more disaster resistant to strong winds, lightning, and heavy rains.	1, 2, 4, 6	1, 2, 3, 5, 9, 10	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning 	GF, NCDPS
CA23	Make information regarding hazards and development regulations within floodplains available through the following: (1) Ensure that the local library maintains information relating to flooding and flood protection; (2) Provide a link on the county website to FEMA resources addressing flooding and flood protection; (3) Provide a link on all participating municipalities' websites to FEMA resources addressing flooding and flood protection, evacuation procedures, disaster preparedness, and post-disaster recovery; and (4) Provide website links to relevant hazard mitigation websites.	1, 2, 4, 6	1, 2, 3, 5, 9, 10	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning ▪ Municipal Administrations 	GF, NCDPS
CA24	Support the efforts of the Carteret County Local Emergency Planning Committee (LEPC) in their effort to address hazards associated with the storage of chemicals, noxious waste material and bulk fuel.	1, 2, 6, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County LEPC 	GF, NCDPS

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CA25	Continue to support the NC Office of Dam Safety in its 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.	1, 2, 4, 6	1, 2, 3, 6, 8, 9, 10	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning ▪ Municipal Administrations 	GF, NCDPS, NCDENR
CA26	Continue to monitor water resources in an effort to mitigate the impacts of drought conditions. These efforts will include maintaining a local water shortage ordinance. This ordinance will be activated in coordination with all utility providers as the need arises.	1, 2, 7, 8	11	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning ▪ Municipal Administrations 	GF, NCDENR
CA27	In the event of a substantial flooding event or other natural hazard occurrence, perform damage assessments in coordination with NCEM. These assessments will assist the county in determining the extent of the damage caused by the respective disaster event. This data, in conjunction with the information outlined in this plan, will be utilized as a tool for land use planning and future hazard mitigation plan updates.	1, 2, 4, 7, 8	1, 2, 3, 5, 9, 10, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning ▪ Municipal Administrations 	NF, NCDPS, HMGP
CA28	Review all land use planning and regulatory documents pertinent to hazard mitigation in an effort to: <ol style="list-style-type: none"> (1) Reduce exposure to natural hazards (2) Promote resource protection (3) Encourage the use of best management practices 	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	Medium	<ul style="list-style-type: none"> ▪ Carteret County Planning ▪ Municipal Administrations 	GF

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CA29	Consider developing a hazardous materials actions plan focused on addressing the potential impacts of hazardous materials spills. Specifically, the plan will identify and address risk associated with known hazardous materials risk areas.	1, 2, 4, 6, 7	Man-made	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	Medium	<ul style="list-style-type: none"> ▪ Carteret County Emergency Services 	GF, NCDPS
CA30	Continue to enforce the NC State Building Code. Local government inspections staff will re-certify 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.	1, 2, 5, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Inspections ▪ Municipal Building Inspections 	GF
CA31	Collaborate to provide education and training to local government officials in an effort to broaden understanding of public policy relating to hazard mitigation.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	Medium	<ul style="list-style-type: none"> ▪ Carteret County Emergency Services ▪ Carteret County Administration ▪ Municipal Administration 	GF
CA32	Continue to proactively seek out grant funding through NCEM and FEMA for mitigation of repetitive loss properties (RLP's) from future flooding events. The County will maintain a list of RLP's, and on an annual basis, will apply for funding for all structures that meet cost-benefit thresholds as defined by FEMA. Carteret County will assist all municipal jurisdictions in working through the structural mitigation grant funding process.	1, 2, 4, 5, 7	1, 2, 3, 5, 9, 10, 12	Carteret County, Atlantic Beach, Beaufort, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Morehead City, Newport, Peletier, Pine Knoll Shores	High	<ul style="list-style-type: none"> ▪ Carteret County Planning Department ▪ Carteret County Board of Commissioners ▪ Municipal Administrations 	GF, NCDPS, HMGP, PDM, UHMA

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SECTION 6. MITIGATION STRATEGIES

Table 68. Craven 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
CR1	Review respective Comprehensive Land Use Plans annually to ensure that the Future Land Use Map adequately delineates portions of the community deemed unsuitable for development due to existing environmental conditions. This effort will also involve the identification of potential drainage easements and open space areas that will positively affect drainage conditions within areas documented as stormwater/flooding hot spots. Additionally, the County will attempt to identify portions of the County susceptible to wildfire damage.	1, 2, 5, 6, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Planning Department ■ Craven County MAC ■ Municipal Administrations 	GF, NCDENR
CR2	Review respective Flood Damage Prevention Ordinances to assess whether any revisions and/or updates have been mandated by FEMA or NCEM. Additionally, jurisdictions will consider whether regulatory options are available to provide for more effective floodplain management.	1, 2, 4, 7	1, 2, 3, 5, 9, 10, 12	Craven County, Bridgeton, Cove City, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Planning Department ■ Craven County Board of Commissioners ■ Municipal Administrations ■ Municipal Governing Boards 	GF, NCDPS
CR3	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.	1, 2, 4, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Inspections Department ■ Municipal Administrations 	GF
CR4	Maintain and update local Flood Insurance Rate Maps (FIRMs). These maps will be reviewed and formally updated as revisions become available through the North Carolina Floodplain Mapping Program.	1, 2, 5, 7	1, 2, 3, 5, 9, 10, 12	Craven County, Bridgeton, Cove City, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Planning Department ■ Craven County Board of Commissioners ■ Municipal Administrations ■ Municipal Governing Boards 	GF, NCDPS

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CR5	Continue to impose a two-foot freeboard requirement for all development located within a defined flood hazard area. Individual municipal jurisdictions are responsible for maintaining and enforcing their respective freeboard requirements (the County provides inspections services for some municipalities).	1, 2, 6, 7	1, 2, 3, 5, 9, 10, 12	Craven County, Havelock, New Bern, River Bend	High	<ul style="list-style-type: none"> ■ Craven County Inspections Department ■ Craven County Board of Commissioners ■ Municipal Administrations ■ Municipal Governing Boards 	GF, NCDPS
CR6	Maintain all FEMA Elevation Certificates and FEMA Floodproofing Certificates for non-residential structures.	1, 2, 4, 7	1, 2, 3, 5, 9, 10, 12	Craven County, Havelock, New Bern, River Bend	High	<ul style="list-style-type: none"> ■ Craven County Inspections Department ■ Craven County Planning Department ■ Municipal Inspections Departments ■ Municipal Planning Departments 	GF
CR7	Continue to support NCDENR in efforts to enforce the Neuse River Basinwide Water Quality Management Rules.	1, 4, 6, 7	1, 2, 3, 5, 9, 10, 12	Craven County, Havelock, New Bern, River Bend, Trent Woods	High	<ul style="list-style-type: none"> ■ Craven County Planning Department ■ Municipal Administrations ■ NCDENR 	GF, NCDENR
CR8	Consider the data and recommendations outlined within this plan when preparing updates to respective Capital Improvements Plans. All recommendations regarding capital expenditures will focus on siting infrastructure and public facilities outside of the Flood Hazard Area.	1, 2, 6, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Craven County, New Bern, River Bend	High	<ul style="list-style-type: none"> ■ Craven County Administration ■ Craven County Board of Commissioners ■ Municipal Administrations 	GF, NCDENR, NCDOT
CR9	Continue to proactively seek out grant funding through NCEM and FEMA for mitigation of repetitive loss properties (RLP's) from future flooding events. The County will maintain a list of RLP's, and on an annual basis, will apply for funding for all structures that meet cost-benefit thresholds as defined by FEMA. Craven County will assist all municipal jurisdictions in working through the structural mitigation grant funding process.	1, 2, 4, 5, 7	1, 2, 3, 5, 9, 10, 12	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Planning Department ■ Craven County Board of Commissioners ■ Municipal Administrations 	GF, NCDPS, HMGP, PDM, UHMA

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CR10	Coordinate with NCDENR to enforce all NC State Erosion and Sediment Control Regulations.	2, 5, 6, 8	1, 2, 3, 5, 9, 10, 12	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Planning Department ■ Municipal Administrations ■ NCDENR 	GF, NCDENR
CR11	Continue to expand upon the County’s Emergency Notification System available to all residents. Craven County Emergency Services will coordinate with all municipal jurisdictions regarding registration.	1, 4, 5, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Emergency Services 	GF, NCDPS
CR12	Consider all of the data, information, maps and recommendations outlined throughout this plan when siting for the development of all new critical facilities.	1, 2, 4, 6, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	Medium	<ul style="list-style-type: none"> ■ Craven County Administration ■ Craven County Planning Department ■ Municipal Administrations 	GF, NCDPS
CR13	Develop a formal system and plan for evaluating and assessing the availability and effectiveness of all critical facilities outlined within this plan. Craven County will coordinate with NCEM, American Red Cross, local animal shelters, local care homes, etc., in making determinations related to need and capacity required in the event of a disaster.	2, 3, 5, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	Medium	<ul style="list-style-type: none"> ■ Craven County Emergency Services ■ Craven County Planning Department ■ Craven County Social Services Dept. ■ NC Department of Public Safety ■ American Red Cross 	GF, ARC
CR14	In conjunction with annual EOP updates, determine if access to all critical facilities is readily available in the event of a flooding event. Careful consideration should be given to localized flooding issues that may restrict access along limited access thoroughfares. Where access issues are identified, the County will establish a plan for alternative transportation.	2, 3, 5, 7	1, 2, 3, 5, 9, 10, 12	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Emergency Services ■ NC Department of Public Safety 	GF, NCDPS

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CR15	Continue to maintain the County's Continuity of Operations (COP). This effort will include an annual update addressing risk management, service retention, alternative staffing procedures and recovery checklist for each County department.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Administration ■ Craven County Board of Commissioners 	GF, NCDPS
CR16	Review and update the County Emergency Operations Plan on an annual basis. This update will involve coordination with all municipalities to ensure that all emergency contacts are accurate.	1, 2, 3, 5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Emergency Services ■ Municipal Administrations 	GF, NCDPS
CR17	Work to expand upon the County's Special Medical Needs Registry (SMNR). The SMNR is available to all County residents. Effective participation will require close cooperation between County ES and local government staff members. All jurisdictions will work to advertise the availability of this service within their respective communities. It should be noted that applicants must be approved once application is made. Application alone does not result in guaranteed emergency service.	2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Emergency Services ■ Craven County Social Services Dept. ■ Craven County Board of Commissioners ■ Municipal Administrations ■ Municipal Governing Boards 	GF, NCDPS, ARC
CR18	Continue to maintain the County's Local Emergency Planning Committee (LEPC) focused on monitoring the presence and proliferation of hazard materials throughout the County. The LEPC and County staff will continue to monitor these materials as submitted.	1, 2, 5, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Craven County	Medium	<ul style="list-style-type: none"> ■ Craven County Emergency Services 	GF, NCDPS
CR19	Maintain information on the County website relating to evacuation and sheltering. Emergency information on the website will include: evacuation routes, sheltering, delays and closures, pet sheltering options, and special needs information.	4, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Emergency Services 	GF, NCDPS

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
CR20	Continue to provide detailed information regarding properties located within flood hazard areas as outlined under CRS Manual Section 322.a through 322.g.	1, 2, 4, 6	1, 2, 3, 5, 9, 10, 12	Craven County, Havelock, New Bern, River Bend	High	<ul style="list-style-type: none"> ■ Craven County Inspections Department ■ Craven County Planning Department ■ Municipal Administrations 	GF, NCDPS
CR21	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 provide material outlining sound techniques for floodplain development and floodproofing of existing structures. The County will also maintain staff educated in these issues to work with prospective builders.	1, 2, 4, 6	1, 2, 3, 5, 9, 10, 12	Craven County, Havelock, New Bern, River Bend	High	<ul style="list-style-type: none"> ■ Craven County Inspections Department ■ Craven County Planning Department ■ Municipal Administrations 	GF, NCDPS
CR22	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.	1, 2, 4, 6	1, 2, 3, 5, 9, 10	Craven County, Havelock, New Bern, River Bend	High	<ul style="list-style-type: none"> ■ Craven County Planning Department ■ Municipal Administrations 	GF, NCDPS
CR23	Continue to support the NC Office of Dam Safety in its 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.	1, 2, 4, 6	1, 2, 3, 6, 8, 9, 10	Craven County, Bridgeton, Cove City, Dover, Havelock, New Bern, River Bend, Trent Woods, Vanceboro	High	<ul style="list-style-type: none"> ■ Craven County Planning Department ■ Municipal Administrations 	GF, NCDPS, NCDENR

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SECTION 6. MITIGATION STRATEGIES

Table 69. Hyde 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
H1	Consider revising the County's Flood Damage Prevention Ordinance to establish a one foot freeboard requirement regarding base flood elevation for new structures developed within the Flood Hazard Area.	1, 2, 3, 5, 7	1, 2, 3, 5, 9, 10	Hyde County	High	<ul style="list-style-type: none"> ■ Hyde County Administration ■ Hyde County Board of Commissioners 	GF, NCDPS
H2	Promote the availability of flood insurance available through the National Flood Insurance Program (NFIP) using the following means: <ul style="list-style-type: none"> o Post on County website o Provide information on building permit applications o Make available at the County library 	1, 2, 4, 6	1, 2, 3, 5, 9, 10	Hyde County	High	<ul style="list-style-type: none"> ■ Hyde County Building Inspections ■ Hyde County Administration 	GF, NCDPS, NFIP
H3	Continue to maintain, operate, and carry out all activities outlined within the Swan Quarter Watershed Project Operation and Maintenance Checklist (latest inspection 5/7/13). This effort includes ensuring functionality of the Swan Quarter Dike.	1, 3, 5, 7	1, 2, 3, 5, 9, 10	Hyde County	High	<ul style="list-style-type: none"> ■ Hyde Soil & Water Conservation District ■ Hyde County Administration ■ Hyde County Board of Commissioners 	GF, NCDPS, NCDENR
H4	Continue to monitor drainage conditions throughout both the mainland and barrier island portions of the County. Additionally, the County will continue to enforce and support the following programs relating to stormwater management: <ul style="list-style-type: none"> o NCDENR Coastal Stormwater Rules o NCDENR Sedimentation & Erosion Control Regulations o NCDENR Statewide Stormwater Regulations o NCDENR CAMA Regulations o US Army Corps of Engineers Non Coastal Wetland Regulations 	2, 4, 6, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Hyde County	High	<ul style="list-style-type: none"> ■ Hyde County Administration ■ Hyde County Board of Commissioners 	GF, NCDPS, NCDENR

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Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
H5	Continue to maintain and map GIS-based data related to floodplain management and mitigation. These efforts will involve maintaining the most recent Flood Insurance Rate Maps (FIRMS), as well as GIS locations for each property either acquired or mitigated under current or prior year Mitigation Grant Projects.	1, 2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Hyde County	High	<ul style="list-style-type: none"> ■ Hyde County Administration ■ Hyde County EMS 	GF, NCDPS, HMGP, PDM, UHMA
H6	Make a variety of materials related to flood insurance, flood protection, floodplain management, increased cost of compliance coverage, information on floodplains, and listings of qualified contractors familiar with floodproofing and elevation techniques, available through various methods including: <ul style="list-style-type: none"> o Placing materials in the County library o Disseminating information to local contractors 	1, 2, 4, 6	1, 2, 3, 5, 9, 10	Hyde County	High	<ul style="list-style-type: none"> ■ Hyde County Building Inspections ■ Hyde County Administration 	GF, NCDPS
H7	Continue to proactively seek out grant funding through NCEM and FEMA for mitigation of repetitive loss properties (RLP) from future flooding events. The County will continue maintaining 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 priority will be for the elevation of structures.	1, 2, 3, 6, 7, 8	1, 2, 3, 5, 9, 10	Hyde County	High	<ul style="list-style-type: none"> ■ Hyde County Administration ■ Hyde County Board of Commissioners 	GF, NCDPS, HMGP, PDM, UHMA
H8	Review the vulnerability of all critical facilities identified in this plan as a component of annual County Emergency Operations Plan updates. This effort will involve an assessment of whether facilities are readily accessible before, during, or after a natural hazard event has transpired. The County will also consider all information and data outlined in this plan when making determinations on the location of all future critical facilities. The Hyde County Emergency Operations Plan was last updated in September 2013.	2, 3, 4, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Hyde County	High	<ul style="list-style-type: none"> ■ Hyde County Emergency Services ■ Hyde County Administration 	GF, NCDPS

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SECTION 6. MITIGATION STRATEGIES

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
H9	Continue to participate in and support the Disaster Assistance Working Group (DAWG). This effort includes maintaining a mutual aid agreement with DAWG, which makes all available Hyde County resources available to participating counties in the event of a disaster. Coordination of all County resources in concert with DAWG will be handled through the group's E-Plan web based portal. All resources are updated as a component of the NC State Resource Management System.	8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Hyde County	Medium	<ul style="list-style-type: none"> ■ Hyde County Emergency Services ■ Hyde County Board of Commissioners 	GF, NCDPS
H10	Review the County's Flood Damage Prevention Ordinance on an annual basis to assess whether any revisions and/or updates have been mandated by FEMA or NCEM.	1, 2, 4, 6	1, 2, 3, 5, 9, 10	Hyde County	High	<ul style="list-style-type: none"> ■ Hyde County Administration ■ Hyde County Board of Commissioners ■ Hyde County CRS Coordinator 	GF, NCDPS
H11	Continue to support the efforts of Tideland Electric and NCDOT in maintaining the County's right-of-ways and utility easements. This effort involves the trimming and pruning of trees that pose an imminent threat to the County's limited infrastructure system. Maintaining clear access into and out of the County, as well as protection of the County's electrical and communications networks, is critical to effective response during natural hazard events.	2, 3, 4, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Hyde County	Medium	<ul style="list-style-type: none"> ■ Hyde County Administration ■ Hyde County Board of Commissioners 	GF, NCDOT, Electric Service Providers
H12	Continue to enforce all regulations outlined under the NC State Building Code. Although not a requirement, the County will encourage the use of wind resistant design techniques for all new residential construction.	1, 3, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Hyde County	High	<ul style="list-style-type: none"> ■ Hyde County Building Inspections ■ Hyde County Administration 	GF
H13	Maintain an informational booth at both the Engelhard Seafood Festival and the Ocrofolk Festival in an effort to inform and educate citizens about County efforts to increase public safety and mitigate private property losses.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Hyde County	Medium	<ul style="list-style-type: none"> ■ Hyde County Emergency Services ■ Hyde County Administration 	GF, NCDPS

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

SECTION 6. MITIGATION STRATEGIES

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
H14	Continue to work closely with NCDPS, NCDOT, the American Red Cross, and DAWG in addressing emergency evacuation and sheltering needs throughout the County. Due to limited resources and high vulnerability, Hyde County must often rely on resources available throughout the region. This effort is bolstered by the regional coordination efforts available through DAWG.	8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Hyde County	Medium	<ul style="list-style-type: none"> ■ Hyde County Emergency Services ■ Hyde County Administration ■ Hyde County Board of Commissioners ■ American Red Cross 	GF, NCDPS, NCDOT, ARC
H15	Continue to provide detailed information regarding properties located within flood hazard areas as outlined under CRS Manual Section 322.a through 322.g.	1, 2, 4, 6	1, 2, 3, 5, 9, 10	Hyde County	High	<ul style="list-style-type: none"> ■ Hyde County Administration ■ Hyde County Board of Commissioners 	GF, NCDPS, HMGP, PDM, UHMA
H16	Continue to participate in the Community Rating System (CRS) made available through the NFIP Program.	1, 2, 4, 6	1, 2, 3, 5, 9, 10	Hyde County	High	<ul style="list-style-type: none"> ■ Hyde County Administration ■ Hyde County Board of Commissioners 	GF, NCDPS, HMGP, PDM, UHMA

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

SECTION 6. MITIGATION STRATEGIES

Table 70. Pamlico 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
P1	In the event of a substantial flooding event, or other natural hazard occurrence, perform damage assessments in coordination with NCEM. These assessments will assist the County in determining the extent of the damage caused by the respective disaster event. This data will be utilized as a tool for land use planning and future hazard mitigation plan updates and to gauge the effectiveness of the County's two-foot freeboard requirement.	1, 2, 4, 6, 7, 8	1, 2, 3, 5, 9, 10	Pamlico County, Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, Vandemere	High	<ul style="list-style-type: none"> ▪ Pamlico County Emergency Services ▪ Pamlico County Administration ▪ Municipal Administrations 	GF, NCDPS
P2	Continue to monitor drainage conditions throughout the County, in particular, issues associated with drainage ditches and agricultural runoff canals situated throughout the County.	1, 2, 4, 6, 7, 8	1, 2, 3, 5, 9, 10	Pamlico County, Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, Vandemere	High	<ul style="list-style-type: none"> ▪ Pamlico County Administration ▪ Pamlico County Emergency Services ▪ Municipal Administrations 	GF, NCDENR, NCDOT
P3	Continue to proactively seek grant funding through NCEM and FEMA for mitigation of repetitive loss properties (RLP's) from future flooding events. The County will maintain a list of RLP's, and on an annual basis, will apply for funding for all structures that meet cost-benefit thresholds as defined by FEMA. Pamlico County will assist all municipal jurisdictions in working through the structural mitigation grant funding process.	1, 3, 4, 7	1, 2, 3, 5, 9, 10	Pamlico County, Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, Vandemere	High	<ul style="list-style-type: none"> ▪ Pamlico County Administration ▪ Pamlico County Emergency Services ▪ Municipal Administrations 	GF, NCDPS, HMGP, PDM, UHMA
P4	Continue to utilize the NC Department of Corrections Community Service program to assist and leverage efforts to snag and clear ditches and canals located throughout the County.	2, 7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Pamlico County	High	<ul style="list-style-type: none"> ▪ Pamlico Public Services 	GF, NCDPS

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SECTION 6. MITIGATION STRATEGIES

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
P5	Continue to educate County residents about the linkage between flooding (standing water) and the proliferation of mosquitos. These efforts will focus on teaching property owners how to mitigate mosquito issues throughout the County.	1, 2, 4, 6, 7	1, 2, 3, 5, 9, 10	Pamlico County, Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, Vandemere	Medium	<ul style="list-style-type: none"> ▪ Pamlico County Administration ▪ Pamlico County Emergency Services ▪ Municipal Administrations 	GF, NCDENR, NCDPS
P6	Work to identify and, when possible, address drainage issues impacting broad areas throughout the County. These efforts will also include the input and involvement of NC State Agencies.	1, 2, 4, 6, 8	1, 2, 3, 5, 9, 10	Pamlico County, Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, Vandemere	High	<ul style="list-style-type: none"> ▪ Pamlico County Administration ▪ Municipal Administrations 	GF, NCDENR, NCDOT, HMGP, PDM, UHMA
P7	Make a range of materials related to flood insurance, flood protection, floodplain management, information on floodplains, and listings of qualified contractors familiar with floodproofing and elevation techniques, available through various avenues including: <ul style="list-style-type: none"> o Placing materials in the local library o Maintaining documents at the County Planning and Economic Development office o Disseminating information to local contractors o Distributing information to churches and other community-based organizations o Establishing a means to distribute information to schoolchildren 	1, 2, 4, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Pamlico County, Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, Vandemere	High	<ul style="list-style-type: none"> ▪ Pamlico County Administration ▪ Municipal Administrations 	GF, NCDPS
P8	Review and update the County Emergency Operations Plan on an annual basis. This update will involve coordination with all municipalities to ensure that all emergency contacts are accurate and that all jurisdictions are adequately prepared.	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Pamlico County, Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, Vandemere	High	<ul style="list-style-type: none"> ▪ Pamlico County Administration ▪ Municipal Administrations 	GF, NCDPS

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

SECTION 6. MITIGATION STRATEGIES

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
P9	Continue to work with the North Carolina Department of Environment and Natural Resources to enforce standards outlined within the statewide stormwater management program. Currently, this program generally addresses stormwater management for projects disturbing an area equal to or greater than one acre. Additionally, the County will monitor localized flooding issues and, where feasible, address these issues through the installation of stormwater best management practices (BMP's).	1, 2, 4, 7, 8	1, 2, 3, 5, 9, 10	Pamlico County, Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, Vandemere	High	<ul style="list-style-type: none"> ▪ Pamlico County Administration 	GF, NCDPS, NCDENR
P10	Develop a formal system and plan for evaluating and assessing the availability and effectiveness of all critical facilities outlined within this plan. Pamlico County will coordinate with NCEM, Red Cross, local animal shelters, local care homes etc., in making determinations relating to need and capacity.	1, 2, 4, 5, 6	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Pamlico County, Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, Vandemere	High	<ul style="list-style-type: none"> ▪ Pamlico County Administration ▪ Pamlico County Emergency Services ▪ Municipal Administration 	GF, NCDPS, ARC
P11	Maintain and update local Flood Insurance Rate Maps (FIRMs). These maps will be reviewed and formally updated as revisions become available through North Carolina Floodplain Mapping Program. The FIRMs will be maintained in the County offices, as well as on the County website.	2, 6, 7	1, 2, 3, 5, 9, 10	Pamlico County, Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, Vandemere	High	<ul style="list-style-type: none"> ▪ Pamlico County Emergency Services 	GF, NCDPS
P12	Ensure that there is adequate capacity for snow and ice removal in the event of a major snowstorm. The County will work with the North Carolina Department of Transportation (NCDOT) and North Carolina Emergency Management (NCEM) to ensure that all resources necessary are available to carry out this effort. Additionally, the County will work closely with the County school system, as well as other entities, to make determinations regarding closures and delays.	1, 2, 4, 8	4	Pamlico County, Alliance, Arapahoe, Bayboro, Grantsboro, Mesic, Minnesott Beach, Oriental, Stonewall, Vandemere	Low	<ul style="list-style-type: none"> ▪ Pamlico County Emergency Services ▪ Municipal Administrations 	GF, NCDPS, NCDOT

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SECTION 6. MITIGATION STRATEGIES

Number	Strategy	Goal Addressed (see page 6-3)	Hazard Addressed (see page 3-1)	Applicable Jurisdictions	Priority	Responsible Party/Dept.	Funding Sources
P13	Continue to maintain all development regulations, emergency and land use related plans, and applications for permits on the County's website. This information will be maintained and updated as deemed necessary.	1, 2, 5, 7	1, 2, 3, 5, 9, 10	Pamlico County	High	<ul style="list-style-type: none"> ▪ Pamlico County Administration 	GF

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SECTION 6. MITIGATION STRATEGIES

IV. COMMUNITY RATING SYSTEM STRATEGY

The Community Rating System (CRS) is a voluntary program developed by FEMA to encourage communities to improve stormwater and floodplain management. Participation in the program results in a discount on flood insurance for all NFIP policy holders within the corporate limits of a participating jurisdiction as outlined in the following table:

Table 71. CRS Related Benefits

Rate Class	Property Owner Insurance Discount		Credit Points Required
	SFHA*	Non-SFHA**	
1	45%	10%	4,500 +
2	40%	10%	4,000 - 4,499
3	35%	10%	3,500 - 3,999
4	30%	10%	3,000 - 3,499
5	25%	10%	2,500 - 2,999
6	20%	10%	2,000 - 2,499
7	15%	5%	1,500 - 1,999
8	10%	5%	1,000 - 1,499
9	5%	5%	500 - 999
10	0%	0%	0 - 499

*Special Flood Hazard Area.

**Preferred risk policies are available only in B, C, and X zones for properties that are shown to have a minimal risk of flood damage. The preferred risk policy does not receive premium rate credits under the CRS because it already has a lower premium than other policies. Although they are in SFHAs, Zones AR and A99 are limited to a 5% discount. Premium reductions are subject to change. Source: Federal Emergency Management Agency.

Throughout the Pamlico Sound region, there are jurisdictions that currently participate in the Community Rating System (CRS). The following outlines all participating communities and their respective CRS rating:

Community Name	CRS Entry Date	Current Class
Alliance	10/1/1992	9
Atlantic Beach	10/1/1992	8
Bayboro	10/1/1992	9
Beaufort	10/1/1994	8
Belhaven	10/1/1993	7
Cape Carteret	10/1/1993	8
Carteret County	10/1/1991	8
Cedar Point	10/1/1992	8
Craven County	10/1/1991	8
Emerald Isle	10/1/1993	7

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SECTION 6. MITIGATION STRATEGIES

<u>Community Name</u>	<u>CRS Entry Date</u>	<u>Current Class</u>
Havelock	10/1/1995	8
Hyde County	10/1/1992	9
Minnesott Beach	10/1/1992	9
Morehead City	10/1/1992	8
New Bern	10/1/1992	10
Newport	10/1/1992	8
Oriental	10/1/1992	8
Pamlico County	10/1/1992	8
Pine Knoll Shores	10/1/1992	6
River Bend	05/1/2010	8
Stonewall	10/1/1992	9
Vandemere	10/1/1992	8
Washington	10/1/1992	7
Washington Park	10/1/1992	8

The mitigation strategies in the table above allude to the fact that other participating jurisdictions will consider participating in this program through the implementation of this plan. The Regional MAC may work together on several of these activities to reduce cost and duplication of effort, if several of the communities decide to enter into the program.

Revised CRS guidance was issued in Fiscal Year 2013. This new guidance impacts not only annual CRS activities, but also the definition of what constitutes a Flood Management Plan. Appendix H provides insight into how the revised guidance will impact communities throughout the Region participating in the CRS program.

I. INTRODUCTION

The Plan Maintenance and Implementation Procedures 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.

II. IMPLEMENTATION

Implementation of the Pamlico Sound Regional Hazard Mitigation Plan will commence with adoption of the document by all participating jurisdictions. Resolutions of Adoption are provided as Appendix K 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 regional and county Mitigation Advisory Committees (MACs) 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. Beaufort, Carteret, Craven, Hyde and Pamlico Counties will 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.

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SECTION 7. PLAN MAINTENANCE AND IMPLEMENTATION PROCEDURES

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.

III. ROLE OF THE MITIGATION ADVISORY COMMITTEE IN IMPLEMENTATION AND MAINTENANCE

With adoption of this plan, the Regional MAC will be tasked with plan implementation and maintenance. The MAC, led by Donald R. Baumgardner of the Craven County Planning 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 Regional 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.

IV. 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. Donald R. Baumgardner,

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acting as chair of the Regional MAC, is responsible for initiating this review and will consult with members of the Regional MAC. This monitoring and updating will take place through a formal review by both the Regional and County MACs 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 an 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.

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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 Governing Boards for each participating jurisdiction, 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.

V. CONTINUED PUBLIC INVOLVEMENT

Public participation is an integral component to the new mitigation planning process and will continue to be essential as the Pamlico Sound 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 County government websites to advertise any maintenance and/or periodic review activities taking place; and
- Keeping copies of the Plan in local libraries.

VI. INCORPORATION INTO EXISTING PLANS AND DOCUMENTS

The Regional 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. 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. Each county, and in turn participating jurisdictions, will be responsible for implementing and reviewing plan elements specific to their respective jurisdiction.

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SECTION 7. PLAN MAINTENANCE AND IMPLEMENTATION PROCEDURES

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:

Beaufort County Mitigation Advisory Committee

<u>MAC Member</u>	<u>Jurisdiction/Agency</u>
John Pack, Emergency Management Coordinator	Beaufort County
Lisa Respass, Emergency Services Specialist	Beaufort County
Judith Lennon, Town Clerk	Aurora
Bubs Carson, Town Administrator	Bath
Peter Budge, Building Inspector	Belhaven
Joy McRoy, Town Clerk	Chocowinity
Bobbie Jo Ricks, Town Manager	Pantego
John Rodman, Planning and Development Director	Washington
Dennie Dale, Town Clerk	Washington Park

Carteret County Mitigation Advisory Committee

<u>MAC Member</u>	<u>Jurisdiction/Agency</u>
Russell Overman, County Manager	Carteret County
Eugene Foxworth, Planning Director	Carteret County
Jen Sawyer, Emergency Management Coordinator/Planner	Carteret County
Gregg Hartman, Planner	Carteret County
John Ford, Emergency Services Director	Carteret County
Jessica Fiester, Planning Director	Atlantic Beach
Kyle Garner, Town Planner	Beaufort
Elizabeth Sweeney, Town Clerk	Bogue
Brandon Hawks, Building Inspector	Cape Carteret
Chris Seaberg, Town Administrator	Cedar Point
Jim Jennings, Planning Director	Emerald Isle
Bryan Chadwick, Town Administrator	Indian Beach
Philip Miller, Fire Chief	Indian Beach
Sandi Watkins, Planner	Morehead City
Linda Staab, Planning and Inspections Director	Morehead City
David Whitlow, City Manager	Morehead City
Angela Christian, Town Manager	Newport
Bea Cunningham, Town Clerk	Peletier
Chris Jones, Building Inspector	Pine Knoll Shores

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Craven County Mitigation Advisory Committee

<u>MAC Member</u>	<u>Jurisdiction/Agency</u>
Donald R. Baumgardner, Planning Director	Craven County
Chad Strawn, Assistant Planning Director	Craven County
Stanley Kite, Emergency Services Director	Craven County
Ira Whitford, Asst. Emergency Services Director	Craven County
Jason Frederick, Planner II	Craven County
Elaine Bryan, Town Clerk	Bridgeton
Sonja Gaskins, Town Manager	Cove City
Kathy New, Town Clerk	Dover
Katrina Marshall, Planning and Inspections Director	Havelock
Jeff Ruggieri, Director of Development Services	New Bern
Pete Connet, Interim Town Manager	River Bend
Marcia Sproul, Town Clerk	Trent Woods
Renee Ipock, Town Clerk	Vanceboro

Hyde County Mitigation Advisory Committee

<u>MAC Member</u>	<u>Jurisdiction/Agency</u>
Kris Noble, Planning Director	Hyde County
Justin Gibbs, Emergency Services Director	Hyde County

Pamlico County Mitigation Advisory Committee

<u>MAC Member</u>	<u>Jurisdiction/Agency</u>
Tim Buck, County Manager	Pamlico County
Chris Murray, County Emergency Coordinator	Pamlico County
Linda Marshall, Town Clerk	Alliance
David Peterson, Town Clerk	Arapahoe
Mary Potter, Town Clerk	Bayboro
Patricia Prescott, Town Clerk	Grantsboro
Booker T. Jones, Sr., Mayor/Manager	Mesic
Catherine Hurm, Town Manager	Minnesott Beach
Diane Miller, Town Manager	Oriental
Marie Spain, Town Clerk	Stonewall
Judy Thaanum, Mayor	Vandemere

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.

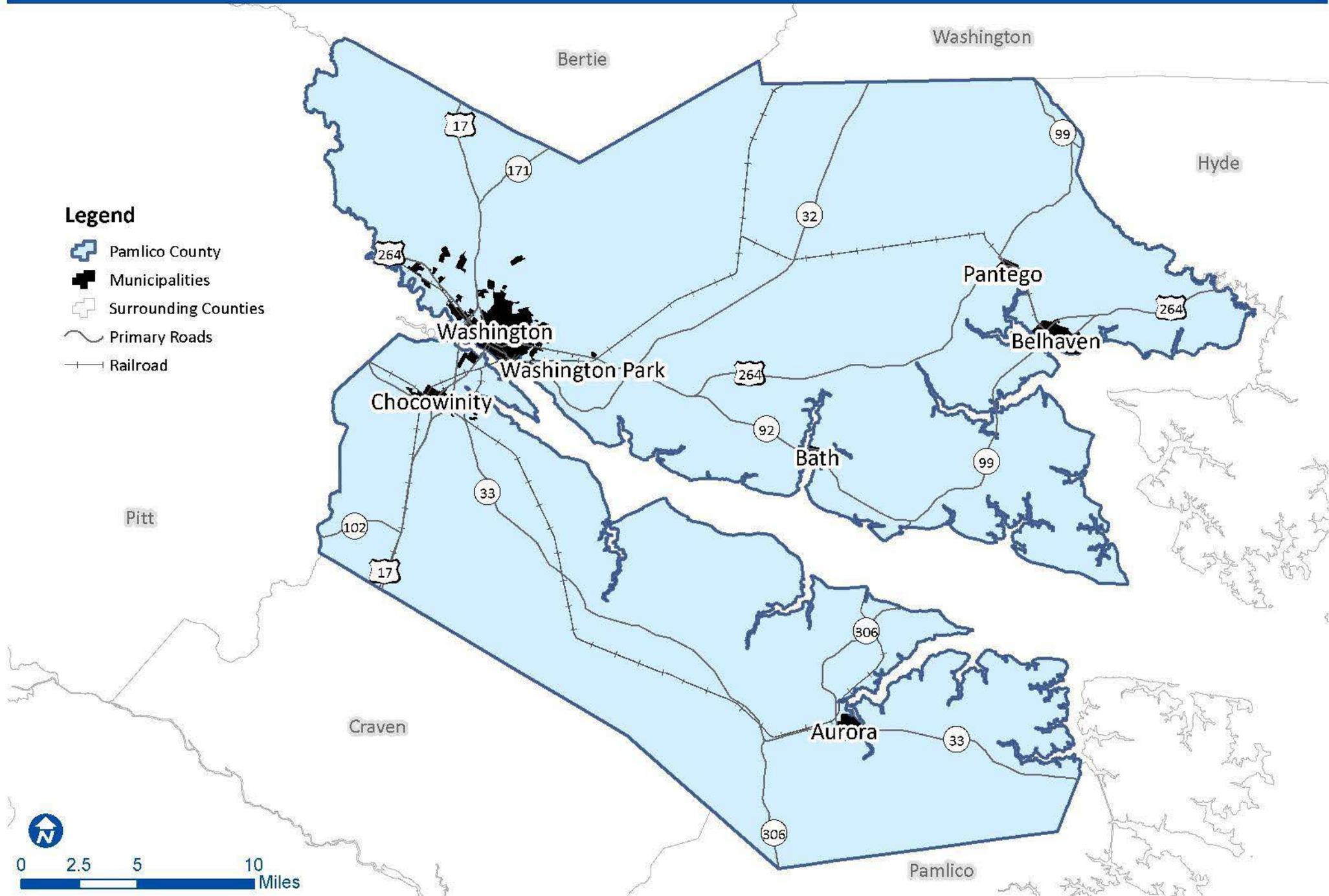
Appendix A

Maps

Map 1 - Beaufort County Non-Specific Hazards

Legend

-  Pamlico County
-  Municipalities
-  Surrounding Counties
-  Primary Roads
-  Railroad



Map 2 - Beaufort County Flood Hazard Areas & Critical Facilities

Legend

- Municipalities
- Surrounding Counties
- Primary Roads
- Railroad
- State Owned Land
- Developed
- Undeveloped

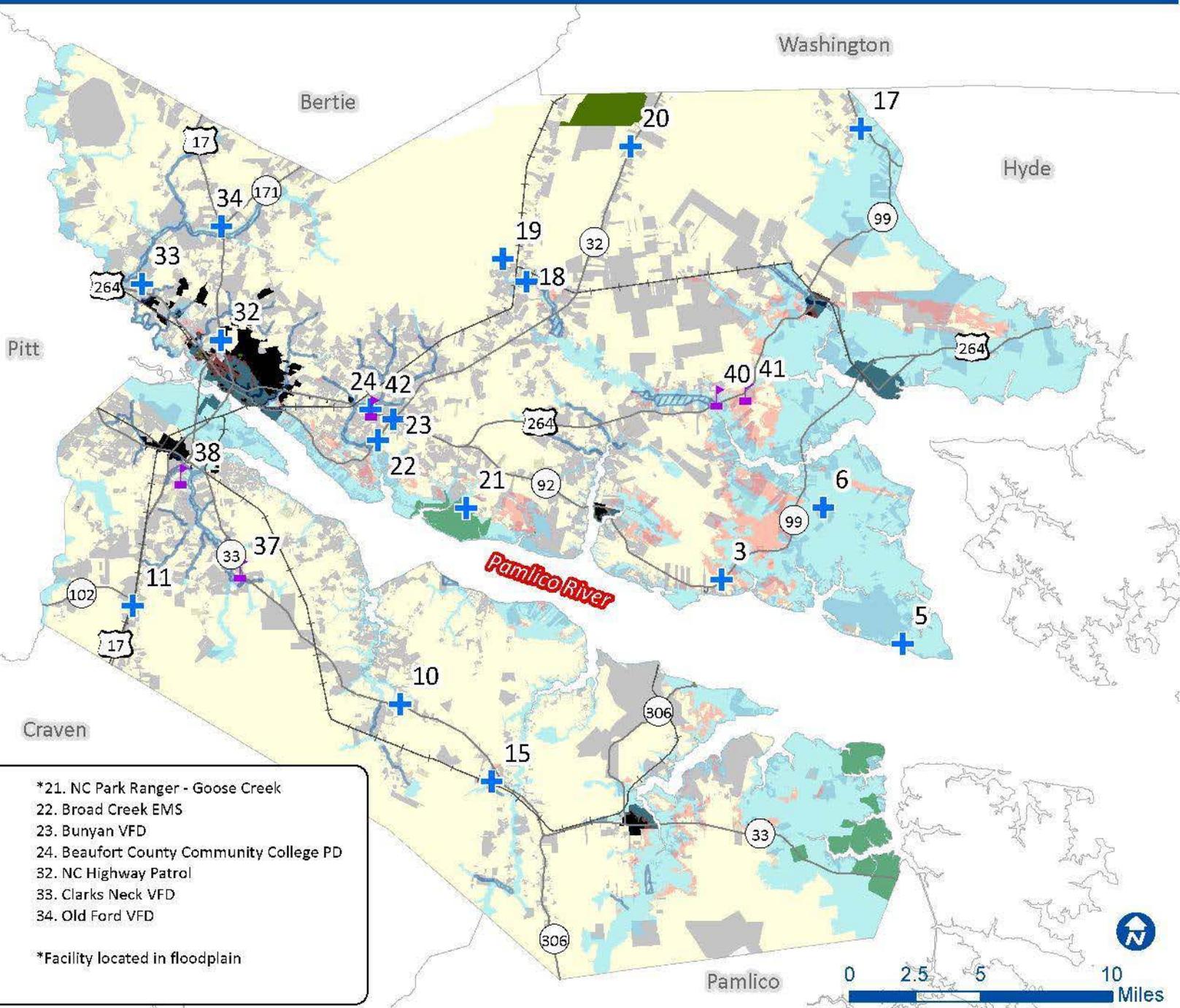
Flood Zone

- 0.2% Annual Chance
- A
- AE
- AEFW

Critical Facilities

- Emergency Services
- Schools

- | | |
|---------------------------------------|--|
| 3. Bath Community Rescue Squad | *21. NC Park Ranger - Goose Creek |
| *5. Pamlico Beach FD and Rescue Squad | 22. Broad Creek EMS |
| *6. Sidney VFD | 23. Bunyan VFD |
| 10. Blounts Creek VFD and EMS | 24. Beaufort County Community College PD |
| 11. Chocowinity FD | 32. NC Highway Patrol |
| 15. Aurora FD | 33. Clarks Neck VFD |
| *17. Pungo River VFD | 34. Old Ford VFD |
| 18. Pinetown Rescue and EMS | |
| 19. Pinetown VFD | |
| 20. Long Acre VFD | |
- *Facility located in floodplain



Map 3 - Aurora Flood Hazard Areas & Critical Facilities

Legend

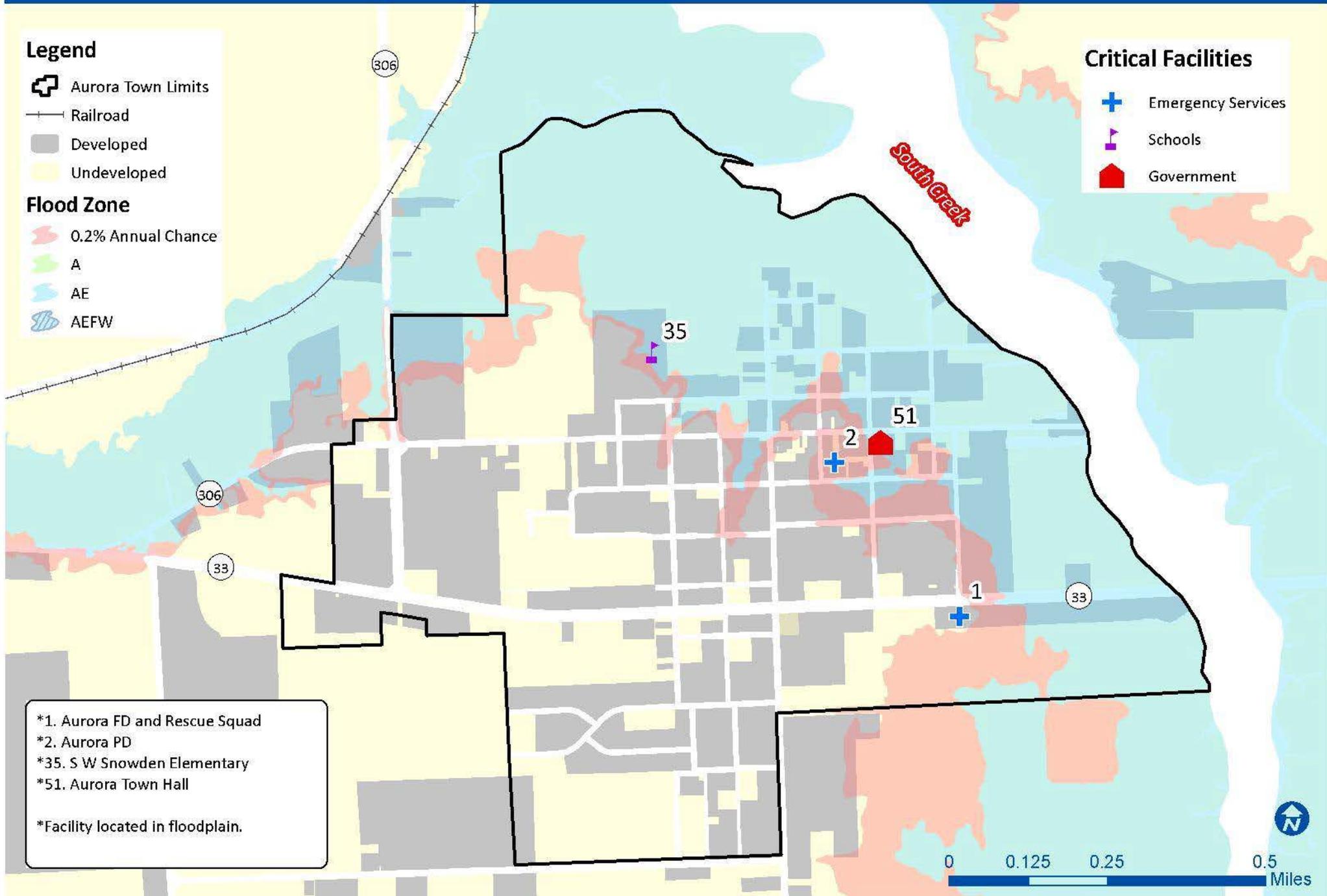
- Aurora Town Limits
- Railroad
- Developed
- Undeveloped

Flood Zone

- 0.2% Annual Chance
- A
- AE
- AEFW

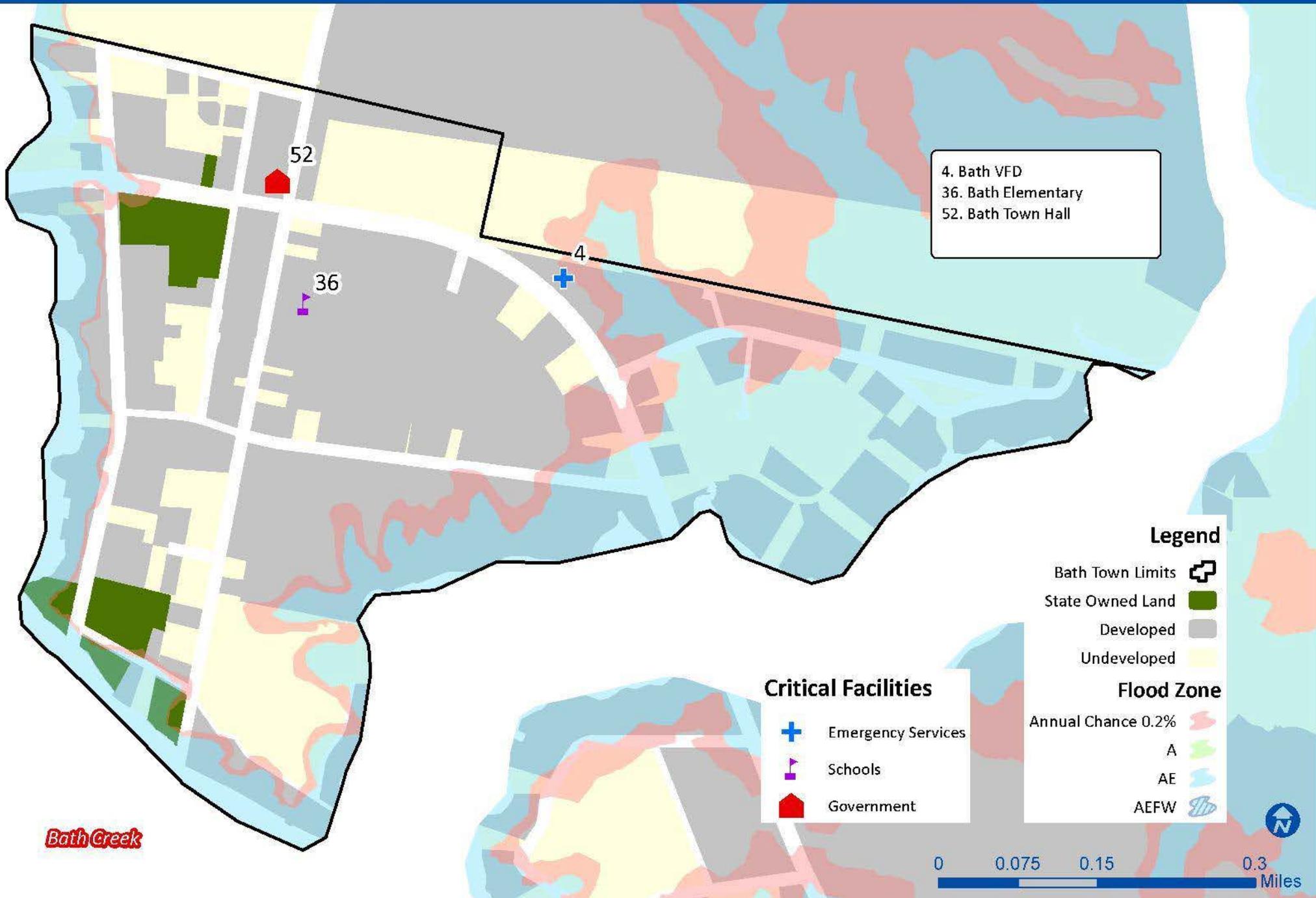
Critical Facilities

- Emergency Services
- Schools
- Government

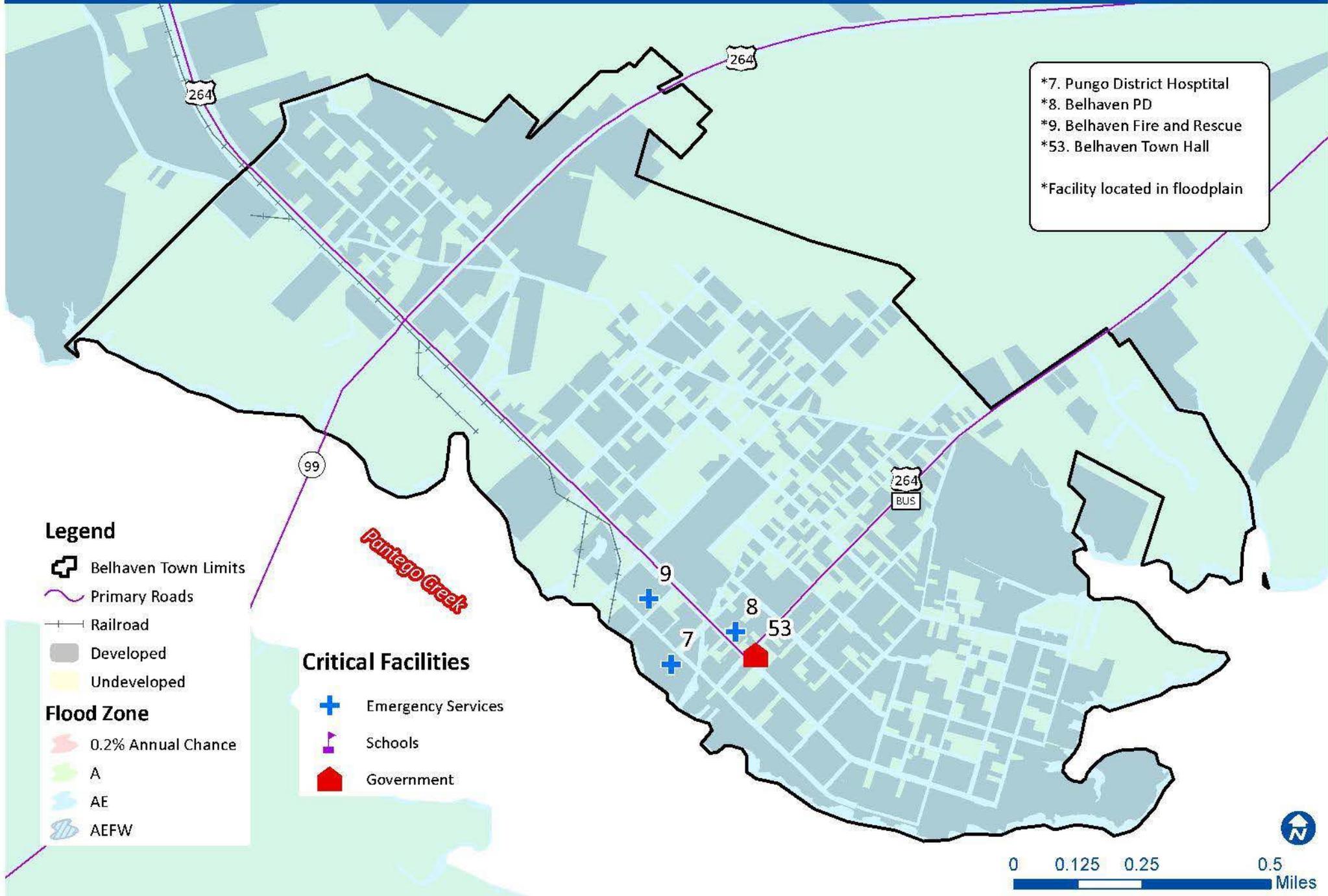


- *1. Aurora FD and Rescue Squad
- *2. Aurora PD
- *35. S W Snowden Elementary
- *51. Aurora Town Hall
- *Facility located in floodplain.

