ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

FEMA Compliant 5-12-2015

PREPARED BY THE WOOTEN COMPANY

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Section 1: Introduction

1.1 Background

The Albemarle Region, which is located in the Northeast corner of North Carolina, is comprised of Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans counties, is vulnerable to a wide range of natural and man-made hazards. These hazards threaten the life and safety of the Region's residents, and have the potential to damage or destroy both public and private property and disrupt the local economy and overall quality of life.

Natural hazards are a part of the world in which we live. Floods, hurricanes, tornadoes, winter storms, wildfires, and other hazardous events are natural phenomena. Natural hazards are inevitable and there is little humans can do to control force and intensity. However, how the natural and the built environments interact with hazards is quite different.

The natural environment is amazingly recuperative from the forces of wind, rain, fire and earth and can regenerate with resiliency, restoring habitat and ecosystems in time for the next generation of plant and animal life to begin anew. The built environment, however, is not as resilient. Natural disasters occur when human activity in the form of buildings, infrastructure, agriculture and other land uses are located in the path of the destructive forces of nature. Since the built environment is more susceptible to natural hazards and cannot recuperate like the natural environment, communities impacted by a natural hazard often recover only over a long period of time and at great social and economic cost.

In recent years, the frequency and impact of natural disasters have increased not because natural hazards occur more frequently but because more people are choosing to live and work in locations that put them and their property at risk. A tremendous number of Americans have chosen to live in areas at risk from coastal storms, repeated flooding, and seismic activity, often with little or no attention to the need for sound building practices or land use policy. As a result, risk of disasters occurring in the wake of natural hazards has grown exponentially. Likewise, while floods have caused a greater loss of life and property and have disrupted more families and communities than all other natural hazards combined, the rate of development in flood-prone areas continues to escalate, putting more people and property in danger.

Man-made hazards can be categorized as technological hazards or terrorism. FEMA Guide 386-7 "Integrating Man-made Hazards into Mitigation Planning" provides the following definitions: Technological hazards refer to the origins of incidents that can arise from human activities such as the manufacturing, transportation, storage and use of hazardous materials. Terrorism refers to the use of Weapons of Mass Destruction (WMD), including biological, chemical, nuclear and radiological weapons; arson, incendiary, explosive and armed attacks; industrial sabotage and intentional hazardous materials releases; and "cyber-terrorism".

With the increase in man-made hazard events in recent years, the need to incorporate these new threats into mitigation is becoming more and more evident. Events such as the 1995 bombing of the Murrah Federal Building, the 1996 Olympic Park Bombing, the 2001 Anthrax attacks, the 2001 hazardous materials train derailment, the September 11th attacks on Washington and New York, the 2002 Beltway sniper attacks, the 2009 mass casualty shooting at Fort Hood, the 2012 Sandy Hook shootings, the 2013 Boston Marathon Bombing, and a multitude of smaller-scale incidents and accidents reinforce the need for communities to reduce their vulnerabilities to future terrorist acts and technological disasters.

While natural and man-made hazards cannot be prevented, local communities can use various means to reduce the vulnerability of people and property to damage. Communities can reduce exposure to future natural hazards by managing the location and characteristics of both the existing and future built environment. By utilizing location and construction techniques, a community can mitigate negative impacts and reduce future damage to both human lives and property.

One of the most effective means that a community can use to implement a comprehensive approach to hazard mitigation is to develop, adopt, and update as needed, a local hazard mitigation plan. A mitigation plan establishes the broad local vision and guiding principles for reducing hazard risk, and further proposes specific mitigation actions to eliminate or reduce identified vulnerabilities.

Hazard mitigation is defined as "any action taken to eliminate or reduce the long-term risk to human life and property from natural and technological hazards. Mitigation activities are ongoing and overlap all phases of emergency management.

Each of twenty five jurisdictions participating in the development of the Albemarle Regional Hazard Mitigation Plan have existing hazard mitigation plans that they have developed over the years, as described in Section 2: *Planning Process*. The Albemarle Regional Hazard Mitigation Plan is an effective means to incorporate hazard mitigation principles and practices into the standard government activities and functions of the eight counties and 17 municipalities participating in this Plan. At its foundation, the Plan recommends specific actions and strategies to protect our built environment from the forces of nature and to protect the residents of the Albemarle Region from losses to those hazards that pose the greatest risk.

Disaster Legislation

Guidance for hazard mitigation planning comes from the Disaster Mitigation Act of 2000 (DMA 2000), which amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by repealing Section 409 and replacing it with Section 322. This amendment placed a new emphasis on the coordination of State and local planning by requiring the development and submission of a hazard mitigation plan not only by the State, but also local governments as a condition of receiving various types of pre and post disaster assistance for mitigation efforts as identified under the Stafford Act. This assistance includes funding under the Hazard Mitigation Grant Program (HMGP) as well as the Pre-Disaster Mitigation (PDM) Program.

Additional grant funding is also available through the Severe Repetitive Loss (SRL) program and the Repetitive Flood Claim (RFC) program. These grant programs were created as part of the Flood Insurance Reform Act of 2004. The reform act also modified the existing Flood Mitigation Assistance (FMA) program. One of the key requirements of this act is that a FEMA approved Hazard Mitigation Plan is now required if communities wish to be considered for these funding programs.

This Plan was prepared in coordination with FEMA and the North Carolina Division of Emergency Management (NCEM) to ensure that it meets all applicable planning requirements. This includes conformance with FEMA's latest *Local Mitigation Planning Handbook* (released March 2013) and *Local Mitigation Plan Review Guide* (released October 2011). FEMA Guide 386-7, *Integrating Man Made Hazards into Mitigation Planning* as also consulted. A *Local Hazard Mitigation Plan Update Checklist*, found in Appendix D, provides a summary of FEMA and NCEM's current minimum standards of acceptability and notes the location within the Plan where each planning requirement is met.

1.2 Purpose

The purpose of this Hazard Mitigation Plan is:

- To demonstrate a local commitment to hazard mitigation planning principles in the Albemarle region;
- To reduce natural hazard vulnerability by reducing the potential for future damages and economic losses;
- To speed recovery and redevelopment following future natural hazard events;
- To qualify for additional grant funding, in both the pre-disaster and post-disaster environment; and
- To comply with federal and state requirements for local hazard mitigation plans.

1.3 Scope

This Hazard Mitigation Plan will be updated and maintained to continually address those hazards determined to be of high and moderate risk through the detailed vulnerability assessment for the Albemarle Region (see Section 4: Hazard Identification & *Risk Assessment*). Other hazards that pose a low or negligible risk will continue to be evaluated during future updates to this plan, but they may not be fully addressed until they are determined to be of high or moderate risk to the Albemarle Region.

The geographic scope (i.e. the "planning area") for this plan includes all incorporated and unincorporated areas of Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans counties. Participating jurisdictions are shown in **Table 1.1**.

Table 1.1: PARTICIPATING JURISDICTIONS IN THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

Camden County	Chowan County	Currituck County	Dare County	Gates County	Hertford County	Pasquotank County	Perquimans County
	Town of Edenton		Town of Duck	Town of Gatesville	Town of Ahoskie	City of Elizabeth City	Town of Hertford
			Town of Kill Devil Hills		Town of Cofield		Town of Winfall
			Town of Kitty Hawk		Town of Como		
			Town of Manteo		Town of Harrellsville		
			Town of Nags Head		Town of Murfreesboro		
			Town of Southern Shores		Town of Winton		

These 25 participating jurisdictions have previously been covered under eight separate county level plans. The decision was made to create one regional mitigation plan in order to accomplish the following planning goals:

- Support a more holistic regional planning effort, taking into account shared concerns and shareable resources;
- Conform to NCEM's preference for regional hazard mitigation planning in the state; and
- Leverage available funding and resources for mitigation planning.

1.4 Authority

This Hazard Mitigation Plan has been adopted by all participating jurisdictions in accordance with the authority and police powers granted to counties as defined by the State of North Carolina (N.C.G.S., Chapter 153A). This Hazard Mitigation Plan has also been adopted by all participating incorporated municipal jurisdictions under the authority granted to cities and towns as defined by the State of North Carolina (N.C.G.S., Chapter 160A). Copies of all local resolutions to adopt the Plan are included in Appendix A.

This Plan was developed in accordance with current state and federal rules and regulations governing local hazard mitigation plans. The Plan shall be monitored and updated (See Section 8 – Plan Maintenance Procedures) on a routine basis to maintain compliance with the following legislation:

- Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as enacted by Section 104 of the Disaster Mitigation Act of 2000 (P.L. 106-

390) and by FEMA's Interim Final Rule published in the Federal Register on February 26, 2002, at 44 CFR Part 201.

- North Carolina General Statutes, Chapter 166A: 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 Commission (2001).

1.5 Plan Overview

This Hazard Mitigation Plan is divided into eight major sections, each of which is described briefly below. The Plan also includes several appendices for additional or supplemental items not included in the main body of the Plan, including copies of local adoption resolutions (Appendix B), a completed *Local Hazard Mitigation Plan Update Checklist* (Appendix D), Public Outreach Strategy (Appendix C), public participation survey results (Appendix C), copies of meeting agendas, sign-in sheets, and PowerPoint slides (Appendix C), etc.

This *Introduction* (Section 1) provides background on hazard mitigation planning and the Disaster Mitigation Act of 2000, and defines the purpose, scope, and authority of the Plan as adopted by all participating jurisdictions. It also provides the following outline of each section making up the Plan.

The *Planning Process*, found in Section 2, fully documents the process by which the Albemarle Region prepared this regional hazard mitigation plan as an update to its eight existing county level plans. This includes a description of the key steps involved in the processes followed, who was involved (i.e., the members of the Hazard Mitigation Planning Committee) and full descriptions of community meetings and workshops, how the public and other stakeholders were notified and involved, and how each of the municipal jurisdictions participated in the process.

The *Regional Profile*, located in Section 3, describes the general makeup of the Albemarle Region, including its counties and local municipalities, including relevant geographic, demographic, and economic characteristics. In addition, building characteristics and land use patterns are discussed along with general historical disaster data. This baseline information provides context for the region-wide planning area and thereby assists the planning team in recognizing the social, environmental, and economic factors that ultimately play a role in determining community vulnerability to natural hazards.

Hazards Identification, found in Section 4, serves to identify the hazards that impact Albemarle Region. This section also looks at available historical data from past hazard occurrences and establishes hazard-by-hazard profiles.

The *Vulnerabilities Assessment*, found in Section 5, analyzes and assesses the Albemarle Region's overall risk to natural hazards. The vulnerabilities assessment also attempts to define any hazard risks that may uniquely or exclusively affect localized areas within the participating jurisdictions.

The *Capability Assessment*, located in Section 6, includes a comprehensive examination and evaluation of individual capacities to implement mitigation strategies, a review of local government authority for hazard mitigation planning, a description of each local government organization and staff, a review of technical and fiscal capabilities, and a summary statement of each community's local commitment to hazard mitigation planning. The purpose of this step was to identify any gaps or weaknesses in local programs or regulations, to determine if any existing programs/regulations had the effect of hindering hazard mitigation, and to identify programs/regulations that could be revised or amended to strengthen local hazard mitigation efforts. The *Community Profile*, *Risk Assessment*, and *Capability Assessment* collectively serve as a basis for determining the goals for the Hazard Mitigation Plan, each contributing to the development, adoption, and implementation of a meaningful *Mitigation Strategy* that is based on accurate background information.

The *Mitigation Strategy*, found in Section 7, consists of regional goal statements as well as specific mitigation actions for each local government jurisdiction participating in the planning process, along with a set of regional mitigation actions to be implemented by the Albemarle Hazard Mitigation Planning Committee. The *Mitigation Strategy* provides the foundation for detailed *Mitigation Action Plans*, found in Section 7, that link specific mitigation actions for each jurisdiction to locally assigned implementation mechanisms and target completion dates. Together, these sections are designed to make the Plan both strategic (through the identification of long-term goals) and also functional through the identification of short-term and immediate actions that will guide day-to-day decision-making and project implementation.

In addition to the identification and prioritization of possible mitigation projects, emphasis is placed on the use of program and policy alternatives to help make the Albemarle Region less vulnerable to the damaging forces of nature while improving the economic, social, and environmental health of the community. The concept of multi-objective planning was emphasized throughout the planning process, particularly in identifying ways to link hazard mitigation policies and programs with complimentary community goals related to housing, economic development, downtown revitalization, recreational opportunities, transportation improvements, environmental quality, land development, and public health and safety.

The *Plan Maintenance Procedures*, found in Section 8, includes the measures each participating jurisdiction will take to ensure the Plan's continuous long-term implementation. The procedures also include the manner in which the Plan will be regularly evaluated and updated to remain a current and meaningful planning document.

Appendices are also included and contain supporting documentation from the planning process as noted throughout the plan.

Section 2: The Planning Process

2.1 Overview of Hazard Mitigation Planning

Local hazard mitigation planning is the process of organizing community resources, identifying and assessing hazard risks, and determining how to best minimize or manage those risks. This process results in a hazard mitigation plan that identifies specific mitigation actions, each designed to achieve short-term planning objectives as well as a long-term community vision. To ensure the functionality of each mitigation action, responsibility is assigned to a specific individual, department, or agency along with a schedule for its implementation. Plan maintenance procedures are established for the routine monitoring of implementation progress, as well as the evaluation and enhancement of the mitigation plan itself. These plan maintenance procedures ensure that the Plan remains a current, dynamic, and effective planning document over time.

Mitigation planning offers many benefits, including:

Saving lives and property;

- Saving money;
- Speeding recovery following disasters;
- Reducing future vulnerability through wise development and post-disaster recovery and reconstruction;
- Expediting the receipt of pre-disaster and post-disaster grant funding; and
- Demonstrating a firm commitment to improving community health and safety.

Typically, mitigation planning is described as having the potential to produce long-term and recurring benefits by breaking the repetitive cycle of disaster loss. A core assumption of hazard mitigation is that pre-disaster investments will significantly reduce the demand for post-disaster assistance by lessening the need for emergency response, repair, recovery, and reconstruction. Furthermore, mitigation practices will enable local residents, businesses, and industries to re- establish themselves in the wake of a disaster, getting the community economy back on track more quickly and with less interruption.

The benefits of mitigation planning go beyond solely reducing hazard vulnerability. Measures such as the acquisition or regulation of land in known hazard areas can help achieve multiple community goals, such as preserving open space, maintaining environmental health, and enhancing recreational opportunities. Thus, it is vitally important that any local mitigation planning process be integrated with other concurrent local planning efforts, and any proposed mitigation strategies must take into account other existing community goals or initiatives that will help complement or hinder their future implementation.

2.2 History of Hazard Mitigation Planning in the Albemarle Region

Each of the eight counties participating in this Plan, along with their incorporated and unincorporated municipal jurisdictions, had a previously approved hazard mitigation plan in place prior to this regional planning effort. The FEMA approval dates for each of these plans, along with a list of their participating municipalities, are listed below.

Camden County Hazard Mitigation Plan (7-9-12)

Town of Southern Shores Community-Based Hazard Mitigation Plan

Currituck County Hazard Mitigation Plan 2010
Plan Amendment Back up power - 2013

Dare County Hazard Mitigation Plan 2010
Town of Duck
Town of Kitty Hawk
Town of Nags Head
Town of Kill Devil Hills
Town of Manteo
2 amendments

Gates County Multi-jurisdictional Hazard Mitigation Plan (Date)
Town of Gatesville

Hertford County Multi-Jurisdictional Plan - 2011
Town of Ahoskie
Town of Murfreesboro
Town of Winton
Town of Cofield
Town of Como
Town of Harrellsville

Pasquotank County Multi-Jurisdictional Plan (Date)
City of Elizabeth City

Perquimans County Multi-Jurisdictional Plan - 2010
Town of Hertford
Town of Winfall

Each of the plans listed above was developed using the multi-jurisdictional mitigation planning process recommended by FEMA. For this regional plan, all of the jurisdictions listed above have agreed to merge, update, and expand their existing mitigation planning content as part of one new regional format. No new jurisdictions have joined the planning process since the plans above were adopted and all of the jurisdictions that participated in previous planning efforts have agreed to participate in this regional planning effort. The specific process of moving forward with one regional approach is described in more detail in the following subsections.

2.3 Preparing the Regional Plan

Hazard mitigation plans are required by FEMA to be updated every five years in order for the jurisdictions covered under them to remain eligible for federal mitigation and public assistance funding. 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 Regional Hazard Mitigation Plan involves an eight-county region including Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans counties along with the seventeen (17) municipalities located within these counties: Town of Edenton, Town of Southern Shores, Town of Duck, Town of Kitty Hawk, Town of Nags Head, Town of Kill Devil Hills, Town of Manteo, Town of Gatesville, Town of Ahoskie, Town of Murfreesboro, Town of Winton, Town of Cofield, Town of Como, Town of Harrellsville, City of Elizabeth City, Town of Hertford and the Town of Winfall.

This regional approach allows resources to be shared amongst the participating jurisdictions and eases the administrative duties of all of the participants by combining the eight existing county level plans, and the requirements for the five- year plan update, into one coordinated regional planning process.

In 2013, Gates County received a Pre-Disaster Mitigation (PDM) Program Grant through the North Carolina Division of Emergency Management (NCEM) for the Albemarle Region. Upon receipt of the aforementioned PDM grant, Gates County had the primary responsibility for coordinating the development of the Albemarle Regional Hazard Mitigation Plan. To help prepare the Albemarle Regional Hazard Mitigation Plan, The Wooten Company was hired as a consultant to provide professional mitigation planning services.

Per the contractual scope of work, the consultant team followed the mitigation planning process recommended by FEMA and recommendations provided by North Carolina Division of Emergency Management (NCEM) mitigation planning staff. The Local Hazard Mitigation Plan Update Checklist, found in Appendix D, provides a detailed summary of FEMA's current minimum standards of acceptability for compliance with DMA 2000 and notes the location where each requirement is met within this Plan. These standards are based upon FEMA's Interim Final Rule as published in the Federal Register on February 26, 2002 in Part 201 of the Code of Federal Regulations (CFR). The planning team used FEMA's Local Mitigation Planning Handbook (released March 2013) for reference as they completed the Plan.

Although each participating jurisdiction had already developed a plan in the past, the combination of the eight plans into one regional plan still required the making of some plan update revisions. Since this is the first regional mitigation plan amongst the participating jurisdictions, key elements from the previous approved plans are referenced throughout the document (e.g., existing mitigation actions) and required a discussion of changes made. For example, all of the risk assessment elements needed to be updated to include most recent information and any data that was standardized across the regional planning area. It was also necessary to formulate a single set of goals for the region. The Capability Assessment (Section 6) includes updated information for all of the participating jurisdictions and the Mitigation Action Status Updates included in Appendix F provides implementation status updates for all of the actions identified in the previous plans.

2.4 Albemarle Regional Hazard Mitigation Planning Committee

In order to guide the development of this Plan, the Albemarle counties (Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans) created the Albemarle Hazard Mitigation Planning Committee (HMPC). This committee represented a community based planning team made up of representatives from various county departments and municipalities and other key stakeholders identified to serve as critical partners in the planning process.

Beginning in May 2014, the planning committee members engaged in regular discussions as well as local meetings and planning workshops to discuss and complete tasks associated with preparing the Plan. This working group coordinated on all aspects of plan preparation and provided valuable input to the process. In addition to regular meetings, committee members routinely communicated and were kept informed through an email distribution list.

Table 2.1 lists the members of the HMPC who were responsible for participating in the development of the Plan. Committee members are generally listed by jurisdiction in Table 2.1 for ease of organizing and presenting the information but it should be noted that the committee worked extremely well as one regional unit thinking beyond traditional jurisdictional boundaries to focus on the mitigation planning issues and tasks at hand. In addition to regular meetings, committee members routinely communicated and were kept informed through e-mail. There was a structure in place to facilitate meeting attendance and timely submission of data and information via a file share site as well as a project website. Additional participation and input from county residents and other identified stakeholders was sought through the distribution of an online survey and the facilitation of public meetings (public involvement is further discussed later in this section).

Table 2.1:

NAME	POSITION	AGENCY, JURISDICTION AND/OR ROLE
Billy Winn	Director	Gates County Emergency Management
Chris Smith	Director	Hertford County Emergency Management
Mary Beth Newns	Director	Currituck County Emergency Management
Christy Saunders	Coordinator	Pasquotank/Camden Counties Emergency Management
Jarvis Winslow	Director	Perquimans County Emergency Management
Sandy Sanderson	Director (Outgoing)	Dare County Emergency Management
Donna Creef	Planning Director	Dare County Planning Department
Wes Haskett	Town Planner	Southern Shores Planning Department
Cordell Palmer	Director	Chowan County Emergency Management
Sam Barrow	Planner	Edenton Planning Department
Andy Garman	Deputy Town Manager	Nags Head Planning Department
Erin Burke	Town Planner	Manteo Planning Department
Greg Loy	Planning Director	Kill Devil Hills Planning Department
Meredith Guns	Assistant Planning Director	Kill Devil Hills Planning Department
Joe Heard	Director of Community Development	Duck Planning Department
Donna Heffernan	Administrative Zoning Technician	Kitty Hawk Planning Department
Rebecca Christenbury	Program Assistant	Currituck County Emergency Management
Horace Reid (Mayor)	Mayor	Town of Hertford*
Ken Dilday	Fire Chief	Town of Ahoskie Fire Department
Carl Pierce	Public Works Director	Town of Winton Public Works
Stanley Griggs	Director	Currituck County Emergency Management
Rob Glover	Regional Specialist	Currituck County Fire/EMS
Ben Woody	Director	Currituck County Planning Department

Ken Rominger (Council Member)	Director	Town of Winfall
Michelle Perry	Director	Currituck County Engineering
Ashley Stoop	Public Preparedness and Response Coordinator	Albemarle Regional Health System
Holly White	Principal Planner	Nags Head Planning Department
Ronnie Sawyer	County Maintenance Yard – Camden, Currituck and Pasquotank	North Carolina Department of Transportation
Brenda McQueen	Superintendent of Buildings	Currituck County Public Works
Eric Weatherly	County Engineer	Currituck County Engineering
Brian Parnell	Title	North Carolina Emergency Management
Spencer Castello	Title	Currituck Planning Department
Kelly Wyatt	Deputy Director of Planning & Development / Zoning Administrator	Nags Head Planning Department
Dabni Shelton	Permit Officer	Southern Shores Planning Department
Drew Pearson	Director	Dare County Emergency Management
Donna Godfrey	Planning and Zoning Director	Perquimans County Planning Department
Holly Colombo	Chief Building Inspector, CAMA Officer LPO	Chowan County Inspections Department
Kent Pierce	Floodplain Administrator	Chowan County Inspections Department
Kevin Howard	County Manager	Chowan County Managers Office
Shelly Cox	Director	Pasquotank County Planning Department
Billy Winn	Director – Gates County Emergency Management	Town of Gatesville*
Chris Smith	Director – Hertford County Emergency Management	Town of Cofield*
Chris Smith	Director – Hertford County Emergency Management	Town of Como*
Chris Smith	Director – Hertford County Emergency Management	City of Harrellsville*
Chris Smith	Director – Hertford County Emergency Management	Town of Murfreesboro*
Christy Saunders	Director – Pasquotank County Emergency Management	City of Elizabeth City*
Jarvis Winslow	Director – Perquimans Emergency Management	Town of Hertford*

**Please see Appendix B – Local Government Participation Documentation noting their proxy given to County jurisdiction*

2.5 Meeting and Workshops

The preparation of this Plan required a series of meetings and workshops for facilitating discussion, gaining consensus, and initiating data collection efforts with local government staff, community officials, and other identified stakeholders. More importantly, the meetings and workshops prompted continuous input and feedback from relevant participants throughout the drafting stages of the Plan.

The following is a summary of the key meetings and workshops held by the HMPC during the development of the Plan. Additionally both Currituck and Dare Counties held meetings of their respective Local Mitigation Committees during the planning process. Those meetings are documented in this section as well.

Currituck County Local Emergency Planning Committee Meetings

The Currituck County LEPC meetings were led by Mary Beth Newns. The initial meeting held on April 9, 2014 consisted of presentations on the Albemarle Regional Hazard Mitigation Plan and introduced the LEPC committee to the Regional Planning Concept. The committee also separated into two groups and held brainstorming sessions on ideas for public outreach. Meeting minutes from this meeting is included in the Appendix H Currituck County Supplemental Documents.

Additional meetings were held in Currituck County, including a project kick-off meeting on May 11, 2014, and public meetings on October 22, 2014 and January 15, 2015.

Currituck County CRS 510 Public Planning Committee Meetings

The Currituck County CRS 510 Public Planning Committee meetings were led by Holly White. The committee included stakeholders from the community and followed the 10-step planning process outlined in the Community Rating System (CRS) Activity 510. Their work included assessing hazards, developing goals, reviewing possible activities, and drafting an action plan. These meetings were held on November 12th, 2014, November 18th, 2014, November 24th, 2014, December 2nd, 2014, December 9th, 2014 and January 20th, 2015. Meeting agendas and additional information on the committee process is included in Appendix H Public Planning Committee.

HMPC Meeting #1 (May 9th, 2014)

The Project Kickoff meeting was started by Mr. Billy Winn, Gates County Emergency Management Director, and was led by Scott Chase, AICP (The Wooten Company Project Manager), and Stephen Smith, CFM (The Wooten Company Lead Planner). This meeting consisted of a detailed overview of the project, a review and discussion of the eight previous county level mitigation plans, an explanation of the process to be followed for updating and integrating the content from the four previous county plans, an open discussion session, and an explanation of next steps.

The meeting began with a brief welcome and opportunity for each of the 24 attendees to introduce themselves to the group. Particular emphasis was placed on identifying what jurisdiction or organization each participant was there to represent, As part of this recognition process, a spreadsheet was passed around for representatives to designate one "Designated Local Jurisdiction Lead" to serve as a primary point of contact for each participating jurisdiction for the duration of the project.

The project overview consisted of an explanation of the purpose of the planning process and the concept of creating a regional hazard mitigation plan to build upon and essentially replace the eight previous county level mitigation plans. It also covered the geographic scope of the project, the proposed schedule for the project, and a detailed breakdown of the key project tasks. The roles and responsibilities for The Wooten Company, Gates County as the lead local agency, and for all participating jurisdictions were also covered. These roles and responsibilities were presented as follows:

- The Wooten Company
    - Oversee, manage, and document the completion of all key project tasks
    - Assist with Monthly progress reports
    - Hosting and managing project website

- Responding to general questions or inquiries from the public or stakeholders

- Gates County
  - Serving as lead coordinating agency
  - Designation of local project manager
  - Assistance with the collection of documents, data, and other information
  - Logistics for project meetings
  - Responding to general questions or inquiries from the public or stakeholders
  - Coordinating with participating jurisdictions

- All participating jurisdictions
  - Designate local jurisdiction lead
  - Attend Hazard Mitigation Planning Committee meetings
  - Coordination between counties, municipalities, and local stakeholders
  - Data collection and information sharing
  - Mitigation strategy development (*Mitigation Action Plans*)
  - Assist with public outreach
  - Review and comment on draft plan materials

Emphasis was also placed on the need for effective communication throughout the duration of the project. This included an overview of the planning team's organization and the idea that municipal jurisdictions would coordinate first through their Designated Local Jurisdiction Lead who would in turn coordinate with the Designated Local Jurisdiction Lead for that county, who would in turn coordinate with the overall local project lead, Billy Winn with Gates County. Active participation and responsiveness were also stressed in light of the aggressive schedule to complete the plan in the desired timeframe.

A detailed discussion also centered on GIS data collection needs and the process to be followed for collecting and submitting the needed data (which was to follow the chain of communication described in the paragraph above). Emphasis was placed on the need for the GIS data to be submitted in a readily usable format and to be the best data readily available.

The committee was also given an overview of a Public Outreach Strategy that would be developed between HMPC Meeting #1 and HMPC Meeting #2. The goals of the Public Outreach Strategy were stated as:

- Generate public interest;
- Solicit citizen input; and
- Engage additional partners in the planning process.

Specific opportunities for public participation were identified as being two in-person open public meetings, the creation of a public project information website, a web-based public participation survey, and use of social media (Facebook, Twitter, RSS, and other various options

Next steps were defined as assignment of Designated Local Jurisdiction Leads; data collection and submission; finalize Public Outreach Strategy and prepare for HMPC Meeting #2.

A copy of the agenda and sign-in sheet for all meetings are included in Appendix B.

HMPC Meeting #2 (July 7th, 2014)

The 2nd HMPC meeting was started by Mr. Billy Winn, Gates County Emergency Management Director, and was led by Scott Chase, AICP (The Wooten Company Project Manager), and Stephen Smith, CFM (The Wooten Company Lead Planner). This meeting consisted of an overview of the final draft Public Outreach Strategy, a hazard identification discussion, an overview of the Local Capability Assessment Survey, an update on data collection progress, an open discussion session, and an explanation of next steps. It should be noted that this meeting occurred just four days following the landfall of Hurricane Arthur just to the south of the planning area in Carteret County.

The meeting began with a brief welcome and opportunity for each of the 26 attendees to introduce themselves to the group.

The draft Public Outreach Strategy (found in Appendix C) was distributed to the committee and a review of the document was provided via PowerPoint. The strategy follows the outline presented at the first meeting in terms of goals, outreach opportunities, etc.

Additional details were provided regarding the two proposed in-person open public meetings:

- Public meetings would be scheduled at two key points during the project timeline: following the completed identification of hazards and following the completion of the draft plan;
- The primary purpose of the meetings would be to inform the public on the process and current status of the regional planning process and to gain input to the process during the drafting stage and prior to plan completion and approval; and
- The Wooten Company would prepare presentations and handout materials to help facilitate two-way communication with public meeting attendees.

Dare County 510 Planning Committee Meeting (September 4, 2014)

The Dare County 510 Planning Committee meeting was led by Sandy Sanderson. This meeting consisted of a discussion regarding the Albemarle Regional Hazard Mitigation Plan and introduced this committee to the Regional Planning Concept. There was also an in-depth discussion on the Community Rating System and the planning credits available for the Regional Plan. Donna Creef, the Dare County CRS Coordinator, walked the group through the 510 CRS planning requirements and stressed the importance of making sure each step is addressed to maximize CRS credits. The committee agreed to hold its next meeting on October 30, 2014. A meeting summary from this meeting is included in Appendix I.

HMPC Meeting #3 (October 22nd, 2014)

The 3rd HMPC meeting was led by Scott Chase, AICP (The Wooten Company Project Manager), and Stephen Smith, CFM (The Wooten Company Lead Planner). This meeting included a presentation on the results of the Public Participation Survey, a discussion of the five Regional goals developed by the HMPC, a discussion on new Mitigation Actions/Strategies focusing on the six categories (Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services and Public Education), an open discussion session, and an explanation of next steps.

The meeting began with a brief welcome and opportunity for each of the 15 attendees to introduce themselves to the group.

The Public Participation Survey Results (found in Appendix C) were presented to committee. The results of this survey are detailed in subsection 2.6.1.

A discussion was held on the importance of meaningful Regional Goals and the following five goals were created for the Albemarle Regional Hazard Mitigation Plan.

- Evaluate and revise local plans, policies, procedures, regulations and ordinances to further enhance the regions ability to mitigate natural hazards.
- Maintain and/or improve existing transportation infrastructure to aid in evacuations.
- Implement a public outreach campaign to increase awareness about the manmade and natural hazards that can impact the region.
- Pursue mitigation of repetitive flood loss properties.
- Identify/Implement mitigation projects that are cost effective and will help reduce the effects of manmade and natural hazards.

The Regional goals set the focus for the Mitigation Actions/Strategies that were developed by each participating jurisdictions and are detailed in Section 7.

Dare County 510 Planning Committee Meeting (October 30th, 2014)

The Dare County 510 Planning Committee meeting was led by Drew Pearson. This meeting consisted of a discussion regarding the Albemarle Regional HMPC meeting from October 22nd, 2014. The results from the Public Participation Survey were also presented to the group. The group also discussed the list of identified hazards for the county and the impact potential of each hazard. The committee agreed to hold its next meeting on November 19th, 2014. A meeting summary from this meeting is included in Appendix I.

Dare County 510 Planning Committee Meeting (November 19th, 2014)

The Dare County 510 Planning Committee meeting was led by Sandy Sanderson. Donna Creef, Dare County Planning Director, provided the group a status update on the work Dare County has completed as part of the Regional Plan update. She emphasized that the goals/action plan report used annually for CRS purposes should be reviewed and updated. She asked that all towns provide updated repetitive loss data so she can produce an updated map for the plan. Status updates were also provided by each participation jurisdiction in attendance. The committee agreed to hold its next meeting on December 18th, 2014 (this meeting was later cancelled).

HMPC Meeting #4 (January 15, 2015)

The 4th HMPC meeting was led Stephen Smith, CFM (The Wooten Company Lead Planner). This meeting consisted of a high-level walkthrough of the working draft Hazard Mitigation Plan including all of its sections and instructions for the committee's review and comment period. The portion of the presentation covering a walkthrough of the working draft plan document consisted of an overview of the plan's organization a brief status update on each section, an explanation of the review and comment process, suggested areas of focus for the committee members, availability of the review files on the project information website, and instructions for submitting review comments by Friday, December 20 if possible. The discussion of next steps consisted of another reminder regarding the review/comment period and deadline, an explanation that the next version of the plan document would be considered a final draft based on the committee's review comments, an overview of the

upcoming State and FEMA plan review process, and local adoption procedures and expectations.

2.6 Involving the Public

An important component of any mitigation planning process is public participation. Individual citizen and community-based input provides the entire planning team with a greater understanding of local concerns and increases the likelihood of successfully implementing mitigation actions by developing community "buy-in" from those directly affected by the decisions of public officials. As citizens become more involved in decisions that affect their safety, they are more likely to gain a greater appreciation of the hazards present in their community and take the steps necessary to reduce their impact. Public awareness is a key component of any community's overall mitigation strategy aimed at making a home, neighborhood, school, business, or entire planning area safer from the potential effects of hazards.

Public involvement in the development of the Albemarle Regional Hazard Mitigation Plan was sought using various methods including open public meetings, and project information website, a public participation survey, and by making copies of draft Plan documents available for public review on county websites and at government offices. Public meetings were held at two distinct periods during the planning process:

(1) during the drafting stage of the Plan; and (2) upon completion of a final draft Plan, but prior to official plan approval and adoption. These public meetings were held at a central location to the planning area to ensure that citizens from each of the eight participating counties had reasonable access to the opportunity to participate in-person in the planning process. The public participation survey (discussed in greater detail in subsection 2.5.1) was made available online via the project information website, each county's website, through web links forwarded via email and newspaper articles, Facebook, Twitter, etc., and in hardcopy form at the first public meeting.

Public Meeting #1
Public Meeting #1 was held from 6 p.m. to 7:30 p.m. on Wednesday, October 22nd, 2014 at the Currituck County Extension Service Building. Stephen Smith (The Wooten Company) presented a PowerPoint presentation documenting the planning process to date, including a discussion of the Regional Planning approach and a detailed discussion on the hazards that impact the area. The Public Participation Survey results were also presented during this meeting. This public meeting was attended by one member of the public as well as representatives from Dare and Currituck counties.

Public Meeting #2
Public Meeting #2 was held from 6 p.m. to 7:30 p.m. on Thursday, January 15th, 2015 at the Currituck County Extension Service Building. Stephen Smith (The Wooten Company) presented a PowerPoint presentation on the final draft plan. This presentation recapped the planning process, including a discussion of the Regional Planning approach. A detailed discussion on the identified hazards from the plan and their impacts on the region was also provided. This public meeting was attended by one member of the public as well as representatives from the participating jurisdictions.

2.6.1 Public Participation Survey

The Albemarle Natural Hazard Mitigation Public Participation Survey was made available in May 9, 2014 and remained available through September 30, 2014 per the Public Outreach Strategy. During this time, 484 surveys were completed. The complete results of the survey can be found in a summary report found in Appendix C.

The following list is a summary of the dominant responses obtained from the survey.

- 69% said they have been personally impacted by a disaster.
- When asked how concerned they are about the possibility of their community being impacted by natural hazards, the top five concerns were hurricanes/tropical storms, nor'easters, flooding, severe thunderstorms and tornados.
- 28% of respondents said that the best way for them to receive information related to natural hazards and hazard mitigation is via email notification.
- 91% said they are interested in making their home or neighborhood more hazard resistant.
- 59% said they have taken measure to protect their home or neighborhood from disasters.
- 59% said their home is not located in the floodplain.
- 48% said they do not carry flood insurance.

The results of the survey were presented to members of the HMPC at HMPC Meeting #3 so that public opinion could be factored into final changes and additions to each jurisdiction's Mitigation Action Plan.

2.7 Involving Stakeholders

The Albemarle Hazard Mitigation Planning Committee included a variety of stakeholders beyond the representatives from each participating jurisdiction. These included representatives from the Albemarle Regional Health System, North Carolina Department of Transportation, North Carolina Emergency Management and the State of North Carolina Forest Service. Input from additional stakeholders, including neighboring communities, was welcomed through the open public meetings and online survey. If any additional stakeholders representing other agencies and organizations participated through the Public Participation Survey, that information is unknown due to the anonymous nature of the survey.

2.8 Documenting the Plan

Progress in hazard mitigation planning for the participating jurisdictions in the Albemarle Region is documented in this plan update. Since hazard mitigation planning efforts officially began in the participating counties with the development of the initial hazard mitigation plans in the early 2000s, many mitigation actions have been completed and implemented in the participating jurisdictions. These actions will help reduce the overall risk to natural hazards for the people and property in the Albemarle Region. The actions that have been completed are documented in the Mitigation Action Updates found in Appendix F.

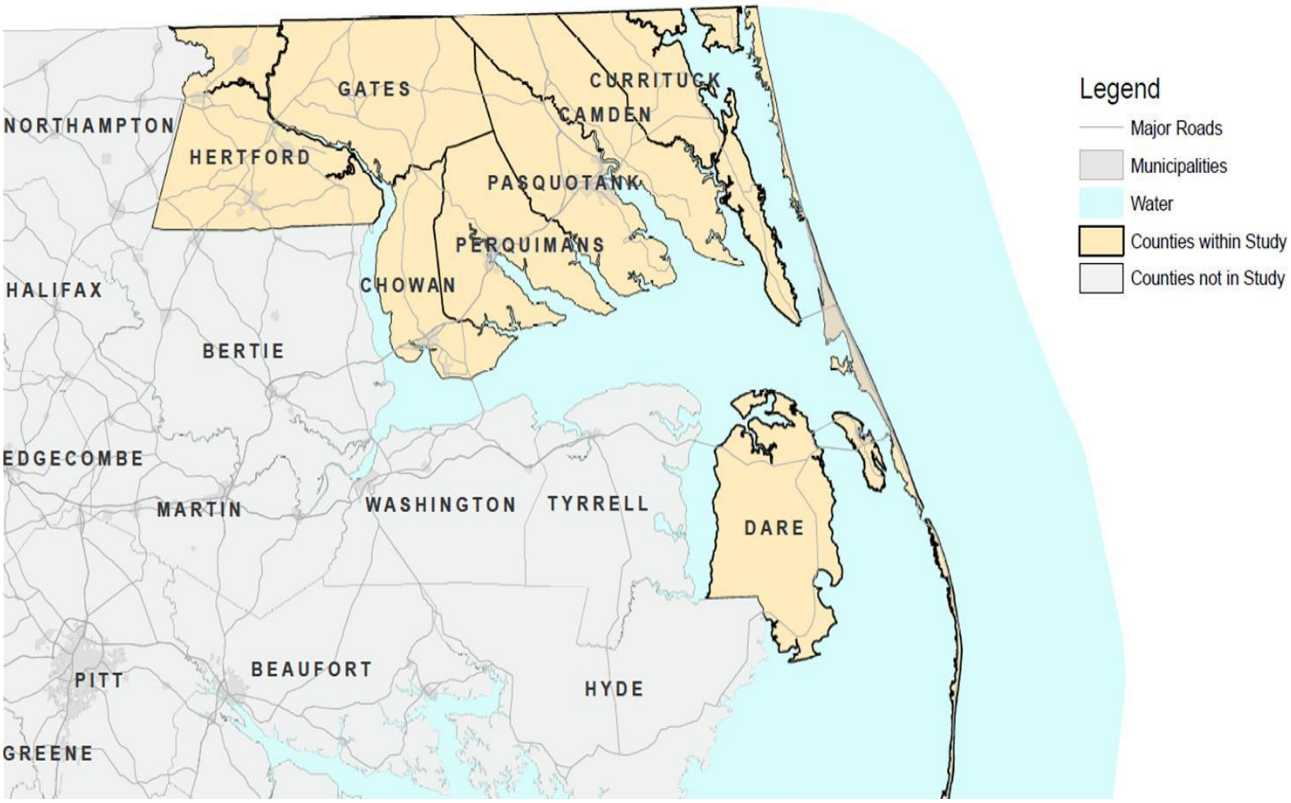
In addition, community capability continues to improve with the implementation of new plans, policies, and programs that help to promote hazard mitigation at the local level. The current state of local capabilities for the participating jurisdictions is captured in Section 6: Capability Assessment. The participating jurisdictions continue to demonstrate their commitment to hazard mitigation and hazard mitigation planning and have proven this by reconvening the Hazard Mitigation Planning Committee to update and combine the previous hazard mitigation plans into this new regional plan and by continuing to involve the public in the hazard mitigation planning process.

Section 3: Regional Profile

3.1 Geography

The Albemarle Region is located in the Northeast corner of North Carolina. For the purposes of this plan, the Albemarle Region includes Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans Counties. An orientation map is provided as **Figure 3.1**.

FIGURE 3.1: ALBEMARLE REGION ORIENTATION MAP



The Albemarle Region is a rural area; however, there are an abundance of attractions that draw visitors to the region each year. Several lighthouses are located throughout the region including the Roanoke River Light in Edenton, the Currituck Beach Light in Corolla, the Roanoke Marshes Light in Manteo, the Bodie Island Light just south of Nags Head, and the Cape Hatteras Lighthouse in Buxton. The region is also home to several National Parks and Wildlife Refuges including the Alligator River National Wildlife Refuge, The Currituck National Wildlife Refuge, The Great Dismal Swamp, Mackay Island National Wildlife Refuge, The Pea Island Wildlife Refuge and The Cape Hatteras National Seashore; which provide fishing, hunting, camping, hiking, biking and boating opportunities. Other regional attractions include Jockey's Ridge State Park, Historic Edenton, Merchants Mill Pond State Park and the Museum of the Albemarle. Lastly, this region boasts some of the best beaches and offshore fishing in the world.

The total land area of each of the participating counties is presented in **Table 3.1**.

TABLE 3.1: TOTAL LAND AREAS OF PARTICIPATING COUNTIES

Camden County	**240.56 Square Miles**
Chowan County	**172.47 Square Miles**
Currituck County	**261.85 Square Miles**
Dare County	**383.42 Square Miles**
Gates County	**340.45 Square Miles**
Hertford County	**353.06 Square Miles**
Pasquotank County	**226.88 Square Miles**
Perquimans County	**247.09 Square Miles**

Source: US Census Bureau 2010

Camden County is located in northeastern North Carolina and bordered to the north by the state of Virginia, Currituck County to the east, Pasquotank and Gates Counties to the west, and the Albemarle Sound to the south. Although outside the state borders, Camden County's economy draws from the Hampton Roads region (Norfolk, Chesapeake, Virginia Beach). It is a short drive from the North Carolina Outer Banks, Downtown Norfolk, and Chesapeake, Virginia. No formally incorporated municipalities are located in Camden County. In 2006, the County approved an ordinance via referendum to create a unified government that incorporated the former townships of South Mills, Camden, and Shiloh into the County. These townships comprise the three core community areas: South Mills in the north, Camden in the center of the county, and Shiloh Village near the south end. The Great Dismal Swamp, the largest swamp in the nation, covers the northern section of the County.

Currituck County, North Carolina currently has no incorporated municipalities and stands as a single jurisdiction. It was established in 1668 as one of five original ports in North Carolina. Currituck County, named for the Algonquin Indian word for "Land of the Wild Goose," is the northern most County in North Carolina along the outer banks. It is bordered to the east by the Atlantic Ocean, to the west by Camden County, to the south by Dare County and to the north by Virginia Beach and Chesapeake, Virginia. Currituck and geologically, Currituck County lay within the coastal plain. About 40 percent of the county's acreage is wooded, of which nearly 73 percent of that land is privately owned. Currituck County has a total area of 444 square miles, of which approximately 182 square miles is water area.

Dare County, located along the eastern coast of North Carolina, stretches for 85 miles along the Atlantic Ocean. Known as the Outer Banks of North Carolina, Dare County is recognized as a top vacation destination because of our abundant natural and historic resources. The islands that comprise Dare County are surrounded by the Atlantic Ocean and numerous estuarine water bodies. Miles of unspoiled beaches and estuarine shorelines, world-class fishing and surfing, and exceptional water quality draw thousands of visitors to our area every year. Dare County is also known as "The Land of Beginnings" in reference to our historic role in the founding of the New World. Another historic event occurred here in 1903 when Orville and Wilbur Wright flew the first man-powered plane from Kill Devil Hills. The County celebrated the 100-year anniversary of this historic first flight in 2003.

Gates County, North Carolina was formed from Chowan, Hertford and Perquimans counties in 1779 and was named after General Horatio Gates, a British soldier who fought with the Americans in the Revolutionary War and commanded the American Army at the Battle of Saratoga. Gates County is located in the coastal plain of northeastern North Carolina and is bordered by Hertford County to the west and southwest, Chowan and Perquimans counties to the south, Pasquotank and Camden counties to the east, and Suffolk County,

Virginia to the north. The center of Gates County is located approximately 25 miles from Suffolk, Virginia; 48 miles from Norfolk, Virginia; 18 miles from Ahoskie, North Carolina; and 23 miles from Murfreesboro, North Carolina**.** The Town of Gatesville, the county's only incorporated municipality, is the county seat of Gates County. Gatesville has a total land area of less than one square mile and comprises less than 3 percent of the total county population.

Hertford County is located in the northeastern region of North Carolina, bounded on the north by the Virginia state line. The county lies 55 miles southwest of Norfolk, 105 miles southeast of Richmond, and 120 miles northeast of the state capital of Raleigh. Major highways serving the county include US Routes 13, 158, and 258, and NC Highways 11, 42, 45, 305, 461, and 561. The County has six (6) municipalities including the towns of Ahoskie, Cofield, Como, Harrellsville, Murfreesboro, and Winton.

Pasquotank County is located in the northeastern section of North Carolina and is bordered by Camden County to the north and east, Gates County to the northwest, Perquimans County to the south west, and the Albemarle Sound to the south. The county has always been known for its water passages. The Dismal Swamp canal now forms part of the Intracoastal Waterway which runs along the east coast of the United States. Elizabeth City is the county seat of Pasquotank County.

Perquimans County, located in northeastern North Carolina, is bounded to the north by Gates County, to the east by Pasquotank County, to the south by the Albemarle Sound, and to the west by Chowan County. Hertford is the county's largest town and is the county seat. Winfall is the county's other incorporated town. Perquimans County boasts a diverse and impressive natural environment. The Little River flows through the eastern part of the county while the Perquimans River flows through the center. The Yeopin River and the Albemarle Sound make up the southernmost boundaries of the county.

3.2 Population and Demographics

Dare County has the largest population of the eight participating counties and Elizabeth City is the largest city located within the planning area. The Region experienced a 13.18% increase in population from 191,263 in 2000 to 216,467 in 2010. Camden County experienced the largest percentage increase of 44.95% (from a 2000 population of 6885 to a 2010 population of 9980) while the Town of Winton experienced the largest percentage decrease with a decrease of 19.56% (from a 2000 population of 956 to a 2010 population of 769). Population counts from the U.S. Census Bureau for 2000, 2010 and 2013 (Estimated) for each of the participating counties and jurisdictions are presented in **Table 3.2**.