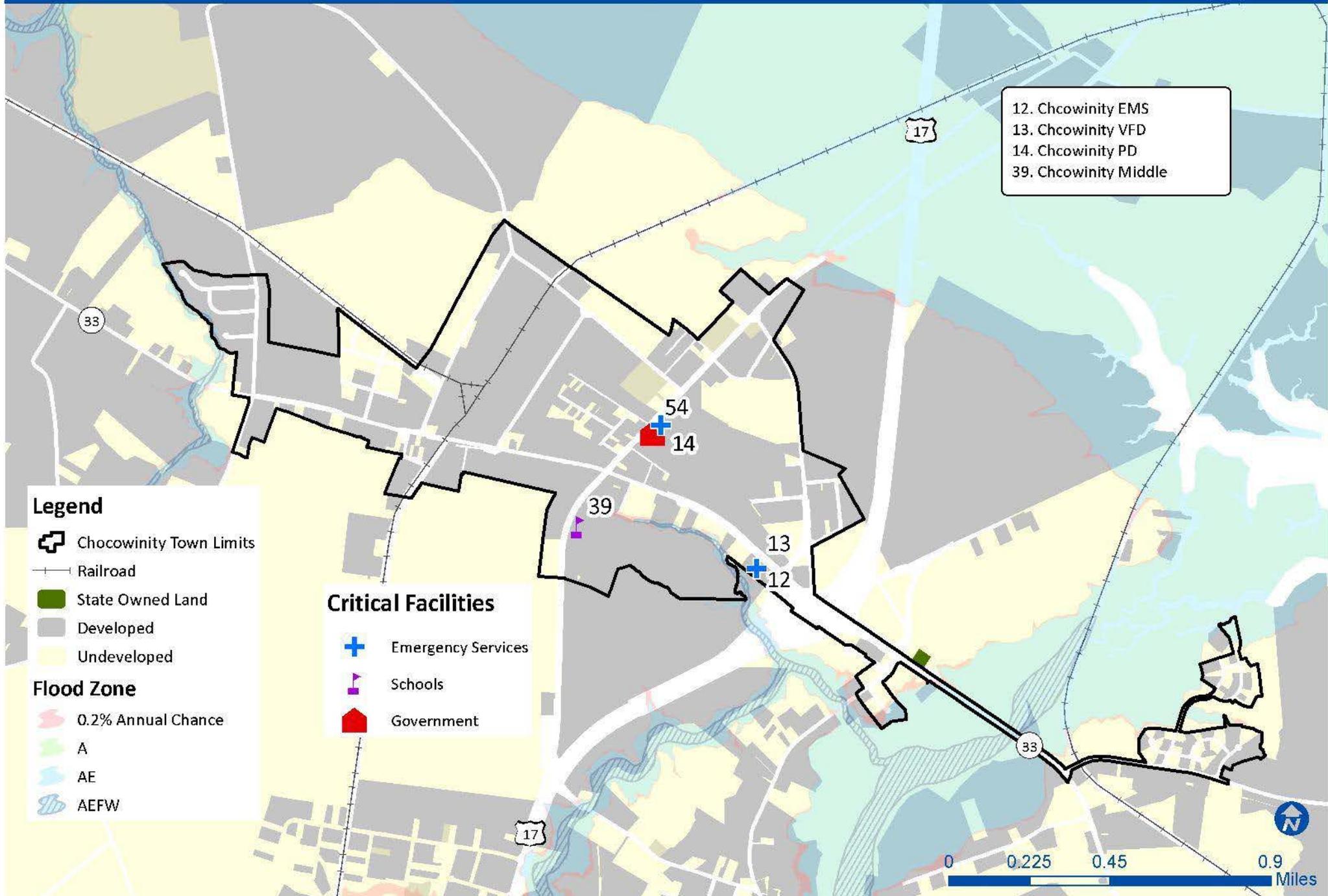
Map 4 - Bath Flood Hazard Areas & Critical Facilities



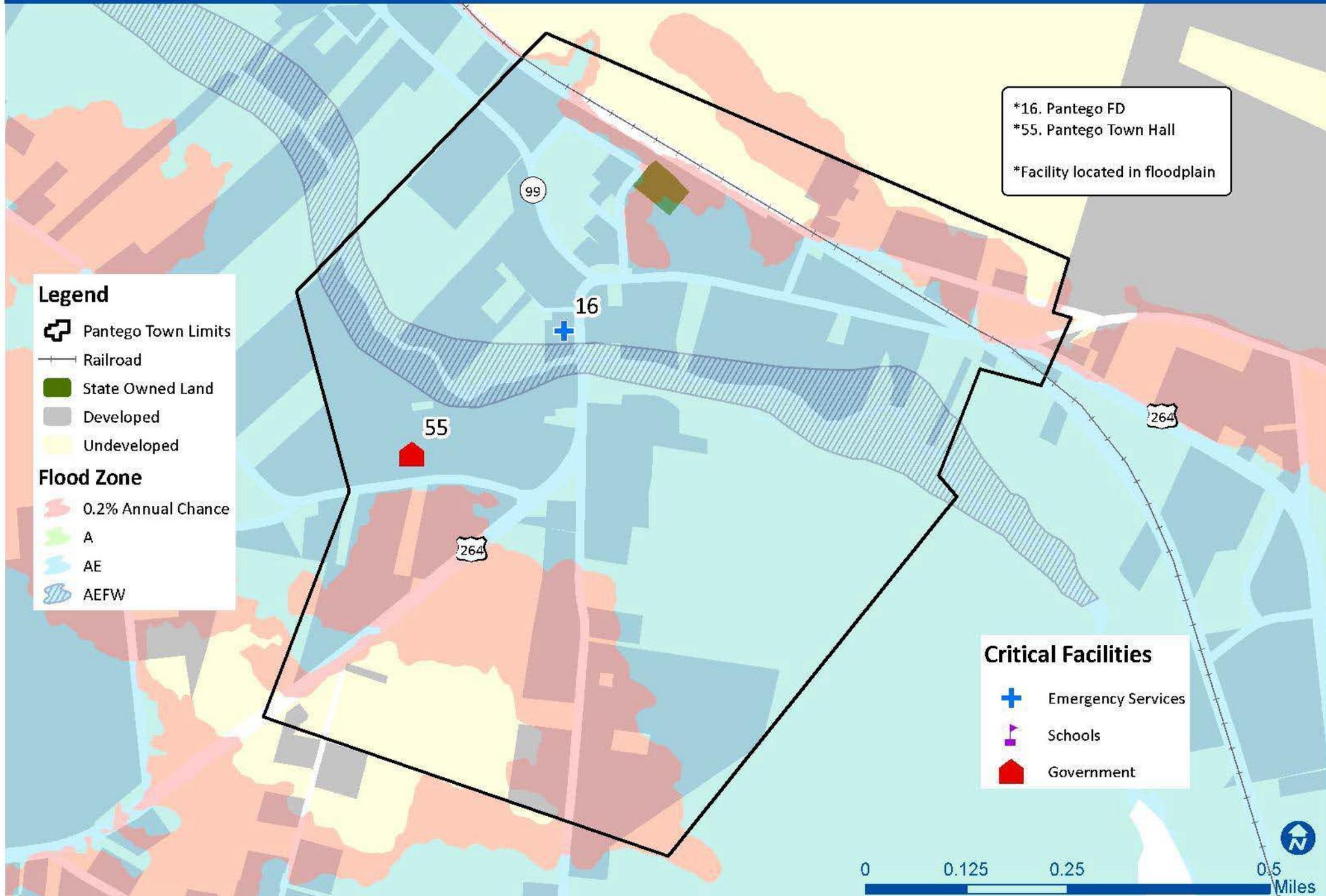
Map 5 - Belhaven Flood Hazard Areas & Critical Facilities



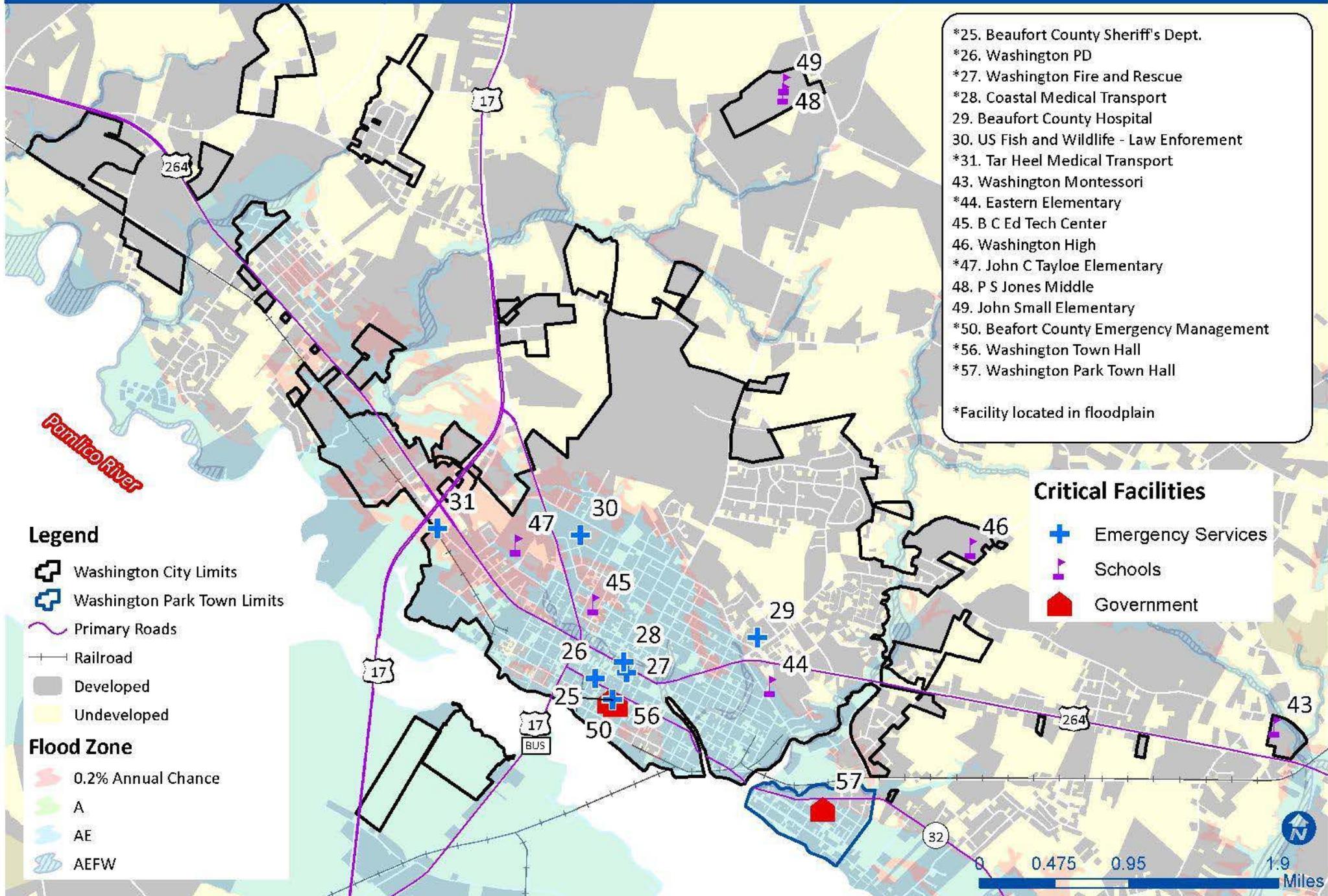
Map 6 - Chocowinity Flood Hazard Areas & Critical Facilities



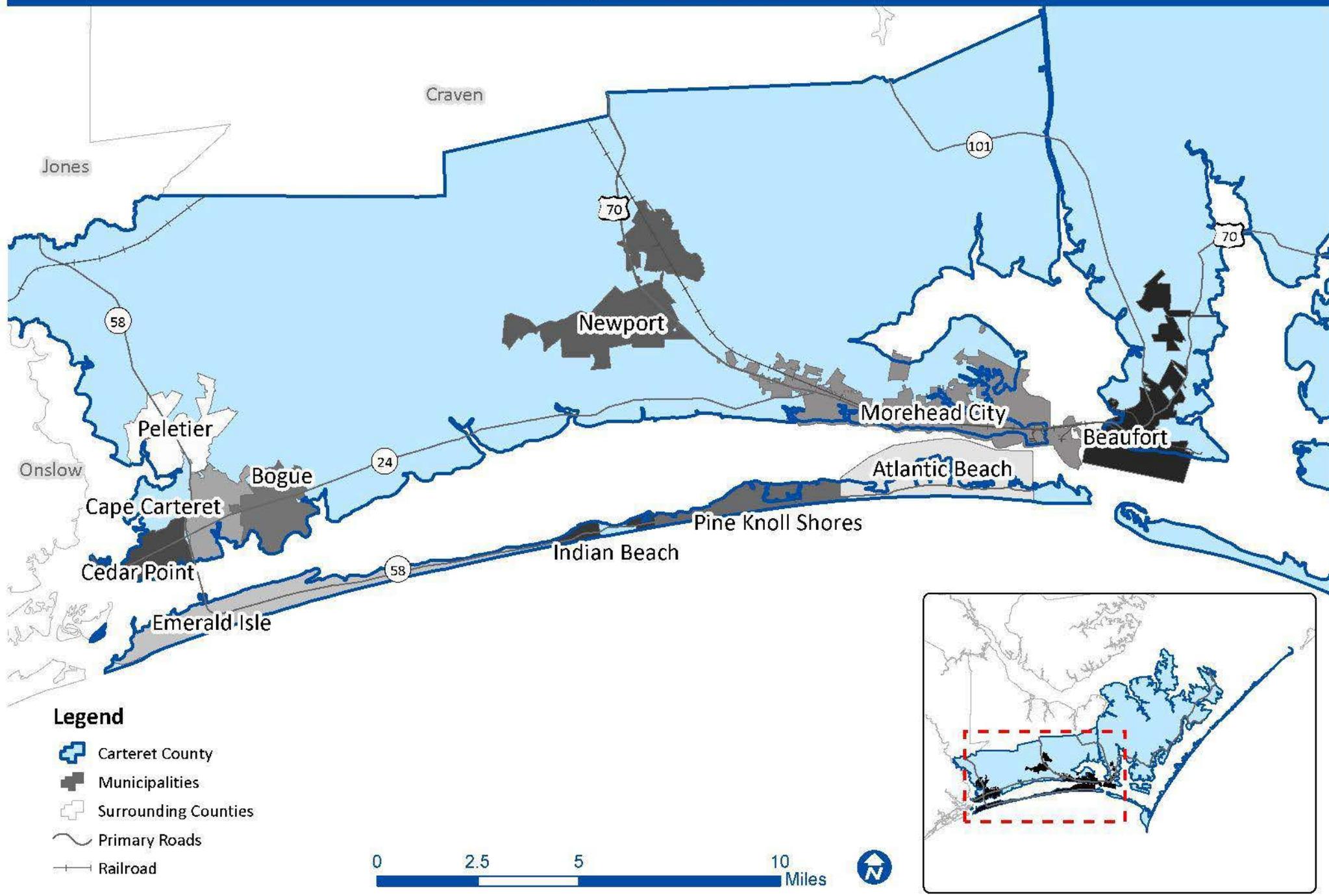
Map 7 - Pantego Flood Hazard Areas & Critical Facilities



Map 8 - Washington & Washington Park Flood Hazard Areas & Critical Facilities

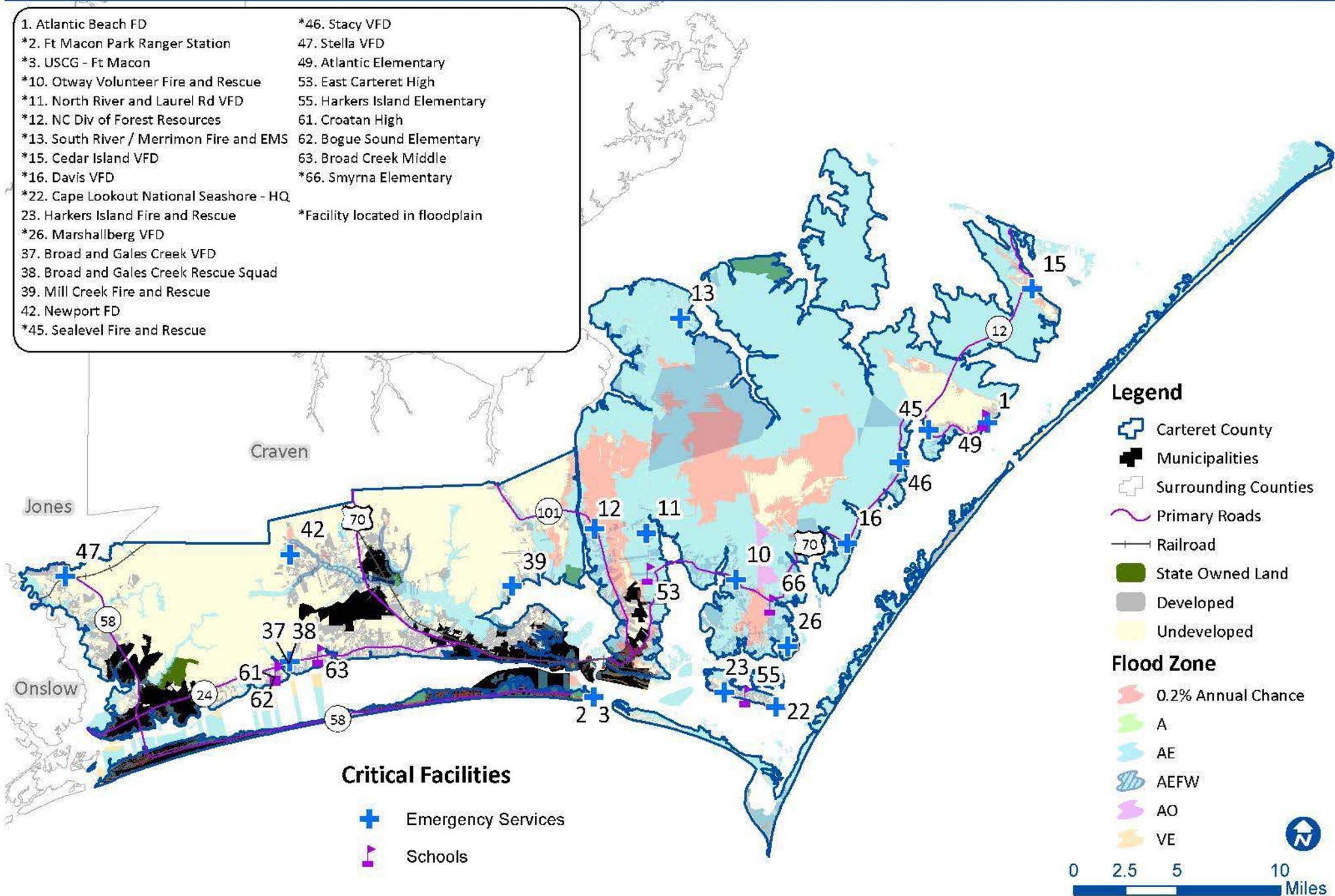


Map 9 - Carteret County Non-Specific Hazards



Map 10 - Carteret County Flood Hazard Areas & Critical Facilities

- | | |
|--|---------------------------------|
| 1. Atlantic Beach FD | *46. Stacy VFD |
| *2. Ft Macon Park Ranger Station | 47. Stella VFD |
| *3. USCG - Ft Macon | 49. Atlantic Elementary |
| *10. Otway Volunteer Fire and Rescue | 53. East Carteret High |
| *11. North River and Laurel Rd VFD | 55. Harkers Island Elementary |
| *12. NC Div of Forest Resources | 61. Croatan High |
| *13. South River / Merrimon Fire and EMS | 62. Bogue Sound Elementary |
| *15. Cedar Island VFD | 63. Broad Creek Middle |
| *16. Davis VFD | *66. Smyrna Elementary |
| *22. Cape Lookout National Seashore - HQ | *Facility located in floodplain |
| 23. Harkers Island Fire and Rescue | |
| *26. Marshallberg VFD | |
| 37. Broad and Gales Creek VFD | |
| 38. Broad and Gales Creek Rescue Squad | |
| 39. Mill Creek Fire and Rescue | |
| 42. Newport FD | |
| *45. Sealevel Fire and Rescue | |



Map 11 - Atlantic Beach, Beaufort & Morehead City Flood Hazard Areas & Critical Facilities

- *4. Atlantic Beach FD
- *5. Atlantic Beach PD
- 6. Beaufort FD
- *7. Beaufort PD
- 8. Carteret County Sherriff's Department
- *9. Beaufort EMS
- *27. Morehead City PD
- *28. NC Port Authority
- 29. Morehead City FD and EMS - 1
- 30. Morehead City FD and EMS - 2
- 31. Carteret General Hospital
- 32. US Customs and Border Protection
- 33. Medical Transport Solutions
- 34. Morehead City FD and EMS - 3
- 35. Wildwood VFD
- 36. NC Highway Patrol

- 50. Beaufort Elementary
- *51. Beaufort Middle
- 52. Tiller School
- 56. Cape Lookout Marine Science HS
- 57. Morehead Elementary
- 59. Morehead City Primary
- 60. West Carteret High
- *67. Carteret County Emergency Operations Center
- *68. Atlantic Beach Town Hall
- *69. Beaufort Town Hall
- 75. Morehead City Town Hall

*Facility located in floodplain

Legend

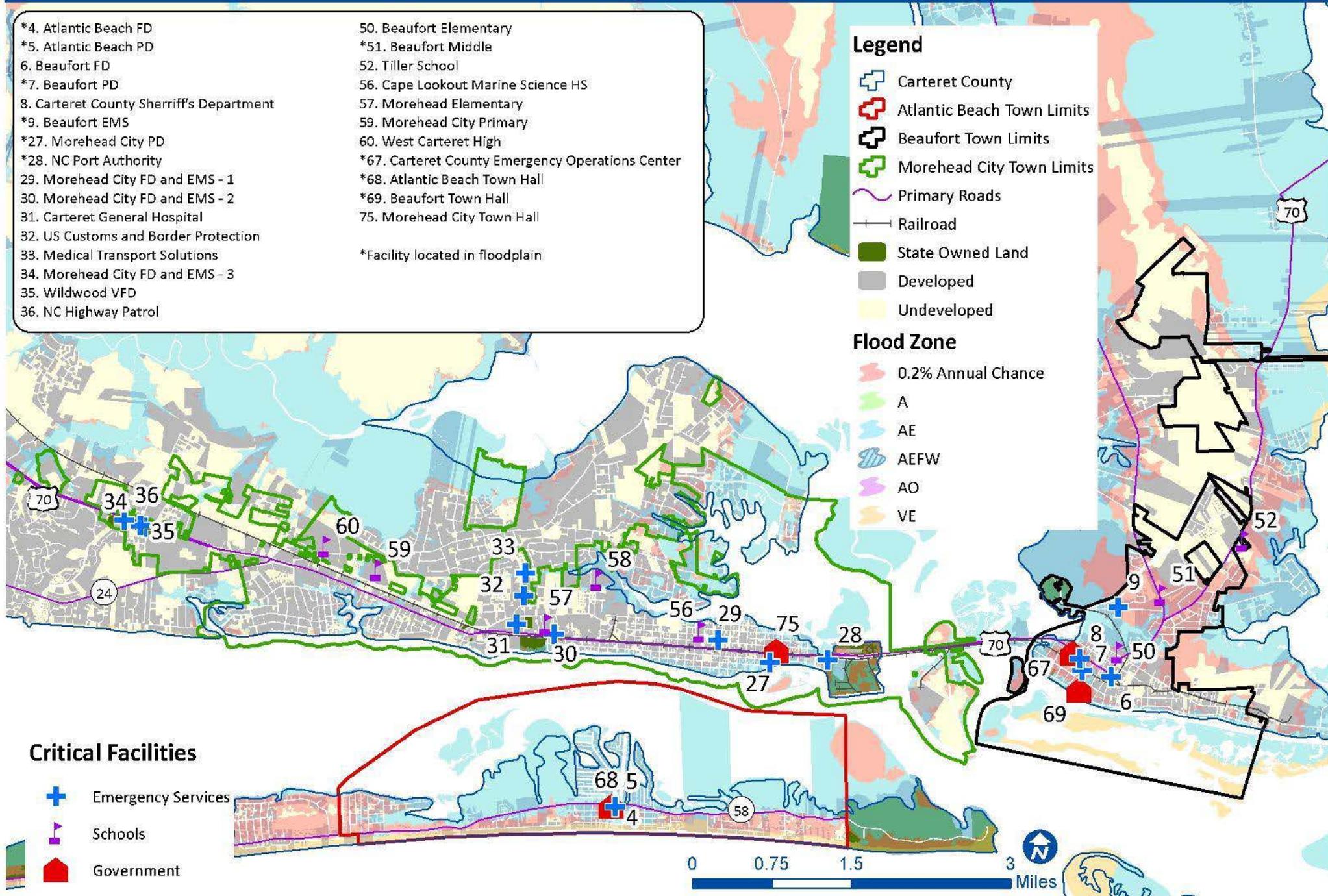
- Carteret County
- Atlantic Beach Town Limits
- Beaufort Town Limits
- Morehead City Town Limits
- Primary Roads
- Railroad
- State Owned Land
- Developed
- Undeveloped

Flood Zone

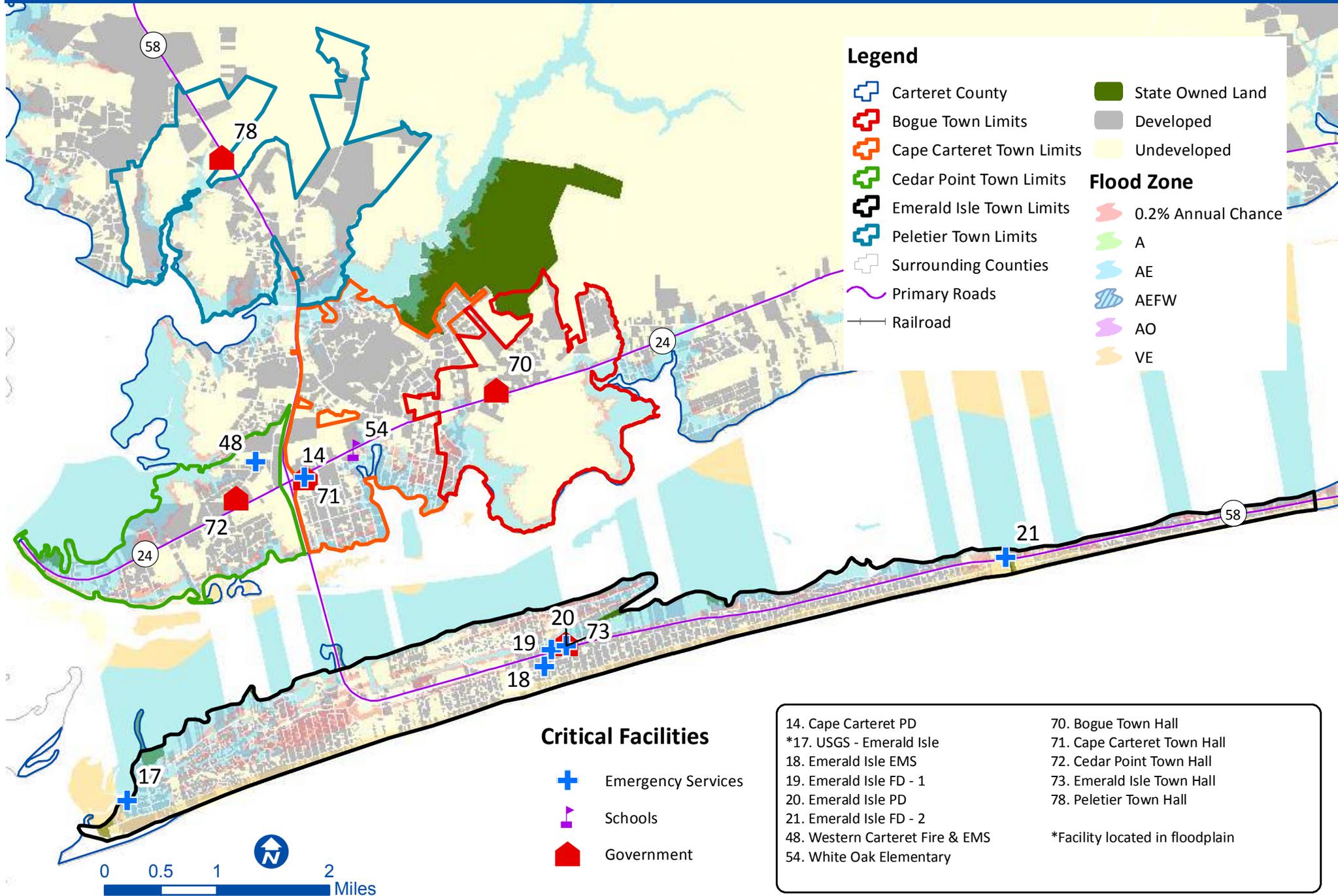
- 0.2% Annual Chance
- A
- AE
- AEFW
- AO
- VE

Critical Facilities

- Emergency Services
- Schools
- Government



Map 12 - Bogue, Cape Carteret, Cedar Point, Emerald Isle & Peletier Flood Hazard Areas & Critical Facilities



Map 13 - Indian Beach & Pine Knoll Shores Flood Hazard Areas & Critical Facilities

Legend

- | | |
|---|--|
|  Carteret County | Flood Zone |
|  Indian Beach |  0.2% Annual Chance |
|  Pine Knoll Shores |  A |
|  Primary Roads |  AE |
|  Railroad |  AEFW |
|  State Owned Land |  AO |
|  Developed |  VE |
|  Undeveloped | |

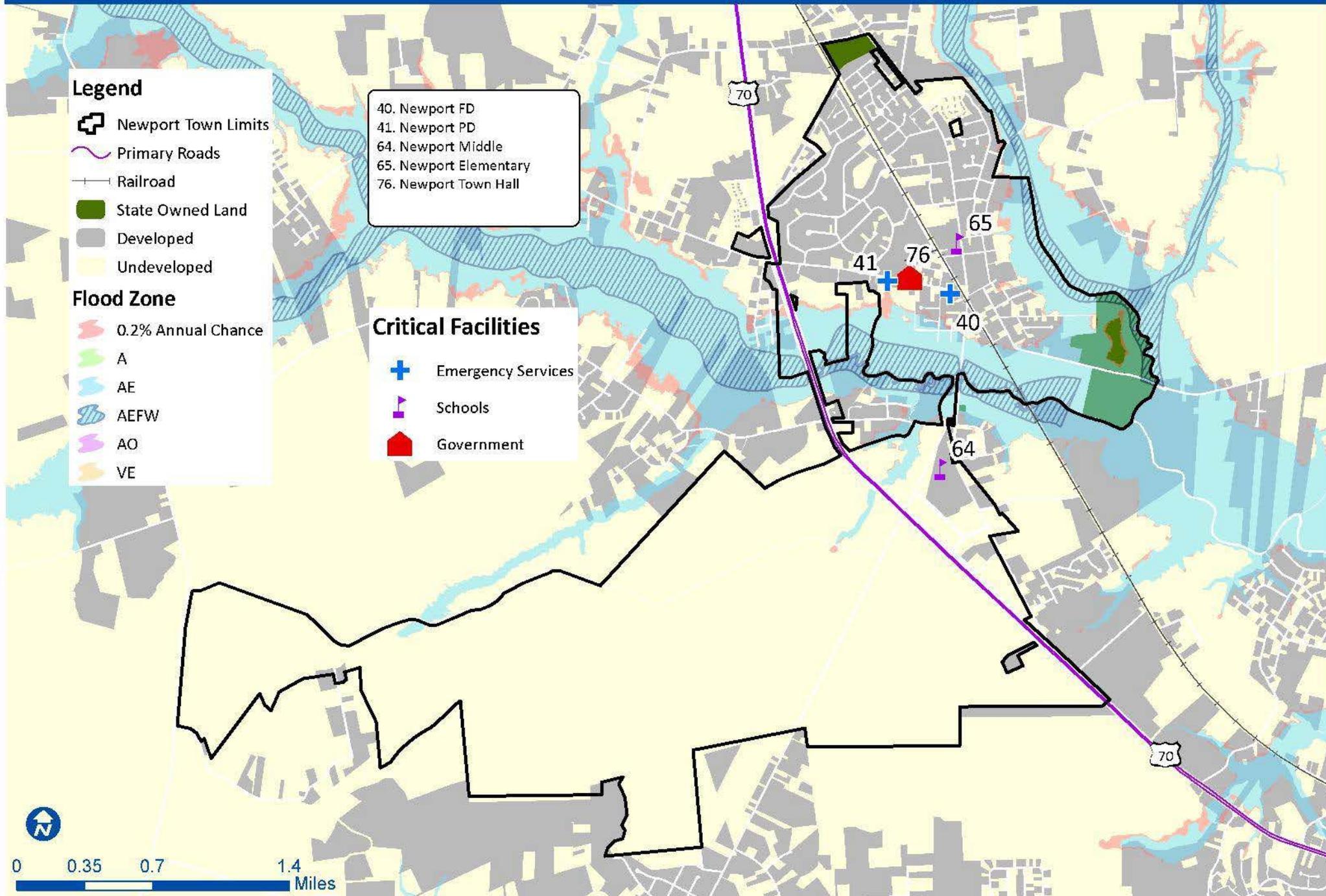
Critical Facilities

-  Emergency Services
-  Schools
-  Government

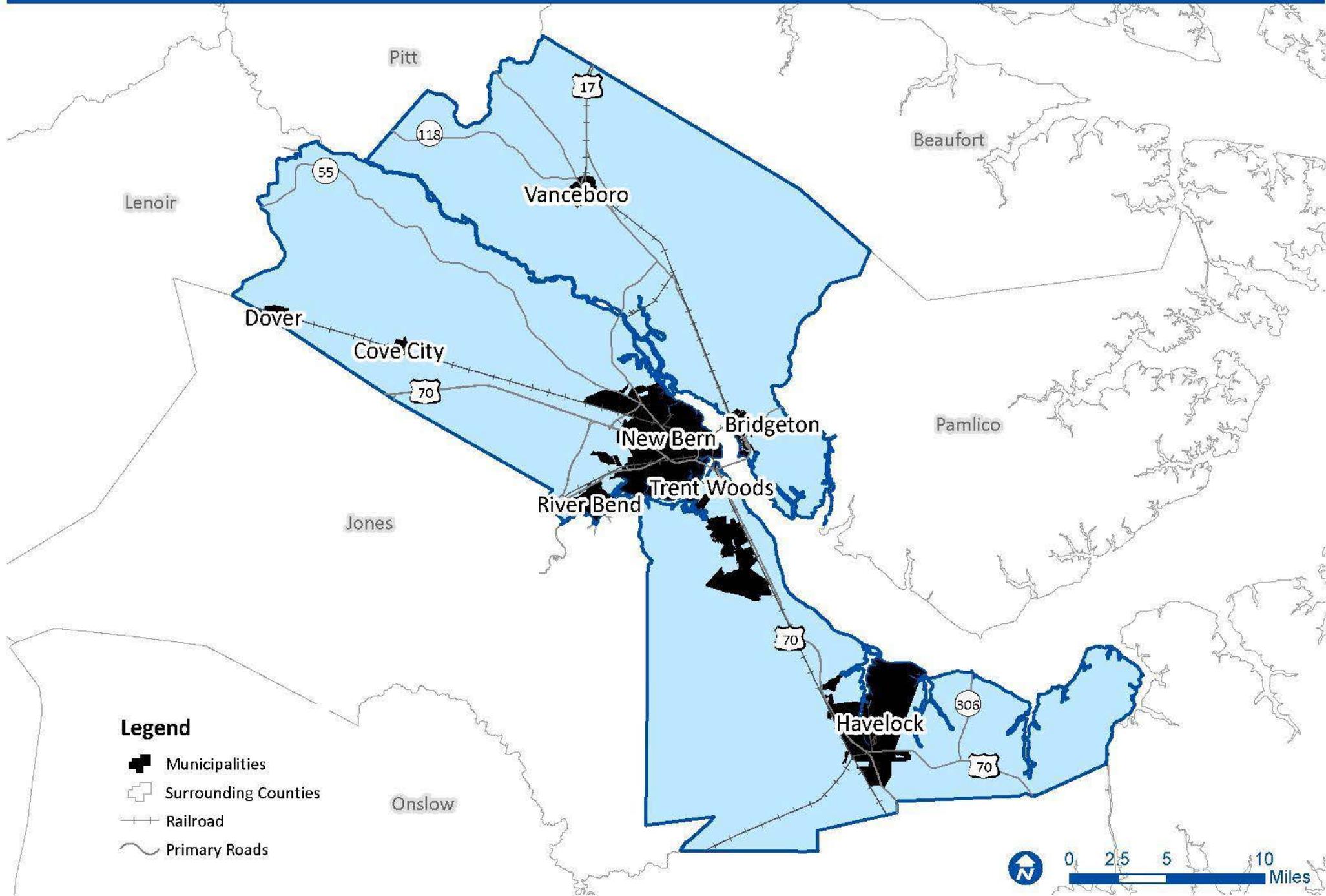
- *24. Indian Beach PD
 - *25. Salter Path VFD & EMS
 - 43. Pine Knoll Shores PD
 - 44. Pine Knoll Shores FD & EMS
 - *74. Indian Beach Town Hall
 - *77. Pine Knoll Shores Town Hall
- *Facility located in floodplain



Map 14 - Newport Flood Hazard Areas & Critical Facilities



Map 15 - Craven County Non-Specific Hazards



Map 16 - Craven County Flood Hazard Areas & Critical Facilities

Critical Facilities

-  Schools
-  Emergency Services

- | | |
|-----------------------------------|---|
| 7. Cove City Fire and Rescue | 43. West of New Bern VFD |
| 9. Number 9 Township VFD | 45. Tri-Community VFD - Main |
| 11. Fort Barnwell VFD | 46. Little Creek VFD * |
| 12. Fort Barnwell Rescue Squad * | 47. Tri-Community VFD |
| 13. Fort Barnwell | 48. Township 9 VFD |
| 14. Little Swift Creek VFD - Main | 49. New Bern Craven County Rescue Squad |
| 15. Little Swift Creek VFD | 51. Vanceboro Rural VFD* |
| 16. Harlow VFD | 52. NC Div of Forest Resources Dist 4 |
| 20. Harlow VFD | 53. Little Creek VFD |
| 21. Harlow VFD * | 57. Vanceboro Rural VFD |
| 22. Township 6 FD | 58. Vanceboro Rural VFD |
| 23. US Forest Service | 59. James W Smith Elementary |
| 24. Township 7 VFD | 70. Brinson Memorial Elementary |
| 26. Township 7 VFD * | 81. West Craven Middle |
| 27. Rhems VFD | 82. West Craven High* |
| 29. Township 7 Rescue Squad | |
| 30. Township 7 VFD | |
| 32. Tri-Community VFD | |

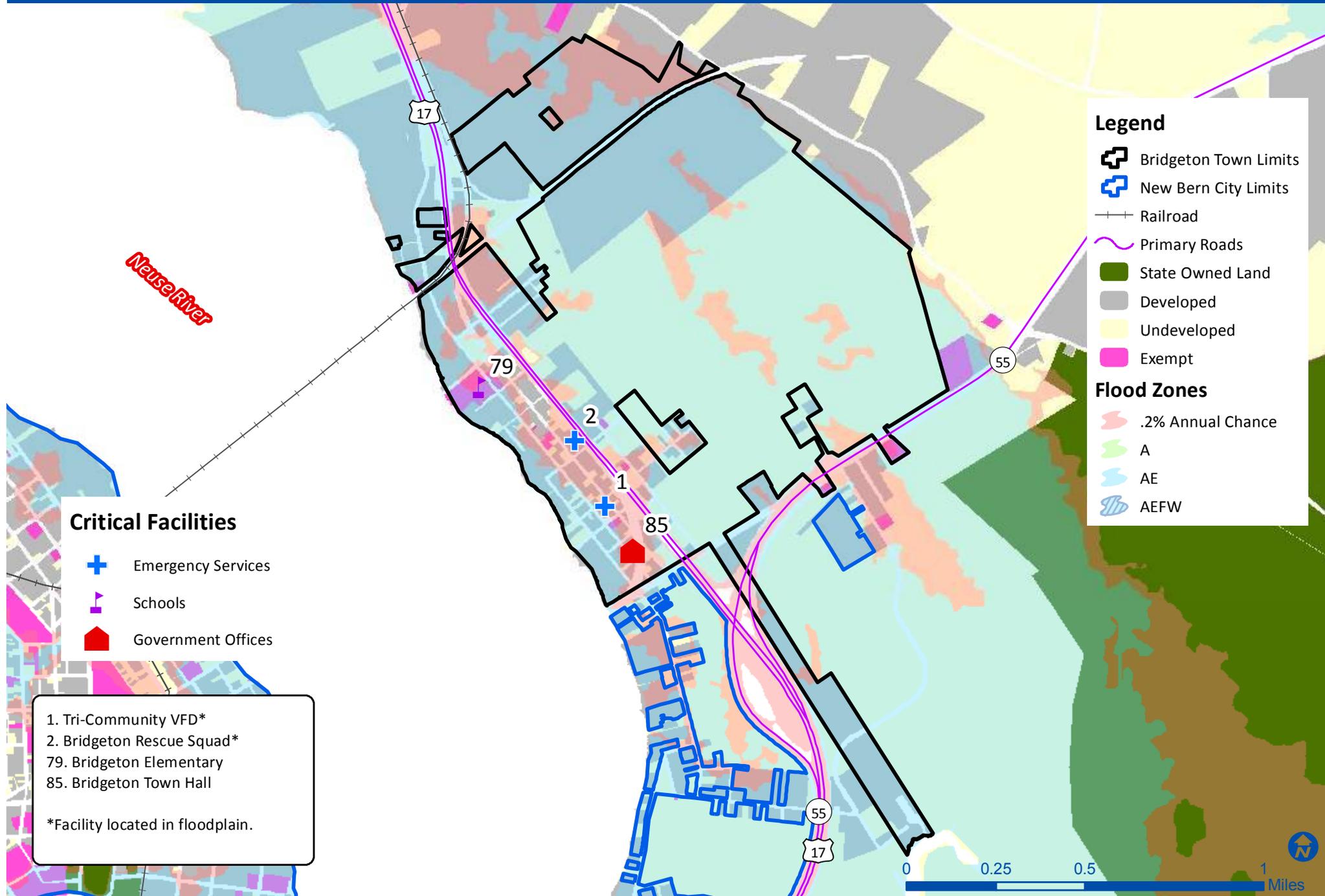
*Facility located in floodplain.

Legend

- Municipalities 
- Surrounding Counties 
- Railroad 
- Primary Roads 
- River 
- State Owned Land 
- Developed 
- Undeveloped 
- Exempt 



Map 17 - Bridgeton Flood Hazard Areas & Critical Facilities



Map 18 - Cove City Flood Hazard Areas & Critical Facilities

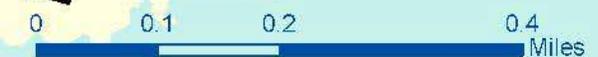
Critical Facilities

-  Emergency Services
-  Schools
-  Government Offices

Legend

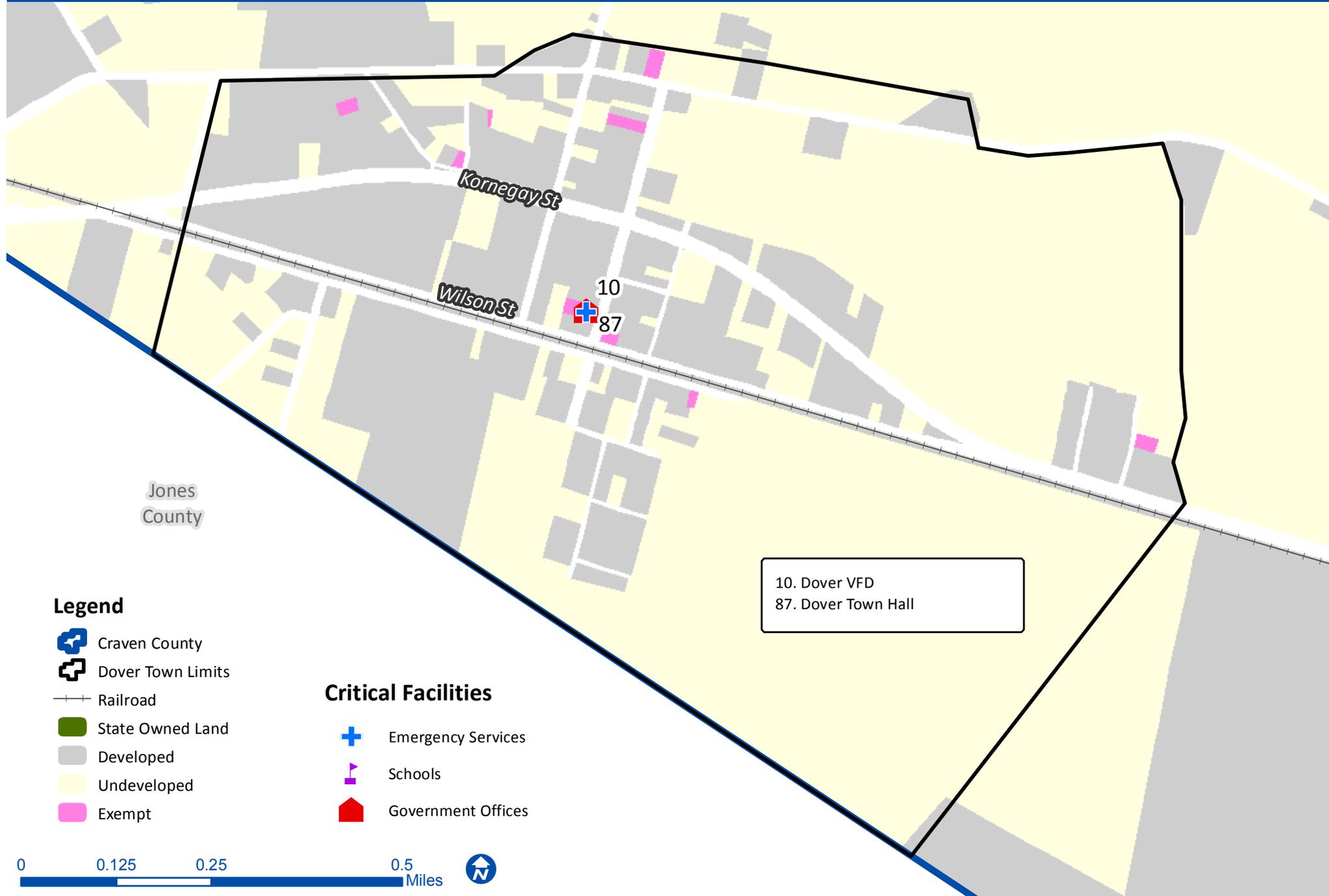
-  Cove City Town Limits
-  Railroad
-  State Owned Land
-  Developed
-  Undeveloped
-  Exempt
- Flood Zones**
-  .2% Annual Chance
-  A
-  AE
-  AEFW

8. Cove City Rescue Squad
86. Cove City Town Hall

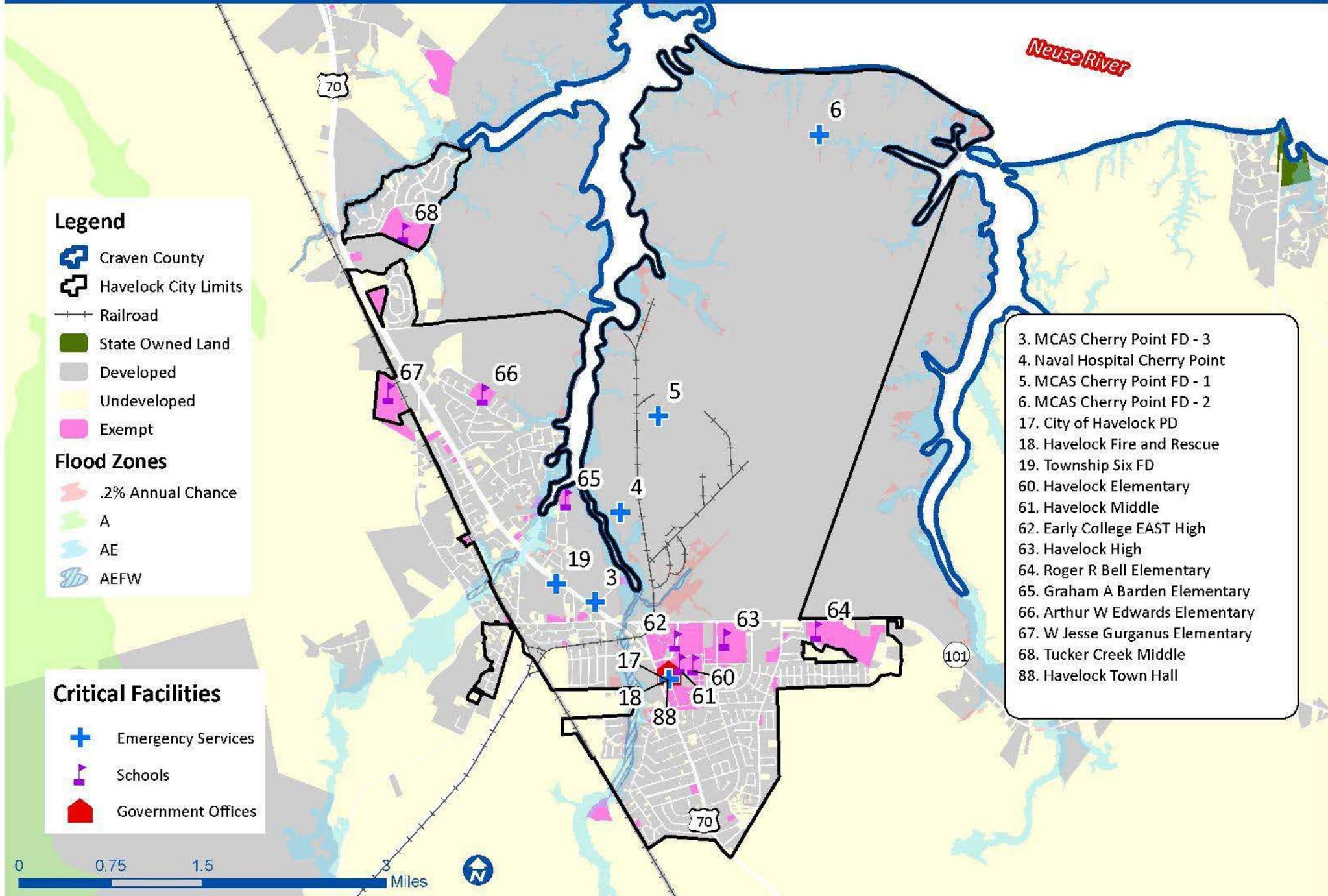


Map 19 - Dover

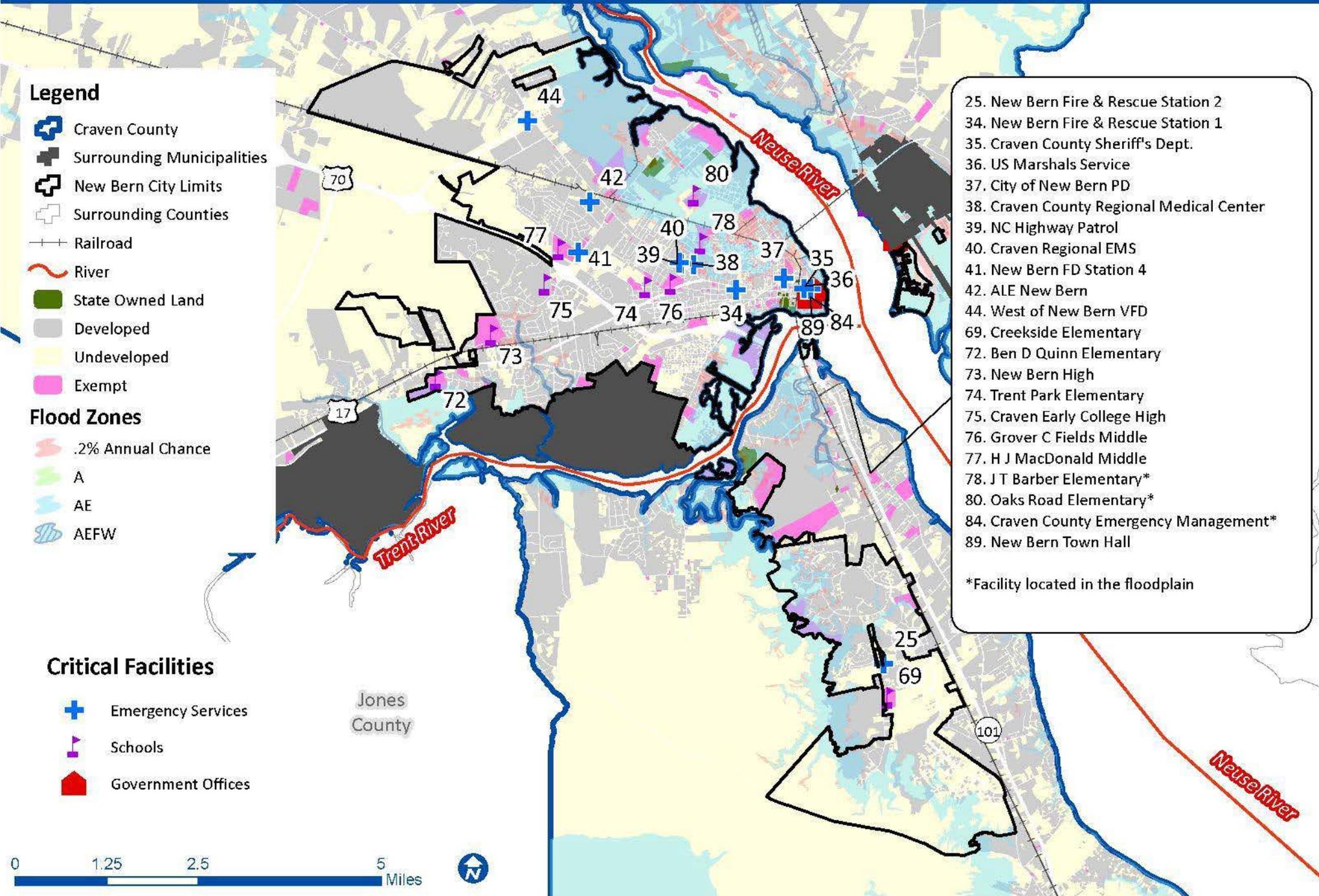
Flood Hazard Areas & Critical Facilities



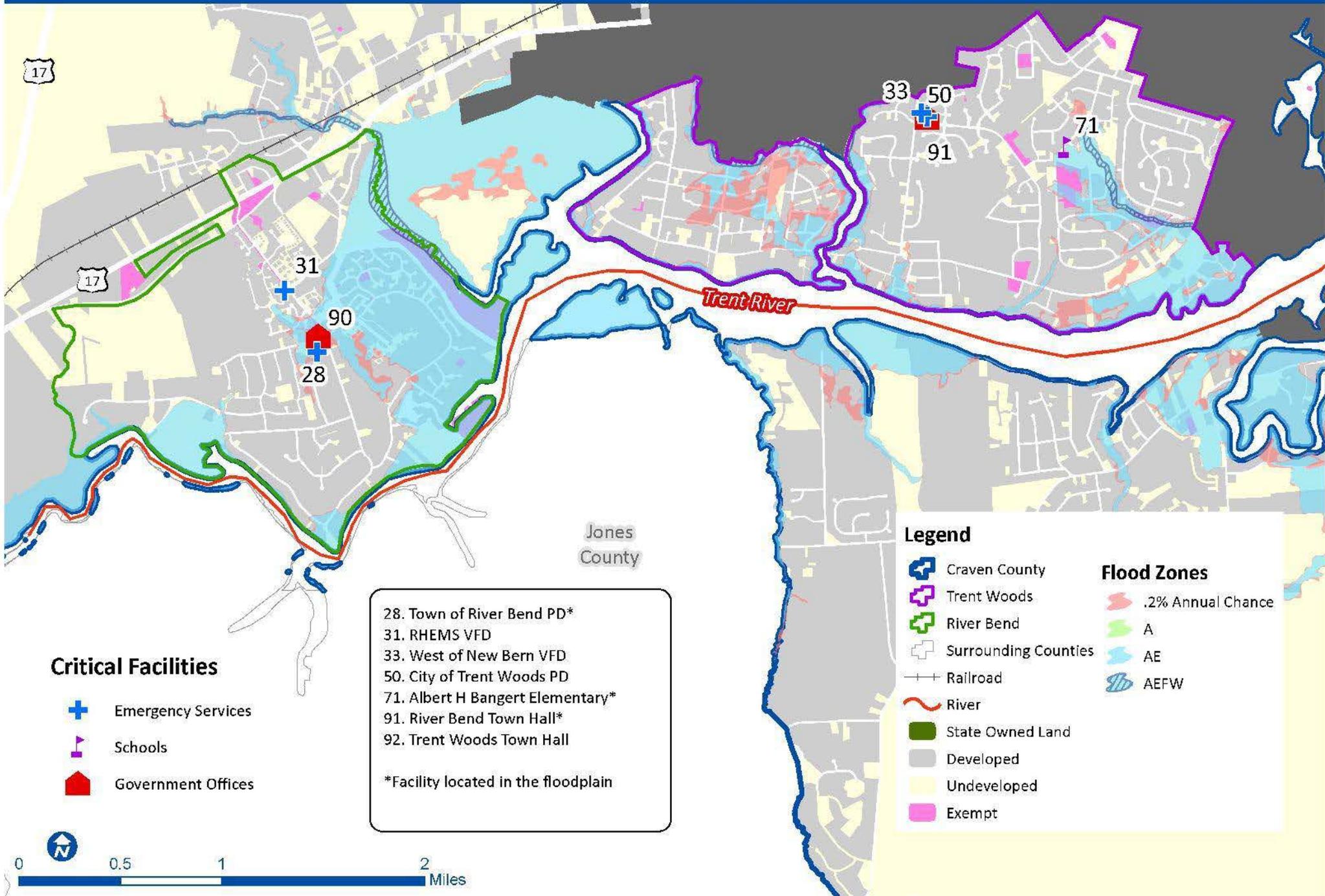
Map 20 - Havelock Flood Hazard Areas & Critical Facilities



Map 21 - New Bern Flood Hazard Areas & Critical Facilities



Map 22 - River Bend & Trent Woods Flood Hazard Areas & Critical Facilities



Map 23 - Vanceboro Flood Hazard Areas & Critical Facilities

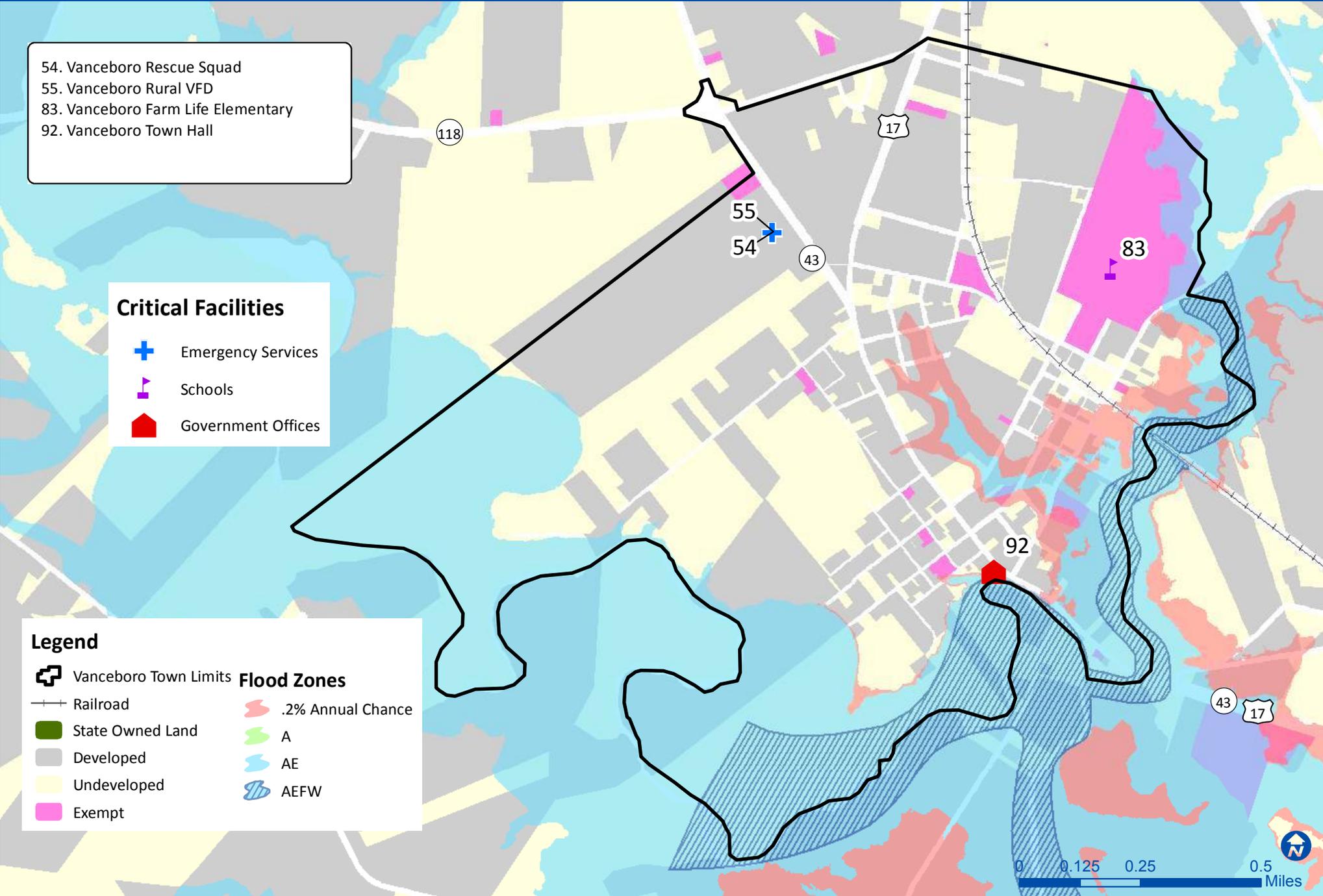
- 54. Vanceboro Rescue Squad
- 55. Vanceboro Rural VFD
- 83. Vanceboro Farm Life Elementary
- 92. Vanceboro Town Hall

Critical Facilities

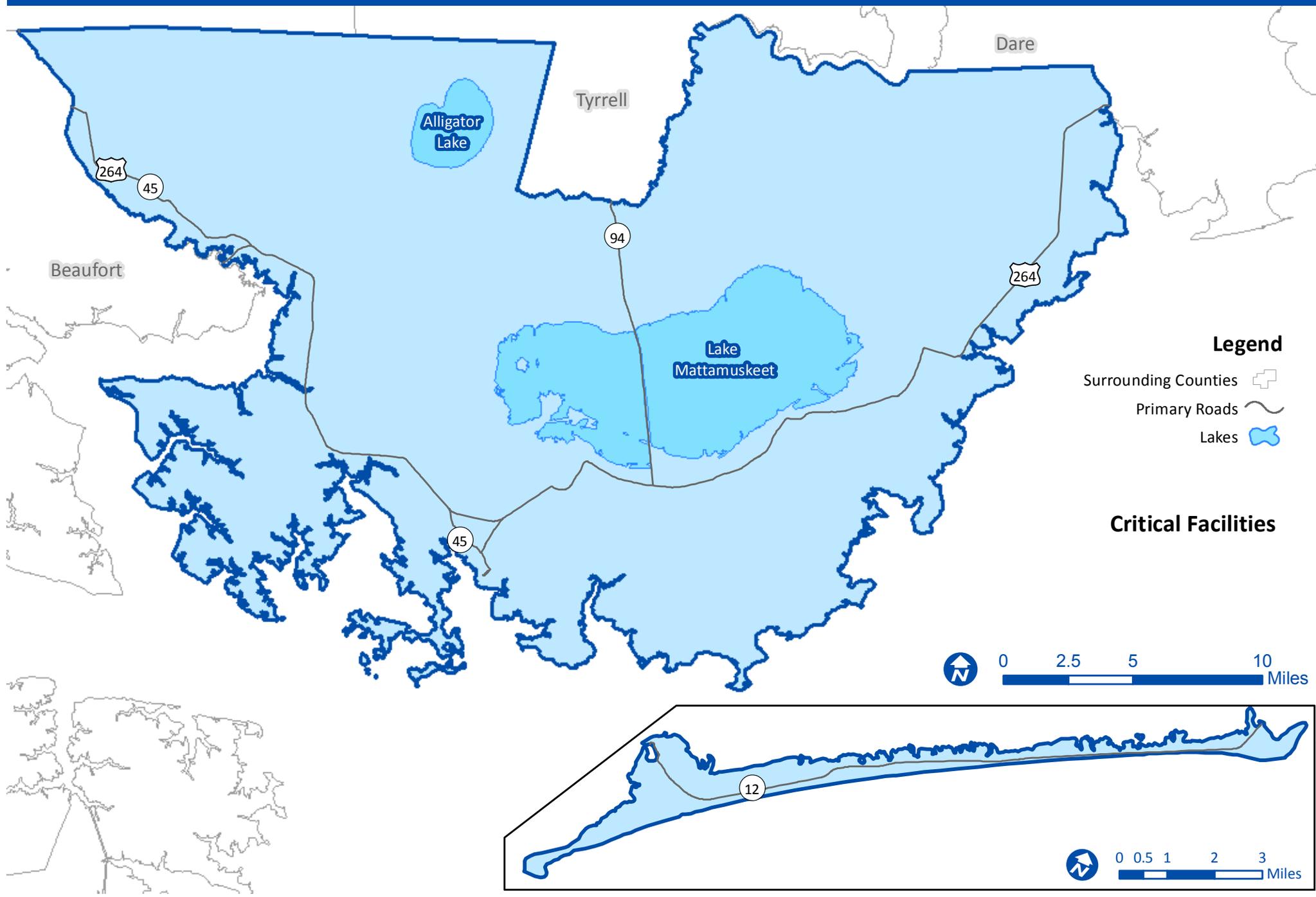
-  Emergency Services
-  Schools
-  Government Offices

Legend

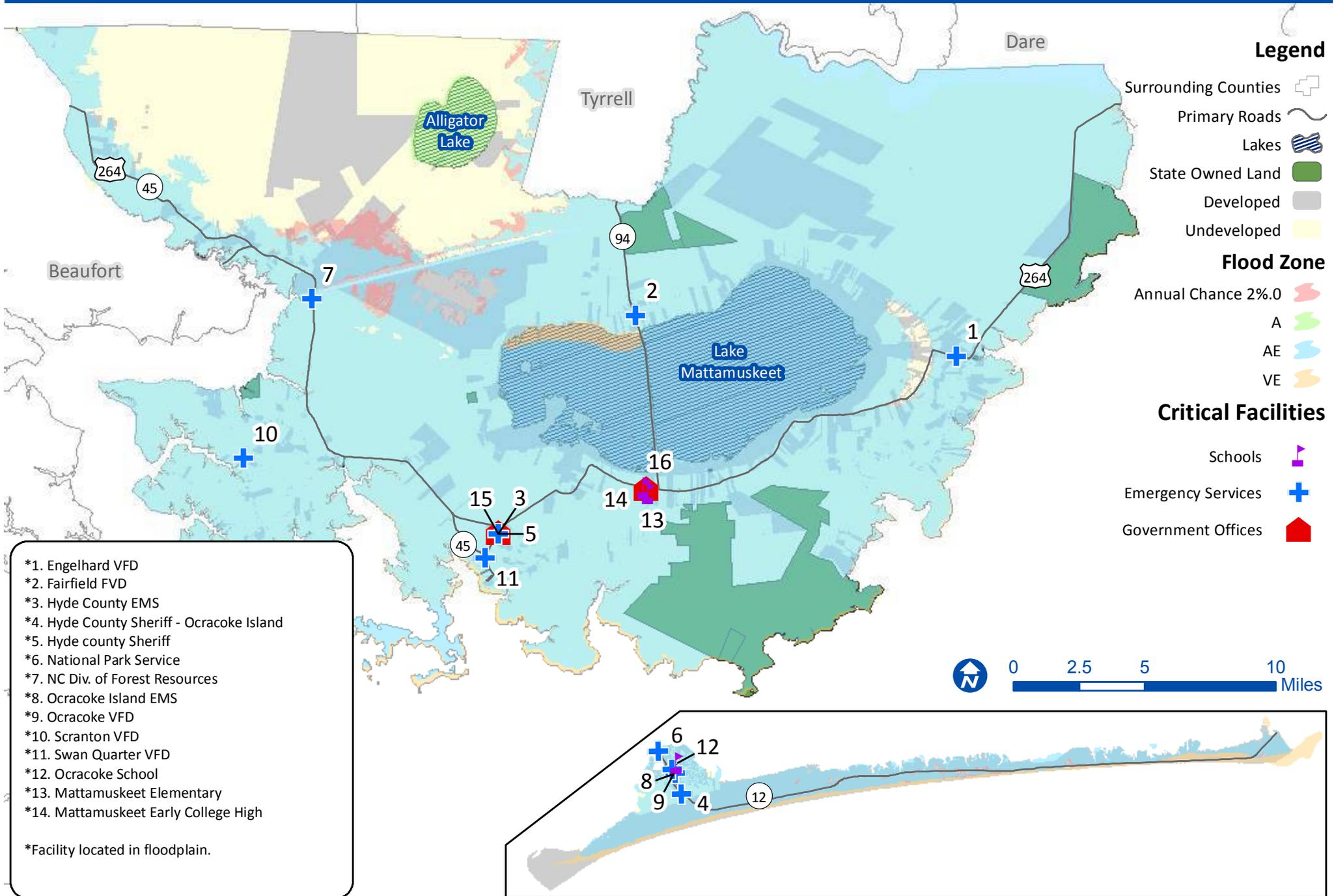
- | | |
|--|---|
|  Vanceboro Town Limits | Flood Zones |
|  Railroad |  .2% Annual Chance |
|  State Owned Land |  A |
|  Developed |  AE |
|  Undeveloped |  AEFW |
|  Exempt | |



Map 24 - Hyde County Non-Specific Hazards



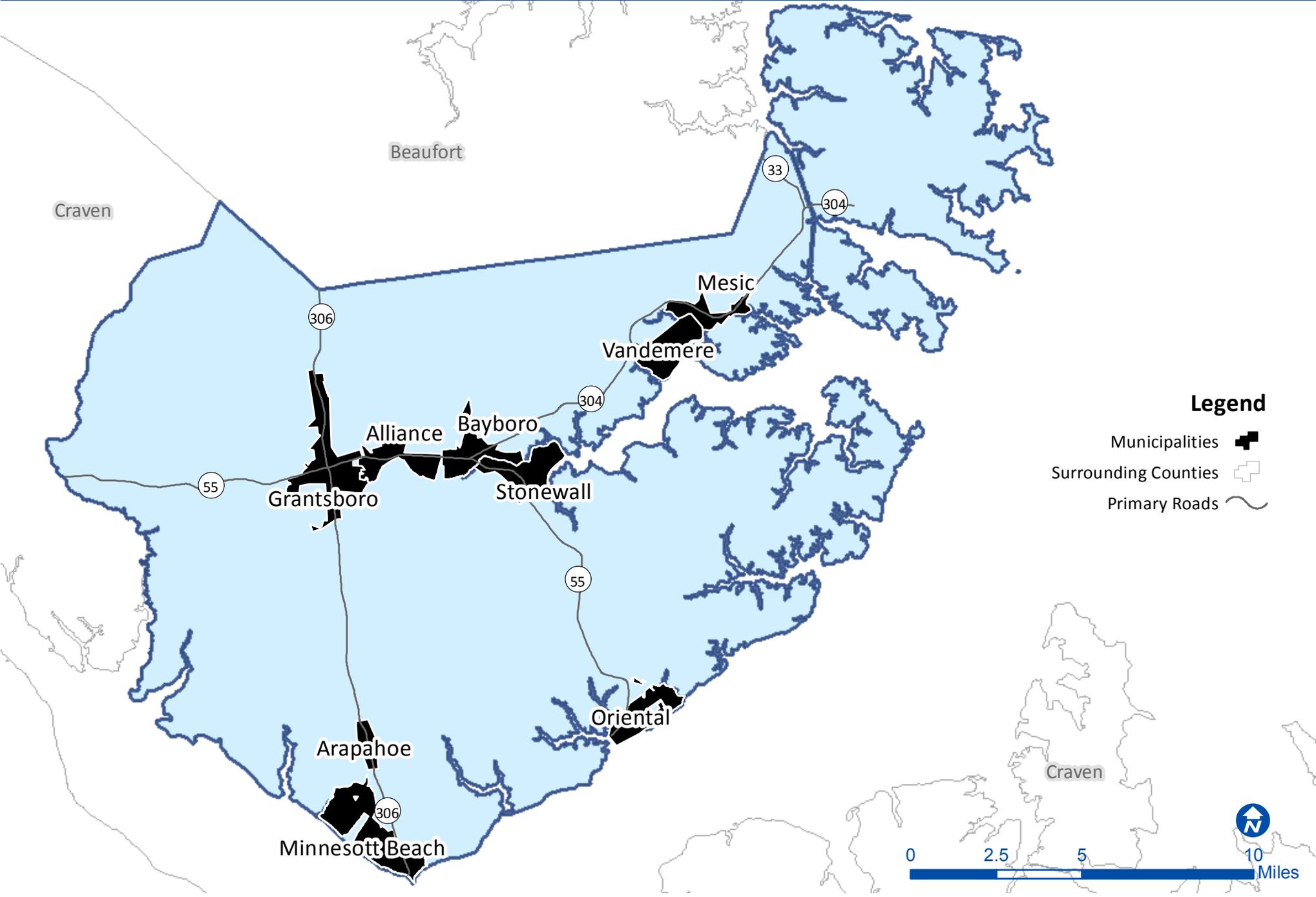
Map 25 - Hyde County Flood Hazard Areas & Critical Facilities



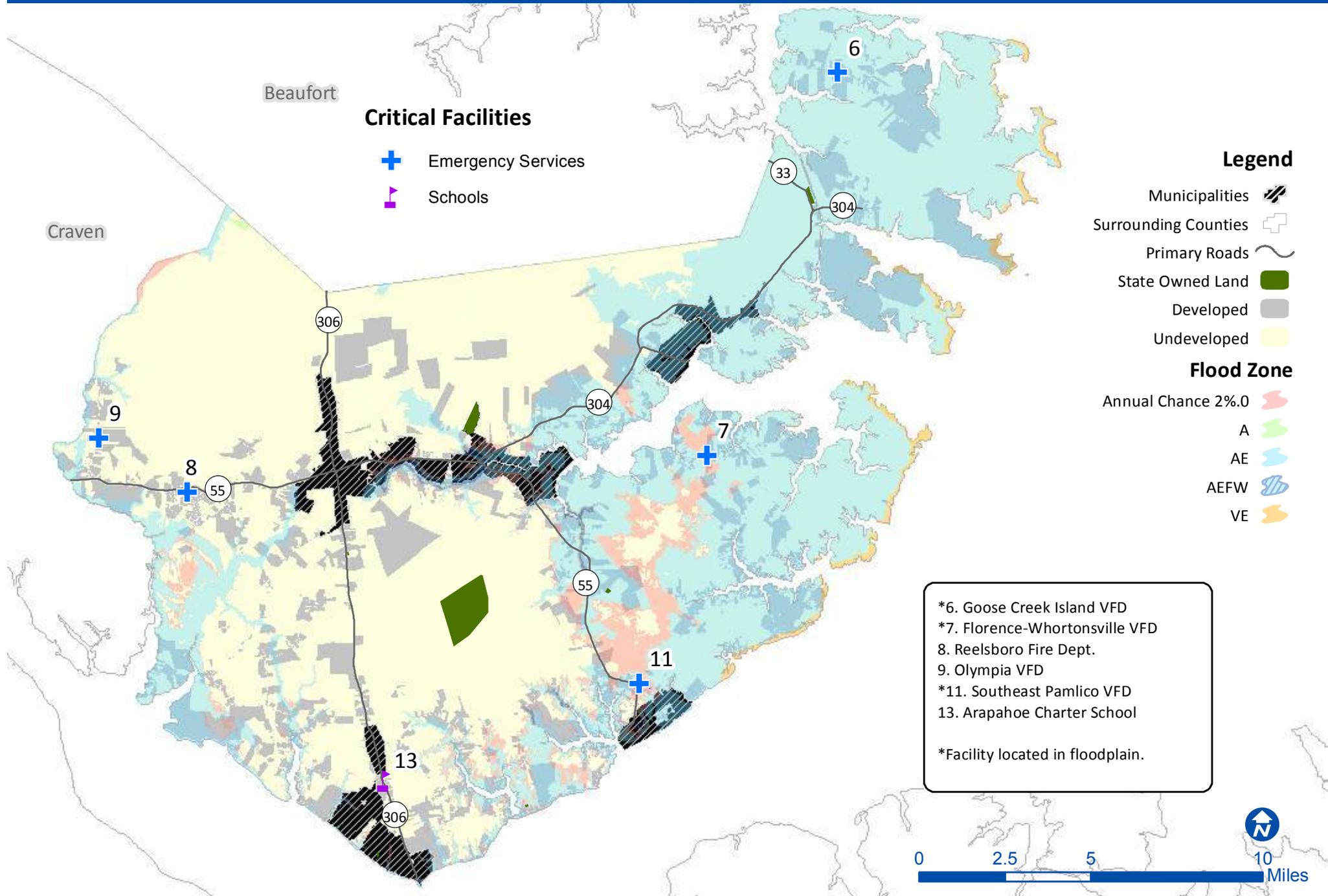
- *1. Engelhard VFD
- *2. Fairfield FVD
- *3. Hyde County EMS
- *4. Hyde County Sheriff - Ocracoke Island
- *5. Hyde county Sheriff
- *6. National Park Service
- *7. NC Div. of Forest Resources
- *8. Ocracoke Island EMS
- *9. Ocracoke VFD
- *10. Scranton VFD
- *11. Swan Quarter VFD
- *12. Ocracoke School
- *13. Mattamuskeet Elementary
- *14. Mattamuskeet Early College High

*Facility located in floodplain.

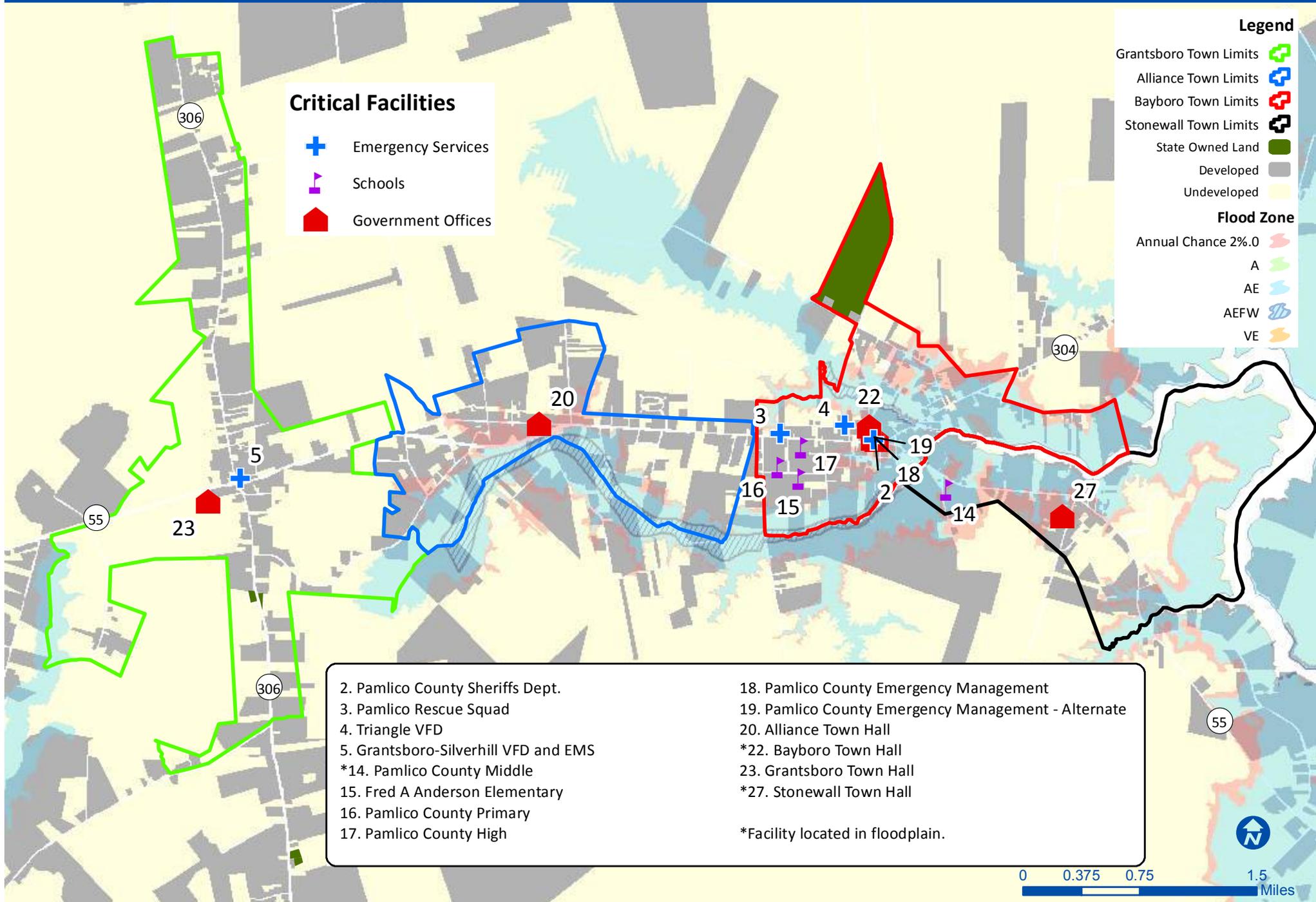
Map 26 - Pamlico County Non-Specific Hazards



Map 27 - Pamlico County Flood Hazard Areas & Critical Facilities



Map 28 - Alliance, Bayboro, Grantsboro & Stonewall Flood Hazard Areas & Critical Facilities



Map 29 - Arapahoe & Minnesott Beach Flood Hazard Areas & Critical Facilities

Legend

-  Arapahoe Town Limits
-  Minnesott Beach Town Limits
-  State Owned Land
-  Developed
-  Undeveloped

Flood Zone

-  0.2% Annual Chance
-  AE

Critical Facilities

-  Emergency Services
-  Government Offices

- 1. Arapahoe VFD
- 21. Arapahoe Town Hall
- 24. Minnesott Beach Town Hall



Map 30 - Mesic & Vandemere Flood Hazard Areas & Critical Facilities

Legend

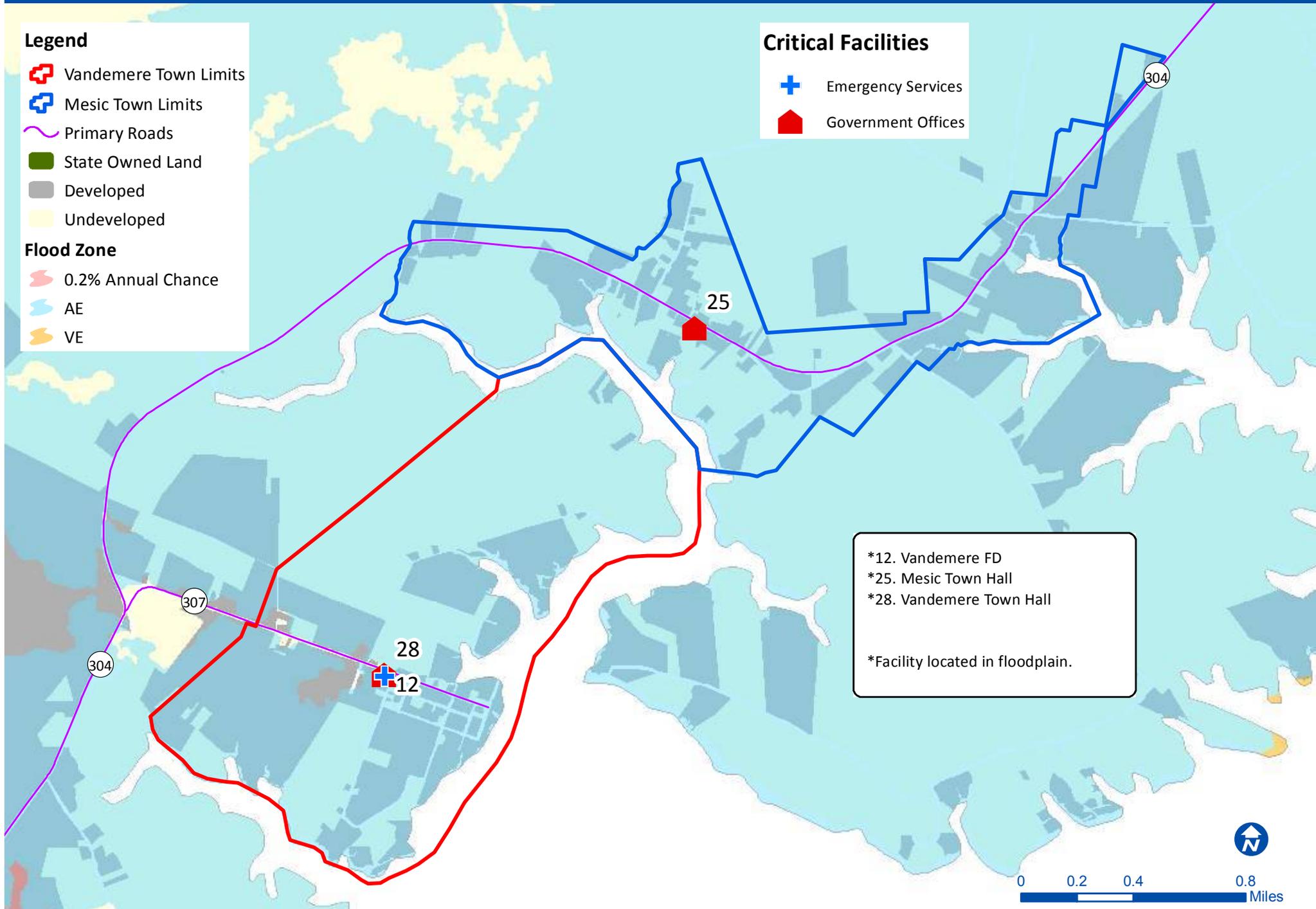
- Vandemere Town Limits
- Mesic Town Limits
- Primary Roads
- State Owned Land
- Developed
- Undeveloped

Flood Zone

- 0.2% Annual Chance
- AE
- VE

Critical Facilities

- Emergency Services
- Government Offices



*12. Vandemere FD
*25. Mesic Town Hall
*28. Vandemere Town Hall

*Facility located in floodplain.

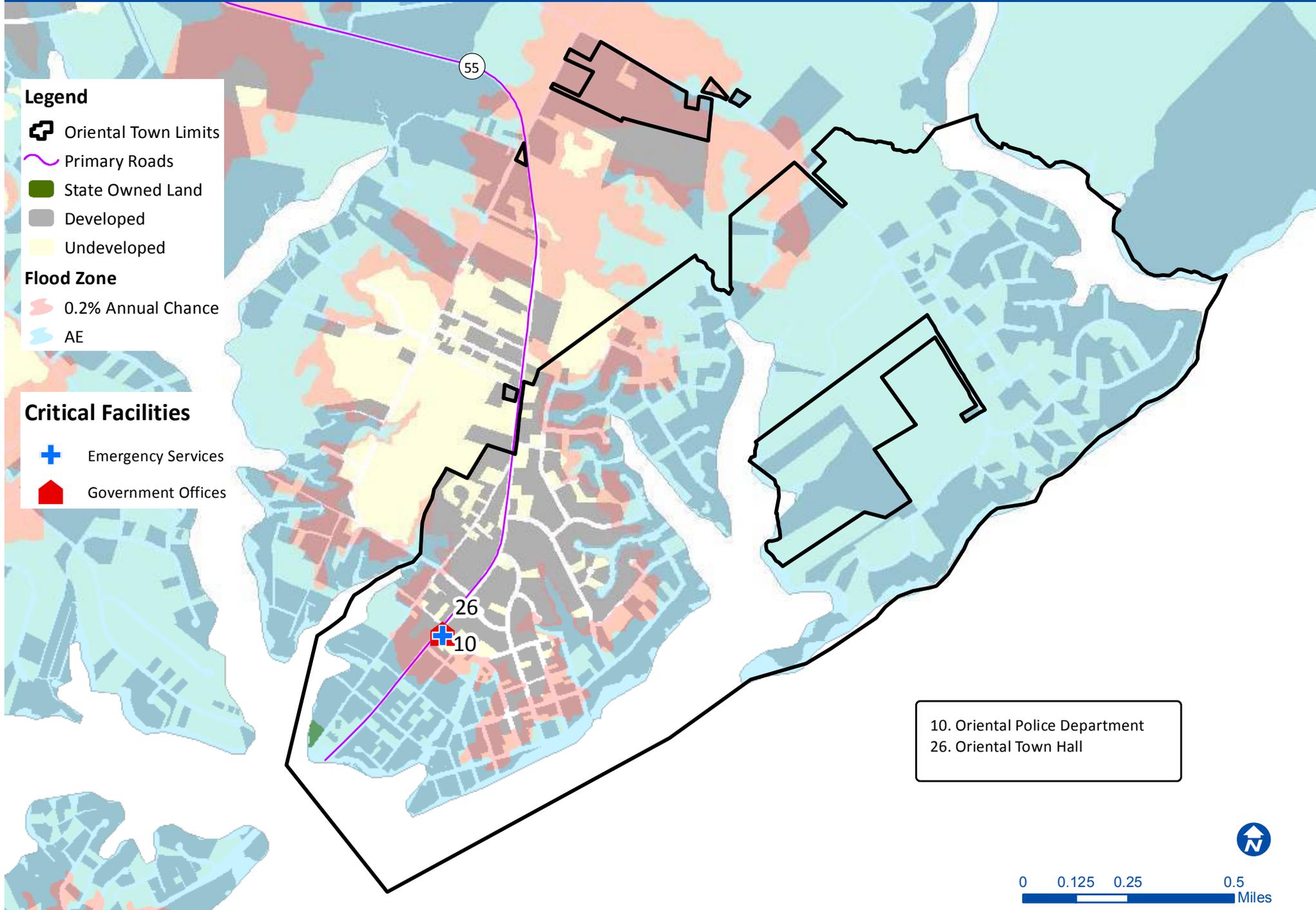
Map 31 - Oriental Flood Hazard Areas & Critical Facilities

Legend

-  Oriental Town Limits
 -  Primary Roads
 -  State Owned Land
 -  Developed
 -  Undeveloped
- ## Flood Zone
-  0.2% Annual Chance
 -  AE

Critical Facilities

-  Emergency Services
-  Government Offices



Appendix B

Local Government Participation Documentation

Development of the Pamlico Sound Regional Hazard Mitigation Plan involved a series of Mitigation Advisory Committee meetings over the course of thirteen months. The following provides the attendance records for the Beaufort County MAC meetings. A discussion of all meetings held throughout the planning process has been provided in Section 1 of the plan. Please refer to attached letters from those jurisdictions not attending a minimum of two (2) MAC meetings.