Table 3.2: Population Counts for Participating Jurisdictions

Jurisdiction	2000 Census Population	2010 Census Population	% Change 2000-2010	2013 Estimates
CAMDEN COUNTY	6885	9980	44.95%	10187
CHOWAN COUNTY	14526	14793	1.84%	14726
Town of Edenton	5364	5004	-6.71%	4983
CURRITUCK COUNTY	18190	23547	29.45%	24396
DARE COUNTY	29967	33920	13.19%	35019
Town of Duck	448	369	-17.63%	379
Town of Kill Devil Hills	5878	6683	13.70%	6920

Town of Kitty Hawk	3010	3272	8.70%	3383
Town of Manteo	1182	1434	21.30%	1363
Town of Nags Head	2700	2757	2.11%	2835
Town of Southern Shores	2201	2714	23.31%	2812
GATES COUNTY	10516	12197	15.99%	11650
Town of Gatesville	281	321	14.23%	308
HERTFORD COUNTY	22601	24669	9.15%	24431
Town of Ahoskie	4739	5039	6.33%	5023
Town of Cofield	347	413	19.02%	407
Town of Como	78	91	16.67%	91
City of Harrellsville	102	106	3.92%	107
Town of Murfreesboro	2045	2835	38.63%	2868
Town of Winton	956	769	-19.56%	761
PASQUOTANK COUNTY	34897	40661	16.52%	39981
Elizabeth City	17243	18683	8.35%	18266
PERQUIMANS COUNTY	11368	13453	18.34%	13601
Town of Hertford	2070	2143	3.53%	2176
City of Winfall	554	594	7.22%	608
Region Totals	148,950	173,220	16.3%	173,991

Source: US Census Bureau 2010

Based on the 2010 Census, the median age for residents of the participating counties ranges from 36 to 46 years. The racial characteristics of the participating counties are presented in **Table 3.3**. Generally, whites make up the majority of the population of the Region, accounting for almost 69% of the Region's population.

Table 3.3: Demographics of Participating Counties

County	White Persons	Black Persons	Other Race	Persons of Hispanic Origin*
Camden	82.09%	13.19%	4.72%	**2.15%**
Chowan	62.02%	34.27%	3.71%	**3.16%**
Currituck	90.32%	5.78%	3.9%	**2.99%**
Dare	92.31%	2.46%	5.23%	**6.52%**
Gates	63.69%	33.16%	3.15%	**1.42%**
Hertford	35.62%	60.53%	3.85%	**2.61%**
Pasquotank	56.71%	37.76%	5.53%	**4.04%**
Perquimans	**72.06%**	**24.88%**	**3.06%**	**2.13%**

Source: U.S. Census Bureau, 2010.

**Hispanics may be of any race, so also are included in applicable race categories.*

3.3 Housing, Infrastructure and Land Use

3.3.1 Housing

According to the U.S. Census Bureau, there are 99,309 housing units in the Albemarle Region, most of which are single family homes (according to the 2010 census). Housing information for the eight participating counties is presented in **Table 3.4**. As shown in the table, Dare County has the highest number of housing units compared to the other counties. Gates County has the least. In terms of median home value, Dare County has the highest and Hertford County has the lowest.

Table 3.4: Housing Characteristics

County	Housing Units (2013)	Median Home Value (2008-2012)
Camden	4098	$223,300
Chowan	7228	$133,100
Currituck	14756	$229,600
Dare	33783	$307,900
Gates	5179	$153,800
Hertford	10485	$83,100
Pasquotank	16802	$176,100
Perquimans	6978	$170,000
TOTAL/AVERAGE ALBEMARLE	**99,309**	**$184,613**

Source: U.S. Census Bureau

3.3.2 Infrastructure

Major roads in the planning area include, US 17, US 64, US 158, US 264, NC 11, NC 12, NC 32, NC 42, NC 45, NC 168. The area is also served by several regional airports and is within a few hours of Raleigh Durham International Airport in Raleigh as well as Norfolk International Airport in Norfolk.

Colleges and universities in the planning area include Chowan University in Murfreesboro, College of the Albemarle campuses in Edenton, Elizabeth City and Manteo; The UNC Coastal Studies Institute in Wanchese as well as Elizabeth City State University in Elizabeth City. There are also several community colleges located throughout the Region.

3.3.3 Land Use

The vast majority of land in Camden County is either in a natural state, used for agricultural purposes, or as low-density single family development on lots that are one acre or greater. Development potential, for the majority of county lands, is limited by the presence of wetlands, floodplains, and other areas of environmental concern. In keeping with existing land use trends, development over the last decade has primarily come in the form of low-density single-family residential homes. As listed shown below, the majority of land in the county is zoned for residential development (94.5%), leaving 5.5% of land to be developed as commercial,

employment, industrial uses under current zoning. Natural features are significant in Camden County, providing a rich green infrastructure system while also limiting development potential. Policy makers should continue thoughtful planning to balance needed growth with the equally important need to protect these natural features.

Development within Chowan County is mainly within the Town of Edenton and along the major road corridors on the outskirts of town. Specifically, the Town of Edenton is experiencing pressure for development along the US 17and NC 32 corridors. Most property in Chowan County (91%) has severe soil limitations for septic tank drain fields due to the high clay content of the soil and the high water table. Approximately 14 percent of the County's land area is within a 100-year floodplain. Local policies encourage the conservation of natural resources and fragile environments that provide protection from natural hazards.

Currituck County is the northern most county in North Carolina along the outer banks. It is bordered to the east by the Atlantic Ocean, to the west by Camden County, to the south by Dare County and to the north by Virginia Beach and Chesapeake, Virginia. The County has no incorporated municipalities and stands as a single jurisdiction. The primary land use in Currituck County is agricultural with increasing residential and commercial development taking place along the major transportation routes and along the outer banks. Due to the vast differences in geography, development patterns, and economy, the County is divided into three distinct subareas; Mainland, Knotts Island and Outerbank Beaches. The County's Land Use Plan is being used to manage natural resources and enhance growth throughout the county.

The island geography of Dare County greatly influences the land use patterns of unincorporated Dare County and has resulted in the establishment of numerous distinct villages. The narrowness of some areas of the County limits the location of additional transportation routes other than the main transportation corridors. Commercial development is generally found along the main transportation routes. Residential areas are located in other areas and accessed by smaller roads and streets. The predominant land use in each village in unincorporated Dare County is residential, most often single family homes which is reflective of the County's policy of preferred residential development. The large amount of publicly-owned land (80%) in Dare County creates competition for development of the remaining 20% of privately owned lands. All development and infrastructure to address the needs of the year-round population and the seasonal visitors must be located on the privately-owned lands. The geographic location of Dare County along the eastern shoreline of North Carolina and its proximity to the Atlantic Ocean makes it vulnerable to flooding, storm surge, and high winds associated with hurricanes, tropical storms and other coastal storms. The physical setting of Dare County includes many natural features that are environmentally fragile and impacts from development must be managed to protect these fragile areas.

Gates County boasts a diverse and impressive natural environment. Gatesville is the County's only incorporated town. Some residential growth is occurring adjacent to Gatesville, and the villages, but most of the residential development is occurring in more rural areas such as Willeyton area in the northern part of the County. With the exception of the villages noted above which have mixed land uses and town-like characteristics and various crossroads, Gates County is characterized by lands devoted to open spaces, conservation, agriculture, forests, and waters bodies and streams.

The majority of Hertford County's land use is agriculture and forestry operations. Residential, commercial, and industrial land use is largely concentrated in and around the Towns of Ahoskie, Murfreesboro and Winton. The county intends for development to occur in areas that can access current and planned infrastructure and remains committed to protecting its natural resources. Hertford County seeks to ensure that future land use and development minimizes, as much as possible, a negative impact on its waters, wetlands, floodplains and other natural heritage areas.

The majority of the developed land within the Pasquotank County planning jurisdiction is located on the fringe of Elizabeth City and along the major road corridors that radiate from the Elizabeth City urban area. Much of the County's future intensive growth is anticipated along the recently completed Halstead Boulevard Connector and within the general area formed by the US 17 Bypass, US 17 North Business, and the Halstead Boulevard Connector. Most property in Pasquotank County has significant soil limitations for septic tank drain fields due to the high clay content of the soil and the high water table. Approximately 38% of the land area in the County lies within a floodplain.

Land within the unincorporated area of Perquimans County is composed primarily of larger parcels designated for agricultural activities with scattered residential development. Residential subdivisions have consumed waterfront access properties to create resort style communities for mostly higher end housing. A vast majority of the County is zoned rural agricultural. This helps to limit the conversion of lands from agricultural uses to more intensive uses such as residential subdivisions. Perquimans County is characterized by lands devoted to open spaces, conservation, agriculture, forests, and waters bodies and streams. The County's commercial areas are located primarily in the Towns of Hertford and Winfall, and along U.S. 17 as well as at area crossroads communities.

3.4 Employment and Industry

According to the US Census Bureau, in 2012, Camden County had an average annual employment of 4,281 workers. The Education and Health Services industry employed 19.1 percent of the County's workforce followed by Public Administration (13.3%); Retail Trade (13.1%); and Manufacturing (10.3%). From 2008 to 2012, the average annual median household income in Camden County was $56,315 compared to $46,450 for the state of North Carolina.

In 2012, Chowan County had an average annual employment of 5,661 workers. The Education and Health Services industry employed the most people, with 25.7 percent of the workforce, followed by Retail Trade (21.3%); Construction (9.5%); and Manufacturing (8.5%). The average annual median household income in Chowan County was $36,385 from 2008 to 2012.

Currituck County had an average annual employment of 11,063 workers in 2012. According to the US Census Bureau, in 2012, Retail Trade was the largest employment sector with 16.1 percent of the County's workforce. The other leading industries were Education and Health Services (15.4%); Construction (14.8%); and Finance and Insurance, and Real Estate and Rental/Leasing (8.5%). From 2008 to 2012, the average annual median household income in Currituck County was $57,446.

The US Census Bureau reported an annual average employment of 18,127 workers in Dare County for 2012. The top employment industry was Arts, Entertainment and Recreation/Accommodations and Food Services, making up 19.5 percent of total employment. Other major industries were Education and Health Services (14.2%); Retail Trade (11.4%) and Finance and Insurance, and Real Estate and Rental/Leasing (11.2%). The County's average annual median household income was $55,780 from 2008 to 2012.

In 2012, Gates County had an average annual employment of 5,220 workers. The Education and Health Services industry employed the most people, with 25.3 percent of the workforce, followed by Manufacturing (16.2%); Retail Trade (11.6%); and Construction (10.6%). The average annual median household income in Gates County was $45,136 from 2008 to 2012.

Hertford County had an average annual employment of 8,689 workers in 2012. According to the US Census Bureau, Education and Health Services was the largest employment sector with 31.9 percent of the County's workforce. The other leading industries were Manufacturing (18.8%); Retail Trade (11.3%); and Public Administration (7.9%). From 2008 to 2012, the average annual median household income in Hertford was $33,412.

The US Census Bureau reported an annual average employment of 17,329 workers in Pasquotank for 2012. The top employment industry was Education and Health Services, making up 28.5 percent of total employment. Other major industries were Retail Trade (12.6%); Arts, Entertainment and Recreation/Accommodations and Food Services (10.1%) and Public Administration (7.12%). The County's average annual median household income was $46,032 from 2008 to 2012.

Perquimans County had an average annual employment of 5,014 workers in 2012. The Education and Health Services industry employed the most people, with 22.9 percent of the workforce, followed by Retail Trade (11%); Manufacturing (10.4%); and Transportation and Warehousing and Utilities (8.7%). The average annual median household income in Gates County was $42,400 from 2008 to 2012.

Section 4: Hazard Identification

4.1 Introduction

The Albemarle Region is vulnerable to a wide range of natural hazards that threaten life and property. Current regulations and interim guidance under the Disaster Mitigation Act of 2000 (DMA 2000) require, at a minimum, an evaluation of a full range of natural hazards.

Upon a thorough review of the full range of natural hazards covered in the existing mitigation plans for the participating counties in the Albemarle area, the hazards suggested under FEMA mitigation planning guidance, and the hazards addressed in the North Carolina State Hazard Mitigation Plan, the participating jurisdictions in the Albemarle Region have identified 14 natural hazards that are to be addressed in the Albemarle Regional Hazard Mitigation Plan. These hazards were identified through an extensive process that included input from Albemarle Hazard Mitigation Planning Committee (HMPC) members.

Table 4.13 lists the full range of natural hazards initially considered for inclusion in the Plan. This table includes a total of 121 individual hazards and documents the evaluation process used for determining which of the initially identified hazards were considered significant enough for further evaluation in the Risk Assessment. For each hazard considered, the table indicates whether or not the hazard was identified as a significant hazard to be assessed further, how this determination was made, and why this determination was made. The table works to summarize not only those hazards that were identified (and why) but also those that were not identified (and why not).

The Albemarle Region and its communities are vulnerable to a wide range of natural and manmade hazards that threaten life and property. The hazards identified by the Albemarle Regional Mitigation Advisory Committee are profiled in this section. A rating system that evaluates the potential for occurrence for each identified threat is provided (**Table 4.13**). The following natural hazards were determined to be of concern for the Albemarle region:

Natural Hazards

- Hurricanes, Tropical Storms
- Nor'easters
- Floods
- Tornadoes
- Winter Storms
- Severe Thunderstorms
- Wildfire
- Erosion
- Drought/Heat Wave
- Earthquakes
- Landslides/Sinkholes
- Tsunami
- Dam/Levee Failure
- Rip Currents

Manmade Hazards

- Transportation Infrastructure Impacts
- Terrorism
- Active Shooter/Mass Casualties
- Cyber Attacks
- Pandemic Events
- Public Health Events

Some of these hazards are interrelated (for example, hurricanes and tropical storms can cause flooding, tornadoes and in some cases landslides), and some consist of hazardous elements that are not addressed separately (for example, severe thunderstorms can cause lightning and hail). It should be noted that some hazards, such as severe winter storms, may impact a large area causing little damage, while other hazards, such as a tornado, may impact a small area yet cause extensive damage. This section provides a general description for each of the hazards listed above along with their hazardous elements, written largely from a regional perspective.

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 event summaries provided in this section (and in Appendix E) have been compiled using local storm reports, data from the National Weather Services and data from the National Climatic Data Center.

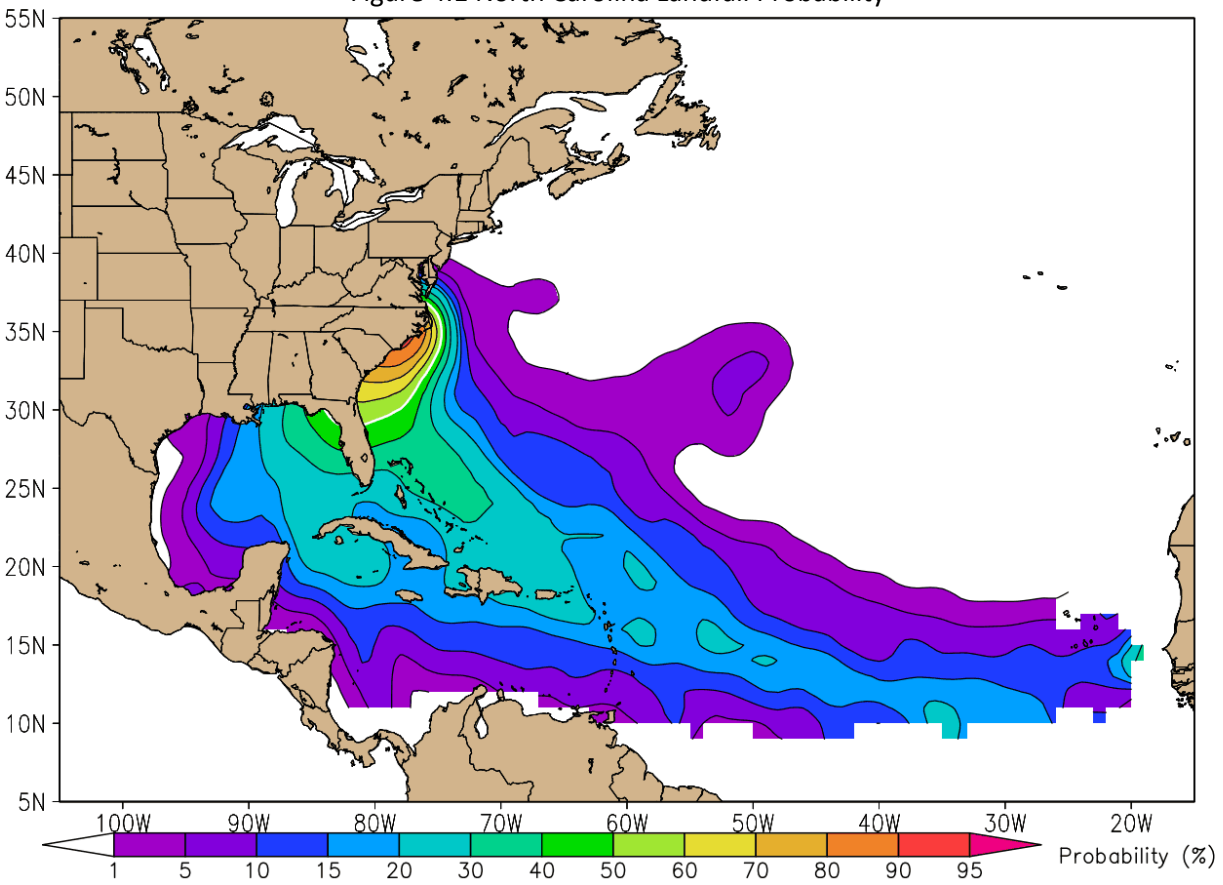
Hurricanes and Tropical Storms

Hurricanes and tropical storms also classified as cyclones are any closed circulation developing around a low-pressure center in which the winds rotate counter-clockwise in the Northern Hemisphere (or clockwise in the Southern Hemisphere) and whose diameter averages 10 to 30 miles across. A tropical cyclone refers to any such circulation that develops over tropical waters. Tropical cyclones act as a "safety-valve," limiting the continued build-up of heat and energy in tropical regions by maintaining the atmospheric heat and moisture balance between the tropics and the pole-ward latitudes. The primary damaging forces associated with these storms are high-level sustained winds, heavy precipitation, and tornadoes. Coastal areas are also vulnerable to the additional forces of storm surge, wind-driven waves, and tidal flooding which can be more destructive than cyclone wind.

The key energy source for a tropical cyclone is the release of latent heat from the condensation of warm water. Their formation requires a low-pressure disturbance, 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. The majority of hurricanes and tropical storms form in the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico during the official Atlantic hurricane season, which encompasses the months of June through November with the peak of season occurring in early to mid-September.

Figure 4.1 shows the probability of a tropical cyclone eventually passing over North Carolina at any intensity based on a given position. This probability was derived using the 1886-2012 best track data.

Figure 4.1 North Carolina Landfall Probability



Source: http://moe.met.fsu.edu/tcprob/ - Florida State University, Department of Earth, Ocean, and Atmospheric Science

As a hurricane develops, barometric pressure (measured in millibars or inches) at its center falls and winds increase. If the atmospheric and oceanic conditions are favorable, it can intensify into a tropical depression. When maximum sustained winds reach or exceed 39 miles per hour, the system is designated a tropical storm, given a name, and is closely monitored by the National Hurricane Center in Miami, Florida. When sustained winds reach or exceed 74 miles per hour the storm is deemed a hurricane. Hurricane intensity is further classified by the Saffir-Simpson Scale which rates hurricane intensity on a scale of 1 to 5, with 5 being the most intense. The Saffir-Simpson Scale is shown in **Table 4.1.**

Table 4.1 - Saffir-Simpson Scale

CATEGORY	MAXIMUM SUSTAINED WIND SPEED (MPH)	MINIMUM SURFACE PRESSURE (MILLIBARS)	STORM SURGE (FEET)
1	74–95	Greater than 980	3–5
2	96–110	979–965	6–8
3	111–130	964–945	9–12
4	131–155	944–920	13–18
5	155 +	Less than 920	19+

Source: National Hurricane Center

The Saffir-Simpson Scale categorizes hurricane intensity linearly based upon maximum sustained winds, barometric pressure, and storm surge potential, which are combined to estimate potential damage. Categories 3, 4, and 5 are classified as "major" hurricanes, and while hurricanes within this range comprise only 20 percent of total tropical cyclone landfalls, they account for over 70 percent of the damage in the United States. **Table 4.2** describes the damage that could be expected for each category of hurricane.

Table 4.2 - Hurricane Damage Classifications

STORM CATEGORY	DAMAGE LEVEL	DESCRIPTION OF DAMAGES
1	MINIMAL	No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Also, some coastal flooding and minor pier damage.
2	MODERATE	Some roofing material, door, and window damage. Considerable damage to vegetation, mobile homes, etc. Flooding damages piers and small craft in unprotected moorings may break their moorings.
3	EXTENSIVE	Some structural damage to small residences and utility buildings, with a minor amount of curtain wall failures. Mobile homes are destroyed. Flooding near the coast destroys smaller structures, with larger structures damaged by floating debris. Terrain may be flooded well inland.
4	EXTREME	More extensive curtain wall failures with some complete roof structure failure on small residences. Major erosion of beach areas. Terrain may be flooded well inland.
5	CATASTROPHIC	Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Flooding causes major damage to lower floors of all structures near the shoreline. Massive evacuation of residential areas may be required.

Source: National Hurricane Center; Federal Emergency Management Agency

Storm surge from tropical systems often arrive ahead of the storm's actual landfall and the more intense the storm, the sooner the surge arrives. Water rise can be very rapid, posing a serious threat to those who have not yet evacuated flood-prone areas. A storm surge is a wave that has outrun its generating source and become a long period swell. The surge is always highest in the right-front quadrant of the direction in which the hurricane is moving. As the storm approaches shore, the greatest storm surge will be to the north of the hurricane eye. Such a surge of high water topped by waves driven by hurricane force winds can be devastating to coastal regions, causing severe beach erosion and property damage along the immediate coast.

Storm surge heights and associated waves are dependent upon the shape of the continental shelf (narrow or wide) and the depth of the ocean bottom (bathymetry). A narrow shelf, or one that drops steeply from the shoreline and subsequently produces deep water close to the shoreline, tends to produce a lower surge but higher and more powerful storm waves. Storm surge areas can be mapped by the probability of storm surge occurrences using Sea, Lake, and Overland Surges from Hurricanes modeling (SLOSH). SLOSH is a computerized model run by the National Hurricane Center to estimate storm surge heights and winds resulting from historical, hypothetical, or predicted hurricanes by taking into account pressure, size, forward speed, track and winds. The SLOSH boundaries may differ from the base flood boundary on the FIRM. The SLOSH flood areas are determined by compositing the model surge values from 200-300 hypothetical hurricanes. The point of a hurricane's landfall is crucial to determining which areas will be inundated by the storm surge. Where the hurricane forecast track is inaccurate, SLOSH model results will be inaccurate. As a result, the SLOSH model is best used for defining the potential maximum surge for a location. Figures 4.2 and 4.3 show the potential storm surge inundation from slow and fast moving hurricanes.

Figure 4.2 – Slow Moving Storm

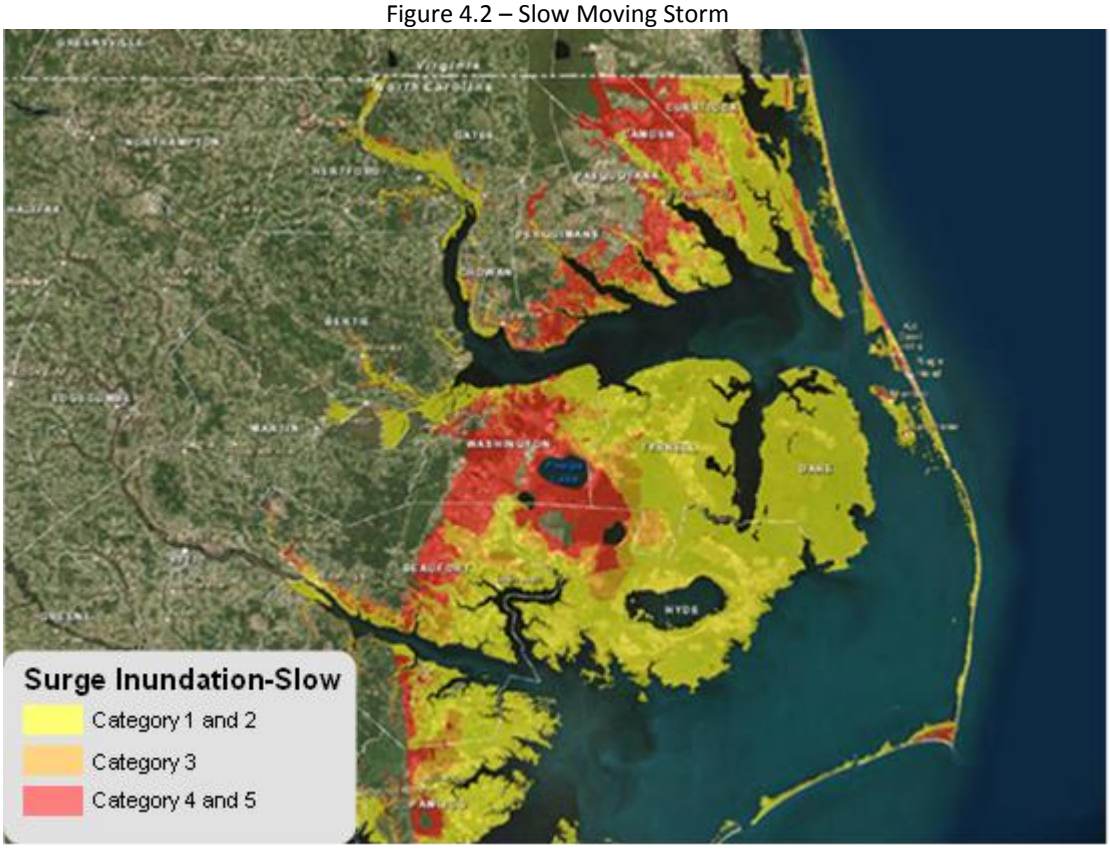
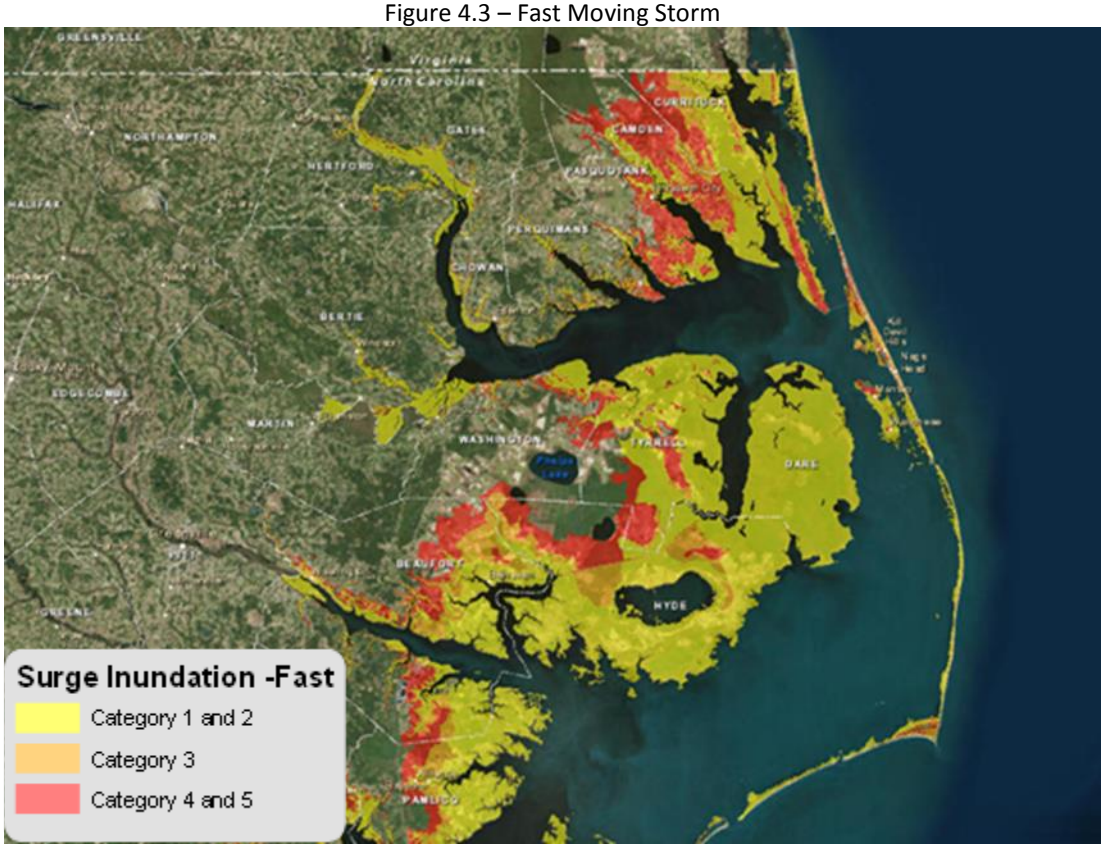


Figure 4.3 – Fast Moving Storm



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 shown above in **Figures 4.1 and 4.2**. The Region has experienced several storm surge events since 2004 as shown in **Table 4.3.**

Table 4.3 – Storm Surge Event History

County/Zone	Date	Type	Deaths	Injuries	Property Damage	Crop Damage
EASTERN DARE (ZONE)	3/10/2004	Storm Surge/tide	0	0	10.00K	0.00K
EASTERN DARE (ZONE)	4/3/2005	Storm Surge/tide	0	0	0.00K	0.00K
EASTERN DARE (ZONE)	4/15/2005	Storm Surge/tide	0	0	50.00K	0.00K
EASTERN DARE (ZONE)	5/6/2005	Storm Surge/tide	0	0	0.00K	0.00K
EASTERN HYDE (ZONE)	5/6/2005	Storm Surge/tide	0	0	0.00K	0.00K
EASTERN DARE (ZONE)	9/9/2007	Storm Surge/tide	0	0	0.00K	0.00K
EASTERN DARE (ZONE)	7/20/2008	Storm Surge/tide	0	0	0.00K	0.00K
EASTERN DARE (ZONE)	10/19/2008	Storm Surge/tide	0	0	10.00K	0.00K
EASTERN DARE (ZONE)	9/2/2010	Storm Surge/tide	0	0	380.00K	0.00K
EASTERN DARE (ZONE)	8/26/2011	Storm Surge/tide	0	0	40.000M	0.00K
WESTERN DARE (ZONE)	8/26/2011	Storm Surge/tide	0	0	1.000M	0.00K
EASTERN DARE (ZONE)	10/28/2012	Storm Surge/tide	0	0	13.000M	0.00K
EASTERN DARE (ZONE)	6/6/2013	Storm Surge/tide	0	0	0.00K	0.00K
EASTERN DARE (ZONE)	7/3/2014	Storm Surge/tide	0	0	1.500M	0.00K

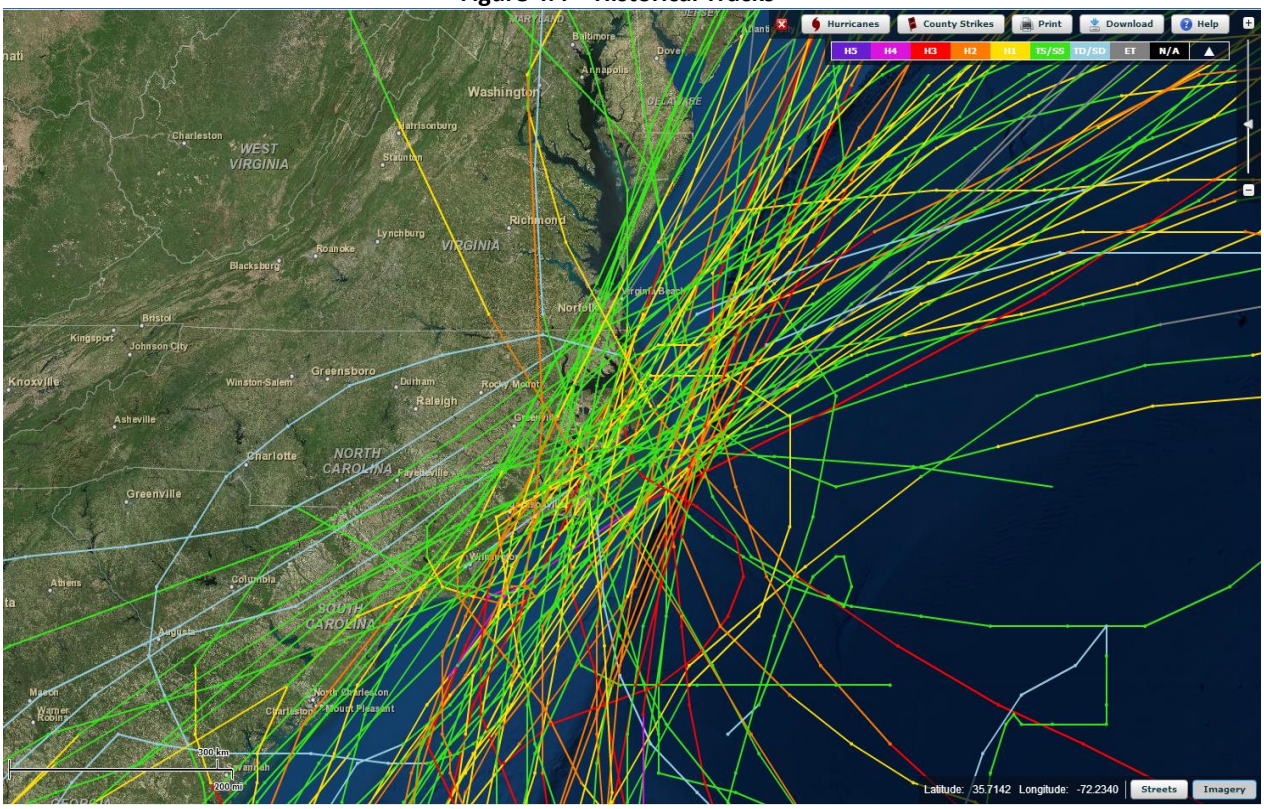
Source: National Oceanic and Atmospheric Administration.

Sea level rise may impact the frequency and severity of these hazards in the future. Sea level rise occurs when the oceans warm or ice melts, bringing more water into the oceans. Sea level rise caused by warming water or thermal expansion is referred to as steric sea level rise, while sea level rise caused by melting snow and ice is called eustatic sea level rise. The combination of steric and eustatic sea level rise is referred to as absolute sea level rise. Absolute sea level rise does not include local land movements. Additionally, while it is often represented as a global average, absolute sea level rise varies from place to place as a result of differences in wind patterns, ocean currents, and gravitational forces. There is strong evidence that global sea level is now rising at an increased rate and will continue to rise during this century.

According to the National Hurricane Center's historical storm track records, 83 hurricane or tropical storms have passed within 75 nautical miles of the Albemarle Region from 1850 to 2011. For the purposes of this graphic, the center of Dare County was used as the search location. These tracks include 24 Category 1 Hurricanes, 15 Category 2 Hurricanes, 6 Category 3 Hurricanes, 1 Category 4 Hurricane and 52 Tropical Storms.

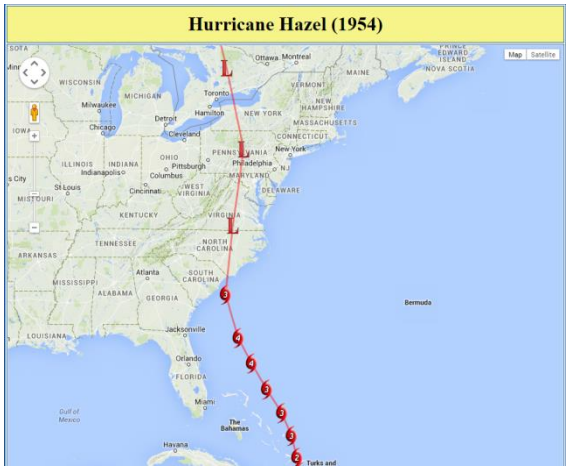
North Carolina has had an extensive hurricane history dating back to colonial times. During the nineteenth century, storms occurred in 1821, 1837, 1846, 1856, 1879, 1883, and 1899. During the years 1960-1990, there was a decrease in land falling hurricanes, with the exception of Hurricane Donna in 1960. However, during the 1950's North Carolina was ravaged by several hurricanes including Hazel, Connie, Diane, and Ione. Recent history has included several hurricanes as well, with Hugo (1989), Emily (1993), Opal (1996), Fran (1996), Eduardo (1996), Bonnie (1998), Dennis (1999), Floyd (1999), Irene (1999), Isabel (2003), Alex (2004), Ophelia (2005), Ernesto (2006), Irene (2011), Sandy (2012) and Arthur (2014) all leaving a mark on North Carolina. However these storms had varying impacts across the Albemarle Region. **Figure 4.4** shows the tracks of storms that have passed within 75 Nautical Miles of the Albemarle Region.

Figure 4.4 – Historical Tracks



The following is a historic look at some of the storms that have impacted North Carolina and the Albemarle Region.

October 5 to 18, 1954 – Hurricane Hazel



Hurricane Hazel was the most destructive storm in the history of North Carolina. The storm crossed the coast just north of Myrtle Beach, South Carolina, as hurricane winds hit the Atlantic coast between the City of Georgetown, South Carolina, and Cape Lookout, North Carolina. Storm tides (i.e., hurricane surge) devastated the immediate ocean from of this stretch of coast. Every fishing pier along 170 miles of coast, from Myrtle Beach, South Carolina, to Cedar Island, North Carolina, was destroyed. The waterfront between the South Carolina – North Carolina state line and Cape Fear was completely destroyed. Grass-covered dunes, some 20 feet high, along and behind which beach homes had been built in a continuous line five miles long, simply disappeared-dunes, houses, and all. From Cape Fear to Cape Lookout, the degree of devastation was not great, but ocean front property was damaged an average of 50-precent along this entire stretch. North of Cape Lookout, damage was relatively light.

Storm surge of 16.6 feet above the NGVD was observed at Holden Beach Bridge and the Town of Calabash, North Carolina. The lowest recorded barometric pressure of the storm was 938 millibars (mb), reported at Little River Inlet on the North Carolina – South Carolina border. Maximum wind speeds were 83 miles per hour (mph), with gusts recorded at 98 mph at the City of Wilmington, North Carolina; 106 mph at Myrtle Beach, South Carolina; and estimated 150 mph at Cape Fear. The storm continued inland through North Carolina causing widespread damage as a result of high winds and record rainfall. Nineteen people were killed and 200 injured during this storm.

August 3 to 14, 1955 – Hurricane Connie

Hurricane Connie entered North Carolina close to Cape Lookout at about 8:30 a.m. on August 12, 1955. The prolonged pounding of high waves against the coast caused tremendous beach erosion, probably worse than that caused by Hurricane Hazel in 1954. Storm tides along the coast from the City of Southport to the Town of Nags Head were reported to be about 7 feet NGVD (6.9 feet NGVD at Wrightsville Beach and 7.5 feet NGVD at Kure Beach). Water in sounds and near the mouths of rivers was five to eight feet above normal. At the City of Wilmington, winds were reported at 72 mph, gusting to 83 mph. At Fort Macon, winds of 75 mph, gusts of 100 mph, and a barometric pressure of 962 mb were reported. The storm also brought torrential rains with the maximum rainfall; around 12 inches in 48 hours, occurring near the City of Morehead City. Total damage throughout the state was estimated at $50 million.

September 10 to 23, 1955 – Hurricane Ione

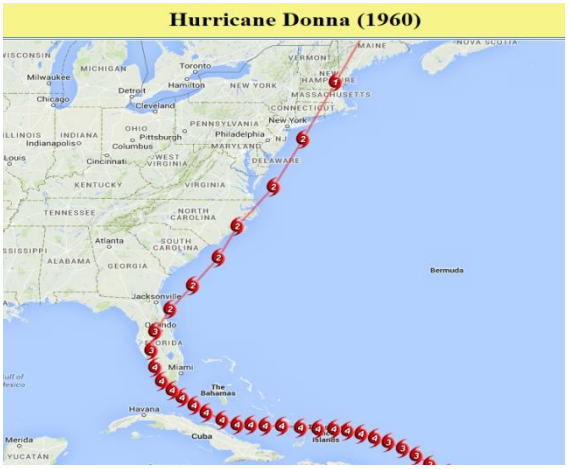
Hurricane Ione moved up from the south and crossed the North Carolina coast near Salter Path, ten miles west of Morehead City, at about 5 a.m. on September 19, 1955. It then slowly curved to the northeast and went out to sea near the Virginia border early on September 20, 1955. When Hurricane Ione entered North Carolina, winds gusted to over 100 mph. Wind speeds of 75 mph with gusts to 107 mph were recorded at Cherry Point. The minimum barometric pressure recorded over North Carolina during this storm was 960 mb. Heavy rains also accompanied Hurricane Ione. At the same time, prolonged easterly winds drove tidal water onto beaches and into sounds and estuaries to heights of 3

to 10 feet above normal. The result was the largest inundation of eastern North Carolina ever known to have occurred. Hurricane Ione made landfall near Salter Path on Bogue Banks on September 19, 1955, killing seven people and causing $88 million in property damage.

September 21 to October 3, 1958 – Hurricane Helene

Hurricane Helene was one of the most powerful storms of recent history; fortunately for the people of North Carolina, the storm center was well out to sea as it moved north on September 26 and 27, 1958. Nevertheless, high winds were recorded at Wilmington, with the highest winds measured at 85 mph and peak gusts recorded at 135 mph, the lowest reported central pressure of the storm was 93 mb; this measurement was recorded south-southeast of Cape Fear early on the morning of September 27, 1958. There was some beach erosion, which resulted from seas and tides, but this erosion was minimized because the storm occurred at the time of low astronomical tides. High tides were estimated at 3 to 5 feet above normal; a high tide of 5.1 feet NGVD was reported at Wrightsville Beach. Tides were higher on the southern end of Pamlico Sound, where the wind shifts as the storm center passed brought the tides seven to eight feet above normal.

August 29 to September 13, 1960 – Hurricane Donna



Hurricane Donna crossed the North Carolina coast between Wilmington and Morehead City on September 11, 1960. The center of the storm passed a few miles east of Wrightsville Beach, although the City of Wilmington and Wrightsville Beach were each in the eye for about an hour. The lowest barometric pressure recorded during this storm was 962 mb at the City of Wilmington. High tides, six to eight feet above normal, and high winds caused severe damage at many points. Winds of hurricane force, up to 97 mph, were reported at the City of Wilmington.

During the night of September 11, 1960, the storm center moved northward, parallel and slightly east of a line drawn between Wilmington, North Carolina and Norfolk, Virginia. Wind gusts were in excess of 97 mph, and tides were 4 to 8 feet above normal. High tides of 10.3 and 8.3 feet NGVD were reported at Atlantic Beach and Wrightsville Beach, respectively. Coastal communities from the City of Wilmington to the Town of Nags Head suffered heavy structural damage and considerable beach erosion. Eight deaths and approximately 100 injuries were attributed to the storm. Damages were estimated at millions of dollars.

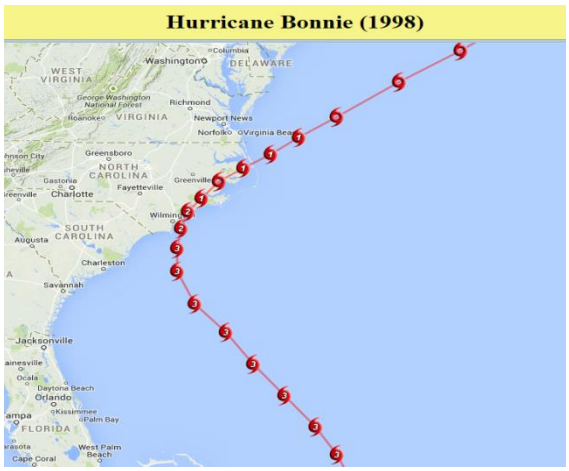
August 26 to 31, 1993 – Hurricane Emily

The first major hurricane of the 1993 season formed on August 22nd about 600 miles east-northeast of the Leeward Islands. It became a tropical storm on August 26th and strengthened to a hurricane the same day. Following a course that varied between west-northwest, Emily would eventually bring the western part of its eye wall over the Outer Banks. The National Hurricane Center upgraded Emily to a Category 3 hurricane. Hurricane force winds (e.g., 90 – 107 mph), strongest from the north then backing to the northwest, were experienced for an hour and a half as the eastern eye wall moved slowly north. This storm caused extensive flooding and destroyed several homes throughout the region.

July 5 to 12, 1996 – Hurricane Bertha

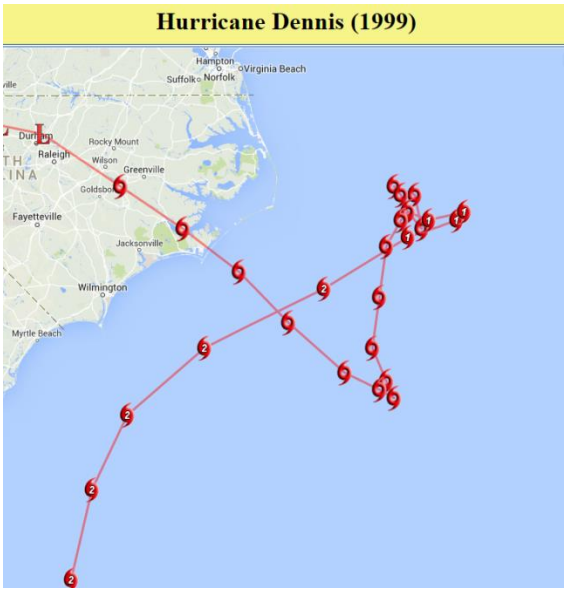
Hurricane Bertha formed on July 5, 1996. As a Category One hurricane, Bertha moved across the northeastern Caribbean. The storm's highest sustained winds received 115-mph north of Puerto Rico. Bertha made landfall near Wilmington on July 12 as a Category Two hurricane, with estimated winds of 105 mph.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

August 27, 1998 – Hurricane Bonnie



Hurricane Bonnie was a Category 2 storm when it came ashore on August 27, 1998, near Cape Fear. 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 Three people died as a consequence of Bonnie. A 12-year old girl was killed when a large tree fell on her home in Currituck County, NC. Another person was caught in rip currents and drowned in Rehoboth Beach, Delaware. The third person died in Cape Cod in a rowboat accident when choppy seas overturned the boat. The last one may have been indirectly related to Bonnie. The Property Claim Services Division of the American Insurance Services Group reports that Bonnie caused an estimated $ 360 million in insured property damage to the United States. This estimate includes $ 240 million in North Carolina, $ 95 million in Georgia, and $ 25 million in South Carolina. A conservative ratio between total damage and insured property damage, compared to past land falling hurricanes, is two to one. Therefore, the total U.S. damage estimate is $ 720 million.

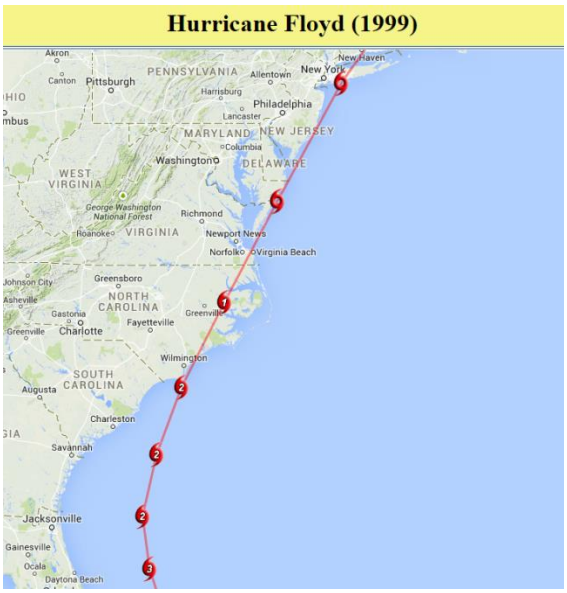
August 30, 1999 – Hurricane/Tropical Storm Dennis



Hurricane Dennis' first pass near the coast of the Carolinas on August 30, 1999, caused sustained tropical storm force winds with gusts to hurricane force in coastal North Carolina and gusts to tropical storm force in coastal South Carolina from Charleston northward. Dennis drifted just east of the North Carolina Outer Banks for several days before coming ashore again on September 4, 1999. Dennis was just below hurricane strength when it made landfall over the Cape Lookout National Seashore just east of Harkers Island, NC. Storm tides of 3 to 5 ft above normal were reported along much of the North Carolina coast on both August 30th and September 4th. Areas along the Neuse River reported tides of 8 to 10 ft above normal tide level on August 30th, while areas along the Currituck River reported similar values

on September 4th. Portions of the South Carolina and southeastern Virginia coast experienced 2 to 4 ft above normal tides during Dennis. Since Dennis meandered off the North Carolina coast for several days, the above normal tides were unusually prolonged. This led to extensive beach erosion along portions of the North Carolina and southeastern Virginia coasts. The Property Claims Services Division of the Insurance Services Office reports insured losses due to Dennis totaled $60 million in North Carolina and Virginia. Press reports indicate that agricultural losses in North Carolina and Virginia were $37 million. Combining these reports gives a total estimated damage from Dennis of $157 million.

September 16, 1999 – Floyd



Hurricane Floyd made landfall near Cape Fear, North Carolina in the early morning hours of September 16, 1999, as a Category 2 hurricane with estimated maximum winds near 90 knots. Floyd was losing its eyewall structure as it made landfall. Continuing to accelerate north-northeastward, Floyd's center passed over extreme eastern North Carolina on the morning of the 16th and over the greater Norfolk, Virginia area in the afternoon. Storm surge values as high as 9 to 10 feet were reported along the North Carolina coast. Rainfall totals as high as 15 to 20 inches were recorded in portions of eastern North Carolina and Virginia. A number of tornadoes were sighted in eastern North Carolina. There was a confirmed tornado in Bertie County and another in Perquimans County. The latter tornado destroyed two houses and damaged three or four others. At least ten tornadoes were reported by spotters in the Newport/Morehead City County Warning area, and these apparently caused some structural damage. Four tornadoes or funnel clouds were seen in the Wilmington area, but no damage was apparent. Total damage estimates range from 3 to over 6 billion dollars.

September 18, 2003 – Hurricane Isabel

Hurricane Isabel was the costliest and deadliest hurricane of the 2003 Atlantic Hurricane season. Isabel formed from a tropical wave on September 6 in the tropical Atlantic Ocean and moved northwestward steadily gaining strength reaching peak winds of 165 MPH on September 11. After fluctuating in intensity for four days, Isabel gradually weakened and made landfall on the Outer Banks of North Carolina with winds of 105 MPH on September 18. In North Carolina, the storm surge from Isabel washed out a portion of Hatteras Island to form what was unofficially known as Isabel Inlet. Damage was greatest along the Outer Banks.

The highest sustained wind speed recorded was 73 mph at Duck. Other sustained wind speeds included 59 mph, recorded in Elizabeth City. The highest gusts

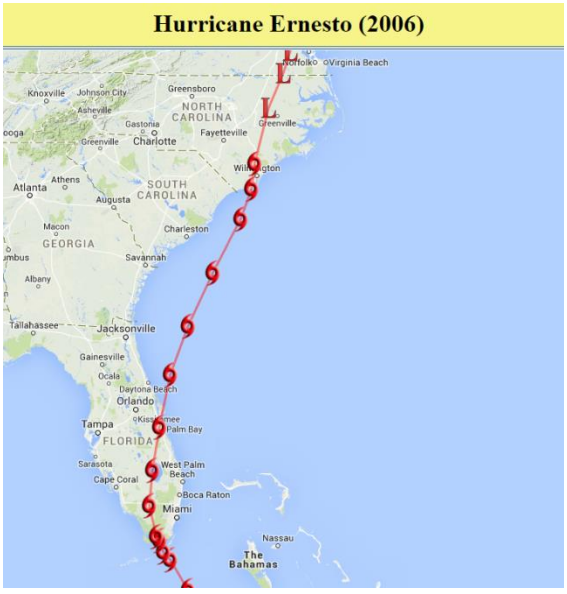
recorded were 97 mph at Elizabeth City (as measured at the Clemson University observation site there – temporary device put in place for measurements of anticipated storm), 92 mph at Duck, and 74 mph at Elizabeth City. Mandatory evacuations were ordered for parts of Currituck County, with approximately several thousand residents evacuated and housed in numerous shelters across coastal parts of northeast North Carolina. The unusually large wind field uprooted many thousands of trees, downed many power lines, damaged hundreds of residential structures, and snapped thousands of telephone poles and cross arms. Hundreds of roads, including major highways, were blocked by fallen trees. Local power companies reported many thousands of customers had lost power. Duck water levels peaked at 7.8 feet MLLW before data was lost. On the Albemarle Sound, storm surge values around 7 feet occurred at Edenton, with a surge around 5 feet observed on the Pasquotank River in Elizabeth City. The lowest sea level pressure recorded was 984 mb, at Duck.

Isabel will be remembered for the greatest wind and storm surge to occur in the region since Hurricane Hazel in 1954, and the 1933 Chesapeake-Potomac Hurricane before that. Also, Isabel will be remembered for the extensive power outages it caused in northeast North Carolina, and the permanent change its storm surge and fallen trees left on the landscape. Rainfall amounts ranged from 2 to 5 inches across coastal parts of northeast North Carolina. Inland flooding due to heavy rainfall occurred over coastal parts of northeast North Carolina. Significant beach erosion occurred across Currituck County.

August 4, 2004 – Hurricane Alex

Hurricane Alex was the first storm of the 2004 hurricane season. The hurricane reached Category 2 intensity as it tracked between just offshore from Cape Lookout and Cape Hatteras, North Carolina. Alex reached hurricane intensity at 0200 a.m. on Tuesday, August 3, while centered about 75 miles south-southeast of Wilmington, NC. The hurricane quickly intensified Tuesday with the center of the storm remaining just offshore. The western fringe of the eye wall skirted the Outer Banks from Cape Lookout to Cape Hatteras. Peak wind gusts of 102 MPH were observed at Hatteras Village.

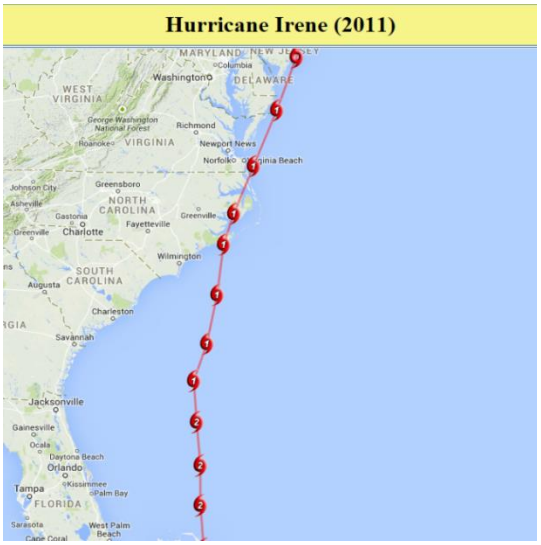
September 1, 2006 - Hurricane Ernesto



Ernesto formed from a tropical wave that emerged from the west coast of Africa on the 18th of August and moved westward across the tropical Atlantic during the following days. The cyclone became a tropical storm on August 25th and gradually turned toward the northwest and continued to intensify as it moved into the central Caribbean Sea on the 26th. After landfall in Florida, the storm intensified into a strong tropical storm as it continued north-northeastward. The center of Ernesto came ashore on September 1 on Oak Island, NC a few miles south-southwest of Wilmington and just west of Cape Fear. At the time of final landfall, Ernesto was very near the threshold between tropical storm and hurricane status, with an intensity of 60 kt and a minimum pressure of 985 mb. The storm reached the North Carolina/Virginia border later on September 1, although by that time it had transformed into an extra-tropical cyclone. Storm total rainfall amounts exceeded 5 inches throughout eastern portions of South Carolina, North Carolina and Virginia as well as Maryland. More than 10 inches of rain fell in several locations in North Carolina and Virginia,

including a maximum of 14.61 at Wrightsville Beach, North Carolina. The heavy rains led to river, coastal and surge flooding for several days after Ernesto's landfall. Ernesto caused extensive flooding in Elizabeth City where over 80 homes were affected by flood waters.

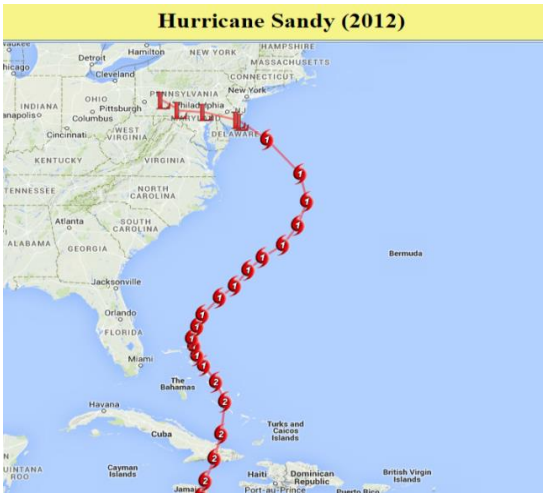
August 26-27, 2011 – Hurricane Irene



Hurricane Irene made landfall on August 27 near Cape Lookout, North Carolina. As the eye wall moved ashore, sustained winds of 73 mph and wind gusts to 115 mph were observed at the Cedar Island Ferry Terminal. Strong winds and driving rains pounded most of Eastern North Carolina. Torrential rainfall amounts in excess of 10 inches were widespread. Storm surge levels of over 10 feet were observed at Ocracoke and several breaches of Highway 12 were noted all along the Outer Banks. Millions of dollars in damages were reported across the state. These damages to property and crops were estimated to be around 381 million dollars. Storm surge related damages exceeded 240 million dollars.

Hurricane Irene left downed and denuded trees, impassable roadways, damaged municipal buildings, and widespread flooding on its way. In Bay Drive in Kill Devil Hills, debris from the Albemarle Sound covered the street after overflowing with overnight rainfall. Storm surge from Hurricane Irene spilled over Kitty Hawk Bay in Albemarle Sound and Roanoke Island, Hatteras Island, Collington, Duck, and other parts of the islands were simply inundated by the Albemarle and Pamlico Sounds. In addition, heavy rains contributed to minor crop damage. Storm total rainfall generally ranged from ten to fourteen inches. Sound side flooding across the Albemarle region was significant, including reports of 5 feet or more water inside homes. Oceanside damage was minimal due to the inland track of the storm. Irene was attributed with at least 56 fatalities.

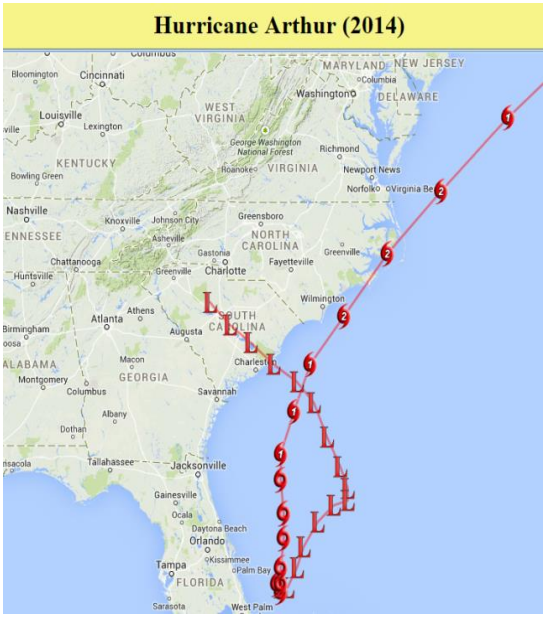
October 27-30, 2012 – Hurricane Sandy



Hurricane Sandy was the deadliest and most destructive hurricane of the 2012 Atlantic hurricane season and the second costliest hurricane in United States history. Classified as the eighteenth named storm, tenth hurricane and second major hurricane of the year, Sandy was a Category 3 storm at its peak intensity when it made landfall in Cuba While it was a Category 2 storm off the coast of the Northeastern United States, the storm became the largest Atlantic hurricane on winds spanning 1,100 miles. Damage estimates were over $68 billion, a total surpassed only by Hurricane Katrina. At least 286 people were killed along the path of the storm in seven countries.

The majority of the damage that occurred in the region was the result of ocean driven wind, wave action and ocean over wash. The sound side flooding that occurred caused widespread and ground flooding, yet caused very minimal flooding to structures. Beach erosion and loss of dune systems was experienced in Dare and Currituck counties.

July 3-4, 2014 – Hurricane Arthur



Hurricane Arthur became the earliest known hurricane to make landfall in the U.S. state of North Carolina. The first named storm of the 2014 Atlantic hurricane season, Arthur developed from an initially non-tropical area of low pressure over the Southeastern United States that emerged into the western Atlantic Ocean on June 28. The system was classified a tropical depression on July 1. The system continued to strengthen and was declared a tropical storm later that day. Drifting northward, the storm reached hurricane status early on July 3. Further structural organization resulted in additional intensification, and on July 4, the system attained its peak winds of 100 mph as a Category 2 hurricane. Arthur made landfall at North Carolina's Shackleford Banks, positioned between Cape Lookout and Beaufort. The storm moved swiftly northward and exited the region passing over Nags Head. A state of emergency was declared for 26 counties in eastern North Carolina and both mandatory and voluntary evacuations were ordered. The storms fast forward speed limited the extent of damages which were mainly due to sound side flooding and wind.

North Carolina's geographic location on the Atlantic Ocean and it proximity to the warm waters of the Gulf Stream make it prone to impacts from Hurricane and Tropical Storms. North Carolina ranks fourth behind Florida, Texas and Louisiana in land falling Hurricanes. The Albemarle Region is located in North Eastern North Carolina and is bordered by the Albemarle Sound to the south and the Atlantic Ocean to the east. The proximity of this region to the coast greatly increases the likelihood of occurrences for these types of coastal storms. As noted in **Table 4.13** and determined by the Albemarle Regional Hazard Mitigation Planning Team, Hurricanes and Tropical Storms are "highly likely" to occur in the Albemarle Region.

Nor'easters

Similar to hurricanes, nor'easters are ocean storms capable of causing substantial damage to coastal areas in the Eastern United States due to their associated strong winds and heavy surf. Nor'easters are named for the winds that blow in from the northeast and drive the storm up the East Coast along the Gulf Stream, a band of warm water that lies off the Atlantic coast. They are caused by the interaction of the jet stream with horizontal temperature gradients and generally occur during the fall and winter months when moisture and cold air are plentiful.

Nor'easters are known for dumping heavy amounts of rain and snow, producing hurricane-force winds, and creating high surf that causes severe beach erosion and coastal flooding. There are two main components to a nor'easter: (1) a Gulf Stream low-pressure system (counter-clockwise winds) generated off the southeastern U.S. coast, gathering warm air and moisture from the Atlantic, and pulled up the East Coast by strong northeasterly winds at the leading edge of the storm; and (2) an Arctic high-pressure system (clockwise winds) which meets the low-pressure system with cold, arctic air blowing down from Canada. When the two systems collide, the moisture and cold air produce a mix of precipitation and have the potential for creating dangerously high winds and heavy seas. As the low-pressure system deepens, the intensity of the winds and waves will increase and cause serious

damage to coastal areas as the storm moves northeast. **Table 4.4** shows an intensity scale proposed for nor'easters that is based upon levels of coastal degradation.

Table 4.4 - 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
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: North Carolina Division of Emergency Management

A number of notable nor'easters have impacted North Carolina in recent decades, including the Ash Wednesday Storm of March 1962, but those events were typically only of local concern. One exception to this was the nor'easter that occurred in 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 Oct. 31, 1991, causing substantial beach erosion. Others that have impacted the region are the Nor'easters that occurred on November 21-22, 2006, November 11-14, 2009 and December 8, 2014.

North Carolina's geographic location on the Atlantic Ocean makes it prone to impacts from Nor'easters. The Albemarle Region is located in North Eastern North Carolina and is bordered by the Albemarle Sound to the south and the Atlantic Ocean to the east. The proximity of this region to the coast greatly increases the likelihood of occurrences for these types of coastal storms. The most intense Nor'easter to impact the Albemarle Region was the Ash Wednesday Storm in 1962. This storm was deemed a Class 5 Storm on the Dolan-Davis Intensity Scale. As noted in **Table 4.13** and determined by the Albemarle Regional Hazard Mitigation Planning Team, Nor'easters are "highly likely" to occur in the Albemarle Region.

Floods

Flooding is a coast-to-coast threat to the United States and its territories in all months of the year. Floods are generally the result of excessive precipitation, and can be classified under two categories: general floods, precipitation over a given river basin for a long period of time; and flash floods, the product of heavy localized precipitation in a short time period over a given location. The severity of a flooding event is determined by the following: a combination of stream and river basin topography and physiography; hydrology, precipitation and weather patterns, recent soil moisture conditions, and the degree of vegetative clearing. Approximately seventy-five percent of all Presidential disaster declarations are associated with flooding. Table 4.5 shows flood damage values by fiscal year from a national perspective.

Table 4.5- National Flood Damage & Fatalities by Fiscal Year (October–September)

Fiscal Year	Damages (in 2013 Dollars)	Fatalities	Fiscal Year	Damages (in 2013 Dollars)	Fatalities
1960	$1,077,235,282	169	1987	$3,129,316,353	70
1961	$1,736,190,143	93	1988	$475,972,562	31
1962	$823,724,357	53	1989	$2,235,868,095	85
1963	$1,885,516,606	41	1990	$3,301,565,249	142
1964	$6,646,609,160	142	1991	$3,354,345,855	61
1965	$7,748,172,154	188	1992	$1,460,800,163	62
1966	$1,096,209,213	56	1993	$29,997,022,163	103
1967	$3,335,387,566	53	1994	$1,977,734,842	91
1968	$2,805,404,548	57	1995	$8,918,494,693	80
1969	$6,790,888,682	445	1996	$10,399,577,678	131
1970	$1,558,580,587	131	1997	$14,306,418,749	118
1971	$1,736,243,627	68	1998	$4,026,769,784	136
1972	$24,317,537,847	555	1999	$8,595,708,180	68
1973	$9,544,445,737	178	2000	$2,054,477,262	38
1974	$2,723,272,298	111	2001	$11,001,413,129	48
1975	$5,927,033,971	127	2002	$1,768,836,561	49
1976	$11,928,779,675	193	2003	$3,540,162,804	86
1977	$4,817,973,602	210	2004	$18,745,995,413	82
1978	$2,407,384,726	125	2005	$53,864,306,063	43
1979	$11,127,039,627	121	2006	$4,612,313,236	76
1980	$4,424,003,707	82	2007	$2,858,648,287	87
1981	$2,700,707,214	84	2008	$6,569,352,174	82
1982	$6,239,869,281	155	2009	$1,070,407,611	56
1983	$9,392,031,481	204	2010	$5,465,668,984	103
1984	$8,635,130,246	126	2011	$8,861,880,649	113
1985	$1,137,902,265	166	2012	$515,642,043	29
1986	$13,336,903,376	94	2013	$2,152,417,080	82

Source: FEMA

General floods are usually long-term events that may last for several days. The primary types of general flooding include riverine, coastal and urban flooding. Riverine flooding is a function of excessive precipitation levels and water runoff volumes within the watershed of a stream or river. Coastal flooding is typically a result of storm surge, wind-driven waves, and heavy rainfall produced by hurricanes, tropical storms, nor'easters, and other large coastal storms. Urban flooding occurs where man-made development has obstructed the natural flow of water and decreased the ability of natural groundcover to absorb and retain surface water runoff.

Most flash flooding is caused by slow-moving thunderstorms in a local area or by heavy rains associated with hurricanes and tropical storms. However, flash flooding events can also occur from accelerated snow melt due to heavy rains, a dam or levee failure within minutes or hours of heavy amounts of rainfall, or from a sudden release of water held by an ice jam. Although flash flooding occurs often along mountain streams, it is also common in urbanized areas where much of the ground is covered by impervious surfaces. Flash flood waters move at very high speeds—"walls" of water can reach heights of 10 to 20 feet. Flash flood waters and the accompanying debris can uproot trees, roll boulders, destroy buildings, and obliterate bridges and roads.

The periodic flooding of lands adjacent to rivers, streams, and shorelines (land known as floodplain) is

a natural and inevitable occurrence that can be expected to take place based upon established recurrence intervals. The recurrence interval of a flood is defined as the average time interval, in years, expected between a flood event of a particular magnitude and an equal or larger flood. Flood magnitude increases with increasing recurrence interval.

Floodplains are designated by the frequency of the flood that is large enough to cover them. For example, the 10-year floodplain will be covered by the 10-year flood and the 100-year floodplain by the 100-year flood. Flood frequencies such as the 100-year flood are determined by plotting a graph of the size of all known floods for an area and determining how often floods of a particular size occur. Another way of expressing the flood frequency is the chance of occurrence in a given year, which is the percentage of the probability of flooding each year. For example, the 100-year flood has a 1 percent chance of occurring in any given year. The following are the flood hazards zones as defined by FEMA in the Flood Insurance Studies for the counties in the Albemarle Region.

Table 4.6 - Flood Zone Descriptions

Zone	Description
A	Zone A is the flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined in the FIS Report by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no Base Flood Elevations or depths are shown within this zone.
AE	Zone AE is the flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined in the FIS Report by detailed methods. In most instances, whole-foot Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
V	Zone V is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Because approximate hydraulic analyses are performed for such areas, no Base Flood Elevations are shown within this zone.
VE	Zone VE is the flood insurance rate zone that corresponds to the 1% annual chance coastal floodplains that have additional hazards associated with storm waves. Whole-foot Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
X	Zone X is the flood insurance rate zone that corresponds to areas outside the 0.2% annual chance floodplain, areas within the 0.2% annual chance floodplain, and to areas of 1% annual chance flooding where average depths are less than 1 foot, areas of 1% annual chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1% annual chance flood by levees. No Base Flood Elevations of depths are shown within this zone.

Source: FEMA

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. Manmade channels may also constrict stream flow and increase flow velocities.

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.

From 2004-2014, the Albemarle region experienced thirty-two (32) flooding events that were reported to the National Climatic Data Center (see Appendix E for a detailed description of these hazard events). The significant events that impacted the area are listed below.

November 21-23, 2006

An intense low pressure system off the North Carolina coast combined with an upper level cutoff low to provide very strong winds, heavy rains, and moderate coastal flooding across portions of northeast North Carolina from late Tuesday November 21st into early Thursday morning November 23rd. Strong onshore winds resulted in moderate to severe coastal flooding during times of high tide. Tidal departures were 4 to 5 feet above normal during the event. Route 12 was flooded with overwash in many areas.

November 11-13, 2011

The remnants of Tropical Storm Ida interacted with a strong upper level disturbance to produce a deep, slow moving, low pressure system off the Carolina coast November 11th through the 13th. This system produced widespread heavy rain, gusty winds, and coastal flooding across portions of eastern North Carolina. By far, the most significant impact was coastal flooding over the northern Outer Banks where over five million dollars in damage was reported. The large waves from the storm continued to batter the Outer Banks for several days after the storm system moved away. Several streets, homes and businesses were flooded in low lying areas of the county close or directly exposed to the Currituck Sound. Moyock experienced the heaviest flooding due to rising Sound waters. Moyock area had 3 neighborhoods that flooded, and flood water going into some of the homes. Significant ocean over-wash and coastal flooding developed over the northern Outer Banks during the early morning hours of November 12th and continued through the early morning hours of November 14th. Areas from Buxton north to Duck had several episodes of coastal flooding, mainly during the high tide cycle. Overall 4 homes were destroyed, 61 had major damage and 465 had minor damage. Highway 12 was severely flooded and destroyed near Rodanthe due to the ocean over-wash. Damage from the coastal flooding was estimated to be 5.8 million dollars.

October 28-29, 2012

Tropical Cyclone Sandy moving northward well off the Mid Atlantic Coast produced very strong northeast winds which caused moderate to severe coastal flooding across portions of northeast North Carolina. Water levels reached 3.0 feet to 4.0 feet above Atlantic Ocean resulting in moderate to severe coastal flooding. Duck reached a tide height of 6.98 feet MLLW. The combination of storm surge and extreme waves caused major damage to coastal dunes, and flooded areas in northern portions of the Currituck Outer Banks. Storm surge on the Currituck Sound was less than Irene, and mostly less than 2 feet above normal.

The dominant sources of flooding in the Albemarle Region are storm surge inundation, riverine flooding, and local ponding of stormwater runoff. Storm surge from the Atlantic Ocean moves into the Albemarle Sound, which further then moves into rivers and creeks throughout the region; riverine flooding from heavy rainfall also occurs throughout he many creeks and streams within the region. Not all storms which pass through the Albemarle Region produce extremely high surge. Flooding extent varies throughout the region with most impacts coming from the combination of storm surge and rainfall. Flood heights ranging from 2 feet above normal tide to almost eight feet above have been recorded during events. Similarly, storms which produce flooding conditions in one area may not necessarily produce flooding conditions in other parts of the region. Based on **Table 4.13** the likelihood of occurrence of flooding in the Albemarle Region is "highly likely."

Tornadoes

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud extending to the ground. Tornadoes are most often generated by thunderstorm activity when cool, dry air intersects and overrides a layer of warm, moist air forcing the warm air to rise rapidly. Tornadoes can also occur during Hurricanes and other coastal storms. The damage caused by a tornado is a result of the high wind velocity and wind-blown debris, also accompanied by lightning or large hail. According to the National Weather Service, tornado wind speeds normally range from 40 to more than 300 miles per hour. The most violent tornadoes have rotating winds of 250 miles per hour or more and are capable of causing extreme destruction and turning normally harmless objects into deadly missiles.

Tornadoes are more likely to occur during the spring and early summer months of March through June and can occur at any time of day, but are likely to form in the late afternoon and early evening. Most tornadoes are a few dozen yards wide and touch down briefly, but even small short-lived tornadoes can inflict tremendous damage. Highly destructive tornadoes may carve out a path over a mile wide and several miles long.

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

The destruction caused by tornadoes ranges from light to inconceivable depending on the intensity, size, and duration of the storm. Typically, tornadoes cause the greatest damages to structures of light construction such as residential homes (particularly mobile homes), and tend to remain localized in impact. Tornado intensity and associated damage is measured using the Enhanced Fujita Scale (Table 4.7) which was implemented by the National Weather Service in 2007.

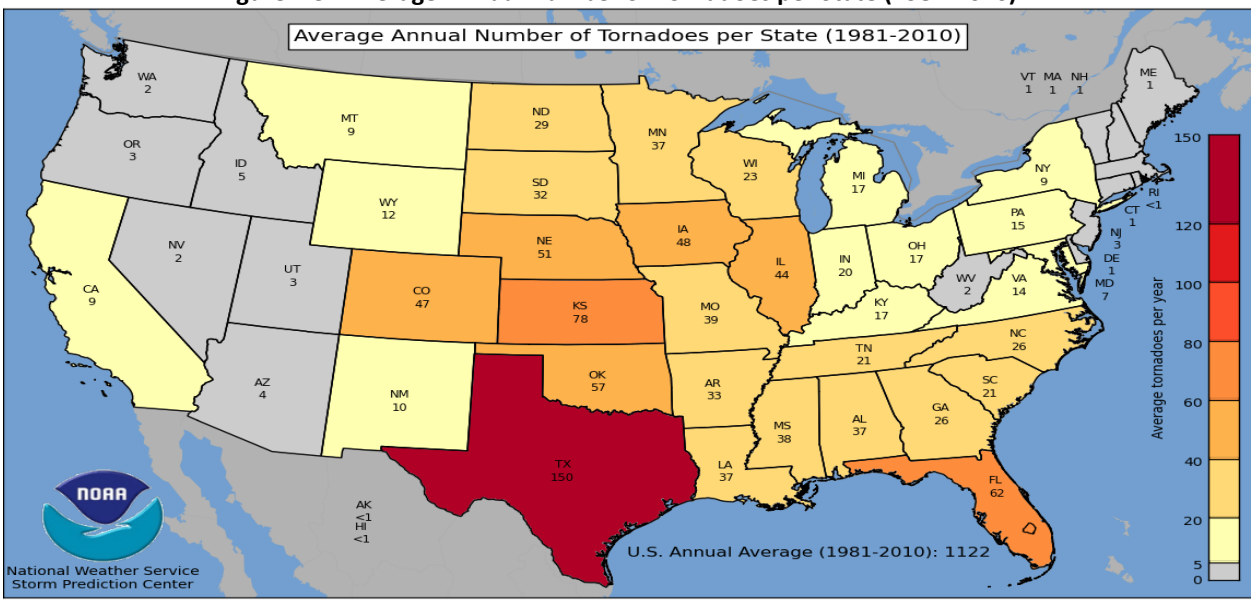
Table 4.7 - Enhanced Fujita Scale

Category	Wind Speed	Potential Damage
EF-0	65-85 mph	Light Damage
EF-1	86-110 mph	Moderate Damage
EF-2	111-135 mph	Considerable Damage
EF-3	136-165 mph	Severe Damage
EF-4	166-200 mph	Devastating Damage
EF-5	200+ mph	Incredible Damage

Source: National Weather Service

According to the National Weather Service Storm Prediction Center (SPC), the highest concentration of tornadoes in the United States has been in the Great Plains region of the Central United States. This area is affectionately known as Tornado Alley. **Figure 4.5** shows tornado activity in the United States based on the annual average occurrence in each state from 1981-2010.

Figure 4.5 - Average Annual Number of Tornadoes per State (1981-2010)



Source: NWS Storm Prediction Center

The tornadoes associated with tropical cyclones are most frequent in September and October when the incidence of tropical storm systems is greatest. This type of tornado usually occurs around the perimeter of the storm, and most often to the right and ahead of the storm path or the storm center as it comes ashore. These tornadoes commonly occur as part of large outbreaks and generally move in an easterly direction.

A total of seventeen (17) tornado events have been documented by the National Climatic Data Center in the Albemarle Sound Region since 2004, resulting in four injuries and one fatality. The region suffered approximately $7.25 million in property damage and $2 million in crop damage. (See Appendix E for detailed descriptions of hazard events). The greatest magnitude reported was an EF2 tornado, which touched down on April 16, 2011, in Hertford and Gates counties, resulting in seven (7) injuries and over $2.2 million in total damages. Another EF2 touched down on April 25, 2014 in Chowan, Pasquotank and Perquimans counties, resulting in over $4 million in damages. A fatality was also associated with this storm. In conclusion, tornados represent a significant threat to the Albemarle Sound Region due primarily to their relative frequency and large impact. Based on **Table 4.13**, the likelihood of occurrence is “possible.”

Winter Storms

A winter storm can range from a moderate snow over a period of a few hours to blizzard conditions with blinding wind-driven snow that lasts for several days. Some winter storms may be large enough to affect several states, while others may affect only a single community. Many winter storms are accompanied by low temperatures and heavy and/or blowing snow, which can severely impair visibility.

Winter storms may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Sleet—raindrops that freeze into ice pellets before reaching the ground—usually bounce when hitting a surface and do not stick to objects; however, sleet can accumulate like snow and cause a hazard to motorists. Freezing rain is rain that falls onto a surface with a temperature below freezing, forming a glaze of ice. Even small accumulations of freezing rain can cause a significant hazard, especially on power lines and trees. An ice storm occurs when freezing rain falls and freezes immediately upon impact. Communications and power can be disrupted for days, and even small accumulations of ice may cause extreme hazards to motorists and pedestrians.

A freeze is weather marked by long periods of sustained low temperatures, especially when below the freezing point (zero degrees Celsius or thirty-two degrees Fahrenheit). Agricultural production is seriously affected when temperatures remain below the freezing point.

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 Albemarle 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.

There were significant coastal winter storms in 1979, 1989 and 1993. From 2004-2014, there were ten (10) occurrences of severe winter weather within the Albemarle 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). Several significant events occurred during this period including February 8-9, 2011 which produced 11 inches of snow across Gates and Hertford counties, January 30, 2010 which also produced 11 inches of snow across parts of Gates and Hertford counties and December 26, 2010 with upwards of 12 inches falling across parts of Gates, Hertford, Pasquotank and Perquimans counties.

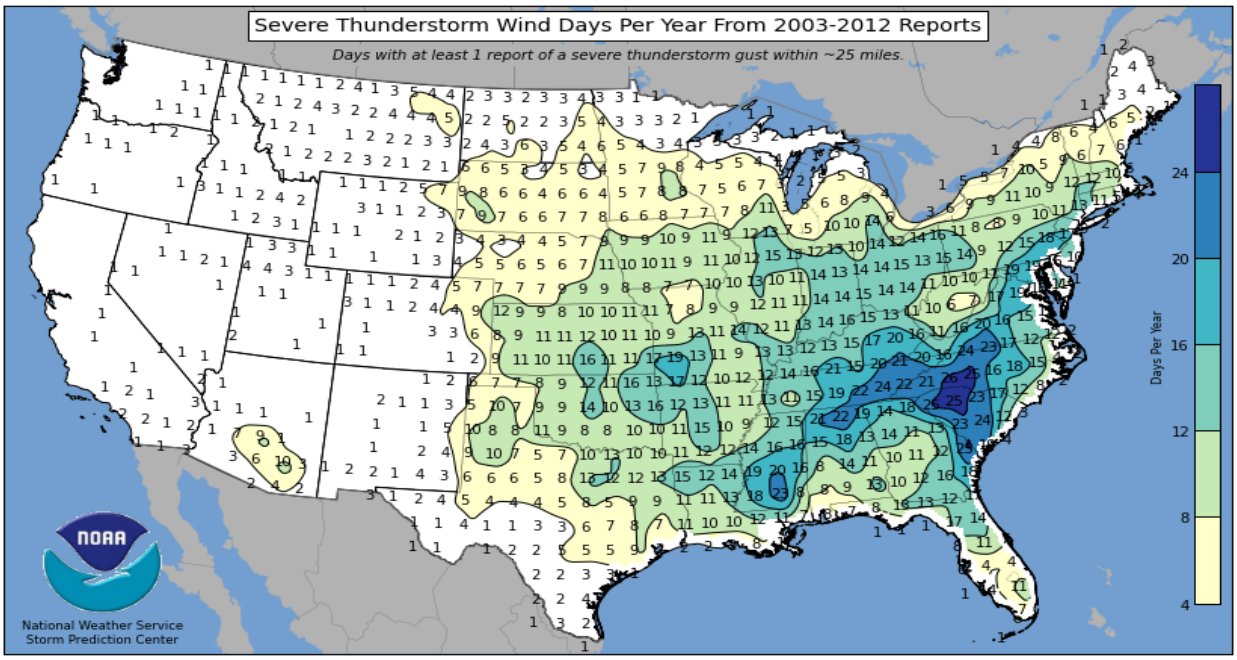
The Albemarle Region is unlikely to be hit with severe blizzard conditions (i.e., high winds and blowing snow), but is subject to freezing rain, icing, and snowfall. Based on historic information and the geographic location of the Albemarle Region, the likelihood of occurrence for a severe winter storm is "likely."

Severe Thunderstorms

According to the National Weather Service, more than 100,000 thunderstorms occur each year, though only about 10 percent of these storms are classified as "severe." Although thunderstorms generally affect a small area when they occur, they are very dangerous because of their ability to generate tornadoes, hailstorms, strong winds, flash flooding, and damaging lightning. While thunderstorms can occur in all regions of the United States, they are most common in the central and southern states because atmospheric conditions in those regions are most ideal for generating these powerful storms.

Thunderstorms are caused when air masses of varying temperatures meet. Rapidly rising warm moist air serves as the "engine" for thunderstorms. These storms can occur singularly, in lines, or in clusters. They can move through an area very quickly or linger for several hours. Figure 4.7 shows the number of Severe Thunderstorm Wind Days per Year from 2003-2012.

Figure 4.6 - Severe Thunderstorm Wind Days 2003-2012



Source: NWS Storm Prediction Center

Lightning is a discharge of electrical energy resulting from the buildup of positive and negative charges within a thunderstorm, creating a "bolt" when the buildup of charges becomes strong enough. This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. Lightning rapidly heats the sky as it flashes, but the surrounding air cools following the bolt. This rapid heating and cooling of the surrounding air causes thunder. On average, 51 people are killed each year by lightning strikes in the United States. Figure 4.7 shows U.S Lightning Fatalities from 2006-2014.

Figure 4.7- U.S Lightning Fatalities 2006-2014

Source: www.lightningsafety.noaa.gov/fatalities.htm

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.

The Albemarle Region is susceptible to severe thunderstorms and windstorms, suffering 67 such events from 2004 to 2014. These storms resulted in one death and almost $189,000 in property damage regionally. The highest wind speed recorded during a Thunderstorm event was 61 kts. on May 11, 2008. Thunderstorm extent is defined by the number of thunder events and wind speeds reported. Additionally, the Albemarle Sound Region suffered 52 hail events from 2004-2014 (see Appendix E for detailed descriptions of hazard events). Hail extent can be defined by the size of the hail stone. The largest hail stone reported in the Albemarle Sound region was 2 inches. Based on **Table 4.13**, the likelihood of occurrence is "highly likely."

Wildfires

A wildfire is any fire occurring in a wildland area (i.e., grassland, forest, brush land) except for those started as part of a controlled burn. Wildfires are part of the natural management of the Earth's ecosystems, but may also be caused by natural or human factors. Over 80 percent of forest fires are started by negligent human behavior such as smoking in wooded areas or improperly extinguishing campfires. The second most common cause for wildfire is lightning.

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

State and local governments can impose fire safety regulations on home sites and developments to help curb wildfire. Land treatment measures such as fire access roads, water storage, helipads, safety zones, buffers, firebreaks, fuel breaks, and fuel management can be designed as part of an overall fire defense system to aid in fire control. Fuel management, prescribed burning, and cooperative land management planning can also be encouraged to reduce fire hazards.

Fire probability depends on local weather conditions, outdoor activities such as camping, debris burning, and construction, and the degree of public cooperation with fire prevention measures. Drought conditions and other natural disasters (i.e., tornadoes, hurricanes, etc.) increase the probability of wildfires by producing fuel in both urban and rural settings. Forest damage from hurricanes and tornadoes may block interior access roads and fire breaks, pull down overhead power lines, or damage pavement and underground utilities.

Many individual homes and cabins, subdivisions, resorts, recreational areas, organizational camps, businesses, and industries are located within high fire hazard areas. The increasing demand for outdoor recreation places more people in wildlands during holidays, weekends, and vacation periods. Unfortunately, wildland residents and visitors are rarely educated or prepared for the inferno that can sweep through the brush and timber and destroy property in minutes.

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 Albemarle 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.

North Carolina, with its large amount of wooded areas, is included among the states with a high risk of wildfire. As development has spread into areas of North Carolina which were previously rural, new residents have been relatively unaware of the hazards posed by wildfires and have used highly flammable material for construction buildings. This has increased the threat of loss of life and property, and has also resulted in a greater population of people less prepared to cope with wildfire hazards. The southern coastal plain is particularly vulnerable to wildfire hazard. The mountain region has also experienced wildfires. The Albemarle Region has a moderate risk to wildfire according to the National Climatic Data Center. The area of concern is the urban interface with woodland areas that are heavy with accumulated fire load from overgrowth or decaying vegetation from hurricane wind damage.

The risk of wildfire damages in the Albemarle Region as a whole is mitigated by the fact that forested tracts are generally of manageable size, accessible to firefighting equipment and personnel, and circumscribed by roadways or waterways that limit the extent and severity of wildfires. Some communities within the Region are more susceptible to wildfires due to the amount the interface of developed land with the woodland environment. The largest Wildfire to impact the Albemarle Region from 2010-2014 occurred in Dare County in 2010. This wildfire burned 281 acres which accounted for approximately 75% of all acreage burned in Dare County that year. For these communities, actions have been taken to minimize the potential by including buffers and setbacks from these wooded areas. Based on **Table 4.13**, the likelihood of occurrence is "likely."

Table 4.8 Historical Occurrences of Wildfire

County	5-Year Average Number of Fires	5-Year Average Number of Acres Burned
Camden	17	53
Chowan	5.8	6.2
Currituck	33.8	20.2
Dare*	28.8	73.2
Gates	18	1.4
Hertford	23.6	64.2
Pasquotank	15.5	18.7
Perquimans	2.8	17.32
TOTAL ALBEMARLE		

Drought/Extreme Heat

Drought is a natural climatic condition caused by an extended period of limited rainfall beyond that which occurs naturally in a broad geographic area. High temperatures, high winds, and low humidity can worsen drought conditions, and can make areas more susceptible to wildfire. Human demands and actions can also hasten drought-related impacts.

Droughts are frequently classified as one of following four types:

- Meteorological;

- Agricultural;
- Hydrological; and
- Socio-economic.

Meteorological droughts are typically defined by the level of "dryness" when compared to an average, or normal amount of precipitation over a given period of time. Agricultural droughts relate common characteristics of drought to their specific agricultural-related impacts. Emphasis tends to be placed on factors such as soil water deficits, water needs based on differing stages of crop development, and water reservoir levels. Hydrological drought is directly related to the effect of precipitation shortfalls on surface and groundwater supplies. Human factors, particularly changes in land use, can alter the hydrologic characteristics of a basin. Socio-economic drought is the result of water shortages that limit the ability to supply water-dependent products in the marketplace.

While drought mostly impacts land and water resources, extreme heat can pose a significant risk to humans. Extreme heat can be defined as temperatures that hover 10 degrees or more above the average high temperature for the region, last for prolonged periods of time, and are often accompanied by high humidity. Under normal conditions, the human body's internal thermostat produces perspiration that evaporates and cools the body. However, in extreme heat and high humidity, evaporation is slowed and the body must work much harder to maintain a normal temperature. Elderly persons, young children, persons with respiratory difficulties, and those who are sick or overweight are more likely to become victims of extreme heat. Because men sweat more than women, they are more susceptible to heat-related illness because they become more quickly dehydrated. Studies have shown that a significant rise in heat-related illness occurs when excessive heat persists for more than two days. Spending at least two hours per day in air conditioning can significantly reduce the number of heat-related illnesses.

In addition to the classifications listed above, 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 frequently from a long-term drought pattern to a long-term wet pattern, the PDSI can respond fairly rapidly. 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.

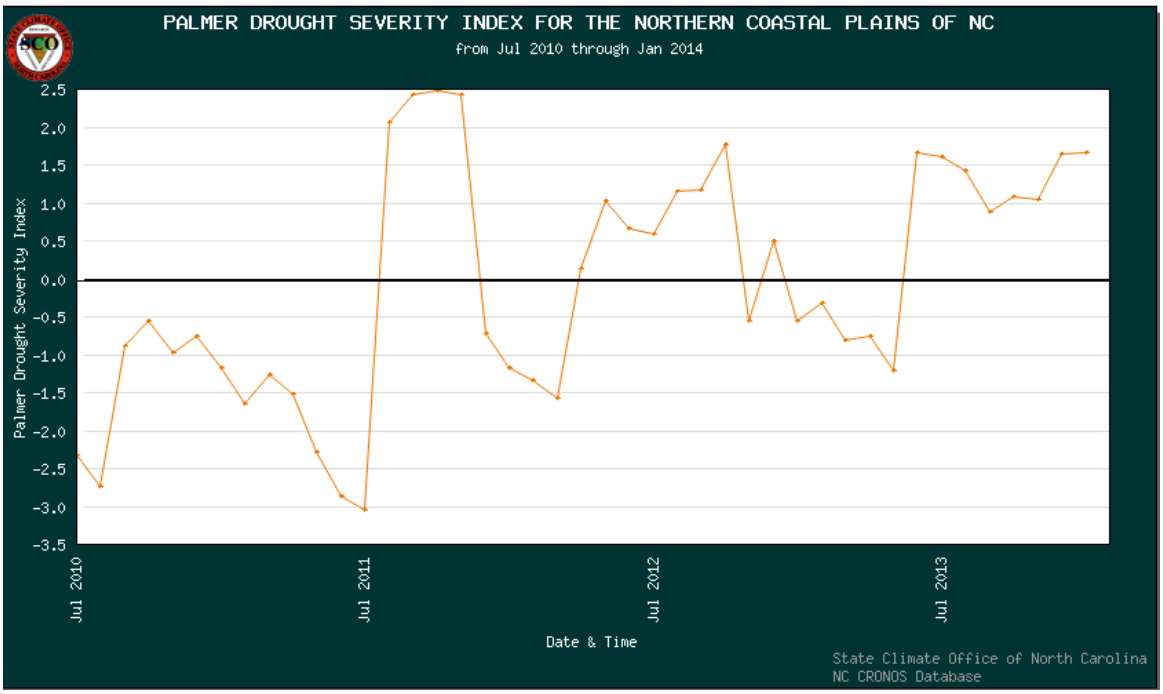


Figure 4.8 Palmer Drought Severity Index for the Northern Coastal Plains of N.C.

The PDSI graph above will be utilized to determine extent of impacts from drought. The National Climatic Data Center indicated that all the counties within the Albemarle Sound Region experienced severe drought conditions during the summer months of 2011 (-3.0 PDSI in July 2011). Drought effects are often severe. Drought can last for extended periods and it affects all citizens, businesses and government. However, there is not a strong history of droughts in the Region. The counties and municipalities within the region have the authority to restrict use of certain water resources. Based on **Table 4.13**, the likelihood of occurrence for drought is "unlikely."

Erosion/Coastal Erosion

Erosion is the gradual breakdown and movement of land due to both physical and chemical processes of water, wind, and general meteorological conditions. Natural, or geologic, erosion has occurred since the Earth's formation and continues at a very slow and uniform rate each year.

There are two types of soil erosion: wind erosion and water erosion. Wind erosion can cause significant soil loss. Winds blowing across sparsely vegetated or disturbed land can pick up soil particles and carry them through the air, thus displacing them. Water erosion can occur over land or in streams and channels. Water erosion that takes place over land may result from raindrops, shallow sheets of water flowing off the land, or shallow surface flow, which is concentrated in low spots. Stream channel erosion may occur as the volume and velocity of water flow increases enough to cause movement of the streambed and bank soils.

An area's potential for erosion is determined by four factors: soil characteristics, vegetative cover, climate or rainfall, and topography. Soils composed of a large percentage of silt and fine sand are most susceptible to erosion. As the content of these soils increases in the level of clay and organic material, the potential for erosion decreases. Well-drained and well-graded gravels and gravel-sand mixtures are the least likely to erode. Coarse gravel soils are highly permeable and have a good capacity for absorption, which can prevent or delay the amount of surface runoff. Vegetative cover can be very helpful in controlling erosion by shielding the soil surface from falling rain, absorbing water from the soil, and slowing the velocity of runoff. Runoff is also affected by the topography of the area including size, shape and slope. The greater the slope length and gradient, the more potential an area has for erosion. Climate can affect the amount of runoff, especially the frequency, intensity and duration of rainfall and storms. When rainstorms are frequent, intense, or of long duration, erosion risks are high. Seasonal changes in temperature and rainfall amounts define the period of highest erosion risk of the year.

Major storms such as hurricanes may cause significant erosion by combining high winds with heavy surf and storm surge to significantly impact the shoreline. Coastal erosion is the wearing away of the land surface by detachment and movement of soil and rock fragments, during a flood or storm over a period of years, through the action of wind, water or other geologic processes. Wind, waves and longshore currents are the driving forces behind coastal erosion. This removal and deposit of sand permanently changes beach shape and structure. Sand may be transported to land-side dunes, deep ocean trenches, other beaches and deep ocean bottoms. Additional factors involved in coastal erosion include human activity, sea-level rise, seasonal fluctuations and climate change.

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. Coastal Erosion maps for Currituck and Dare counties, as provided by the Division of Coastal Management, are included in Appendix H and Appendix I respectively.

Shoreline erosion is a natural hazard within the Albemarle 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. Given the Albemarle 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 "highly likely."

Earthquakes

An earthquake is the motion or trembling of the ground produced by sudden displacement of rock in the Earth's crust. Earthquakes result from crustal strain, volcanism, landslides, or the collapse of caverns. Earthquakes can affect hundreds of thousands of square miles; cause damage to property measured in the tens of billions of dollars; result in loss of life and injury to hundreds of thousands of persons; and disrupt the social and economic functioning of the affected area.

Most property damage and earthquake-related deaths are caused by the failure and collapse of structures due to ground shaking. The level of damage depends upon the amplitude and duration of the shaking, which are directly related to the earthquake size, distance from the fault, site and regional geology. Other damaging earthquake effects include landslides, the down-slope movement of soil and rock (mountain regions and along hillsides), and liquefaction, in which ground soil loses the ability to resist shear and flows much like quick sand. In the case of liquefaction, anything relying on the substrata for support can shift, tilt, rupture, or collapse.