September 16, 2013

Beaufort County
Belhaven
Chocowinity
Washington
Washington Park

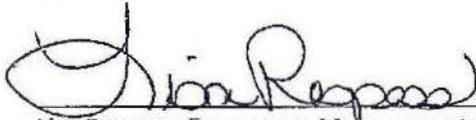
May 27, 2014

Beaufort County
Belhaven
Washington Park

June 10, 2014

Beaufort County
Belhaven
Washington Park

I, John Pack, Emergency Management Coordinator, certify that County and Municipal staff directly participated in the Pamlico Sound HMP planning process by attending the MAC meetings as outlined above.



Lisa Respons, Emergency Management

Beaufort County, North Carolina

Signed and sworn to before me this day by John Pack.

Date: 11/4/14



Notary Public

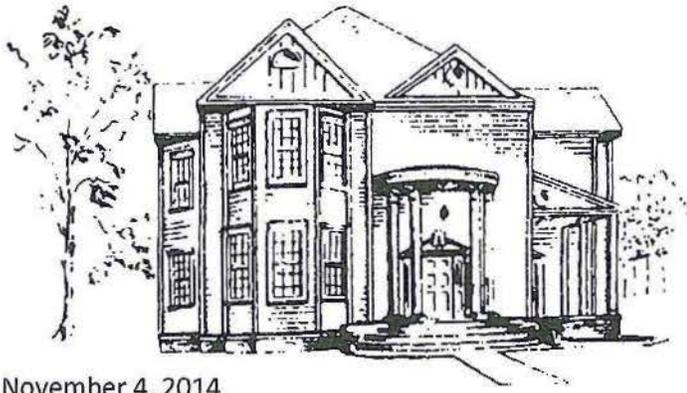
My commission expires: January 9, 2018

Town of Aurora

Mayor
Clif Williams

Town Clerk
Judith S. Lannon

Commissioners
Patricia Bragg
W.C. Boyd
Al Kutzing
Brad Lee



November 4, 2014

Established 1880

Donald R. Baumgardner, Project Coordinator
Craven County Planning Director
2828 Neuse Boulevard
New Bern, NC 28562

Re: Town of Aurora participation in the Pamlico Sound Hazard Mitigation Planning process

Dear Donald:

Due to our relatively low population and thus small operating staff, the Town of Aurora, at that time, was not able to send representation to the two planning meetings conducted for Pamlico Sound Hazard Mitigation Plan. The Town of Aurora Board of Commissioners is aware of the Pamlico Sound Regional Planning process and is very much in support of the regional plan. We are still reviewing the plan through the project website; in fact, we found one item needing correction: Section 4 Community Capability Assessment, Number 2.) Beaufort County Municipalities, under the overview chart: The Town of Aurora does own and operate our own water and sewer utility service.

Our Town Board has endorsed the previous Beaufort County Hazard Mitigation plans and will gladly consider the adoption of this regional plan. Aurora does work closely with our County Emergency Management team. They assisted us in a public safety notification process just last week. The Town of Aurora and the entire surrounding southern end of Beaufort County sustained heavy flood and wind damage during Hurricane Irene and is still enduring the recovery process. Our community has experienced the aftermath of many storms over the years; and understands the importance of mitigating future loss. We will engage the citizens of Aurora in the drafted plan and receive their input. Following the receipt of a certificate of pending adoption from FEMA, the Town will conduct a Public Hearing to receive Public Comment and formally adopt the plan.

The Town of Aurora will implement the plan and continue to work with local and regional Emergency Management teams. Please feel free to contact me with any questions.

Sincerely,

Clif Williams, Mayor

Cc: Landin W. Holland MPA, AICP, CZO

295 Main Street
Post Office Box 86, Aurora, North Carolina 27806, (252) 322-4611, Fax (252) 322-5896
E-mail: aurora@embarqmail.com



The Historic Town of Bath

P O Drawer 6A, 103 S King Street
Bath, North Carolina 27808
(p) 252-923-0212 (f) 252-923-0313

January 30, 2015

Mr. Donald R. Baumgardner, Planning Director
Craven County
2828 Neuse Boulevard
New Bern, NC 28562

Dear Mr. Baumgardner:

Please be advised that the Town of Bath, Beaufort County, fully intends to adopt and implement the proposed Pamlico Sound Regional Hazard Mitigation Plan pending approval from FEMA. We have worked with Beaufort County in the past on a regional plan just for the county and the included municipalities, and understand and appreciate the need for regional cooperation.

Due to our extremely small 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 Public Utilities Director maintains frequent contact with county officials, not only regarding water/sewer issues, but all emergency management situations. Based on our previous work with Beaufort 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 Beaufort County, including the Town of Bath, in the event of a major disaster.

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

Sincerely,

James G. Latham
Mayor

Cc: Landin Holland, HCP

JAMES H. MOBLEY, Jr., Mayor
JOY A. McROY, Town Clerk
TODD ALLIGOOD, Police Chief

Town of Chocowinity



COMMISSIONERS:
LOUISE S. FURMAN
M. L. DUNBAR
ARLENE JONES
WILLIAM J. ALBRITTON

P. O. Box 145 • Chocowinity, North Carolina 27817 • Phone (252) 946-6568 -- Fax (252) 975-7500

December 10, 2014

Donald R. Baumgardner, Project Coordinator
Craven County Planning Director
2828 Neuse Boulevard
New Bern, NC 28562

RE: Pamlico Sound Regional Hazard Mitigation Plan

Dear Mr. Baumgardner:

As you are probably aware, the Town of Chocowinity information in the Pamlico Sound Regional Hazard Mitigation Plan is minimal. Kevin Brickhouse, our Public Works Director and Joy McRoy, our Town Clerk attended one of your planning meetings and subsequently had gotten approval by the Town Board that the information in the plan was accurate. Therefore since the remaining portion of the plan was not pertaining to our Town, we felt it was not necessary for anyone to attend any additional planning meetings.

Thank you for your time and effort in this project.

Sincerely,

James H. Mobley, Jr.
Mayor

cc: Landin Holland MPA, AICP, CZO

Town of Pantego

Post office Box 87
Pantego, North Carolina 27860
OFFICE 252-935-2832
FAX 252-935-2833
CLERK 252-944-8809

January 30, 2015

Mr. Don Baumgardner, Planning Director
Craven County Planning Department
2828 Neuse Boulevard
New Bern, North Carolina 28562

Dear Mr. Baumgardner:

The Town of Pantego has enjoyed its time participating in the Pamlico Sound Regional Hazard Mitigation Planning Process. The Town of Pantego believes that a regional hazard mitigation plan is in the best interest of the town, the county, and the region. In this part of the state, hazard mitigation is extremely important so that in the event of a natural disaster the town, county, and region can be prepared to react to better serve our citizens.

The Town of Pantego has been coordinating with John Pack, Beaufort County's Emergency Management Director, through email since this process began. All parts of the plan have been reviewed online by the Mayor or Town Manager. The Town Council members have been made aware of the planning process and the project website. The Town of Pantego has reviewed the hazard mitigation plan and is satisfied with its contents.

Once there is a final copy of the hazard mitigation plan, the Town of Pantego will hold a formal hearing for the public to ask questions and give their input. Following the hearing, if there are no objections, the town will adopt and implement the plan pending its certification and an adoption letter from FEMA.

We look forward to continuing the necessary work on the local, county and regional level to produce a final plan, adopt it, and implement it.

Sincerely,



Stuart Ricks
Mayor

Cc: Landin Holland, HCP

~MAYOR~ Stuart C. Ricks
TOWN COUNCIL~ Mart Benson, Charles Williams, Robert Edwards, Chad Keech, Reid Selberman
TOWN CLERK~ Bobbie Jo Ricks

ges

Manager
an M. Alligood



Washington City Council
Richard Brooks
Doug Mercer
Larry Beeman
William Pitt
Bobby Roberson

November 14, 2014

COPY

Mr. Donald R. Baumgardner, Project Coordinator
Craven County Planning Director
2828 Neuse Boulevard
New Bern, NC 28562

RE: Pamlico Sound Regional Hazard Mitigation Plan

Dear Mr. Baumgardner:

Please be aware that the City of Washington has gladly and willingly participated in the planning process for the Pamlico Sound Regional Hazard Mitigation Plan. The City's participation in the process has been coordinated through Beaufort County and the Office of Emergency Management.

The contents and the planning elements of the regional hazard mitigation plan have been thoroughly reviewed by the City's Department of Planning and Development that consist of the Planning Administrator and the Planning Director. These elements were reviewed through the project website. The availability of the draft plan was also discussed and given to the Washington Planning Board and to this date no opposition to the plan has been noted by the Planning Board.

The major part of the review process for the Planning Department has been for the accuracy and completeness of the document. After extensive review by the department it appears that the section that represents Beaufort County is complete and satisfactory.

The City Council was made aware of the regional hazard mitigation plan during a general council meeting as part of the agenda process. The planning process was explained to the Council and how the City of Washington was apart of that process. The Council was also given the project website and encouraged that each Council member visits the website and become familiar with the plan.

The City of Washington is satisfied with the contents of the draft Pamlico Sound Regional Hazard Mitigation Plan and it is the City Council's intention to adopt the plan through the formal public hearing process. After adoption the Council, also intends to implement said plan.

Sincerely,


Jay MacDonald Hodges, Mayor

PLANNING AND DEVELOPMENT

Eugene Foxworth
Director



Beaufort Office
Phone: 252-728-8497
Fax: 252-728-6643

Development of the Pamlico Sound Regional Hazard Mitigation Plan involved a series of Mitigation Advisory Committee meetings over the course of thirteen months. The following provides the attendance records for the Carteret County MAC meetings. A discussion of all meetings held throughout the planning process has been provided in Section 1 of the plan. Please refer to attached letters from those jurisdictions not attending a minimum of two (2) MAC meetings.

October 29, 2013

Carteret County
Morehead City
Cape Carteret
Pine Knoll Shores
Cedar Point
Atlantic Beach
Indian Beach
Beaufort

June 12, 2014

Carteret County
Pine Knoll Shores
Beaufort
Atlantic Beach
Morehead City

June 27, 2014

Carteret County
Atlantic Beach
Morehead City

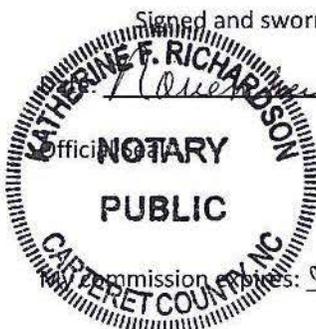
I, Eugene Foxworth, Carteret County Planning & Development Director, certify that County and Municipal staff directly participated in the Pamlico Sound HMP planning process by attending the MAC meetings as outlined above.

A handwritten signature in blue ink, appearing to read "Eugene Foxworth".

Eugene Foxworth, Planning & Development Director

Carteret County, North Carolina

Signed and sworn to before me this day by Eugene Foxworth.



November 25, 2014

Katherine F. Richardson
Notary Public

Commission Expires: February 25, 2019

Mailing: 302 Courthouse Square, Beaufort, NC 28516
Location: 402 Broad Street, Beaufort, NC 28516

TOWN OF BOGUE
121 Chimney Branch Road
Bogue, NC 28570

Mayor Mitchell M. Russell

Commissioners:

Eddie Morton

Herbert Page

David Padgett

Glenn Russell

Charles Wilton

252-393-3055
fax 252-764-0845
Mon-Tues-Thurs
9:00am to 1:00pm
boguetown@bizec.rr.com

November 6, 2014

Donald R. Baumgardner
Project Coordinator and Craven County Planning Director
2828 Neuse Boulevard
New Bern, NC 28562

Dear Mr. Baumgardner,

Our town is very small, we rely on the Carteret County Sheriff's department for law enforcement and the Western Carteret Inter local Cooperation Agency provides fire and emergency services. We do not have the trained staff or time to attend the previously held planning meetings. We would like to be included in the current Hazard Mitigation Plan as we are not able to create one of our own.

As the Mayor of the Town of Bogue, NC in Carteret County, I have participated in the Pamlico Sound Regional Hazard Mitigation Planning Process. On June 5, 2014, June 12, 2014 and November 6, 2014 I discussed the Plan with Commissioner Charles Wilton and Town Clerk Elizabeth Sweeney. We reviewed the plan on the project website. I agree with the information contained in it with regard to the Town of Bogue. Information about the draft plan is available at the Town Hall for the residents of Bogue. Upon receipt of certification pending adoption by FEMA Bogue will have a public hearing. It is the intention of Bogue to adopt the plan after the public hearing.

Respectfully,



Mitchell M. Russell
Mayor

cc: Landin W. Holland

COPY

TOWN OF CEDAR POINT

Mayor
E.A. Guthrie, Jr.

Mayor Pro-Tem
Scott Hatsell

Board of Commissioners
Sam B. Meadows, III
David Winberry
W.B. "Bill" Ennett



Town Administrator
Christopher D. Seaberg

Mailing Address
PO Box 1687
427 Sherwood Avenue
Swansboro, NC 28584
Phone: 252-393-7898

Fax: 252-393-7166

www.cedarpointnc.org

Friday, November 7, 2014

Re: Pamlico Sound Regional Hazard Mitigation Plan

To whom this may concern:

The purpose of this letter is to document the Town of Cedar Point's involvement in the planning process of the Pamlico Sound Regional Hazard Mitigation Plan. Please keep in mind that the Town has a small staff consisting of 3 full time and 2 part time workers. As one of the full time staff I am responsible for the general administration, planning and zoning administration, financial management, and anything else the Town Board feels is necessary to maintain an adequate level of service for our citizens. The unfortunate effect of the multitasking listed above is the inability to attend every necessary meeting required for the various plans and projects the Town is involved in.

With regards to the Town's involvement in the Pamlico Sound Regional Hazard Mitigation Plan, I was physically able to attend one meeting. I would submit comments on behalf of the Town via email to supplement my inability to attend other meetings. For example, I was unable to attend the June 12, 2014 meeting due to other obligations so I emailed Cindy Anderson with Holland Consulting Planners, the contractor for this project, suggesting the document should list the need for a shelter in the western portion of the County. It was acknowledged received by Ms. Anderson per a later phone conversation.

Please note that I understand the need for involvement in the planning process for documents such as this. In the past I, on behalf of the Town, have been actively involved in 2 planning and updating cycles of the Carteret County Multi-Jurisdictional Hazard Mitigation Plan.

Please do not hesitate contacting me if there should be any questions or concerns with the content of this letter.

Respectfully Yours

A handwritten signature in black ink, appearing to read "Christopher D. Seaberg".

Christopher D. Seaberg
Town Administrator

Town of Emerald Isle

Office of the Town Manager
Frank A. Rush, Jr.
frush@emeraldisle-nc.org



7509 Emerald Drive
Emerald Isle, NC 28594
Voice 252-354-3424
Fax 252-354-5068

April 6, 2015

Donald R. Baumgardner, Planning Director
Craven County
2828 Neuse Blvd
New Bern, NC 28561

Dear Don,

Please accept this letter as evidence of our willingness and desire to be a part of the Pamlico Sound Regional Hazard Mitigation Plan. While we have had our own plan in the past, we see the wisdom and benefits of planning for disaster responses on a more regional basis.

Our interim Planning Director attended a number of the meetings of the Coordinating Committee and has kept the Town abreast of this important effort. We are gratified with the way that Emerald Isle has been included as an integral part of this Plan.

Upon receipt of certification pending adoption by FEMA, Emerald Isle will hold a Public hearing. It is the intention of Emerald Isle to adopt the Plan after that Public Hearing.

Thank you for sponsoring this important effort. Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Frank A. Rush, Jr.', written in a cursive style.

Frank A. Rush, Jr., Town Manager



TOWN OF INDIAN BEACH

1400 Salter Path Road • Salter Path, North Carolina 28575
(252) 247-3344 • Fax (252) 247-0513 • www.indianbeach.org

November 11, 2014

Mr. Donald R. Baumgardner
Project Coordinator and Craven County Planning Director
2828 Neuse Boulevard
New Bern, NC 28562

RE: Pamlico Sound Regional Hazard Mitigation Plan

Dear Mr. Baumgardner:

In response to Landin's letter dated October 28, 2014, please see below:

The Town of Indian Beach is a small beach town on the island of Bogue Banks. We have a limited staff in our administration office which limits our availability to participate in a number of meetings. We have participated in the process and will continue to participate in the approval process.

1. The Town of Indian Beach has been in contact with the County Planning/Emergency Management Director. We were able to contribute in one meeting during the planning process and provide our input.
2. The Town Administrator for the Town of Indian Beach has reviewed the plan on the project website. He has also incorporated the Police and Fire Departments in the review process.
3. The Board of Commissioners will be informed at the next meeting of information on the plan and the web site.
4. The Town Administrator has reviewed the plan for accuracy and completeness.
5. The Town of Indian Beach is satisfied with the draft plan. We found one small issue and it has been relayed to Cindy and she said it would be revised.
6. Once the plan is in final form and after receiving the certification pending adoption letter from FEMA, the Board of Commissioners will formally adopt it through a public hearing.
7. The Town of Indian Beach will implement the Pamlico Sound Regional Hazard Mitigation Plan following its adoption.

Thank you for helping coordinate this tremendous effort. If I can be any assistance to you, feel free to contact me at 252-247-3344.

Sincerely,

Stewart M. Pickett
Mayor

cc: Mr. Landin W. Holland, Senior Planner
Ms. Cindy M. Anderson

Town of Newport

Dennis Barber, **Mayor**
Kenneth Davis, **Mayor Pro-Tem**

Council Members

David Heath
Chuck Shinn
James Mc Coy
Mark Eadie

*P. O. Box 1869
Newport, NC 28570*



Angela Christian
Town Manager

Taylor & Taylor
Town Attorney

Maryellen Brown
Town Clerk/Tax Collector

*252) 223-4749
(252) 223-5382 fax*

Mr. Donald Baumgardner
Craven County Planning Director, Project Coordinator
2828 Neuse Boulevard
New Bern, NC 28562

Dear Mr. Baumgardner:

The Town of Newport staff has followed the planning process of the Pamlico Sound Regional Hazard Mitigation Plan in its developmental phases. There has been coordination with the Carteret Emergency Management Director, planning staff and our public safety departments identifying hazards and how we will address them in Newport. The draft plan elements have been reviewed by staff and they have confirmed the accuracy and completeness of the plan related to Newport. When the final plan is complete, a public hearing will be held by Town Council to consider adoption of the plan. It will be our intention to implement the plan following its adoption.

Our Town Council has received information on the draft plan and its availability on the website www.pamlicosoundhmp.org. This has been a lengthy process and we appreciate all the efforts that have been made for the completion of this plan.

Sincerely,

Mayor Dennis Barber
Town of Newport
Cc: Angela Christian, Town Manager
Landin Holland, Holland Consulting Planners, Inc.



Town of Peletier
North Carolina

1603 Hwy 58 • Peletier, NC 28584 -- PHONE 252.393.8666 • FAX 252.393.7027

February 9, 2015

Mr Donald R Baumgardner
Project Coordinator/Craven County Planning Director
2828 Neuse Bl
New Bern NC 28562

Dear Mr Baumgardner,

This letter will support the Town of Peletier's participation in the Pamlico Sound Regional Hazard Mitigation Planning Process.

The Town of Peletier coordinates with the County Planning Emergency Management Director on a quarterly basis through email. We review plan elements through the project website. Our town's elected officials have been made aware of the planning process and the project website. Our community has reviewed the draft plan for accuracy and completeness. Our town's elected officials and community is satisfied with the draft plan. Once the Town of Peletier receives a certification pending adoption letter from FEMA, the elected officials will hold a formal public hearing to adopt the plan. Once adopted, the Town of Peletier will implement the plan.

Thank you for your time and consideration in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Dale Sowers", written over a horizontal line.

Dale Sowers
Mayor

DKS:bc
Cc: Mr Landin Holland

**Office of Planning,
Inspections and
Community Development**

Donald R. Baumgardner, Director
R. Chad Strawn, Assistant Director
Shelton P. Toier, Chief Building
Inspector

Craven County



**Human Services Annex
2828 Neuse Boulevard
New Bern, North Carolina 28562**

Planning (252) 636-6618
Fax (252) 636-5190
Inspections (252) 636-4987
Fax (252) 636-4984

Development of the Pamlico Sound Regional Hazard Mitigation Plan involved a series of Mitigation Advisory Committee meetings over the course of thirteen months. The following provides the attendance records for the Craven County MAC meetings. A discussion of all meetings held throughout the planning process has been provided in Section 1 of the plan. Please refer to attached letters from those jurisdictions not attending a minimum of two (2) MAC meetings.

December 6, 2013

Craven County
New Bern
Havelock
River Bend

March 11, 2014

Craven County
Havelock
River Bend
Trent Woods

May 27, 2014

Craven County
River Bend

I, Donald R. Baumgardner, Craven County Planning Director, certify that County and Municipal staff directly participated in the Pamlico Sound HMP planning process by attending the MAC meetings as outlined above.

Donald R. Baumgardner, Planning Director

Craven County, North Carolina

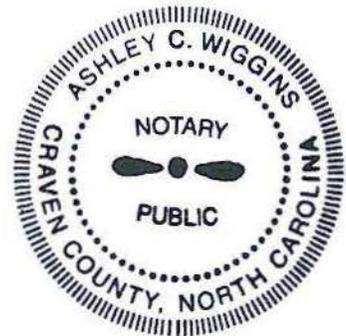
Signed and sworn to before me this day by Donald R. Baumgardner.

Date: 11/4/2014

Official Seal

Notary Public

My commission expires: 5-1-2016



TOWN OF BRIDGETON

RODMAN L. WILLIAMS, HONORABLE MAYOR
ELAINE G. BRYAN, TOWN CLERK/FINANCE OFFICER

BOARD OF COMMISSIONERS
ELIZABETH PARKER, MAYOR PROTEM
JOHN R. CHITTICK
KEITH L. TYNDALL
ALAN R. WELCH

November 6, 2014

Mr. Donald R. Baumgardner, Planning Director
Craven County Planning
2828 Neuse Boulevard
New Bern, NC 28562

Re: Pamlico Sound Regional Hazard Mitigation Plan

Dear Mr. Baumgardner:

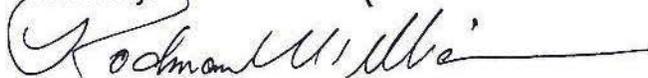
I am sending you this letter in assurance that the Town of Bridgeton has participated in the preparation of the Pamlico Sound Regional Hazard Mitigation Plan; and, that we also intend to adopt and implement the plan after its approval by FEMA and a public hearing.

I understand the need and appreciate the importance of having an effective hazard mitigation plan. To that end, I have obtained certification as a Floodplain Manager and serve in that capacity for the Town of Bridgeton.

The Governing Body of the Town is aware of the project website. We are satisfied with the Plan and confirm that we have reviewed the elements of the plan as it relates to the Town of Bridgeton and that we fully support it.

If I can be of any further assistance in your endeavor to go forward with the Pamlico Sound Regional Hazard Mitigation Plan, please let me know.

Sincerely:



Rodman L. Williams, CFM
Honorable Mayor

Cc: Mr. Landin Holland MPA, ACIP, CZO
Holland Consulting Planners
3329 Wrightsville Ave., Suite F
Wilmington, NC 28403-4115

Bridgeton Board of Commissioners

ADDRESS:
P. O. BOX 570, 202 B Street
BRIDGETON, NC 28519-0570

www.bridgetonnc.net

townofbridgeton@earthlink.net
PHONE: 252-637-3697
FAX: 252-637-9844

TOWN OF COVE CITY

P.O. BOX 8
COVE CITY, NC 28523

Phone 252-633-1595

Fax 252-633-1595

Mayor

Dred C. Mitchell
Mayor Pro Tem
Wiley Avery

Board

Roy D. McCoy
Evelyn E. Brown
Linda McCoy
Barbara H. Jones

Town Clerk

Sonja H. Gaskins

Utilities Operator

Amanda Boyd

December 31, 2014

Donald R. Baumgardner, Project Coordinator
Craven County Planning Director
2828 Neuse Boulevard
New Bern, NC 28562

Subject: Pamlico Sound Regional Hazard Mitigation Plan

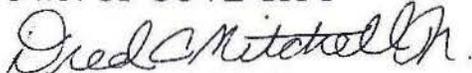
Dear Mr. Baumgardner,

The Board of the Town of Cove City is keenly aware of the planning process and has reviewed the draft copy at project website www.pamlicosoundhmp.org. The Town has reviewed the draft plan for accuracy and entirety and is satisfied with the draft plan.

The Town is prepared to hold a public hearing for the purpose of adoption of the plan upon receipt of a certification pending adoption letter from FEMA. The town's intention is to implement the plan upon adoption.

Sincerely,

TOWN OF COVE CITY



Dred C. Mitchell, Jr., Mayor

DCM/shg

cc: Landin Holland MPA, AICP, CZO

Town of Dover

Mayor

PO Box 128

Mayor Pro Tem

John P. Wetherington

Dover, North Carolina, 28526

Randy Mitchell

December 30, 2015

Donald R. Baumgardner

Craven County Planning Director

2828 Neuse Boulevard

New Bern, NC 28562

Dear Mr. Baumgardner:

Please accept this letter stating that the Town of Dover has participated in the Craven County Multi-Jurisdictional Hazard Mitigation Plan Update.

The plan elements were reviewed on the projects website that was provided and the Town is satisfied with the accuracy and completeness of the draft plan.

Once certification is received from FEMA, the Town will adopt the Hazard Mitigation Plan at a formal hearing.

Sincerely,



John Wetherington

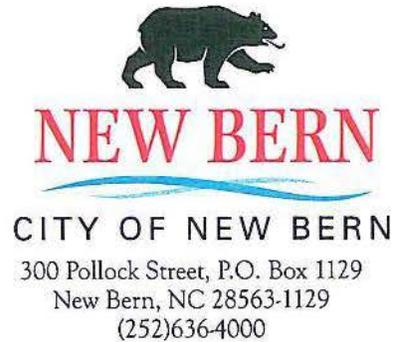
Mayor

Cc" Chad Strawn, Craven County Planning

Cindy M. Anderson, Holland Consulting Planners, Inc.

COPY

Aldermen
Dallas O. Blackiston
Victor J. Taylor
Patricia C. Schaible
Johnnie Ray Kinsey
Bernard W. White
Jeffrey T. Odham



Dana E. Outlaw
Mayor
Mark A. Stephens
City Manager
Veronica E. Mattocks
City Clerk
Keith M. Fiaschetti
Director of Finance

October 30, 2014

Mr. Donald R. Baumgardner
Project Coordinator & Craven County Planning Dir.
2828 Neuse Boulevard
New Bern, NC 28562

RE: City of New Bern Description of Participation in Pamlico Sound Regional Hazard Mitigation Plan (PSRMP)

Mr. Baumgardner:

In response to the letter from Holland Consulting Planners dated October 28, 2014, please find below information with respect to New Bern's review of the plan:

- 1. Coordination with County Planning/Emergency Management Director:** The City of New Bern participated in one PSRMP meeting during the process.
- 2. Statement of plan review on website:** The Director of Development Services for the City of New Bern has reviewed relevant plan elements through the project website (www.pamlicosoundhmp.org).
- 3. Elected body notification:** At its next regularly scheduled Board of Alderman meeting, City staff will inform the Board of the plan and project website.
- 4. Statement of Plan review:** The Director of Development Services for the City of New Bern has reviewed the plan for accuracy and completeness.
- 5. Statement of satisfaction:** The City of New Bern acknowledges the PSRMP as satisfactory.
- 6. Statement of acceptance:** Once in final form, the City of New Bern will formally present the PSRHMP to City leadership for acceptance.
- 7. Statement of intention to implement:** The city will continue to coordinate with Craven County Planning in an effort to implement the policies of the PSRMP.

If I can be of further assistance, please let me know.

Sincerely,

Dana E. Outlaw, Mayor

✓ cc: Landin W. Holland, Senior Planner

Everything comes together here.

Town of Trent Woods

912 Country Club Drive
Trent Woods, NC 28562-7231
(252) 637-9810 Fax (252) 637-7088
www.trentwoodsnc.org



MAYOR
Charles F. Tyson

COMMISSIONERS:
M. Shane Turner
Daniel E. Murphy
Billy R. Joiner

November 3, 2014

Mr. Donald R. Baumgardner
Project Coordinator and Craven Co. Planning Director
2828 Neuse Blvd.
New Bern, NC 28562

Dear Don,

The Town of Trent Woods Board of Commissioners has received the draft of the Pamlico Sound Regional Hazard Mitigation Plan and a review of the planning process and plan is scheduled for the November Board of Commissioners meeting. If there are any questions or changes to be made, we will notify your office. After receiving the certification pending adoption letter from FEMA, a public meeting will be held before adoption of the plan. As in the past, the Town of Trent Woods will implement the Pamlico Sound Regional Hazard Mitigation Plan.

Respectfully,

A handwritten signature in cursive script, appearing to read 'Charles Tyson', with a long horizontal flourish extending to the right.

Charles F. Tyson, Jr.
Mayor

Mayor Chad E. Braxton

Town Clerk E. Renee Ipock



Alderman Richard Bowers
Alderman David Dunn
Alderman Dennis Smith
Alderman Billy Whitford
Alderman Earl Wright

Town of Vanceboro

P.O. Box 306, Vanceboro, NC 28586

Phone: 252/244-0919 Fax: 252/244-1387

November 3, 2014

Donald R. Baumgardner, Project Coordinator
& Craven County Planning Director
2828 Neuse Boulevard
New Bern, NC 28562

Re: Pamlico Sound Regional Hazard Mitigation Plan

Dear Mr. Baumgardner:

The Town of Vanceboro's participation in the Pamlico Sound Regional Hazard Mitigation Planning Process has been documented by attending some meetings, keeping up-to-date by e-mail with Craven County Planning Department, and reviewing of the project website (www.pamlicosoundhmp.org).

The Town of Vanceboro Board of Aldermen have been made aware of the planning process and have been given the project website to review the HMP. There are a few corrections to be made as follows:

- Page 2-29 – appears there is a Typo - Washington Park's should be Vanceboro's.
- Page 5-18 – Vanceboro Rural Volunteer Fire Department is listed four times (#51, #55, #57, #58), there is only one location.
- Appendix A, Map 23 – the Vanceboro Rural Volunteer Fire Department and Rescue Squad are incorrectly plotted. They moved to 375 NC Hwy 43 in March, 2009.

With the exception of the three noted corrections, the Town of Vanceboro Board of Aldermen intend to adopt the Pamlico Sound Hazard Mitigation Plan through a formal public hearing following receipt of a certification pending adoption letter from FEMA. Once adopted, the Town of Vanceboro will implement the Plan.

Respectfully,

TOWN OF VANCEBORO

Chad E. Braxton
Mayor

Development of the Pamlico Sound Regional Hazard Mitigation Plan involved a series of Mitigation Advisory Committee meetings over the course of thirteen months. The following provides the attendance records for the Hyde County MAC meetings. A discussion of all meetings held throughout the planning process has been provided in Section 1 of the plan. Please refer to attached letters from those jurisdictions not attending a minimum of two (2) MAC meetings.

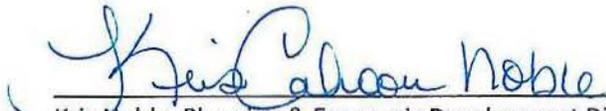
January 23, 2014

Hyde County Manager
Planning & Economic Development Dept.
Health Department
Emergency Services Department
Utilities Department
Building Inspections Department
Soil & Water Department

April 3, 2014

Hyde County Manager
Planning & Economic Development Dept.
Health Department
Emergency Services Department
Utilities Department
Building Inspections Department
Soil & Water Department

I, Kris Noble, Hyde County Planning & Economic Development Director, certify that County staff directly participated in the Pamlico Sound HMP planning process by attending the MAC meetings as outlined above. NOTE: There are no incorporated municipalities in Hyde County.

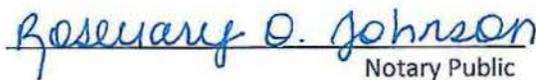

Kris Noble, Planning & Economic Development Director

Hyde County, North Carolina

Signed and sworn to before me this day by Kris Noble.

Date: November 4, 2014

Official Seal


Notary Public

My commission expires: 6/8/2019



Board of Commissioners

Paul Delamar, Chairman
At-Large

Christine Mele, Vice Chairman
Township #2

Ann A. Holton
At-Large

Pat Prescott
Township #1

Jimmy Spain
Township #3

Carl Ollison
Township #4

Kemy Heath
Township #5



COUNTY OF PAMLICO

POST OFFICE BOX 776
BAYBORO, NORTH CAROLINA 28515
(252) 745-3133 / 745-5195
FAX (252) 745-5514

EMAIL:

TIM.BUCK@PAMLICOCOUNTY.ORG

County Manager
Timothy A. Buck

Clerk to the Board
Kathy P. Cayton

County Attorney
Jimmie B. Hicks, Jr.

Development of the Pamlico Sound Regional Hazard Mitigation Plan involved a series of Mitigation Advisory Committee meetings over the course of thirteen months. The following provides the attendance records for the Pamlico County MAC meetings. A discussion of all meetings held throughout the planning process has been provided in Section 1 of the plan. Please refer to attached letters from those jurisdictions not attending a minimum of two (2) MAC meetings.

July 18, 2013

Pamlico County
Minnesott Beach
Vandemere

May 16, 2014

Pamlico County

I, Tim Buck, Pamlico County Manager, certify that County and Municipal staff directly participated in the Pamlico Sound HMP planning process by attending the MAC meetings as outlined above.



Tim Buck, Pamlico County Manager

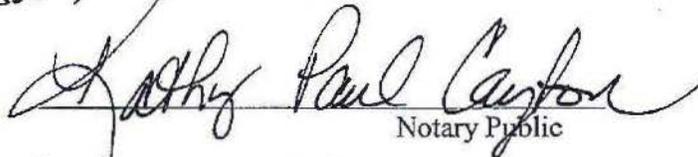
Pamlico County, North Carolina

Signed and sworn to before me this day by Tim Buck.

Date: November 4, 2014

Official Seal





Notary Public

My commission expires: March 22, 2018

TOWN OF ALLIANCE

PO BOX 39
934 MAIN STREET
ALLIANCE, NC 28509

Phone (252) 745-4260
Fax (252) 745-4260
townofalliance@centurylink.net

October 31, 2014

Mr. Donald R. Baumgardner
Project Coord./Craven Co. Planning Director
2828 Neuse Boulevard
New Bern, NC 28562

Re: Pamlico Sound HMP

Dear Mr. Baumgardner:

In response to Mr. Holland's letter of October 28, 2014, please be advised:

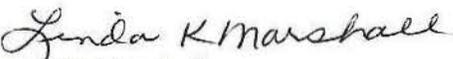
The Town of Alliance is an incorporated entity of approximately 783 residents. Its office is open 5 hours per week and has a limited staff consisting of a part-time individual as Town Clerk.

The majority of its 5 member Board is otherwise employed outside their Town responsibilities.

Our participation is as follows:

- . 1 - The Town of Alliance is in contact with the County Planning/Emergency Management Director;
- . 2 - The plan has been reviewed on the project website;
- . 3 - Our Town has been made aware of the plan and is proud to have fully participated in the Pamlico Sound Regional Hazard Mitigation Planning process;
- . 4 - The Town of Alliance has reviewed the draft plan for accuracy and completeness;
- . 5 - The Town of Alliance is satisfied with the draft plan as reviewed on the project website;
- . 6 - The Town of Alliance intends to adopt the plan, as in the past, through a public hearing, upon receipt of a certification pending adoption letter from FEMA;
- . 7 - The Town of Alliance fully intends to implement the plan following its adoption

Sincerely yours,


Linda K. Marshall
Town Clerk and Finance Director

/lkm

✓cc: Mr. Landin W. Holland MPA, AICP, CZO

TOWN OF ARAPAHOE
P.O. BOX 85
ARAPAHOE, NC 28510

March 5, 2015

This is in response to your request for a letter of participation in the mitigation planning process. The Town of Arapahoe fully intends to coordinate with Pamlico County in implementing its plan. To further support the participation the Board of Commissioners of the Town of Arapahoe have reviewed the plan, is aware of the planning process and website, and may adopt the plan with approval after a Public Hearing. It is the plan to implement this Hazard Mitigation Plan after its adoption. I believe this serves the purposes of participation.

Sincerely,

A handwritten signature in black ink, appearing to read "Terry H. Cannan". The signature is fluid and cursive, with a large initial "T" and a long horizontal stroke at the end.

Terry H. Cannan
Mayor

Town of Grantsboro

Post Office Box 174, Grantsboro, North Carolina 28529
Telephone: (252)745-6522 – Fax: (252)745-7705

ALFRED E. CAHOON, MAYOR
MICHAEL HARRIS, MAYOR PRO-TEM
PAT PRESCOTT, CLERK/FINANCE OFFICER

COUNCIL MEMBERS:
STEPHEN HARRIS
JULIA LEE
DALE THOMAS NEWMAN
RAY POOLE

February 9, 2015

Mr. Donald R. Baumgardner, Project Coordinator
Craven County Planning Director
2828 Neuse Boulevard
New Bern, North Carolina 28562

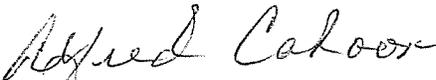
Re: Pamlico Sound Regional Hazard Mitigation Plan

Dear Mr. Baumgardner:

As the Town of Grantsboro is one of the smallest towns included in the Regional Hazard Mitigation Plan and has very limited staff, the town was involved in the planning process by on-going dialog with the Pamlico County EMS director and by reviewing the plan as it evolved and upon completion. The town council has been made aware of the project website and has ascertained that the information for the Town of Grantsboro is accurate. A public hearing will be held to adopt the plan following the receipt of certification from FEMA. Upon adoption the town intends to implement the plan.

Thank you for your efforts on this project.

Yours truly,



Alfred E. Cahoon, Mayor

/plp

Cc: Mr. Landin Holland MPA, AICP, CZO
Senior Planner

Town of Minnesott Beach

11758 Highway 306 South
Minnesott Beach, NC 28510

Phone 252-249-1755 Fax 252-249-0285
www.minnesottbeachnc.govoffice.2com
e-mail: minnesottbeach@embarqmail.com

November 12, 2014

Mr. Donald R. Baumgardner
Project Coordinator and Craven County Planning Director
2828 Neuse Boulevard, New Bern, NC 28562

Dear Mr. Baumgardner:

This letter is to share with you the Town of Minnesott Beach's involvement in the Pamlico Sound Regional Hazard Mitigation Planning Process.

The town coordinates with the Pamlico County Planning/Emergency Management Director, Chris Murray and County Manager, Tim Buck annually plus as needed. Town official(s) have attended two plan revision meetings.

Town official(s) have reviewed elements of the plan through the project website (www.pamlicosoundhmp.org).

The Minnesott Beach Board of Commissioners have been made aware of the planning process and project website at board meetings and via email.

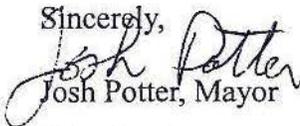
The Minnesott Beach Board of Commissioners has reviewed the online draft plan for accuracy and completeness of data and is satisfied with the draft plan.

The town intends to adopt the revised plan upon receipt of a certification pending adoption letter from FEMA and a subsequent formal public hearing.

The town intends to implement the plan upon its adoption.

Please contact me at 252-249-1844 or town hall at 252-249-1755 if you need further information.

Sincerely,


Josh Potter, Mayor

Copy to:

✓ Mr. Landin Holland MPA, AICP, CZO
Senior Planner
Holland Consulting Planners, Inc.
3329 Wrightsville Avenue, Suite F
Wilmington, NC 28403



TOWN OF ORIENTAL

Post Office Box 472
Oriental, North Carolina 28571
(252) 249-0555 • Fax (252) 249-0208
www.townoforiental.com
townhall@townoforiental.com

December 2, 2014

Mr. Donald R. Baumgardner
Project Coordinator, Craven County Planning Director
2828 Neuse Blvd.
New Bern, NC 28562

Dear Mr. Baumgardner,

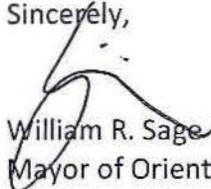
This letter is to inform you that the Town of Oriental has reviewed the Draft Pamlico Sound Regional Hazard Mitigation Plan online and finds it to be satisfactory as related to the Town. The elected officials of the Town were made aware of the planning process and have participated in a meeting concerning the assembly of this plan.

The Town has reviewed the draft online and is prepared to adopt it through resolution once it has been approved by FEMA, and implement it thereafter.

This draft, once approved, will be forwarded to our Planning Board for use and reference when adjusting our Growth Management Ordinance, in order to further protect our citizens.

The Town of Oriental lies especially vulnerable to weather emergencies and is grateful that you have undertaken the coordination of a regional plan that includes Oriental.

Sincerely,


William R. Sage
Mayor of Oriental

cc: Landin Holland MPA

TOWN OF STONEWALL

P O BOX 99

Stonewall, North Carolina 28583

November 12, 2014

Donald R. Baumgardner, Project Coordinator & Craven County Planning Director

2828 Neuse Boulevard

New Bern, North Carolina 28562

Dear Sir:

In reference to a letter we received October 30, 2014 from Landin W. Holland from hcp, we submit the following:

The Stonewall Town Board has reviewed the proposed Pamlico Sound Regional Hazard Mitigation Plan on the project website www.pamlicosoundhmp.org. The Board is satisfied with the draft plan and will adopt the plan through a formal public hearing following receipt of certification pending adoption letter from FEMA.

Members of the Stonewall Town Board have been in contact with Mr. Tim Buck, County Manager in charge of the Pamlico County Hazard Mitigation Plan, as needed when bad weather occurs.

Stonewall previously adopted a Hazard Mitigation Plan after a public hearing on August 10, 2010 and would like to renew a plan as needed.

Thank you for your help in this matter.

Sincerely,



Charles M. Alexander, Mayor

✓ Cc: Landin W. Holland MPA, AICP, CZO

TOWN OF VANDEMERE

P. O. Box 338
Vandemere, NC 28587

November 14, 2014

Mr. Donald R. Baumgardner, Project Coordinator
2828 Neuse Blvd.
New Bern, NC 28562

Dear Mr. Baumgardner,

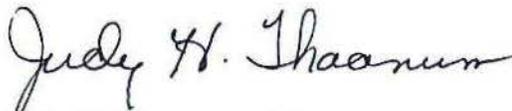
We are in receipt of a correspondence from Holland Consulting Planners dated October 28, 2014. At our November 13, 2014 town council meeting, our Commissioners were made aware of the planning process and the project website. We are satisfied with the draft plan and intentions are to adopt the plan through a formal public hearing following receipt of a certification pending adoption letter from FEMA.

We are in communication with both County Manager, Tim Buck and Emergency Management Director, Chris Murray concerning the Hazard Mitigation Plan. We have extensive experience of working with the County during and after severe weather events.

We have previously participated in the Pamlico Sound Regional Hazard Mitigation Plan and our intentions are to continue to participate. As in the past, we will implement the plan upon it's adoption.

Please be aware we are a very small town with limited resources. We simply need more lead time for responding to request such as this. Please allow a minimum of thirty (30) days for future responses. We apologize for the delay in our response.

Sincerely,



Judy H. Thaanum, Mayor

Appendix C

Public Involvement Documentation

Simpson said.

...hoods and wind-
...ther cars. He said
...nditions were bet-
...the work has been
...but he still ques-
...thods used.
...t have rocks splat-
...was early on," Mr.
...adding that there
...etter way.

"When you have two neigh-
borhoods that are side by side,
how does one neighborhood

The oil, which has none of the
psychoactive effects of marijuana,
will be legal for North Carolinians
with epilepsy who have not
responded to treatment and are
under the care of a neurologist.
It will be legal as soon as a state
registry and other regulations can
be established.

Lawmakers say the hemp oil,
which is made into syrup, would
not make anyone high. The oil is
taken in a dropper and absorbed in
the mouth.

"This is not a psychoactive
drug. That is taken out. But it
does have something in it that will
help these folks," said Sen. Thom

county maintenance forces
came in and put down was to
try and seal up cracks and do
some patching prior to resur-
facing, because we are plan-
ning to resurface in Country
Club East," Mr. Cabaniss said
during the meeting.

He said it could also be
because of budget limitations,

Goolsby, R-New Hanover.

Bea VanEvery said the oil has
reduced seizures in her grand-
daughter by 70 to 80 percent. Her
daughter moved to Colorado to get
the treatment for the girl. If Mr.
McCrory signs the bill, she hopes
they will return to North Carolina.
She said she's glad other families
don't have to move out of state to
get the treatment they need.

"That was really supposed
to be done last year," Mr.
Livingston said, adding that
the contract would have been
let by the division office.

He wasn't sure why it never
was.

Similar work has also been
ongoing in the western part of
the county, including parts of

"It will just be a great thing for
children in North Carolina," she
said.

Lawmakers praised the bill on
the floor of both chambers, saying
it will help children and also put
the state on the edge in treating
this type of epilepsy with East
Carolina University, Wake Forest
University, UNC-Chapel Hill and
Duke University studying it.

road into town.
Paving is complete on the
Nine Foot Road project. Crews

726-7081, ext. 229, email
mark@thenewstimes.com; or fol-
low on Twitter @markhibbs.

**SEVERAL VARIETIES OF
SWEET CORN**

**BOGUE SOUND CANTALOUPE
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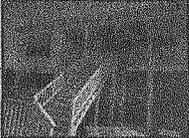
emp
FROM PAGE 1A

cannabis plant.
will help ease the suf-
fered by children from
other treatments are
just their seizures,"
said in a press state-
ment to congratulate the
assembly for crafting a
bill that only improves the
health of North Carolina chil-
dren's parents, but also
improves sense regulation
and clinical research at
research universities."

STIMAN CREEK OPEN HOUSE

Sunday, June 29, 2014
1:00 p.m. - 4:00 p.m.

 106 Anglers Way, Beaufort
(252) 504-2400

 711 Captains Point
Beaufort

 100 Cedar Street • Beaufort, NC • 28516
www.HollandShepardGroup.com

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PUBLIC HEARING

**PAMLICO SOUND REGIONAL
HAZARD MITIGATION PLAN**

Notice is hereby given that the Craven County Board of
Commissioners (lead agency for the Pamlico Sound Regional
Hazard Mitigation Plan) will conduct a public hearing on July 7,
2014, at 7:00 p.m., in the Craven County Commissioners Meeting
Room at the Craven County Administration Building, 406 Craven
Street, New Bern, North Carolina.

The purpose of the hearing will be to discuss the Pamlico Sound
Regional Hazard Mitigation Plan. The Pamlico Sound Region is
comprised of the counties of Beaufort, Carteret, Craven, Hyde,
and Pamlico as well as each county's municipal jurisdictions. All
interested citizens, business owners, officials from neighboring
jurisdictions, and other governmental entities are encouraged to
attend to offer comments and/or obtain information concerning
the draft plan.

For additional information, please contact Landin Holland at
910/392-0060.

**STATE OF NORTH CAROLINA
COUNTY OF PAMLICO
AFFIDAVIT OF PUBLICATION**

Before the undersigned, a person duly commissioned, qualified and authorized by law to administer oaths, personally appeared to Maureen Donald, who after being first sworn, deposes and says she is the Business Manager for **THE PAMLICO NEWS**, a newspaper published, issued and entered as second class mail in the Town of Oriental in said county and state, and that notice or other legal advertisement, a true copy of which is attached hereto, was published in **THE PAMLICO NEWS** on the following dates

7/2/14

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

This 7 day of July 2014

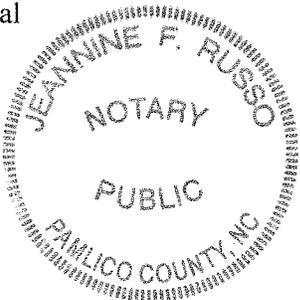
Pamlico County, North Carolina

Sworn to and subscribed before me this day by

Maureen Donald
BUSINESS MANAGER

Date: 7-7-14

Seal



Jeannine F. Russo Notary Public

My commission expires: 6-9-16

**PUBLIC HEARING
PAMLICO SOUND REGIONAL HAZARD
MITIGATION PLAN**

Notice is hereby given that the Craven County Board of Commissioners (lead agency for the Pamlico Sound Regional Hazard Mitigation Plan) will conduct a public hearing on July 7, 2014, at 7:00 p.m., in the Craven County Commissioners Meeting Room at the Craven County Administration Building, 406 Craven Street, New Bern, North Carolina.

The purpose of the hearing will be to discuss the Pamlico Sound Regional Hazard Mitigation Plan. The Pamlico Sound Region is comprised of the counties of Beaufort, Carteret, Craven, Hyde, and Pamlico as well as each county's municipal jurisdictions. All interested citizens, business owners, officials from neighboring jurisdictions, and other governmental entities are encouraged to attend to offer comments and/or obtain information concerning the draft plan.

For additional information, please contact Landin Holland at 910/392-0060.