Most earthquakes are caused by the release of stresses accumulated as a result of the rupture of rocks along opposing fault planes in the Earth's outer crust. These fault planes are typically found along borders of the Earth's ten tectonic plates. These plate borders generally follow the outlines of the continents, with the North American plate following the continental border with the Pacific Ocean in the west, but following the mid-Atlantic trench in the east. As earthquakes occurring in the mid-Atlantic trench usually pose little danger to humans, the greatest earthquake threat in North America is along the Pacific Coast.

The areas of greatest tectonic instability occur at the perimeters of the slowly moving plates, as these locations are subjected to the greatest strains from plates traveling in opposite directions and at different speeds. Deformation along plate boundaries causes strain in the rock and the consequent buildup of stored energy. When the built-up stress exceeds the rocks' strength, a rupture occurs. The rock on both sides of the fracture is snapped, releasing the stored energy and producing seismic waves, generating an earthquake.

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 (see Table 4.7). Each unit increase in magnitude on the Richter Scale corresponds to a ten-fold increase in wave amplitude, or a 32-fold increase in energy. Intensity is most commonly measured using the Modified Mercalli Intensity (MMI) Scale based on direct and indirect measurements of seismic effects. The scale levels are typically described using roman numerals, with an I corresponding to imperceptible (instrumental) events, IV corresponding to moderate (felt by people awake), to XII for catastrophic (total destruction). A detailed description of the Modified Mercalli Intensity Scale of earthquake intensity and its correspondence to the Richter Scale is given in Table 4.9.

Table 4.9- Richter Scale

RICHTER MAGNITUDES	EARTHQUAKE EFFECTS
Less than 3.5	Generally not felt, but recorded.
3.5–5.4	Often felt, but rarely causes damage.
Under 6.0	At most slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions.
6.1–6.9	Can be destructive in areas up to about 100 kilometers across where people live.
7.0–7.9	Major earthquake. Can cause serious damage over larger areas.
8 or greater	Great earthquake. Can cause serious damage in areas several hundred kilometers across.

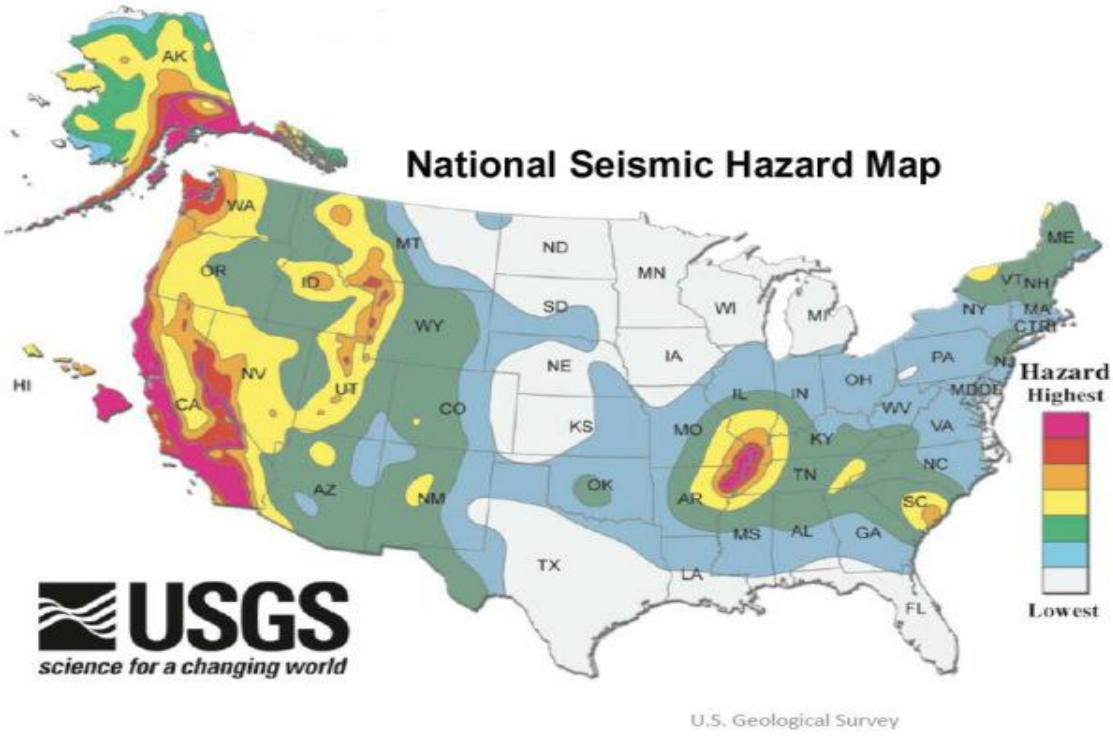
Table 4.10 - Modified Mercalli Intensity Scale for Earthquakes

SCALE	INTENSITY	DESCRIPTION OF EFFECTS	CORRESPONDING RICHTER SCALE MAGNITUDE
I	INSTRUMENTAL	Detected only on seismographs	
II	FEEBLE	Some people feel it	<4.2
III	SLIGHT	Felt by people resting; like a truck rumbling by	
IV	MODERATE	Felt by people walking	
V	SLIGHTLY STRONG	Sleepers awake; church bells ring	<4.8
VI	STRONG	Trees sway; suspended objects swing, objects fall off shelves	<5.4
VII	VERY STRONG	Mild Alarm; walls crack; plaster falls	<6.1
VIII	DESTRUCTIVE	Moving cars uncontrollable; masonry fractures, poorly constructed buildings damaged	
IX	RUINOUS	Some houses collapse; ground cracks; pipes break open	<6.9
X	DISASTROUS	Ground cracks profusely; many buildings destroyed; liquefaction and landslides widespread	<7.3
XI	VERY DISASTROUS	Most buildings and bridges collapse; roads, railways, pipes and cables destroyed; general triggering of other hazards	<8.1
XII	CATASTROPHIC	Total destruction; trees fall; ground rises and falls in waves	>8.1

Source(s): North Carolina Division of Emergency Management

Figure 4.9 is a National Seismic Hazards Map that was compiled by the U.S. Geological Survey (USGS) Geologic Hazards Team, which conducts global investigations of earthquake, geomagnetic, and landslide hazards.

Figure 4.9 - National Seismic Hazard Map



The earliest North Carolina earthquake on record is that of March 8, 1735, near Bath in Beaufort County. During the great earthquake of 1811, 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, centered in or near Charleston, SC.

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. The Albemarle region is located in the portion of North Carolina that is less susceptible to the effects of earthquakes. The likelihood of occurrence for earthquakes is "unlikely."

Tsunami

The word tsunami is Japanese and means "harbor wave." A tsunami is one or a series of great waves that are created by an earthquake, landslide, volcanic eruption, submarine earthquake or other undersea disturbances. From the area of disturbance, tsunami waves will travel outward in all directions. Tsunamis can originate hundreds or even thousands of miles away from coastal areas. A tsunami is not the same as a tidal wave.

The time between wave crests may be five to 90 minutes and the open ocean wave speed may average 450 miles per hour. As tsunami waves approach shallow coastal waters, they appear to be of normal size. Although the waves slow down as they reach shallow water, the energy remains constant. When tsunami waves crash into the shoreline, they may be as high as 100 feet. Areas at greatest risk are less than 50 feet above sea level and within one mile of the shoreline. Rapid changes in the ocean water level may indicate that a tsunami is approaching. Most deaths during a tsunami are the result of drowning. Associated risks include flooding, polluted water supplies, and damaged gas lines.

In the United States, tsunamis have historically affected the West Coast but the threat of tsunami inundation is also possible on the Atlantic 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 4.13**, the likelihood of occurrence for tsunamis in the Albemarle Region is "unlikely."

Landslides/Sinkholes

A landslide is the downward and outward movement of slope-forming soil, rock, and vegetation, which is driven by gravity. Landslides may be triggered by both natural and human-caused changes in the environment, including heavy rain, rapid snow melt, steepening of slopes due to construction or erosion, earthquakes, volcanic eruptions, and changes in groundwater levels.

There are several types of landslides: rock falls, rock topple, slides, and flows. Rock falls are rapid movements of bedrock, which result in bouncing or rolling. A topple is a section or block of rock that rotates or tilts before falling to the slope below. Slides are movements of soil or rock along a distinct surface of rupture, which separates the slide material from the more stable underlying material. Mudflows, sometimes referred to as mudslides, mudflows, lahars or debris avalanches, are fast-moving rivers of rock, earth, and other debris saturated with water. They develop when water rapidly

accumulates in the ground, such as heavy rainfall or rapid snowmelt, changing the soil into a flowing river of mud or "slurry." Slurry can flow rapidly down slopes or through channels, and can strike with little or no warning at avalanche speeds. Slurry can travel several miles from its source, growing in size as it picks up trees, cars, and other materials along the way. As the flows reach flatter ground, the mudflow spreads over a broad area where it can accumulate in thick deposits.

Landslides are typically associated with periods of heavy rainfall or rapid snow melt and tend to worsen the effects of flooding that often accompanies these events. In areas burned by forest and brush fires, a lower threshold of precipitation may initiate landslides. Some landslides move slowly and cause damage gradually, whereas others move so rapidly that they can destroy property and take lives suddenly and unexpectedly.

Among the most destructive types of debris flows are those that accompany volcanic eruptions. A spectacular example in the United States was a massive debris flow resulting from the 1980 eruptions of Mount St. Helens, Washington. Areas near the bases of many volcanoes in the Cascade Mountain Range of California, Oregon and Washington are at risk from the same types of flows during future volcanic eruptions.

Areas that are generally prone to landslide hazards include previous landslide areas; the bases of steep slopes; the bases of drainage channels; and developed hillsides where leach-field septic systems are used. Areas that are typically considered safe from landslides include areas that have not moved in the past; relatively flat-lying areas away from sudden changes in slope; and areas at the top or along ridges, set back from the tops of slopes.

In the United States, it is estimated that landslides cause up to $2 billion in damages and from 25 to 50 deaths annually. Globally, landslides cause billions of dollars in damage and thousands of deaths and injuries each year

Sinkholes are a natural and common geologic feature in areas with underlying limestone and other rock types that are soluble in natural water. Most limestone is porous, allowing the acidic water of rain to percolate through their strata, dissolving some limestone and carrying it away in solution. Over time, this persistent erosional process can create extensive underground voids and drainage systems in much of the carbonate rocks. Collapse of overlying sediments into the underground cavities produces sinkholes.

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

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

Although a sinkhole can form without warning, specific signs can signal potential development:

- Slumping or falling fence posts, trees, or foundations;

- Sudden formation of small ponds;
- Wilting vegetation;
- Discolored well water; and/or
- Structural cracks in walls, floors.

Sinkhole formation is aggravated and accelerated by urbanization. Development increases water usage, alters drainage pathways, overloads the ground surface, and redistributes soil. According to FEMA, the number of human-induced sinkholes has doubled since 1930, insurance claims for damages as a result of sinkholes has increased 1,200 percent from 1987 to 1991, costing nearly $100 million. . Based on **Table 4.13**, the likelihood of occurrence for landslides/sinkholes in the Albemarle Region is "unlikely."

Dam/Levee Failure

Worldwide interest in dam and levee safety has risen significantly in recent years. Aging infrastructure, new hydrologic information and population growth in floodplain areas downstream from dams and near levees have resulted in an increased emphasis on safety, operation and maintenance.

There are about 80,000 dams in the United States today, the majority of which are privately owned. Other owners include state and local authorities, public utilities, and federal agencies. The benefits of dams are numerous: they provide water for drinking, navigation, and agricultural irrigation. Dams also provide hydroelectric power, create lakes for fishing and recreation, and save lives by preventing or reducing floods.

Though dams have many benefits, they also can pose a risk to communities if not designed, operated, and maintained properly. In the event of a dam failure, the energy of the water stored behind even a small dam is capable of causing loss of life and great property damage if development exists downstream of the dam. If a levee breaks, scores of properties are quickly submerged in floodwaters and residents may become trapped by this rapidly rising water. The failure of dams and levees has the potential to place large numbers of people and great amounts of property in harm's way.

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 fifteen dams located in the Albemarle Region. The majority of these dams (14) are located in Hertford County and (1) in Gates County. **Table 4.11** provides information regarding those dams.

Table 4.11 – Dams

Status	Hazard Potential	County	River/Stream	River Basin
IMPOUNDING	High	Gates	Benntees Creek	Chowan
BREACHED	Low	Hertford	Hares Branch	Chowan
BREACHED	Low	Hertford	Chowan River-Tr	Chowan
EXEMPT	Low	Hertford	Deep Creek	Chowan
IMPOUNDING	High	Hertford	College Branch	Chowan
IMPOUNDING	High	Hertford	College Branch	Chowan
IMPOUNDING	High	Hertford	College Branch	Chowan
EXEMPT-HB_SIZE	Low	Hertford	Whiteoak Swamp-Tr	Chowan
BREACHED	Low	Hertford	Hares Branch	Chowan
EXEMPT-HB_SIZE	Intermediate	Hertford	Meherrin River-Tr	Chowan
EXEMPT-HB_SIZE	Low	Hertford	Potecasi Creek-Tr	Chowan
EXEMPT-HB_SIZE	Low	Hertford	Banks Creek-Tr	Chowan
EXEMPT-HB_SIZE	Low	Hertford	Buckhorn Creek-Tr	Chowan
EXEMPT-HB_SIZE	Low	Hertford	Tp-Potecasi Creek	Chowan
EXEMPT-HB_SIZE	Low	Hertford	Meherrin River	Chowan

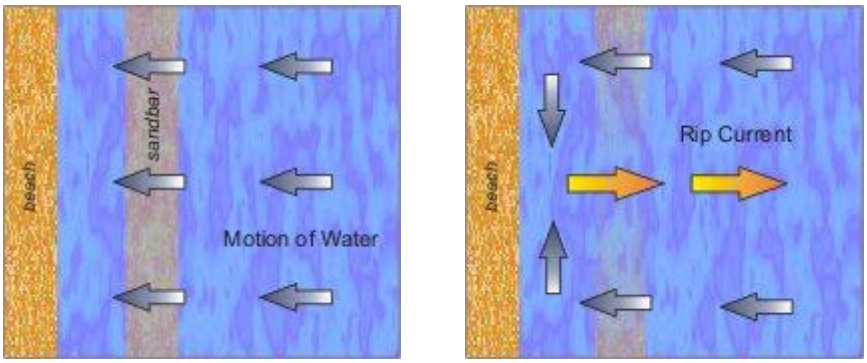
Source: NC Dam Safety Program

Eight (8) 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. Ten of the fifteen dams have a low hazard classification, one has an intermediate classification, and four 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 Albemarle Sound region. Thus, no data has been reported regarding this issue. In the event of a dam breech 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 Albemarle Region is "unlikely."

Rip Currents

Rip currents are the leading cause of aquatic rescues in the United States. Of the 604 rescues in 2013 in North Carolina, as reported by the United States Lifesaving Association, 366 of the rescues were a result of rip currents. Rip currents are channels of water running seaward from the shore through holes in the sandbar. Rip currents do not pull down, but they do flow out, and while they vary in strength and size, they often are too strong to allow swimmers to swim back through them to shore. Rip currents can change throughout the seasons depending on how water movement affects the topography of the sandbar. Generally speaking, rip currents only pull 20 to 50 yards off-shore, depending on where the sandbar is located.



Source: NWS Southern Region Headquarters

Rip currents can be found on many surf beaches every day. Under most tide and sea conditions the speeds are relatively slow. However, under certain wave, tide, and beach profile conditions the speeds can quickly increase to become dangerous to anyone entering the surf. The strength and speed of a rip current will likely increase as wave height and wave period increase. They are most likely to be dangerous during high surf conditions as the wave height and wave period increase. Rip currents most typically form at low spots or breaks in sandbars, and also near structures such as groins, jetties and piers. Rip currents can be very narrow or extend in widths to hundreds of yards.

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.

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. **Table 4.12** provides a description of the rip currents which have occurred in the Albemarle Region since 2004.

Table 4.12

Location	St.	Date	Type	Deaths
NAGS HEAD	NC	8/5/2004	Rip Current	1
COROLLA	NC	9/22/2004	Rip Current	1
COROLLA	NC	9/23/2004	Rip Current	1
KILL DEVIL HILLS	NC	5/27/2005	Rip Current	1
NAGS HEAD	NC	6/22/2005	Rip Current	1
EASTERN DARE (ZONE)	NC	9/22/2006	Rip Current	1
EASTERN HYDE (ZONE)	NC	5/27/2007	Rip Current	1
EASTERN DARE (ZONE)	NC	7/1/2007	Rip Current	1
EASTERN HYDE (ZONE)	NC	7/4/2007	Rip Current	1
EASTERN DARE (ZONE)	NC	7/24/2009	Rip Current	1
EASTERN DARE (ZONE)	NC	9/18/2009	Rip Current	1
WESTERN HYDE (ZONE)	NC	8/7/2010	Rip Current	1
EASTERN DARE (ZONE)	NC	6/20/2012	Rip Current	1
EASTERN DARE (ZONE)	NC	6/26/2013	Rip Current	0

Source: National Climatic Data Center

As show in Table 4.12, 2004 and 2007 were the most active years for Rip Currents in the Albemarle Region. There were three Rip Current events reported in both 2004 and 2007 with a total of 6 fatalities. The probability of rip currents impacting the Albemarle Region coastline is “highly likely” (see Table 4.13).

Non-Natural Hazards

Terrorism

Terrorism is not new, and even though it has been used since the beginning of recorded history it can be relatively hard to define. Terrorism has been described variously as both a tactic and strategy; a crime and a holy duty; justified reaction to oppression and an inexcusable abomination. Obviously, a lot depends on whose point of view is represented.

Terrorism has often been an effective tactic for the weaker side in a conflict. As an asymmetric form of conflict, it confers coercive power with many of the advantages of military force at a fraction of the cost. Due to the secretive nature and small size of terrorist organizations, they often offer opponents no clear organization to defend against or to deter.

The National Strategy for Homeland Security characterizes terrorism as any premeditated, unlawful act dangerous to human life or public welfare that is intended to intimidate or coerce civilian populations or governments. This description captures the core concepts shared by the various definitions of terrorism contained in the U.S. Code, each crafted to achieve a legal standard of specificity and clarity. This description covers kidnappings; hijackings; shootings; conventional bombings; attacks involving chemical, biological, radiological, or nuclear weapons; cyber-attacks; and any number of other forms of malicious violence. Terrorists can be U.S. citizens or foreigners, acting in concert with others, on their own, or on behalf of a hostile state

Description

There are three perspectives of terrorism: the terrorist's, the victim’s and the general publics'. The phrase "one man’s terrorist is another man’s freedom fighter" is a view terrorist themselves would

accept. Terrorist do not see themselves as evil. They believe they are legitimate combatants, fighting for what they believe in, by whatever means possible. A victim of a terrorist act sees the terrorist as a criminal with no regard for human life. The general publics' view is the most unstable. The terrorists take great pains to foster a "Robin Hood" image in hope of swaying the general publics' point of view toward their cause. This sympathetic view of terrorism has become an integral part of their psychological warfare and needs to be countered vigorously.

Terrorism has demonstrated increasing abilities to adapt to counter-terrorism measures and political failure. Terrorists are developing new capabilities of attack and improving the efficiency of existing methods. Additionally, terrorist groups have shown significant progress in escaping from a subordinate role in nation-state conflicts, and becoming prominent as international influences in their own right. They are becoming more integrated with other sub-state entities, such as criminal organizations and legitimately chartered corporations, and are gradually assuming a measure of control and identity with national governments. Terrorists are improving their sophistication and abilities in virtually all aspects of their operations and support. The aggressive use of modern technology for information management, communications and intelligence has increased the efficiency of these activities. Weapons technology has become more increasingly available, and the purchasing power of terrorist organizations is on the rise. The ready availability of both technology and trained personnel to operate it for any client with sufficient capital allows the well-funded terrorist to equal or exceed the sophistication of governmental counter-measures. Likewise, due to the increase in information outlets and competition with increasing numbers of other messages, terrorism now requires a greatly increased amount of violence or novelty to attract the attention it now requires. The tendency of major media to compete for ratings and the subsequent revenue realized from increases in their audience size and share produce pressures on terrorists to increase the impact and violence of their actions to take advantage of the sensationalism terrorist violence requires.

Terrorism in the Albemarle Region

There has never been an act of Terrorism in Albemarle Region, however given the number of visitors to the many national sites/monuments in the region and the ability of terrorist to strike at will in most any area it is prudent for the communities in the Albemarle Region to recognize the terrorist threat. Built into several county Emergency Response Plans is the ability to respond to all hazards emergency situations. The Albemarle Regional hazard mitigation risk table includes terrorism as a potential hazard and this category includes mass casualties/active shooters and cyber security attacks to reflect the potential for internet viruses and other cyber threats to government computer systems and private sectors systems.

<u>Transportation (Bridge) and Transportation Infrastructure Impacts</u>

The loss of any bridge would be described as the physical interruption of travel on the roadway, either man-made or natural. The Albemarle Region contains several waters bodies that have bridge crossings, including the Albemarle Sound, the Croatan Sound, the Roanoke Sound, the Currituck Sound, Oregon Inlet, the Pasquotank River, the Perquimans River and the Chowan River. Access to the area is gained by crossing bridges making the loss of any bridge a potential economic disaster to the area. Identifying a bridge as a natural hazard may be misunderstood, but in terms of economic loss as described in the analysis determining what is considered as a disaster, the Mitigation Planning team felt this was representative.

Loss of Bridge Use in the Albemarle Region

The following events can be used to demonstrate this:

- The Croatan Sound Bridge was closed for approximately 10 weeks in 1986 due to a vessel striking the bridge and collapsing the navigation span.
- The Oregon Inlet Bridge was closed for approximately three weeks in 1988 when a section of the bridge collapsed due to maintenance problems.
- The Oregon Inlet Bridge was closed for six months in 1990 when a dredge collapsed a span in the bridge.
- In December 2013, the Oregon Inlet Bridge was closed for several weeks to allow emergency bridge piling work after NCDOT discovered extensive scouring had occurred around some of the bridge support pilings.

This category was expanded by the Albemarle Regional Hazard Mitigation Planning team to include transportation infrastructure and not just bridge closures. There have been several storm events on Hatteras Island that have resulted in the loss of sections of NC 12 Highway through Pea Island. A temporary steel bridge was installed after Hurricane Irene demolished sections of NC 12. The road was closed for several weeks until repairs could be made to NC 12 which included the construction of temporary steel bridge in a portion of the damaged highway. There are also several Ferry routes in the Region that are impacted during hazard events and the loss of these important transportation routes will similarly impact the local economy. These include the Knotts Island Ferry in Currituck County and the Hatteras Island Ferry in Dare County. Also included is the emergency ferry route between Stumpy Point and Hatteras Island that is used during emergency situations.

Pandemic and Public Health Events

According to the World Health Organization (WHO), a pandemic is an epidemic of infectious disease that spreads through populations across a large region; for instance a continent, or even the world. A pandemic can start when three conditions have been met:

- Emergence of a disease new to a population. Agents infect humans, causing serious illness.
- Agents infect humans, causing serious illness.
- Agents spread easily and sustainably among humans.

A pandemic occurs when a new virus appears against which the human population has no immunity, resulting in epidemics world-wide with enormous numbers of deaths and illness. With the increase in global transport, as well as urbanization and overcrowded conditions, epidemics due to the new influenza virus are likely to quickly take hold around the world. If an influenza pandemic were to occur today, we could expect: The pandemic virus to spread rapidly due to the high level of global traffic. Vaccines, antiviral agents and antibiotics to treat secondary infections to be in short supply, with a period of several months before vaccine becomes available.

Medical facilities to be overwhelmed with demands to care for both influenza and non-influenza patients. Widespread illness to result in sudden and potentially significant shortages of personnel to provide essential community services. In the past, pandemics have resulted in increased morbidity and mortality and great social disruption. In the 20th century, the most severe pandemic occurred in 1918 and caused an estimated 40-50 million deaths worldwide. Current epidemiological models project that a pandemic could result in 2 to 7.4 million deaths globally.

In addition to pandemics, other public health events can occur. During the 2014 annual summary meeting of the Dare County Hazard Mitigation Planning Committee, it was noted that these events should be added to the list of hazards that may impact Dare County. Wide-spread contamination of public water supplies is one such example.

Pandemic and Public Health Events in the Albemarle Region

There have been no recorded Pandemics outbreaks or public health events in the Albemarle Region to date.

The table below shows the Hazard Identification and corresponding Hazard Index scores. In Bold are the most threatening natural hazards to Albemarle Region.

Table 4.13 HAZARDS RANKING

Hazard Type	Likelihood of Occurance (Highly Likely, Likely, Possible, Unlikely)	Intensity Rating (Relative Terms)	Impacts (Catostrophic, Critical, Limited, Negligible)	Conclusion Rank
Earthquake	Unlikely	Low	Negligible	2
Floods	**Highly Likely**	**High**	**Critical**	**5**
Hurricanes	**Highly Likely**	**High**	**Catostrophic**	**5**
Land Slides	Unlikely	Low	Negligible	1
Nor'Easters	**Highly Likely**	**High**	**Critical**	**4**
Thunderstorms	Highly Likely	Moderate	Negligible	2
Tornadoes	Possible	Moderate	Limited	3
Wildfires	Likely	Moderate	Limited	4
Winterstorms	Likely	Moderate	Limited	3
Dam/Levee Failure	Unlikely	Moderate	Limited	2
Tsunami	Unlikely	High	Critical	1
Erosion	**Highly Likely**	**Moderate**	**Critical**	**5**
Rip Currents	Highly Likely	High	Limited	3
Drought	Unlikely	Low	Negligible	1
Bridge Collapse	Possible	Moderate	Critical	3
Transportation Infrastructre Impacts	Possible	Moderate	Critical	3
Terrorism Event	Unlikely	Low	Negligible	1
Active Shooter/Mass Casualties	Possible	Moderate	Critical	3
Cyber Security Attacks	Likely	High	Critical	4
Pandemic Event	Unlikely	Moderate	Critical	1
Public Health Event	Possible	Moderate	Critical	2

Likelihood of Occurrence estimates the likelihood of each type of hazard occurring in the Albemarle Region. Highly

likely= near 100% probably in the next year. Likely = between 10 and 100% probability in the next 100 years. Possible=between 1 and 10% probability in the next year, or at least one chance in the next 100 years. Less than 1% probability in the next year, or at least one chance in the next 100 years.

Intensity Rating varying levels of potential intensity using relative terms.

Impacts describe a combination of the severity of the event, its magnitude, and the density of human activity in the affected areas. Catastrophic= >50% magnitude, multiple deaths, complete shutdown of critical facilities for >30 days, >50% of property is severely damaged. Critical= 25% to 50% magnitude, multiple severe injuries, complete shutdown of critical facilities for >13 days, >25% of property is severely damaged. Limited= 10% to 25% magnitude, some injuries, complete shutdown of critical facilities for >7 days, >10 % of property is severely damaged. Negligible= <10% magnitude, minor injuries, shutdown of critical facilities for <24 hours, <10% of property is severely damaged.

Section 5: Vulnerabilities Assessment

5.1 Introduction

This section of the Hazard Mitigation Plan will assist with gauging the present level of vulnerability throughout the Albemarle 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. Due to the inconsistency of available data resources, the data presented for each County varies. However, the presentation of the information is consistent in an effort to allow efficient updating of the plan.

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

This section of the plan 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 4 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.

5.2 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 quality of this data will 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 previous plan. One of the primary reasons that the data has been complied 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.

Vulnerability to Non-Specific Hazards

Several of the hazards outlined within Section 4 result in impacts that are not geographically targeted at a specific area or portion of the Counties. The following hazards typically impact the entire Albemarle Region with certain events having significant impacts on specific portions of each participating jurisdiction: Nor'easters, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion, Drought/Heat Waves, Dam/Levee Failure and Rip Currents. 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.

The following provides an overview of development vulnerability with respect to non-specific hazards throughout the Albemarle Region:

Camden County Existing Vulnerability

	Developed			Undeveloped		
Location	# of Parcels	Acreage	Total Value	# of Parcels	Acreage	Total Value
Camden County	4,052	43,891	$1,002,711,391	3,239	142,884	$409,696,160

Camden County Future Vulnerability

Currently, Camden County does not have the future land use 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.

Chowan County Existing Vulnerability

	Developed			Undeveloped		
Location	# of Parcels	Acreage	Total Value	# of Parcels	Acreage	Total Value
Chowan County (Unincorporated)	7,184	5,418	$1,289,076,415	5,229	68,311	$189,513,929
Edenton	2,515	4,739	610336107	746	5,897	39971906

Chowan County Future Vulnerability

Currently, Chowan County does not have the future land use 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.

Currituck County Existing Vulnerability

	Developed			Undeveloped		
Location	# of Parcels	Acreage	Total Value	# of Parcels	Acreage	Total Value
Currituck County	16,133	46,012	$5,409,635,700	8,734	117,203	$1,275,911,900

Currituck County Future Vulnerability

The Currituck County Land Use plan was adopted in 2006 and amended in 2008 and 2009. This plan established Future Land Use classifications for the properties located throughout the county. The Future Land Use GIS data provided by Currituck County was used for this analysis.

Undeveloped Land			
Future Land Use Category	Acreage	Land Value	% of Total County
Conservation	48,476	$338,186,500.00	41.36%
Full Service	11,729	$465,050,300.00	10.01%
Limited Service	18,339	$328,786,300.00	15.65%
Rural	38,659	$143,202,600.00	32.98%
Total	117,203	$1,275,225,700.00	

Dare County Existing Vulnerability

	Developed			Undeveloped		
Location	# of Parcels	Acreage	Total Value	# of Parcels	Acreage	Total Value
Dare County (Unincorporated)	10,968	28,175	$4,134,129,900	5,917	191,658	$972,636,700
Duck	2,226	1,063	$1,413,368,100	455	232	$76,731,100
Kill Devil Hills	5,775	1,974	$1,752,751,900	1,177	1,140	$162,041,100
Kitty Hawk	2,502	1,792	$920,425,300	991	2,865	$91,706,900
Manteo	746	440	$414,007,600	284	611	$32,398,300
Nags Head	4,484	2,636	$2,098,215,800	1,013	6,082	$266,585,500
Southern Shores	2,411	1,671	$1,178,210,700	619	544	$122,646,700

Dare County Future Vulnerability

Currently, Dare County does not have the future land use 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.

Gates County Existing Vulnerability

	Developed			Undeveloped		
Location	# of Parcels	Acreage	Total Value	# of Parcels	Acreage	Total Value
Gates County (Unincorporated)	4,737	39,108	$711,724,803	4,532	64,911	$153,145,882
Gatesville	200	384	$42,733,746	60	382	$1,807,760

Gates County Future Vulnerability

Currently, Gates County does not have the future land use 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.

Hertford County Existing Vulnerability

	Developed			Undeveloped		
Location	# of Parcels	Acreage	Total Value	# of Parcels	Acreage	Total Value
Hertford County (Unincorporated)	5,256	72,738	$700,359,329	4,346	16,321	$210,982,915
Ahoskie	2,320	2,706	$363,304,713	895	46,994	$20,237,315
Como	50	1,029	$5,687,073	21	1,706	$2,075,432
Colfield	192	1,099	$24,643,196	164	2,068	$3,540,610
Harrellsville	80	987	$7,129,567	28	14	$245,978
Murfreesboro	1,603	2,585	$220,652,714	576	4,626	$13,878,616
Winton	362	387	$37,623,088	127	342	$1,607,014

Hertford County Future Vulnerability

Currently, Hertford County does not have the future land use 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.

Pasquotank County Existing Vulnerability

	Developed			Undeveloped		
Location	# of Parcels	Acreage	Total Value	# of Parcels	Acreage	Total Value
Pasquotank County (Unincorporated)	7,762	35,678	$1,424,562,300	4,184	94,151	$358,192,000
Elizabeth City	7,581	5,778	$1,437,519,908	2,252	5,046	$128,304,900

Pasquotank County Future Vulnerability

Currently, Pasquotank County does not have the future land use 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.

Perquimans County Existing Vulnerability

	Developed			Undeveloped		
Location	# of Parcels	Acreage	Total Value	# of Parcels	Acreage	Total Value
Perquimans County (Unincorporated)	4,299	14,853	859,781,301	8,277	87,939	374,983,900
Hertford	900	1,165	$165,838,500	433	2,541	$18,814,802
Winton	299	481	$63,773,200	262	2,001	$9,376,500

Perquimans County Future Vulnerability

Currently, Perquimans County does not have the future land use 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

5.3 VULNERABILITY TO FLOODING

Flooding primarily impacts the Albemarle Region during Hurricanes and tropical storm, Nor'easters, thunderstorm events and heavy rains. The following section provides an analysis of vulnerability for properties within the Region's 100 year floodplain and provides an overview of the impacts associated with: riverine flooding, hurricanes/tropical storms, and storm surge.

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", "AE", and "VE" are considered to be high- risk flood zones, as there is a 1% or greater chance of flooding each year. Additionally, the "VE" zone is extremely hazardous due to the influence of wave action in these areas. A complete description of the FEMA Flood zones is located in Section4. The following information shows the acreage within each County located within a flood hazard area. Table 5.1 provides the acreage within each county located with these flood hazard areas.

Table 5.1 – Albemarle Region Flood Hazard Areas

	Zone A	Zone AE	Zone VE
Camden County	32,143	79,703	
Chowan County	164	47,760	
Currituck County	4,294	123,596	70,541
Dare County	25	268,233	126,630
Gates County	22,830	48,575	
Hertford County		45,996	
Pasquotank County	7,346	49,570	
Perquimans County	4,743	39,717	

Flood Zones Calculated in Acres

Camden County Existing Floodplain Vulnerability

The following provides an overview of existing conditions for portions of Camden County located within a defined flood hazard area. (Zones A and AE)

	Developed				Undeveloped		
Location	# of Parcels	Acreage	Building Value	Total Value	# of Parcels	Acreage	Total Value
Camden County	2,025	28,038	316,894,026	518,786,089	2,264	106,599	257,642,681

Camden County Future Floodplain Vulnerability

Currently, Camden County does not have the future land use information required to perform a detailed analysis of potential future conditions in relation to the flood 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.

Chowan County Existing Floodplain Vulnerability

The following provides an overview of existing conditions for portions of Chowan County located within a defined flood hazard area. (Zones A and AE)

	Developed				Undeveloped		
Location	# of Parcels	Acreage	Building Value	Total Value	# of Parcels	Acreage	Total Value
Chowan County	5,418	15,232	625,248,087	737,987,039	12,043	33,230	85,828,170
Edenton	527	3,676	168,751,202	221,454,506	155	3,551	14,118,202

Chowan County Future Floodplain Vulnerability

Currently, Chowan County does not have the future land use information required to perform a detailed analysis of potential future conditions in relation to the flood 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.

Currituck County Existing Floodplain Vulnerability

The following provides an overview of existing conditions for portions of Currituck County located within a defined flood hazard area. (Zones A, AE and VE)

	Developed				Undeveloped		
Location	# of Parcels	Acreage	Building Value	Total Value	# of Parcels	Acreage	Total Value
Currituck County	8,601	32,781	1,746,476,500	3,553,310,100	4,635	71,639	643,656,300

Currituck County Future Vulnerability

The following provides an overview of potential future vulnerabilities for undeveloped portions of Currituck County located within a defined flood hazard area. (Zones A, AE and VE)

Undeveloped Land			
Future Land Use Category	Acreage	Land Value	% of Total County
Conservation	42,183	$232,978,200.00	58.90%
Full Service	3,612	$155,847,200.00	5.04%
Limited Service	10,602	$207,833,400.00	14.80%
Rural	15,220	$46,997,500.00	21.25%
Total	71,617	$643,656,300.00	

Dare County Existing Floodplain Vulnerability

The following provides an overview of existing conditions for portions of Dare County located within a defined flood hazard area. (Zones A, AE and VE)

	Developed				Undeveloped		
Location	# of Parcels	Acreage	Building Value	Total Value	# of Parcels	Acreage	Total Value
Dare County	9,799	27,412	1,849,483,000	3,873,104,100	5,344	191,060	937,944,100
Duck	1,216	733	372,637,600	932,482,700	271	166	51,863,200
Kill Devil Hills	4,309	1,646	734,155,700	1,462,959,600	805	963	131,322,600
Kitty Hawk	1,785	1,469	336,956,800	654,080,600	746	2,836	67,823,100
Manteo	746	440	250,295,600	414,007,600	283	611	32,326,100
Nags Head	3,620	2,361	838,142,400	1,831,212,400	821	5,992	249,968,100
Southern Shores	1,428	1,156	375,004,800	813,983,000	373	377	87,662,300

Dare County Future Vulnerability

Currently, Dare County does not have the future land use information required to perform a detailed analysis of potential future conditions in relation to the flood 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.

Gates County Existing Floodplain Vulnerability

The following provides an overview of existing conditions for portions of Gates County located within a defined flood hazard area. (Zones A and AE)

	Developed				Undeveloped		
Location	# of Parcels	Acreage	Building Value	Total Value	# of Parcels	Acreage	Total Value
Gates County	574	17,798	64,628,331	138,436,735	615	71,724	101,806,893
Gatesville	28	218	6,299,693	9,072,764	12	286	993,980

Gates County Future Floodplain Vulnerability

Currently, Gates County does not have the future land use information required to perform a detailed analysis of potential future conditions in relation to the flood 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.

Hertford County Existing Floodplain Vulnerability

The following provides an overview of existing conditions for portions of Hertford County located within a defined flood hazard area. (Zones A and AE)

	Developed				Undeveloped		
Location	# of Parcels	Acreage	Building Value	Total Value	# of Parcels	Acreage	Total Value
Hertford County	639	6,899	153,872,703	231,715,510	977	91,180	90,228,462
Ahoskie	70	1,003	15,427,715	19,811,085	109	2,714	6,294,165
Como	-	-	-	-	-	-	-
Colfield	3	307	42,739	282,303	5	301	205,065
Harrellsville	-	-	-	-	-	-	-
Murfreesboro	36	664	15,653,327	19,176,544	54	1,920	3,572,295
Winton	16	77	6,087,115	7,823,964	3	4	36,907

Hertford County Future Floodplain Vulnerability

Currently, Hertford County does not have the future land use information required to perform a detailed analysis of potential future conditions in relation to the flood 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.

Pasquotank County Existing Floodplain Vulnerability

The following provides an overview of existing conditions for portions of Pasquotank County located within a defined flood hazard area. (Zones A and AE)

	Developed				Undeveloped		
Location	# of Parcels	Acreage	Building Value	Total Value	# of Parcels	Acreage	Total Value
Pasquotank County	4,963	18,201	564,648,803	838,802,706	2,558	43,758	162,227,100
Elizabeth City	3,928	2,946	524,496,804	768,175,708	1,161	3,049	62,887,300

Pasquotank County Future Floodplain Vulnerability

Currently, Pasquotank County does not have the future land use information required to perform a detailed analysis of potential future conditions in relation to the flood 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.

Perquimans County Existing Floodplain Vulnerability

The following provides an overview of existing conditions for portions of Perquimans County located within a defined flood hazard area. (Zones A and AE)

	Developed				Undeveloped		
Location	# of Parcels	Acreage	Building Value	Total Value	# of Parcels	Acreage	Total Value
Perquimans County	1,087	6,754	131,203,880	233,080,400	1,863	30,724	106,739,100
Hertford	24	209	5,148,600	7,554,800	82	744	6,708,300
Winfall	14	163	3,164,500	8,976,900	29	443	1,742,500

Perquimans County Future Floodplain Vulnerability

Currently, Perquimans County does not have the future land use information required to perform a detailed analysis of potential future conditions in relation to the flood 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.

5.4 VULNERABILITY TO STORM SURGE

Maps included in Appendix A graphically depict the Sea, Lake and Overland Surge from Hurricanes (SLOSH) model runs for both slow moving and fast moving Hurricanes. SLOSH is a computerized model run by the National Weather Service to estimate storm surge heights resulting from hypothetical hurricanes by taking into account the maximum of various category hurricanes as determined by pressure, size, forward speed and sustained winds. For the regional analysis, storm were categorized into three groups - Category 1&2, Category 3 and Category 4&5- for both fast and slow approaches. The SLOSH model should be seen as defining the "worst case scenario" of potential maximum surge for particular locations as opposed to the regional impact of one singular storm surge event.

Camden County Existing Storm Surge Vulnerability

The following provides an overview of existing conditions for portions of Camden County that are impacted by potential storm surge generated by both slow and fast approaching storms.

	Developed Land					
	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	1,091	810	1,860	250	1,634	2,630
Acreage	9,290	4,068	20,147	1,576	45,297	25,218
Building Value	185,961,683	108,344,919	285,654,412	35,943,840	138,624,059	384,679,197
Total Assessed Value	325,367,738	171,151,125	478,037,031	66,342,937	399,936,340	38,568,725
	Undeveloped Land					
	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	1,625	552	924	756	1,634	1,441
Acreage	50,021	10,163	53,856	27,563	27,442	59,796
Land Value	153,988,673	76,957,079	155,158,688	32,459,030	251,456,210	205,348,558

Camden County Future Floodplain Vulnerability

Currently, Camden County does not have the future land use 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.

Chowan County Existing Storm Surge Vulnerability

The following provides an overview of existing conditions for portions of Chowan County that are impacted by potential storm surge generated by both slow and fast approaching storms.

Developed Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	1,091	810	1,860	250	1,634	2,630
Acreage	9,290	4,068	20,147	1,576	45,297	25,218
Building Value	185,961,683	108,344,919	285,654,412	35,943,840	138,624,059	384,679,197
Total Assessed Value	325,367,738	171,151,125	478,037,031	66,342,937	399,936,340	38,568,725

Undeveloped Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	1,625	552	924	756	1,634	1,441
Acreage	50,021	10,163	53,856	27,563	27,442	59,796
Land Value	153,988,673	76,957,079	155,158,688	32,459,030	251,456,210	205,348,558

Chowan County Future Floodplain Vulnerability

Currently, Chowan County does not have the future land use 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.

Currituck County Existing Storm Surge Vulnerability

The following provides an overview of existing conditions for portions of Currituck County that are impacted by potential storm surge generated by both slow and fast approaching storms.

Developed Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	6,606	5,665	3,192	6052	6,078	3,668
Acreage	28,268	10,225	6,412	25804	12,503	7,344
Building Value	1,052,325,600	1,087,638,900	710,629,900	1,083,836,200	1,247,567,700	580,675,500
Total Assessed Value	1,994,846,300	1,862,042,300	1,339,114,800	2,139,458,900	2,240,509,500	933,296,700

Undeveloped Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	669	92	1,444	89	81	928
Acreage	15,751	591	13,731	1,571	894	21,375
Land Value	61,367,213	2,025,142	48,983,322	7,116,558	5,417,530	71,610,889

Currituck County Future Storm Surge Vulnerability

The following provides an overview of potential future vulnerabilities for undeveloped portions of Currituck County as impacted by slow and fast moving storms.

Slow Moving	Category 1-2		Category 3		Category 4-5	
Land Use Category	Acreage	Land Value	Acreage	Land Value	Acreage	Land Value
Conservation	40,242	$ 192,408,700	4,198	$ 115,921,600	3,078	$ 27,772,300
Full Service	4,745	$ 239,251,900	4,745	$ 239,251,900	997	$ 98,856,900
Limited	10,125	$ 111,584,000	3,043	$ 121,415,000	4,827	$ 90,619,900
Rural	20,391	$ 63,406,200	11,340	$ 49,757,900	6,807	$ 28,674,100

Fast Moving	Category 1-2		Category 3		Category 4-5	
Land Use Category	Acreage	Land Value	Acreage	Land Value	Acreage	Land Value
Conservation	42,045	$ 305,009,900	4,573	$ 28,297,100	1,650	$ 4,109,400
Full Service	5,453	$ 205,313,600	4,847	$ 199,380,500	1,408	$ 53,537,800
Limited	10,327	$ 204,558,000	2,337	$ 67,382,000	5,267	$ 53,668,700
Rural	19,348	$ 63,412,900	8,346	$ 43,310,100	10,908	$ 35,468,400

Dare County Existing Storm Surge Vulnerability

The following provides an overview of existing conditions for portions of Dare County that are impacted by potential storm surge generated by both slow and fast approaching storms.

Developed Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	13,962	4,292	8,188	12,248	9,390	4,016
Acreage	20,841	5,414	10,482	31,215	3,630	1,724
Building Value	2,633,947,500	786,698,900	1,974,548,600	2,846,411,600	1,649,638,000	777,027,200
Total Assessed Value	4,675,451,800	1,752,163,000	4,619,689,400	6,322,145,900	3,144,768,200	1,394,292,000

Undeveloped Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	6,002	1,305	2,353	5,953	2,300	1,203
Acreage	101,270	38,285	8,388	199,858	2,088	1,231
Land Value	566,287,500	560,970,900	508,811,700	1,252,873,700	270,208,100	117,207,400

Dare County Future Storm Surge Vulnerability

Currently, Dare County does not have the future land use 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.

Gates County Existing Storm Surge Vulnerability

The following provides an overview of existing conditions for portions of Gates County that are impacted by potential storm surge generated by both slow and fast approaching storms.

Developed Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	67	14	104	14	10	101
Acreage	3,357	1,111	1,701	228	309	4,429
Building Value	9,052,619	1,538,589	7,727,864	2,909,625	791,452	10,291,958
Total Assessed Value	21,977,849	5,188,482	16,623,172	3,877,351	1,438,908	29,004,714

Undeveloped Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	126	6	92	21	26	146
Acreage	40,142	162	3,054	9,912	16,031	16,289
Land Value	25,651,300	379,422	8,416,386	2,936,995	3,406,204	25,318,891

Gates County Future Floodplain Vulnerability

Currently, Gates County does not have the future land use 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.

Hertford County Existing Storm Surge Vulnerability

The following provides an overview of existing conditions for portions of Hertford County that are impacted by potential storm surge generated by both slow and fast approaching storms.

Developed Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	34	224	57	146	71	69
Acreage	9,246	9,562	2,755	9,199	221	10,891
Building Value	3,885,900	41,558,265	6,876,932	35,675,213	6,315,900	5,148,355
Total Assessed Value	14,550,809	67,003,673	12,158,919	56,367,023	10,634,804	19,121,877

Undeveloped Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	29	211	62	172	47	46
Acreage	5,163	25,311	5,896	26,417	1,662	5,938
Land Value	3,570,576	23,383,747	5,943,833	23,009,874	2,923,180	4,709,283

Hertford County Future Floodplain Vulnerability

Currently, Hertford County does not have the future land use 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.

Pasquotank County Existing Storm Surge Vulnerability

The following provides an overview of existing conditions for portions of Pasquotank County that are impacted by potential storm surge generated by both slow and fast approaching storms.

Developed Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	2,860	3,038	7,122	577	1,427	9,262
Acreage	16,153	2,065	14,294	933	2,453	24,718
Building Value	593,170,404	262,688,200	1,216,136,400	86,944,103	141,370,300	1,300,367,401
Total Assessed Value	872,613,608	349,442,100	1,216,136,400	136,564,106	211,311,700	1,851,940,502

Undeveloped Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	2,021	987	2,166	2,021	623	3,556
Acreage	31,741	4,463	26,016	31,741	6,563	44,839
Land Value	142,119,100	35,390,700	160,412,700	142,119,100	31,723,100	259,681,800

Pasquotank County Future Floodplain Vulnerability

Currently, Pasquotank County does not have the future land use 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.

Perquimans County Existing Storm Surge Vulnerability

The following provides an overview of existing conditions for portions of Perquimans County that are impacted by potential storm surge generated by both slow and fast approaching storms.

Developed Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	1,372	431	2,236	40	749	1,592
Acreage	5,388	121	6,227	21	149	6,959
Building Value	230,050,180	54,255,210	292,963,580	3,508,500	108,486,150	265,370,740
Total Assessed Value	400,743,900	80,807,200	399,830,200	6,427,000	175,121,200	425,526,900

Undeveloped Land

	Hurricance Storm Surge (Slow) Cat 1-2	Hurricance Storm Surge (Slow) Cat 3	Hurricance Storm Surge (Slow) Cat 4-5	Hurricance Storm Surge (Fast) Cat 1-2	Hurricance Storm Surge (Fast) Cat 3	Hurricance Storm Surge (Fast) Cat 4-5
# of Parcels	5,498	1,302	3,525	114	1,448	2,698
Acreage	16,499	723	26,269	115	564	31,584
Land Value	319,825,500	19,434,900	12,159,800	3,809,400	46,204,900	154,506,200

Perquimans County Future Storm Surge Vulnerability

Currently, Perquimans County does not have the future land use 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

5.5 CRITICAL FACILITIES

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 Albemarle 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. Also included in this list are schools and universities which are often used as emergency shelters. Following are lists of the most critical facilities for Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans (including all participating municipalities).