**Affidavit of Publication
New Bern Sun Journal
New Bern, NC**

Personally appeared before me, a Notary Public of the County of *Onslow* State of North Carolina, on this the 27th day of June, 2014



of The Sun Journal, who being duly sworn, states that the advertisement entitled **PUBLIC HEARING PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN** Notice is hereby given that the Craven County Board of Commissioners (lead agency for the Pamlico Sound Regional Hazard Mitigation Plan) will conduct a public hearing on July 7, 2014, at 7:0 a true copy of which is printed herewith, appeared in The Sun Journal, a newspaper published in the City of New Bern, NC, County of Craven, State of North Carolina, 1 day a week for _____ weeks on the following dates:

June 27, 2014

NORTH CAROLINA
CRAVEN COUNTY

**PUBLIC HEARING
PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN**

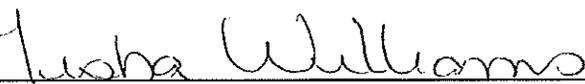
Notice is hereby given that the Craven County Board of Commissioners (lead agency for the Pamlico Sound Regional Hazard Mitigation Plan) will conduct a public hearing on July 7, 2014, at 7:00 p.m., in the Craven County Commissioners Meeting Room at the Craven County Administration Building, 406 Craven Street, New Bern, North Carolina.

The purpose of the hearing will be to discuss the Pamlico Sound Regional Hazard Mitigation Plan. The Pamlico Sound Region is comprised of the counties of Beaufort, Carteret, Craven, Hyde, and Pamlico as well as each county's municipal jurisdictions. All interested citizens, business owners, officials from neighboring jurisdictions, and other governmental entities are encouraged to attend to offer comments and/or obtain information concerning the draft plan.

For additional information, please contact Landin Holland at 910/392-0060.

June 27, 2014 (adv)

Subscribed and sworn to this 27th day of June, 2014

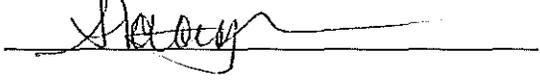
x 

Notary Public



**Affidavit of Publication
New Bern Sun Journal
New Bern, NC**

Personally appeared before me, a Notary Public of the County of Craven, State of North Carolina, on this the 8th day of August, 2014



of The Sun Journal, who being duly sworn, states that the advertisement entitled **Regional Meeting 8-18** a true copy of which is printed herewith, appeared in The Sun Journal, a newspaper published in the City of New Bern, NC, County of Craven, State of North Carolina, 1 day a week for 1 weeks on the following dates:

August 8, 2014

NORTH CAROLINA
CRAVEN COUNTY

**PUBLIC INPUT MEETING
PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN**

Notice is hereby given that the Pamlico Sound Regional Hazard Mitigation Advisory Committee will conduct a public input meeting on August 18, 2014, at 6:00 p.m., in the Town of Newport Council Chambers, 200 Howard Boulevard, Newport, NC.

The purpose of the meeting will be to discuss the Pamlico Sound Regional Hazard Mitigation Plan. The Pamlico Sound Region is comprised of the counties of Beaufort, Carteret, Craven, Hyde, and Pamlico as well as each county's municipal jurisdictions. All interested citizens, business owners, officials from neighboring jurisdictions, and other governmental entities are encouraged to attend to offer comments and/or obtain information concerning the draft plan.

For additional information, please contact Landin Holland at 910/392-0060.

August 8, 2014 (adv)

Subscribed and sworn to this 8th day of August, 2014

x 
Notary Public



Cindy M. Anderson

Subject: Pamlico Sound Regional Hazard Mitigation Plan

The Pamlico Sound Region, which includes the counties of Beaufort, Carteret, Craven, Hyde, and Pamlico and all municipalities within these counties, have prepared the Pamlico Sound Regional Hazard Mitigation Plan (HMP). A draft has been submitted to the NC Department of Public Safety, Emergency Management Section for review and comment.

We solicit your review and comment on the draft 2015 Regional HMP. The plan may be reviewed at <http://www.pamlicosoundhmp.org>. Please submit any questions or comments to Mr. Donald R. Baumgardner, Project Coordinator and Craven County Planning Director at dbaumgardner@cravencountync.gov on or before November 24, 2014.

Your assistance is appreciated. Please contact Mr. Baumgardner at 252/636-6618 if you have any questions.

Thank you,
Landin Holland
Project Planner



Landin W. Holland, MPA, AICP, CZO

Senior Planner

3329 Wrightsville Ave, Ste F

Wilmington, NC 28403

Phone: 910/392-0060

Email: holland@hcpplanning.com

County	NC Forest Service	NCDENR	NCDOT	NC Cooperative Extension	NCOEMS	American Red Cross
Beaufort	beaufort.ncfs@ncagr.gov	Washington Regional Office	wjarvis@ncdot.gov	rod_gurganus@ncsu.edu	regina.godette@dhhs.nc.gov	Lynwood.Roberson@redcross.org
Craven	craven.ncfs@ncagr.gov	megan.stilley@ncdenr.gov	rsmith@ncdot.gov	tom_glasgow@ncsu.edu		Vicki.Labelle@redcross.org
Carteret	carteret.ncfs@ncagr.gov	marlene.salver@ncdenr.gov	rsmith@ncdot.gov	peggie_garner@ncsu.edu		Vicki.Labelle@redcross.org
Hyde	hyde.ncfs@ncagr.gov		dslee@ncdot.gov	natalie_wayne@ncsu.edu		Lynwood.Roberson@redcross.org
Pamlico	pamlico.ncfs@ncagr.gov		rsmith@ncdot.gov	daniel_simpson@ncsu.edu		Vicki.Labelle@redcross.org

Adjacent Jurisdictions/Agencies

Onslow Co	Jeff_Hudson@onslowcountync.gov
Jones Co	fhoward@jonescountync.gov
Lenoir Co	mjarman@co.lenoir.nc.us
Pitt Co	scott.elliott@pittcountync.gov
Martin Co	dbone@martincountyncgov.com
Washington Co	jrhodes@washconc.org
Tyrrell Co	dcllegg@tyrrellcounty.net
Dare Co	outten@darenc.com
ERAC	erac@vidanthealth.com

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: Beaufort, Carteret, Craven, Hyde, and Pamlico Counties	Title of Plan: Pamlico Sound Regional Hazard Mitigation Plan	Date of Plan: October 8, 2014 Revision 1/19/2015
Local Point of Contact: Donald R. Baumgardner	Address: 2828 Neuse Boulevard New Bern, NC 28562	
Title: Planning Director		
Agency: Craven County		
Phone Number: 252.636.6618	E-Mail: dbaumgardner@cravencountync.gov	

State Reviewer: John Mello	Title: Hazard Mitigation Planner	Date: 11/24/2014
--	--	--

FEMA Reviewer:	Title:	Date:
Date Received in FEMA Region <i>(insert #)</i>		
Plan Not Approved		
Plan Approvable Pending Adoption		
Plan Approved		

**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	Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)			
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 1-4 to 1-9 and 7-5 to 7-6		
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 1-8 to 1-11		
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		
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 4-1 to 4-16		
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		
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		

1. REGULATION CHECKLIST

Regulation (44 CFR 201.6 Local Mitigation Plans)

Location in Plan
(section and/or
page number)

Met Not
Met Met

ELEMENT A: REQUIRED REVISIONS

NCEM Review:

A1: “The Plan must provide, at a minimum, the jurisdiction represented and the person’s position or title and agency within the jurisdiction.”

A1: “For each jurisdiction seeking plan approval, the plan must document how they were involved in the planning process. For example, the plan may document meetings attended, data provided, or stakeholder and public involvement activities offered. Jurisdictions that adopt the plan without documenting how they participated in the planning process will not be approved.”

Required Revisions:

- Please add a position title for Philip Miller, Indian Beach. **Added title to page 7-5**
- The plan must document how the following jurisdictions participated in the planning process Aurora, Bath, Chocowinity, Pantego, Washington, Bogue, Cape Carteret, Cedar Point, Emerald Isle, Indian Beach, Newport, Peletier, Bridgeton, Cove City, Dover, Vanceboro, Arapahoe, Bayboro, Grantsboro, Mesic, Oriental, and Stonewall. **Participation letters included in Appendix B.**

For additional information, see “Element A – Planning Process” in the Local Mitigation Plan Review Guide, October, 2011, Page 17.

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 to 3-33		
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 to 3-33 and Appendix E		
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 3, page 3-1 to 3-33		
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 5-22		

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
ELEMENT B: REQUIRED REVISIONS				
NCEM Review:				
B1: “The plan must include a description of the natural hazards that can affect the jurisdiction(s) in the planning area....The description, or profile, must include information on location, extent, previous occurrences, and future probability for each hazard.				
B2: “The plan must include the history of previous hazard events for each of the identified hazards.” “Plan updates must include hazard events that have occurred since the last plan was developed.”				
Required Revisions:				
<ul style="list-style-type: none"> Wildfire must include information on <u>previous occurrences</u> and <u>extent</u>. Extent should be defined by the greatest number of acres burned using the previous occurrences. Please add wildfire historical occurrences and define wildfire extent if applicable on page 3-17 to 3-18. It should be noted if there have been no previous occurrences. Updated wildfire discussion in Section 3. 				
<i>For more information, please see Element B: Hazard Identification and Risk Assessment in the Local Mitigation Plan Review Guide, October 1, 2011, Pages 18-20.</i>				
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 to 4-22			
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 4-14 to 4-16 Section 6, page 6-6 to 6-36			
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 to 6-4			
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, page 6-6 to 6-36			
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 6-36			
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 7, page 7-4 to 7-5			

1. REGULATION CHECKLIST

Regulation (44 CFR 201.6 Local Mitigation Plans)

Location in Plan
(section and/or
page number)

Met Not
Met

ELEMENT C: REQUIRED REVISIONS

NCEM Review:

C2: “The plan must describe each jurisdiction’s participation in the NFIP and describe their floodplain management program for continued compliance. Simply stating “The community will continue to comply with NFIP,” will not meet this requirement.”

C2: “Jurisdictions that are currently not participating in the NFIP and where an FHBM or FIRM has been issued may meet this requirement by describing the reasons why the community does not participate.”

Required Revisions:

- Table 48, page 4-15, identifies that the Town of Dover does not participate in the NFIP program. Please provide a statement why the community does not participate (i.e. There is no SFHA within the town’s jurisdictional boundary). **Added note to Table 48, page 4-15.**
- Craven County Mitigation Action Plans specifically addressing NFIP activities list the Town of Dover as an applicable jurisdiction (see CR2 as one example). Consider whether the Town of Dover will be completing these actions or should the town be removed? **Revised Table 68 beginning on page 6-25.**

Recommended Revisions:

- Revise Mitigation Actions B12 and CA5 to include all hazards. **Revised actions as indicated.**

For more information, please see Element C: Mitigation Strategy in the Local Mitigation Plan Review Guide, October 1, 2011, Pages 23-25.

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 5-1 to 5-11		
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Appendix G		
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	Appendix G		

ELEMENT D: REQUIRED REVISIONS

NCEM Review:

D2: “Was the plan revised to reflect progress in local mitigation efforts?”

D2: “To evaluate and demonstrate progress made in the past five years in achieving goals and implementing actions outlined in their mitigation strategy.”

Required Revisions:

- See the attached document “Pamlico Sound RJ-HMP Element D2 Required Revisions” for NCEM required revisions to mitigation action updates. **Revised Appendix G in accordance with attachment.**
- The “Progress” statement should describe any activity that occurred since the last update (Progress) and when available, include date(s) and measurable accomplishment(s). i.e. 4 parcels acquired and structures demolished within the 100 year floodplain since last plan update or completed new ordinance in 2012 or lack of available funding opportunities since last update precluded any activity.

For additional information, see “Element D – Plan Review, Evaluation, and Implementation” in the Local Mitigation Plan Review Guide, October, 2011, Pages 27.

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
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 and Appendix D (to be completed)			
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))	Section 1 and Appendix D (to be completed)			
<u>ELEMENT E: REQUIRED REVISIONS</u>				
<u>NCEM First Review:</u>				
<p>E1 - The plan must include documentation of plan adoption, usually a resolution by the governing body or other authority. Unsigned adoption resolutions should be included in Appendix A. Adoption resolution templates are included as Appendix I.</p> <p>E2 - Each jurisdiction that is included in the plan must have its governing body adopt the plan prior to FEMA approval, even when a regional agency has the authority to prepare such plans.</p> <p><i>For additional information, see "Element E – Plan Adoption" in the Local Mitigation Plan Review Guide, October, 2011, Pages 28-29.</i></p>				
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)				
F1.				
F2.				
<u>ELEMENT F: REQUIRED REVISIONS</u>				

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

How does the Plan go above and beyond minimum requirements to document the planning process with respect to:

- *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 B: Hazard Identification and Risk Assessment

In addition to the requirements listed in the Regulation Checklist, 44 CFR 201.6 Local Mitigation Plans identifies additional elements that should be included as part of a plan's risk assessment. The plan should describe vulnerability in terms of:

- 1) *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;*
- 2) *The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas; and*
- 3) *A description of potential dollar losses to vulnerable structures, and a description of the methodology used to prepare the estimate.*

How does the Plan go above and beyond minimum requirements to document the Hazard Identification and Risk Assessment with respect to:

- *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

How does the Plan go above and beyond minimum requirements to document the Mitigation Strategy with respect to:

- *Key problems identified in, and linkages to, the vulnerability assessment;*
- *Serving as a blueprint for reducing potential losses identified in the Hazard Identification and Risk Assessment;*
- *Plan content flow from the risk assessment (problem identification) to goal setting to mitigation action development;*
- *An understanding of mitigation principles (diversity of actions that include structural projects, preventative measures, outreach activities, property protection measures, post-disaster actions, etc);*
- *Specific mitigation actions for each participating jurisdictions that reflects their unique risks and capabilities;*
- *Integration of mitigation actions with existing local authorities, policies, programs, and resources; and*
- *Discussion of existing programs (including the NFIP), plans, and policies that could be used to implement mitigation, as well as document past projects.*

Element D: Plan Update, Evaluation, and Implementation (Plan Updates Only)

How does the Plan go above and beyond minimum requirements to document the 5-year Evaluation and Implementation measures with respect to:

- *Status of previously recommended mitigation actions;*
- *Identification of barriers or obstacles to successful implementation or completion of mitigation actions, along with 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; and*
- *Discussion of how the mitigation goals and actions support the long-term community vision for increased resilience.*

B. Resources for Implementing Your Approved Plan

Ideas may be offered on moving the mitigation plan forward and continuing the relationship with key mitigation stakeholders such as the following:

- *What FEMA assistance (funding) programs are available (for example, Hazard Mitigation Assistance (HMA)) to the jurisdiction(s) to assist with implementing the mitigation actions?*
- *What other Federal programs (National Flood Insurance Program (NFIP), Community Rating System (CRS), Risk MAP, etc.) may provide assistance for mitigation activities?*
- *What publications, technical guidance or other resources are available to the jurisdiction(s) relevant to the identified mitigation actions?*
- *Are there upcoming trainings/workshops (Benefit-Cost Analysis (BCA), HMA, etc.) to assist the jurisdictions(s)?*
- *What mitigation actions can be funded by other Federal agencies (for example, U.S. Forest Service, National Oceanic and Atmospheric Administration (NOAA), Environmental Protection Agency (EPA) Smart Growth, Housing and Urban Development (HUD) Sustainable Communities, etc.) and/or state and local agencies?*

**SECTION 3:
MULTI-JURISDICTION SUMMARY SHEET (OPTIONAL)**

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 Requirements
1	Beaufort County	County										
2	Aurora	Town										
3	Bath	Town										
4	Belhaven	Town										
5	Chocowinity	Town										
6	Pantego	Town										
7	Washington	City										
8	Washington Park	Town										
9	Carteret County	County										

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 Requirements
10	Atlantic Beach	Town										
11	Beaufort	Town										
12	Bogue	Town										
13	Cape Carteret	Town										
14	Cedar Point	Town										
15	Emerald Isle	Town										
16	Indian Beach	Town										
17	Morehead City	Town										
18	Newport	Town										
19	Peletier	Town										
20	Pine Knoll Shores	Town										
21	Craven County	County										
22	Bridgeton	Town										
23	Cove City	Town										

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 Requirements
24	Dover	Town										
25	Havelock	City										
26	New Bern	City										
27	River Bend	Town										
28	Trent Woods	Town										
29	Vanceboro	Town										
30	Hyde County	County										
31	Pamlico County	County										
32	Alliance	Town										
33	Arapahoe	Town										
34	Bayboro	Town										
35	Gransboro	Town										
36	Mesic	Town										
37	Minnesott Beach	Town										

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 Requirements
38	Oriental	Town										
39	Stonewall	Town										
40	Vandemere	Town										

Element D2 Mitigation Strategies Required Revisions

Beaufort County

- **Strategy #20** Progress states “Beaufort County has treated several units through the HMGP program.” I was unable to locate HMGP grants that funded back-up generators or transfer switches. Please describe or provide examples or consider revising progress comment.
- **Strategy #27** Progress states “Beaufort County has *acquired* several units through the HMGP program.” Please describe what communities participated since the last update. Federally funded mitigation projects since last update include HMGP-1969-0012 approved project identifies acquisition of 1 residential structure located in Chocowinity.
- **Strategy #33** Progress states “continue to apply for HMGP/HMA funding for residential *acquisition and elevation.*” Please describe treatment, e.g. acquisition, elevation, etc. and what communities participated since the last update. Federally funded mitigation projects since last update include FMA-2008 approved project identifies elevation of one (1) residential structure located in Belhaven. RFC-2008 approved project identifies elevation of two (2) residential structures located in Belhaven and Washington. SRL-2008 approved project identifies elevation of four (4) residential structures located in Belhaven and Washington. SRL-2010 approved project identifies elevation of three (3) residential structures located in Belhaven and Washington. SRL-2011 approved project identifies elevation of one (1) residential structure located in Belhaven. HMGP 1969-0011 approved project identifies elevation of seven (7) residential structures located in Belhaven and Washington. HMGP-1969-0012 approved project identifies acquisition of 1 residential structure located in Chocowinity. HMGP-4019-022 approved project identifies elevation of one (1) residential structure located in Washington.
- **Strategy #37:** Please describe or provide specific examples that “jurisdictions are working with local real estate agencies to ensure that agents are informing clients when property for sale is located within a SFHA.” Examples should be since the last plan update.
- **Strategy #38:** Please describe or provide examples that “information regarding hazards and development regulations within floodplains are made available through” multiple mechanisms. Examples should be since the last plan update.
- **Strategy #43:** Please describe if any dam safety program inspections or mitigation activity has occurred since the last plan update.

Carteret County

- **Strategy #12** Progress states “Carteret County has installed several back-up generators at the following locations...” However, the “Progress” comment never describes any locations. Consider revising the comment or adding locations.
- **Strategy #41** Progress status states: “TBC” and is highlighted yellow. Consider revising the status to identify the corresponding 2014 strategy or mark complete or eliminated, etc.
- **Strategy #45** “Status/Corresponding 2015 Strategy: CA18.” Strategy CA18 uses the identical wording as #45 and has not been revised as stated. Also, describe what “some guidelines” means. What mechanism did the communities develop/use such as an ordinance or plan?
- **Strategy #47** Progress states “several units have been treated through the HMGP program.” Please describe treatment, e.g. acquisition, elevation, etc. and what communities participated since the last update. Federally funded mitigation projects since last update include HMGP-4019-0025 approved project identifies elevation of eight (8) residential structures located in Sea Level and Stacy. SRL-2008 approved project identifies elevation of two (2) residential structures located in Newport. PDM-2014 application identifies elevation of nine (9) residential structures located in Beaufort, Davis, Newport, Harkers Island, and Salter Path.
- **Strategy #48** refers to regional partnerships to identify funding sources but the progress is identical to Strategy #47. Please revise progress to describe regional partnership activity and any newly identified funding sources for mitigation activities since the last plan update.
- **Strategy #50** Please provide comments or examples of update activity to the map information service.
- **Strategy #51:** Please describe or provide examples that “jurisdictions are annually mailing a notice to all property owners whose land is located within a SFHA.” Examples should be since the last plan update.

- **Strategy #52:** Please describe or provide examples that “jurisdictions are working with local real estate agencies to ensure that agents are informing clients when property for sale is located within a SFHA.” Examples should be since the last plan update.
- **Strategy #53:** Please describe or provide examples that “information regarding hazards and development regulations within floodplains are made available” through multiple mechanisms. Examples should be since the last plan update.
- **Strategy #54:** Please describe if any activity or updates have occurred since the last plan update.
- **Strategy #57:** Please provide specific examples that “informational brochures are being developed and distributed.” Examples should be since the last plan update.
- **Strategy #60:** Please describe if any dam safety program inspections or mitigation activity has occurred since the last plan update.
- **Strategy #71:** Please describe any “coordination with utility providers to inform residents” since the last plan update. How do utility providers notify residents of drought hazards and regional drought policies?

Craven County

- **Strategy #22:** Please provide comments or examples of update activity to the “map information service” since the last plan update.
- **Strategy #23:** Please provide comments or examples of update activity within the “comprehensive services regarding planning and development activities within the defined SFHA.” Examples should be since the last plan update.
- **Strategy #24:** Please provide comments or examples of update activity to “information regarding hazards and development regulations within the floodplains.” Describe any mechanisms used to make this information available. Examples should be since the last plan update.
- **Strategy #25:** Please provide comments or examples of how the County’s Emergency Notification System has been expanded or improved since the last plan update.
- **Strategy #26:** Please provide specific examples that “jurisdictions are working with local real estate agencies to ensure that agents are informing clients when property for sale is located within a SFHA.” Examples should be since the last plan update.
- **Strategy #34:** Please describe if any dam safety program inspections or mitigation activity has occurred since the last plan update. Also, the “Status/Corresponding 2015 Strategy: CR20, CR21, CR22” does not describe any dam safety activity. Consider revising 2015 status reference.
- **Strategy #37:** Please describe if any activity or updates have occurred since the last plan update.

Hyde County

- **Strategy #2:** Please describe if any activity or updates have occurred since the last plan update. I was unable to locate any flood insurance or NFIP information on the Hyde County website as described in Strategy #2.
- **Strategy #5:** Please describe any mitigation activity or FIRM system updates that have occurred since the last plan update. Federally funded mitigation projects since last update include PDM-2011-001 approved project identifies elevation of eight (8) residential structures. HMGP-4019-0023 approved project identifies elevation of five (5) residential structures.
- **Strategy #6:** Please provide comments or examples of how the County has continued to maintain or update the education outreach program regarding “individual and family preparedness/mitigation measures for property owners.” Examples should be since the last plan update.
- **Strategy #7:** Progress states “the county has treated several units through HMGP funding.” Please describe treatment, e.g. acquisition, elevation, etc. and funded projects. Federally funded mitigation projects since last update include PDM-2011-001 approved project identifies elevation of eight (8) residential structures. HMGP-4019-0023 approved project identifies elevation of five (5) residential structures.
- **Strategy #8:** Please describe any activity or updates that have occurred since the last plan update. Has there been any increase in the amount of flood prone property preserved as open space since the last plan update.
- **Strategy #9:** Please describe any activity or updates that have occurred since the last plan update. Have any critical facilities been assessed for mitigation techniques or participated in mitigation activity since the last plan update? Have any new critical facilities been constructed since the last plan update?

- **Strategy #15:** Please describe any activity or updates that have occurred since the last plan update. Does the County have a designated office responsible for reaching out to repetitive loss property owners? What mechanism(s) are used to contact property owners? Were property owners contacted since the last plan update?

Pamlico County

- **Strategy #1:** Progress states “there have been several events in the county requiring damage assessments.” Please describe some examples the County used to “evaluate the effectiveness of the increased BFE.”
- **Strategy #7:** Please provide comments or specific examples of how the County educates property owners and residents about natural hazards since the last plan update.
- **Strategy #17:** Progress states “the county has treated several severe repetitive loss properties since certification of the 2010 plan.” Please describe repetitive loss property treatment, e.g. acquisition, elevation, etc. and funded projects. Federally funded mitigation projects since last update include HMGP-1490-0009 Acquisition of 2 Residential Structures located in Hobucken and Lowland. HMGP-4019-031 Elevation of 54 Residential Structures located in Arapahoe, Bayboro, Florence, Grantsboro, Hobucken, Lowland, Maribel, Merritt, Mesic, Oriental, Spinnaker Pt, and Vandemere. HMGP-4019-032 Acquisition of 53 Structures located in Arapahoe, Bayboro, Goose Creek Island, Hobucken, Lowland, Merritt, and Stonewall.

Appendix E - Hazard History

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
CARTERET, CRAVEN, HYDE, PAMLICO	REGIONAL EVENT	NC	5/7/2007	22:00	EST-5	Coastal Flood		0	0		0 0.00K
CARTERET	CARTERET	NC	11/2/2007	15:00	EST-5	Coastal Flood		0	0		0 0.00K
CARTERET, CRAVEN	CARTERET, CRAVEN	NC	9/24/2008	15:00	EST-5	Coastal Flood		0	0		1000 0.00K
CARTERET	CARTERET	NC	9/25/2008	18:15	EST-5	Coastal Flood		0	0		0 0.00K
HYDE	HYDE	NC	8/22/2009	17:00	EST-5	Coastal Flood		0	0		0 0.00K
CARTERET	CARTERET	NC	11/12/2009	17:00	EST-5	Coastal Flood		0	0		0 0.00K
CARTERET	CARTERET	NC	11/14/2009	6:00	EST-5	Coastal Flood		0	0		0 0.00K
HYDE	HYDE	NC	11/27/2009	6:15	EST-5	Coastal Flood		0	0		0 0.00K
HYDE	HYDE	NC	2/10/2010	21:00	EST-5	Coastal Flood		0	0		0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	3/11/1998	23:00	EST	Cold/Wind Chill		0	0		0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	6/1/2011	0:00	EST-5	Drought		0	0		0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	7/1/2011	0:00	EST-5	Drought		0	0		0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	8/1/2011	0:00	EST-5	Drought		0	0		0 0.00K
WASHINGTON	BEAUFORT CO.	NC	8/2/1996	19:10	EST	Flash Flood		0	0		0 0.00K
GRANTHAMS	CRAVEN CO.	NC	8/3/1996	15:45	EST	Flash Flood		0	0		0 0.00K
BELHAVEN, EMERALD ISLE	BEAUFORT, CARTERET	NC	10/8/1996	8:00	EST	Flash Flood		0	0		50000 0.00K
NEWPORT, HAVELOCK, ARAPAHOE	CARTERET, CRAVEN, PAMLICO	NC	5/5/1998	1:00	EST	Flash Flood		0	0		0 0.00K
NEWPORT, CHERRY PT MCAS	CARTERET, CRAVEN	NC	8/30/1999	8:00	EST	Flash Flood		0	0		0 0.00K
BEAUFORT, CARTERET, CRAVEN, PAMLICO	REGIONAL EVENT	NC	9/15/1999	16:13	EST	Flash Flood		0	0		0 0.00K
BEAUFORT, CARTERET, CRAVEN, PAMLICO	REGIONAL EVENT	NC	9/16/1999	3:51	EST	Flash Flood		0	0		0 0.00K
BEAUFORT, CARTERET, CRAVEN, PAMLICO	REGIONAL EVENT	NC	10/17/1999	13:19	EST	Flash Flood		0	0		0 0.00K
VANCEBORO	CRAVEN CO.	NC	7/25/2000	21:00	EST	Flash Flood		0	0		0 0.00K
JAMES CITY	CRAVEN CO.	NC	9/18/2000	17:30	EST	Flash Flood		0	0		0 0.00K
MOREHEAD CITY	CARTERET CO.	NC	7/27/2002	19:05	EST	Flash Flood		0	0		0 0.00K
MOREHEAD CITY, SALTER PATH	CARTERET CO.	NC	8/28/2002	9:40	EST	Flash Flood		0	0		0 0.00K
MERRITT	PAMLICO CO.	NC	8/31/2002	5:45	EST	Flash Flood		0	0		0 0.00K
NEWPORT	CARTERET CO.	NC	9/1/2002	13:45	EST	Flash Flood		0	0		0 0.00K
WEST CENTRAL PORTION	CARTERET CO.	NC	10/11/2002	18:00	EST	Flash Flood		0	0		0 0.00K
WASHINGTON	BEAUFORT CO.	NC	8/11/2003	6:25	EST	Flash Flood		0	0		0 0.00K
NEWPORT	CARTERET CO.	NC	8/23/2003	15:30	EST	Flash Flood		0	0		0 0.00K
NEWPORT, HAVELOCK	CARTERET, CRAVEN	NC	9/18/2003	13:00	EST	Flash Flood		0	0		0 0.00K
WASHINGTON	BEAUFORT CO.	NC	5/22/2004	18:50	EST	Flash Flood		0	0		0 0.00K
MOREHEAD CITY	CARTERET CO.	NC	6/30/2004	14:30	EST	Flash Flood		0	0		0 0.00K
HAVELOCK	CRAVEN CO.	NC	7/11/2004	13:20	EST	Flash Flood		0	0		0 0.00K
VANDEMERE	PAMLICO CO.	NC	7/19/2004	18:30	EST	Flash Flood		0	0		0 0.00K
EAST PORTION	CARTERET, CRAVEN	NC	8/3/2004	9:10	EST	Flash Flood		0	0		0 0.00K
AURORA, WASHINGTON	BEAUFORT CO.	NC	10/8/2005	8:15	EST	Flash Flood		0	0		125000 0.00K
OLD FORD, CAPE CARTERET, VANCEBORO, SWAN CORNER	BEAUFORT, CARTERET, CRAVEN, P. NC	NC	9/30/2010	19:00	EST-5	Flash Flood		0	0		1020000 55.500M
AURORA, HAVELOCK, SWANQUARTER, MINNESOTT BEACH	BEAUFORT, CRAVEN, HYDE, PAMLICO	NC	8/27/2011	14:30	EST-5	Flash Flood		0	0		0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	10/8/2005	5:58	EST	Flood		0	0		50000 0.00K
JAMES CITY	CRAVEN CO.	NC	4/15/2007	13:40	EST-5	Flood		0	0		0 0.00K
CHERRY PT USNR	CRAVEN CO.	NC	7/10/2007	13:05	EST-5	Flood		0	0		0 0.00K
BEAUFORT	CARTERET CO.	NC	9/9/2007	19:00	EST-5	Flood		0	0		5000 0.00K
HAVELOCK	CRAVEN CO.	NC	6/12/2009	23:30	EST-5	Flood		1	0		1000 0.00K
HAVELOCK	CRAVEN CO.	NC	8/12/2009	13:45	EST-5	Flood		0	0		50000 0.00K
NEWPORT, PELETIER	CARTERET CO.	NC	11/12/2009	2:39	EST-5	Flood		0	0		0 0.00K
CAPE CARTERET, TRUTTNEYS LNDG	CARTERET CO.	NC	11/19/2009	1:30	EST-5	Flood		0	0		0 0.00K
OLD FORD, CAPE CARTERET, VANCEBORO	BEAUFORT, CARTERET, CRAVEN	NC	9/29/2010	21:00	EST-5	Flood		0	0		0 0.00K
WASHINGTON ARPT	BEAUFORT CO.	NC	5/23/2012	17:44	EST-5	Flood		0	0		0 0.00K
WASHINGTON ARPT, PUNGO	BEAUFORT CO.	NC	5/30/2012	11:30	EST-5	Flood		0	0		0 0.00K
VANCEBORO	CRAVEN CO.	NC	5/23/2013	18:00	EST-5	Flood		0	0		0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	3/23/2004	1:00	EST	Frost/Freeze		0	0		0 0.00K
NEW HOLLAND	HYDE CO.	NC	5/8/1998	16:49	EST	Funnel Cloud		0	0		0 0.00K
DOVER, NEW BERN	CRAVEN CO.	NC	4/11/1999	15:36	EST	Funnel Cloud		0	0		0 0.00K
ARAPAHOE	PAMLICO CO.	NC	9/15/1999	15:10	EST	Funnel Cloud		0	0		0 0.00K
WASHINGTON	BEAUFORT CO.	NC	5/10/2003	20:25	EST	Funnel Cloud		0	0		0 0.00K
BLOUNTS CREEK STATION, BUNYAN, CHOCOWINITY	BEAUFORT CO.	NC	4/20/2008	14:20	EST-5	Funnel Cloud		0	0		0 0.00K
SCRANTON	HYDE CO.	NC	4/28/2008	16:24	EST-5	Funnel Cloud		0	0		0 0.00K
ATLANTIC	CARTERET CO.	NC	5/30/2012	10:10	EST-5	Funnel Cloud		0	0		0 0.00K
ARAPAHOE	PAMLICO CO.	NC	8/15/2012	12:40	EST-5	Funnel Cloud		0	0		0 0.00K
SWANQUARTER	HYDE CO.	NC	5/9/1996	17:30	EST	Hail	0.75 in.	0	0		0 0.00K
SWANQUARTER, HOBUCKEN	HYDE, PAMLICO	NC	5/24/1996	20:25	EST	Hail	0.75 in.	0	0		0 0.00K
WILDWOOD, MOREHEAD CITY	CARTERET CO.	NC	5/29/1996	22:05	EST	Hail	0.75 in.	0	0		0 0.00K
PINETOWN	BEAUFORT CO.	NC	7/2/1996	16:35	EST	Hail	0.75 in.	0	0		0 0.00K
BEAUFORT	CARTERET CO.	NC	7/27/1996	23:50	EST	Hail	1.75 in.	0	0		0 0.00K
CHOCOWINITY	BEAUFORT CO.	NC	7/30/1996	17:00	EST	Hail	2.00 in.	0	0		2000 0.00K
BATH, BRIDGETON	BEAUFORT, CRAVEN	NC	4/21/1997	16:44	EST	Hail	0.75 in.	0	0		0 0.00K
NEW BERN	CRAVEN CO.	NC	4/21/1997	16:30	EST	Hail	1.00 in.	0	0		0 0.00K
NEW BERN	CRAVEN CO.	NC	4/21/1997	18:10	EST	Hail	1.00 in.	0	0		0 0.00K
CAPE CARTERET	CARTERET CO.	NC	6/3/1997	14:45	EST	Hail	0.88 in.	0	0		0 0.00K
VANCEBORO	CRAVEN CO.	NC	7/5/1997	17:45	EST	Hail	1.75 in.	0	0		0 0.00K
ORIENTAL	PAMLICO CO.	NC	7/5/1997	15:50	EST	Hail	0.75 in.	0	0		0 0.00K
TUSCARORA	CRAVEN CO.	NC	7/6/1997	16:05	EST	Hail	0.75 in.	0	0		0 0.00K
COVE CITY, NEW BERN	CRAVEN CO.	NC	8/5/1997	17:45	EST	Hail	0.88 in.	0	0		0 0.00K
YEATESVILLE	BEAUFORT CO.	NC	8/18/1997	15:45	EST	Hail	0.88 in.	0	0		0 0.00K

ALLIANCE	PAMLICO CO.	NC	8/18/1997	16:23 EST	Hail	1.00 in.	0	0	0 0.00K
OCEAN	CARTERET CO.	NC	5/4/1998	19:03 EST	Hail	0.75 in.	0	0	0 0.00K
NEWPORT	CARTERET CO.	NC	5/4/1998	19:25 EST	Hail	0.88 in.	0	0	0 0.00K
NEW BERN	CRAVEN CO.	NC	5/4/1998	17:00 EST	Hail	0.75 in.	0	0	0 0.00K
NEW BERN	CRAVEN CO.	NC	5/4/1998	17:05 EST	Hail	1.00 in.	0	0	0 0.00K
VANCEBORO	CRAVEN CO.	NC	5/8/1998	18:52 EST	Hail	1.75 in.	0	0	0 0.00K
NEW HOLLAND, SCRANTON, ENGELHARD	HYDE CO.	NC	5/8/1998	16:49 EST	Hail	1.00 in.	0	0	0 0.00K
BAYVIEW	BEAUFORT CO.	NC	5/17/1998	11:00 EST	Hail	0.75 in.	0	0	0 0.00K
BEAUFORT	CARTERET CO.	NC	5/17/1998	11:05 EST	Hail	1.00 in.	0	0	0 0.00K
SCRANTON	HYDE CO.	NC	5/27/1998	14:40 EST	Hail	0.75 in.	0	0	0 0.00K
GRANTSBORO	PAMLICO CO.	NC	5/27/1998	13:35 EST	Hail	1.75 in.	0	0	0 0.00K
GRANTSBORO	PAMLICO CO.	NC	5/27/1998	13:35 EST	Hail	1.00 in.	0	0	0 0.00K
BAYBORO	PAMLICO CO.	NC	5/27/1998	13:45 EST	Hail	0.75 in.	0	0	0 0.00K
AURORA	BEAUFORT CO.	NC	6/2/1998	15:45 EST	Hail	1.75 in.	0	0	0 0.00K
BAYBORO	PAMLICO CO.	NC	6/2/1998	15:25 EST	Hail	1.50 in.	0	0	0 0.00K
CHOCOWINITY	BEAUFORT CO.	NC	6/3/1998	18:40 EST	Hail	1.00 in.	0	0	0 0.00K
AURORA	BEAUFORT CO.	NC	6/3/1998	20:25 EST	Hail	2.75 in.	0	0	0 0.00K
PINETOWN	BEAUFORT CO.	NC	6/3/1998	21:10 EST	Hail	1.75 in.	0	0	0 0.00K
COVE CITY, CLARK	CRAVEN CO.	NC	6/3/1998	16:35 EST	Hail	0.75 in.	0	0	0 0.00K
OCRACOKE	HYDE CO.	NC	6/3/1998	21:10 EST	Hail	1.75 in.	0	0	50000 0.00K
VANDEMERE	PAMLICO CO.	NC	6/3/1998	20:25 EST	Hail	2.75 in.	0	0	100000 0.00K
FAIRFIELD	HYDE CO.	NC	6/12/1998	18:00 EST	Hail	1.75 in.	0	0	0 0.00K
BELHAVEN	BEAUFORT CO.	NC	6/19/1998	13:05 EST	Hail	1.00 in.	0	0	0 0.00K
CLARK	CRAVEN CO.	NC	6/23/1998	20:15 EST	Hail	0.75 in.	0	0	0 0.00K
WASHINGTON	BEAUFORT CO.	NC	5/23/1999	16:45 EST	Hail	1.00 in.	0	0	0 0.00K
NEW BERN	CRAVEN CO.	NC	8/11/1999	18:20 EST	Hail	0.88 in.	0	0	0 0.00K
ENGELHARD	HYDE CO.	NC	8/11/1999	17:31 EST	Hail	1.75 in.	0	0	0 0.00K
REELSBORO	PAMLICO CO.	NC	8/11/1999	15:09 EST	Hail	1.00 in.	0	0	0 0.00K
REELSBORO	PAMLICO CO.	NC	8/11/1999	15:28 EST	Hail	0.75 in.	0	0	0 0.00K
WASHINGTON	BEAUFORT CO.	NC	2/14/2000	19:45 EST	Hail	0.88 in.	0	0	0 0.00K
ACRE STATION	BEAUFORT CO.	NC	2/14/2000	19:55 EST	Hail	1.00 in.	0	0	0 0.00K
WASHINGTON, NEW BERN, ALLIANCE	BEAUFORT, CRAVEN, PAMLICO	NC	4/21/2000	19:00 EST	Hail	0.75 in.	0	0	0 0.00K
PANTEGO	BEAUFORT CO.	NC	4/21/2000	20:30 EST	Hail	1.00 in.	0	0	0 0.00K
SCRANTON	HYDE CO.	NC	4/25/2000	12:55 EST	Hail	1.00 in.	0	0	0 0.00K
NEW BERN, BAYBORO	CRAVEN, PAMLICO	NC	5/21/2000	15:28 EST	Hail	1.25 in.	0	0	0 0.00K
NEW BERN	CRAVEN CO.	NC	5/21/2000	17:14 EST	Hail	1.75 in.	0	0	100000 0.00K
ORIENTAL	PAMLICO CO.	NC	5/21/2000	16:28 EST	Hail	1.00 in.	0	0	0 0.00K
ORIENTAL	PAMLICO CO.	NC	5/21/2000	18:10 EST	Hail	0.75 in.	0	0	0 0.00K
FT BARNWELL	CRAVEN CO.	NC	5/22/2000	17:55 EST	Hail	1.00 in.	0	0	0 0.00K
NEW BERN, FT BARNWELL, HAVELOCK	CRAVEN CO.	NC	5/22/2000	18:20 EST	Hail	0.75 in.	0	0	0 0.00K
ERNUL	CRAVEN CO.	NC	5/22/2000	19:15 EST	Hail	1.75 in.	0	0	0 0.00K
TRENT WOODS, NEW BERN	CRAVEN CO.	NC	5/22/2000	20:25 EST	Hail	1.00 in.	0	0	0 0.00K
REELSBORO	PAMLICO CO.	NC	5/22/2000	20:40 EST	Hail	1.25 in.	0	0	0 0.00K
SOUTH RIVER	CARTERET CO.	NC	5/25/2000	15:50 EST	Hail	1.75 in.	0	0	0 0.00K
NEW BERN	CRAVEN CO.	NC	5/25/2000	15:04 EST	Hail	2.00 in.	0	0	200000 0.00K
CHERRY PT LNDG	CRAVEN CO.	NC	5/25/2000	15:28 EST	Hail	1.75 in.	0	0	0 0.00K
MINNESOTT BEACH	PAMLICO CO.	NC	5/25/2000	15:30 EST	Hail	0.75 in.	0	0	0 0.00K
CHOCOWINITY	BEAUFORT CO.	NC	5/27/2000	18:33 EST	Hail	2.00 in.	0	0	100000 0.00K
SOUTH RIVER, NEW BERN, GRANTSBORO	CARTERET, CRAVEN, PAMLICO	NC	5/28/2000	14:42 EST	Hail	0.75 in.	0	0	0 0.00K
BATH	BEAUFORT CO.	NC	7/16/2000	15:40 EST	Hail	1.75 in.	0	0	0 0.00K
NEW BERN, VANCEBORO, RANSOMVILLE	CRAVEN, BEAUFORT	NC	7/16/2000	14:47 EST	Hail	1.00 in.	0	0	0 0.00K
FT BARNWELL	CRAVEN CO.	NC	7/16/2000	17:10 EST	Hail	2.00 in.	0	0	20000 0.00K
NEW BERN	CRAVEN CO.	NC	8/9/2000	17:35 EST	Hail	1.00 in.	0	0	0 0.00K
ATLANTIC BEACH	CARTERET CO.	NC	8/13/2000	14:43 EST	Hail	0.75 in.	0	0	0 0.00K
NEWPORT, HAVELOCK	CARTERET, CRAVEN	NC	8/16/2000	23:17 EST	Hail	0.88 in.	0	0	0 0.00K
BEAUFORT, PANZER, WASHINGTON	BEAUFORT, CARTERET, HYDE	NC	8/16/2000	23:33 EST	Hail	0.75 in.	0	0	0 0.00K
BAYBORO	PAMLICO CO.	NC	8/16/2000	22:55 EST	Hail	1.00 in.	0	0	0 0.00K
NEW HOLLAND	HYDE CO.	NC	8/24/2000	18:05 EST	Hail	1.50 in.	0	0	0 0.00K
SEALEVEL	CARTERET CO.	NC	4/17/2001	15:20 EST	Hail	1.75 in.	0	0	0 0.00K
WASHINGTON PARK	BEAUFORT CO.	NC	5/12/2001	17:48 EST	Hail	0.88 in.	0	0	0 0.00K
AURORA	BEAUFORT CO.	NC	5/28/2001	11:13 EST	Hail	0.88 in.	0	0	0 0.00K
ATLANTIC	CARTERET CO.	NC	5/28/2001	11:50 EST	Hail	0.75 in.	0	0	0 0.00K
SEALEVEL	CARTERET CO.	NC	6/6/2001	16:40 EST	Hail	1.00 in.	0	0	0 0.00K
BLOUNTS CREEK STATIO, NEW BERN	BEAUFORT, CRAVEN	NC	4/18/2002	15:53 EST	Hail	0.88 in.	0	0	0 0.00K
COVE CITY	CRAVEN CO.	NC	6/14/2002	15:20 EST	Hail	0.75 in.	0	0	0 0.00K
HAVELOCK	CRAVEN CO.	NC	6/17/2002	16:00 EST	Hail	0.75 in.	0	0	0 0.00K
MERRITT	PAMLICO CO.	NC	6/17/2002	14:35 EST	Hail	0.88 in.	0	0	0 0.00K
FT BARNWELL	CRAVEN CO.	NC	7/5/2002	17:30 EST	Hail	0.75 in.	0	0	0 0.00K
WHORTONVILLE	PAMLICO CO.	NC	7/27/2002	16:13 EST	Hail	0.75 in.	0	0	0 0.00K
NEW BERN	CRAVEN CO.	NC	7/31/2002	14:10 EST	Hail	0.75 in.	0	0	0 0.00K
NEW BERN	CRAVEN CO.	NC	7/31/2002	15:00 EST	Hail	0.88 in.	0	0	0 0.00K
NEWPORT	CARTERET CO.	NC	3/6/2003	4:11 EST	Hail	0.75 in.	0	0	0 0.00K
OCRACOKE	HYDE CO.	NC	3/11/2003	13:40 EST	Hail	0.75 in.	0	0	0 0.00K
AURORA	BEAUFORT CO.	NC	5/9/2003	19:25 EST	Hail	0.88 in.	0	0	0 0.00K
FAIRFIELD, SWANQUARTER, NEW HOLLAND	HYDE CO.	NC	5/9/2003	18:15 EST	Hail	1.75 in.	0	0	0 0.00K
OCRACOKE	HYDE CO.	NC	5/9/2003	19:11 EST	Hail	1.00 in.	0	0	0 0.00K
WASHINGTON	BEAUFORT CO.	NC	5/10/2003	20:25 EST	Hail	1.00 in.	0	0	0 0.00K
COVE CITY, NEW BERN	CRAVEN CO.	NC	5/29/2003	18:05 EST	Hail	0.75 in.	0	0	0 0.00K