Camden County		
Facility	Physical Address	City
Camden County Sheriffs Department	117 North State Highway 343	Camden
North Carolina Division Of Parks - Dismal Swamp State Park	2294 United States Highway 17 North	South Mills
North Carolina Division Of Forest Resources District 7 - Camden County	941 NC Highway 343 South	Shiloh
South Mills Volunteer Fire Department	127 Keeter Barn Road	South Mills
South Camden Fire Department Station 12	114 Sawyers Creek Road	Camden
South Camden Fire Department Station 11	1061 NC Highway 343 South	Shiloh
Grandy Primary	175 NC Highway 343 North	Camden
Camden County High	103 US 158 W	Camden
Camden Middle	248 Scotland Road	Camden
Camtech High	103A US Highway 158 West	Camden
Camden Intermediate	123 Noblitt Drive	Camden

Chowan County		
Facility	Physical Address	City
Chowan County Sheriffs Department / Chowan County Jail	100 Court Street	Edenton
Chowan Law Enforcement Center	305 West Freemason Street	Edenton
East Carolina Health Company Police	211 Virginia Road	Edenton
Edenton Police Department	504 South Broad Street	Edenton
Center Hill-Crossroads Fire District	105 Center Hill Road	Tyner
Edenton Fire Department	704 North Broad Street	Edenton
Chowan County Emergency Operations Center	208 West Hicks Street	Edenton
Chowan County EMS Unit 3	1414 Rocky Hock Landing Road	Edenton
Chowan County EMS Unit 1	208 West Hicks Street	Edenton
Chowan County EMS Unit 4	105 Center Hill Road	Tyner
Edenton Fire Department	704 North Broad Street	Edenton
John A Holmes High	600 Woodard Street	Edenton
Chowan Middle	2845 Virginia Road	Tyner
D F Walker Elementary	125 Sandy Ridge Road	Edenton
White Oak Elementary	111 Sandy Ridge Road	Edenton

Currituck County		
Facility	Physical Address	City
Currituck County Sheriffs Office	407 Maple Road	Maple
North Carolina Division Of Forest Resources District 7 - Currituck County	198 Airport Road	Maple
Carova Beach Volunteer Fire Department	2169 Ocean Pearl Road	Corolla
Currituck County Fire And EMS Station 8 - Knotts Island	153 South End Road	Knotts Island
Currituck County Fire And EMS Station 6 - Corolla	827 Whalehead Drive	Corolla
Lower Currituck Volunteer Fire Department - Waterlily Station	424 Waterlily Road	Coinjock
Currituck County Fire And EMS Station 7 - Pine Island	470 Ocean Trail	Corolla
Currituck County Fire And EMS Station 3 - Moyock	108 Puddin Ridge Road	Moyock
Currituck County Fire And EMS Station 4 - Crawford	121 Shawboro Road	Moyock
Lower Currituck Volunteer Fire Department - Powells Point Station	8336 Caratoke Highway	Powells Point
Currituck County Fire And EMS Station 5 - Lower Currituck	6325 Caratoke Highway	Grandy
Knotts Island Volunteer Fire Department	153 South End Road	Knotts Island
Crawford Volunteer Fire Company	121 Shawboro Road	Moyock
Moyock Fire Department And Rescue Squad Incorporated	108 Puddin Ridge Road	Moyock
Currituck County Fire And EMS Station 2	424 Waterlily Road	Coinjock
Corolla Fire And Rescue - Whalehead Station	827 Whalehead Drive	Corolla
Corolla Fire And Rescue - Pine Island Station	470 Ocean Trail	Corolla
Lower Currituck Fire Department	6323 Caratoke Highway	Grandy
Currituck County Emergency Management	151 Courthouse Rd	Currituck
Carova Beach Volunteer Fire Department	2169 Ocean Pearl Road	Corolla
Currituck County Fire And EMS Station 8 - Knotts Island	153 South End Road	Knotts Island
Currituck County Fire And EMS Station 6 - Corolla	827 Whalehead Drive	Corolla
Currituck County Fire And EMS Station 7 - Pine Island	470 Ocean Trail	Corolla
Currituck County Fire And EMS Station 3 - Moyock	108 Puddin Ridge Road	Moyock
Currituck County Fire And EMS Station 4 - Crawford	121 Shawboro Road	Moyock
Currituck County Fire And EMS Station 5 - Lower Currituck	6325 Caratoke Highway	Grandy
Knotts Island Volunteer Fire Department	153 South End Road	Knotts Island
Crawford Volunteer Fire Company	121 Shawboro Road	Moyock
Currituck County Fire And EMS Station 2	424 Waterlily Road	Coinjock
Moyock Fire Department And Rescue Squad Incorporated	108 Puddin Ridge Road	Moyock
Corolla Fire And Rescue - Whalehead Station	827 Whalehead Drive	Corolla
Corolla Fire And Rescue - Pine Island Station	470 Ocean Trail	Corolla
Central Elementary	504 Shortcut Road	Barco
Currituck County High	4203 Caratoke Hwy	Barco
Currituck County Middle	4263 Caratoke Hwy	Barco

Currituck County		
Facility	Physical Address	City
Moyock Elementary	255 Tulls Creek Road	Moyock
Knotts Island Elementary	413 Woodleigh Road	Knotts Island
W T Griggs Elementary	261 Poplar Branch Road	Poplar Branch
Shawboro Elementary School	370 Shawboro Road	Shawboro
Moyock Middle	216 Survey Road	Moyock
Jarvisburg Elementary	110 Jarvisburg Rd	Jarvisburg
The Jp Knapp Ech (I)School	2966 Caratoke Hwy	Currituck
Water'S Edge Village School	1126 School House Lane	Corolla

Dare County		
Facility	Physical Address	City
Dare County Sheriffs Department	962 Marshall C Collins	Manteo
Jockeys Ridge North Carolina State Park	Carolista Drive	Nags Head
National Park Service - Buxton Island Ranger Station	46500 Lighthouse Road	Buxton
Dare County Sheriffs Department - Hatteras Substation	57727 State Highway 12	Hatteras
Dare County Sheriffs Department - Colington Substation	2077 Colington Road	Kill Devil Hills
Kill Devil Hills Administration Building	102 Town Hall Drive	Kill Devil Hills
Southern Shores Police Department	5375 N. Virginia Dare Trail	Southern Shores
First Flight Airport	1000 North Croatan Highway	Kill Devil Hills
National Park Service - Bodie Island Ranger Station	2 Park Service Road	Nags Head
North Carolina State Highway Patrol Troop A District I	2601 Croatan Highway	Kill Devil Hills
National Park Service - Cape Hatteras Ranger Station	1401 National Park Drive	Manteo
United States Fish And Wildlife Service - Alligator River	708 North United States Highway 64	Manteo
Town Of Nags Head Police Division	5401 South Croatan Highway	Nags Head
Manteo Police Department	410 Ananias Dare Street	Manteo
Kitty Hawk Police Department	722 West Kitty Hawk Road	Kitty Hawk
Baum Center	300 Mustain Drive	Kill Devil Hills
Century Link Telephone Substation	202 Asheville Drive	Kill Devil Hills
Kill Devil Hills Desalination Water Plant	600 Mustain Drive	Kill Devil Hills
Duck Police Department Headquarters	1259 Duck Road	Duck

Dare County		
Facility	Physical Address	City
Salvo Fire Department Station 48	27209 Roth Road	Salvo
Frisco Fire Department Station 42	52470 State Highway 12	Frisco
Dare County Regional Airport Station 22	410 Airport Road	Manteo
North Carolina Division Of Forest Resources District 13 - Dare County	406 Airport Road	Manteo
Southern Shores Fire Department - East Station	28 East Dogwood Trail	Southern Shores
Roanoke Island Volunteer Fire Department Station 17 - South Station	323 Old Schoolhouse Road	Wanchese
Colington Fire Department Station 15	108 School House Road	Kill Devil Hills
Stumpy Point Fire Department Station 19	255 Bayview Drive	Stumpy Point
Manns Harbor Fire Department Station 18	6657 United States Highway 64 And 264	Manns Harbor
Nags Head Fire And Rescue Station 16	5314 South Croatan Highway	Nags Head
Kill Devil Hills Fire Department Station 14	1634 North Croatan Highway	Kill Devil Hills
Duck Fire Department Station 11	1259 Duck Road	Duck
Chicamacomico Fire Department Station 50	24333 State Highway 12	Rodanthe
Avon Fire Department Station 46	40105 Harbor Road	Avon
Buxton Fire Department Station 44	47095 State Highway 12	Buxton
Hatteras Fire Department Station 40	57717 State Highway 12	Hatteras
Nags Head Fire And Rescue Station 21	8806 South Old Oregon Inlet Road	Nags Head
Roanoke Island Volunteer Fire Department Station 17 - North Station	917 United States Highway 64	Manteo
Kitty Hawk Fire Department Station 13	859 West Kitty Hawk Road	Kitty Hawk
Southern Shores Fire Department - South Station	15 South Dogwood Trail	Southern Shores
Dare County Emergency Management	1044 Driftwood Dr	Manteo
Kill Devil Hills Wastewater Treatment Plant	801 Bermuda Bay Boulevard	Kill Devil Hills
Hatteras Island Rescue Squad Station 35	48103 State Highway 12	Buxton
Roanoke Island Volunteer Fire Department Station 17 - South Station	323 Old Schoolhouse Road	Wanchese
Nags Head Fire And Rescue Station 16	5314 South Croatan Highway	Nags Head
Dominion Power Substation	Bermuda Bay Development	Kill Devil Hills
Duck Fire Department Station 11	1259 Duck Road	Duck
Avon Fire Department Station 46	40105 Harbor Road	Avon
Dare County EMS Station 7	1078 Driftwood Drive	Manteo
Dare County EMS Station 5	5314 South Croatan Highway	Nags Head
Dare County EMS Station 3	50346 State Highway 12	Frisco

Dare County		
Facility	Physical Address	City
Dare County EMS Station 4	28 East Dogwood Trail	Kitty Hawk
Nags Head Fire And Rescue Station 21	8806 South Old Oregon Inlet Road	Nags Head
Roanoke Island Volunteer Fire Department Station 17 - North Station	917 United States Highway 64	Manteo
Kitty Hawk Fire Department Station 13	859 West Kitty Hawk Road	Kitty Hawk
Kill Devil Hills Public Works	701 Bermuda Boulevard	Kill Devil Hills
Dare County EMS Station 8	6677 United States Highway 64	Manns Harbor
Dare County EMS Station 6	24297 Atlantic Drive	Rodanthe
Dare County EMS Station 1	1632 North Croatan Highway	Kill Devil Hills
Kill Devil Hills Water Administration	107 Town Hall Drive	Kill Devil Hills
Dare County EMS Station 2	515 Bowsertown Road	Manteo
Manteo Middle	1000 N. Hwy. 64-264	Manteo
Manteo Elementary	701 N Hwy 64 264	Manteo
Dare County Alternative	N Hwy 64 264	Manteo
Manteo High	616 Wingina Avenue	Manteo
First Flight Elementary	107 Veteran'S Drive	Kill Devil Hills
Cape Hatteras Secondary	Hatteras Highway 12	Buxton
Cape Hatteras Elementary	47500 Middle Ridge	Buxton
Kitty Hawk Elementary	16 S. Dogwood Trail	Southern Shores
First Flight Middle	109 Veteran'S Drive	Kill Devil Hills
First Flight High School	100 Veteran'S Drive	Kill Devil Hills
Nags Head Elementary	3100 S Wrightsville Avenue	Nags Head
Town of Southern Shores - Public Works	27 Pintail Trail	Southern Shores
Town Hall Southern Shores	5375 N. Virginia Dare Trail	Southern Shores
Water Processing Facility/Eighth Street Pump Station	2100 Pond Ave.	Nags Head
Britthaven Nursing Home	430 Health Center Drive	Nags Head
Outer Banks Medical Center	4917 South Croatan Highway	Nags Head
Villas Package Plant	468 Villa Dunes Drive	Nags Head
Fire Station #20/Ocean Ruscue Station	3719 South Croatan Hwy	Nags Head
Outer Banks Hospital	4800 South Croatan Hwy	Nags Head
Fire Station #16	5314 South Croatan Hwy	Nags Head
Village Central Sewage	205 Sand Wedge Lane	Nags Head
Nags Head Municipal Complex/Police Station	5401 South Croatan Hwy	Nags Head
Power Transmission Facility	West Lakeside Drive	Nags Head
Gull Street Pump Station	104 East Gull	Nags Head
Water Tower - S. Nags Head	South Old Oregon Inlet Road	Nags Head
Water Tower - 8th Street	8th Street	Nags Head
Water Tank - Gull	104 East Gull	Nags Head
Public Works Facilities	2200 Lark Ave	Nags Head
Fire Station #21	8806 South Old Oregon Inlet Road	Nags Head

Gates County		
Facility	Physical Address	City
North Carolina Division Of Parks - Merchants Mill Pond	71 United States Highway 158 East	Gatesville
Gates County Sheriffs Department	202 Court Street	Gatesville
Sunbury Volunteer Fire Department Incorporated	1006 United States Highway 158 East	Sunbury
Hobbsville Volunteer Fire Department Incorporated	365 Hobbsville Road	Hobbsville
Gatesville Volunteer Fire Department	127 Main Street	Gatesville
Gates Volunteer Fire Department Incorporated	459 Gates School Road	Gates
Eure Volunteer Fire Department Incorporated	1210 State Highway 137	Eure
United States Forest Service - Gatesville Ranger Station	61 United States Highway 158 West	Gatesville
Gates County Emergency Management	202 Court St	Gatesville
Hobbsville Volunteer Fire Department Incorporated	365 Hobbsville Road	Hobbsville
Gatesville Volunteer Fire Department	127 Main Street	Gatesville
Gates Volunteer Fire Department Incorporated	459 Gates School Road	Gates
Gates County Rescue Squad Incorporated	16 United States Highway 158 East	Gatesville
Harrell Medical Transport	49 Muddy Cross Road	Hobbsville
Central Middle	362 Us Hwy 158	Gatesville
Gates County Senior High	088 Hwy 158 West	Gatesville
Gatesville Elementary	709 Main Street	Gatesville
Buckland Elementary	448 Nc 37 North	Gates
T S Cooper Elementary	237 Nc 32 South	Sunbury

Hertford County		
Facility	Physical Address	City
Chowan University Department Of Public Safety	1 University Place	Murfreesboro
North Carolina State Highway Patrol Troop A District Ii	242 State Highway 42 West	Ahoskie
Federal Correctional Institution - River Correctional Institution	145 Parkers Fishery Road	Winton
City Of Murfreesboro Police Department	115 East Broad Street	Murfreesboro
Ahoskie Police Department	301 West Main Street	Ahoskie
Hertford County Sheriffs Department / Hertford County Jail	701 North Taylor Street	Winton
North Carolina Division Of Forest Resources District 7 - Hertford County	129 River Road	Winton
Winton Volunteer Fire Department	503 North Main Street	Winton
Millennium Fire Department Incorporated	246 Millenium Road	Aulander
Como Volunteer Fire And EMS	1201 United States Highway 258 North	Como
Saint John Fire Department Incorporated	1127 State Road 561 West	Ahoskie
Union Rural Volunteer Fire Department	103 Union Road	Ahoskie
Harrellsville Volunteer Fire Department Incorporated	229 East Main Street	Harrellsville
Ahoskie Rural Volunteer Fire Department	609 Main Street West	Ahoskie
Ahoskie Fire Department	301 West Main Street	Ahoskie
Murfreesboro Fire Department	200 Sycamore Street	Murfreesboro
Hertford County Emergency Management	102 Industrial Park Road	Winton
Millennium Fire Department Incorporated	246 Millenium Road	Aulander
Como Volunteer Fire And EMS	1201 United States Highway 258 North	Como
Saint John Fire Department Incorporated	1127 State Road 561 West	Ahoskie
Harrellsville Volunteer Fire Department Incorporated	229 East Main Street	Harrellsville
Ahoskie Rescue Squad Incorporated	205 Pembroke Avenue North	Ahoskie
Winton Volunteer Rescue Squad	503 North Main Street	Winton
Hertford County Ambulance Service	102 Industrial Park Road	Winton
Murfreesboro Rescue Squad	202 Sycamore Street	Murfreesboro
Hertford County Middle	1850 Hwy 11N	Murfreesboro
Riverview Elementary	236 Us 158 Business	Murfreesboro
Hertford County High	1500 W First St	Ahoskie
Ahoskie Elementary	200 N Talmage St	Ahoskie
Bearfield Primary	145 Hertford Co High School Rd	Ahoskie
Hertford Co Early College	109 Community College Rd	Ahoskie
Cs Brown High	102 Csb Dr	Winton

Pasquotank County		
Facility	Physical Address	City
United States Coast Guard Base/Elizabeth City/Air Station/Fire Station	1664 Weeksville Road	Elizabeth City
North Carolina Division Of Forest Resources - District Seven	861 Berea Church Road	Elizabeth City
Elizabeth City Police Department	302 East Colonial Avenue	Elizabeth City
Federal Courthouse/United States Marshals Service - Elizabeth City Office	306 East Main Street	Elizabeth City
Albemarle Hospital	1144 North Road Street	Elizabeth City

Pasquotank County		
Facility	**Physical Address**	**City**
North Carolina State Highway Patrol Troop A District Iii	1164 United States Highway 17 South	Elizabeth City
Elizabeth City State University Police Department	1704 Weeksville Road	Elizabeth City
North Carolina Alcohol Law Enforcement District 1	106 Tarheel Court	Elizabeth City
Pasquotank County Sheriffs Department	200 East Colonial Avenue	Elizabeth City
Elizabeth City Fire Department Station 2	410 Harney Street	Elizabeth City
Pasquotank - Providence Volunteer Fire Department Incorporated	1995 North Road Street	Elizabeth City
Elizabeth City Fire Department Station 1	902 Halstead Blvd	Elizabeth City
Weeksville Volunteer Fire Department Incorporated Station 1	2742 Peartree Road	Elizabeth City
North Carolina Division Of Forest Resources District 7 - Pasquotank County	861 Berea Church Road	Elizabeth City
Pasquotank - Nixonton Volunteer Fire Department Incorporated	1316 Four Forks Road	Elizabeth City
Weeksville Volunteer Fire Department Incorporated Station 2	1422 Soundneck Road	Elizabeth City
Pasquotank-Newland Volunteer Fire Department	721 United States Highway 158	Elizabeth City
Camden/Pasquotank Emergency Management	200 E. Colonial Avenue	Elizabeth City
United States Coast Guard Support Center Fire Department - Elizabeth City	Weeksville Road	Elizabeth City
Pasquotank - Camden EMS	1144B North Road Street	Elizabeth City
Central Elementary	1059 Us Hwy 17	Elizabeth City
Weeksville Elementary	1170 Salem Church Rd	Elizabeth City
Elizabeth City Middle	1066 Northside Road	Elizabeth City
H L Trigg Community	1004 Parkview Drive	Elizabeth City
J C Sawyer Elementary	1007 Park St	Elizabeth City
Northeastern High	963 Oak Stump Rd	Elizabeth City
Pasquotank Elementary	1407 Peartree Rd	Elizabeth City
P W Moore Elementary	606 Roanoke Ave	Elizabeth City
River Road Middle	1701 River Road	Elizabeth City
Sheepharney Elementary	200 W Elizabeth St	Elizabeth City
Pasquotank County High	1064 Northside Road	Elizabeth City
Northside Elementary	1062 Northside Rd	Elizabeth City

Perquimans County		
Facility	**Physical Address**	**City**
Perquimans County Sheriffs Department	110 North Church Street	Hertford
Winfall Police Department - Headquarters	100 Parkview Lane	Winfall
Hertford Police Department	114 West Grubb Street	Hertford
Belvidere-Chappell Hill Volunteer Fire Department	143 Drinking Hole Road	Belvidere
Hertford Fire Department	328 West Grubb Street	Hertford
Durants Neck Fire Department	2087 New Hope Road	Hertford

Perquimans County		
Facility	Physical Address	City
Bethel Community Fire Protection Association	462 Snug Harbor Road	Hertford
Inter-County Volunteer Fire Department Incorporated	118 Woodville Road	Hertford
Winfall Volunteer Fire Department	341 Wiggins Road	Hertford
Perquimans County Emergency Management	128 North Church St	Hertford
Belvidere-Chappell Hill Volunteer Fire Department	143 Drinking Hole Road	Belvidere
Hertford Fire Department	328 West Grubb Street	Hertford
Bethel Community Fire Protection Association	462 Snug Harbor Road	Hertford
Inter-County Volunteer Fire Department Incorporated	118 Woodville Road	Hertford
Winfall Volunteer Fire Department	341 Wiggins Road	Hertford
Perquimans County Rescue And EMS	601B South Edenton Road Street	Hertford
Perquimans County Middle	312 W Main Street	Winfall
Perquimans County High	305 Edenton Road St	Hertford
Hertford Grammar	603 Dobbs Street	Hertford
Perquimans Central	181 Winfall Blvd	Winfall

5.6 Changes in Development

Eastern North Carolina, and specifically the counties and towns that make up the Albemarle Region, have been extremely impacted by the recession that began in 2008. The construction/development industry has been severely impacted by the recession. Camden, Currituck, Dare and Perquimans counties continued to show growth over the period from 2010-2013. Chowan, Gates, Hertford and Pasquotank counties show no growth for the same period. Gates, Hertford and Pasquotank showed declines. The following table shows the building permits issued and the population trends for the period 2010-2013.

Single Family Building Permits						Population Change		
	2010	2011	2012	2013		2010	2013	% Growth
Camden	16	15	16	42		9980	10174	1.90%
Chowan	29	11	10	12		14793	14815	0.10%
Currituck	138	137	204	232		23547	24506	4%
Dare	136	151	221	201		33920	35273	4%
Gates	34	28	21	25		12186	11880	-2.50%
Hertford	19	2	20	5		24658	24621	-0.20%
Pasquotank	45	54	68	68		40661	39458	-3%
Perquimans	53	38	28	38		13453	13771	3.40%

Source: US Census Bureau

The participating jurisdictions in the Albemarle Region will continue to enforce the requirements of the National Flood Insurance Program to protect development in the flood hazard areas. They will also continue to enforce other local land use and environmental policies to protect development from future hazards.

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5.7 REPETITIVE LOSS PROPERTIES

Repetitive loss structures are those that have suffered damage from repeated hazard events. A Repetitive Loss (RL) property is technically defined as any insurable building for which two or more claims of more than $1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978. A RL property may or may not be currently insured by the NFIP. The only reliable source of information on repetitive loss structures is flood insurance claims data available through the National Flood Insurance Program (NFIP). **Table 5.2** provides a summary count by jurisdiction for Repetitive Loss (RL) properties identified by FEMA. Repetitive Loss Maps provided by Currituck and Dare Counties can be found in Appendix H and Appendix I.

Table 5.2 Repetitive Loss Summary

Jurisdiction	Total Number of Buildings	Total Number of Losses	Total Amount of Claims Payments
Camden County	21	49	$959,722.90
Chowan County	9	19	$403,821.13
Town of Edenton	7	15	$696,436.73
Currituck County	86	206	$2,702,614.70
Dare County	449	1,363	$27,321,221.43
Town of Duck	7	17	$377,388.49
Town of Kill Devil Hills	88	278	$5,798,131.77
Town of Kitty Hawk	250	830	$12,520,209.69
Town of Manteo	8	25	$1,051,762.12
Town of Nags Head	149	676	$13,150,995.08
Town of Southern Shores	0	0	$0.00
Gates County	1	3	$34,024.82
Town of Gatesville	0	0	$0.00
Hertford County	6	15	$210,314.38
Town of Ahoskie	10	28	$1,221,672.45
Town of Como	-	-	-
Town of Colfield	-	-	-
Town of Harrellsville	-	-	-
Town of Murfreesboro	0	0	$0.00
Town of Winton	0	0	$0.00
Pasquotank County	19	51	$501,097.92
Elizabeth City	23	53	$1,587,896.25
Perquimans County	2	4	$85,233.33
Town of Hertford	2	4	$45,997.64
Town of Winfall	0	0	$0.00
Total Albemarle Region	1,137	3,636	$68,668,540.83

5.8 Key Issues

This section will look at the key issues regarding each participating jurisdiction's most vulnerable structures and key infrastructure. These issues along with the mitigation strategies contained in Section 7 are intended to address the community's vulnerability to flooding, hurricanes, nor'easters and erosion. These hazards

have been identified as the region's most significant hazards as defined in **Table 4.11** (Section 4, page 39)

Camden County

Camden County will work to address the following key issues.

- Camden County will monitor the ongoing status and condition of all repetitive loss properties as outlined in **Table 5.2**.

- Camden County will explore options for relocating or flood proofing Camden Middle School, Camden Intermediate School, South Camden Volunteer Fire/Rescue and the Camden County Sheriff Department which are located in the 100 year floodplain.

Chowan County

Chowan County along with the Town of Edenton will work to address the following key issues.

- Chowan County, along with the Town of Edenton, will monitor the ongoing status and condition of all repetitive loss properties as outlined in **Table 5.2**.

- The Town of Edenton will explore options for relocating or flood proofing the Edenton Police Department which is located in the 100 year floodplain.

Currituck County

Currituck County will work to address the following key issues.

- Currituck County will monitor the ongoing status and condition of all repetitive loss properties as outlined in **Table 5.2**.

- Currituck County will explore options for relocating or flood proofing Currituck County High School, Currituck County Middle School, Shawboro Elementary School and Water's Edge Village School which are all located in the 100 year floodplain. They will also explore options for relocating of flood proofing the Carova Beach Volunteer Fire Department, Currituck County Fire and EMS Stations 2, 4 and 6, Lower Currituck Volunteer Fire Department and the Crawford Volunteer Fire Department, Corolla Fire and Rescue which are all located in the 100 year floodplain.

Dare County

Dare County along with the Towns of Duck, Kill Devil Hills, Kitty Hawk, Manteo, Nags Head and Southern Shores will work to address the following key issues:

- Dare County, along with the Towns of Duck, Kill Devil Hills, Kitty Hawk, Manteo, Nags Head and Southern Shores, will monitor the ongoing status and condition of all repetitive loss properties as

outlined in **Table 5.2**.

- Dare County will explore options for relocating or flood proofing the Dare County Sheriff's Department Collington Substation, Collington Fire Department Station 15, Mans Harbor Fire Station 18, Dare County EMS Station 8, Stumpy Point Fire Department Station 19, Chicamacomico Fire Department Station 50, Dare County EMS Station 6, Salvo Fire Department Station 48, Avon Fire Department Station 46, Buxton Fire Department Station 44, Cape Hatteras Secondary School, Cape Hatteras Elementary School, Frisco Fire Department Station 42, Hatteras Fire Department Station 40 and the Dare County Sheriffs Department Hatteras Substation, all of which are located in the 100 year floodplain. The Town of Kitty Hawk will explore options for relocating or flood proofing the Kitty Hawk Police Department and Kitty Hawk Fire Department Station 13 which are located in the 100 year floodplain. The Town of Kill Devil Hills will explore options for relocating or flood proofing Dare County EMS Station 1 and the Kill Devil Hills Fire Department Station 14 which are located in the 100 year floodplain. The Town of Nags Head will explore options for relocating or flood proofing Nags Head Elementary as well as Nags Head Fire and Rescue Station 21, which are both located in the 100 year floodplain. The Town of Manteo will explore options for relocating or flood proofing the Roanoke Island Volunteer Fire Department Station 17, Manteo Elementary, Manteo Police Department, Manteo Middle School, Dare County EMS Station 12 and the Dare County Sheriff's Department, all of which are located in the 100 year floodplain.

Gates County

Gates County along with the Town of Gatesville will work to address the following key issues.

- Gates County and the Town of Gatesville will monitor the ongoing status and condition of all repetitive loss properties as outlined in **Table 5.2**.

Hertford County

Hertford County along with the Towns of Ahoskie, Cofield, Como, Harrellsville, Murfreesboro and Winton will work to address the following key issues.

- Hertford County along with the Towns of Ahoskie, Cofield, Como, Harrellsville, Murfreesboro and Winton will monitor the ongoing status and condition of all repetitive loss properties as outlined in **Table 5.2**.

Pasquotank County

Pasquotank County along with the Towns of Elizabeth City will work to address the following key issues.

- The Town of Elizabeth City will explore options for relocating or flood proofing Central Elementary School, Weeksville Elementary School, J C Sawyer Elementary School and Sheep Harney Elementary School which are located in the 100 year floodplain. Pasquotank County will explore options for relocating or flood proofing the Weeksville Volunteer Fire Department and the Pasquotank-Newland Volunteer Fire Department, which are both located in the 100 year floodplain. Pasquotank County will also work with the North Carolina Division of Forest Resources to explore options for relocating or flood proofing the District 7 office.

- Pasquotank County along with the Town of Elizabeth City will monitor the ongoing status and condition of all repetitive loss properties as outlined in **Table 5.2**.

Perquimans County

Perquimans County along with the Towns of Hertford and Winfall will work to address the following key issues.

- Perquimans County will explore options for relocating or flood proofing Inter-County Volunteer Fire Department which is located in the 100 year floodplain.

- Perquimans County along with the Towns of Hertford and Winfall will monitor the ongoing status and condition of all repetitive loss properties as outlined in **Table 5.2**.

Section 6: Capabilities Assessment

6.1 Overview

The purpose of conducting a Capability Assessment is to determine the ability of a local jurisdiction to implement a comprehensive Mitigation Strategy, and to identify potential opportunities for establishing or enhancing specific mitigation policies, programs, or projects. As in any planning process, it is important to try to establish which goals, objectives, and actions are feasible, based on an understanding of the organizational capacity of those agencies or departments tasked with their implementation. A Capability Assessment helps to determine which mitigation actions are practical and likely to be implemented over time given a local government's planning and regulatory framework, level of administrative and technical support, amount of fiscal resources, and current political climate.

A Capability Assessment has two primary components: 1) an inventory of a local jurisdiction's relevant plans, ordinances, and programs already in place; and 2) an analysis of its capacity to carry them out. Careful examination of local capabilities will detect any existing gaps, shortfalls, or weaknesses with ongoing government activities that could hinder proposed mitigation activities and possibly exacerbate community hazard vulnerability. A Capability Assessment also highlights the positive mitigation measures already in place or being implemented at the local government level, which should continue to be supported and enhanced through future mitigation efforts.

The Capability Assessment completed for the Albemarle Region serves as a critical planning step and an integral part of the foundation for designing an effective Mitigation Strategy. Coupled with the Risk Assessment, the Capability Assessment helps identify and target meaningful mitigation actions for incorporation into the Mitigation Strategy portion of the Plan. It not only helps establish the goals and objectives for the Region to pursue under this Plan, but also ensures that those goals and objectives are realistically achievable under given local conditions.

6.2 Conducting the Capabilities Assessment

In order to facilitate the inventory and analysis of local government capabilities within the Albemarle counties, a detailed Local Capability Assessment Survey was distributed to members of the Albemarle Hazard Mitigation Planning Committee (HMPC) at the second planning committee meeting. The survey questionnaire requested information on a variety of "capability indicators" such as existing local plans, policies, programs, or ordinances that contribute to and/or hinder the Region's ability to implement hazard mitigation actions. Other indicators included information related to the Region's fiscal, administrative, and technical capabilities, such as access to local budgetary and personnel resources for mitigation purposes, as well as any existing education and outreach programs that can be used to promote mitigation. Survey respondents were also asked to comment on the current political climate with respect to hazard mitigation, an important consideration for any local planning or decision making process.

At a minimum, the survey results provide an extensive and consolidated inventory of existing local plans, ordinances, programs, and resources in place or under development, in addition to their overall effect on hazard loss reduction. In completing the survey, local officials were also required to conduct a self-assessment of their jurisdiction's specific capabilities. The survey instrument thereby not only helps accurately assess the degree of local capability, but it also serves as a good source of

introspection for counties and local jurisdictions that want to improve their capabilities as identified gaps, weaknesses, or conflicts can be recast as opportunities for specific actions to be proposed as part of the Mitigation Strategy.

6.3 Capabilities Assessment Findings

The findings of the capability assessment are summarized in this Plan to provide insight into relevant capacity of the participating communities in the Albemarle Regional Hazard Mitigation Plan to implement hazard mitigation activities. All information is based upon the responses provided by local government officials to the Capability Assessment Survey and during meetings of the Mitigation Advisory Committee. All completed survey questionnaires are available through Gates County upon request.

PLANNING AND REGULATORY CAPABILITY

Planning and regulatory capability is based on the implementation of plans, ordinances and programs that demonstrate a local jurisdiction's commitment to guiding and managing growth, development and redevelopment in a responsible manner while maintaining the general welfare of the community. It includes emergency response and mitigation planning, comprehensive land use planning and transportation planning in addition to the enforcement of zoning or subdivision ordinances and building codes that regulate how land is developed and structures are built, as well as protecting environmental, historic and cultural resources in the community. Although some conflicts can arise, these planning initiatives generally present significant opportunities to integrate hazard mitigation principles and practices into the local decision making process.

This assessment is designed to provide a general overview of the key planning and regulatory tools or programs in place or under development for the participants in the Albemarle Regional Hazard Mitigation Plan along with their potential effect on loss reduction. This information will help identify opportunities to address existing gaps, weaknesses or conflicts with other initiatives in addition to integrating the implementation of this Plan with existing planning mechanisms, where appropriate.

Table 6.1 provides a summary of the relevant local plans, ordinances and programs already in place or under development for the participating local governments. A checkmark ☑ indicates that the given item is currently in place and being implemented by the local jurisdiction or that it is currently being developed for future implementation.

TABLE 6.1

Jurisdiction	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan	Stormwater Management Plan	Natural Resource Protection Plan	Flood Response Plan	Emergency Operations Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Flood Damage Prevention Ordinance	Zoning Ordinance	Subdivision Ordinance	Unified Development Ordinance	Post-Disaster Redevelopment Ordinance	Building Code	Fire Code	National Flood Insurance Program	NFIP CRS Program
Camden County	☑	☑		☑	☑			☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑		☑	☑	☑	
Chowan County	☑	☑		☑				☑							☑	☑	☑			☑	☑	☑	
Edenton	☑	☑	☑	☑			☑	☑	☑	☑	☑	☑	☑		☑	☑	☑	☑	☑	☑	☑	☑	☑
Currituck County	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑		☑	☑	☑	☑		☑	☑	☑	☑
Dare County	☑	☑	☑				☑	☑	☑	☑	☑	☑			☑	☑	☑			☑	☑	☑	☑
Duck	☑	☑	☑	☑	☑			☑		☑		☑			☑	☑	☑		☑	☑	☑	☑	☑
Kill Devil Hills	☑	☑	☑	☑	☑	☑		☑	☑	☑	☑	☑		☑	☑	☑	☑		☑	☑	☑	☑	☑
Kitty Hawk	☑	☑	☑	☑	☑		☑	☑				☑			☑	☑	☑			☑	☑	☑	☑
Manteo	☑	☑	☑		☑		☑	☑		☑	☑	☑			☑	☑	☑			☑	☑	☑	☑
Nags Head	☑	☑	☑	☑	☑		☑	☑	☑	☑	☑	☑			☑	☑	☑		☑	☑	☑	☑	☑
Southern Shores	☑	☑						☑				☑			☑	☑	☑		☑	☑	☑	☑	☑
Gates County	☑	☑	☑		☑			☑		☑	☑				☑	☑	☑			☑	☑	☑	
Gatesville	☑	☑	☑		☑			☑		☑	☑				☑	☑	☑			☑	☑	☑	
Hertford County	☑	☑	☑					☑	☑	☑	☑		☑	☑	☑	☑	☑			☑	☑	☑	
Ahoskie	☑		☑		☑		☑	☑		☑	☑	☑	☑	☑	☑	☑	☑			☑	☑	☑	
Colfield	☑		☑					☑		☑	☑		☑		☑	☑	☑			☑	☑	☑	
Como	☑														☑	☑				☑	☑	☑	
Harrellsville	☑							☑	☑											☑			
Murfreesboro	☑	☑						☑	☑	☑	☑		☑	☑	☑	☑	☑			☑	☑	☑	
Winton	☑	☑	☑					☑	☑	☑	☑		☑	☑	☑	☑	☑			☑	☑	☑	
Pasquotank County	☑	☑	☑	☑	☑			☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑		☑	☑	☑	
Elizabeth City	☑	☑		☑	☑			☑		☑	☑	☑	☑	☑	☑	☑	☑	☑		☑	☑	☑	
Perquimans County	☑							☑					☑		☑	☑	☑			☑	☑	☑	
Hertford	☑	☑										☑			☑	☑	☑			☑	☑	☑	
Winfall	☑	☑									☑				☑	☑	☑			☑	☑	☑	

EMERGENCY MANAGEMENT

Hazard mitigation is widely recognized as one of the four primary phases of emergency management. The three other phases include preparedness, response and recovery.

Opportunities to reduce potential losses through mitigation practices are most often implemented before disaster strikes, such as elevation of flood-prone structures or through the continuous enforcement of regulatory policies that prevent hazardous construction. However, mitigation opportunities will also present themselves during immediate preparedness or response activities, and during the long-term recovery and redevelopment process following a hazard event.

Planning for each phase is a critical part of a comprehensive emergency management program and a key to the successful implementation of hazard mitigation actions. As a result, the Capability Assessment Survey asked several questions across a range of emergency management plans in order to assess the jurisdiction's willingness to plan and their level of technical planning proficiency.

Hazard Mitigation Plan

A hazard mitigation plan represents a community's blueprint for how it intends to reduce the impact of natural, and in some cases human-caused, hazards on people and the built environment. The essential elements of a hazard mitigation plan include a risk assessment, capability assessment, and mitigation strategy.

- All of the jurisdictions participating in this regional planning effort have previously been covered by their county's multi-jurisdictional hazard mitigation plan.

Disaster Recovery Plan

A disaster recovery plan serves to guide the physical, social, environmental, and economic recovery and reconstruction process following a disaster event. In many instances, hazard mitigation principles and practices are incorporated into local disaster recovery plans with the intent of capitalizing on opportunities to break the cycle of repetitive disaster losses. Disaster recovery plans can also lead to the preparation of disaster redevelopment policies and ordinances to be enacted following a hazard event.

- Seventeen of the 25 participating jurisdictions have a disaster recovery plan either in place or under development.

Emergency Operations Plan

An emergency operations plan outlines responsibilities and the means by which resources are deployed during and following an emergency or disaster.

- Twenty-two of the 25 participating jurisdictions have an emergency operations plan either in place or under development.

Continuity of Operations Plan

A continuity of operations plan establishes a chain of command, line of succession, and plans for backup or alternate emergency facilities in case of an extreme emergency or disaster event.

- Eleven of the 25 participating jurisdictions have a continuity of operations plan either in place or under development.

GENERAL PLANNING

The implementation of hazard mitigation activities often involves agencies and individuals beyond the emergency management profession. Stakeholders may include local planners, public works officials, economic development specialists, and others. In many instances, concurrent local planning efforts will help to achieve or complement hazard mitigation goals, even though they are not designed as such. Therefore, the Local Capability Assessment Survey also asked questions regarding general planning capabilities and the degree to which hazard mitigation is integrated into other ongoing planning efforts in the Albemarle Region.

Comprehensive Plan

A comprehensive land use plan, or general plan, establishes the overall vision for what a community wants to be and serves as a guide for future governmental decision making. Typically a comprehensive plan contains sections on demographic conditions, land use, transportation elements, and community facilities. Given the broad nature of the plan and its regulatory standing in many communities, the integration of hazard mitigation measures into the comprehensive plan can enhance the likelihood of achieving risk reduction goals, objectives, and actions.

- Twenty of the 25 participating jurisdictions have a comprehensive land use plan either in place or under development

Capital Improvements Plan

A capital improvements plan guides the scheduling of spending on public improvements. A capital improvements plan can serve as an important mechanism for guiding future development away from identified hazard areas. Limiting public spending in hazardous areas is one of the most effective long-term mitigation actions available to local governments.

- Fourteen of the 25 participating jurisdictions have a capital improvements plan either in place or under development

Historic Preservation Plan

A historic preservation plan is intended to preserve historic structures or districts within a community. An often overlooked aspect of the historic preservation plan is the assessment of buildings and sites located in areas subject to natural hazards, and the identification of ways to reduce future damages. This may involve retrofitting or relocation techniques that account for the need to protect buildings that do not meet current building standards, or are within a historic district that cannot easily be relocated out of harm's way.

- Eight of the 25 participating jurisdictions have a historic preservation plan either in place or under development

Zoning Ordinance

Zoning represents the primary means by which land use is controlled by local governments. As part of a community's police power, zoning is used to protect the public health, safety, and welfare of those in a given jurisdiction that maintains zoning authority. A zoning ordinance is the mechanism through which zoning is typically implemented. Since zoning regulations enable municipal governments to limit the type and density of development, a zoning ordinance can serve as a powerful tool when applied in identified hazard areas.

- Twenty-four of the 25 participating jurisdictions have a zoning ordinance either in place or under development

Subdivision Ordinance

A subdivision ordinance is intended to regulate the development of residential, commercial, industrial, or other uses, including associated public infrastructure, as land is subdivided into buildable lots for sale or future development. Subdivision design that accounts for natural hazards can dramatically reduce the exposure of future development.

- Twenty-three of the 25 jurisdictions have a subdivision ordinance either in place or under development

Building Codes, Permitting, and Inspections

Building codes regulate construction standards. In many communities, permits and inspections are required for new construction. Decisions regarding the adoption of building codes (that account for hazard risk), the type of permitting process required both before and after a disaster, and the enforcement of inspection protocols all affect the level of hazard risk faced by a community.

- All of the jurisdictions participating in this regional planning effort have building codes in place

The adoption and enforcement of building codes by local jurisdictions is routinely assessed through the Building Code Effectiveness Grading Schedule (BCEGS) program, developed by the Insurance

Services Office, Inc. (ISO). In North Carolina, the North Carolina Department of Insurance assesses the building codes in effect in a particular community and how the community enforces its building codes, with special emphasis on mitigation of losses from natural hazards. The results of BCEGS assessments are routinely provided to ISO's member private insurance companies, which in turn may offer ratings credits for new buildings constructed in communities with strong BCEGS classifications. The concept is that communities with well-enforced, up-to-date codes should experience fewer disaster-related losses, and as a result should have lower insurance rates.

In conducting the assessment, ISO collects information related to personnel qualification and continuing education, as well as number of inspections performed per day. This type of information combined with local building codes is used to determine a grade for that jurisdiction. The grades range from 1 to 10, with a BCEGS grade of 1 representing exemplary commitment to building code enforcement, and a grade of 10 indicating less than minimum recognized protection.

FLOODPLAIN MANAGEMENT

Flooding represents the greatest natural hazard facing the Nation. At the same time, the tools available to reduce the impacts associated with flooding are among the most developed when compared to other hazard-specific mitigation techniques. In addition to approaches that cut across hazards, such as education, outreach and the training of local officials, the National Flood Insurance Program (NFIP) contains specific regulatory measures that enable government officials to determine where and how growth occurs relative to flood hazards. Participation in the NFIP is voluntary for local governments, but the program is promoted by FEMA as a first basic step for implementing and sustaining an effective hazard mitigation program. It is therefore used as a key indicator for measuring local capability as part of this assessment.

In order for a county or municipality to join the NFIP, they must adopt a local flood damage prevention ordinance that requires jurisdictions to follow established minimum building standards in the floodplain. These standards require that all new buildings and substantial improvements to existing buildings will be protected from damage by the 100-year flood, and that new floodplain development will not aggregate existing flood problems or increase damage to other properties.

Another key service provided by the NFIP is the mapping of identified flood hazard areas. Once prepared, the Flood Insurance Rate Maps (FIRMs) are used to assess flood hazard risk, regulate construction practices and set flood insurance rates. FIRMs are an important source of information to educate residents, government officials and the private sector about the likelihood of flooding in their community. **Table 6.2** summarizes NFIP participation for the Counties and Towns with the Albemarle Region.

Table 6.2

NFIP Participation in the Albemarle Region

JURISDICTION	NFIP ENTRY DATE	CURRENT EFFECTIVE MAP	NUMBER OF POLICIES	TOTAL PREMIUMS	AMOUNT OF COVERAGE
Camden County	12/4/1985	7/20/2009	885	$606,838	$204,144,200
Chowan County	7/3/1985	8/3/2009	249	$161,765	$70,378,300
Edenton	9/15/1977	8/3/2009	213	$164,066	$55,321,700
Currituck County	11/1/1984	9/20/2006	5344	$4,739,526	$1,496,187,800
Dare County	10/6/1978	9/20/2006	9700	$6,421,868	$2,374,187,200
Duck	11/6/2003	9/20/2006	566	$543,630	$178,901,800
Kill Devil Hills	5/4/1973	9/20/2006	4398	$2,703,122	$1,000,336,300
Kitty Hawk	10/6/1978	9/20/2006	1514	$1,364,163	$395,079,500
Manteo	1/5/1973	9/20/2006	708	$480,423	$168,348,100
Nags Head	11/10/1972	9/20/2006	3679	$322,367	$998,609,200
Southern Shores	5/13/1972	9/20/2006	1277	$1,121,213	$380,841,200
Gates County	7/16/1991	8/3/2009	68	$54,096	$14,140,800
Gatesville	5/13/1977	8/3/2009	2	$3,788	$1,050,000
Hertford County	11/1/1999	8/3/2009	61	$34,675	$12,291,600
Ahoskie	5/1/1987	8/3/2009	21	$12,925	$5,215,100
Colfield	8/3/2009	8/3/2009	-	-	-
Como	12/12/2007	8/3/2009	-	-	-
Harrellsville	NA	-	-	-	-
Murfreesboro	6/1/1987	8/3/2009	3	$1,172	$770,000
Winton	7/1/1987	8/3/2009	4	$1,668	$1,225,000
Pasquotank County	12/4/1985	7/20/2009	1295	$752,638	$296,817,300
Elizabeth City	4/3/1978	7/20/2009	1478	$958,916	$271,622,900
Perquimans County	7/3/1985	7/20/2009	706	$354,188	$171,746,900
Hertford	7/3/1985	7/20/2009	53	$47,055	$14,428,700
Winfall	11/5/1992	7/20/2009	12	$8,911	$2,935,400

Source(s): Federal Emergency Management Agency/North Carolina Division of Emergency Management

All jurisdictions listed above, with the exception of Harrellsville, participate in the National Flood Insurance Program. Harrellsville does not contain any Special Flood Hazard Area within its jurisdictional boundary. All other jurisdictions will continue to comply with all required provisions of the program and work to adequately comply in the future utilizing a number of strategies. Floodplain management in all eight counties and 17 municipalities is managed through zoning ordinances, subdivision regulations, building code restrictions, as well as their respective flood damage prevention ordinances. The jurisdictions will coordinate with NCEM and FEMA to develop maps and regulations related to Special Flood Hazard Areas within their jurisdictional boundaries. They will also continue to improve their floodplain management program in ways that reduces the risk of flooding to people and property.

An additional indicator of floodplain management capability is the active participation of local jurisdictions in the Community Rating System (CRS). The CRS is an incentive-based program that encourages counties and municipalities to undertake defined flood mitigation activities that go beyond the minimum requirements of the NFIP, adding extra local measures to provide protection from flooding. All of the 18 creditable CRS mitigation activities are assigned a range of point values. As points are accumulated and reach identified thresholds, communities can apply for an improved CRS class. Class ratings, which run from 10 to 1, are tied to flood insurance premium reductions as shown in **Table 6.3**. As class ratings improve (decrease), the percent reduction in flood insurance premiums for NFIP policyholders in that community increases.

Table 6.3
CRS Premium Discounts, By Class

Class	Special Flood Hazard Area	Non-Special Flood Hazard Area
1	45%	10%
2	40%	10%
3	35%	10%
4	30%	10%
5	25%	10%
6	20%	10%
7	15%	5%
8	10%	5%
9	5%	5%
10	0	0

Source(s): Federal Emergency Management Agency

Participation in the CRS is voluntary. Any community that is in full compliance with the rules and regulations of the NFIP may apply for a CRS classification better than class 10. The CRS application process has been simplified over the past several years based on community comments to make the program as user friendly as possible, and extensive technical assistance is also available for communities who request such assistance.