NEW BERN, BRIDGETON	CRAVEN CO.	NC	5/29/2003	18:36 EST	Hail	0.88 in.	0	0	0 0.00K
GRANTSBORO	PAMLICO CO.	NC	5/29/2003	18:55 EST	Hail	1.00 in.	0	0	0 0.00K
BAYBORO	PAMLICO CO.	NC	7/12/2003	15:20 EST	Hail	1.75 in.	0	0	0 0.00K
NEWPORT	CARTERET CO.	NC	8/23/2003	14:15 EST	Hail	0.88 in.	0	0	0 0.00K
NEWPORT	CARTERET CO.	NC	8/23/2003	14:30 EST	Hail	0.75 in.	0	0	0 0.00K
COVE CITY	CRAVEN CO.	NC	4/11/2004	17:05 EST	Hail	0.88 in.	0	0	0 0.00K
WASHINGTON	BEAUFORT CO.	NC	5/22/2004	18:45 EST	Hail	0.75 in.	0	0	0 0.00K
NEW BERN	CRAVEN CO.	NC	6/11/2004	22:55 EST	Hail	1.75 in.	0	0	0 0.00K
AURORA	BEAUFORT CO.	NC	7/8/2004	14:00 EST	Hail	0.88 in.	0	0	0 0.00K
JAMES CITY	CRAVEN CO.	NC	7/10/2004	16:40 EST	Hail	1.75 in.	0	0	0 0.00K
TUSCARORA	CRAVEN CO.	NC	8/5/2004	16:45 EST	Hail	0.88 in.	0	0	0 0.00K
ENGELHARD	HYDE CO.	NC	3/28/2005	8:55 EST	Hail	1.00 in.	0	0	0 0.00K
BATH	BEAUFORT CO.	NC	4/23/2005	17:07 EST	Hail	0.75 in.	0	0	0 0.00K
ORIENTAL	PAMLICO CO.	NC	5/12/2005	17:20 EST	Hail	0.88 in.	0	0	0 0.00K
PINETOWN	BEAUFORT CO.	NC	5/24/2005	17:35 EST	Hail	0.88 in.	0	0	0 0.00K
PINETOWN	BEAUFORT CO.	NC	5/24/2005	17:44 EST	Hail	1.50 in.	0	0	0 0.00K
SOUTH RIVER, HAVELOCK	CARTERET, CRAVEN	NC	5/24/2005	17:55 EST	Hail	0.75 in.	0	0	0 0.00K
MERRITT	PAMLICO CO.	NC	5/24/2005	18:25 EST	Hail	1.75 in.	0	0	0 0.00K
WASHINGTON	BEAUFORT CO.	NC	8/3/2005	16:17 EST	Hail	0.75 in.	0	0	0 0.00K
WASHINGTON, BOGUE, BAYBORO	BEAUFORT, CARTERET, PAMLICO	NC	4/3/2006	11:50 EST	Hail	0.75 in.	0	0	0 0.00K
AURORA, BATH, BRIDGETON	BEAUFORT, CRAVEN	NC	4/3/2006	12:30 EST	Hail	1.75 in.	0	0	0 0.00K
AURORA, JAMES CITY, OCRACOE	BEAUFORT, CRAVEN, HYDE	NC	4/3/2006	18:42 EST	Hail	1.00 in.	0	0	0 0.00K
STELLA, NEW BERN, COVE CITY, HAVELOCK	CARTERET, CRAVEN	NC	4/3/2006	19:15 EST	Hail	0.88 in.	0	0	0 0.00K
BRIDGETON	CRAVEN CO.	NC	4/3/2006	18:20 EST	Hail	1.25 in.	0	0	0 0.00K
BELHAVEN	BEAUFORT CO.	NC	4/8/2006	15:19 EST	Hail	0.75 in.	0	0	0 0.00K
WASHINGTON, BELHAVEN	BEAUFORT CO.	NC	5/15/2006	14:15 EST	Hail	0.75 in.	0	0	0 0.00K
TERRA CEIA	BEAUFORT CO.	NC	5/15/2006	14:50 EST	Hail	1.50 in.	0	0	0 0.00K
WASHINGTON	BEAUFORT CO.	NC	5/15/2006	16:40 EST	Hail	0.88 in.	0	0	0 0.00K
CHOCOWINITY	BEAUFORT CO.	NC	5/18/2006	20:35 EST	Hail	1.75 in.	0	0	0 0.00K
HAVELOCK	CRAVEN CO.	NC	5/18/2006	21:25 EST	Hail	0.88 in.	0	0	0 0.00K
AURORA, WASHINGTON	BEAUFORT CO.	NC	5/26/2006	14:45 EST	Hail	0.75 in.	0	0	0 0.00K
CHOCOWINITY	BEAUFORT CO.	NC	5/26/2006	18:25 EST	Hail	0.88 in.	0	0	0 0.00K
STELLA, JAMES CITY, HAVELOCK, JASPER	CARTERET, CRAVEN	NC	5/26/2006	15:00 EST	Hail	1.00 in.	0	0	0 0.00K
HAVELOCK, VANCEBORO	CRAVEN CO.	NC	5/26/2006	15:12 EST	Hail	0.88 in.	0	0	0 0.00K
COVE CITY, ARAPAHOE	CRAVEN, PAMLICO	NC	5/26/2006	17:06 EST	Hail	0.75 in.	0	0	0 0.00K
CHOCOWINITY, DOVER, HAVELOCK	BEAUFORT, CRAVEN	NC	6/5/2006	18:05 EST	Hail	0.75 in.	0	0	0 0.00K
FT BARNWELL	CRAVEN CO.	NC	6/6/2006	14:05 EST	Hail	0.75 in.	0	0	0 0.00K
CHERRY PT MCAS	CRAVEN CO.	NC	6/8/2006	14:00 EST	Hail	0.88 in.	0	0	0 0.00K
HAVELOCK	CRAVEN CO.	NC	6/8/2006	14:45 EST	Hail	0.75 in.	0	0	0 0.00K
ORIENTAL	PAMLICO CO.	NC	6/8/2006	14:00 EST	Hail	1.75 in.	0	0	0 0.00K
MINNESOTT BEACH	PAMLICO CO.	NC	6/8/2006	14:56 EST	Hail	1.25 in.	0	0	0 0.00K
AURORA, NEW BERN, OLYMPIA	BEAUFORT, CRAVEN, PAMLICO	NC	6/12/2006	16:31 EST	Hail	2.75 in.	0	0	25000 0.00K
BRIDGETON	CRAVEN CO.	NC	6/12/2006	16:10 EST	Hail	1.75 in.	0	0	0 0.00K
PUNGO	BEAUFORT CO.	NC	6/30/2006	17:40 EST	Hail	1.75 in.	0	0	0 0.00K
COVE CITY	CRAVEN CO.	NC	6/30/2006	18:05 EST	Hail	1.00 in.	0	0	0 0.00K
SCRANTON	HYDE CO.	NC	6/30/2006	18:30 EST	Hail	0.75 in.	0	0	0 0.00K
STELLA	CARTERET CO.	NC	7/15/2006	17:11 EST	Hail	0.88 in.	0	0	0 0.00K
PINETOWN	BEAUFORT CO.	NC	7/20/2006	17:44 EST	Hail	0.75 in.	0	0	0 0.00K
STELLA	CARTERET CO.	NC	8/5/2006	11:30 EST	Hail	0.75 in.	0	0	0 0.00K
WASHINGTON ARPT	BEAUFORT CO.	NC	3/28/2007	15:23 EST-5	Hail	1.25 in.	0	0	0 0.00K
WASHINGTON ARPT	BEAUFORT CO.	NC	3/28/2007	15:25 EST-5	Hail	0.88 in.	0	0	0 0.00K
WASHINGTON ARPT	BEAUFORT CO.	NC	3/28/2007	15:27 EST-5	Hail	1.75 in.	0	0	50000 0.00K
WASHINGTON ARPT, OLD FORD	BEAUFORT CO.	NC	3/28/2007	15:29 EST-5	Hail	1.00 in.	0	0	0 0.00K
WASHINGTON ARPT	BEAUFORT CO.	NC	3/28/2007	15:31 EST-5	Hail	2.00 in.	0	0	0 0.00K
WASHINGTON ARPT	BEAUFORT CO.	NC	3/28/2007	15:42 EST-5	Hail	1.50 in.	0	0	0 0.00K
WASHINGTON ARPT, FAIRFIELD	BEAUFORT, HYDE	NC	3/28/2007	15:43 EST-5	Hail	0.75 in.	0	0	0 0.00K
SIDNEY XRD	BEAUFORT CO.	NC	6/4/2007	17:27 EST-5	Hail	1.00 in.	0	0	0 0.00K
BOGUE, NEWPORT, SALTER PATH, CAMP									
GLENN, NEWPORT	CARTERET CO.	NC	6/9/2007	14:13 EST-5	Hail	0.75 in.	0	0	0 0.00K
SALTER PATH	CARTERET CO.	NC	6/9/2007	14:40 EST-5	Hail	1.00 in.	0	0	0 0.00K
CAMP GLENN, SMYRNA	CARTERET CO.	NC	6/9/2007	14:56 EST-5	Hail	0.88 in.	0	0	0 0.00K
CAMP GLENN	CARTERET CO.	NC	6/9/2007	15:16 EST-5	Hail	1.25 in.	0	0	0 0.00K
BURBAGE XRD, AURORA	BEAUFORT CO.	NC	6/12/2007	15:40 EST-5	Hail	0.88 in.	0	0	0 0.00K
FT BARNWELL	CRAVEN CO.	NC	6/16/2007	18:35 EST-5	Hail	1.25 in.	0	0	0 0.00K
ASKIN	CRAVEN CO.	NC	6/16/2007	18:49 EST-5	Hail	1.00 in.	0	0	0 0.00K
CHOCOWINITY	BEAUFORT CO.	NC	7/17/2007	19:55 EST-5	Hail	1.00 in.	0	0	0 0.00K
BUNYAN, CHOCOWINITY, COVE CITY	BEAUFORT, CRAVEN	NC	4/20/2008	14:20 EST-5	Hail	0.75 in.	0	0	0 0.00K
BUNYAN	BEAUFORT CO.	NC	4/20/2008	14:27 EST-5	Hail	1.00 in.	0	0	0 0.00K
HACKNEY	BEAUFORT CO.	NC	4/20/2008	14:55 EST-5	Hail	0.88 in.	0	0	0 0.00K
NEWPORT	CARTERET CO.	NC	4/21/2008	12:15 EST-5	Hail	0.88 in.	0	0	0 0.00K
STELLA, CRAVEN CORNER, BRIDGETON, RHEMS,									
MESIC	CARTERET, CRAVEN, PAMLICO	NC	4/21/2008	13:00 EST-5	Hail	0.75 in.	0	0	0 0.00K
HARKERS IS	CARTERET CO.	NC	4/22/2008	4:00 EST-5	Hail	0.75 in.	0	0	0 0.00K
STELLA	CARTERET CO.	NC	5/10/2008	1:15 EST-5	Hail	0.88 in.	0	0	0 0.00K
ATLANTIC, VANCEBORO	CARTERET, CRAVEN	NC	5/11/2008	19:37 EST-5	Hail	0.88 in.	0	0	0 0.00K
(NKT)MCAS CHERRY PT, TRENT WOODS	CRAVEN CO.	NC	5/11/2008	18:50 EST-5	Hail	1.00 in.	0	0	0 0.00K
CHERRY PT USNR	CRAVEN CO.	NC	5/11/2008	18:55 EST-5	Hail	0.75 in.	0	0	0 0.00K
STACY	CARTERET CO.	NC	5/20/2008	17:13 EST-5	Hail	0.88 in.	0	0	0 0.00K

STELLA, BROAD CREEK, CAPE CARTERET, CHERRY PT USNR, RIVERDALE, GRANTSBORO OCEAN	CARTERET, CRAVEN, PAMLICO CARTERET CO.	NC	5/20/2008	19:43 EST-5	Hail	0.75 in.	0	0	0 0.00K
CHERRY PT USNR OTWAY	CRAVEN CO. CARTERET CO.	NC	5/20/2008	16:33 EST-5	Hail	1.75 in.	0	0	0 0.00K
ATLANTIC CHERRY PT USNR	CARTERET CO. CRAVEN CO.	NC	6/1/2008	20:20 EST-5	Hail	0.88 in.	0	0	0 0.00K
BAYBORO LEGGETTS XRDS, ERNUL NEW BERN, BRIDGETON, JASPER, SCOTTS STORE	PAMLICO CO. BEAUFORT, CRAVEN CRAVEN CO.	NC	6/20/2008	13:30 EST-5	Hail	0.75 in.	0	0	0 0.00K
TRENT WOODS, BRIDGETON	CRAVEN CO.	NC	6/20/2008	13:15 EST-5	Hail	0.88 in.	0	0	0 0.00K
BRIDGETON, CLARK, REELSBORO	BEAUFORT, CRAVEN	NC	6/27/2008	14:55 EST-5	Hail	1.00 in.	0	0	0 0.00K
BLOUNTS CREEK STATION, VANCEBORO BLOUNTS CREEK STATIO	BEAUFORT, CRAVEN BEAUFORT CO.	NC	7/8/2008	14:40 EST-5	Hail	1.75 in.	0	0	0 0.00K
	CRAVEN CO.	NC	7/8/2008	12:10 EST-5	Hail	0.88 in.	0	0	0 0.00K
	CRAVEN CO.	NC	7/8/2008	12:38 EST-5	Hail	1.00 in.	0	0	0 0.00K
	CRAVEN, PAMLICO	NC	7/8/2008	12:50 EST-5	Hail	0.75 in.	0	0	0 0.00K
	BEAUFORT, CRAVEN	NC	7/22/2008	12:40 EST-5	Hail	1.00 in.	0	0	0 0.00K
	BEAUFORT CO.	NC	10/1/2008	13:58 EST-5	Hail	1.75 in.	0	0	0 0.00K
BELHAVEN, PAMLICO BEACH, JASPER, CATON	BEAUFORT, CRAVEN	NC	10/1/2008	14:32 EST-5	Hail	0.88 in.	0	0	0 0.00K
BELHAVEN, VANCEBORO, JASPER	BEAUFORT, CRAVEN	NC	10/1/2008	14:37 EST-5	Hail	0.75 in.	0	0	0 0.00K
OLD FORD	BEAUFORT CO.	NC	10/1/2008	16:40 EST-5	Hail	1.00 in.	0	0	0 0.00K
SURRY, BLOUNTS CREEK STATION	BEAUFORT CO.	NC	5/4/2009	14:45 EST-5	Hail	0.75 in.	0	0	0 0.00K
PANTEGO	BEAUFORT CO.	NC	5/4/2009	15:19 EST-5	Hail	1.75 in.	0	0	0 0.00K
VANCEBORO	CRAVEN CO.	NC	5/7/2009	17:25 EST-5	Hail	1.75 in.	0	0	0 0.00K
VANCEBORO	CRAVEN CO.	NC	5/7/2009	17:30 EST-5	Hail	0.88 in.	0	0	0 0.00K
PANTEGO	BEAUFORT CO.	NC	6/12/2009	15:10 EST-5	Hail	0.88 in.	0	0	0 0.00K
BELHAVEN, RIVERDALE	BEAUFORT, CRAVEN	NC	6/12/2009	15:15 EST-5	Hail	0.75 in.	0	0	0 0.00K
BAYBORO	PAMLICO CO.	NC	6/13/2009	15:30 EST-5	Hail	0.75 in.	0	0	0 0.00K
STELLA	CARTERET CO.	NC	6/22/2009	23:38 EST-5	Hail	0.75 in.	0	0	0 0.00K
RIVERDALE, TRENT WOODS	CRAVEN CO.	NC	6/26/2009	15:55 EST-5	Hail	1.00 in.	0	0	0 0.00K
GRANTSBORO	PAMLICO CO.	NC	7/12/2009	19:10 EST-5	Hail	0.75 in.	0	0	0 0.00K
CAMPBELLS CREEK, CEDAR PT BEACH	BEAUFORT, CARTERET	NC	7/24/2009	13:23 EST-5	Hail	0.75 in.	0	0	0 0.00K
PANTEGO, PONZER	BEAUFORT, HYDE	NC	7/24/2009	14:01 EST-5	Hail	2.75 in.	0	0	0 0.00K
MC CONNELL	BEAUFORT CO.	NC	7/26/2009	16:00 EST-5	Hail	0.75 in.	0	0	0 0.00K
WHARTON	BEAUFORT CO.	NC	8/18/2010	16:10 EST-5	Hail	1.00 in.	0	0	0 0.00K
NEWPORT	CARTERET CO.	NC	4/5/2011	7:30 EST-5	Hail	0.75 in.	0	0	0 0.00K
VANCEBORO, CHERRY PT USNR	CRAVEN CO.	NC	4/16/2011	18:41 EST-5	Hail	1.00 in.	0	0	0 0.00K
VANCEBORO	CRAVEN CO.	NC	4/28/2011	15:35 EST-5	Hail	2.75 in.	0	0	0 0.00K
VANCEBORO	CRAVEN CO.	NC	4/28/2011	15:40 EST-5	Hail	1.00 in.	0	0	0 0.00K
CAPE CARTERET	CARTERET CO.	NC	6/19/2011	16:27 EST-5	Hail	1.25 in.	0	0	0 0.00K
SALTER PATH	CARTERET CO.	NC	6/19/2011	16:32 EST-5	Hail	1.00 in.	0	0	0 0.00K
OTWAY	CARTERET CO.	NC	6/20/2011	2:20 EST-5	Hail	1.00 in.	0	0	0 0.00K
OLD FORD	BEAUFORT CO.	NC	6/27/2011	15:30 EST-5	Hail	0.88 in.	0	0	0 0.00K
WOODROW	CRAVEN CO.	NC	6/27/2011	13:27 EST-5	Hail	0.75 in.	0	0	0 0.00K
OCRACOCKE IS ARPT	HYDE CO.	NC	7/2/2011	7:42 EST-5	Hail	0.75 in.	0	0	0 0.00K
CHOCOWINITY, FREDERICK	BEAUFORT CO.	NC	3/20/2012	16:11 EST-5	Hail	1.00 in.	0	0	0 0.00K
HACKNEY	BEAUFORT CO.	NC	3/20/2012	16:21 EST-5	Hail	0.88 in.	0	0	0 0.00K
CROATAN, FT BARNWELL	CRAVEN CO.	NC	3/25/2012	14:20 EST-5	Hail	0.75 in.	0	0	0 0.00K
ORIENTAL	PAMLICO CO.	NC	3/25/2012	15:00 EST-5	Hail	1.00 in.	0	0	0 0.00K
PIKE ROAD, BELHAVEN	BEAUFORT CO.	NC	5/2/2012	17:34 EST-5	Hail	0.88 in.	0	0	0 0.00K
BELHAVEN	BEAUFORT CO.	NC	5/2/2012	19:17 EST-5	Hail	1.00 in.	0	0	0 0.00K
OLD FORD	BEAUFORT CO.	NC	5/16/2012	14:30 EST-5	Hail	1.25 in.	0	0	0 0.00K
PINETOWN, VANCEBORO	BEAUFORT, CRAVEN	NC	5/16/2012	14:40 EST-5	Hail	1.00 in.	0	0	0 0.00K
VANCEBORO	CRAVEN CO.	NC	5/16/2012	13:53 EST-5	Hail	0.75 in.	0	0	0 0.00K
YEATESVILLE, SLADESVILLE	BEAUFORT, HYDE	NC	5/22/2012	15:20 EST-5	Hail	0.75 in.	0	0	0 0.00K
ALLIGOODS, CHOCOWINITY, PINEVILLE	BEAUFORT CO.	NC	5/23/2012	16:28 EST-5	Hail	0.88 in.	0	0	0 0.00K
WASHINGTON ARPT	BEAUFORT CO.	NC	5/23/2012	17:15 EST-5	Hail	1.00 in.	0	0	0 0.00K
ROE, THURMAN, GRANTHAMS, FT BARNWELL	CARTERET, CRAVEN	NC	7/1/2012	14:59 EST-5	Hail	1.00 in.	0	0	0 0.00K
NEWPORT	CARTERET CO.	NC	7/22/2012	15:20 EST-5	Hail	1.25 in.	0	0	0 0.00K
NEWPORT, CHERRY PT USNR	CARTERET, CRAVEN	NC	7/22/2012	16:00 EST-5	Hail	1.00 in.	0	0	0 0.00K
CHERRY PT LNDG	CRAVEN CO.	NC	7/22/2012	15:01 EST-5	Hail	0.75 in.	0	0	0 0.00K
CHERRY PT USNR, (NKT) MCAS CHERRY PT	CRAVEN CO.	NC	7/22/2012	15:06 EST-5	Hail	0.88 in.	0	0	0 0.00K
GLOUCESTER	CARTERET CO.	NC	8/24/2012	19:50 EST-5	Hail	1.00 in.	0	0	0 0.00K
BEAUFORT	CARTERET CO.	NC	5/6/2013	21:37 EST-5	Hail	1.00 in.	0	0	0 0.00K
ASKIN	CRAVEN CO.	NC	5/11/2013	11:55 EST-5	Hail	0.88 in.	0	0	0 0.00K
MOREHEAD CITY	CARTERET CO.	NC	9/3/1998	18:00 EST	Heavy Rain		0	0	25000 0.00K
CHERRY PT USNR	CRAVEN CO.	NC	7/10/2007	13:15 EST-5	Heavy Rain		0	0	0 0.00K
CORE CREEK	CARTERET CO.	NC	9/9/2007	12:00 EST-5	Heavy Rain		0	0	0 0.00K
WASHINGTON, CEDAR PT, TRENT WOODS, BAYBORO	BEAUFORT, CARTERET, CRAVEN, P.	NC	9/27/2010	0:00 EST-5	Heavy Rain		0	0	0 0.00K
NEWPORT, CAMP GLENN, CHERRY PT USNR, SLADESVILLE	CARTERET, CRAVEN, HYDE	NC	5/30/2012	12:54 EST-5	Heavy Rain		0	0	0 0.00K
BEAUFORT, CRAVEN	BEAUFORT, CRAVEN (ZONE)	NC	12/3/2000	6:00 EST	Heavy Snow		0	0	0 0.00K
BEAUFORT, CRAVEN, HYDE, PAMLICO	BEAUFORT, CRAVEN, HYDE, PAMLINC	NC	1/20/2009	8:00 EST-5	Heavy Snow		0	0	0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	2/12/2010	21:00 EST-5	Heavy Snow		0	0	0 0.00K
BEAUFORT, CRAVEN, HYDE, PAMLICO	BEAUFORT, CRAVEN, HYDE, PAMLINC	NC	12/26/2010	5:00 EST-5	Heavy Snow		0	0	0 0.00K
CARTERET, CRAVEN	CARTERET, CRAVEN (ZONE)	NC	1/10/2011	7:00 EST-5	Heavy Snow		0	0	0 0.00K
CARTERET, CRAVEN, HYDE, PAMLICO	CARTERET, CRAVEN, HYDE, PAMLINC	NC	1/22/2011	9:00 EST-5	Heavy Snow		0	0	0 0.00K
WESTERN HYDE (ZONE)	WESTERN HYDE (ZONE)	NC	2/10/2011	3:00 EST-5	Heavy Snow		0	0	0 0.00K

EASTERN HYDE (ZONE)	EASTERN HYDE (ZONE)	NC	11/12/2009	21:00 EST-5	High Surf		0	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	11/19/2012	21:00 EST-5	High Surf		0	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	9/4/1998	2:00 EST	High Wind	45 kts.	0	0	0	0.00K
CARTERET, HYDE	CARTERET, EASTERN HYDE (ZONE)	NC	12/16/1998	2:00 EST	High Wind	70-84 kts.	0	0	0	0.00K
CARTERET, HYDE	CARTERET, EASTERN HYDE (ZONE)	NC	12/16/2000	8:00 EST	High Wind	54-62 kts. M	0	0	0	0.00K
CARTERET, CRAVEN	CARTERET, CRAVEN (ZONE)	NC	3/13/2001	2:00 EST	High Wind	51 kts. M	0	0	0	0.00K
CARTERET, HYDE	CARTERET, EASTERN HYDE (ZONE)	NC	3/20/2001	19:00 EST	High Wind	45-52 kts. M	0	0	0	0.00K
CARTERET, HYDE	CARTERET, EASTERN HYDE (ZONE)	NC	1/6/2002	14:00 EST	High Wind	54-62 kts. M	0	0	0	0.00K
CARTERET, CRAVEN, HYDE	CARTERET, CRAVEN, EASTERN H	NC	2/4/2002	20:00 EST	High Wind	36-53 kts. M	0	0	0	0.00K
CARTERET, HYDE	CARTERET, EASTERN HYDE (ZONE)	NC	10/15/2002	19:00 EST	High Wind	43-50 kts. M	0	0	0	0.00K
BEAUFORT, CARTERET, CRAVEN, HYDE	BEAUFORT, CARTERET, CRAVEN, H	NC	12/24/2002	17:15 EST	High Wind	50 kts. E	0	0	0	0.00K
EASTERN HYDE (ZONE)	EASTERN HYDE (ZONE)	NC	4/10/2003	10:00 EST	High Wind	50 kts. EG	0	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	5/23/2003	18:13 EST	High Wind	54 kts. MG	0	0	0	0.00K
EASTERN HYDE (ZONE)	EASTERN HYDE (ZONE)	NC	2/27/2004	0:00 EST	High Wind	50 kts. MG	0	0	0	0.00K
ALL COUNTIES	REGIONAL EVENT	NC	3/7/2004	22:15 EST	High Wind	50-53 kts. EG	0	0	5000	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	2/28/2005	9:00 EST	High Wind	52 kts. MG	0	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	5/6/2005	9:50 EST	High Wind	69 kts. MG	0	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	1/17/2006	19:00 EST	High Wind	52 kts. MG	0	0	0	0.00K
BEAUFORT (ZONE)	BEAUFORT (ZONE)	NC	6/14/2006	18:15 EST	High Wind	53 kts. MG	0	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	6/27/2006	14:35 EST	High Wind	35 kts. ES	0	0	0	0.00K
CARTERET, CRAVEN, HYDE	CARTERET, CRAVEN, HYDE	NC	5/7/2007	12:00 EST-5	High Wind	35-55 kts. MS	0	0	0	0.00K
CARTERET, HYDE	CARTERET, HYDE	NC	11/2/2007	13:00 EST-5	High Wind	37-55 kts. MS	0	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	3/7/2008	19:30 EST-5	High Wind	56 kts. EG	0	0	0	0.00K
CARTERET, HYDE	CARTERET, HYDE	NC	3/8/2008	14:00 EST-5	High Wind	51 kts. MG	0	0	0	0.00K
EASTERN HYDE (ZONE)	EASTERN HYDE (ZONE)	NC	9/24/2008	18:20 EST-5	High Wind	50 kts. EG	0	0	0	0.00K
CARTERET, HYDE	CARTERET, HYDE	NC	12/19/2009	2:30 EST-5	High Wind	51-54 kts. MG	0	0	0	0.00K
CRAVEN, HYDE	CRAVEN, HYDE	NC	2/10/2010	14:01 EST-5	High Wind	51-56 kts. MG	0	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	3/2/2010	19:50 EST-5	High Wind	50 kts. MG	0	0	0	0.00K
EASTERN HYDE (ZONE)	EASTERN HYDE (ZONE)	NC	11/4/2011	21:50 EST-5	High Wind	50 kts. MG	0	0	0	0.00K
ALL COUNTIES	REGIONAL EVENT	NC	8/26/2011	0:00 EST-5	Hurricane		0	0	70000000	55.000M
ALL COUNTIES	REGIONAL EVENT	NC	7/12/1996	10:00 EST	Hurricane (Typhoon)		0	0	63800000	34.600M
CARTERET (ZONE)	CARTERET (ZONE)	NC	8/29/1996	10:00 EST	Hurricane (Typhoon)		0	0	0	0.00K
ALL COUNTIES	REGIONAL EVENT	NC	9/4/1996	18:00 EST	Hurricane (Typhoon)		0	0	223050000	0.00K
ALL COUNTIES	REGIONAL EVENT	NC	8/26/1998	0:00 EST	Hurricane (Typhoon)		0	0	0	0.00K
ALL COUNTIES	REGIONAL EVENT	NC	8/30/1999	0:00 EST	Hurricane (Typhoon)		0	0	0	0.00K
ALL COUNTIES	REGIONAL EVENT	NC	9/14/1999	23:00 EST	Hurricane (Typhoon)		2	0	1500000	20.200M
ALL COUNTIES	REGIONAL EVENT	NC	10/16/1999	17:00 EST	Hurricane (Typhoon)		1	0	0	0.00K
ALL COUNTIES	REGIONAL EVENT	NC	9/17/2003	18:00 EST	Hurricane (Typhoon)		0	0	72100000	14.200M
ALL COUNTIES	REGIONAL EVENT	NC	8/3/2004	0:00 EST	Hurricane (Typhoon)		0	0	5045000	0.00K
ALL COUNTIES	REGIONAL EVENT	NC	8/14/2004	0:00 EST	Hurricane (Typhoon)		0	0	950000	525.00K
ALL COUNTIES	REGIONAL EVENT	NC	9/13/2005	12:00 EST	Hurricane (Typhoon)		0	5	28500000	8.000M
CRAVEN (ZONE)	CRAVEN (ZONE)	NC	1/30/2010	1:00 EST-5	Ice Storm		0	0	0	0.00K
NEW BERN	CRAVEN CO.	NC	6/10/1996	10:30 EST	Lightning		0	1	0	0.00K
BRIDGETON	CRAVEN CO.	NC	6/15/1996	13:30 EST	Lightning		0	1	0	0.00K
DAVIS	CARTERET CO.	NC	5/23/1998	13:00 EST	Lightning		1	0	0	0.00K
ATLANTIC BEACH	CARTERET CO.	NC	5/23/1998	13:05 EST	Lightning		0	2	0	0.00K
WASHINGTON	BEAUFORT CO.	NC	7/25/2001	16:10 EST	Lightning		0	0	2000	0.00K
PANTEGO	BEAUFORT CO.	NC	10/11/2002	18:30 EST	Lightning		0	0	100000	0.00K
NORTH HARLOWE	CRAVEN CO.	NC	6/19/2003	19:15 EST	Lightning		1	1	0	0.00K
CHERRY PT MCAS	CRAVEN CO.	NC	6/8/2006	14:00 EST	Lightning		1	0	0	0.00K
NEWPORT	CARTERET CO.	NC	6/9/2007	15:15 EST-5	Lightning		0	0	5000	0.00K
ORIENTAL	PAMLICO CO.	NC	7/21/2010	21:24 EST-5	Lightning		0	0	6000000	0.00K
GRANTHAMS	CRAVEN CO.	NC	7/20/2012	16:45 EST-5	Lightning		0	0	500	0.00K
ATLANTIC	CARTERET CO.	NC	5/31/2002	14:00 EST	Rip Current		1	0	0	0.00K
ATLANTIC BEACH	CARTERET CO.	NC	7/23/2002	13:00 EST	Rip Current		1	0	0	0.00K
ATLANTIC BEACH	CARTERET CO.	NC	7/18/2004	8:00 EST	Rip Current		1	0	0	0.00K
OCRACOKE	HYDE CO.	NC	7/28/2004	8:00 EST	Rip Current		1	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	7/24/2006	9:30 EST	Rip Current		1	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	5/5/2007	9:00 EST-5	Rip Current		1	0	0	0.00K
EASTERN HYDE (ZONE)	EASTERN HYDE (ZONE)	NC	5/27/2007	21:00 EST-5	Rip Current		1	0	0	0.00K
EASTERN HYDE (ZONE)	EASTERN HYDE (ZONE)	NC	7/4/2007	12:00 EST-5	Rip Current		1	0	0	0.00K
WESTERN HYDE (ZONE)	WESTERN HYDE (ZONE)	NC	8/7/2010	14:30 EST-5	Rip Current		1	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	8/24/2010	14:50 EST-5	Rip Current		1	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	6/1/2013	15:37 EST-5	Rip Current		1	0	0	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	7/11/2013	8:00 EST-5	Rip Current		1	0	0	0.00K
CARTERET, CRAVEN	CARTERET, CRAVEN	NC	3/2/1998	11:30 EST	Sleet		0	0	0	0.00K
WHICHARDS BEACH	BEAUFORT CO.	NC	3/21/2001	1:00 EST	Storm Surge/Tide		0	0	0	0.00K
CARTERET, CRAVEN, PAMLICO	CARTERET, CRAVEN, PAMLICO	NC	2/27/2004	0:00 EST	Storm Surge/Tide		0	0	0	0.00K
CARTERET, CRAVEN, PAMLICO	CARTERET, CRAVEN, PAMLICO	NC	4/15/2005	12:00 EST	Storm Surge/Tide		0	0	40000	0.00K
CARTERET, CRAVEN, HYDE, PAMLICO	CARTERET, CRAVEN, HYDE, PAMLIC	NC	5/6/2005	11:00 EST	Storm Surge/Tide		0	0	0	0.00K
CARTERET, HYDE	CARTERET, HYDE	NC	7/20/2008	7:00 EST-5	Storm Surge/Tide		0	0	0	0.00K
ALL COUNTIES	REGIONAL EVENT	NC	8/26/2011	0:00 EST-5	Storm Surge/Tide		0	0	167200000	0.00K
EASTERN HYDE (ZONE)	EASTERN HYDE (ZONE)	NC	10/28/2012	6:00 EST-5	Storm Surge/Tide		0	0	100000	0.00K
BEAUFORT, CRAVEN, PAMLICO	BEAUFORT, CRAVEN, PAMLICO	NC	2/10/2010	8:00 EST-5	Strong Wind	45 kts. EG	0	0	1500	0.00K
CARTERET (ZONE)	CARTERET (ZONE)	NC	3/6/2013	15:00 EST-5	Strong Wind	43 kts. EG	0	0	500	0.00K
EMERALD ISLE	CARTERET CO.	NC	1/12/1996	4:50 EST	Thunderstorm Wind	91 kts.	0	0	500000	0.00K
EMERALD ISLE	CARTERET CO.	NC	1/19/1996	10:45 EST	Thunderstorm Wind		0	0	0	0.00K
ERNUL, GRANTSBORO	CRAVEN, PAMLICO	NC	4/26/1996	13:56 EST	Thunderstorm Wind		0	0	0	0.00K
RIVERDALE, OTWAY	CRAVEN, CARTERET	NC	5/29/1996	21:30 EST	Thunderstorm Wind	52 kts.	0	0	0	0.00K

NEWPORT	CARTERET CO.	NC	6/25/1996	14:15 EST	Thunderstorm Wind		0	0	0	0.00K
CHOCOWINITY	BEAUFORT CO.	NC	7/22/1996	19:30 EST	Thunderstorm Wind		0	0	0	0.00K
HAVELOCK, NEWPORT	CRAVEN, CARTERET	NC	7/30/1996	17:35 EST	Thunderstorm Wind	52 kts.	0	0	0	0.00K
VANCEBORO	CRAVEN CO.	NC	9/16/1996	23:45 EST	Thunderstorm Wind		0	0	0	0.00K
ATLANTIC BEACH, BAYVIEW	CARTERET, BEAUFORT	NC	9/17/1996	6:15 EST	Thunderstorm Wind	52 kts.	0	0	10000	0.00K
SALTER PATH	CARTERET CO.	NC	10/8/1996	9:15 EST	Thunderstorm Wind	60 kts.	0	0	20000	0.00K
VANCEBORO	CRAVEN CO.	NC	2/14/1997	4:30 EST	Thunderstorm Wind	51 kts.	0	0	0	0.00K
NEWPORT, STELLA, HAVELOCK	CARTERET, CRAVEN	NC	2/15/1997	1:30 EST	Thunderstorm Wind	51 kts.	0	0	10000	0.00K
HARKERS IS	CARTERET CO.	NC	3/31/1997	3:20 EST	Thunderstorm Wind	56 kts.	0	0	0	0.00K
HAVELOCK	CRAVEN CO.	NC	4/17/1997	15:10 EST	Thunderstorm Wind		0	0	0	0.00K
BAYVIEW, SLADESVILLE, SWANQUARTER	BEAUFORT, HYDE	NC	5/9/1997	18:05 EST	Thunderstorm Wind	50 kts.	0	0	0	0.00K
STELLA	CARTERET CO.	NC	5/26/1997	16:55 EST	Thunderstorm Wind		0	0	0	0.00K
CAPE CARTERET	CARTERET CO.	NC	6/3/1997	15:00 EST	Thunderstorm Wind	50 kts.	0	0	0	0.00K
AURORA, BRIDGETON, BAYBORO	BEAUFORT, CRAVEN, PAMLICO	NC	6/14/1997	14:10 EST	Thunderstorm Wind	51 kts.	0	1	0	0.00K
VANCEBORO	CRAVEN CO.	NC	7/28/1997	18:00 EST	Thunderstorm Wind	50 kts.	0	0	0	0.00K
VANCEBORO	CRAVEN CO.	NC	8/20/1997	20:35 EST	Thunderstorm Wind	50 kts.	0	0	0	0.00K
HAVELOCK, BRIDGETON, VANDEMERE	CRAVEN, PAMLICO	NC	1/8/1998	10:30 EST	Thunderstorm Wind	50 kts.	0	0	10000	0.00K
PAMLICO BEACH	BEAUFORT CO.	NC	5/4/1998	17:45 EST	Thunderstorm Wind	51 kts.	0	0	20000	0.00K
AURORA, NEWPORT, OTWAY, COVE CITY, CLARK, JAMES, CITY, BRIDGETON, HAVELOCK, REELSBORO	BEAUFORT, CARTERET, CRAVEN, P.	NC	5/23/1998	12:20 EST	Thunderstorm Wind	50-61 kts.	0	0	35000	0.00K
NEW BERN	CRAVEN CO.	NC	5/27/1998	14:50 EST	Thunderstorm Wind	52 kts.	0	0	0	0.00K
ENGELHARD	HYDE CO.	NC	6/3/1998	21:47 EST	Thunderstorm Wind	50 kts.	0	0	0	0.00K
SWANQUARTER	HYDE CO.	NC	6/12/1998	18:45 EST	Thunderstorm Wind	70 kts.	0	0	0	0.00K
CHOCOWINITY, CAPE CARTERET, BEAUFORT, HARKERS IS, OTWAY, SWANQUARTER	BEAUFORT, CARTERET, HYDE	NC	6/13/1998	18:15 EST	Thunderstorm Wind	51-61 kts.	0	0	40000	0.00K
OCRACOKE	HYDE CO.	NC	6/19/1998	14:30 EST	Thunderstorm Wind	62 kts.	0	0	0	0.00K
NEWPORT, CLARK	CARTERET, CRAVEN	NC	6/23/1998	20:50 EST	Thunderstorm Wind	50 kts.	0	0	10000	0.00K
CEDAR IS, HAVELOCK, OCRACOKE	CARTERET, CRAVEN, HYDE	NC	6/30/1998	22:00 EST	Thunderstorm Wind	51-67 kts.	0	0	0	0.00K
BATH, NEWPORT, NEW BERN, OCRACOKE	BEAUFORT, CARTERET, CRAVEN, H	NC	3/3/1999	17:15 EST	Thunderstorm Wind	50 kts.	0	0	0	0.00K
OCRACOKE	HYDE CO.	NC	4/15/1999	20:44 EST	Thunderstorm Wind	57 kts.	0	0	0	0.00K
WASHINGTON	BEAUFORT CO.	NC	5/24/1999	18:45 EST	Thunderstorm Wind	55 kts.	0	0	0	0.00K
BELHAVEN, VANCEBORO	BEAUFORT, CRAVEN	NC	8/8/1999	16:30 EST	Thunderstorm Wind	55 kts.	0	0	0	0.00K
NEW BERN	CRAVEN CO.	NC	8/26/1999	15:00 EST	Thunderstorm Wind	56 kts.	0	0	0	0.00K
ATLANTIC BEACH	CARTERET CO.	NC	9/15/1999	16:35 EST	Thunderstorm Wind	70 kts.	0	0	0	0.00K
CEDAR PT, CAPE CARTERET, ATLANTIC BEACH, HAVELOCK	CARTERET, CRAVEN	NC	11/2/1999	12:17 EST	Thunderstorm Wind	50-55 kts.	0	0	0	0.00K
MOREHEAD CITY	CARTERET CO.	NC	2/14/2000	6:35 EST	Thunderstorm Wind	58 kts. E	0	0	0	0.00K
(NKT)MCAS CHERRY PT, ORIENTAL	CRAVEN, PAMLICO	NC	3/12/2000	2:54 EST	Thunderstorm Wind	51-61 kts. M	0	0	0	0.00K
PINETOWN	BEAUFORT CO.	NC	4/21/2000	19:55 EST	Thunderstorm Wind	70 kts. E	0	0	0	0.00K
GRANTSBORO	PAMLICO CO.	NC	5/22/2000	21:28 EST	Thunderstorm Wind	67 kts. E	0	0	20000	0.00K
WASHINGTON	BEAUFORT CO.	NC	5/27/2000	22:55 EST	Thunderstorm Wind	58 kts. E	0	0	0	0.00K
BEAUFORT, CHERRY PT LNDG	CARTERET, CRAVEN	NC	5/28/2000	15:21 EST	Thunderstorm Wind		0	0	25000	0.00K
BLOUNTS CREEK STATIO	BEAUFORT CO.	NC	7/16/2000	15:53 EST	Thunderstorm Wind	65 kts. E	0	0	10000	0.00K
SALTER PATH	CARTERET CO.	NC	7/25/2000	10:28 EST	Thunderstorm Wind	65 kts. E	0	0	0	0.00K
FLORENCE	PAMLICO CO.	NC	8/16/2000	23:15 EST	Thunderstorm Wind		0	0	30000	0.00K
ALL COUNTIES	REGIONAL EVENT	NC	8/18/2000	18:45 EST	Thunderstorm Wind	52-63 kts. E	0	0	50000	0.00K
BEAUFORT, ATLANTIC BEACH, SWANQUARTER	CARTERET, HYDE	NC	12/17/2000	4:45 EST	Thunderstorm Wind	54-61 kts. M	0	0	0	0.00K
STELLA	CARTERET CO.	NC	4/1/2001	15:30 EST	Thunderstorm Wind	61 kts. E	0	0	0	0.00K
CAPE CARTERET, SALTER PATH	CARTERET CO.	NC	4/17/2001	14:35 EST	Thunderstorm Wind	55-60 kts. M	0	0	0	0.00K
NEW BERN, COVE CITY, ERNUL, OCRACOKE, GRANTSBORO	CRAVEN, HYDE, PAMLICO	NC	5/28/2001	10:30 EST	Thunderstorm Wind	52-65 kts. E	0	0	11000	0.00K
MOREHEAD CITY, HARKERS IS	CARTERET CO.	NC	7/5/2001	17:00 EST	Thunderstorm Wind	52 kts. E	0	0	0	0.00K
CAPE CARTERET	CARTERET CO.	NC	8/28/2001	15:35 EST	Thunderstorm Wind	52 kts. E	0	0	0	0.00K
WASHINGTON PARK, DOVER	BEAUFORT, CRAVEN	NC	5/13/2002	20:35 EST	Thunderstorm Wind	52 kts. E	0	0	3000	0.00K
AURORA	BEAUFORT CO.	NC	6/14/2002	15:35 EST	Thunderstorm Wind	52 kts. E	0	0	0	0.00K
BELHAVEN, PINETOWN, NEW BERN, ENGELHARD, VANDEMERE	BEAUFORT, CRAVEN, HYDE, PAMLIC	NC	7/10/2002	14:21 EST	Thunderstorm Wind	52-62 kts. E	0	0	4000	0.00K
STELLA, MOREHEAD CITY, HARKERS IS	CARTERET CO.	NC	7/20/2002	17:46 EST	Thunderstorm Wind	52-61 kts. M	0	0	0	0.00K
ERNUL	CRAVEN CO.	NC	7/31/2002	14:45 EST	Thunderstorm Wind	61 kts. E	0	0	0	0.00K
NEW BERN	CRAVEN CO.	NC	8/24/2002	19:15 EST	Thunderstorm Wind	52 kts. M	0	0	0	0.00K
NEW BERN	CRAVEN CO.	NC	11/11/2002	12:45 EST	Thunderstorm Wind	52 kts. E	0	0	0	0.00K
CEDAR PT	CARTERET CO.	NC	11/12/2002	12:23 EST	Thunderstorm Wind	52 kts. M	0	0	0	0.00K
WASHINGTON, JAMES CITY	BEAUFORT, CRAVEN	NC	2/22/2003	16:55 EST	Thunderstorm Wind	55 kts. EG	0	0	0	0.00K
CEDAR IS	CARTERET CO.	NC	3/11/2003	13:05 EST	Thunderstorm Wind	57 kts. MG	0	0	0	0.00K
FT BARNWELL	CRAVEN CO.	NC	5/29/2003	18:38 EST	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
BELHAVEN	BEAUFORT CO.	NC	7/11/2003	20:30 EST	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
OCRACOKE	HYDE CO.	NC	11/28/2003	20:55 EST	Thunderstorm Wind	53 kts. MG	0	0	0	0.00K
ATLANTIC BEACH, HARKERS IS, CEDAR IS, NEW BERN	CARTERET, CRAVEN	NC	12/10/2003	22:45 EST	Thunderstorm Wind	50-64 kts. EG	0	0	8000	0.00K
OCRACOKE	HYDE CO.	NC	12/11/2003	0:27 EST	Thunderstorm Wind	55 kts. EG	0	0	10000	0.00K
ATLANTIC BEACH	CARTERET CO.	NC	4/13/2004	13:25 EST	Thunderstorm Wind	52 kts. EG	0	0	10000	0.00K
BELHAVEN, ENGELHARD, OCRACOKE, ARAPAHOE	BEAUFORT, HYDE, PAMLICO	NC	6/11/2004	22:30 EST	Thunderstorm Wind	50-56 kts. MG	0	0	0	0.00K
WASHINGTON	BEAUFORT CO.	NC	6/25/2004	18:27 EST	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
NEWPORT	CARTERET CO.	NC	9/17/2004	20:30 EST	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
JAMES CITY	CRAVEN CO.	NC	10/13/2004	13:30 EST	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K

ALL COUNTIES	REGIONAL EVENT	NC	3/8/2005	11:30 EST	Thunderstorm Wind	50-74 kts. MG	0	1	245000	0.00K
NEWPORT, MOREHEAD CITY	CARTERET CO.	NC	5/20/2005	20:15 EST	Thunderstorm Wind	50 kts. EG	0	0	5000	0.00K
PELETIER, NEWPORT, VANCEBORO	CARTERET, CRAVEN	NC	7/13/2005	12:20 EST	Thunderstorm Wind	51 kts. EG	0	0	0	0.00K
STELLA	CARTERET CO.	NC	8/20/2005	16:05 EST	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
OCRACOKE	HYDE CO.	NC	10/22/2005	5:00 EST	Thunderstorm Wind	69 kts. MG	0	0	0	0.00K
CHOCOWINITY, BRIDGETON, ENGELHARD	BEAUFORT, CRAVEN, HYDE	NC	1/14/2006	2:15 EST	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
OCRACOKE	HYDE CO.	NC	4/3/2006	20:15 EST	Thunderstorm Wind	55 kts. MG	0	0	0	0.00K
PUNGO	BEAUFORT CO.	NC	5/15/2006	17:15 EST	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
VANCEBORO	CRAVEN CO.	NC	5/18/2006	20:30 EST	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
AURORA	BEAUFORT CO.	NC	5/26/2006	17:15 EST	Thunderstorm Wind	55 kts. EG	0	0	0	0.00K
STELLA	CARTERET CO.	NC	6/3/2006	16:15 EST	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
SWANQUARTER	HYDE CO.	NC	6/12/2006	17:00 EST	Thunderstorm Wind	52 kts. EG	0	0	0	0.00K
WASHINGTON, DOVER, VANCEBORO	BEAUFORT, CRAVEN	NC	7/28/2006	21:20 EST	Thunderstorm Wind	50-55 kts. EG	0	0	15000	0.00K
OLD FORD	BEAUFORT CO.	NC	7/29/2006	19:46 EST	Thunderstorm Wind	60 kts. EG	0	0	0	0.00K
MOREHEAD CITY	CARTERET CO.	NC	7/31/2006	16:11 EST	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
CHERRY PT MCAS	CRAVEN CO.	NC	8/4/2006	15:38 EST	Thunderstorm Wind	59 kts. MG	0	0	0	0.00K
CEDAR IS, BEAUFORT MOOREHD ARP	CARTERET CO.	NC	3/2/2007	8:28 EST-5	Thunderstorm Wind	52 kts. MG	0	0	0	0.00K
HARKERS IS, OTWAY	CARTERET CO.	NC	6/9/2007	15:30 EST-5	Thunderstorm Wind	56-80 kts. EG	0	0	105000	0.00K
ALLIANCE	PAMLICO CO.	NC	6/12/2007	16:45 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
OYSTER CREEK LNDG	HYDE CO.	NC	6/20/2007	13:33 EST-5	Thunderstorm Wind	50-57 kts. MG	0	0	0	0.00K
OCRACOKE IS ARPT	HYDE CO.	NC	7/13/2007	16:15 EST-5	Thunderstorm Wind	56 kts. MG	0	0	0	0.00K
BLOUNTS CREEK STATIO, HARKERS IS, TRENT WOODS, MERRITT	BEAUFORT CO.	NC	8/10/2007	16:54 EST-5	Thunderstorm Wind	52-55 kts. EG	0	0	0	0.00K
GAYLORD, PUNGO, VANCEBORO	BEAUFORT, CRAVEN	NC	8/21/2007	20:09 EST-5	Thunderstorm Wind	52 kts. EG	0	0	0	0.00K
BEAUFORT, FT BARNWELL, SHORTONVILLE	CARTERET, CRAVEN, PAMLICO	NC	3/5/2008	1:46 EST-5	Thunderstorm Wind	50-56 kts. EG	0	0	0	0.00K
BAYVIEW	BEAUFORT CO.	NC	4/5/2008	3:50 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
BEAUFORT	CARTERET CO.	NC	5/11/2008	19:27 EST-5	Thunderstorm Wind	52 kts. EG	0	0	0	0.00K
FAIRFIELD	HYDE CO.	NC	6/10/2008	14:00 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
BLOUNTS CREEK STATION, BATH, VANCEBORO, TRENT WOODS	BEAUFORT, CRAVEN	NC	6/29/2008	17:47 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
KENNEL BEACH	PAMLICO CO.	NC	7/8/2008	15:39 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
TRENT WOODS	CRAVEN CO.	NC	7/22/2008	13:58 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
PINETOWN	BEAUFORT CO.	NC	8/2/2008	22:58 EST-5	Thunderstorm Wind	52 kts. EG	0	0	0	0.00K
WASHINGTON ARPT, TERRA CEIA, CEDAR PT BEACH, SOUTH MASONTOWN, TRENT WOODS, THURMAN, VANCEBORO	BEAUFORT, CARTERET, CRAVEN	NC	1/7/2009	10:40 EST-5	Thunderstorm Wind	50-68 kts. EG	0	0	10000	0.00K
OLD FORD	BEAUFORT CO.	NC	4/6/2009	11:10 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
COVE CITY	CRAVEN CO.	NC	5/7/2009	18:40 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
FAIRFIELD	HYDE CO.	NC	5/29/2009	15:05 EST-5	Thunderstorm Wind	50-55 kts. EG	0	0	2000	0.00K
(NKT)MCAS CHERRY PT	CRAVEN CO.	NC	6/12/2009	23:12 EST-5	Thunderstorm Wind	59 kts. MG	0	0	0	0.00K
(NKT)MCAS CHERRY PT	CRAVEN CO.	NC	6/13/2009	16:35 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
AURORA, BLOUNTS CREEK STATION, FAIRFIELD, SCOTTS STORE	BEAUFORT, HYDE, PAMLICO	NC	6/26/2009	15:24 EST-5	Thunderstorm Wind	50-60 kts. EG	0	0	5000	0.00K
TRENT WOODS, RIVERDALE	CRAVEN CO.	NC	6/27/2009	17:35 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
PINEVILLE	BEAUFORT CO.	NC	7/17/2009	19:07 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
CEDAR PT	CARTERET CO.	NC	11/12/2009	2:20 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
RHEMS	CRAVEN CO.	NC	6/16/2010	13:15 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	3.00K
JASPER	CRAVEN CO.	NC	6/20/2010	17:56 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
CHERRY PT USNR	CRAVEN CO.	NC	6/25/2010	14:07 EST-5	Thunderstorm Wind	61 kts. EG	0	0	0	0.00K
ACRE STATION, BUNYAN, SIMMONS NOT APT, NEW BERN, TRENT WOODS, ALLIANCE, ARAPAHOE	BEAUFORT, CRAVEN, PAMLICO	NC	6/29/2010	14:41 EST-5	Thunderstorm Wind	50-60 kts. EG	0	0	5500	0.00K
OLD FORD, BLOUNTS CREEK STATION	BEAUFORT CO.	NC	7/17/2010	14:45 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
VANCEBORO	CRAVEN CO.	NC	7/21/2010	20:55 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
RHEMS	CRAVEN CO.	NC	7/29/2010	23:30 EST-5	Thunderstorm Wind	60 kts. EG	0	0	0	0.00K
CATON	CRAVEN CO.	NC	8/12/2010	22:45 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
ASKIN	CRAVEN CO.	NC	8/27/2010	15:20 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
RHEMS	CRAVEN CO.	NC	10/14/2010	11:57 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
ALLIGOODS, AURORA, CRAVEN CORNER	BEAUFORT, CRAVEN	NC	4/5/2011	10:53 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
MC CONNELL, ROSE BAY, PONZER, OCRACOKE IS ARPT, VANDEMERE	BEAUFORT, HYDE, PAMLICO	NC	4/16/2011	19:04 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
BEAUFORT, BEAUFORT MOOREHD ARP, RIVERDALE, TRENT WOODS	CARTERET, CRAVEN	NC	6/20/2011	2:00 EST-5	Thunderstorm Wind	50-66 kts. MG	0	0	65000	0.00K
PINETOWN, LEECHVILLE, RHEMS, GRANTHAMS, STONEWALL	BEAUFORT, CRAVEN, PAMLICO	NC	6/23/2011	17:10 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
NEW BERN, MERRITT, STONEWALL	CRAVEN, PAMLICO	NC	6/27/2011	13:17 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
JASPER	CRAVEN CO.	NC	7/7/2011	16:53 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
WASHINGTON	BEAUFORT CO.	NC	8/7/2011	21:23 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
VANCEBORO	CRAVEN CO.	NC	8/21/2011	14:46 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
CHOCOWINITY	BEAUFORT CO.	NC	9/29/2011	1:35 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
OLD FORD, VANCEBORO	BEAUFORT, CRAVEN	NC	5/16/2012	14:32 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0	0.00K
LATHAM, CHOCOWINITY, WASHINGTON ARPT, MCCONNELL, BATH, PINEVILLE, PANTEGO, BUNYAN	BEAUFORT CO.	NC	7/1/2012	15:30 EST-5	Thunderstorm Wind	50-65 kts. EG	2	40	0	0.00K
CAPE CARTERET, CEDAR PT BEACH, OCEAN, HOLLY SPGS, BEAUFORT, NEWPORT	CARTERET CO.	NC	7/1/2012	16:47 EST-5	Thunderstorm Wind	50-53 kts. EG	0	0	0	0.00K

RIVERSIDE, ERNUL, ASKIN, WASHINGTON FORKS, TRENT WOODS, BRIDGETON, (EWN) SIMMONS NOT APT, GRANTHAMS, (NKT) MCAS									
CHERRY PT, RIVERDALE, CROATAN	CRAVEN CO.	NC	7/1/2012	15:37 EST-5	Thunderstorm Wind	50-73 kts. EG	0	0	0 0.00K
OCRACOKE IS ARPT	HYDE CO.	NC	7/1/2012	16:45 EST-5	Thunderstorm Wind	58 kts. MG	0	0	0 0.00K
WASHINGTON ARPT, PINETOWN	BEAUFORT CO.	NC	7/9/2012	16:20 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0 0.00K
VANCEBORO, TRENT WOODS	CRAVEN CO.	NC	7/16/2012	17:41 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0 0.00K
TRENT WOODS	CRAVEN CO.	NC	7/20/2012	16:45 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0 0.00K
VANCEBORO, HONOLULU	CRAVEN CO.	NC	7/21/2012	16:01 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0 0.00K
CHERRY PT LNDG	CRAVEN CO.	NC	7/22/2012	15:01 EST-5	Thunderstorm Wind	54 kts. MG	0	0	0 0.00K
PINETOWN	BEAUFORT CO.	NC	7/23/2012	7:20 EST-5	Thunderstorm Wind	50 kts. EG	0	0	1000 0.00K
WASHINGTON ARPT, OLD FORD, COVE CITY, MIDWAY, CATON, BRIDGETON	BEAUFORT, CRAVEN	NC	7/24/2012	16:29 EST-5	Thunderstorm Wind	50-52 kts. EG	0	0	0 0.00K
ATLANTIC BEACH, CAMP GLENN, BEAUFORT, BEAUFORT MOOREHD ARP	CARTERET CO.	NC	12/26/2012	14:50 EST-5	Thunderstorm Wind	52-70 kts. EG	0	0	3000 0.00K
GRANTHAMS, PANZER, ALLIANCE, STONEWALL BEAUFORT	CRAVEN, HYDE, PAMLICO CARTERET CO.	NC	1/31/2013	2:37 EST-5	Thunderstorm Wind	50-60 kts. EG	0	0	28000 0.00K
BEAUFORT MOOREHD ARP, CORE CREEK	CARTERET CO.	NC	2/26/2013	21:19 EST-5	Thunderstorm Wind	57 kts. MG	0	0	0 0.00K
PONZER	CARTERET CO.	NC	5/6/2013	21:26 EST-5	Thunderstorm Wind	50-62 kts. MG	0	0	0 0.00K
BAYVIEW	HYDE CO.	NC	5/11/2013	12:55 EST-5	Thunderstorm Wind	50 kts. EG	0	0	0 0.00K
NEWPORT, NEW BERN	BEAUFORT CO.	NC	6/27/2013	17:22 EST-5	Thunderstorm Wind	50 kts. EG	0	0	500 0.00K
FT BARNWELL	CARTERET, CRAVEN	NC	7/12/1996	16:20 EST	Tornado	F0	0	0	0 0.00K
WASHINGTON	CRAVEN CO.	NC	9/16/1996	23:30 EST	Tornado	F1	0	0	20000 0.00K
BATH	BEAUFORT CO.	NC	10/8/1996	8:30 EST	Tornado	F1	0	1	30000 0.00K
NEW BERN	BEAUFORT CO.	NC	10/8/1996	8:33 EST	Tornado	F2	0	0	30000 0.00K
ATLANTIC BEACH	CRAVEN CO.	NC	10/8/1996	8:00 EST	Tornado	F1	0	0	15000 0.00K
VANCEBORO	CARTERET CO.	NC	10/26/1997	18:45 EST	Tornado	F0	0	0	165000 0.00K
SOUTH RIVER	CRAVEN CO.	NC	4/1/1998	17:30 EST	Tornado	F0	0	0	0 0.00K
WILLISTON	CARTERET CO.	NC	6/2/1998	16:15 EST	Tornado	F0	0	0	1000 0.00K
PINETOWN	CARTERET CO.	NC	7/31/1998	14:45 EST	Tornado	F0	0	0	0 0.00K
BEAUFORT	BEAUFORT CO.	NC	8/26/1998	17:39 EST	Tornado	F0	0	0	0 0.00K
HAVELOCK	CARTERET CO.	NC	8/26/1998	12:25 EST	Tornado	F1	0	0	225000 0.00K
ORIENTAL	CRAVEN CO.	NC	8/26/1998	14:10 EST	Tornado	F1	0	0	200000 0.00K
CAPE CARTERET	PAMLICO CO.	NC	8/26/1998	16:00 EST	Tornado	F0	0	0	0 0.00K
OCRACOKE	CARTERET CO.	NC	9/3/1998	21:30 EST	Tornado	F0	0	0	50000 0.00K
DOVER, TUSCARORA	HYDE CO.	NC	9/3/1998	21:45 EST	Tornado	F1	0	0	200000 0.00K
DAVIS	CRAVEN CO.	NC	4/11/1999	15:38 EST	Tornado	F0	0	0	0 0.00K
BRIDGETON	CARTERET CO.	NC	4/15/1999	22:05 EST	Tornado	F1	0	0	500000 0.00K
SALTER PATH	CRAVEN CO.	NC	4/15/1999	21:45 EST	Tornado	F0	0	0	0 0.00K
HARLOWE	CARTERET CO.	NC	9/15/1999	15:40 EST	Tornado	F2	0	0	300000 0.00K
ATLANTIC BEACH	CARTERET CO.	NC	9/15/1999	16:55 EST	Tornado	F1	0	0	0 0.00K
WINTERGREEN	CARTERET CO.	NC	9/15/1999	18:05 EST	Tornado	F0	0	0	0 0.00K
SWANQUARTER	CRAVEN CO.	NC	9/15/1999	19:20 EST	Tornado	F0	0	0	0 0.00K
GRANTSBORO	HYDE CO.	NC	9/15/1999	18:25 EST	Tornado	F0	0	0	0 0.00K
BAYBORO	PAMLICO CO.	NC	9/15/1999	15:15 EST	Tornado	F0	0	0	0 0.00K
HOBUCKEN	PAMLICO CO.	NC	9/15/1999	18:31 EST	Tornado	F0	0	0	0 0.00K
BAYBORO	PAMLICO CO.	NC	9/15/1999	18:40 EST	Tornado	F2	0	0	700000 0.00K
TUSCARORA	PAMLICO CO.	NC	9/15/1999	19:35 EST	Tornado	F0	0	0	0 0.00K
CAPE CARTERET	CRAVEN CO.	NC	3/17/2000	0:10 EST	Tornado	F0	0	0	50000 0.00K
MOREHEAD CITY	CARTERET CO.	NC	4/15/2000	11:45 EST	Tornado	F0	0	0	20000 0.00K
BRIDGETON	CARTERET CO.	NC	4/15/2000	12:45 EST	Tornado	F0	0	0	0 0.00K
STELLA	CRAVEN CO.	NC	4/15/2000	12:17 EST	Tornado	F1	0	1	700000 0.00K
CAPE CARTERET	CARTERET CO.	NC	9/18/2000	15:37 EST	Tornado	F0	0	0	0 0.00K
MOREHEAD CITY	CARTERET CO.	NC	4/1/2001	15:30 EST	Tornado	F0	0	0	0 0.00K
SEALEVEL	CARTERET CO.	NC	4/17/2001	15:00 EST	Tornado	F1	0	0	100000 0.00K
OCRACOKE	CARTERET CO.	NC	4/17/2001	15:16 EST	Tornado	F0	0	0	0 0.00K
PANTEGO	HYDE CO.	NC	9/10/2002	11:05 EST	Tornado	F0	0	0	1000 0.00K
BELHAVEN	BEAUFORT CO.	NC	10/11/2002	16:38 EST	Tornado	F2	0	0	3000000 0.00K
ATLANTIC	BEAUFORT CO.	NC	10/11/2002	17:45 EST	Tornado	F0	0	0	20000 0.00K
WASHINGTON	CARTERET CO.	NC	10/11/2002	18:40 EST	Tornado	F0	0	0	0 0.00K
NEWPORT	BEAUFORT CO.	NC	5/10/2003	20:42 EST	Tornado	F0	0	0	0 0.00K
ATLANTIC BEACH	CARTERET CO.	NC	7/2/2003	9:55 EST	Tornado	F0	0	0	0 0.00K
VANCEBORO	CARTERET CO.	NC	7/2/2003	10:10 EST	Tornado	F0	0	0	2000 0.00K
AURORA	CRAVEN CO.	NC	7/2/2003	13:40 EST	Tornado	F0	0	0	2000 0.00K
MOREHEAD CITY	BEAUFORT CO.	NC	8/6/2003	11:30 EST	Tornado	F0	0	0	0 0.00K
CEDAR IS	CARTERET CO.	NC	8/6/2003	16:45 EST	Tornado	F0	0	0	50000 0.00K
MOREHEAD CITY	CARTERET CO.	NC	8/14/2003	11:01 EST	Tornado	F0	0	0	0 0.00K
STACY	CARTERET CO.	NC	4/13/2004	13:35 EST	Tornado	F0	0	0	10000 0.00K
WILLISTON	CARTERET CO.	NC	6/7/2004	10:53 EST	Tornado	F0	0	0	0 0.00K
DOVER	CARTERET CO.	NC	6/7/2004	17:25 EST	Tornado	F0	0	0	0 0.00K
NEW BERN	CRAVEN CO.	NC	6/23/2004	19:35 EST	Tornado	F0	0	0	0 0.00K
BAYBORO	CRAVEN CO.	NC	6/23/2004	20:17 EST	Tornado	F0	0	0	0 0.00K
ATLANTIC BEACH	PAMLICO CO.	NC	6/23/2004	20:30 EST	Tornado	F0	0	0	0 0.00K
OTWAY	CARTERET CO.	NC	7/17/2004	16:19 EST	Tornado	F0	0	0	5000 0.00K
BATH	CARTERET CO.	NC	7/17/2004	16:25 EST	Tornado	F1	0	0	75000 0.00K
STELLA	BEAUFORT CO.	NC	8/13/2004	6:00 EST	Tornado	F1	0	0	100000 0.00K
ROSE BAY	CARTERET CO.	NC	8/13/2004	4:53 EST	Tornado	F1	0	3	284000 0.00K
	HYDE CO.	NC	8/14/2004	14:40 EST	Tornado	F0	0	0	0 0.00K

HARLOWE	CARTERET CO.	NC	8/15/2004	13:23 EST	Tornado	F0	0	0	0 0.00K
NORTH HARLOWE	CRAVEN CO.	NC	8/15/2004	13:25 EST	Tornado	F0	0	0	0 0.00K
JAMES CITY	CRAVEN CO.	NC	10/13/2004	12:20 EST	Tornado	F0	0	0	0 0.00K
GRANTSBORO	PAMLICO CO.	NC	10/13/2004	13:00 EST	Tornado	F0	0	0	0 0.00K
MERRITT	PAMLICO CO.	NC	10/13/2004	13:30 EST	Tornado	F0	0	0	2000 0.00K
ATLANTIC BEACH	CARTERET CO.	NC	6/25/2005	17:40 EST	Tornado	F0	0	0	1000 0.00K
BROAD CREEK	CARTERET CO.	NC	7/13/2005	12:35 EST	Tornado	F0	0	0	500 0.00K
SALTER PATH	CARTERET CO.	NC	8/27/2005	14:15 EST	Tornado	F0	0	0	0 0.00K
ATLANTIC BEACH	CARTERET CO.	NC	6/14/2006	11:40 EST	Tornado	F0	0	0	25000 0.00K
SEALEVEL	CARTERET CO.	NC	7/1/2006	11:30 EST	Tornado	F0	0	0	0 0.00K
STACY	CARTERET CO.	NC	8/27/2006	14:29 EST	Tornado	F0	0	0	5000 0.00K
MOREHEAD CITY	CARTERET CO.	NC	8/31/2006	17:25 EST	Tornado	F0	0	0	10000 0.00K
STACY	CARTERET CO.	NC	8/31/2006	18:05 EST	Tornado	F0	0	0	0 0.00K
SMYRNA	CARTERET CO.	NC	3/2/2007	8:40 EST-5	Tornado	EF0	0	0	1000 0.00K
OLD FORD	BEAUFORT CO.	NC	7/11/2007	18:00 EST-5	Tornado	EF1	0	0	250000 0.00K
OLD FORD	BEAUFORT CO.	NC	2/18/2008	4:38 EST-5	Tornado	EF1	0	0	50000 0.00K
BUNYAN	BEAUFORT CO.	NC	4/20/2008	14:45 EST-5	Tornado	EF0	0	0	0 0.00K
CHOCOWINITY	BEAUFORT CO.	NC	4/20/2008	15:38 EST-5	Tornado	EF0	0	0	0 0.00K
LEECHVILLE	BEAUFORT CO.	NC	4/28/2008	16:25 EST-5	Tornado	EF0	0	0	0 0.00K
PANZER	HYDE CO.	NC	4/28/2008	16:40 EST-5	Tornado	EF0	0	0	0 0.00K
NEWPORT	CARTERET CO.	NC	5/11/2008	19:06 EST-5	Tornado	EF1	0	0	30000 0.00K
CRAB PT VLG	CARTERET CO.	NC	5/11/2008	19:17 EST-5	Tornado	EF0	0	0	10000 0.00K
BEAUFORT	CARTERET CO.	NC	5/11/2008	19:27 EST-5	Tornado	EF0	0	0	0 0.00K
ALLIGOODS	BEAUFORT CO.	NC	4/11/2009	1:40 EST-5	Tornado	EF0	0	0	100000 0.00K
HONOLULU	CRAVEN CO.	NC	5/5/2009	16:25 EST-5	Tornado	EF0	0	0	0 0.00K
VANCEBORO	CRAVEN CO.	NC	5/7/2009	17:25 EST-5	Tornado	EF0	0	0	0 0.00K
VANCEBORO	CRAVEN CO.	NC	5/7/2009	17:27 EST-5	Tornado	EF0	0	0	10000 0.00K
ALLIGOODS	BEAUFORT CO.	NC	7/17/2009	16:23 EST-5	Tornado	EF0	0	0	0 0.00K
BUNYAN	BEAUFORT CO.	NC	7/17/2009	19:12 EST-5	Tornado	EF0	0	0	0 0.00K
BATH	BEAUFORT CO.	NC	4/16/2011	19:08 EST-5	Tornado	EF0	0	0	4000 0.00K
VANCEBORO	CRAVEN CO.	NC	4/16/2011	18:40 EST-5	Tornado	EF0	0	0	0 0.00K
RIVERDALE	CRAVEN CO.	NC	4/16/2011	19:43 EST-5	Tornado	EF2	0	7	4000000 0.00K
KENNEL BEACH	PAMLICO CO.	NC	4/16/2011	19:52 EST-5	Tornado	EF0	0	0	0 0.00K
PUNGO	BEAUFORT CO.	NC	4/28/2011	16:23 EST-5	Tornado	EF0	0	0	0 0.00K
FT BARNWELL	CRAVEN CO.	NC	4/28/2011	15:20 EST-5	Tornado	EF0	0	0	0 0.00K
LEECHVILLE	BEAUFORT CO.	NC	8/26/2011	20:12 EST-5	Tornado	EF1	0	0	200000 0.00K
TRUTTNEYS LNDG	CARTERET CO.	NC	5/30/2012	9:34 EST-5	Tornado	EF1	0	0	600000 0.00K
GURLOCK	HYDE CO.	NC	7/10/2012	16:40 EST-5	Tornado	EF0	0	0	0 0.00K
CORE CREEK	CARTERET CO.	NC	12/26/2012	14:58 EST-5	Tornado	EF1	0	0	10000 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	6/18/1996	13:00 EST	Tropical Storm		0	0	0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	10/8/1996	1:00 EST	Tropical Storm		0	0	0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	9/1/1999	0:00 EST	Tropical Storm		0	0	9100000 25.700M
CARTERET, HYDE	CARTERET, HYDE	NC	9/10/2002	5:00 EST	Tropical Storm		0	0	57000 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	8/31/2006	12:00 EST	Tropical Storm		0	0	205000 1.200M
BEAUFORT, CARTERET, CRAVEN, HYDE	BEAUFORT, CARTERET, CRAVEN, H	NC	9/5/2008	12:00 EST-5	Tropical Storm		0	0	30000 0.00K
CARTERET, CRAVEN, HYDE	CARTERET, CRAVEN, HYDE	NC	9/2/2010	16:00 EST-5	Tropical Storm		0	0	29200 2.000M
ALL COUNTIES	REGIONAL EVENT	NC	10/28/2012	6:00 EST-5	Tropical Storm		0	0	0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	6/6/2013	18:00 EST-5	Tropical Storm		0	0	0 0.00K
OCRACOKE VILLAGE	HYDE CO.	NC	7/23/1997	8:38 EST	Waterspout		0	0	0 0.00K
ATLANTIC	CARTERET CO.	NC	2/17/1998	8:30 EST	Waterspout		0	0	25000 0.00K
SALTER PATH	CARTERET CO.	NC	5/4/1998	17:48 EST	Waterspout		0	0	0 0.00K
MOREHEAD CITY	CARTERET CO.	NC	5/4/1998	17:55 EST	Waterspout		0	0	0 0.00K
OCRACOKE	HYDE CO.	NC	7/1/1998	20:37 EST	Waterspout		0	0	20000 0.00K
STACY	CARTERET CO.	NC	7/7/1998	12:50 EST	Waterspout		0	0	0 0.00K
SWANQUARTER	HYDE CO.	NC	7/26/1998	10:30 EST	Waterspout		0	0	0 0.00K
SALTER PATH	CARTERET CO.	NC	9/30/1998	7:47 EST	Waterspout		0	0	0 0.00K
BATH	BEAUFORT CO.	NC	9/15/1999	17:25 EST	Waterspout		0	0	0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	2/3/1996	4:00 EST	Winter Storm		2	18	75000 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	2/10/1997	12:00 EST	Winter Storm		0	0	0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	1/19/1998	11:00 EST	Winter Storm		2	1	0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	1/27/1998	5:00 EST	Winter Storm		0	0	100000 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	2/3/1998	12:00 EST	Winter Storm		0	0	80000 0.00K
BEAUFORT, CARTERET, HYDE, PAMLICO	BEAUFORT, CARTERET, HYDE, PAM	NC	2/17/1998	4:00 EST	Winter Storm		4	0	25000 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	1/3/2002	15:00 EST	Winter Storm		0	0	0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	1/23/2003	9:00 EST	Winter Storm		0	0	0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	1/25/2004	14:00 EST	Winter Storm		0	0	0 0.00K
BEAUFORT (ZONE)	BEAUFORT (ZONE)	NC	1/26/2004	23:00 EST	Winter Storm		0	0	0 0.00K
BEAUFORT, CARTERET, PAMLICO	BEAUFORT, CARTERET, PAMLICO	NC	12/20/2004	3:00 EST	Winter Storm		0	0	0 0.00K
BEAUFORT, CRAVEN	BEAUFORT, CRAVEN	NC	12/26/2004	4:00 EST	Winter Storm		0	0	0 0.00K
BEAUFORT (ZONE)	BEAUFORT (ZONE)	NC	1/30/2010	1:00 EST-5	Winter Storm		0	0	0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	1/9/2004	13:00 EST	WINTER WEATHER		0	0	0 0.00K
ALL COUNTIES	REGIONAL EVENT	NC	2/16/2004	0:00 EST	WINTER WEATHER		0	0	0 0.00K
CRAVEN (ZONE)	CRAVEN (ZONE)	NC	2/26/2004	8:00 EST	WINTER WEATHER		0	0	0 0.00K
CRAVEN, HYDE	CRAVEN, HYDE	NC	12/20/2004	3:00 EST	WINTER WEATHER		0	0	0 0.00K
EASTERN HYDE (ZONE)	EASTERN HYDE (ZONE)	NC	2/20/2006	3:00 EST	Winter Weather		0	0	0 0.00K

1. 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

<http://www.nccrimecontrol.org/index2.cfm?a=000003,000010>

2. 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: NCDENR - Division of Parks and Recreation, 919-707-9306

http://www.ncparks.gov/About/trails_main.php

3. 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>

4. 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: <http://portal.hud.gov/>

5. 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>

6. Community Facilities Loans

The US Department of Agriculture (USDA), Rural Housing Service (RHS) provides funding for construction of community facilities for public use.

Contact: USDA, RHS Williamston Area Office, 252/792-7603,
<http://www.rurdev.usda.gov/rhs/index.html>

7. Emergency Management Performance Grant (EMPG)

The purpose of the EMPG is to assist state and local governments in enhancing and sustaining all-hazards emergency management capabilities. Either the State Administrative Agency (SAA) or the state's Emergency Management Agency (EMA) are eligible to apply directly to FEMA for EMPG funds on behalf of state and local emergency management agencies, however, only one application will be accepted from each state or territory.

Contact: FEMA, 800/621-FEMA, <http://www.fema.gov>

8. 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>

9. Flood Mitigation Assistance Program (FMAP)

This program provides grants for cost-effective measures to reduce or eliminate the long-term risk of flood damage to the built environment and real property. The program's main goal is to reduce repetitive losses to the National Flood Insurance Program. 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: NCDEM, 919-825-2500, <http://www.fema.gov/flood-mitigation-assistance-program>

10. North Carolina Wetlands Restoration Program

This program, through the North Carolina Department of Environment and Natural Resources (NCDENR), Division of Water Quality, provides in-kind services for the restoration of wetlands and for increased effectiveness of wetland mitigation efforts.

Contact: NCDENR, 919-707-8976, <http://portal.ncdenr.org/web/eep/wetlands-restoration-program>

11. Parks and Recreation Trust Fund (PARTF)

Through the North Carolina Department of Environment and Natural Resources, this program provides matching funds for local parks and recreation public facility development.

Contact: NCDENR, 919-707-9303, http://www.ncparks.gov/About/grants/partf_main.php

12. Physical Disaster Loans

The Small Business Administration (SBA) offers loans to victims of declared physical disasters for uninsured losses. The loan limit on these funds may be increased by twenty percent to provide for mitigation measures.

Contact: SBA, 800/827-5722, <http://www.sba.gov/>

13. 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/>

14. 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>

15. 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>

16. River Basin Surveys and Investigations

The US Department of Agriculture, Natural Resources Conservation Service provides technical assistance to local agencies for planning activities to solve problems related to the river basin, including wetland preservation.

Contact: NRCS, <http://www.nrcs.usda.gov>

17. Small Business Administration Disaster Assistance Program

This program provides loans to businesses affected by Presidentially-declared disasters. The program provides direct loans to businesses to repair or replace uninsured disaster damages to property owned by the business, including real estate, machinery and equipment, inventory and supplies. Businesses of any size are eligible. Nonprofit organizations are also eligible. The SBA administers the Disaster Assistance Program.

18. 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>

19. 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>

20. 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/>

21. 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>

22. 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>

I. BEAUFORT COUNTY MITIGATION PROGRESS REPORT

The following provides a summary of progress achieved with regard to the strategies adopted through the 2010 Beaufort County Multi-Jurisdictional Hazard Mitigation Plan.

Strategy #1: Include hazard mitigation policies in all CAMA Land Use Plan Updates.

Progress: The Beaufort County CAMA Land Use Plan (Comprehensive Plan) was adopted and certified in January, 2010. Since that time, the plan has not been updated; however, the county will continue to consider mitigation practices and policies through plan updates.

Status/Corresponding 2015 Strategy: B1

Strategy #2: Coordinate all development/planning decisions with review of appropriate CAMA LUP's, including stated redevelopment policies and actions.

Progress: The Beaufort County CAMA Land Use Plan (Comprehensive Plan) was adopted and certified in January, 2010. Since that time, the plan has not been updated; however, the county will continue to consider mitigation practices and policies through plan updates.

Status/Corresponding 2015 Strategy: B2

Strategy #3: Revise local development ordinances to encourage shoreline vegetation protection to help mitigate flooding.

Progress: This strategy has not been carried out. Belhaven and Washington have opted to rely on state regulations for managing shoreline vegetation.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #4: Review "Firewise" zoning and subdivision ordinance standards and report on their appropriateness for incorporation into the existing zoning and subdivision ordinances.

Progress: The county as well as participating jurisdictions have not implementing firewise zoning and subdivision standards. The MAC has decided to eliminate this as a strategy.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #5: Provide information to the general public as to how best to sight a fire, including early fire detection, and how to report it to the appropriate agency.

Progress: This strategy was never carried out due to its broad reach and general nature. This issue is covered through a range of ongoing EM efforts.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #6: Maintain reciprocal mutual aid agreements with surrounding communities for fire protection and emergency response.

Progress: Beaufort County as well as participating jurisdictions continue to maintain mutual aid agreements.

Status/Corresponding 2015 Strategy: B3

Strategy #7: Evaluate adequacy of existing local fire/EMS/police staff and equipment to respond according to current Emergency Operations Plan parameters, and improve equipment and staff training/response capability as funding allows.

Progress: It was determined through MAC discussions that this issue is adequately covered through annual EOP updates and yearly budget discussions.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #8: Evaluate adequacy of existing local early warning and emergency response communications equipment, and prepare annual capital improvements plans to improve early warning and communication effectiveness before, during, and following disaster events.

Progress: Beaufort County maintains a Code Red emergency notification system. The county will continue to operate and promote this system.

Status/Corresponding 2015 Strategy: B4

Strategy #9: Implement an emergency notification software/hardware system to provide immediate notification to businesses, residences, and critical facilities of impending natural or man-made incidents/disasters.

Progress: Beaufort County maintains a Code Red emergency notification system. The county will continue to operate and promote this system.

Status/Corresponding 2015 Strategy: B4

Strategy #10: Develop standard protocols for training/certification of volunteer staff for shelter management, traffic control, first aid, etc., to improve volunteer response capability during and following disaster events, including coordination with ARC personnel.

Progress: Beaufort County maintains several Community Emergency Response Teams. The county will continue to actively seek qualified volunteers.

Status/Corresponding 2015 Strategy: B5

Strategy #11: Complete an annual evaluation of each designated emergency shelter, including structural inspection, resource inventory, staffing plan, and vulnerability assessment, including coordination with ARC personnel.

Progress: Beaufort County EM evaluates all shelters in conjunction with annual EOP updates. The county will continue this practice.

Status/Corresponding 2015 Strategy: B6

Strategy #12: Maintain information on county and local websites concerning location of approved shelter facilities and to ensure citizens that shelter facilities are the safest option in a major disaster event.

Progress: Beaufort County EM maintains a range of materials on the county website, including this plan. The county will continue this practice.

Status/Corresponding 2015 Strategy: B7

Strategy #13: Meet annually with owners/managers of healthcare facilities and nursing homes to review evacuation plans, disaster staffing plans, emergency power capacity, etc.

Progress: Beaufort County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan.

Status/Corresponding 2015 Strategy: B13

Strategy #14: Identify alternate detour routes from major evacuation arteries in the county.

Progress: This strategy has not been accomplished and the MAC has decided to eliminate it and handle it through the county's EOP.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #15: Provide citizens and visitors with maps of evacuation routes which will facilitate the evacuation of the county in case of a hazardous event.

Progress: Beaufort County maintains procedures for dissemination of this information through the county EOP. The county will continue this practice.

Status/Corresponding 2015 Strategy: B8

Strategy #16: Provide information as to the policies and procedures for bridge closure and reopening policies which will facilitate the evacuation and re-entry to municipalities and isolated areas of the county in case of a hazardous event.

Progress: Beaufort County maintains procedures for dissemination of this information through the county EOP. The county will continue this practice.

Status/Corresponding 2015 Strategy: B8

Strategy #17: Continue to ensure adequate evacuation warning in case of major hazard event.

Progress: Beaufort County maintains procedures for dissemination of this information through the county EOP. The county will continue this practice.

Status/Corresponding 2015 Strategy: B9

Strategy #18: Continue to monitor and establish programs to maintain continuity of government operations.

Progress: Beaufort County maintains a continuity of operations plan (COOP). The county will continue this process and procedure.

Status/Corresponding 2015 Strategy: B10

Strategy #19: Continuously maintain the Beaufort County Emergency Operations Plan and convene semi-annual Beaufort County Emergency Operations Center exercises to test the functionality of the Emergency Operations Plan.

Progress: Beaufort County reviews, maintains, and updates the county EOP on an annual basis. This practice will be maintained.

Status/Corresponding 2015 Strategy: B11

Strategy #20: Continue to apply for grant funds, allocate local funding, and work with local electric service providers to procure and maintain back-up generators/transfer switches for all critical public facilities, with an emphasis on emergency services facilities, critical water/sewer facilities, and shelter facilities. Evaluate the equipment on a regular basis to assure it continues to meet the needs of the operations occurring at each facility.

Progress: Since certification of the 2010 plan, Beaufort County has not been able to acquire new generators.

Status/Corresponding 2015 Strategy: B12

Strategy #21: Hold an annual public hazard mitigation meeting, attended by the MAC and participating jurisdictions to educate the public and elected officials and receive comments about the location of high risk facilities/development, the jurisdictions' overall vulnerability to natural and man-made hazards, and the jurisdictions' hazard mitigation efforts.

Progress: Beaufort County hosts an annual EM open house to address a range of issues including those listed above. The county will continue this practice.

Status/Corresponding 2015 Strategy: B13

Strategy #22: Maintain the Hazard Mitigation Advisory Committee (MAC) and hold semi-annual MAC meetings to continue relationship-building and communicate about mitigation measures taking place throughout the community.

Progress: Beaufort County maintains its MAC in an effort to maximize the benefits of the HMGP program. The MAC meets at least once annually.

Status/Corresponding 2015 Strategy: B14

Strategy #23: Work on the five-year implementation of the plan. At the end of this five-year period, the county will undertake efforts to update this plan including the following ten (10) 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: Beaufort County maintains its MAC in an effort to maximize the benefits of the HMGP program. The MAC meets at least once annually.

Status/Corresponding 2015 Strategy: B14

Strategy #24: Coordinate Beaufort County Emergency Operations and Recovery planning with the Eastern Regional Advisory Committee Medical Response Plan.

Progress: It was determined through MAC discussions that this issue is adequately covered through annual EOP updates and yearly budget discussions.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #25: Maintain continual 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) Identification of critical electrical facilities needing retrofit or upgrade and map with elevation reference marks; (3) Identification of problem areas and potential solutions; and (4) Communication with county officials during and immediately after a natural hazard event that results in loss of electrical power.

Progress: Beaufort County meets annually with electric service providers operating throughout the county.

Status/Corresponding 2015 Strategy: B16

Strategy #26: Monitor trees and vegetation on publicly-owned property to assure that no property or utility damage will occur as a result of diseased or dying trees or other vegetation.

Progress: This strategy is carried out by the county's municipal public works departments. The county also relies on electric service providers within the county.

Status/Corresponding 2015 Strategy: B17

Strategy #27: Continue to maintain all property acquired with public mitigation funds within the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. Continue to pro-actively establish open space within the floodplain and floodway as grant funds become available to carry out this initiative.

Progress: Federally funded mitigation projects since certification of the 2010 plan include HMGP-1969-0012 which provided for the acquisition of one (1) residential structure located in Chocowinity. Acquired properties are maintained as open space. This practice will continue.

Status/Corresponding 2015 Strategy: B18

Strategy #28: 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: The Beaufort County CAMA Land Use Plan (Comprehensive Plan) was adopted and certified in January, 2010. Since that time, the plan has not been updated; however, the county will continue to consider mitigation practices and policies through plan updates.

Status/Corresponding 2015 Strategy: B19

Strategy #29: Annually review local floodplain ordinances to provide improved flood protection standards and require freeboard for retrofitting and new construction as required by NC State Building Code.

Progress: Beaufort County has and continues to maintain an updated Flood Damage Prevention Ordinance. The county, in conjunction with participating jurisdictions, review and update this ordinance annually.

Status/Corresponding 2015 Strategy: B20

Strategy #30: Maintain and improve the capabilities of local Geographic Information (GIS) Systems with respect to risk mapping and the availability of flood hazard data and other hazard information to the public.

Progress: Beaufort County maintains a comprehensive GIS program including all data layers included in this plan. This practice will be continued.

Status/Corresponding 2015 Strategy: B21

Strategy #31: Continue to require a finished floor elevation certificate for all development within the Special Flood Hazard Area (SFHA) in 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 SFHA without the submittal of the required elevation certificate. All elevation certificates shall be kept on file by the county or municipality (new buildings).

Progress: Beaufort County as well as participating jurisdictions maintain all elevation certificates in coordination with the NFIP. This practice will be continued.

Status/Corresponding 2015 Strategy: B22

Strategy #32: Continue to comply with North Carolina state coastal stormwater regulations.

Progress: This strategy has been eliminated because the MAC feels these issues are adequately addressed by state regulatory agencies.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #33: Maintain current listing of Repetitive Loss Properties and conduct annual outreach activities to encourage homeowners to participate in FEMA-sponsored residential acquisition and elevation programs; continue to apply for HMGP/HMA funding for residential acquisition and elevation.

Progress: This list is maintained annually and is utilized for the preparation of HMGP applications. Federally funded mitigation projects since certification of the 2010 plan include FMA-2008 which provided for the elevation of one (1) residential structure in Belhaven; RFC-2008 which provided for the elevation of two (2) residential structures in Belhaven and Washington; SRL-2008 which provided for the elevation of four (4) residential structures in Belhaven and Washington; SRL-2010 which provided for the elevation of three (3) residential structures in Belhaven and Washington; SRL-2011 which provided for the elevation of one (1) residential structure in Belhaven; HMGP-1969-001 which provided for the elevation of seven (7) residential structures in Belhaven and Washington; HMGP-1969-0012 which provided for the acquisition of one (1) residential structure in Chocowinity; and HMGP-4019-022 which provided for the elevation of one (1) residential structure in Washington. The county applies annually for funding and will continue this practice.

Status/Corresponding 2015 Strategy: B23

Strategy #34: Encourage Beaufort County Commissioners and elected officials of non-CRS communities to participate in the Community Rating System.

Progress: Beaufort County EM continues to encourage the County Board of Commissioners to establish participation in this program. EM will continue these efforts.

Status/Corresponding 2015 Strategy: B24

Strategy #35: Maintain a map information service involving the following: (1) Provide information relating to Flood Insurance Rate Maps (FIRM) to all inquirers, including providing of information on whether a given property is located within a flood hazard; (2) Provide information regarding the flood insurance purchase requirement; (3) Maintain historical and current FIRMs; (4) Advertise once annually in the local newspaper the availability of FIRMs; and (5) Provide information to inquirers about local floodplain management requirements (all buildings).

Progress: Beaufort County maintains this service through its existing GIS department. This practice will continue.

Status/Corresponding 2015 Strategy: B25

Strategy #36: Provide information on County/City/Town websites informing the public where they can obtain information about heir property's location with respect to the special flood hazard area, and where they can obtain information about the incidence of flood events and losses incurred during historic flood events.

Progress: Beaufort County as well as the municipalities (which have websites) provide information about services and information available regarding this issue. This practice will continue.

Status/Corresponding 2015 Strategy: B26

Strategy #37: Continue to work with local real estate agencies to ensure that agents are informing clients when property for sale is located within a SFHA. The county will provide these agencies with brochures documenting the concerns relating to development located within the floodprone areas and ways that homeowners may make their home more disaster resistant to strong winds, lightning, and heavy rains (all buildings).

Progress: Beaufort County jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. Once annually, the county Emergency Services Department delivers educational materials to local and regional real estate agents.

Status/Corresponding 2015 Strategy: B27

Strategy #38: Make information regarding hazards and development regulations within floodplains available through the following: (1) Ensure that local libraries maintain information relating to flooding and flood protection; (2) Provide a link on the municipal website to FEMA resources addressing flooding and flood protection, evacuation procedures, disaster preparedness, and post-disaster recovery; and (3) Provide website links to relevant hazard mitigation websites.

Progress: Beaufort County jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. Specifically, flood

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

APPENDIX G. 2010 MITIGATION PROGRESS REPORT

hazard educational materials/links are available on the county and municipal websites. Additionally, materials are located at all county library branches.

Status/Corresponding 2015 Strategy: B28

Strategy #39: Promote national “awareness” weeks (i.e., hurricane preparedness, severe weather preparedness, etc.) through local media. (“Awareness” weeks are listed on the National Weather Service website at <http://www.nws.noaa.gov/os/severeweather/severewxcal.shtml>).

Progress: Beaufort County EM works diligently to promote awareness campaigns. This practice will continue.

Status/Corresponding 2015 Strategy: B29

Strategy #40: Develop and distribute informational brochures on tornadoes and the signs of severe thunderstorms.

Progress: This strategy has not been completed and the MAC has decided to eliminate due to budgetary constraints.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #41: Educate the general public of the importance of weather alert radios and systems that can operate on alternative power and can provide up-to-the-moment information regarding locations of severe storms and possible tornadoes.

Progress: Beaufort County continues to maintain this practice. The county has distributed weather radios since certification of the 2010 plan. The county will continue this practice.

Status/Corresponding 2015 Strategy: B30

Strategy #42: Maintain a Hazardous Materials Action Plan that addresses the proper containment of spills, etc.

Progress: The county has an adopted Hazardous Materials Action Plan. The county will continue to maintain this plan.

Status/Corresponding 2015 Strategy: B31

Strategy #43: Continue to support of 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 upstream dam facilities, both public and private, are properly maintained and stable.

Progress: Beaufort County jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. Since adoption of the last plan, the County has assisted NCDENR in performing annual dam safety inspections.

Status/Corresponding 2015 Strategy: B32

Strategy #44: Continue to inventory and map Beaufort County's significant man-made hazards and coordinate reporting requirements, monitoring, and emergency response in accordance with the county's Emergency Operations Plan.

Progress: Beaufort County works in concert with the county LEPC to address this issue. This is also covered under the county's EOP. The data is maintained through the county GIS department.

Status/Corresponding 2015 Strategy: B33

Strategy #45: Provide manufactured home vendors, lenders, and buyers with information on proper construction, installation, and foundation specifications in accordance with appropriate HUD/FHA/FEMA and NC Department of Insurance requirements; provide information to the public related to wind-resistant construction methods.

Progress: This process is addressed through the county's inspections department. This practice will be maintained.

Status/Corresponding 2015 Strategy: B34

Strategy #46: Monitor natural and man-made drainage structures to ensure they are clear and functioning properly; prioritize needed drainage projects and review funding alternatives annually.

Progress: This practice is carried out by the jurisdictions operating municipal stormwater systems. The strategy has been revised to reflect this fact.

Status/Corresponding 2015 Strategy: B35

Strategy #47: Ensure that private roads are clear and that access by emergency vehicles is unimpeded.

Progress: This strategy has been eliminated due to the fact that the county does not have the resources to address this issue.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #48: Improve monitoring of hazardous material transport at Norfolk Southern Railroad railyard facility near Chocowinity; improve communication with railroad officials and public information efforts related to this activity.

Progress: Beaufort County carries out this effort through coordination with the county LEPC. This practice will continue.

Status/Corresponding 2015 Strategy: B36

Strategy #49: Improve monitoring of hazardous material manufacturing, storage, and transport at PotashCorp facility and associated Norfolk Southern Railroad operations near Aurora; improve communication with corporate and railroad officials and public information efforts related to this activity.

Progress: Beaufort County carries out this effort through coordination with the county LEPC. This practice will continue.

Status/Corresponding 2015 Strategy: B37

Strategy #50: Work with citizen representatives and PotashCorp personnel to assess and improve emergency response procedures and specific mitigation actions related to the possible release of hazardous materials at the PotashCorp facility near Aurora.

Progress: Beaufort County carries out this effort through coordination with the county LEPC. This practice will continue.

Status/Corresponding 2015 Strategy: B38

II. CARTERET COUNTY MITIGATION PROGRESS REPORT

The following provides a summary of progress achieved with regard to the strategies adopted through the 2010 Carteret County Multi-Jurisdictional Hazard Mitigation Plan.

Strategy #1: Improve shelter capacities with alternate power/heat/air conditioning sources.

Progress: Carteret County has installed several back-up generators since adoption of this plan. This strategy has been revised and expanded through this update.

Status/Corresponding 2015 Strategy: CA1

Strategy #2: In concert with the American Red Cross (ARC), maintain an annually updated list of all ARC approved shelters.

Progress: Carteret County EM has worked with the American Red Cross through several shelter activations since adoption of the 2010 plan. This strategy has been revised and expanded through this update.

Status/Corresponding 2015 Strategy: CA1

Strategy #3: Continually maintain on the county's website instructional information on ensuring that on-site sheltering is as safe an option as possible.

Progress: Carteret County has and continues to maintain shelter information on the county website.

Status/Corresponding 2015 Strategy: CA1

Strategy #4: Identify alternate detour routes from major evacuation arteries in the county.

Progress: Carteret County has not carried out this task since the 2010 update. The strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: CA2

Strategy #5: Have available to citizens and visitors, maps of evacuation routes which will facilitate the evacuation of the county in case of a hazardous event.

Progress: Carteret County has and continues to make this information available through several avenues. This strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: CA2

Strategy #6: Provide information as to the policies and procedures for bridge closure and reopening policies which will facilitate the evacuation and re-entry to municipalities and isolated areas of the county, in case of a hazardous event.

Progress: Carteret County has and continues to make this information available through several avenues. This strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: CA2

Strategy #7: Continue to ensure adequate evacuation warning in case of major hazard event.

Progress: Carteret County has, and continues to make this information available through several avenues. This strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: CA2

Strategy #8: Continue to monitor and establish programs to maintain continuity of government operations.

Progress: The county has maintained the county's continuity of government operations since adoption of the 2010 plan. This strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: CA3

Strategy #9: Continue to identify alternate Emergency Operations Center (EOC) locations.

Progress: This strategy has been completed. The county established the new location; this effort also involved the location of a new E911 location.

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #10: Continuously maintain the Carteret County Emergency Operations Response Plan.

Progress: Carteret County has and continues to update the county's EOP on an annual basis. This strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: CA4

Strategy #11: Develop a plan for consolidated E-911 dispatch center and an EOC located outside of floodplain.

Progress: This strategy has been completed. The county established an EOC at a new location; this effort also involved the location of a new E911 location.

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #12: Continue to procure and maintain back-up generators for all critical public facilities, with an emphasis on Environmental Health. Evaluate the equipment on a regular basis to assure it continues to meet the needs of the operations occurring at each facility.

Progress: Carteret County has installed several back-up generators since adoption of the 2010 plan. This strategy continues to be a priority for the county.

Status/Corresponding 2015 Strategy: CA5

Strategy #13: Maintain a contract with a qualified post-disaster recovery service provider. This contract will include the provision of essential services and equipment, including generators, and will include documentation required for reimbursement from FEMA/NCEM.

Progress: Carteret County as well as participating jurisdictions have maintained a contract with a post-disaster recovery service provider since adoption of the 2010 plan. This strategy has been revised to more accurately define the county's intention.

Status/Corresponding 2015 Strategy: CA6

Strategy #14: Hold an annual public hazard mitigation meeting attended by the MAC and participating jurisdictions, to educate the public and elected officials and receive comments about the location of high risk facilities/development, the jurisdictions' overall vulnerability to natural and man-made hazards, and the jurisdictions' hazard mitigation efforts.

Progress: Over the course of the last five years, Carteret County as well as participating jurisdictions have not formally conducted mitigation public input meetings. In order to address CRS requirements, Beaufort and Morehead City have held mitigation forums.

Status/Corresponding 2015 Strategy: CA7

Strategy #15: Maintain the Hazard Mitigation Advisory Committee (MAC) to continue relationship-building and keep updated on mitigation measures taking place throughout the community.

Progress: In addition to the duties of the regional MAC defined in this plan, each participating county will be required to maintain their own respective MACs. The MACs have been maintained since the 2010 update.

Status/Corresponding 2015 Strategy: CA8

Strategy #16: Continue to familiarize local public officials with the principles and practices of emergency management and emergency operations.

Progress: Over the course of the last five years, Carteret County as well as participating jurisdictions have not formally conducted mitigation public input meetings. In order to address CRS requirements, Beaufort and Morehead City have held mitigation forums.

Status/Corresponding 2015 Strategy: CA7

Strategy #17: Continue to rely on the Carteret County Emergency Operations Plan (EOP) for effective disaster event communication.

Progress: Carteret County has and continues to update the county's EOP on an annual basis. This strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: CA4

Strategy #18: Work on the five-year implementation of the plan. At the end of this five-year period, the county will undertake efforts to update this plan including the following ten (10) 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: Carteret County in conjunction with Beaufort and Morehead City (previously independent) are working towards their respective plans fire year update. This strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: CA9

Strategy #19: Coordinate Carteret County Emergency Operations and Recovery planning with the Eastern Regional Advisory Committee Medical Response Plan.

Progress: Carteret County has addressed collaboration with ERAC through updates of the county's EOP.

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #20: Maintain the Emergency Services Department WebEOC, a management system that allows utilities to post information and outages on a website. Continue training for officials regarding the use of the program. This includes the Planning Department compiling a list (address, PIN, etc.) after a storm of what was disconnected and following up on it.

Progress: Carteret County has maintained a proprietary WebEOC portal since the 2010 update. This strategy will be continued through this update; however, the strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: CA10

Strategy #21: Continue to attend the Hurricane Preparedness Expo conducted by Progress Energy annually. This expo assists the community in preparing for the effects of severe weather, and provides the preliminary planning steps required for effective post-disaster recovery.