- Currituck County (Class 8), Dare County (Class 8), Duck (Class7), Kill Devil Hills (Class 6), Kitty Hawk (Class 6), Manteo (Class 8), Nags Head (Class 6) and Southern Shores (Class 7) are the only jurisdictions that currently participate in the CRS Program.

Flood Damage Prevention Ordinance

A Flood Damage Prevention Ordinance establishes minimum building standards in the floodplain. These standards require that all new buildings and substantial improvements to existing buildings will be protected from damage by the 100-year flood, and that new floodplain development will not aggregate existing flood problems or increase damage to other properties.

- Twenty-four of the 25 participating jurisdictions adopted a Flood Damage Prevention Ordinance

Floodplain Management Plan

A Floodplain Management Plan (or a Flood Mitigation Plan) provides a framework for action regarding the corrective and preventative measures in place to reduce flood-related impacts.

- Fifteen of the 25 participating jurisdictions have a Floodplain Management plan either in place or under development

Open Space Management Plan

An Open Space Management Plan is designed to preserve, protect and restore largely undeveloped lands in their natural state, and to expand or connect areas in the public domain such as parks, greenways and other outdoor recreation areas. In many instances open space management practices are consistent with the goals of reducing hazard losses, such as the preservation of wetlands or other flood-prone areas in their natural state in perpetuity.

- Ten of the 25 participating jurisdictions have and open space management plan either in place or under development

Stormwater Management Plan

A Stormwater Management Plan is designed to address flooding associated with stormwater runoff. The stormwater management plan is typically focused on design and construction measures that are intended to reduce the impact of more frequently occurring minor urban flooding.

- Twelve of the 25 participating jurisdictions have a Stormwater Management plan either in place or under development

A*DMINISTRATIVE AND TECHNICAL CAPABILITY*

The ability of a local government to develop and implement mitigation projects, policies and programs is directly tied to its ability to direct staff time and resources for that purpose. Administrative capability can be evaluated by determining how mitigation-related activities are assigned to local departments and how adequate the personnel resources are for carrying the activities out. The degree of intergovernmental coordination among departments will also affect administrative capability for the implementation and success of proposed mitigation activities. Technical capability can generally be evaluated by assessing the level of knowledge and technical expertise of local government employees, such as personnel skilled in using geographic information systems (GIS) to analyze and assess community hazard vulnerability.

The Capability Assessment Survey was used to capture information on administrative and technical capability through the identification of available staff and personnel resources. **Table 6.4** provides a summary of the results for the plan participants. A checkmark ☑indicates that the given local staff member(s) is maintained through each jurisdiction's local government resources. Additional information on administrative and technical capability for the counties and towns in the Albemarle Region is provided in the completed surveys which may be obtained through each respective jurisdiction.

Table 6.4

Jurisdiction	Planning Staff - Land Development	Engineering/Inspection Staff	Planning Staff - Hazard Mitigaiton	Emergency Manager	Floodplain Manager	Land Surveyors	Scientists - Hazard Mitigation	Staff Experience to accesses vulnerabilities	GIS Staff	Grant Writers
Camden County	☑	☑	☑	☑	☑			☑	☑	☑
Chowan County	☑		☑	☑	☑			☑		
Edenton	☑	☑	☑	☑	☑			☑	☑	☑
Currituck County	☑	☑	☑	☑	☑			☑	☑	☑
Dare County	☑	☑	☑	☑	☑			☑	☑	☑
Duck	☑	☑	☑	☑	☑			☑	☑	☑
Kill Devil Hills	☑	☑	☑		☑				☑	☑
Kitty Hawk	☑	☑	☑		☑				☑	☑
Manteo	☑	☑	☑		☑			☑	☑	☑
Nags Head	☑	☑	☑	☑	☑			☑	☑	☑
Southern Shores	☑	☑	☑		☑	☑		☑	☑	☑
Gates County	☑				☑					
Gatesville	☑				☑					
Hertford County	☑	☑		☑	☑			☑	☑	
Ahoskie					☑					
Colfield	☑	☑		☑	☑			☑		
Como										
Harrellsville										
Murfreesboro	☑			☑				☑	☑	
Winton	☑	☑		☑	☑			☑	☑	
Pasquotank County	☑	☑	☑	☑	☑			☑	☑	☑
Elizabeth City	☑	☑	☑	☑	☑			☑	☑	☑
Perquimans County	☑	☑		☑	☑				☑	☑
Hertford	☑	☑	☑	☑	☑			☑	☑	☑
Winfall	☑	☑	☑	☑	☑			☑	☑	☑

FISCAL CAPABILITY

The ability of a local government to take action is often closely associated with the amount of money available to implement policies and projects. This may take the form of outside grant funding awards or locally-based revenue and financing. The costs associated with mitigation policy and project implementation vary widely. In some cases, policies are tied primarily to staff time or administrative

costs associated with the creation and monitoring of a given program. In other cases, direct expenses are linked to an actual project such as the acquisition of flood- prone homes, which can require a substantial commitment from local, state and federal funding sources.

The Capability Assessment Survey was used to capture information on each jurisdiction's fiscal capability through the identification of locally available financial resources. **Table 6.5** provides a summary of the results for the plan participants. A checkmark ☑ indicates that the given fiscal resource is locally available for hazard mitigation purposes (including matching funds for state and federal mitigation grants).

Table 6.5

Jurisdiction	Capital Improvement Programming	Community Development Block Grants	Special Purpose Taxes	Gas/Electric Utility Fees	Water/Sewer Fees	Stormwater Utility Fees	Development Impact Fees	General Obligation, Revune and/or Special Tax Bonds	Interlocal Agreements
Camden County	☑	☑	☑		☑	☑	☑	☑	☑
Chowan County					☑				☑
Edenton	☑	☑		☑	☑		☑		☑
Currituck County	☑	☑	☑		☑				☑
Dare County	☑	☑			☑			☑	☑
Duck	☑		☑				☑	☑	☑
Kill Devil Hills	☑				☑				☑
Kitty Hawk	☑		☑				☑	☑	☑
Manteo	☑	☑	☑		☑	☑	☑		
Nags Head	☑		☑		☑	☑	☑	☑	☑
Southern Shores	☑		☑				☑	☑	☑
Gates County	☑	☑							
Gatesville	☑	☑							
Hertford County		☑	☑		☑				
Ahoskie	☑	☑		☑	☑	☑	☑	☑	
Colfield		☑	☑	☑	☑			☑	☑
Como		☑	☑	☑	☑			☑	☑
Harrellsville		☑			☑				☑
Murfreesboro		☑		☑	☑			☑	☑
Winton		☑	☑		☑				
Pasquotank County	☑	☑	☑	☑	☑	☑		☑	☑
Elizabeth City	☑	☑	☑	☑	☑	☑		☑	☑
Perquimans County	☑	☑	☑		☑		☑		☑
Hertford	☑	☑		☑	☑		☑	☑	☑
Winfall	☑	☑		☑	☑		☑	☑	☑

POLITICAL CAPABILITY

One of the most difficult capabilities to evaluate involves the political will of a jurisdiction to enact meaningful policies and projects designed to reduce the impact of future hazard events. Hazard mitigation may not be a local priority, or may conflict with or be seen as an impediment to other goals of the community, such as growth and economic development. Therefore the local political climate must be considered in designing mitigation strategies, as it could be the most difficult hurdle to overcome in accomplishing their adoption and implementation.

The Local Capability Assessment Survey was used to capture information on political capability of the Albemarle Region. Survey respondents were asked to identify some general examples of local political capability, such as guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum state or federal requirements (e.g., building codes, floodplain management, etc.). The comments provided by the participating jurisdictions are listed below:

- Camden County's Land Use Plan is included in their Camden County 2035 Comprehensive Plan (http://www.camdencountync.gov/?Itemid=272) and Small Area Plan for The South Mills Village Core Camden County, North Carolina (http://www.ecu.edu/cs-cas/plan/upload/South-Mills-Plan-1-31-12-2.pdf). In November, 2014 Camden County Commissioners voted to participate in the Community Rating System. They will undergo a "community assistance visit" to see if the county can meet the qualifications. Camden County has established a Stormwater program and fee to conduct clearing and snagging maintenance activities on the County's major streams and ditches, and perhaps some dredging where permitted by the Army Corp of Engineers. The objective is to keep the downstream and forested areas clear of debris that impedes free flowing drainage.

- Currituck County has many plans, policies, and ordinances the support hazard resiliency and mitigation. Currituck County has an active floodplain management program and is a participant in the NFIP. Currituck County also participates in the Community Rating System (CRS) that encourages and rewards participation in the NFIP through the use of higher regulatory standards. Recently, the County has obtained Hazard Mitigation Grant funding to elevate several repetitive loss houses. The County has also obtained CDBG grant funding. The older homes being replaced by the grant are being reconstructed in way that meet all current code regulations making them more hazard resilient. The County is also designing their buildings and facilities in a way to make them as hazard resilient as possible. Currituck County is committed actions, policies, and programs that will reduce hazard vulnerabilities in the community and protect the health, safety, and welfare of the community. Elected officials and senior management are always willing to do whatever is necessary to protect the health, safety, and welfare of all citizens. Example: Lake James Environmental Standards (buffers, erosion, and setbacks) all exceed state and federal requirements.

- Dare County participates in the CRS program in addition to our participation in the NFIP which provides insurance premium discounts to all property owners located in the floodplain. A 1-foot freeboard requirement was included in the Flood Damage Prevention Ordinance to further protect citizens from flooding. The County also participates in the CAMA program with regulates development along the ocean and estuarine shorelines. Dare County also actively purses available FEMA grants to elevate flood damaged structures and is currently administering a grant to elevate 44 homes.

- The Town of Duck Town Council and Town Management have championed policies and ordinances that reduce community vulnerability. The Town has adopted many higher regulatory standards in local ordinances to protect development and reduce property damage. Some examples include additional setback restrictions for oceanfront structures, freeboard requirements for structures in the floodplain, fill limitations and stormwater management, and a restriction on the size of dwellings. The Town has also been very proactive in addressing stormwater issues on NC 12 which have historically created problems with storm evacuations.

- The Town of Kill Devil Hills actively participates, enforces and addresses many items which support hazard resiliency and mitigation. The Town participates in the Community Rating System (CRS) which provides flood insurance premium discounts to all property owners located in the floodplain. The Town has also adopted and amended a Flood Damage Prevention Ordinance (FDPO) to include a one foot freeboard, a higher regulatory standard than what is required by the National Flood Insurance Program. In addition to the FDPO, the Town has also adopted a stormwater management ordinance for commercial sites which requires onsite retention of a ten year, two hour storm. The Town also participates in enforcing the Coastal Area Management Act (CAMA) by having three Local Permit Officers (LPOs) on staff to regulate development along the ocean and estuarine shorelines. Two of the Town's LPOs are also Certified Floodplain Managers (CFMs) accredited by the North Carolina Association of State Floodplain Managers.

- In response to repetitive flooding in certain locations, Kitty Hawk Town Council has funded several stormwater management studies, the most recent of which identified potential solutions to the flooding issues. As the potential stormwater management improvements cost a significant amount of money, but only benefit certain areas of the town, many property owners in the community do not support funding the recommended improvements. During the last two fiscal years, the Kitty Hawk Town Council members have budgeted funds to implement the first two phases of the stormwater management improvements and sought supplemental funds to install the remaining improvements in a quicker timeframe. The Town of Kitty Hawk has also adopted a flood damage protection ordinance with a one-foot freeboard requirement that exceeds the Minimum base flood elevation standards in AE and VE flood zones. Although this requirement places a greater expense on the property Owner and/or contractor at the time of construction, the Town recognizes the greater long-term good of preventing flood damage. The Town of Kitty Hawk has partnered with the State of North Carolina and Nature Conservancy on the acquisition and conservation of the Kitty Hawk Woods Coastal Reserve, which consists of 1,877 acres of unique maritime forest land. Although the Town has a very limited amount of remaining, developable land, Town leaders recognized the importance of preserving the coastal reserve properties as a natural amenity and mechanism to prevent over-development and provide a large area of natural stormwater management.

- The Town of Manteo's Board of Commissioners has a standing history of implement policies and funding projects that address hazards that may be experienced within their jurisdiction. The adoption of the "Stormwater Tax" has allowed for more than $300,000.00 of stormwater improvements with additional projects in the works. The adoption and enforcement of the Stormwater Ordinance also help mitigate flood threats to new and existing structures. The Town's continued participation in the CRS program allows residents to collect a 10% break on flood policies as well.

- The Town of Nags head implemented a Stormwater Ordinance that requires both commercial and residential development to retain runoff onsite. The town also implemented a freeboard

requirement in the Flood Damage Prevention Ordinance to further protect citizens from flooding. Nags head has also adopted a regulation in the Flood Damage Prevention Ordinance that limits the amount of storage space below Base Flood Elevation to 300 square feet.

- The Town of Southern Shores has a 2-foot freeboard requirement included in the Flood Damage Prevention Ordinance to further protect citizens from flooding.

- The Hertford County Board of Commissioners, with technical assistance from staff, have approved and are enforcing land use policies and procedures aligned with CAMA regulations. The County has an active Planning and Zoning Department that enforces countywide zoning, subdivision regulations and a floodplain management program.

- Pasquotank County/Elizabeth city provided a link to their current land use plan which is located at http://www.co.pasquotank.nc.us/landuse.htm. Pasquotank County has implemented a Stormwater Design Manual, which can be viewed here: http://www.co.pasquotank.nc.us/Departments/planning/Drainage%20Manual%20FINAL%20FEB%2016%202009.pdf

- The Edenton Town Council has the political capabilities to enact policies and programs that reduce hazard vulnerabilities in our community. For example, the Town's Land Use Plan and UDO continue policy statements and regulations that require certain percentage of open space be set aside as part of new residential subdivisions. The Town's requirements for landscaping, planting of trees in new parking lots and shading requirements go beyond minimum requirements.

6.4 Community Self-Assessment

In addition to the inventory and analysis of specific local capabilities, the Local Capability Assessment Survey asked counties and local jurisdictions within the Albemarle Region to conduct a self-assessment of their perceived capability to implement hazard mitigation activities. As part of this process, local officials were encouraged to consider the barriers to implementing proposed mitigation strategies in addition to the mechanisms that could enhance or further such strategies. In response to the survey questionnaire, county officials classified each of the aforementioned capabilities as either "limited," "moderate," or "high."

Table 6.6 summarizes the results of the self-assessment for the Albemarle Region.

Table 6.6
Community Self-Assessment

Jurisdiction	Planning/Regulatory	Administrative/Technical	Fiscal	Poltical	Overall
Camden County	Moderate	Moderate	Moderate	Moderate	Moderate
Chowan County	Moderate	High	High	High	High
Edenton	High	High	Moderate	High	High
Currituck County	High	High	High	Moderate	High
Dare County	High	High	High	High	High
Duck	High	High	Moderate	High	High
Kill Devil Hills	High	High	Moderate	Moderate	Moderate
Kitty Hawk	High	Moderate	Moderate	Moderate	Moderate
Manteo	High	High	High	High	High
Nags Head	Moderate	Moderate	Moderate	Moderate	Moderate
Souther Shores	High	Moderate	Moderate	Moderate	Moderate
Gates County	Moderate	Moderate	Limited	Moderate	Moderate
Gatesville	Moderate	Moderate	Limited	Moderate	Moderate
Hertford County	High	High	Moderate	High	High
Ahoskie	Moderate	Moderate	Limited	High	Moderate
Colfield	Moderate	Moderate	Moderate	Moderate	Moderate
Como	Limited	Limted	Limited	Limited	Limited
Harrellsville	Limited	Limited	Limited	Limited	Limited
Murfreesboro	Moderate	Moderate	Moderate	Moderate	Moderate
Winton	High	Moderate	Moderate	High	High
Pasquotank County	Moderate	Moderate	Moderate	Moderate	Moderate
Elizabeth City	Moderate	Moderate	Moderate	Moderate	Moderate
Perquimans County	Moderate	Moderate	Moderate	Moderate	Moderate
Hertford	Moderate	High	Moderate	High	High
Winfall	Moderate	High	Moderate	High	High

As previously discussed, one of the reasons for conducting a *Capability Assessment* is to examine local capabilities to detect any existing gaps or weaknesses within ongoing government activities that could hinder proposed mitigation activities and possibly exacerbate community hazard vulnerability. These gaps or weaknesses have been identified, for each jurisdiction, in the tables found throughout this section. The participating jurisdictions used the *Capability Assessment* as part of the basis for the mitigation actions that are identified in Section 7; therefore, each jurisdiction addresses their ability to expand on and improve their existing capabilities through the identification of their mitigation actions.

Section 7: Mitigation Strategies

7.1 Introduction

This section of the Albemarle 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' previous plan. All strategies relating to regional initiatives were developed through this planning process. 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. Gates County will take the lead in undertaking all strategies outlined within this plan relating to the region overall, with support and assistance from Camden, Chowan, Currituck, Dare, Hertford, Pasquotank and Perquimans counties, as well as all participating jurisdictions.

As the Regional Mitigation Advisory Committee 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** 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.

7.2 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.

B. Monitoring and Evaluation

Camden, Chowan, Currituck Dare, Gates, Hertford, Perquimans and Pasquotank 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, Camden Chowan, Currituck Dare, Gates, Hertford, Perquimans and Pasquotank 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 F of the plan.

7.3 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 Mitigation Advisory Committee 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 community's previous 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 F).

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 inter-jurisdictional cooperation and coordination, especially regarding the reduction of natural hazard impacts.

The tables in this section outline all the implementation strategies developed through the Albemarle 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 Mitigation Advisory Committee 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 Regional Mitigation Advisory Committee will revisit these actions as outlined within Section 8, Plan Maintenance.

It should be noted that in devising the strategies outlined in this section, the Regional Mitigation Advisory Committee 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.

Table 7.1 Regional Mitigation Strategies

Number	Mitigation Strategy	Responsible Agency
REG1	Evaluate and revise local plans, policies, procedures, regulations and ordinances to further enhances the regions ability to mitigate natural and man-made hazards	Participating County Administration, Participating County Emergency Management Agencies
REG2	Maintain and/or improve existing transportation infrastructure throughout the Region to enhance response times and aid in evacuations.	Participating County Administration, Participating County Emergency Management Agencies
REG3	Implement a public outreach campaign to increase awareness about the natural and man-made hazards that can impact the region.	Participating County Administration, Participating County Emergency Management Agencies
REG4	Pursue mitigation of repetitive loss properties throughout the Region.	Participating County Administration, Participating County Emergency Management Agencies
REG5	Identify and implement mitigation projects that are cost effective and will help reduce the effects of natural and man-made hazards.	Participating County Administration, Participating County Emergency Management Agencies

Table 7.2.1 Camden County Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CAM1	Utilize best available data to identify the location and potential impacts of natural hazards on people, property and natural environment.	Hurricanes, Nor'easters Flooding	High	Planning, GIS, Emergency Management	General Fund, Grants	New Action
CAM2	Establish periodic monitoring and review of Multi-Hazard plan and ordinances to determine effectiveness at preventing and mitigating hazards.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes	High	Planning, Inspections Emergency Management, LEPC, Emergency Response Agencies	General Fund	New Action
CAM3	Continue to ensure through proper planning, zoning and building codes that all safety measure are in place for new construction and placement.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes	High	Planning, Inspections, County Commissioners	General Fund	New Action
CAM4	Continue efforts for post-storm planning in an effort to reduce the time required to return the affected community to pre-storm status.	Hurricanes, Nor'easters, Flooding, Tornadoes	High	Planning, Emergency Management	General Fund	County has just completed the RFP process for a new Debris Removal Contract and Debris Monitoring Contract. A Disaster Recovery Plan has been completed.
CAM5	Maintain "Storm Ready Community" Status	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes	High	Emergency Management	General Fund	New Action
CAM6	Ensure that building codes are enforced to prevent damages from high winds.	Hurricanes, Tornadoes, Severe Thunderstorms	High	Inspections, County Commissioners	General Fund	New Action
CAM7	Continue to enforce regulatory measures that ensure new development will not increase flood threats to existing properties.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms	High	Planning, County Commissioners	General Fund, Grants	New Action
CAM8	Minimize economic and property losses due to flooding through continued compliance in the National Flood Insurance Program (NFIS).	Hurricanes, Nor'easters, Flooding	High	Planning, Emergency Management, County Commissioners	General Fund	New Action

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CAM9	Join the Community Rating System (CRS).	Hurricanes, Nor'easters, Flooding,	High	Planning, Emergency Management, County Commissioners	General Fund	New Action
CAM10	Develop and maintain comprehensive water management policies for Camden County considering the connections between land-use, urban growth, and surface water, and ground water issues.	Hurricanes, Nor'easters, Flooding	High	Planning, CAMA, County Commissioners, Emergency Management	General Fund	New Action
CAM11	Seek/Encourage the development and implementation of long-term cost effective and environmentally sound mitigation projects.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms	Medium	Emergency Management, County Commissioners	Mitigation Funds	New Action
CAM12	As Funding allows, reduce flood-related damage to repetitive flood loss properties and structures through the buyout program.	Hurricanes, Nor'easters, Flooding	Medium	Emergency Management, County Commissioners, Finance Department	Mitigation Funds	New Action
CAM13	Encourage critical facilities to apply structural hazard mitigation and sustainability concepts when building or remodeling their facilities; to include back-up power sources.	All Hazards	Medium	Emergency Management	General Funds, Mitigation Fund, Grants	New Action
CAM14	Reduce the impact of wind on trees near county/city structures.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	Low	Maintenance	General Fund	New Action
CAM15	Acquire generators or other forms of redundant power supply to ensure that critical facilities and infrastructure remain operational where normal power supply is not available.	All Hazards	Medium	Emergency Management	General Fund	New Action
CAM16	Maintain Debris Removal and Monitoring Services Contracts	Hurricanes, Nor'easters, Severe Thunderstorms Tornadoes	Medium	Emergency Management, Planning, County Commissioners	General Fund	New Action
CAM17	Encourage development of Continuity of Operations Plans in both government and private agencies.	Hurricanes, Nor'easters, Severe Thunderstorms, Flooding Tornadoes	Medium	Emergency Management	General Fund	Completed by Camden Sheriff's Office and additional planning efforts are underway by other departments.
CAM18	Educate and inform residents, businesses and visitors via public education, social media and print materials on ways to mitigate disasters including steps that they can protect themselves.	All Hazards	High	Emergency Management	Mitigation Funds	Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.
CAM19	Encourage the use of weather radios/severe weather warning apps especially in schools, rest homes, convalescent homes, retirement centers and other locations where people congregate to inform them of the approach of severe weather.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	High	Emergency Management	Mitigation Funds	New Action

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CAM20	Increase awareness of hazards affecting Camden County and provide information to assist in good decision-making.	All Hazards	High	Emergency Management	General Funds, Mitigation Fund, Grants	New Action
CAM21	Educate home and property owners about flood-proofing and wind-proofing measures.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes	Medium	Planning/Inspections, Emergency Management	General Fund	New Action
CAM22	Continue to enforce the North Carolina Building Code. The requirement that new structures or structures undergoing significant renovation be resistant to wind loads of 110 mph. is of particular importance.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	High	Planning/Inspections	General Fund	The Planning and Code Enforcement Department continues to enforce the state building code, including wind load requirements. All building plans must demonstrate compliance prior to issuance of a building permit. The Building Inspector continues to conduct inspections during construction and no Certificate of Occupancy is issued unless all requirements are satisfied.
CAM23	Educate contractors about safe housing development through written materials or during county sponsored events.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	Low	Planning/Inspections	General Fund	Removed from plan. Will be removed on subsequent plan.
CAM24	Provide hazard mitigation information for the county residents including information on preparedness for all hazards significant to Camden County during various public events, in public buildings, and through media outlets.	All Hazards	High	Emergency Management	General Fund	Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.
CAM25	Provide homeowners information on wind resistant measures.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	Medium	Planning/Inspections, Emergency Management	General Fund	Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.
CAM26	Post information about Camden County's emergency evacuation routes.	All Hazards	High	Emergency Management	General Fund	Information provided during various public events/educational events. Also posted to EM website and via social media.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CAM27	Review the Pasquotank-Camden-Elizabeth City Multi-Hazard Operations Plan annually and update the plan as necessary. Ensure all departments establish guidelines for response to emergencies and to maintain departmental operations. Work with County departments to ensure each department possesses a clear understanding of department responsibilities as outlined in the Pasquotank-Camden-Elizabeth City Multi-Hazard Operations Plan.	All Hazards	High	Emergency Management	General Fund	Public Safety Agencies meet regularly; on a monthly basis. Other agencies meet along with these agencies for special meetings/trainings. Exercises are conducted annually to review departmental operations and to ensure each agency understands their role and responsibility as outlined in the Multi-Jurisdictional Hazard Mitigation Plan.
CAM28	Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees or branches on county property when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the community.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	High	Utility Providers, Emergency Management, Public Works	General Fund	Camden County relies on the utility providers to conduct these efforts, the County will continue to support their efforts through maintenance support services provided by the County.
CAM29	Continue efforts to develop continuity of operations plans (COOP) for county departments. Continuity of operations planning has been completed by several departments and additional planning efforts are currently underway.	All Hazards	High	Emergency Management, County Commissioners,	General Fund	Completed by Camden Sheriff's Office and additional planning efforts are underway by other departments.
CAM30	Record all tax parcel information and floodplain locations in a GIS system including repetitive loss areas, areas of greatest risk, and vulnerable populations.	Hurricanes, Floods, Nor'easters	High	Camden County GIS	General Fund	Completed and updated as information is made available.
CAM31	In conjunction with NCEM/GTM, produce an up-to-date flood map of Camden County that can be utilized to reduce development in the floodplain.	Hurricanes, Floods, Nor'easters	High	Camden County GIS	General Fund	Completed and updated as information is made available.
CAM32	Minimize economic and property losses due to flooding. Continued compliance with NFIP – participate in the Community Rating System (CRS).	Hurricanes, Floods, Nor'easters	High	Planning and Inspections	General Fund	The flood damage prevention ordinance is reviewed annually to ensure that it is current, FIRMS are up to date and proper enforcement is being accomplished.
CAM33	Provide information to citizens on flooding preparedness. As with other hazards of concern to Camden County, hazard mitigation information should be distributed to residents, including information on preparedness for all hazards significant to its jurisdiction. The information should educate on methods of elevation and flood proofing property.	Hurricanes, Floods, Nor'easters	High	Planning and Inspections	General Fund	Available at the office of planning and inspections, information is provided via various forums and in the flood damage prevention ordinance.
CAM34	Distribute information identifying flood prone areas within the county. Sixty –seven percent of Camden County is within the flood zone. Evacuation and family preparedness information should be distributed to all residents living within flood prone areas and especially to the special needs population located within these areas.	Hurricanes, Floods, Nor'easters	High	Emergency Management	General Fund	Emergency Management maintains a Special Needs Registry – evacuation and family preparedness information made available to this population as well as the non-English speaking population in Camden County.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CAM35	Work with the National Weather Service to provide early warning to the community and critical facilities.	Hurricanes, Floods, Nor'easters	High	Emergency Management	General Fund	Pasquotank-Camden Emergency Management Agency has been officially recognized by the National Weather Service as a NC Storm ready Community. There is access to, and considerable cooperation from, local broadcast media to warn the public to the potential for flooding. Weather alert radios are also located in each school and many government agencies to provide early warning. In addition, a notification plan is in place to alert critical facilities of watches/warnings. Coordination with the NWS should continue and additional methods of disseminating early warnings to the community/critical facilities should be continually evaluated and explored.
CAM36	Provide new home and property buyers with information on wind proofing. This information may be most efficiently dispersed by the tax assessor's office because all home transactions are recorded there.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	Low	Planning and Inspections, Tax Office	General Fund	Removed from plan.
CAM37	Educate mobile home contractors and owners about wind proofing measures, including wood and light steel construction connectors and anchoring systems.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	High	Planning and Inspections	General Fund	Mobile homes are only allowed in R-2 and R-1 residential zones. Single-wides are permitted to be replaced on site, and moved around the county to R-1 zones or trailer parks – but are not allowed to be brought into county otherwise. All homes must meet 110 mph wind codes. Mobile homes older than 1993 when the wind regulations changed are not permitted.
CAM38	Zoning and Subdivision Ordinances should require storm shelters in all mobile home areas and subdivisions.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	Low	Planning and Inspections	General Fund	Removed from plan.
CAM39	Reduce the impact of trees/ice to power lines. Prune trees away from power lines and develop/enforce policies regarding tree limb clearance.	Winter storms	Medium	Camden Maintenance, Building Inspector, County Manager	General Fund	County maintenance division in cooperation with the County's extension service identifies regularly and removes trees/branches that are considered at risk. Camden County relies on the utility providers to conduct these efforts, the County will continue to support their efforts through maintenance support services provided by the County.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CAM40	Continue coordinated mitigation and management strategies for de-icing roads, public notification and clearing roads of fallen trees with NCDOT and other public and private partners.	Winter storms	High	Camden Manager, Emergency Management	General Fund	Follow guidance provided by NCDOT division for de-icing roads. Work with County maintenance and utility providers for removal of trees post storm. Coordination with the NWS should continue and additional methods of disseminating early warnings for community/critical facilities, that includes public infrastructure such as roads and bridges. Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.
CAM41	Minimize the impacts of lightning strikes. Zoning ordinances should require that lightning detection devices be installed in public outdoor gathering areas such as school stadiums and ball parks.	Severe Thunderstorms	Medium	Planning, County Commissioners	General Fund	For consideration in the County's rewrite of the Unified Development Ordinance (UDO). RFP responses for a UDO rewrite is being considered in FY 15-16 budget.
CAM42	Minimize the impacts of lightning strikes. Continue to educate the public on severe thunderstorm safety and the safety measures to be taken from lightening injuries.	Severe Thunderstorms	High	Planning, Emergency Management	General Fund	Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.
CAM43	Improve the wind resistance of structures in the county. Continue to enforce the NC Building Code. The requirement that new structures or structures undergoing significant renovation be resistant to wind loads of 110 m.p.h. is of particular importance.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Planning, County Commissioners	General Fund	The Planning and Code Enforcement Department continues to enforce the state building code, including wind load requirements. All building plans must demonstrate compliance prior to issuance of a building permit. The Building Inspector continues to conduct inspections during construction and no Certificate of Occupancy is issued unless all requirements are satisfied.
CAM44	Educate home and property owners about wind proofing measures. Provide hazard mitigation information for the county residents including information on preparedness for all hazards significant to Camden County during various public events, in public buildings, and through media outlets.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Planning and Inspections, Tax Office	General Fund	Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.
CAM45	Reduce the impact of wind on trees near county structures. Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees or branches on county/city property when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the county.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Public Works	General Fund	Trees and branches are continually monitored by all departments and pruned prior to major weather events.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CAM46	Increase driving safety during thunderstorms by installing visibility, reflector tape or paint along road edges and in the dividing line should be placed on all major roads throughout the county.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Planning, County Manager, Public Works	General Fund	As funds are available this is maintained by NCDOT. Road paint reapplied, reflectors replaced, resurfacing completed as needed.
CAM47	Conduct an annual review of the Pasquotank-Camden-Elizabeth City Multi-Hazard Operations Plan. Maintain current emergency contact information.	Wildfires	High	Planning, Emergency Management, County Manager	General Fund	Annual update of Multi-Jurisdictional Hazard Mitigation Plan. The Emergency Management Coordinator attends annual NC Forest Service Cooperative Meeting. EM Coordinator maintains current contact information.
CAM48	Continue inter-agency and multi-jurisdictional efforts to identify, contain and properly extinguish wildfires	Wildfires	High	Planning, Emergency Management, County Manager	General Fund	NC Forestry representatives regularly attendee monthly Public Safety Meetings.
CAM49	Record tax parcel information/floodplain locations in GIS system including repetitive losses due to flooding.	Flooding	High	Tax Office	General Fund	Staff will continue to utilize FEMA Floodplain data provided by NCFMP along with tax parcel data to locate vulnerable areas. Storm Surge data from NOAA will also be used.
CAM50	Review the Pasquotank-Camden Elizabeth City Multi-Hazard Operation Plan	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Planning, Emergency Management, County Manager	General Fund	Annual update of Multi-Jurisdictional Hazard Mitigation Plan. The Emergency Management Coordinator attends annual NC Forest Service Cooperative Meeting. EM Coordinator maintains current contact information.
CAM51	Enforce NC Building Code	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Planning/Inspections	General Fund	The Planning and Code Enforcement Department continues to enforce the state building code, including wind load requirements. All building plans must demonstrate compliance prior to issuance of a building permit. The Building Inspector continues to conduct inspections during construction and no Certificate of Occupancy is issued unless all requirements are satisfied.
CAM52	Maintain Evacuation Routes and disseminate information to the public	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Planning, Emergency Management, County Manager	General Fund	Major improvements have been made to communicate with stakeholders. Use of social media and internet based communication tools has drastically improved the town's ability to disseminate and receive information.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CAM53	Provide information to citizens on flooding preparedness.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Emergency Management, Planning	General Fund	Major improvements have been made to communicate with stakeholders. Use of social media and internet based communication tools has drastically improved the town's ability to disseminate and receive information.
CAM54	Coordination with NWS should continue and additional methods of disseminating early warnings to the community/critical facilities should be continually evaluated and explored.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Planning, Emergency Management, County Manager	General Fund	Coordination efforts with NWS are taking place. Continue to monitor best methods of disseminating early warnings to Community whether it be on the website, periodic mailers, regional committees, etc.
CAM55	Educate the public on severe thunderstorm safety.	Thunderstorms	High	Planning, Emergency Management	General Fund	Major improvements have been made to communicate with stakeholders. Use of social media and internet based communication tools has drastically improved the town's ability to disseminate and receive information.
CAM56	Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees on county property when they pose an immediate threat to property or critical facilities.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Public Works	General Fund	Camden County relies on the utility providers to conduct these efforts, the County will continue to support their efforts through maintenance support services provided by the County.
CAM57	Stormwater Advisory Committee should continue its work in identifying major drainage issues in the four stormwater districts and work to identify what level of maintenance is needed in these areas.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Public Works, Planning	General Fund, Grant Funds	Established a Stormwater program and fee to conduct clearing and snagging maintenance activities on the county's major streams and ditches, and some dredging where permitted by the Army Corp of Engineers.
CAM58	Update/Maintain a current action plan for wildfire response.	Wildfires	High	Planning/County Manager	General Fund	Plan is to be updated and maintained.
CAM59	Continue inter-agency and multijurisdictional efforts to identify, contain and extinguish wildfires.	Wildfires	Medium	Planning, Emergency Management, County Manager	General Fund	NC Forestry representatives regularly attendee monthly Public Safety Meetings.
CAM60	Participate in National Flood Insurance Community Rating System (in addition to continued NFIP compliance)	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Planning, Emergency Management, County Manager	General Fund	Adopted appropriate land use or other regulatory polices/ordinances that assist repetitive loss properties.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CAM61	Encourage installation of generator switches in new construction critical facilities	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	Medium	Public Works	General Fund	New Action
CAM62	Provide new home and property buyers with information on wind proofing measures.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	Medium	Inspections	General Fund	Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook. All structures rehabilitated greater than 50% damage, or reconstructed greater than 50% have to meet present wind load requirements in NC Building Code.
CAM63	Educate contractors about wind proofing measures.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Inspections	General Fund	Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook. All structures rehabilitated greater than 50% damage, or reconstructed greater than 50% have to meet present wind load requirements in NC Building Code.
CAM64	Educate home and property owners about Wildland/Urban Interface fire safety.	Wildfires	High	Inspections/Planning	General Fund	Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook. All structures rehabilitated greater than 50% damage, or reconstructed greater than 50% have to meet present wind load requirements in NC Building Code.
CAM65	Educate contractors about principles for quality redevelopment and safe housing development.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Inspections/ Planning	General Fund	Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook. All structures rehabilitated greater than 50% damage, or reconstructed greater than 50% have to meet present wind load requirements in NC Building Code.
CAM66	Increase driving safety awareness during thunderstorms. Improve road visibility by adding reflector tape, paint, etc. on all major roads throughout the county.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes, winter storms	High	Public Works/Transportation	General Fund	As funds are available this is maintained by NCDOT. Road paint reapplied, reflectors replaced, resurfacing completed as needed.
CAM67	Amend Zoning Ordinances to require lightning detection devices be installed in public outdoor gathering areas such as school stadiums and ball parks.	Thunderstorms	High	Planning/Zoning, County Manager	General Fund	No action. County has not amended this action.

Table 7.2.2. – Chowan County Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CHO1	GIS mapping locations of damaged utilities caused by previous hurricanes.	Hurricanes	Medium	Chowan County GIS	General Fund	Chowan County views this as a critical tool in assessing vulnerability and potential Emergency Management issues that may arise during a natural hazard event. These efforts will be continued on an as needed basis following an event.
CHO2	Locate different funding sources that can aid in the improvements of drainage within the County.	Hurricanes, Floods, Nor'easters	High	Chowan County Administration	General Fund	The County has a fairly good handle on drainage issues within rural portions of the County. County administration will continue to address issues as they arise, if feasible through the use of grant funds.
CHO3	Provide public service messages that discuss preparations in the event of a hurricane to be sent out annually in the early spring.	Hurricane	High	Chowan County Emergency Management	General Fund	Emergency Management officials work closely with local media outlets to prepare citizens for hazards associated with Hurricane season. These efforts are generally outlined within the County's EOP
CHO4	Update and identify all areas not previously labeled on the 100-year flood map that were flooded during major rainfall events and hurricanes.	Hurricanes, Floods, Nor'easters	High	Chowan County Planning	General Fund	The County conducted this analysis following Hurricane Isabel, and will continue to do so following all substantial flooding /hurricane events.
CHO5	Elevate repetitive loss structures or acquire repetitive loss properties	Hurricanes, Floods, Nor'easters	High	Chowan County Planning	General Fund, Grants Fund	Currently the County does not have any structures that qualify for treatment as a repetitive loss property. The County has not treated any units over the last five years
CHO6	Determine specific reasons why each area was damaged (amount of times flooded, and whether this damage is expected from future flooding). This will work in concert with all future repetitive loss analysis.	Hurricanes, Floods, Nor'easters	High	Chowan County Planning	General Fund	The County conducted this analysis following Hurricane Isabel, and will continue to do so following all substantial flooding /hurricane events
CHO7	Consider and review all changes established through the updated NFIP Floodplain Mapping Program, when required.	Hurricanes, Floods, Nor'easters	High	Chowan County Planning, Chowan County Inspections	General Fund	New Action
CHO8	Use special consideration for development permits for structures proposed within the Areas of Special Flood Hazard (ASFH)	Hurricanes, Floods, Nor'easters	High	Chowan County Planning, Chowan County Inspections	General Fund	This process is carried out through enforcement of the County's Flood Damage Prevention Ordinance. These efforts will continue.
CHO9	Require all new structures finished floor elevation (FFE) be at or above the current BFE*.	Hurricanes, Floods, Nor'easters	High	Chowan County Planning, Chowan County Inspections	General Fund	This strategy was deemed unnecessary and therefore has been removed from the plan

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CHO10	Locate different funding sources that can aid in the improvements of drainage within the Town and County caused by regular flooding events (such as grants through CDBG, NCDENR, etc.)	Hurricanes, Floods, Nor'easters	High	Chowan County Planning, Chowan County Inspections	General Fund, Grant Funds	The County has a fairly good handle on drainage issues within rural portions of the County. County administration will continue to address issues as they arise, if feasible through the use of grant funds.
CHO11	Work with the curriculum directors of both the public and private schools to add all Mitigation Hazards prevention and preparedness information.	All Hazards	High	Chowan County Planning, Chowan County Inspections	General Fund	County Emergency Management Officials visit and work closely on an annual basis with local schools to prepare for natural disasters, especially tornadoes and hurricanes.
CHO12	Work with local charities, Meals on Wheels and/or Habitat for Humanity chapters, to apply non-structural mitigation measures to the homes of low-income senior citizens in during times of disaster.	All Hazards	High	Chowan County Administration, Chowan County Health Department	General Fund	New Action
CHO13	Compile flood mitigation information and make it available to Chowan County and Edenton residents and business owners."	Hurricanes, Flooding, Nor'easters	High	Chowan County Planning, Chowan County Inspections	General Fund, Grant Funds	This information is always available through the Town and County Inspections Office. The materials are provided by FEMA
CHO14	The County will assess erosion following substantial natural hazard events in an effort to insure that it does not encroach upon developed portions of the County.	Hurricanes, Flooding, Nor'easters, Erosion	High	Chowan County Planning, Chowan County Inspections	General Fund, Grants Fund	New Action
CHO15	Provide emergency broadcast the located and approximate time for areas likely to be hit by a tornado.	Tornadoes	High	Chowan County Emergency Management	General Fund, Grant Funds	Emergency Management officials work closely with local media outlets to prepare citizens for hazards associated with Hurricane season. These efforts are generally outlined within the County's EOP.
CHO16	Create a systematic warning system aimed at posting electrical highway signs that warn of extreme weather conditions.	All Hazards	High	Chowan County Emergency Management	General Fund, Grant Funds	The County maintains a County Emergency Notification System geared towards notifying citizens of impending inclement weather or emergency situations. This system is updated as funds are available.
CHO17	Improve the wind resistance of structures within the County and Town by continuing to enforce the North Carolina Building Code.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	High	Chowan County Planning, Chowan County Inspections	General Fund	Enforcement is accomplished through the issuance of building permits and inspections through the County's permitting office.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CHO18	Support efforts of utility providers to monitor trees and branches at risk of breaking or falling in windstorms.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	High	Chowan County Planning, Chowan County Inspections, Utility Providers	General Fund	Chowan County relies on the utility providers to conduct these efforts; the County will continue to support their efforts.
CHO19	Prepare County and Town notification when water conservation plans are in effect once the water levels drop below the revised County and Town water levels.	Drought	High	Chowan County Emergency Management	General Fund	Chowan County has, will continue to enforce the County's Water Shortage Management Plan. This plan outlines procedures for water rationing during periods of extreme droughts.
CHO20	Create a GIS map of areas in critical need of improvement.	All Hazards	High	Chowan County Land Records	General Fund, Grant Funds	The County has created a GIS website. In the process of budgeting and acquiring grants for survey equipment needed to accurately locate facilities (Incomplete).
CHO21	Require all public utility companies as well as County and Town-owned utilities to inspect and repair damage due to Hurricane within a 5-year time frame.	Hurricane	High	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund	Creating additional funding within County and Town utilities departments.
CHO22	Utilize GPS to transfer to GIS mapping system. Include consistent problem areas on the current flood maps. Those areas include: Pembroke Circle, Dillard Mill, and Cypress Point Marina, as well as Woodlawn Park.	Flooding	High	Chowan County Land Records	General Fund	The County has created a GIS website. In the process of budgeting and acquiring grants for survey equipment needed to accurately locate facilities.
CHO23	List areas in need of repair, replacement and improvement.	Flooding	High	Chowan County & Town of Edenton Administration	General Fund	There are no additional funds required for this measure. Complete.
CHO24	Determined priority level by past flooding experience, extent and value of damage, and cost of repairs.	Flooding	High	Chowan County & Town of Edenton Administration	General Fund	There are no additional funds required for this measure. Complete.
CHO25	Identify all structures located within the revised Areas of Special Flood Hazard (ASFH).	Flooding	High	Chowan Planning & Inspection Department	General Fund	This strategy was deemed ambiguous and vague. Due to these deficiencies it has been eliminated.
CHO26	For structures located within the ASFH, determine whether the structure's finished floor elevation (FFE) is above or below the base flood elevation (BFE).	Flooding	High	Chowan Planning & Inspection Department	General Fund	No additional costs are expected. Complete
CHO27	Identify structures that have been damaged by flooding in the past due to distance and/or height of structure.	Flooding	High	Chowan County & Town of Edenton Administration	General Fund	No additional costs are expected. Complete
CHO28	Require all new structures to include drainage ditches and/or culverts installed around perimeter of property to prevent flooding and flood damage to structures.	Flooding	Medium	Chowan Planning & Inspection Department	General Fund	No additional costs are expected. Complete
CHO29	Research possible seawall options to prevent tidal flooding.	Flooding	High	Chowan County Board of Commissioners & Town of Edenton Town.	General Fund, Grant Funds	Seawall constructed to minimize effects of 25-yr flood. Uneconomical to build larger structure without grants. Town attempting to capture grants for additional study and construction. Funding Hurdles.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CHO30	Begin monitoring erosion complaints, considering locations, possible events, and past complaints about the areas.	Erosion	Medium	Chowan County Planning & Inspection Department	General Fund	Budget to be created (for the County and Town) at a later date depending on amount of complaints and legitimacy.
CHO31	Research and interview with property owners	Erosion	Medium	Chowan County Planning & Inspection Department	General Fund	Budget may need to be created (for the County and Town) at a later date depending on amount of complaints and legitimacy.
CHO32	Research possible seawall options to prevent future erosion along Edenton Bay and rivers	Erosion	High	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund, Grant Funds	Seawall constructed to minimize effects of 25-yr flood. Uneconomical to build larger structure without grants. Town attempting to capture grants for additional study and construction.
CHO33	Consider bringing in fill and additional necessary materials to replace erosion in designated areas.	Erosion	Medium	Chowan County Board of Commissioners & Town of Edenton Town Council to consider repair measures.	General Fund	Soil to be replaced as needed. No Action at this Time.
CHO34	Posting signs in areas considered eroded	Erosion	Medium	Chowan County Planning & Inspection Department	General Fund	Budget may need to be created (for the County and Town) at a later date depending on amount of complaints and legitimacy. No Action at this Time.
CHO35	Research and interview with property owners	Storm Surge	Medium	Chowan County Planning & Inspection Department	General Fund	Budget may need to be created (for the County and Town) at a later date depending on amount of complaints and legitimacy. No Action at this Time.
CHO36	Document specific accounts of storm surge levels within different areas per storm & calculate value of loss. *Information to be included in future Hazard Mitigation Plan updates (once every 5 years).	Storm Surge	Medium	Chowan County Planning & Inspection Department	General Fund	Budget may need to be created (for the County and Town) at a later date depending on amount of complaints and legitimacy. No Action at this Time.
CHO37	Research possible seawall options to prevent future erosion along Edenton Bay and rivers	Storm Surge	High	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund, Grant Funds	Seawall constructed to minimize effects of 25-yr flood. Uneconomical to build larger structure without grants. Town attempting to capture grants for additional study and construction.
CHO38	Provide public mailings to discuss what to do in case of expected storm surge.	Storm Surge	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	County Webpage has been updated to reflect this information.
CHO39	Start radio or newspaper advertisement, to warn citizens of hazards and safety precautions that should be taken.	Tornadoes	High	Chowan County Emergency Services	General Fund	Program has been eliminated due to a lack of political will and tools available to achieve the stated outcome.
CHO40	Prepare a series of mailings to citizens discussing the proper safety procedures for each hazard addressed in this plan.	Tornadoes	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	Information made available on County website. County/Town will budget for advertisements to invite public to view

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CHO41	Require all new structures to include drainage ditches and/or culverts installed around perimeter of property to prevent flooding and flood damage to structures.	Nor'easters	High	Chowan Planning & Inspection Department	General Fund	Program has been eliminated due to a lack of political will and tools available to achieve the stated outcome.
CHO42	Provide safety warning radio broadcasts, determining the approximate time and area a nor'easter would be likely to hit.	Nor'easters	Medium	EMS/Chowan County & Town of Edenton Fire & Law Enforcement	General Fund	The County has implemented a "One-Call" call alert contract. An auto dialer contacts every phone number in the county with automated message of pending danger. NOAA also sends alerts on radio and TV. Complete.
CHO43	Prepare a series of mailings to citizens discussing what the proper safety procedures for each hazard addressed in this Plan.	Nor'easters	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	Information made available on County Website. County/Town will budget for advertisements to invite public to view.
CHO44	Post warning signs in areas stating the likelihood of fires in the area due to the current weather conditions, including the dangers that may lead to wildfires.	Wildfires	High	North Carolina Forestry Service, Chowan County Fire Department and Town of Edenton Fire Department.	General Fund	Implemented by State. Information also made available on County website.
CHO45	Require owners (by advertisement in the local papers) to annually remove any brush or downed limbs promptly to prevent fires from moving quickly along the ground.	Wildfires	High	Chowan County Board of Commissioners & Town of Edenton Town Council to add new amendment to ordinances	General Fund	Added new amendments to ordinances.
CHO46	Assign new regulations that will revise the current water level for both the Town of Edenton Water Department and the Chowan County Water Department.	Drought	Medium	County and Town Water Departments	General Fund	No additional costs to either the County or Town water departments. Town of Edenton has adopted a Water Shortage Response Plan. The County has received verbal agreement to purchase water from neighboring county in event of emergency. Complete, but remains open to be revised as needed.
CHO47	Start radio or newspaper advertisement, to warn citizens of hazards and safety precautions that should be taken.	Winter Storms	High	Chowan County Emergency Services	General Fund	Program has been eliminated due to a lack of political will and tools available to achieve the stated outcome.
CHO48	Prepare a series of mailings to citizens discussing what the proper safety procedures for each hazard addressed in this Plan.	Winter Storms	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	Information made available on County website. County/Town will budget for advertisements to invite public to view.