Progress: Carteret County has maintained attendance at all annual preparation meetings regarding safeguard of the county's electrical system. This strategy has been revised to address all utility providers in the county.

Status/Corresponding 2015 Strategy: CA11

Strategy #22: Maintain a representative of the public electric authorities on the MAC.

Progress: This strategy has been eliminated by the MAC. The county has determined that this issue is covered through various avenues.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #23: Maintain continual 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) Identification of critical electrical facilities needing retrofit or upgrade and map with elevation reference marks; (3) Identification of problem areas and potential

solutions; and (4) Communication with County officials during and immediately after a natural hazard event that results in loss of electrical power.

Progress: Carteret County has maintained attendance at all annual preparation meetings regarding safeguard of the county's electrical system. This strategy has been revised to address all utility providers in the county.

Status/Corresponding 2015 Strategy: CA11

Strategy #24: The municipalities will review local ordinances to require electric utilities and cable lines to be installed underground.

Progress: This strategy has not been carried out; however, Beaufort and Morehead City are still considering this issue.

Status/Corresponding 2015 Strategy: Under consideration

Strategy #25: Monitor trees and vegetation on publicly-owned property to assure that no property or utility damage will occur as a result of diseased or dying trees or other vegetation.

Progress: Carteret County has maintained attendance at all annual preparation meetings regarding safeguard of the county's electrical system. This strategy has been revised to address all utility providers in the county.

Status/Corresponding 2015 Strategy: CA11

Strategy #26: Continue to review wetlands maps for possible updates.

Progress: Carteret County has established wetland maps through the National Wetlands Inventory (NWI).

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #27: Continue annually reviewing and revising development ordinances to encourage shoreline vegetation along marshes and other Areas of Environmental Concern (AEC's).

Progress: This strategy has not been carried out. All jurisdictions have opted to rely on state regulations for managing shoreline vegetation.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #28: Continue to maintain all property acquired within the Special Flood Hazard Area (SFHA) as undisturbed open space in perpetuity. Continue to pro-actively establish open space within the floodplain and floodway as grant funds become available to carry out this initiative.

Progress: Carteret County as well as participating jurisdictions have and will continue to maintain these parcels as open space.

Status/Corresponding 2015 Strategy: CA12

Strategy #29: 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: The county as well as participating jurisdictions continue to utilize information in this plan when conducting planning activities. This strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: CA13

Strategy #30: Provide annual review of development restrictions in floodplain areas and maintain initiatives to ensure limited residential and commercial development in the floodplain 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 (all buildings).

Progress: Carteret County as well as participating jurisdictions review development regulations annually. This strategy has been removed due to the fact that it is covered under other strategies.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #31: Continue to support limiting public services for new structures that will be located in 100-year floodplain areas (all buildings).

Progress: This strategy has been eliminated as the MAC has determined that jurisdictional FDPOs adequately address this issue.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #32: Maintain reciprocal mutual aid agreements with surrounding communities for fire protection.

Progress: Carteret County in conjunction with participating jurisdictions maintain ongoing mutual aid agreements to address a range of public safety issues.

Status/Corresponding 2015 Strategy: CA14

Strategy #33: Continue the preventive maintenance efforts to ensure the fire hydrants and equipment are working properly.

Progress: Carteret County as well as participating jurisdictions maintain and inspect all hydrants and equipment on an annual basis. This item is addressed through various EM policies and procedures.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #34: Map all areas in proximity to National Forest Areas including types of land use and construction.

Progress: Carteret County in conjunction with the state of North Carolina have worked to establish a comprehensive GIS system including all data layers defined in this plan.

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #35: Evaluate and improve information to the general public as to how best to sight a fire, including early fire detection, and how to report it to the appropriate agency.

Progress: Carteret County EM and partnering fire stations as well as the NC Forestry Division provide education on sighting and response. The MAC has determined that these efforts are adequate and, therefore, eliminated this strategy.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #36: Annually review the Floodplain Ordinances to provide improved flood protection standards.

Progress: Carteret County as well as participating jurisdictions review and update their respective FDPOs at a minimum annually, but also in the event of NCEM or FEMA mandated revisions.

Status/Corresponding 2015 Strategy: CA15

Strategy #37: Damage Assessments – Flood Damaged Structures. Any and all portions of buildings that have been submerged for any length of time will be inspected for flood-related damage, as well as other conditions that may be dangerous to life, health, or other property (existing buildings).

Progress: This strategy was determined to be unclear and vague; therefore, it was been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #38: Continually maintain and update the County's Geographic Information System (GIS).

Progress: Carteret County in conjunction with the state of North Carolina have worked to establish a comprehensive GIS system including all data layers defined in this plan.

Status/Corresponding 2015 Strategy: CA16

Strategy #39: Continue to 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 SFHA without the submittal of the required elevation certificate. All elevation certificates shall be kept on file by the County or municipality (new buildings).

Progress: Carteret County as well as all participating CRS communities have and continue to require and maintain elevation certificates for all structures developed in the flood hazard area.

Status/Corresponding 2015 Strategy: CA17

Strategy #40: Continue to comply with North Carolina state coastal stormwater regulations.

Progress: This strategy has not been carried out. All jurisdictions have opted to rely on state regulations for managing shoreline vegetation.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #41: At the local government staff level, work with the North Carolina Department of Transportation (NCDOT) and the Regional Planning Organization to identify drainage problem areas and develop resolutions for drainage issues created by NCDOT facilities, including inspections of channels, retention basins, and, as needed, pursue debris removal.

Progress: The county MAC determined that DOT adequately addresses state-owned roads throughout the county.

Status/Corresponding 2015 Strategy: R6

Strategy #42: Continue to encourage utilization of alternatives to impervious surfaces in all projects.

Progress: The county as well as participating jurisdictions have encouraged contractors to use Best Management Practices as defined by the NCDENR stormwater branch.

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #43: Continue to maintain a list of repetitive flood loss properties (existing buildings).

Progress: Carteret County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan.

Status/Corresponding 2015 Strategy: CA19

Strategy #44: Continually maintain participation in the National Flood Insurance Program (NFIP) (all buildings).

Progress: Carteret County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan.

Status/Corresponding 2015 Strategy: CA16

Strategy #45: Establish and maintain reconstruction policies that include procedures for issuance of building permits after a natural disaster (all buildings).

Progress: All jurisdictions participating in this plan have developed some guidelines through CAMA planning efforts for redevelopment. This strategy has been included within the updated plan.

Status/Corresponding 2015 Strategy: CA18

Strategy #46: Adopt and annually update a capital improvement plan with an emphasis on mitigation for critical facilities including relocation and retrofitting. (NOTE: Subject to funding availability).

Progress: Carteret County has not historically maintained a CIP and has not adopted one since certification of the 2010 plan. This strategy has been eliminated to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #47: 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: Federally funded mitigation projects since certification of the 2010 plan include HMGP-4019-0025 which provided for the elevation of eight (8) residential structures located in Sea Level and Stacy; SRL-2008 which provided for the elevation of two (2) residential structures in Newport; and PDM-2014 which provided for the elevation of nine (9) residential structures located in Beaufort, Davis, Newport, Harkers Island, and Salter Path. This strategy has been updated and included in this plan update to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: CA12

Strategy #48: Establish local and regional partnerships to identify funding sources for natural hazard mitigation activities and seek funding.

Progress: Since adoption of the 2010 plan, the county has not been able to accomplish this task. It has been updated and included in this plan update.

Status/Corresponding 2015 Strategy: CA32

Strategy #49: Support participation in the Community Rating System (CRS) Program (all buildings).

Progress: Carteret County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan.

Status/Corresponding 2015 Strategy: CA19

Strategy #50: Maintain a map information service involving the following: (1) Provide information relating to Flood Insurance Rate Maps (FIRM) to all inquirers, including a provision of information on

whether a given property is located within a flood hazard area; (2) Provide information regarding the flood insurance purchase requirement; (3) Maintain historical and current FIRMs; (4) Advertise once annually in the local newspaper the availability of FIRMs; and (5) Provide information to inquirers about local floodplain management requirements (all buildings).

Progress: Carteret County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. The county utilizes this system to help citizens understand the impacts of flood hazard areas on their property.

Status/Corresponding 2015 Strategy: CA20

Strategy #51: Annually mail a notice to all property owners whose land is located within a SFHA. This notice should clearly state that the recipient's property is susceptible to flooding and provide information pertinent to emergency evacuation and post-disaster recovery.

Progress: Carteret County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. The following communities mail these notices annually: Carteret County, Atlantic Beach, Beaufort, Cape Carteret, Cedar Point, Emerald Isle, Morehead City, Newport, and Pine Knoll Shores.

Status/Corresponding 2015 Strategy: CA21

Strategy #52: Continue to work with local real estate agencies to ensure that agents are informing clients when property for sale is located within a SFHA. The County will provide these agencies with brochures documenting the concerns relating to development located within the floodprone areas and ways that homeowners may make their home more disaster resistant to strong winds, lightning, and heavy rains (all buildings).

Progress: Carteret County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. Once annually, the county Emergency Services Department delivers educational materials to local and regional real estate agents.

Status/Corresponding 2015 Strategy: CA22

Strategy #53: Make information regarding hazards and development regulations within floodplains available through the following: (1) Ensure that the local library maintains information relating to flooding and flood protection; (2) The County will provide a link on the County website to FEMA resources addressing flooding and flood protection; (3) All participating municipalities will provide a link on the municipalities' website to FEMA resources addressing flooding and flood protection, evacuation procedures, disaster preparedness, and post-disaster recovery; and (4) Provide website links to relevant hazard mitigation websites.

Progress: Carteret County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. Specifically, flood hazard educational materials/links are available on the county and municipal websites, in addition to being available at all county library branches.

Status/Corresponding 2015 Strategy: CA23

Strategy #54: Maintain a comprehensive Geographic Information System (GIS) with current FIRM panels in an effort to make this information readily available to County citizens. In addition to this digital data, bound copies of all historical and current FIRM panels will be maintained within the Carteret County Planning Department.

Progress: Carteret County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. This system is updated weekly, and this procedure has been in place through the implementation of the existing plan.

Status/Corresponding 2015 Strategy: CA16

Strategy #55: Coordinate with the Carteret County School System Hazards Awareness Educational Programs for use by educators within the Carteret County School System.

Progress: This campaign is no longer in existence; however, alternative outreach methods have been established.

Status/Corresponding 2015 Strategy: Eliminated

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Strategy #56: Promote national “awareness” weeks (i.e., hurricane preparedness, severe weather preparedness, etc.) through local media, (“Awareness” weeks are listed on the National Weather Service website at <http://www.nws.noaa.gov/os/severeweather/severewxcal.shtml>).

Progress: This campaign is no longer in existence; however, alternative outreach methods have been established.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #57: Develop and distribute informational brochures on tornadoes, waterspouts, and the signs of severe thunderstorms.

Progress: Carteret County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. Brochures are acquired through FEMA and distributed through the local Emergency Services and Building Inspections offices.

Status/Corresponding 2015 Strategy: CA23

Strategy #58: Educate the general public to the importance of weather alert radios and systems that can operate on alternative power and can provide up-to-the-moment information regarding locations of severe storms and possible tornadoes.

Progress: Since certification of the 2010 plan, the county has maintained a widespread campaign regarding this issue. The county intends to continue these efforts.

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #59: Prepare a Hazardous Material Action Plan that addresses the proper containment of spills, etc.

Progress: This strategy was not accomplished under this update; however, it has been carried forward in this update.

Status/Corresponding 2015 Strategy: CA29

Strategy #60: 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.

Progress: Carteret County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. Since adoption of the last plan, the County has assisted NCDENR in performing annual dam safety inspections.

Status/Corresponding 2015 Strategy: CA25

Strategy #61: Identify and map Carteret County's significant man-made hazards and coordinate response with the County's Emergency Operations Plan.

Progress: This strategy has been completed and is maintained through annual updates.

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #62: Maintain dialogue with Michael S. Smith Airport Authority to effectively regulate land use as the County continues to grow and encroach upon the airport environs.

Progress: Carteret County has established zoning regulations and land use policies regarding land adjacent to the airport or other areas affecting air space in relation to aircraft. The county continues to review and maintain regulations.

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #63: Maintain dialogue with US Marine Corps and Department of Defense for the Bogue and Atlantic Airfields to effectively regulate land use as the County continues to grow and encroach upon the airport environs.

Progress: Carteret County has established zoning regulations and land use policies regarding land adjacent to the airport or other areas affecting air space in relation to aircraft. The county continues to review and maintain regulations.

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #64: 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 including wind-related risks (all buildings).

Progress: Carteret County as well as participating jurisdictions have maintained enforcement of the IBC and in turn the NC State Building Code since certification of the 2010 plan.

Status/Corresponding 2015 Strategy: CA30

Strategy #65: Include hazard mitigation policies in all CAMA Land Use Plan Updates.

Progress: Carteret County and the participating jurisdictions all maintain land use plans adopted prior to certification of the 2010 plan. All jurisdictions continue to consider this document during plan updates.

Status/Corresponding 2015 Strategy: CA28

Strategy #66: Continually coordinate all development/planning decisions with the County and municipal-certified CAMA Land Use Plans including stated redevelopment policies and actions.

Progress: Carteret County and the participating jurisdictions all maintain land use plans adopted prior to certification of the 2010 plan. All jurisdictions continue to consider this document during plan updates.

Status/Corresponding 2015 Strategy: CA28

Strategy #67: Revise local development ordinances to encourage and incorporate shoreline vegetation protection along the AEC's in order to protect character and to help mitigate flooding.

Progress: This strategy has not been carried out. All jurisdictions have opted to rely on state regulations for managing shoreline vegetation.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #68: Revise the development ordinances to encourage and incorporate sand fencing along the oceanfront lots to promote dune replenishment and establishment.

Progress: This strategy has not been carried out. All jurisdictions have opted to rely on state regulations for managing shoreline vegetation.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #69: Continue to coordinate with the County Public Works Department, as well as all municipalities, regarding the monitoring of water resources. When necessary, the County will institute measures to conserve water resources according to the county's Drought Management Plan.

Progress: Carteret County Emergency Management in collaboration with communities operating water systems have and will continue to enforce standards defined in the respective jurisdiction's Drought Management Plan.

Status/Corresponding 2015 Strategy: CA26

Strategy #70: Continue to maintain water shortage response guidelines at the County and municipal levels.

Progress: Carteret County Emergency Management in collaboration with communities operating water systems have and will continue to enforce standards defined in the respective jurisdiction's Drought Management Plan.

Status/Corresponding 2015 Strategy: CA26

Strategy #71: Continue to coordinate with utility providers to inform residents of drought hazards and regional drought policies.

Progress: Carteret County Emergency Management in collaboration with communities operating water systems have and will continue to enforce standards defined in the respective jurisdiction's Drought Management Plan. Citizens are notified of drought conditions by jurisdictions maintaining a utility through steps outlined in their respective adopted Drought Management Ordinances. This effort involves the use of local media outlets.

Status/Corresponding 2015 Strategy: CA26

Strategy #72: Continue to coordinate with utility providers to inform residents about water conservation techniques.

Progress: Carteret County Emergency Management in collaboration with communities operating water systems have and will continue to enforce standards defined in the respective jurisdiction's Drought Management Plan.

Status/Corresponding 2015 Strategy: CA26

Strategy #73: Distribute materials on how to conserve water during periods of drought but also during periods of adequate water supplies.

Progress: Carteret County Emergency Management in collaboration with communities operating water systems have and will continue to enforce standards defined in the respective jurisdiction's Drought Management Plan.

Status/Corresponding 2015 Strategy: CA26

III. CRAVEN COUNTY MITIGATION PROGRESS REPORT

The following provides a summary of progress achieved with regard to the strategies adopted through the 2010 Craven County Multi-Jurisdictional Hazard Mitigation Plan.

Strategy #1: In concert with the American Red Cross (ARC), maintain an annually updated list of all ARC approved shelters.

Progress: The Craven County EOP maintains a current listing of all salient data regarding emergency response, including shelters. The county updates the EOP annually in coordination with the American Red Cross.

Status/Corresponding 2015 Strategy: CR13

Strategy #2: Continuously maintain, on the County's website, instructional information on ensuring that on-site sheltering is as safe an option as possible.

Progress: The Craven County EOP maintains a current listing of all salient data regarding emergency response, including shelters. The county updates the EOP annually in coordination with the American Red Cross. Additionally, this information is maintained on the Craven County website.

Status/Corresponding 2015 Strategy: CR13

Strategy #3: 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) identification of 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: Since adoption of the 2010 plan, the county has maintained ongoing coordination with all electric service providers within the county. This effort is now incorporated into County EOP procedures.

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #4: Improve capability of secondary power source at all County and Municipal Critical Facilities (all buildings).

Progress: Craven County has continued these efforts, establishing several back-up generators since certification of the 2010 plan. This strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: CR15

Strategy #5: Maintain a representative of the public electric authority on the MAC.

Progress: This issue has been adequately addressed through establishment and implementation of the county co-op since adoption of the 2010 plan. This plan will continue to be maintained and updated.

Status/Corresponding 2015 Strategy: CR8, CR15

Strategy #6: Retrofit all County and Municipal facilities for lightning protection (existing buildings).

Progress: The county MAC has determined that this strategy is impractical, and should be handled on a case-by-case basis.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #7: Support conservation easements on all floodprone property and impose such easements on all properties acquired with public assistance funds.

Progress: This strategy has been eliminated because all properties acquired with HMGP funding have a FEMA mandated deed restriction placed on them that restricts future development.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #8: Integrate new greenway and public park improvements into comprehensive planning and capital improvement efforts (including coordination with all local certified CAMA land sue plans).

Progress: Craven County adopted the latest CAMA (Comprehensive Plan) prior to certification of the 2010 plan. The county will continue to consider mitigation through future plan updates.

Status/Corresponding 2015 Strategy: CR1

Strategy #9: 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: Craven County has and continues to maintain an updated Flood Damage Prevention Ordinance. The county, in conjunction with participating jurisdictions, review and update this ordinance annually.

Status/Corresponding 2015 Strategy: CR2, CR3, CR5

Strategy #10: Publicize and maintain maps of floodplain and floodprone areas on the county website and at building inspection offices and in public libraries. Provide copies of the flood maps to the public.

Progress: Craven County maintains FIRMs that are current and in line with FEMA standards. Additionally, the ordinance is updated as directed by NCEM and/or FEMA.

Status/Corresponding 2015 Strategy: CR4

Strategy #11: Map all areas in proximity to National Forest Areas including types of land use and construction.

Progress: This strategy was completed in 2012-2013 in conjunction with the county GIS department. The data is currently available through county GIS.

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #12: The MAC will review “firewise” zoning and subdivision standards and recommend their appropriateness for incorporation into existing (or new) zoning subdivision of UDO ordinances. (Source: <http://www.firewise.org>). This will include the establishment of buffers around National Forest Areas (new buildings).

Progress: Craven County has determined that this strategy is impractical and will be eliminated from the plan.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #13: 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 (new buildings).

Progress: Craven County maintains limited zoning and subdivision regulations. The county, in conjunction with participating jurisdictions, have determined that respective Flood Damage Prevention Ordinances and existing land development regulations are adequate.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #14: Adopt and annually update a capital improvement plan with an emphasis on mitigation for critical facilities including relocation and retrofitting (all buildings). NOTE: Subject to funding availability.

Progress: Since certification of the 2010 plan, Craven County has maintained a CIP that has been updated through the annual budgeting process (this practice will continue).

Status/Corresponding 2015 Strategy: CR8

Strategy #15: 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: Craven County, in collaboration with local and regional partners, work on an ongoing basis to address regional drainage issues.

Status/Corresponding 2015 Strategy: R6

Strategy #16: 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: Since certification of the 2010 plan, Craven County, in collaboration with the participating jurisdictions, have treated several units through the HMGP program. The county will continue to maintain a proactive approach to this program.

Status/Corresponding 2015 Strategy: CR9

Strategy #17: Require a finished floor elevation certificate for all development within the special flood hazard area (SFHA) in 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: Craven County and all CRS participating communities will continue to maintain these efforts.

Status/Corresponding 2015 Strategy: CR6

Strategy #18: Identify and map municipal stormwater “hot spots” and coordinate with capital improvement planning for upgrade of substandard storm drainage components.

Progress: Craven County, in collaboration with local and regional partners, work on an ongoing basis to address regional drainage issues.

Status/Corresponding 2015 Strategy: CR1

Strategy #19: Continue to comply with North Carolina state coastal stormwater regulations (new buildings).

Progress: This strategy has been eliminated because the MAC feels these issues are adequately addressed by state regulatory agencies.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #20: Continuously maintain information concerning the County’s flood data maintenance efforts, including GIS/tax parcel data.

Progress: Craven County has collected information establishing a comprehensive GIS database, inclusive of floodplain information. This system will continue to be maintained.

Status/Corresponding 2015 Strategy: CR4

Strategy #21: Hold an annual public hazard mitigation meeting, attended by the MAC and participating jurisdictions, to educate the public and elected officials and receive comments about the location of high risk facilities/development, the jurisdictions’ overall vulnerability to natural and man-made hazards, and the jurisdictions’ hazard mitigation efforts.

Progress: Craven County in conjunction with the annual county-wide EOP update process adequately addresses this issue. Currently, maintenance procedures will remain in place until a change is deemed necessary.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #22: 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 FIRMs; (4) Advertise once 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: Craven County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. The county's map information service is updated weekly and is made available to all participating communities.

Status/Corresponding 2015 Strategy: CR20, CR21, CR22

Strategy #23: Craven County will 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 retrofitting 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 available of services once annually in the local newspaper; and (7) Maintain a log of all individuals assisted through these services, including site visits (all buildings).

Progress: Craven County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. Since the last update, Craven County has worked closely with participating communities and citizens to

identify and educate these individuals on how to deal with floodplain development in compliance with the NFIP.

Status/Corresponding 2015 Strategy: CR20, CR21, CR22

Strategy #24: Craven County will make information regarding hazards and development regulations within the floodplains 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 its website to FEMA resources addressing flooding and flood protection (all buildings).

Progress: Craven County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. Specifically, flood hazard educational materials/links are available on the county and municipal websites in addition to being located at all county library branches.

Status/Corresponding 2015 Strategy: CR20, CR21, CR22

Strategy #25: Craven County will establish and maintain flood warning systems.

Progress: Craven County has maintained and improved upon the capabilities of the county's early warning system. The Code RED system is operational and available to all residents. This system will be continue to be maintained and updated as deemed necessary.

Status/Corresponding 2015 Strategy: CR11

Strategy #26: Craven 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 floodprone areas (existing buildings).

Progress: Craven County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. Once annually, the county Emergency Services Department delivers educational materials to local and regional real estate agents.

Status/Corresponding 2015 Strategy: CR22

Strategy #27: Craven County will coordinate with the Craven County School System Hazards Awareness Educational Programs for use by educators within the Craven County School System.

Progress: Craven County maintains a widespread public awareness campaign. The MAC eliminated this strategy due to a range of outreach efforts ongoing throughout the county.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #28: Continue to rely on the Craven County Emergency Operations Plan (EOP) for effective disaster event communication.

Progress: Craven County updates the county EOP on an annual basis. The county addresses all emergency communication necessary throughout the county.

Status/Corresponding 2015 Strategy: CR14, CR16

Strategy #29: Establish county-wide program, including a public service campaign prompting citizens to register their unlisted or mobile telephone numbers.

Progress: This strategy has been worked on and is in place relating to state requirements for Special Medical Needs Registries.

Status/Corresponding 2015 Strategy: CR17

Strategy #30: Maintain a registry of special needs individuals, which has been coordinated with the Craven 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.

Progress: This strategy has been worked on and is in place relating to state requirements for Special Medical Needs Registries.

Status/Corresponding 2015 Strategy: CR17

Strategy #31: Craven County, in conjunction with all municipal jurisdictions participating in this hazard mitigation plan update, 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 (10) 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: Craven County has maintained a county MAC including all participating jurisdictions since certification of the 2010 plan.

Status/Corresponding 2015 Strategy: CR23

Strategy #32: Maintain dialogue with the Craven Regional Airport Authority to effectively regulate land use as the County continues to grow and encroach upon the airport environs defined by the Craven County Zoning and Height Ordinance.

Progress: Craven County adopted the latest CAMA (Comprehensive Plan) prior to certification of the 2010 plan. The county will continue to consider mitigation through future plan updates.

Status/Corresponding 2015 Strategy: CR1

Strategy #33: Maintain dialogue with the Cherry Point Marine Corps Air Station (MCAS) personnel to effectively regulate land use as the County continues to grow and encroach upon the airport environs defined by the Craven County Zoning and Height Ordinance and the Marine Corps Air Station Zoning Ordinance.

Progress: Craven County adopted the latest CAMA (Comprehensive Plan) prior to certification of the 2010 plan. The county will continue to consider mitigation through future plan updates.

Status/Corresponding 2015 Strategy: CR1

Strategy #34: Craven County will 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.

Progress: Craven County as well as all other jurisdictions participating in the CRS program (see page 6-37) must maintain this data, in addition to conducting a range of education and community outreach efforts. These communities have and will strive to maintain current rankings through implementation of this plan. Since adoption of the last plan, the County has assisted NCDENR in performing annual dam safety inspections.

Status/Corresponding 2015 Strategy: CR23

Strategy #35: Support storm hazard mitigation policies provided in the 2008 Craven County, Bridgeton, and New Bern CAMA Land Use Plans (all buildings).

Progress: Craven County adopted the latest CAMA (Comprehensive Plan) prior to certification of the 2010 plan. The county will continue to consider mitigation through future plan updates.

Status/Corresponding 2015 Strategy: CR1

Strategy #36: 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 including wind-related risks (all buildings).

Progress: Craven County has maintained the International Building Code since certification of the 2010 plan. These codes are currently in place.

Status/Corresponding 2015 Strategy: CR3

Strategy #37: Continuously maintain current state-approved water supply plans.

Progress: Craven County as well as participating jurisdictions continue to update and maintain water supply plans to ensure adequate capacity. These plans are updated every three years.

Status/Corresponding 2015 Strategy: CR7

IV. *HYDE COUNTY MITIGATION PROGRESS REPORT*

The following provides a summary of progress achieved with regard to the strategies adopted through the 2008 Hyde County Multi-Hazard Mitigation Plan Update.

Strategy #1: Develop and adopt a “no-rise (in base flood elevation)” clause for the county’s Flood Damage Prevention Ordinance.

Progress: This strategy has not been completed. The MAC has deemed implementation of this strategy as impractical and removed it from the plan.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #2: Advertise and promote the availability of flood insurance to county property owners by including information in all building permit applications, displaying information in County Inspections Department and adding information to the County website.

Progress: The county promote availability, but has not run advertisements or posted information on the county website. The education of citizens and outreach will be expanded upon through the implementation of this plan.

Status/Corresponding 2015 Strategy: H2

Strategy #3: Continue to support and work towards completion of the construction of the Swan Quarter “mosquito dike” to alleviate future flood hazard conditions.

Progress: This project was completed; this strategy has been updated to reflect maintenance of the Swan Quarter dike moving forward.

Status/Corresponding 2015 Strategy: H3

Strategy #4: Seek funding to complete a stormwater drainage study/plan for both Mainland Hyde and the village of Ocracoke that will lead to a stormwater management ordinance.

Progress: Hyde County has researched various avenues available to address this issue. This strategy has been revised to more accurately define the county’s intentions.

Status/Corresponding 2015 Strategy: H4

Strategy #5: Continue to support and develop the Geographic Information System (GIS) to maintain current cadastral (building/parcel) data for purposes of conducting more detailed hazard risk assessments and for tracking permitting/land use patterns.

Progress: Hyde County has maintained and will continue to maintain a comprehensive GIS system through implementation of this plan.

Status/Corresponding 2015 Strategy: H5

Strategy #6: Continue to collect educational materials on individual and family preparedness/mitigation measures for property owners, and display at both the library and routinely-visited county offices.

Progress: Hyde County has continued to carry out this strategy in an effort to maintain compliance with the CRS program (this strategy is ongoing). Hyde County makes these materials available at the local library branch. These materials are provided by FEMA and updated annually.

Status/Corresponding 2015 Strategy: H6

Strategy #7: Continue to acquire and preserve parcels of land subject to repetitive flooding from willing and voluntary property owners.

Progress: Federally funded mitigation projects since certification of the 2010 plan include PDM-2011-001 which provided for the elevation of eight (8) residential structures and HMGP-4019-0023 which provided for the elevation of five (5) residential structures. The county will continue to make this a priority moving through implementation.

Status/Corresponding 2015 Strategy: H7

Strategy #8: Regularly calculate and document the amount of floodprone property that is preserved as open space for additional credit points under the Community Rating System (CRS).

Progress: Hyde County must maintain this data, in addition to conducting a range of education and community outreach efforts. There has been no increase in property preserved as open space since the last update. The county has and will strive to maintain its current ranking through implementation of this plan.

Status/Corresponding 2015 Strategy: H16

Strategy #9: Evaluate the potential mitigation techniques for protecting each critical facility to the maximum extent possible, including all new facilities.

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Progress: Hyde County consistently assesses EM facilities including both shelters and critical facilities. As a function of the county EOP, all facilities are inspected for stability, security, and adequacy prior to hurricane season. No new critical facilities have been construction since the last update.

Status/Corresponding 2015 Strategy: H8

Strategy #10: Establish a local reserve fund for repairing and/or incorporating hazard mitigation measures for public facilities and infrastructure damaged by natural hazards.

Progress: This strategy has not been carried out. The MAC has decided to remove the strategy due to a lack of political will.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #11: Conduct inventory/survey for the county's emergency response services to identify any existing needs or shortfalls in terms of personnel, equipment or required resources, including funding for public safety services.

Progress: It was determined by the MAC that these efforts are covered through the county EOP. The strategy has been removed due to redundancy.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #12: Formally review the county's Flood Damage Prevention Ordinance and continually revise on a 3-year cycle.

Progress: Hyde County reviews and updates the Flood Damage Prevention Ordinance annually at this time. This effort is in addition to any NCEM or FEMA mandated revisions.

Status/Corresponding 2015 Strategy: H10

Strategy #13: Continue to update educational flyers targeting NFIP policyholders on the Increased Costs of Compliance (ICC) coverage, to be disseminated following a flood event that results in substantial damage determined by the county.

Progress: Hyde County addresses the issue of ICC through their ongoing mitigation program. The county will continue to do so.

Status/Corresponding 2015 Strategy: Completed/Removed

Strategy #14: Incorporate the inspection and management of hazardous trees into the county's routine drainage system maintenance process.

Progress: Hyde County has limited resources with regard to public works and maintenance. The strategy has been revised to more appropriately reflect the current state of affairs.

Status/Corresponding 2015 Strategy: H11

Strategy #15: Continue to contact all owners of FEMA-identified repetitive loss properties and inform them of the assistance available through the federal Flood Mitigation Assistance (FMA) program, in addition to other flood protection measures.

Progress: Hyde County has and will continue to maintain these efforts through the county's CRS program. The Hyde County Inspections office is responsible for this effort. Outreach notices are mailed to repetitive loss property owners through each annual funding cycle.

Status/Corresponding 2015 Strategy: H15, H16

Strategy #16: Continue to augment the enforcement of the State Building Code and related county ordinances by encouraging wind-resistant design techniques for new residential construction during the county's permit process.

Progress: Hyde County has enforced the NC State Building Code since certification of the 2010 plan, and will continue to do so through this update.

Status/Corresponding 2015 Strategy: H12

Strategy #17: Amend the county's Manufactured Housing and Travel Trailer Park Ordinance to require tornado shelters for any new major manufactured/mobile home park with more than 30 mobile home spaces.

Progress: This strategy has not been completed and has been deemed to be impracticable. It will be reconsidered in the future, if necessary.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #18: Annually provide public hazard information for the residents of Hyde County, in combination with the "Engelhard Seafood" festival on the Mainland and the "Ocracoke" festival on Ocracoke Island or another appropriate community event.

Progress: This effort has proven effective for the county and will be maintained through this update.

Status/Corresponding 2015 Strategy: H13

Strategy #19: Continue to update the local emergency evacuation plan for the Village of Ocracoke in coordination with the North Carolina Department of Transportation, North Carolina Division of Emergency Management, and other appropriate agencies.

Progress: Hyde County works closely on an annual basis to ensure that proper emergency evacuation procedures are in place. The strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: H14

V. *PAMLICO COUNTY MITIGATION PROGRESS REPORT*

The following provides a summary of progress achieved with regard to the strategies adopted through the 2010 Pamlico County Multi-Jurisdictional Hazard Mitigation Plan.

Strategy #1: Monitor and review damage assessments in the County during and after future events to evaluate the effectiveness of the increased BFE.

Progress: Since certification of the 2010 plan, there have been several events in the county requiring damage assessments. These damage assessments will help assess the accuracy of new flood maps when they are available in 2015. The county will maintain a proactive stance toward this issue.

Status/Corresponding 2015 Strategy: P1

Strategy #2: Identify vulnerable areas and prioritize the critical drainage ditches.

Progress: The county monitors drainage conditions during every significant rain event. The strategy has been revised to better address the issue.

Status/Corresponding 2015 Strategy: P2

Strategy #3: Explore grant funding for storm water management plans.

Progress: Since 2010, the county has not proactively sought out grant funding for stormwater management. This strategy has been revised to more adequately define resources available to address mitigation.

Status/Corresponding 2015 Strategy: P6

Strategy #4: Continue participation in the community service program to clean ditches and petition the State of North Carolina to continue the community service program.

Progress: This program has served the county well over the last five years and will continue to be utilized as a resource.

Status/Corresponding 2015 Strategy: P4

Strategy #5: Make public aware of the importance of drainage areas and the link to the proliferation of mosquitoes.

Progress: Pamlico County maintains an active vector control program. This effort will be maintained through the County budget.

Status/Corresponding 2015 Strategy: Completed

Strategy #6: Coordinate with the State Forest Service/NCDOT concerning drainage ditches and tree-cutting activities.

Progress: Pamlico County has and continues to deal with this persistent problem.

Status/Corresponding 2015 Strategy: P6

Strategy #7: Meet with insurance agents, Realtors, and bankers to coordinate public education.

Progress: Pamlico County works closely with the community to educate property owners and residents about issues associated with natural hazards (these efforts will continue). These efforts are typically handled through Commissioners meetings. The county intends to increase these efforts through this update.

Status/Corresponding 2015 Strategy: P7

Strategy #8: Create a publication or brochure in order to communicate the potential of natural hazards in the area to potential landowners and residents.

Progress: This strategy has not been carried out and is being eliminated due to budgetary constraints.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #9: Pursue placemats containing information about flood zones.

Progress: This strategy was deemed impracticable and eliminated.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #10: Meet with schools, churches, and other community organizations to disseminate information.

Progress: The county EM department in conjunction with the MAC determined that public education efforts are adequately covered through other programs.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #11: Recommend annual review by towns of storm readiness coordinated by County Emergency Management.

Progress: Pamlico County EM addresses this effort annually through review and update of the county EOP. The towns are involved in this process.

Status/Corresponding 2015 Strategy: P8

Strategy #12: Support State efforts to develop guidelines to reduce nonpoint source water pollution that originates from new construction and use of fertilizers.

Progress: Pamlico County continues to work closely with NCDENR regarding water quality issues. This strategy has been revised to more accurately define the county's intentions.

Status/Corresponding 2015 Strategy: P9

Strategy #13: Seek upstream river monitoring by the NC Division of Water Quality.

Progress: This strategy has been deemed impracticable by the MAC and eliminated.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #14: Map preferable secondary roads to be used for evacuation and place more evacuation route signs on roads throughout the County.

Progress: The county GIS department has mapped all right-of-ways and this information has been provided to the NC GIS clearinghouse.

Status/Corresponding 2015 Strategy: Completed

Strategy #15: Develop flood marker program and pursue a grant to fund the program.

Progress: This strategy was deemed impracticable by the MAC and eliminated.

Status/Corresponding 2015 Strategy: Eliminated

Strategy #16: Develop the County's floodplain map for public dissemination in the brochure to be developed in [Strategy] #8 of this plan.

Progress: This strategy has been achieved through establishment of the NC statewide floodplain management portal.

Status/Corresponding 2015 Strategy: P11

Strategy #17: Research methods to address repetitive loss properties.

Progress: Federally funded mitigation projects since certification of the 2010 plan include HMGP-1490-0009 which provided for the acquisition of two (2) residential structures located in Hobucken and Lowland; HMGP-4019-031 which provided for the elevation of 54 residential structures located in Arapahoe, Bayboro, Florence, Grantsboro, Hobucken, Lowland, Maribel, Merritt, Mesic, Oriental, Spinnaker Pt, and Vandemere; and HMGP-4019-032 which provided for the acquisition of 53 structures in Arapahoe, Bayboro, Goose Creek Island, Hobucken, Lowland, Merritt, and Stonewall. The county will continue to utilize this program when feasible.

Status/Corresponding 2015 Strategy: P3

Strategy #18: Request the NC Climate Office in their Storm Events Database to include nor-easters, wildfires, and severe winter storms (damage estimates by county) in the list of various types of storms.

Progress: Pamlico County did not carry out this strategy; however, an alternate data source was identified.

Status/Corresponding 2015 Strategy: Eliminated

APPENDIX H

CRS & FEMA Mitigation Planning Program Overview

Over the last year, the Community Rating System has issued new guidance associated with participation in the program. This guidance places an increased burden on communities to not only carry out activities required under the program, but to maintain detailed records regarding these efforts. Moving forward, communities will need to be diligent in maintaining these records in an effort to maintain their respective program rating. The schedule of activities, as stated, remains unchanged as follows:

- o Public Information Activities (300 Series)
- o Mapping and Regulations (400 Series)
- o Flood Damage Reduction Activities (500 Series)
- o Warning and Response (600 Series)

Each of these series involves a range of activities intended to alleviate the exposure of repetitive loss properties (RLP) in the event of a natural disaster. A majority of these activities is familiar to participants in the program. There are some modifications; however, the most significant change involves Section 500, specifically Section 510, which deals with Floodplain Management Planning requirements. The Section 510 guidance impacts communities based on the number of repetitive loss properties present in a respective jurisdiction. The following provides an overview of how the 510 guidance impacts communities with varying numbers of RLP's:

- (1) Category A: A community that has no repetitive loss properties, or whose repetitive loss properties all have been mitigated. A Category A community has no special requirements except to submit information to update its repetitive loss list, as needed.
- (2) Category B: A community with at least one, but fewer than 10, repetitive loss properties that have not been mitigated. At each verification visit, a Category B community must:
 - (a) Prepare a map of the repetitive loss area(s)
 - (b) Review and describe its repetitive loss problem
 - (c) Prepare a list of the addresses of all properties with insurable buildings in those areas
 - (d) Undertake an annual outreach project to those addresses. A copy of the outreach project is submitted with each year's recertification.
- (3) Category C: A community with 10 or more repetitive loss properties that have not been mitigated. A Category C community must:
 - (a) Do the same things as a Category B community
 - (b) Prepare a floodplain management plan or area analysis for its repetitive loss area(s).

The overriding concerns regarding the updated CRS guidance relate to Section 510 Floodplain Management Planning. For communities classified as Category C above, a Floodplain Management Plan in line with Section 510 must be drafted and adopted by their respective Governing Board. The following outlines the steps prescribed under Section 510, and the content and process required for varying levels of compliance:

Step 1: Organize to Prepare the Plan

- A. (4 Points) If the office responsible for the plan participates in development (minimum of five meetings)
 - B. (9 Points) If the planning process involves a committee (minimum of five meetings)
 - C. (2 Points) If governing board recognizes the committee
- (15 Points) Step 1 Total Available Points**

Step 2: Involve the Public

- A. (Up to 60 Points) If the planning process is conducted through a planning committee that involves the public and meets the following requirements:
 - Committee includes staff and at least half of the members are not staff;
 - Committee must meet a minimum of five times; and
 - Adequate participation is required.
 - B. (15 Points) If one or more of the plan meetings are held in an affected area within two months of initiation of the process.
 - C. (15 Points) If a meeting is held in an affected area at the end of the process, two weeks prior to adoption.
 - D. (5 Points)
(30 Points Max) For each additional public outreach measure as follows:
 - Establish a website dedicated to the plan;
 - Conduct a public webcast regarding the plan;
 - If a questionnaire involving the community is conducted (double credit is provided if the survey is direct-mailed to residents in flooding hotspots); and
 - Additional outreach, such as mailers, booths at events, and presentations to civic groups and neighborhoods.
- (120 Points) Step 2 Total Available Points**

Step 3: Coordinate

- A. (5 Points) Required for credit under Step 3: The community must review all past plans, studies, and technical information pertinent to floodplain management.
 - B. Communities will receive credit for reaching out to other agencies:
 - Contact agency, keep records;
 - Ask agency if they have useful data;
 - Ask agency if they have information pertinent to project; and
 - Offer the agency an opportunity to participate in plan.
 - (1 Point) For each agency contacted.
 - (2 Points) For follow-up contact.
- (35 Points) Step 3 Total Available Points**

Step 4: Assess the Hazard

- Item A, below, must be completed.
- B-rated & C-rated communities must assess all repetitive loss areas

A. Communities must assess the flood hazard locally including:

- Special Flood Hazard Areas (SFHA);
- Repetitive Loss Areas (RLA);
- Areas not in SFHA, but with flood history; and
- Other flooding hotspots.

(5 Points) If SFHA's are mapped

(5 Points) For a description of flood hazards

(5 Points) For a discussion of past floods

(15 Points) Total Available Points

B. Communities must:

- Include an analysis of less frequent flood areas including
 - Inventory of dams,
 - Inventory of levees, and
 - Mapping Coastal A zones
- Map all affected areas
- Summarize hazards in lay terms.

(10 Points) Total Available Points

C. (5 Points) For including a discussion of potential flooding areas

D. (5 Points) For providing probability of future events

(35 Points) Step 4 Total Available Points

Step 5: Assess the Problem

- Item A, below, must be completed.
- Assessment must truly characterize causes of flooding in the areas identified in Step 4.
- Multi-jurisdictional plans require an assessment of problems in all communities.

A. (2 Points) If community's vulnerability to all identified hazards is assessed.

B. Communities must incorporate an assessment of how the following are impacted by hazards:

(5 Points) For life safety and evacuation;

(5 Points) For public health;

(5 Points) For critical facilities;

(5 Points) For economic impacts;

(5 Points) For the number and types of affected buildings.

C. (5 Points) If the assessment includes a review of historical damage, including RLA's.

D. (5 Points) For a review of the natural environment.

E. (7 Points) For a review of past, present, and future development trends

F. (8 Points) For a description of potential future flooding conditions

(52 Points) Step 5 Total Available Points

Step 6: Set Goals

The community must set goals aimed at addressing all hazards identified in Step 4.

(2 Points) Step 6 Total Available Points

Step 7: Review Possible Activities

Item A, below, is required.

Under Step 7, a review of possible activities must:

- Include a discussion of funding availability;
- Include an assessment of activities that are/are not working;
- All activities defined in previous plan updates must be included

A. (5 Points) If the plan reviews existing zoning, building, stormwater regulations, etc. This plan must:

- State how tools can reduce flooding;
- Outline existing plans and regulations; and
- State whether amendments are necessary.

(5 Points) If the community assesses whether current regulations are sufficient for current and future development conditions.

(5 Points) If property protection mechanisms are discussed (i.e., elevation).

(5 Points) If protection of natural functions is discussed.

(5 Points) If emergency service activities are discussed.

(5 Points) If the plan reviews structural projects (i.e., channel maintenance and dams)

(5 Points) If the plan reviews public outreach activities.

(35 Points) Step 7 Total Available Points

Step 8: Draft Action Plan

For each recommendation, the plan must state:

- Who is responsible;
- When it will be done;
- How it will be funded;
- Actions must be prioritized;
- If acquisition, the community must discuss logistics;
- Communities must adopt action items under two of the six categories defined by CRS (See Figure 510-4, CRS Manual);
- Plan must state how community will incorporate the proposed activities and recommendations into existing plans, studies, and regulations.

A. (10 Points) If the plan provides flood recommendations for two of the six categories defined in Step 7 (Figure 510-4, CRS Manual).

(20 Points) If the plan provides flood recommendations for three of the six categories defined in Step 7 (Figure 510-4, CRS Manual).

(30 Points) If the plan provides flood recommendations for four of the six categories defined in Step 7 (Figure 510-4, CRS Manual).

(45 Points) If the plan provides flood recommendations for five of the six categories defined in Step 7 (Figure 510-4, CRS Manual).

B. (10 Points) Additional points provided if the action plan proposes post-disaster redevelopment and mitigation procedures.

- C. (5 Points) Additional points provided if the plan action items address other natural hazards.
(60 Points) **Step 8 Total Available Points**

Step 9: Adopt the Plan

- (2 Points) If the plan is adopted by the Governing Board by formal vote and resolution.

(2 Points) **Step 9 Total Available Points**

Step 10: Implement, Evaluate, and Revise

- The plan must address when, how, and by whom the plan will be implemented;
- An annual status report must be submitted to CRS;
- Every participating community must submit reports; and
- Plan must be updated on a five-year cycle.

- A. (2 Points) If the community established formal procedures for monitoring and updating.
- B. If the annual evaluation report is produced through the steering committee appointed under Step 2(a).
(6 Points) If the committee meets once a year.
(12 Points) If the committee meets twice a year.
(24 Points) If the committee meets quarterly.
(26 Points) **Step 10 Total Available Points**

(382 Points) **Total Available Points for Section 510, Floodplain Management Plan.**

Once a plan is in place and in compliance with the Section 510 requirements outlined above, the document must be updated every five years. The updated plan must be submitted to CRS for review. The CRS audit of the plan will be based on the guidance in place when the plan is completed. For CRS communities participating in the Pamlico River Basin Regional Hazard Mitigation Plan, this means that following completion of this plan, if intended for CRS compliance, the plan will be reviewed under the standards outlined above.

Repetitive Loss Area Analysis (RLAA)

As an alternative to the requirement to conduct a Floodplain Management Planning Process, communities may prepare a Repetitive Loss Analysis (RLAA). It should be noted that the RLAA provides a potential point total of 140 points, where the FMP planning process provides the potential for securing 382 points. The RLAA involves a five-step process. The process is briefly summarized below. For further detail refer to Section 512.b of the CRS guidance manual.

- Step 1: Directly advise all properties located in defined repetitive loss areas that the analysis will be conducted and solicit their input.
- Step 2: Contact agencies that may have plans and studies that could affect the cause or impacts of flooding.
- Step 3: Visit each structure in all repetitive loss areas and collect basic information as defined under Section 512.b., Step 3.
- Step 4: Review alternative approaches and determine what protection measures and drainage improvements are feasible in the community.
- Step 5: Document findings for each defined repetitive loss area.

Appendix I

Public Hearing Documentation

(INSERT COUNTY)

**RESOLUTION ADOPTING THE
PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN UPDATE**

WHEREAS, the citizens and property within (Insert County) are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas, i.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, (Insert County) desires to seek ways to mitigate situations that may aggravate such circumstances; and

WHEREAS, the Legislature of the State of North Carolina, 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, has 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, in Article 1 of Chapter 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 – Senate Bill 300 effective July 1, 2001), has stated in Item 6.01(b)(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, it is the intent of the Board of Commissioners of (Insert 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; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan and update it every five years in order to receive future Hazard Mitigation Grant Program Funds; and

NOW, THEREFORE, be it resolved that the Board of Commissioners of (Insert County) hereby:

1. Adopts the Pamlico Sound Regional Hazard Mitigation Plan; and
2. Vests the (Insert Responsible Person) 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.
3. Appoints the (Insert Responsible Person) to assure that the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.

4. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2015 Pamlico Sound Regional Hazard Mitigation Plan.

Adopted this _____ day of _____, 2015.

Chairman, (Insert County) Board of Commissioners

ATTEST:

(Insert Clerk) (SEAL)

(Insert Municipality)

**RESOLUTION ADOPTING THE
PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN UPDATE**

WHEREAS, the citizens and property within (Insert County) are subject to the effects of natural hazards and man-made hazard events that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas, i.e., flood hazard areas, are particularly susceptible to flood hazard events; and

WHEREAS, the county desires to seek ways to mitigate situations that may aggravate such circumstances; 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 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 that is updated every five years”; and

WHEREAS, it is the intent of the Board of Commissioners of (Insert 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; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan and update it every five years in order to receive future Hazard Mitigation Grant Program Funds; and

WHEREAS, the (Insert Municipality) actively participated in the planning process of the Pamlico Sound 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) hereby:

1. Adopts the Pamlico Sound Regional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the (Insert Municipality); and

3. Vests the (Insert Responsible Person) 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) to assure that, in cooperation with (Insert County), the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.
5. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2015 Pamlico Sound Regional Hazard Mitigation Plan.

Adopted this _____ day of _____, 2015.

Mayor, (Insert Municipality Name)

ATTEST:

Town Clerk (SEAL)