Table 7.2.3 Town of Edenton Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
EDN1	Develop plan to assist property owners with safe and efficient post-disaster cleanup *(*New Strategy*).*	All Hazards	Medium	Edenton Public Works Department, Edenton Administration	General Fund, Grant Funds	New Action
EDN2	Improve stormwater drainage and land management preparation for flooding events *(*New Strategy*).*	Hurricanes, Nor'easters, Flooding	High	Edenton Planning Department	General Fund, Grant Funds	New Action
EDN3	Elevate repetitive loss structures or acquire repetitive loss properties.	Hurricanes, Floods, Nor'easters	High	Edenton Planning Department	General Fund, Grant Funds	Currently the Town does not have any structures that qualify for treatment as a repetitive loss property. There have not been any units treated over the last five years.
EDN4	Compile flood mitigation information and make it available to Chowan County and Edenton residents and business owners.	Hurricanes, Floods, Nor'easters	High	Edenton Planning Department, Chowan County Planning, Chowan County Inspections	General Fund, Grant Funds	This information is always available through the Town and County Inspections Office. The materials are provided by FEMA. Information is also made available on County Website. County/Town considering budget for advertisements to invite public to view.
EDN5	Prepare County and Town notification when water conservation plans are in effect once the water levels drop below the revised County and Town water levels.	Drought	High	Chowan County Emergency Management	General Fund	The Town of Edenton, along with Chowan County has, will continue to enforce the County's Water Shortage Management Plan. This plan outlines procedures for water rationing during periods of extreme droughts.
EDN6	Advocate the Use of Existing State and Federal Regulatory Programs for Protecting and Preserving Coastal Wetland Areas of Environmental Concern *(*New Strategy*)*	Hurricanes, Floods, Nor'easters	Medium	Edenton Planning Department	General Fund	New Action
EDN7	Support Improvements to Regional Transportation Systems for Safe Traffic Flow *(*New Strategy*)*	Hurricanes, Nor'easters, Flooding, Winter Storms	Medium	Edenton Planning Department, Edenton Administration, NCDOT	General Fund, Grant Funds	New Action
EDN8	Create a systematic warning system aimed at posting electrical highway signs that warn of extreme weather conditions.	All Hazards	High	Chowan County Emergency Management	General Fund, Grant Funds	The County maintains a County Emergency Notification System geared towards notifying citizens of impending inclement weather or emergency situations.
EDN9	Work with the curriculum directors of both the public and private schools to add all Mitigation Hazards prevention and preparedness information *(Strategy reworded to include all hazards).*	All Hazards	High	Chowan County Planning, Chowan County Inspections, Town of Edenton Planning Department	General Fund	County Emergency Management Officials visit and work closely on an annual basis with local schools to prepare for natural disasters, especially tornadoes and hurricanes. *(Strategy reworded to include all hazards).*
EDN10	Improve the wind resistance of structures within the County and Town by continuing to enforce the North Carolina Building Code.	Hurricanes, Nor'easters, Severe Thunderstorms, Tornadoes	High	Chowan County Planning, Chowan County Inspections, Town of Edenton Planning Department, Town of Edenton Inspections	General Fund	Enforcement is accomplished through the issuance of building permits and inspections through the County's permitting office.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
EDN11	Create a GIS map of areas in critical need of improvement.	Hurricanes	High	Chowan County Land Records	General Fund, Grant Funds	The County has created a GIS website. In the process of budgeting and acquiring grants for survey equipment needed to accurately locate facilities.
EDN12	GIS mapping locations of damaged utilities caused by previous hurricanes.	Hurricanes	High	Chowan County Land Records	General Fund, Grant Funds	The County has created a GIS website. In the process of budgeting and acquiring grants for survey equipment needed to accurately locate facilities.
EDN13	Require all public utility companies as well as County and Town-owned utilities to inspect and repair damage due to Hurricane within a 5-year time frame.	Hurricanes	High	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund	Incomplete and in process of creating additional funding within County and Town utilities departments.
EDN14	Locate different funding sources that can aid in the improvements of drainage within the Town and County.	Hurricanes	High	Chowan/Edenton Administration	General Fund, Grant Funds	Past drainage studies performed by Town and seawall constructed. Acquiring additional grants for further improvements.
EDN15	Provide public service messages that discuss preparations in the event of a hurricane to be sent out annually in the early spring.	Hurricanes	High	Chowan/Edenton Administration	General Fund, Grant Funds	Information made is available on County Website. County/Town considering budget for advertisements to invite public to view.
EDN16	Utilize GPS to transfer to GIS mapping system. Include consistent problem areas on the current flood maps. Those areas include: Pembroke Circle, Dillard Mill, and Cypress Point Marina, as well as Woodlawn Park.	Flood	High	Chowan County Land Records	General Fund, Grant Funds	Incomplete, however the County has created a GIS website. In the process of budgeting and acquiring grants for survey equipment needed to accurately locate facilities.
EDN17	Update and identify all areas not previously labeled on the 100-year flood map that were flooded during major rainfall events and hurricanes.	Flood	High	Chowan County & Town of Edenton Administration	General Fund, Grant Funds	1 private home and 1 historic home have been elevated since 2005. Will continue to apply for grant assistance to elevate and or acquire such properties.
EDN18	List areas in need of repair, replacement and improvement.	Flood	High	Chowan County & Town of Edenton Administration	General Fund, Grant Funds	This strategy was deemed ambiguous and vague. Due to these deficiencies it has been eliminated.
EDN19	Determined priority level by past flooding experience, extent and value of damage, and cost of repairs.	Flood	High	Chowan County & Town of Edenton Administration	General Fund, Grant Funds	List updated and reprioritization post event.
EDN20	Determine specific reasons why each area was damaged (amount of times flooded, and whether this damage is expected from future flooding). The majority of these areas would be located in the Town of Edenton.	Flood	High	Chowan County & Town of Edenton Administration	General Fund, Grant Funds	The County conducted this analysis following Hurricane Isabel, and will continue to do so following all substantial flooding /hurricane events.
EDN21	Identify all structures located within the revised Areas of Special Flood Hazard (ASFH).	Flood	Medium	Chowan Planning & Inspection Department	General Fund	This strategy was deemed ambiguous and vague. Due to these deficiencies it has been eliminated.
EDN22	For structures located within the ASFH, determine whether the structure's finished floor elevation (FFE) is above or below the base flood elevation (BFE).	Flood	High	Chowan Planning & Inspection Department	General Fund	Information determined based upon updated FIRMs.
EDN23	Identify structures that have been damaged by flooding in the past due to distance and/or height of structure.	Flood	High	Chowan County & Town of Edenton Administration	General Fund	List of structures updated post event. Limited resources available to update regularly on regular basis post event (Incomplete data)

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
EDN24	Use special consideration for development permits for structures proposed within the Areas of Special Flood Hazard (ASFH).	Flood	High	Chowan Planning & Inspection Department	General Fund	All structures proposed within ASFH must meet flood damage prevention ordinance.
EDN25	Require all new structures finished floor elevation (FFE) be elevated at or above the current base flood elevation (BFE).	Flood	High	Chowan Planning & Inspection Department	General Fund	All structures proposed within ASFH must meet flood damage prevention ordinance thus requiring all new structures to meet or exceed BFE.
EDN26	Require all new structures to include drainage ditches and/or culverts installed around perimeter of property to prevent flooding and flood damage to structures.	Flood	High	Chowan Planning & Inspection Department	General Fund	On a case by case basis, the local Building Inspector and the Planning Board, if necessary, will determine if rerouting the flow of ditches is environmentally sound. Depending on the situation, a CAMA permit may also need to be issued before any installations begin.
EDN27	Locate different funding sources that can aid in the improvements of drainage within the Town and County caused by regular flooding events (such as grants through CDBG, NCDENR, etc…)	Flood	High	Chowan/Edenton Administration	Grant Funds	Chowan County & the Town of Edenton will be applying for aid through FEMA.
EDN28	Research possible seawall options to prevent tidal flooding.	Flood	High	Chowan County Board of Commissioners & Town of Edenton	Grant Funds	Seawall constructed to minimize effects of 25-yr flood. Uneconomical to build larger structure without grants. Town attempting to capture grants for additional study and construction.
EDN29	Compile flood mitigation information and make it available to Chowan County and Edenton residents and business owners.	Flood	High	Chowan County Planning & Inspection Department	General Fund	Information made is available on County Website. County/Town considering budget for advertisements to invite public to view.
EDN30	Work with the curriculum directors of both the public and private schools to add flood disaster, hurricane, tornado, and wildfire prevention and preparedness information.	Flood, Hurricane, Tornadoes, Wildfires	High	Chowan County EMS/EMT personnel and Chowan County & Town of Edenton Fire Dept. personnel	General Fund	Per state requirements, fire and tornado drills are routinely performed at local schools. Information also is available on County Website.
EDN31	Work with local charities, Meals on Wheels and/or Habitat for Humanity chapters, to apply non-structural mitigation measures to the homes of low-income senior citizens in the Flood Hazard Area.	Flood	High	Chowan County & Town of Edenton Administration to organize volunteer groups	Volunteer/ Charitable, General Fund, Grant Funds	Seek out grant funds and partnerships with Charitable organizations where practical on a case by case basis (incomplete).
EDN32	Begin monitoring erosion complaints, considering locations, possible events, and past complaints about the areas.	Hurricanes, Nor'easters, Flooding, Thunderstorms	Medium	Chowan County Planning & Inspection Department	General Fund, Grant Funds	Budget being considered (for the County and Town) reflective on the amount of complaints and legitimacy of the complaints of erosion issues (incomplete).
EDN33	Research and interview with property owners regarding erosion.	Hurricanes, Nor'easters, Flooding, Thunderstorms	Medium	Chowan County Planning & Inspection Department	General Fund, Grant Funds	Budget being considered (for the County and Town) reflective on the amount of complaints and legitimacy of the complaints of erosion issues (incomplete).

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
EDN34	Research possible seawall options to prevent future erosion along Edenton Bay and rivers.	Hurricanes, Nor'easters, Flooding, Thunderstorms	High	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund, Grant Funds	Seawall constructed to minimize effects of 25-yr flood. Uneconomical to build larger structure without grants. Town attempting to capture grants for additional study and construction.
EDN35	Consider bringing in fill and additional necessary materials to replace erosion in designated areas.	Hurricanes, Nor'easters, Flooding, Thunderstorms	Medium	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund	Soil replaced as needed in designated areas, monitored for a case by case basis.
EDN36	Posting signs in areas considered eroded.	Hurricanes, Nor'easters, Flooding, Thunderstorms	Medium	Chowan County Planning & Inspection Department	General Fund, Grant Funds	Budget being considered (for the County and Town) reflective on the amount of complaints and legitimacy of the complaints of erosion issues (incomplete).
EDN37	Research and interview with property owners regarding storm surge damage.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tsunamis	Medium	Chowan County Planning & Inspection Department	General Fund, Grant Funds	Budget being considered (for the County and Town) reflective on the amount of complaints and legitimacy of the complaints as a result of damage caused by storm surge (incomplete).
EDN38	Document specific accounts of storm surge levels within different areas per storm & calculate value of loss. *Information to be included in future Hazard Mitigation Plan updates (once every 5 years).	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tsunamis	Medium	Chowan County Planning & Inspection Department	General Fund, Grant Funds	Budget being considered (for the County and Town) reflective on the amount of complaints and legitimacy of the complaints as a result of damage caused by storm surge (incomplete). Information to be included in this update herein (Albemarle Regional Hazard Mitigation Plan).
EDN39	Research possible seawall options to prevent future erosion along Edenton Bay and rivers.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tsunamis	Medium	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund, Grant Funds	Seawall constructed to minimize effects of 25-yr flood. Uneconomical to build larger structure without grants. Town attempting to capture grants for additional study and construction.
EDN40	Provide public mailings to discuss what to do in case of expected storm surge.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tsunamis	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	County Webpage is updated annually to reflect this information.
EDN41	Provide safety warning radio broadcasts, determining the approximate time and area a tornado would be likely to hit.	Tornado	High	EMS/Chowan County & Town of Edenton Fire & Law Enforcement	General Fund	The County has implemented a "One-Call" call alert contract. An auto dialer contacts every phone number in the county with automated message of pending danger. NOAA also sends alerts on radio and TV.
EDN42	Start radio or newspaper advertisement, to warn citizens of hazards and safety precautions that should be taken.	Tornado	High	Chowan County Emergency Services	General Fund	Chowan County does not have the resources or tools available to carry out this process; therefore, it has been eliminated from the plan.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
EDN43	Improve the wind resistance of structures within the County and Town by continuing to enforce the North Carolina Building Code through the County's minimum housing code.	Hurricanes, Nor'easters, Tornadoes, Thunderstorms	High	Chowan County Planning & Inspection Department	General Fund	Required by enforcing the NC State Building Code.
EDN44	Require all new structures to include drainage ditches and/or culverts installed around perimeter of property to prevent flooding and flood damage to structures.	Hurricanes, Nor'easters, Tornadoes, Thunderstorms	High	Chowan County Planning & Inspection Department	General Fund	Incomplete and required on a case by case basis
EDN45	Provide safety warning radio broadcasts, determining the approximate time and area a nor'easter would be likely to hit.	Nor'easters	High	EMS/Chowan County & Town of Edenton Fire & Law Enforcement	General Fund	The County has implemented a "One-Call" call alert contract. An auto dialer contacts every phone number in the county with automated message of pending danger. NOAA also sends alerts on radio and TV.
EDN46	Prepare a series of mailings to citizens discussing what the proper safety procedures for each hazard addressed in this Plan.	All Hazards	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	Chowan County does not have the resources or tools available to carry out this process; therefore, it has been eliminated from the plan.
EDN47	Post warning signs in areas stating the likelihood of fires in the area due to the current weather conditions, including the dangers that may lead to wildfires.	Wildfires	High	North Carolina Forestry Service, Chowan County Fire Department and Town of Edenton Fire Department	State, General Fund	Implemented by State. Information also made available on County website.
EDN48	Require owners (by advertisement in the local papers) to annually remove any brush or downed limbs promptly to prevent fires from moving quickly along the ground.	Wildfires	High	Chowan County Board of Commissioners & Town of Edenton Town Council	General Fund	Incomplete and for consideration in future amendment to both County and Town Code of Ordinances.
EDN49	Assign new regulations that will revise the current water level for both the Town of Edenton Water Department and the Chowan County Water Department.	Drought	High	County and Town Water Departments	General Fund	Town of Edenton has adopted a Water Shortage Response Plan. The County has received verbal agreement to purchase water from neighboring county in event of emergency.
EDN50	Start radio or newspaper advertisement, to warn citizens of hazards and safety precautions that should be taken.	Winter storm	High	Chowan County Emergency Services	General Fund	The County has implemented a "One-Call" call alert contract. An auto dialer contacts every phone number in the county with automated message of pending danger. NOAA also sends alerts on radio and TV.
EDN51	Prepare a series of mailings to citizens discussing what the proper safety procedures for each hazard addressed in this Plan.	Winter storm	High	Chowan County Emergency Services and Town of Edenton Fire & Police Departments	General Fund	Information made is available on County Website. County/Town considering budget for advertisements to invite public to view.

Table 7.2.4 Currituck County Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CUR1	Improve storm water drainage in order to prevent flooding.	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Floods	High	Currituck County Engineering, NCDOT, Currituck County Planning	General Fund	Routinely checking on an annual basis. Inspection of areas where prone to flooding are inspected prior and post event to remove any debris, etc. that may cause flooding. Completed stormwater management ordinance. Prepared and adopted a community-wide stormwater management master plan.
CUR2	Routinely inspect and clear debris from drainage system.	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Floods	High	NCDOT, Currituck County Soil Conservation	General Fund, NCDOT Funds	Routinely checking on an annual basis. Inspection of areas where prone to flooding are inspected prior and post event to remove any debris, etc. that may cause flooding.
CUR3	Prepare stormwater drainage studies and planning for mitigation of known problem areas.	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Floods	High	Currituck County Engineering, Currituck County Soil Conservation	Local Service Districts	Completed stormwater drainage studies and planning for known problem areas.
CUR4	Determine the feasibility of stormwater districts in watersheds, townships, or problem flooding areas through a study to mitigate against future flooding	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Floods	High	Currituck County Engineering, Currituck County Planning	General Fund	New Action
CUR5	Seek funding for public hazard mitigation projects.	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Floods	Medium	Currituck County Administration, Currituck County Emergency Management	General Funds, Impact Fee, Grant Funds	Hazard grant funds received for generators at shelters.
CUR6	Identify bridges for retrofitting.	All Hazards	High	NCDOT, Currituck County Planning, Currituck County Emergency Management	NCDOT	Routinely checking and identifying bridges for retrofit and making recommendations for the State's Transportation Improvement Program at the annual RPO meeting for bridge repair/replacement funding.
CUR7	Work with NC DOT and neighboring communities to improve traffic flow throughout both mainland and the Outer Banks portion of Currituck County. "	All Hazards	High	Currituck County Planning, Currituck County Emergency Management, NCDOT	General Fund, Grant Funds, NCDOT	New Action
CUR9	Partner with NC DOT to evaluate congested areas on Hwy 12 and Caratoke Hwy and implement level of service standards for new development.	All Hazards	High	Currituck County Planning, Currituck County Emergency Management, NCDOT	General Fund, Grant Funds, NCDOT	Evaluated congested areas on Hwy 12 and Caratoke Hwy and implemented level of service standards for new development.
CUR10	Encourage NC DOT to continue with road improvements (stop lights, turn/deceleration lanes, etc.)	All Hazards	High	Currituck County Planning, Currituck County Emergency Management, NCDOT	General Fund, Grant Funds, NCDOT	Evaluating and routinely checking for recommendations for road improvements (stop lights, turn/deceleration lanes, etc.) annually at RPO meeting for STIP funds and available funds that may be available to the Division.
CUR11	Continue to support efforts for planning, design, and construction of the Mid-County bridge project.	All Hazards	High	Currituck County Planning, Currituck County Emergency Management, NCDOT	General Fund, Grant Funds, NCDOT	Supported efforts annually at RPO, however funding for Mid-County bridge project not available.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CUR12	Maintain participation and membership in the National Flood Insurance Program (NFIP) and the Community Rating System (CRS) Program.	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Floods	High	Currituck County Planning	General Fund	New Action
CUR13	Support and continue NC Floodplain Mapping Program updates of flood and hazard maps as needed.	Nor'easter, Hurricane, Floods	High	Currituck County Planning	General Fund	Maintain and enforce updated flood hazard maps for structures to be located or additions to in the floodplain.
CUR14	Investigate the feasibility of adopting higher standards such as protection of critical facilities that will benefit the County's CRS rating and increase the discount of flood insurance for home owners. *(Strategy reworded to include benefit of CRS and discount of flood insurance)*	Nor'easter, Hurricane, Floods	High	Currituck County Planning	General Fund	Investigated the feasibility of adopting higher standards such as freeboard and protection of critical facilities (completed). *(Strategy reworded to include benefit of CRS and discount of flood insurance)*
CUR15	Develop a joint public outreach document that addresses all hazards (published by the Planning and Emergency Management Departments).	All Hazards	High	Currituck County Planning, Currituck County Emergency Management	General Fund	Progress continues on this strategy. Joint information has been posted in our local quarterly newsletter that is mailed to each household and posted on the county website.
CUR16	Continue to educate the public and increase awareness about hazards, how to develop and retrofit their properties against hazards, and individual responsibility for mitigating against hazard risk in order to protect public health, safety, and welfare.	All Hazards	High	Currituck County Planning, Currituck County Emergency Management	General Fund	New Action
CUR17	Educate the public and inform them of the benefits of participation in the Fire Wise program	Wildfire	Medium	Currituck County Planning, Currituck County Emergency Management	General Fund	Completed
CUR18	Educate homeowners and builders on the benefits of sprinkler systems in residential structures.	All Hazards	Medium	Currituck County Planning, Currituck County Emergency Management	General Fund	Completed
CUR19	Increase public awareness and understanding of the locations and proper way to dispose of hazardous waste.	All Hazards	Medium	Currituck County Planning, Currituck County Emergency Management	General Fund	Developed an annual household hazardous materials collection site.
CUR20	Periodically survey the public to evaluate if public outreach efforts are effective in identifying potential flood hazards, public concern, and ways to mitigate against hazards.	Floods	High	Currituck County Planning, Currituck County Emergency Management	General Fund	Completed
CUR21	Protect private and county assets, buildings, and critical facilities through implementation of cost-effective and technically feasible mitigation actions.	All Hazards	High	Currituck County Administration, Currituck County Emergency Management	General Fund	New Action
CUR22	Establish appropriate buffers/setbacks between critical facilities and other uses that may be incompatible.	All Hazards	High	Currituck County Planning, Currituck County Emergency Management	General Fund	This is complete for recently built critical facilities and will continue to be reviewed through our technical review committee.
CUR23	Educate, empower, and assist the most vulnerable populations from being impacted by potential hazards.	All Hazards	High	Currituck County Planning, Currituck County Emergency Management	General Fund	New Action

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CUR24	Expand publications to include other languages.	All Hazards	High	Currituck County Planning, Currituck County Emergency Management	General Fund	The county has developed the evacuation map in two languages and established interpreters, but we continue to work on other publications as well as making them available on the county website.
CUR25	Evaluate effectiveness of Currituck's warning systems.	All Hazards	High	Currituck County Planning, Currituck County Emergency Management	General Fund	Completed and evaluated on annual basis.
CUR26	Educate and assist vulnerable populations in developing personal preparedness plans.	All Hazards	High	Currituck County Planning, Currituck County Emergency Management	General Fund	New Action
CUR27	Partner with other County Departments, State, local agencies to educate and inform vulnerable populations about special needs registry with Social Services through community outreach (survey, website, social media, water bill).	All Hazards	High	Currituck County Planning, Currituck County Emergency Management	General Fund	New Action
CUR28	Improve the capability of the County to respond to hazards and improve the effectiveness of hazard mitigation strategies in regards to public safety response.	All Hazards	High	Currituck County Planning, Currituck County Emergency Management	General Fund	New Action
CUR29	Maintain and work to improve radio communications and technology throughout public safety programs.	All Hazards	High	Currituck County Emergency Management	General Fund	Completed
CUR30	Provide continuous training and information for first responders in hazard response.	All Hazards	High	Currituck County Emergency Management	General Fund	Allow county staff to attend regular training activities sponsored through FEMA, NCEM and County Emergency Management
CUR31	Improve water safety and water response through use agreements or easements with Homeowner Associations that have existing boat ramps with access to the sound.	Hurricanes, Nor'easters, Floods, Erosion	Medium	Currituck County Emergency Management	General Fund	New Action
CUR32	Coordinate response to bridge incidents for the Wright Memorial Bridge.	All Hazards	High	Currituck County Emergency Management, NCDOT	General Fund	Completed
CUR33	Develop a strategy to facilitate post-disaster and recovery plans with the private sector including homeowner associations and critical facilities.	All Hazards	High	Currituck County Planning, Currituck County Emergency Management	General Fund, Grant Funds	Completed
CUR34	Secure funding, design, and construct an EOC/Public Safety Facility.	All Hazards	High	Currituck County Administration, Currituck County Emergency Management	General Fund, Grant Funds	The public safety facility is the next building project, if funding can be secured.
CUR35	Secure pumps for stormwater pumping prior to storm events.	Hurricanes, Nor'easters, Floods, Severe Thunderstorm	High	Currituck County Engineering	General Fund, Grant Funds	New Action
CUR36	Improve the dissemination of information to the public prior, during, and after events.	All Hazards	High	Currituck County Emergency Management	General Fund	New Action

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CUR37	Maintain partnerships with adjacent counties and municipalities to leverage and share resources.	All Hazards	High	Currituck County Emergency Management, Currituck County Planning	General Fund	New Action
CUR38	Continue to develop Community Emergency Response Teams (CERT)	All Hazards	High	Currituck County Emergency Management	General Fund, Grant Funds	Maintain updated list of CERT participants/volunteers that are available pre and post event.
CUR39	Create curriculums for all hazards preparedness to better educate the public.	All Hazards	Medium	Currituck County Emergency Management, Currituck County Planning	General Fund	Currently utilizing some or all of the CERT material. There are many good FEMA curriculums available as well. This strategy was not needed.
CUR40	Pursue mitigation of repetitive flood loss properties.	Hurricanes, Nor'easters, Floods	High	Currituck County Planning	General Fund	New Action
CUR41	Direct development away from high-risk and vulnerable areas and establish redevelopment standards that decrease hazard risk	Hurricanes, Nor'easters, Floods	High	Currituck County Planning	General Fund	Added requirement to development ordinances and enforced in development review.
CUR42	Preserve natural environmental features to naturally absorb water run-off and serve as wind buffers.	Hurricanes, Nor'easters, Floods	High	Currituck County Planning	General Fund	New Action
CUR43	Encourage clustering of residential lots outside of hazard areas in subdivision design/review and discourage development intensity and infrastructure improvements in known hazard areas.	Hurricanes, Nor'easters, Floods	High	Currituck County Planning	General Fund	Completed
CUR44	Adopt appropriate land use or other regulatory policies/ordinances that assist in the mitigation of repetitive loss properties.	Hurricanes, Nor'easters, Floods	High	Currituck County Planning	General Fund	Completed
CUR45	Preserve and/or restore natural and coastal areas or the natural functions of floodplains (coastal and riverine) and watershed areas.	Hurricanes, Nor'easters, Floods	High	Currituck County Planning	General Fund	New Action
CUR46	Protect/enhance landforms through both public and private efforts that serve as natural mitigation features by promoting dune grass plantings, installation of sand fencing, importing sand, and other appropriate measures.	Hurricanes, Nor'easters, Floods, Erosion	High	Currituck County Planning, Currituck County Engineering	General Fund	The County is pursuing creation of a dune enhancement program. The newly adopted Unified Development Ordinance provides regulations regarding dune protection, tree protection, and heritage tree replacement.
CUR47	Retain vegetation and require buffers in areas adjacent to wetlands, water bodies and Maritime forests	Hurricanes, Nor'easters, Floods, Erosion	High	Currituck County Planning, Currituck County Engineering	General Fund	Added requirement to development ordinances and enforced in development review.
CUR48	Evaluate the adoption of a County ordinance address protection to the primary or frontal dune or damage to vegetation on the frontal dune.	Hurricanes, Nor'easters, Floods, Erosion	High	Currituck County Planning, Currituck County Engineering	General Fund	New Action
CUR49	Evaluate allocating a portion of occupancy tax toward the dune planting program and shoreline restoration.	Hurricanes, Nor'easters, Floods, Erosion	High	Currituck County Administration, Currituck County Planning, Currituck County Engineering	General Fund	New Action

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CUR50	Continue to educate elected officials and the public on the need for and benefits of sustained shoreline management strategies.	Hurricanes, Nor'easters, Floods, Erosion	Medium	Currituck County Planning, Currituck County Engineering	General Fund	New Action
CUR51	Work in conjunction with the Division of Coastal Management and the GIS Coordinator to track the extent of local beach erosion and annually produce a "State of the Beach" report.	Hurricanes, Nor'easters, Floods, Erosion	Low	Currituck County Planning, Currituck County Engineering	General Fund	New Action
CUR52	Create maps reflecting the historical migration of the marsh to track erosion.	Hurricanes, Nor'easters, Floods, Erosion	Medium	Currituck County Planning	General Fund	New Action
CUR53	Educate property owners on the natural and beneficial functions of floodplains, watersheds, and other natural/coastal areas.	Hurricanes, Nor'easters, Floods, Erosion	Medium	Currituck County Planning	General Fund	New Action
CUR54	Educate the development and agricultural communities as well as the public on the impacts of turbidity on floodplain/natural areas and mitigating best management practices.	Hurricanes, Nor'easters, Floods, Erosion	Medium	Currituck County Planning	General Fund	New Action
CUR55	Develop outreach materials and offer training on Low Impact Development (LID) best management practices that can be distributed to the public and engineering communities.	Hurricanes, Nor'easters, Floods, Erosion	Medium	Currituck County Planning	General Fund	New Action
CUR56	Create stormwater management ordinance.	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding	High	Currituck County Engineer, Planning	General Fund	Completed
CUR57	Prepare and adopt a community-wide stormwater management master plan.	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding	High	Currituck County Engineer, Planning	General Fund	Completed
CUR58	Incorporate manmade hazards such as hazardous materials spills and terrorism.	All Hazards	High	Hazard Mitigation Planning Committee	General Fund	Completed
CUR59	Explore regional hazard mitigation plans with surrounding counties.	All Hazards	Medium	Hazard Mitigation Planning Committee, Surrounding County officials	Hazard Mitigation Grant Funds	Completed with the development of the Albemarle Regional Hazard Mitigation Plan
CUR60	Encourage NC Building Code to strengthen building codes and incorporate those higher standards for hazard resistance to mitigate structure damage via sending delegation to the Code Council.	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding, Winter Weather, Earthquake	Medium	Currituck County Inspections	General Fund	This action statement could not be financially supported by the Inspections Dept.
CUR61	Adopt appropriate land use or other regulatory polices/ordinances that assist repetitive loss properties.	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding, Winter Weather, Earthquake	Medium	Currituck County Planning	General Fund	Completed with the adopted amendments to the Unified Development Ordinance.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CUR62	Investigate the feasibility of adopting higher standards such as freeboard and protection of critical facilities.	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding, Winter Weather, Earthquake	High	Currituck County Planning	General Fund	Completed with the adopted amendments to the Unified Development Ordinance.
CUR63	Create an ordinance to require that all utility lines will be buried in areas of new development.	Nor'easters, Hurricane, Severe Thunderstorm, Tornado	Medium	Currituck County Planning	General Fund	Completed with the adopted amendments to the Unified Development Ordinance.
CUR64	Develop an annual household hazardous materials collection site.	Flood, Extreme Heat	High	Currituck County Public Works	General Fund, Grant Funds	Completed annually. Date TBA.
CUR65	Open a permanent hazardous materials collection site.	Flood, Extreme Heat	Medium	Currituck County Public Works	General Fund, Grant Funds	No funding available, however, contract with a vendor for annual collection site set up.
CUR66	Create fire/draught resistant plant list.	Wildfire, Drought	High	Currituck County Planning	General Fund	Updated as needed and available in Currituck Planning Office.
CUR67	Provide and educate people about fire/draught resistant plant list.	Wildfire, Drought	Medium	Currituck County Planning	General Fund	Updated as needed and available in Currituck Planning Office.
CUR68	Survey County owned property to retrofit for hazards.	Nor'easter, Flood, Hurricane, Severe Thunderstorm, Tornado, Winter Weather, Wildfire, Earthquake	High	Currituck County Public Works	General Fund	As budget allows, the County continues to work on gathering survey for County owned property.
CUR69	Continue to update and maintain flood maps and other hazard maps.	Nor'easter, Flood, Hurricane, Severe Thunderstorm, Tornado, Winter Weather, Wildfire, Earthquake	High	Currituck County Planning, GIS	General Fund	Updated as needed and available in Currituck Planning Office.
CUR70	Update and amend County ordinances as needed.	Nor'easter, Flood, Hurricane, Severe Thunderstorm, Tornado, Winter Weather, Wildfire, Earthquake	High	Currituck County Planning	General Fund	Completed with the adopted amendments to the Unified Development Ordinance. Updated as needed and available in Currituck Planning Office.
CUR71	Clarify and strengthen the Maritime Forest Ordinance.	Flooding, Drought	High	Currituck County Planning	General Fund	Completed.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
CUR72	Preserve natural environmental features to naturally absorb water run-off and serve as wind buffers.	Flooding, Drought	High	Currituck County Planning	General Fund	Completed with the adopted amendments to the Unified Development Ordinance.
CUR73	Continue communicating with other counties about hazard mitigation.	All Hazards	Medium	Currituck County Emergency Management	General Fund	Completed.
CUR74	Continue to work on requirement for a real estate disclosure statement for home buyers and renters.	Flooding	Medium		General Fund, Local Real Estate Commission	Incomplete. Developing working relationship with Real Estate Commission to garner support for providing disclosure.

Table 7.2.5 Dare County Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
DAR1	Identify Funding to improve stormwater drainage and land management preparation for flooding	Hurricanes, Nor'easters, Severe Thunderstorms, Floods	Medium	Dare County Planning	General Fund, Grant Funds	Seek funding from mitigation sources at state/fed level. Utilize academic partners to leverage combined assessment revenues.
DAR2	Identify problem areas and prioritize projects to improve drainage systems throughout the county.	Hurricanes, Nor'easters, Severe Thunderstorms, Floods	High	Dare County Planning	General Fund	Actively pursue damage assessment using GIS mapping techniques after each significant event
DAR3	Enforce ordinances that prevent fill or structures without a drainage plan.	Hurricanes, Nor'easters, Severe Thunderstorms, Floods	High	Dare County Planning	General Fund	Routinely Enforce the Dare County flood ordinance regulations for fill in the VE flood zones.
DAR4	Assist property owners with safe and efficient clean up after storm events by implementing yearly contract with debris removal services	Hurricanes, Nor'easters, Severe Thunderstorms, Floods	Medium	Dare County Planning, Dare County Soil and Water Board	General Fund, Grant Funds	Continue yearly contract renewal with debris removal services. Compose media template for public outlining county debris plan and debris pick-up separation of items Seek FEMA/state funding for reimbursement after storm events
DAR5	Increase the number of properties that meet and exceed the published Base Flood Elevations	Hurricanes, Nor'easters, Severe Thunderstorms, Erosion, Flood, Tsunami	High	Dare County Planning, Dare County Emergency Management	General Fund	All new structures permitted under County's review have to meet or exceed the published Base Flood Elevations and based on annual permitting reports meet strategy.
DAR6	Utilize existing post storm information and GIS mapping to identify the most vulnerable structures in the County.	Hurricanes, Nor'easters, Severe Thunderstorms, Erosion, Flood, Tsunami	High	Dare County Planning, Dare County Emergency Management	General Fund, Grant Funds	County participate in Regional Plan that has vulnerability review of structures in County, will seek additional grant funding for mitigation of vulnerable structures identified.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
DAR7	Implement a repetitive loss plan to reduce the potential damage from future events.	Hurricanes, Nor'easters, Severe Thunderstorms, Erosion, Flood, Tsunami	High	Dare County Planning, Dare County Hurricane Recovery	General Fund, Grant Funds	Additional grant funding to elevate 44 homes secured by Dare County after Hurricane Irene, work on elevation to be completed by 2015
DAR10	Identify and prioritize funding to mitigate vulnerable structures and develop the repetitive loss plan	Hurricanes, Nor'easters, Severe Thunderstorms, Erosion, Flood, Tsunami	High	Dare County Planning Emergency Management	General Fund, Grant Funds	Repetitive loss map/plan identified as CRS goal for 2015 update, incomplete.
DAR11	Implementation and Enforcement of CAMA Use Standards for Coastal Wetland AECs as Identified under 15NCAC7H, Section 0205 and 0208	Hurricanes, Nor'easters, Flood	Medium	Dare County Planning	Grant Funds	Dare County continues to provide LPO assistance in unincorporated Dare County. County per CAMA has adopted Land Use Plan. All development within AEC may require CAMA major permit and must be consistent with County's adopted plan.
DAR12	Continue to Administer the CAMA Local Enforcement Program and Maintain the Staff Necessary for this Work	Hurricanes, Nor'easters, Flood	Medium	Dare County Planning	General Fund	County provides Local Permit Officer assistance in unincorporated Dare County.
DAR13	Refer Applicants to U.S. Army Corps of Engineers Permit Program, Specifically Section 404	Hurricanes, Nor'easters, Flood	Medium	Dare County Planning	General Fund	As needed for individual development projects and subdivision projects County refers Applicants to U.S. Army Corps of Engineers Permit Program, Specifically Section 404 for Wetland development
DAR14	Facilitate Implementation of Permit Program for Wetland Management	Hurricanes, Nor'easters, Flood	Medium	Dare County Planning	General Fund, Grant Funds	Incomplete, No local wetland permit program established, refer all applicants to US Army Corps of Engineers.
DAR15	Protect transportation routes and improve traffic flow along NC 12. Improve NC 12 to a two lane road and coordinate traffic signals.	Hurricanes, Nor'easters, Flood	Medium	Dare County Planning, Dare County Emergency Management, NCDOT	NCDOT	Annually attend RPO meetings that make recommendations for the State's Transportation Improvement Program. Funding that is programmed in STIP has to meet the criteria and recommended as Regional, Statewide project.
DAR16	Advocate the replacement of the Bonner Bridge.	Hurricanes, Nor'easters, Flood, Erosion	High	Dare County Planning, Dare County Emergency Management, NCDOT	NCDOT	NCDOT working to replace bridge; lawsuits from environmental courts have resulted in delays, no action.
DAR17	Establish secondary water supplies/points for fire protection efforts.	Hurricanes, Nor'easters, Flood, Wildfire	Medium	Dare County Fire Marshal	Grant Funds	New Action, funding to be sought.
DAR18	Acquire generators or other forms of redundant power supply to ensure that critical facilities and infrastructure remain operational where normal power supply is not available	All Hazards	Medium	Dare County Fire Marshall	Grant Funds	New Action, funding to be sought.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
DAR19	Require Realtors to disclose flood zones. Develop and maintain relations with Real Estate Community and provide outreach and educational opportunities. Provide access to floodplain maps and floodplain information for the Real Estate Community.	Hurricanes, Nor'easters, Flood	Medium	Dare County Planning	General Fund	Expanded outreach includes Real Estate community and receives feedback on planned brochures. Completed: Flood disclosure required on Real Estate Disclosure Forms.
DAR20	Enhance NFIP information by distributing NFIP brochures and including up to date flood maps on the County website.	Hurricanes, Nor'easters, Flood	Medium	Dare County Planning, Dare County GIS	General Fund	Completed.
DAR21	Coordinate with NC Floodplain Mapping on public dissemination of updated floodplain maps.	Hurricanes, Nor'easters, Flood	High	NC Floodplain Mapping, Dare County Planning	General Fund	Updated Flood maps are posted on County's website.
DAR22	Continue to participate in the Community Rating System. Look for additional activities to implement to improve Class rating.	Hurricanes, Nor'easters, Flood	High	Dare County Planning	General Fund	Actively engages the CRS committee for Dare County. Annually do mailings that address drainage methods and storm recovery activities to the public.
DAR23	Continue participation in Storm Ready program.	Hurricanes, Nor'easters, Flood	High	Dare County Emergency Management	General Fund	New Action
DAR24	Develop Emergency Response Plan for Road/Bridge Loss	Bridge Collapse, Transportation Infrastructure Failure	High	Dare County Emergency Management, NCDOT	General Fund	County staff works closely with NCDOT officials and annually advocate at RPO meetings bridge/road improvements for State's Transportation Improvement Plan.
DAR25	Advocate for Beach Replacement	Hurricanes, Nor'easters, Flood, Erosion	High	DCBC/Manager	Grant Funds	Annually brief local representatives in State Legislature, invited to attend County's budget retreat.
DAR26	Circulate brochures on all hazards identified in the risk assessment to educate the public on protective actions that they can prepare for in their disaster plans.	All Hazards	Low	Dare County Emergency Management	General Fund	CRS outreach activities completed annually, brochures available in Planning offices. Expanded activities to include all hazards. Expanded outreach includes Real Estate community and receives feedback on planned brochures. Brief annually local representatives in State Legislature, invited to attend County's budget retreat. Flood maps are posted on County's website.
DAR27	Conduct annual outreach activities to increase awareness of all potential hazards that affect Dare County.	All Hazards	Medium	Dare County Emergency Management, Dare County Planning	General Fund	New Action
DAR28	Prioritize and Fund Critical Drainage Projects that improve stormwater drainage and land management preparation for flooding.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	High	Dare County Planning	Grant Fund	Grants funds are secured when available to assist homeowners with drainage improvements. Received grants funds from Department of Agriculture for "snag and drag" cleanup of ditches in Wanchese. Phase 1 completed in fall 2014 and Phase 2 scheduled for mid-2015.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
DAR29	Educate the public with assistance with safe and efficient clean up after storm events.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	High	Dare County Planning	General Fund	Dare completes annual CRS outreach activity in August to all property owners in unincorporated Dare County. Additionally, a flood damage response placket to be used immediately following a flood event will be developed later this summer as part of our CRS outreach activities.
DAR30	Fund and implement assistance to property owners with safe and efficient clean up after storm events.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	High	Dare County Planning	General Fund	Dare County has a storm debris agreement with a private contractor already in place should storm event occur. This allows for pre-positioning of equipment and personnel before event for faster responses to affected areas.
DAR31	Develop plan to increase the number of properties that meet and exceed Base Flood Elevation (BFE).	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	High	Dare County Planning	General Fund	Flood Prevention Ordinance revised in January 2014 to require 1-foot freeboard for all new construction and substantial improvements. All utilities and ductwork must also be elevated to comply with 1-foot freeboard. Submission of elevation certificate to verify compliance with 1-foot freeboard is required.
DAR32	Prioritize funding to increase the number of properties that meet and exceed BFE.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	High	Dare County Planning	General Fund, Grant Funds	Elevation of hazard mitigation grant currently underway -- 44 homes to be elevated by end of 2016 with funding secured after Hurricane Irene. Full-time staff is employed to oversee grant project. Structures are all elevated to be consistent with freeboard requirement of Dare County Flood Prevention Ordinance.
DAR33	Lobby State Legislators to require realtors to disclose flood zones.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Medium	Dare County Planning	General Fund	Work with Dare's elected representatives in NC House and NC Senate for the consideration of legislation requiring disclosure standards for all real estate transactions including for sale by owners and long-term lease agreements.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
DAR34	Lobby local realtors board to require realtors to disclose flood zones	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Medium	Dare County Planning	General Fund	Inclusion of representatives from real estate industry on CRS committee for outreach activity. Development of disclosure brochures for distribution at local realtors' offices planned as part of 2015 CRS outreach activities. Amendments to flood ordinance, zoning ordinance and subdivision ordinance adopted in February 2015 requiring disclosures of flood hazard/CBRA zoning on all new plats, site plans, and at time of building permit issuance.
DAR35	Circulate Brochure on NFIP to enhance NFIP information.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	High	Dare County Planning	General Fund	CRS outreach activities completed annually; brochures available in Planning offices. Links to NFIP information posted on Dare County webpage as part of CRS outreach activities.
DAR36	Put Flood Maps on the County's Website to enhance NFIP information.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	High	Dare County Planning	General Fund	Flood zone layer available on Dare County GIS, link to flood maps also on Dare County webpage.
DAR37	Continue to Participate in CRS Activities to enhance NFIP information.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	High	Dare County Planning	General Fund	Dare County remains an active participant in the CRS program, implementation of new activities to maintain current class 8 ranking with possible increase to class 7 are being developed. Development of PPI, enhanced webpage, freeboard, non-conversion deed restrictions are examples of some activities already adopted or in development.
DAR38	Update FIRM to enhance NFIP information.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	High	Dare County Planning	General Fund	Anticipated August 2015 release of new FIRMS for Dare County, with procedures implemented by Dare County for adoption of new FIRMS and associated flood ordinance revisions as part of mapping initiative by end of 2016.

Table 7.2.6 Town of Duck Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
DCK1	Continue to fund enforcement of current hazard mitigation regulations.	All Hazards	High	Town Council	General Fund	Town Council continues to annually fund Code Enforcement Position
DCK2	Improve stormwater drainage in vulnerable areas	Hurricanes, Nor'easters, Flood	High	Planning Board	General Fund	NCDOT drainage study completed. Additional work continues to resolve localized roadway flooding as funding and resources become available.
DCK3	Adopt and apply development policies that balance protection of natural resources and fragile areas with residential and economic development	Hurricanes, Nor'easters, Thunderstorms, Wildfire, Flooding	Medium	Town Council	General Fund	Adopted Town Code amendments including Tree and Vegetation Preservation, Land Disturbing Activities, Beach and Dune Management, Wind and Solar Energy, Ocean and Sound Overlay, Parking, Lot Coverage, etc. Currently working on ordinances related to Stormwater Management and low-impact development.
DCK4	Develop policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, flooding, or sea level rise	Hurricanes, Nor'easters, Thunderstorms, Wildfire, Flooding	Medium	Town Council	General Fund	Adoption of revised Flood Insurance Rate Maps and Flood Damage Prevention Ordinance, Local Participation in CAMA LPO program, completed enrollment in FEMA Community Rating System, Enforcement of NC State Building Code Revisions and Amendments including Wind-Borne Debris Provisions. The Town has also revised policies related to oceanfront development including additional setbacks for accessory structures, new dune walkway standards, and remedies for structures encroaching on the ocean beach.
DCK5	Develop location, density, and intensity criteria for new, existing development and redevelopment including public facilities and infrastructure so that they can better avoid or withstand natural hazards	Hurricanes, Nor'easters, Thunderstorms, Wildfire, Flooding	Medium	Town Council	General Fund	Town Code revisions including lot coverage regulations, limitations on residential dwelling size (ratio of number of bedrooms to lot area), increased setbacks for accessory structures, additional elevation requirements for V-Zone structures.
DCK6	Identify areas most at risk and investigate strategies to reduce risk from wild land/urban interface fires	Wildfire	Medium	Fire Department, Town Staff	General Fund	New Action
DCK7	Investigate how the Town of Duck can become a Fire wise Community	Wildfire	Medium	Fire Department, Town Council	General Fund	New Action

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
DCK8	Collaborate with DVFD and the Town of Duck to educate the homeowners, developers and landscapers on designing fire safe communities.	Wildfire	Medium	Fire Department, Town Council	General Fund	New Action
DCK9	Develop dune maintenance education materials and make available online.	Hurricanes, Nor'easters, Flood, Erosion	High	Town Staff, Hired Consultant, Division of Coastal Management	General Fund, Grant Fund	Town distributes information regarding proper sand fence installation techniques and native vegetation information; the Town also provides copies of the NC Sea Grant Publication "The Dune Book" upon request.
DCK10	Provide information on good construction techniques for coastal communities	Hurricanes, Nor'easters, Flood, Erosion	High	Town Staff	General Fund	Continue to provide FEMA/NC Department of Insurance publications on Coastal Construction Techniques.
DCK11	Enroll in the FEMA Community Rating System and take advantage of the various mitigation strategies promoted by this program	Hurricanes, Nor'easters, Flood, Erosion	High	Town Council, Town Staff	General Fund	Enrollment in the program has been completed. However, the Town continues to develop actions and strategies that will lower its CRS rating and therefore provide lower flood insurance premiums to property owners within the Town.
DCK12	Research the use and storage of propane and develop an ordinance to regulate these storage tanks	Hurricanes, Nor'easters, Flood, Erosion	High	Fire Department, Town Staff	General Fund	The Town needs is currently investigating the legal authority to regulate underground storage tanks since they are under the control of the NC Dept. of Agriculture.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
DCK13	Mitigate ocean over wash and sound erosion by identifying vulnerable areas, developing public outreach information and disseminating this information to the public.	Hurricanes, Nor'easters, Flood, Erosion	High	Town Council	General Fund	The Town has been monitoring high oceanfront erosion areas by documenting storm damage and taking photos/video. The Town has used GIS information provided by Dare County and the North Carolina Division of Coastal Management to monitor movement of the oceanfront shoreline. Additionally, a beach erosion study has been developed for the Town by the USACOE and Coastal Planning and Engineering which documents erosion patterns and existing conditions. NCDOT in conjunction with the Towns of Duck and Southern Shores conducted a drainage study on NC 12 to determine areas vulnerable to flooding. The Town needs to develop a method to track sound side erosion. The Town distributes information regarding proper sand fence installation techniques and native vegetation information; the Town also provides copies of the NC Sea Grant Publication, "The Dune Book", upon request.
DCK14	Increase the amount of open space throughout the town by seeking land donations or making land purchases. Develop an open space plan to further enhance these areas.	Hurricanes, Nor'easters, Flood, Erosion	High	Town Council	General Fund	The Town has purchased an 11-acre park in the center of the Village Commercial area which is partially maintained as open space. The Town is 90 percent developed and there are few other areas available to purchase and maintain as open space. Town funds for this activity are limited. Future activities in this area will largely depend on the success of the Town in acquiring property with available grants

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
DCK15	Support programs and initiatives to annually assess shoreline changes (erosion and accretion)	Hurricanes, Nor'easters, Flood, Erosion	High	Town Council	General Fund	The Town has been monitoring high oceanfront erosion areas by documenting storm damage and taking photos/video. The Town has used GIS information provided by Dare County and the North Carolina Division of Coastal Management to monitor movement of the oceanfront shoreline. Additionally, a beach erosion study has been developed for the Town by the USACOE and Coastal Planning and Engineering which documents erosion patterns and existing conditions. The Town has enacted an additional tax to support beach management activities. It is anticipated that some of the revenue will be used in future years to collect detailed beach and dune profile information that will allow the town to track shoreline change.
DCK16	Develop/Update policies to deal with encroaching development on the Town beaches and to preserve the Towns dune system.	Hurricanes, Nor'easters, Flood, Erosion	High	Town Council	General Fund	The Town has adopted an ordinance to limit the encroachment of structures on the beach. Additionally, new setbacks have been adopted for accessory structures such as pools and dune decks to provide additional protection to the dune system. The Town has also prohibited sandbags.
DCK17	Stay informed and involved relative to Federal, State, and/or regional studies and initiatives concerning beach re-nourishment and maintenance	Hurricanes, Nor'easters, Flood, Erosion	High	Town Council	General Fund	The Town participates in the annual program established by the Dare County Shoreline Commission to provide funds for beach maintenance. The Town is actively participating in a beach nourishment project in conjunction with Dare County and the Towns of Kill Devil Hills and Kitty Hawk.
DCK18	Work with and support efforts by CAMA concerning beach re-nourishment and maintenance	Hurricanes, Nor'easters, Flood, Erosion	High	Town Council	General Fund	The Town participates in the CAMA LPO program and issues permits for regulated beach activities. The Town has adopted a Beach and Dune Management ordinance to protect dunes and dune vegetation. The Town is currently pursuing a strategy to nourish the beach.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
DCK19	Seek ways to ensure residents receive information and links to technical assistance from the Division of Coastal Management concerning beach re-nourishment and maintenance activities and options such as sand fencing	Hurricanes, Nor'easters, Flood, Erosion	High	Town Council	General Fund	The Town provides information and issues CAMA permits to oceanfront property owners seeking to maintain their primary and frontal dunes. The Town website is used to provide this information as well.
DCK20	Lobby the NC Board of Transportation and the NC Department of Transportation and NC Turnpike Authority for the construction of the Mid-County Bridge	Hurricanes, Nor'easters, Flood, Erosion	High	Town Council, NCDOT	NCDOT	The Town Council has issued several resolutions to support the construction of the Mid-Currituck Bridge and to identify the Town's preferred design alternative for the project. The Town has sent letters to NCDOT and NC Turnpike Authority Staff providing comments on the project studies that have been underway for several years. The Town frequently discusses the project at regular Town Council meetings and is kept informed of the status of the project by Town staff and residents who serve on a local committee to support construction of the bridge.
DCK21	Identify capital projects to address drainage issues on NC 12 and lobby NCDOT to have these items addressed	Hurricanes, Nor'easters, Flood, Erosion	High	Town Council	NCDOT	Engineering has been completed to rectify localized drainage projects on other parts of NC 12 and funding is being provided in the CIP annually. Drainage Project on NC12 at Waterfront Shops/Stan White has been funded in CIP for FY 2014.
DCK22	Develop an emergency communications network. Maintain a roster of business owners and homeowners associations.	All Hazards	High	Town Council	General Fund	This Town is actively maintaining this information and updates its list annually.
DCK23	Develop effective public information program to disseminate data on all hazards.	All Hazards	High	Town Council	General Fund	New Action
DCK24	Develop public education materials to educate beachgoers on beach safety (rip currents, beach holes, beach fires, etc.)	Rip Currents	High	Town Manager, Public Information Officer, Ocean Rescue	General Fund	Continue to develop and updated materials on beach hazards to be distributed to the public.
DCK25	Meet with Currituck County and Southern Shores to discuss possible locations for a debris removal area	Hurricanes, Nor'easters, Thunderstorms	High	Town Manager	General Fund	Completed. Remove on subsequent update.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
DCK26	Provide funding for stormwater improvements.	Hurricanes, Nor'easters, Thunderstorms	Medium	Town Council	General Fund	Town/NCDOT have completed major stormwater project on NC 12 in South Duck. Engineering has been completed to rectify localized drainage projects on other parts of NC 12 and funding is being provided in the CIP annually. Drainage Project on NC12 at Waterfront Shops/Stan White has been funded in CIP for FY 2014.
DCK27	Develop good construction materials information.	Hurricanes, Nor'easters	High	Planning Board	General Fund	New Action
DCK28	Identify available property for open space.	Hurricanes, Nor'easters, Coastal Erosion, Wildfire.	High	Town Council	General Fund	The Town has purchased an 11-acre park in the center of the Village Commercial area which is partially maintained as open space. The Town is 90 percent developed and there are few other areas available to purchase and maintain as open space. Town funds for this activity are limited. Future activities in this area will largely depend on the success of the Town in acquiring property with available grants.
DCK29	Develop and maintain the open space.	Hurricanes, Nor'easters, Coastal Erosion, Wildfire.	High	Town Council	General Fund	The Town drafted a Municipal Property Master Plan in 2004 in order to develop the Town Park property and this has now been completed. No other open space areas are currently being pursued for acquisition by the Town.
DCK30	Lobby the NC Board of Transportation and the NC Department of Transportation.	Hurricanes.	High	Town Council	NCDOT	NCDOT has completed a project to raise NC 12 in the southern portion of Town to address a flooding issue.
DCK31	Continue to research methods to disseminate information.	Hurricanes, Nor'easters, Tornadoes.	High	Town Council	General Fund	Major improvements have been made to communicate with stakeholders. Use of social media and internet based communication tools has drastically improved the town's ability to disseminate and receive information.
DCK32	Continue to identify who needs natural hazards information.	Hurricanes, Nor'easters, Tornadoes.	High	Town Council	General Fund	Major improvements have been made to communicate with stakeholders. Use of social media and internet based communication tools has drastically improved the town's ability to disseminate and receive information.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
DCK33	Continue to develop/disseminate this information (dune protection, wind, erosion).	Hurricanes, Nor'easters, Tornadoes.	High	Town Council	General Fund	Major improvements have been made to communicate with stakeholders. Use of social media and internet based communication tools has drastically improved the town's ability to disseminate and receive information.
DCK34	Continue to research methods to get information to citizens.	Hurricanes, Nor'easters, Tornadoes.	High	Town Council	General Fund	Major improvements have been made to communicate with stakeholders. Use of social media and internet based communication tools has drastically improved the town's ability to disseminate and receive information.
DCK35	Develop/disseminate hurricane information to provide to tourists.	Hurricanes, Nor'easters, Tornadoes.	High	Town Council	General Fund	Major improvements have been made to communicate with stakeholders. Use of social media and internet based communication tools has drastically improved the town's ability to disseminate and receive information.
DCK36	Continue to disseminate the information through realtors and businesses.	Hurricanes, Nor'easters, Tornadoes.	High	Department of Community Development	General Fund	Major improvements have been made to communicate with stakeholders. Use of social media and internet based communication tools has drastically improved the town's ability to disseminate and receive information.
DCK37	Develop and maintain a database of contact information for oceanfront property owners where storm damage is likely to occur.	Hurricanes, Nor'easters, Coastal Erosion.	High	Department of Community Development	General Fund	This information has been collected and is being actively maintained by the Town.
DCK38	Develop a method to post storm damage information on the Town website including property specific damage information.	Hurricanes, Nor'easters, Coastal Erosion.	High	Department of Community Development	General Fund	Property specific data has been posted to the Town's website via spreadsheet as it is collected by Damage Assessment teams. Photos of general damage have been posted to Facebook and other social media outlets to provide a summary of storm impacts.

Table 7.2.7 Town of Kill Devil Hills Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
KDH1	Planning and Zoning – Continue to enforce the zoning ordinance and amend when necessary	Flooding, Hurricanes, Tropical Storms, Nor'easters	High	Planning Dept., Board of Commissioners, Building Inspect.	General Fund	Continue to monitor the zoning ordinances to enforce and amend as necessary
KDH2	Floodplain Regulations – Provide technical assistance to customers/citizens and continue to enforce current flood hazard ordinance.	Flooding, Hurricanes, Tropical Storms, Nor'easters	High	Planning Dept., Building Inspector, Board of Commissioners	General Fund	Customers were provided technical assistance and flood damage prevention ordinance was enforced. Difficult construction below BFE violations were corrected and others in process. Ongoing enforcement of current flood damage prevention ordinance. Amend ordinance as necessary. Prepare for new flood maps and regulations in 2015.
KDH3	Open Space Preservation – Support efforts to preserve natural areas.	Flooding, Hurricanes, Tropical Storms, Nor'easters	High	Planning Dept.	General Fund	Town will continue to enforce CAMA and AEC regulations which also working with the Nature Conservancy in the management of Nags Head Woods.
KDH4	Stormwater Management – Continue to implement the stormwater management plan.	Flooding, Hurricanes, Tropical Storms, Nor'easters	Medium	Planning Dept., Public Services	General Fund	Plan Update, Concepts were implemented through site plan review. Drainage projects implemented. Ongoing enforcement of local and state stormwater regulations. Amend as necessary. Continue projects with available funding.
KDH5	Drainage System Maintenance – Continue mowing drainage ditches and conduct normal maintenance and storm event driven maintenance.	Flooding, Hurricanes, Tropical Storms, Nor'easters	High	Public Services, NCDOT	General Fund	Ditch maintenance scheduled throughout the year as well as prior to and after storm events. Ongoing regular maintenance cycles as outlined by the Public Services Department. Follow state regulations.
KDH6	Building Code – Monitor changes to the State Building Code and modify local regulations as necessary to minimize damage.	All Hazards	High	Planning Dept., Building Inspector	General Fund	Inspectors accomplished annual training and enforced revisions to building codes which became effective in 2012. Ongoing monitoring of NCBC. Occasionally modify local ordinances to reflect NCBC changes.
KDH7	Relocation – Expedite permitting for the relocation of repetitive loss situations.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	Low	Planning Dept.	General Fund	No repetitive loss relocation opportunities were presented. Ongoing as updated repetitive loss information is provided to the Town. Provided information on possible grant opportunities to the public.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
KDH8	Acquisition – Encourage repetitive loss properties to consider acquisition as a possible solution.	Flooding, Hurricanes, Tropical Storms, Nor'easters	Low	Planning Director, Board of Commissioners	NC Division of Emergency Management, FEMA	The Town continues outreach efforts on an annual basis to repetitive loss property owners encouraging mitigation activities. Political climate did not support seeking acquisition funding.
KDH9	Building Elevation – Continue enforcing the base flood elevation requirement of the Town's Flood Damage Prevention Ordinance.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	High	Asst. Planning Director, Building Inspector	General Fund	The Town continued to enforce FDPO requiring documentation for new construction and additions to existing structures. Ongoing enforcement of the FDPO.
KDH10	Insurance – Maintain outreach efforts and continue making flood insurance available to the Town's residents.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	High	Planning Dept., Town Clerk	General Fund	The Town continued its outreach efforts to educate citizens about flooding, flood insurance and the Biggert-Waters Insurance Reform Act of 2012 and Grimm Waters Act of 2014. Ongoing efforts to inform residents and property owners through various outreach projects as part of CRS.
KDH11	Dune and Beach Maintenance – Continue ongoing beach nourishment efforts.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	High	Planning Director, Board of Commissioners	General Fund	Contracted an engineering consultant to provide engineering support and permitting services and offshore sand search for beach renourishment. Ongoing in an effort to start beach nourishment in the spring of 2016.
KDH12	Wetlands Protection – Continue to utilize the zoning ordinance and the Land Use Plan to protect wetlands, implement and enforce CAMA AEC regulations and refer applicants to US Army Corps of Engineers for Section 404 wetlands.	Flooding, Hurricanes, Tropical Storms, Nor'easters	High	US Army Corps of Engineers, Planning Dept., NCDENR	General Fund	Continued awareness of wetland protection and requirements for development to address CAMA and USACOE regulations. Continued participation in the CAMA LPO program along with continued enforcement of Town ordinances as needed to protect wetlands.
KDH13	Coastal Barrier Protection – Continue to support coastal barrier protection efforts by the State.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	High	CAMA, Planning Dept.	N/A	Continued to raise citizen awareness of coastal barrier protection while Town moves forward with beach nourishment activities.
KDH14	Erosion and Sediment Control – Continue to enforce local and state regulations.	Flooding, Coastal Erosion	High	Planning Dept.	General Fund	The Town continued to participate and enforce Erosion and Sediment Control Ordinance through plan approvals, site inspections and reporting to the State. Staff completed annual recertification for local program.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
KDH15	Areas of Environmental Concern (AECs) – Support local CAMA officer with compliance efforts within the AECs.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	High	CAMA LPO	General Fund	The Town continued to participate, remain active, train and implement the CAMA Local Permit Officer Program.
KDH16	Surface Water Quality – Preserve surface water quality and enhance water quality through stormwater management and zoning.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	Medium	Planning Dept., Public Services	General Fund	The Stormwater Management Plan Update was implemented through site plan review (zoning). The update has a greater focus on water quality and includes strategies to preserve and enhance water quality.
KDH17	Maritime Forest Environmental Zoning District – Continue to enforce the Maritime Forest Environmental Zoning District.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Wildfire	High	Planning Dept.	General Fund	The Town continued to enforce the Maritime Forest Environmental District Ordinance (Zoning) to preserve the Town's maritime forest.
KDH18	Flood Warning – Facilitate evacuation	Flooding, Hurricanes, Tropical Storms, Nor'easters	High	Dare County Control Group	General Fund	The Town continued to coordinate and participate with the Dare County Control Group in event of evacuation.
KDH19	Flood Response – Coordinate efforts to expedite reconstruction and rebuilding efforts in cooperation with Dare County Emergency Management staff.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms,	High	Planning Dept.	General Fund	The Town continued to coordinate and participate with the Dare County Emergency Management staff and Town staff.
KDH20	Flood Recovery – Coordinate efforts to expedite recovery.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms	High	Planning Dept., Board of Commissioners	General Fund	Coordinate efforts with local, state and federal agencies.
KDH21	Critical Facilities Protection – Take appropriate actions to prevent and/or minimize damages to critical facilities. Use generators or other forms of redundant power to ensure that critical facilities and infrastructure remain operational.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	High	Police, Fire & Rescue, Public Works, NC Dominion Power	General Fund	Train for preparedness, response and recovery and to protect critical facilities by utilizing shutters on windows of Town buildings. Accomplished scheduled maintenance of Town drainage ditches. Continue to maintain existing redundant power supply equipment.
KDH22	Transportation - Work with NCDOT Strategic Office of Planning to enhance and construct infrastructure for evacuation.	Hurricanes, Tropical Storms	High	Planning Dept.	General Fund	Active participation with all partners including Albemarle Rural Planning Organization to raise awareness for infrastructure improvements to address evacuation effectiveness. Adoption in early 2015 of Dare County comprehensive transportation plan. Funding formulas and budget climate within NCDOT did not support additional infrastructure for evacuation.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
KDH23	Fire Protection - Implement Water Systems Master Plan.	Fire, Wildfires	High	Public Services, Water Department	Water Fund	Water lines replaced on NC 12 and other streets in accordance with the Water System Master Plan. Budgetary actions for further implementation are under consideration but not ranking high in a very demanding budget environment.
KDH24	Health and Safety Maintenance – Develop ongoing protocols to assure the maintenance of critical public services.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire, Pandemic Event, Public Health Event, Cyber Security Attack, Active Shooter/Mass Casualties, Terrorism Transportation Infrastructure Impacts	Medium	Police, Fire & Rescue, Public Works, Dare County Emergency Management	General Fund	Town Departments were exercised and trained for preparedness, response and recovery.
KDH25	Reservoirs 1. Continue protection efforts concerning the Fresh Pond. 2. Maintain liaison with NC Division of Coastal Management concerning the development of the Kill Devil Hills Land Use Plan.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Winter Storms	High	Planning Dept., CAMA	General Fund	The Town continued to support Fresh Pond AEC although it is no longer used as a potable water source.
KDH26	Stormwater Management – Continue to implement the stormwater management plan.	Flooding	Medium	Public Services	General Fund	The Stormwater Management Plan Update August 8, 2011. Concepts were implemented through site plan review.
KDH27	Beach Nourishment – Encourage beach nourishment as a storm protection measure and search for funding.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	High	Board of Commissioners, Dare County Commissioners	Town of Kill Devil Hills and Dare County	The Town contracted an engineering consultant to provide engineering support and permitting services and offshore sand search for beach nourishment. Ongoing in an effort to start beach nourishment in the spring of 2016.
KDH28	Map Information – Maintain updated flood map information for citizens and customers.	Flooding, Hurricanes, Tropical Storms, Nor'easters	High	NC Division of Emergency Management, Planning Dept.	NC Division of Emergency Management	The Town continued to maintain updated flood map and educate citizens and customers about flood maps and inform them of upcoming changes through public outreach and customers.
KDH29	Library – Compile and maintain current information in the Kill Devil Hills Floodplain Management Library.	Flooding, Hurricanes, Tropical Storms, Nor'easters	Medium	CRS Coordinator	General Fund	Continue to maintain current information in the Floodplain Management Library. The Town began scanning old documents to maintain and enhance digital archives. Ongoing effort to keep library materials up to date for CRS participation.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
KDH30	Technical Assistance – Continue to utilize technical assistance from state and federal agencies and private consultants to provide appropriate technical assistance to citizens and customers.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	High	Building Inspector, Planning Dept.	N/A	Utilize outside resources to provide the most accurate information possible.
KDH31	Outreach Projects - Initiate outreach projects to inform the public on Town and County initiatives that will reduce hazard related losses of property and life.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire, Earthquake, Land Slide, Tornado, Tsunami, Rip Currents, Drought, Bridge Collapse, Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Security Attack, Pandemic Event, Public Health Event	Varies	Planning Dept., Dare County Emergency Management	General Fund	The Town continued annual outreach projects though joint mailings, public library and Town website.
KDH32	Outreach Projects - Work with print, radio, and television media to effectuate outreach efforts in cooperation with Dare County and neighboring municipalities to educate the public on additional hazards identified in the risk assessment.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire, Earthquake, Land Slide, Tornado, Tsunami, Rip Currents, Drought, Bridge Collapse, Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Security Attack, Pandemic Event, Public Health Event	Varies	Planning Dept., Dare County Emergency Management	General Fund	Provide printed information and continue to air a hurricane awareness video for television and provided web site updates for its citizenry.
KDH33	Develop updated floodplain map for public dissemination.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Medium	Planning Dept.	General Fund	Continues to maintain flood maps and provide information regarding the release of updated flood maps. Continue informing the public of the pending changes.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
KDH34	Continue to participate in CRS	Hurricanes, Nor'easters, Tidal Flooding, Flooding	High	Planning Dept.	General Fund	Ongoing effort to document CRS efforts for annual recertification to promote floodplain awareness.
KDH35	Circulate brochure specifically on NFIP.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Medium	Planning Dept.	General Fund	(New Strategy).** NFIP Brochures made available at Town Hall and Dare County Libraries. Additional Brochure is under development and will be circulated over the life of the plan as part of annual Community Rating System outreach activities
KDH36	Conduct contractor's meeting.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Medium	Planning Dept.	General Fund	The Town hosted an annual contractors meeting as a refresher to local developers and industry professionals on floodplain regulations and required documentation.

Table 7.2.8 Town of Kitty Hawk Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
KHK1	Implement beach and dune renourishment projects	Hurricanes, Nor'easters, Flood, Erosion	High	Town Council	General Fund, Grant Fund	Beach Renourishment project set to begin for Kitty Hawk Beaches in 2016.
KHK2	Implement stormwater drainage improvements per the studies/plan	Hurricanes, Nor'easters, Flood, Erosion	High	Town Manager, Public Works	General Fund, NCDOT	Projects are implemented as funding and resources are available. 2011 - The Town of Kitty Hawk and N.C. Department of Transportation jointly funded a stormwater management plan that identifies areas prone to significant flooding and offers recommendations for improving stormwater drainage issues in each of these areas. 2012 - The Town hired an engineering consultant to complete more detailed specifications and begin the permitting process for installation of drainage improvements in seven (7) of the areas facing stormwater drainage issues. 2013 - Further studies and permitting are on hold pending the identification of a funding source for the outfall projects. The Town is in discussions with NCDOT as a funding partner, as the outfalls would relieve significant flooding issues on N.C. Highway 12.
KHK3	Revise the storm preparedness, response, and recovery plan for Kitty Hawk	Hurricanes, Nor'easters, Flood, Erosion	High	Town Staff, Town Council	General Fund	The Town continues to monitor this plan and update it annually.
KHK4	Educate homeowners on various mitigation techniques and resources available to them	All Hazards	High	Town Planning	General Fund	Town Planning staff provide information to citizens via telephone, in person office visits and they also provide handouts and with bi-annual mailings.
KHK5	Provide homeowners with the resources necessary to individually hazard-proof their own homes	Hurricanes, Nor'easters, Flood, Erosion	High	Town Planning, Town Inspections	General Fund	Town Planning staff provide information to citizens via telephone, in person office visits and they also provide handouts and with bi-annual mailings.
KHK6	Encourage homeowners to conduct an inventory of their assets to assist with damage claims	All Hazards	High	Town Planning, Police Department	General Fund	Town Planning staff provide information to citizens via telephone, in person office visits and they also provide handouts and with bi-annual mailings.

KHK7	Encourage mitigation of Repetitive Loss Properties *(New Strategy).*	Hurricanes, Nor'easters, Flood, Erosion	High	Town Planning, Property Owners	General Fund, Grant Fund, Property Owners	Town Planning staff provides information to citizens via telephone, in person office visits and they also provide handouts and with bi-annual mailings *(New Strategy).*
KHK8	Educate citizens about dune vegetation	Hurricanes, Nor'easters, Flood, Erosion	High	Town Planning, Town Public Works	General Fund	Town Planning staff provide information to citizens via telephone, in person office visits and they also provide handouts.
KHK9	Establish town plans for mitigation and recovery through information on disaster planning, recovery and reconstruction	All Hazards	High	Town Staff, Town Council	General Fund	The Town reviews existing plans and regulations on an annual basis. Staff also reviews its Mitigation Plan Annually as part of the CRS Program.
KHK10	Clean out culverts, ditches, and waterways to relieve standing water and facilitate the stormwater drainage	Hurricanes, Nor'easters, Flood, Erosion, Severe Thunderstorms	General Fund, NCDOT	High	Town Public Works, NCDOT	Public Works routinely monitors culverts, ditches and waterways to make sure they are clear of debris. Coordinates with NCDOT on waterway debris removal and cleaning.
KHK11	Collect beach erosion data annually	Hurricanes, Nor'easters, Flood, Erosion	NC Coastal Managemen t	High	NC Coastal Management	The Town will continue to obtain annual beach erosion data from NC Coastal Management
KHK12	Update and improve the protocols and procedures (local, county, and state) by which the citizens in Kitty Hawk are made aware of impending storm events and expected impacts	Hurricanes, Nor'easters, Flood, Erosion	General Fund	High	Town Council, Dare County Emergency Management	Protocols and Procedures are updated by Town Staff, in conjunction with Dare County Emergency Management, on an annual basis and also immediately after each storm event.
KHK13	Work with the Dare County Control Group to prepare the provision of needed equipment and services to persons and businesses in need of assistance.	All Hazards	General Fund	High	Town Council, Dare County Emergency Management	Town Staff works with the Dare County Control Group to make sure equipment and services are provided after each storm event.
KHK14	Work with Dare County to improve the communication systems between all public safety departments within the towns, county, and state so that in the event of a disaster, all entities will be able to communicate with one another.	All Hazards	Town Council, Town Staff, Dare County Emergency Managemen t, Dare County Sherriff's Department	Capital Reserve Fund	High	Communications systems are checked annually and prior to impending events. The Town will continue to work with Dare County Emergency Management to enhance the communication system.
KHK15	Define procedures and practices to maintain critical facilities and services to the maximum extent possible during and after a storm event	All Hazards	Town Staff, Town Council	General Fund	High	Town Staff continues to research procedures and practices aimed at protecting critical facilities and make sure these facilities are operational before, during and after hazard events.
KHK16	Implement beach and dune renourishment projects as funding becomes available	Hurricanes, Nor'easters, Flood, Erosion	Town Council	General Fund, Grant Funds	High	Beach renourishment projects for Kitty Hawk are slated to begin in 2016.
KHK17	Encourage NC Department of Transportation to elevate Kitty Hawk's highway to Kitty Hawk Landing	Hurricanes, Nor'easters, Flood, Erosion	Town Council, NCDOT	NCDOT	High	Town Council continues to lobby NCDOT for funding for this project.

KHK18	Maintain updated flood map information for citizens and customers	Hurricanes, Nor'easters, Flood, Erosion	NCEM, Town Planning and Inspections	NCEM	High	Updated Flood Maps and Floodplain information is available upon request from the Planning and Inspections Department.
KHK19	Initiate outreach projects to inform the public on Town and County initiatives that will reduce hazard related losses of property and life	All Hazards	High	Town Planning	General Fund	Town Planning staff provide information to citizens via telephone, in person office visits and they also provide handouts and with bi-annual mailings.

Table 7.2.9 Town of Nags Head Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH1	Continue participation in the National Flood Insurance Program. This includes updating town ordinances and flood maps as revisions and changes in FEMA and State requirements are made available.	Hurricanes, Nor'easters, Flood, Thunderstorm,	High	Planning	General Fund	New Action
NGH2	Maintain the town's freeboard requirement and consider additional measures for flood damage reduction recognized by FEMA and the CRS program to reduce flood losses	Hurricanes, Nor'easters, Flood, Thunderstorm,	High	Planning	General Fund	New Action
NGH3	Support the continued education and training of the Town's Building Inspectors and planning staff in inspections and mitigation activities related to flood. This shall include maintaining staff as certified floodplain managers.	Hurricanes, Nor'easters, Flood, Thunderstorm	Medium	Planning	General Fund, Grant Funds	2011: Inspectors attend periodic training workshops and have increased training as a result of BCEGS.
NGH4	Develop a program to identify businesses and material storage areas where significant amounts of toxic or hazardous products are stored which would be subject to flooding.	Hurricanes, Nor'easters, Flood, Thunderstorm,	Medium	Public Safety - Fire	General Fund	Through annual fire prevention inspections, Nags Head Fire staff evaluates and determines protection of toxic or hazardous products stored in areas prone to flooding.
NGH5	Continue to identify properties in repetitive loss areas and inform property owners in these areas of flood mitigation actions they can take to reduce flood losses.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion	Medium	Planning	General Fund	(Delete) The Town informs repetitive loss property owners of yearly retrofitting workshops held in the fall or winter.
NGH6	Petition FEMA through the Town's state and regional NFIP representatives to consider adopting realistic regulations regarding the determination of destroyed structures. Specifically, this would apply to structures which are located on the public beach that are not eligible for flood insurance until they collapse.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion	Low	Planning/Administration	General Fund	New Action
NGH7	Continue Town participation in the Community Rating System program and seek ways to improve the town's class six (6) rating.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Winterstorm	High	Planning/Planning Board/Board of Commissioners	General Fund	The Town is actively training on the 2013 CRS manual in preparation for its 2015 five year cycle visit.
NGH8	Train town staff on the 2013 CRS Manual.	Hurricanes, Nor'easters, Flooding, Thunderstorm,	High	Planning	General Fund	New Action

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH9	Following a severe storm or hurricane, evaluate reconstruction and repairs efforts for compliance with the adopted zoning ordinance, CAMA regulations, and all other applicable local, state and federal regulations.	Hurricanes, Nor'easters, Floods, Thunderstorm, Tornadoes, Winterstorm, Erosion, Wildfire	Medium	Planning	General Fund	The Town enforces all regulations and other applicable local, state and federal regulations and enforcement of all CAMA regulations in accordance with CAMA rules and the Local Permitting Officer Program.
NGH10	Continue to maintain, enforce and evaluate the effectiveness of the comprehensive stormwater management ordinance adopted in 2014.	Hurricanes, Nor'easters, Flood, Thunderstorm,	High	Planning, Public Works	General Fund	New Action
NGH11	Evaluate methods to improve the effectiveness and property owner participation in the Town's Septic Health Program. This may include additional measures to monitor septic system operations with routine inspections.	Hurricanes, Nor'easters, Floods, Thunderstorm, Tsunami	Medium	Planning, Septic Health	General Fund, Grant Funds	New Action
NGH12	Explore seeking authority and adopting regulations which would allow qualified Town staff to inspect sewer treatment facilities and on-site septic systems after a storm. These regulations should also allow staff to request the corrective actions necessary to ensure proper operation of these systems.	Hurricanes, Nor'easters, Floods, Thunderstorm, Tsunami	Medium	Planning, Septic Health	General Fund	Town staff is trained to inspect systems, but no authority to enter private property has been requested. In 2007 the Town adopted a regulation that prohibits "pump and haul" operations for residential uses where the septic system cannot be repaired.
NGH13	*The Town shall take a proactive approach to educating citizens on the negative implications of using a septic system that has suffered storm damage. The Town will develop educational materials informing homeowners on the proper care of a system impacted by floodwaters.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion	High	Planning, Septic Health	General Fund, Water Fund	(Delete) Town is currently programming and evaluating the Town's "Septic Health Initiative"
NGH14	Continue to identify properties in repetitive loss areas and inform property owners in these areas of flood mitigation actions they can take to reduce flood losses.	Hurricanes, Nor'easters, Floods, Thunderstorm, Erosion, Winterstorm	Medium	Planning	General Fund, Grants	New Action
NGH15	Continue the town's program for coastal storm damage reduction to nourish beaches as a means to mitigate damage to oceanfront properties and infrastructure.	Hurricanes, Nor'easters, Floods, Thunderstorm, Erosion, Tsunami	High	Board of Commissioners/Town Manager/Public Works/Planning	Dare County Shoreline Fund, Town Municipal Service Districts	The Town carried out a successful beach nourishment project. This project will be completed by Spring of 2017. The Town received required permits in late 2010.
NGH16	Continue to pursue funding and permitting for the Town's beach nourishment program from Dare County and other levels of government	Hurricanes, Nor'easters, Flood, Thunderstorm, Coastal Erosion, Tsunami	High	Board of Commissioners/Town Manager	General Fund	In 2005, Dare County enacted an increase in the general sales tax devoted to beach nourishment. Although it was repealed in 2006 the Town currently receives interest payments from the fund. The Town uses the funds for Town wide sand fencing projects.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH17	Actively lobby the State for a state policy and strategy on beach nourishment and beach re-nourishment through joint efforts with other local governments and organizations such as the North Carolina Beach and Inlet Waterways Association. This includes an annually funded state program to support local nourishment activities.	Hurricanes, Nor'easters, Floods, Thunderstorm, Erosion, Tsunami	Medium	Board of Commissioners	General Fund	In 2005, Dare County enacted an increase in the general sales tax devoted to beach nourishment that was repealed in 2006. In 2008, the Town established a beach nourishment fund. In 2009, the Town applied for a Water Resources grant that was not funded. Because of the lack of financial assistance from federal and state government, Nags Head raised taxes in 2011 to help pay for the $36 million nourishment project.
NGH18	Develop and implement a shoreline management plan to assist with stabilization of the beach between nourishment cycles. This may include a town program to provide planting and sand fencing based on a set of criteria for evaluating shoreline and dune conditions.	Hurricanes, Nor'easters, Floods, Thunderstorm, Erosion	High	Public Works/Planning	General Fund, Dare County Shoreline Fund	New Action
NGH19	Develop a long-term strategy for beach nourishment including financing, permitting, and ongoing project implementation in coordination with Dare County and other Dare County municipalities.	Hurricanes, Nor'easters, Floods, Thunderstorm, Erosion	Medium	Board of Commissioners/Town Manager	General Fund, Dare County Shoreline Fund	New Action
NGH20	Monitor and evaluate changing shoreline conditions on an annual basis as part of an overall shoreline management strategy.	Hurricanes, Nor'easters, Floods, Thunderstorm, Erosion	High	Public Works/Consultant	General Fund, Dare County Shoreline Fund	New Action
NGH21	Seek methods to remove structures located on the public beach which degrade the recreational and natural quality of the environment, create public health and safety hazards to beachgoers, and impede the ability of life safety personnel to move along the shoreline.	Hurricanes, Nor'easters, Floods, Thunderstorm, Erosion	High	Board of Commissioners/Town Manager/Town Attorney	General Fund	Since the Veterans Day Storm, the Town has facilitated the relocation or demolition of 17 homes.
NGH22	Actively seek grants to acquire property for the purpose of mitigating damage, improving water quality, preserving open space, protecting natural resources and co-locating (dual use) Town facilities.	Hurricanes, Nor'easters, Floods, Thunderstorm, Erosion	Medium	Planning/Public Works	General Fund/Grants	New Action
NGH23	Maintain an emergency transportation route parallel to US 158. This may include Wrightsville Avenue, Memorial Avenue and even the Nags Head Woods Road as needed.	Hurricanes, Nor'easters, Floods, Thunderstorm, Erosion, Tsunami	Medium	Public Works/Public Safety	General Fund,	Wrightsville, Memorial and even the Nags Head Woods Road could be used as needed for emergency access if something happens to US158.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH24	Comprehensively review and improve the Town's drainage system through the budget and CIP process.	Hurricanes, Nor'easters, Floods, Thunderstorms,	High	Board of Commissioners/Public Works	General Fund	The Town established a Stormwater Utility, funded by a $2 per month charge on all water bills, in the spring of 2005. The first project funded was a major update to the Town's Stormwater Management Plan, and the creation of a Stormwater CIP. The list of stormwater management projects has been expanded greatly as a result of Tropical Storm Beryl and the wet season experienced from June through August of 2012. The Town is working to develop engineered solutions with NCDOT to prioritize projects as funds permit.
NGH25	Implement stormwater improvements and address localized drainage issues. This may include the reevaluation of the Town's Stormwater Utility, as necessary.	Hurricanes, Nor'easters, Floods, Thunderstorms	Medium	Board of Commissioners/Town Manager/Public Works	General Fund/Stormwater Fund	New Action
NGH26	Continue to develop and implement a strategically prioritized list of stormwater projects as part of the Town's Capital Improvement Program.	Hurricanes, Nor'easters, Floods, Thunderstorms,	High	Board of Commissioners/Town Manager/Public Works	General Fund/Stormwater Fund	The list of stormwater management projects has been expanded greatly as a result of Tropical Storm Beryl and the wet season experienced from June through August of 2012. The Town is working to develop engineered solutions with NCDOT to prioritize projects as funds permit.
NGH27	Collect necessary survey data and asset information to evaluate and program drainage and transportation projects as well as maintenance activities.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion	High	Public Works	General Fund/Stormwater Fund	New Action.
NGH28	Continue to identify and evaluate solutions to address areas of repetitive flooding.	Hurricanes, Nor'easters, Floods, Thunderstorms Erosion	High	Public Works	General Fund/Stormwater Fund	The Town Department of Public Works continually works to mitigate the impacts of flooding within identified areas of repetitive flooding within residential neighborhoods. Recent examples of drainage infrastructure improvement projects servicing neighborhoods include Nags Head Pond, Nags Head Acres, Vista Colony and Carolinian Circle Subdivisions as well as drainage pipe replacement projects along S. Memorial Ave., Albatross St. and Nags Head Realty all of which are located in the northern end of Town.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH29	Perform annual maintenance of the Town's drainage system including vegetation removal, sediment removal, culvert cleaning and the re-establishment of drainage grade lines to improve drainage flow.	Hurricanes, Nor'easters, Flood, Thunderstorm,	High	Public Works	General Fund/Stormwater Fund	The performance of an annual drainage maintenance program which includes vegetation removal, sediment removal, culvert cleaning and the re-establishment of drainage grade lines to improve drainage flow. The Town continues to explore and investigate innovative solutions to unconventional drainage problems. This includes the implementation of a groundwater lowering system along the western portion of the Vista Colony Subdivision to lower surrounding surface and groundwater increasing available stormwater storage capacity in advance of storm events.
NGH30	Investigate innovative solutions to unconventional drainage problems. This could include the implementation of a groundwater lowering system along the western portion of the Vista Colony Subdivision to lower surrounding surface and groundwater increasing available stormwater storage capacity in advance of storm events.	Hurricanes, Nor'easters, Flood, Thunderstorm,	Medium	Public Works	General Fund/Stormwater Fund	This includes the implementation of a groundwater lowering system along the western portion of the Vista Colony Subdivision to lower surrounding surface and groundwater increasing available stormwater storage capacity in advance of storm events.
NGH31	Incorporate drainage improvements into roadway, pathway, and related development projects in an effort to eliminate impediments, improve flow and enhance hydraulic capacity which can effectively result in an increased level of service and system efficiency. Examples include the continued development of the W. Side Multi-Use Path, Holy Trinity Catholic Church, Flicker St. and Moongate Subdivision located in the Village of Nags Head.	Hurricanes, Nor'easters, Flood, Thunderstorm,	Medium	Public Works	General Fund/Stormwater Fund	Continue with the approach of incorporating drainage improvements into roadway, pathway, and related development projects in an effort to eliminate impediments, improve flow and enhance hydraulic capacity which can effectively result in an increased level of service and system efficiency. Examples include the continued development of the W. Side Multi-Use Path, Holy Trinity Catholic Church, Flicker St. and Moongate Subdivision located in the Village of Nags Head.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH32	Develop contingency plans for Town streets and waterlines that may be lost as a result of erosion. This can include development of alternative routes or access, or upfront declaration of the potential for future improvements.	Hurricanes, Nor'easters, Flood, Thunderstorm,	Medium	Public Works	General Fund/Stormwater Fund	The Town has identified alternative means of access to several properties along the ocean front where property owners agreed to work cooperatively. The Town modified development regulations to assist with providing access to properties where a Town road has been damaged or lost. The Town took action to officially close Surfside Avenue in 2011 as a Town Road when it was lost due to erosion. In 2012, the Town worked with the Nature Conservancy, and Clean Water Management Trust Fund to relocate a portion of Nags Head Woods Road damaged by Hurricane Irene in coordination with a sound side stabilization and natural restoration project.
NGH33	Maintain public safety communications with Hospital, Colony Ridge staff and other special needs populations to assist with evacuation procedures prior to an event	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, Tsunami	High	Planning/ Hurricane Recovery	General Fund	In 2012, Fire, Police, Emergency Management and EMS Staff met with representatives of The Outer Banks Hospital and Colony Ridge Nursing Home to determine methods to best serve the affected special needs population. These interactive meetings identified several deficiencies. Steps have been taken to mitigate hazards and implement new procedures.
NGH34	Conduct a study to determine future impacts of recurring flooding associated with sea level rise on town infrastructure including streets, waterlines, electric power utilities, and wastewater systems.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion	Medium	Planning/Public Works/Board of Commissioners	General Fund, Grant Funds	New Action
NGH35	Continue to evaluate the need for and maintain fire breaks in wild land urban interface areas including residential communities adjacent to Nags Head Woods and the Cape Hatteras National Seashore as part of the ongoing evaluation of the Nags Head Urban Wild Fire Interface Plan.	Fire/Wildfire	High	Public Safety – Fire/Nature Conservancy/NPS	General Fund, Grant Funds	An evaluation was completed in 2012 and no changes were made to current plan.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH36	Plan and participate in controlled burn activities as necessary to strategically reduce fuel loads in Nags Head Woods and other areas to mitigate the impact of wild land urban interface fires.	Fire/Wildfire	High	Public Safety – Fire/Nature Conservancy/NPS	General Fund, Grant Funds	In February and April of 2013, the Town, NC Forestry and The Nature Conservancy worked together to prescribe burn 50+ acres of private sound front marsh area in Nags Head Woods. This was the first intentional fire in this area and homeowners were pleased with the tremendous fuel reduction afforded by the prescribed burn.
NGH37	Continue the program to remove dead wood in critically fire prone areas.	Fire/Wildfire	Medium	Public Safety – Fire	General Fund	Homeowners may access the fire prevention staff to determine an optimal way to create fire safe landscaping.
NGH38	*Continue to educate property owners to maintain fire safe landscaping and vegetation adjacent to structures.	Wildfire	Medium	Public Safety – Fire	General Fund	(Delete) New Action
NGH39	Evaluate the Nags Head Woods Fire Plan annually and coordinate information with Nature Conservancy staff ~~Strategies to~~ and seek grant funding for fuel reduction activities.	Fire/Wildfire	High	Public Safety – Fire/Nature Conservancy/National Park Service	General Fund, Grant Funds	Currently, homeowners may access the fire prevention staff to determine an optimal way to create fire safe landscaping. A series of fire prevention fuels reduction meetings were conducted to inform/educate the public of the forthcoming Nags Head Woods Marsh controlled burn in March 2012. A series of public fuel reduction meetings were conducted in the fall of 2012 to answer homeowner questions about Nags Head Wood fire prevention and planning for prescribed burns to be conducted in the spring of 2013.
NGH40	Continue cooperation with the US Forest Service and Dare County for mutual aid fire protection.	Fire/Wildfire	Medium	Public Safety – Fire	General Fund	Nags Head Fire Rescue provided mutual aid structural firefighting services to all those Dare County Fire Departments requesting assistance in 2011/2012, as well as utilizing incoming resources to assist in mitigating hazards exceeding the capabilities of Nags Head Fire Rescue. Nags Head continues to maintain excellent mutual aid working relationships with all Dare County fire departments.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH41	Continue to inventory, recommend and implement improvements recommend improvements to fire hydrants, water distribution infrastructure, and other town infrastructure in support of fire planning efforts as part of the annual CIP process.	Fire/Wildfire	High	Public Safety – Fire, Public Works	General Fund, Water Fund	In 2008 the inventory was reviewed and updated. An additional 1,640 feet of 8-inch waterline under design for US 158 Bypass from Bonnett to Baltic streets was determined to be needed. Lack of funding has prevented the line from being built. A detailed Hydraulic Study was completed in 2010. Several projects to improve domestic flow, and fire protection, were recommended. These have been prioritized and will be constructed when funds are available. The 2013-2014 budgets allowed for funding of five additional fire hydrants spaced equally along Wellfield Road.
NGH42	Update the Water Supply Shortage Plan and evaluate recommendations to implement water restrictions during periods of drought.	Drought, Fire, Wildfire	Medium	Public Works	General Fund, Water Fund	New Action
NGH43	Continue to cooperate with Dare County on the development of additional water supply well facilities.	Drought, Fire, Wildfire	Medium	Public Works	General Fund, Water Fund	The Town continues to cooperate with Dare County as requested. Additional wells and 2 million gallons of treatment capacity added to Dare County Water Plant in Kill Devil Hills in 2005-2006.
NGH44	Improve fire protection in Nags Head Woods with the installation of 'dry hydrants' and maintenance and improvements to Nags Head Woods Road.	Fire/Wildfire	Medium	Public Safety – Fire, Public Works	General Fund, Water Fund	The Nags Head Woods road is maintained by Nags Head Public Works and roadway material is added as needed to maintain an acceptable driving surface.
NGH45	Continue to coordinate recovery and post storm response activities with Dare County, State and Federal Government on issues of mutual concern.	All Hazards	Medium	Board of Commissioners, Town Manager, Outside Agencies	General Fund	The Town participates in preparedness meetings such as the VA/NC hurricane meeting and hurricane recovery exercises with adjacent jurisdictions (mutual aid).
NGH46	Continue to maintain and improve ~~its~~ emergency operations and communications infrastructure including the EOC, backup EOC and mobile command center.	All Hazards	Medium	Public Safety, Town Manager	General Fund	New Action
NGH47	Following a severe storm the Town shall establish an information center staffed with Town, County, State and Federal employees who are available to assist property owners in the reentry and recovery process.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, Tsunamis	High	Public Safety, Public Information Officer	General Fund, FEMA	New Action.
NGH48	Following a declared emergency storm event, only those areas where damage assessment is complete and that have been declared relatively secure shall be open to the public.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, Tsunami	High	Public Safety, Public Information Officer, Planning	General Fund	Material, staffing and procedures have been identified to carry out this task.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH49	Identify and implement methods to streamline the damage assessment process to provide information to Dare County, the state, and any other agencies assisting the town with recovery efforts. This shall also include methods to expedite the availability of damage and condemnation information to Town staff and the public.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, Tsunami	High	Planning	General Fund	Town's equipment used to collect digital information in the field proved unreliable in the field and will be discontinued. The Planning and Development Department's installation of Blue Prince Software and trial usage of cell phone devices in the field will be used to determine a better digital collection approach. The Town will use a trained team to collect data and photos from the field.
NGH50	Pre-position debris removal and monitoring agreements on a yearly basis and seek pre-approved temporary disaster-debris management sites with NC DENR.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, Tsunami	High	Town Manager, Public Works, Board of Commissioners	General Fund	The Town has secured agreements with two debris haulers, a memorandum of Agreement with Dare County (for debris removal using their contractor) and one debris monitoring contractor.
NGH51	Continue to exercise inter local agreements with Dare County and other municipalities for debris management and monitoring.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, Tsunami	High	Town Manager, Public Works, Board of Commissioners	General Fund	The Town has and will continue to partner with neighboring municipalities to manage debris.
NGH52	Obtain pre-storm authorization from the NC Department of Transportation (DOT) to clear DOT maintained roads after storm events.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, Tsunami	High	Town Manager	General Fund	This was accomplished in 2007 and again in 2012.
NGH53	Maintain mutual aid agreements and reevaluate as necessary to continue post-storm assistance with building inspections, damage assessment, utilities repair public facilities maintenance and additional public safety personnel. The Town shall continue participate in the Statewide Mutual Aid Compact.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, Tsunami	High	Town Manager	General Fund	The Town has mutual aid agreements with other Dare County agencies. The Town also participates in the Statewide Mutual Aid Compact. The Town will no longer enlist community volunteers for the damage assessment process after a storm, but has pre-identified Town personnel to work with the Planning and Development Department on damage assessment so that the process is timelier and utilizes only personnel authorized to use Town equipment and those covered under Town liability insurance.
NGH54	Maintain a well trained staff level damage assessment team and staff knowledgeable in public disaster assistance policies.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, Tsunami	High	Planning	General Fund	New Action.
NGH55	Follow the Incident Command Structure and maintain a designated Emergency Management Coordinator and Deputy Emergency Management Coordinator.	All Hazards	High	Public Safety, Town Manager	General Fund	New Action
NGH56	Update emergency plans annually to include changes or modifications to critical facilities and include these in the Town's Emergency Operations Plan.	All Hazards	High	Public Safety, Town Manager	General Fund	New Action

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH57	Enter into an agreement prior to storm events to secure the helipad at the hospital for pre and post event needs.	All Hazards	High	Public Safety, Town Manager	General Fund	New Action
NGH58	Partner with the County, State and local agencies to develop a special needs registry list.	All Hazards	High	Public Safety, Town Manager	General Fund	New Action
NGH59	Investigate the development of a protocol and secure a location for the offsite storage (i.e. internet based storage or facility outside Town and County jurisdiction), back-up and recovery of important Town data.	All Hazards	High	Town Manager, Information Technology	General Fund	New Action
NGH60	Explore the feasibility of developing a Local Emergency Preparedness Committee (LEPC).	All Hazards	Low	Public Safety	General Fund	New Action
NGH61	Development of a plan with procedures to address an active shooter/mass casualty situation within Town facilities.	Terrorism Event Active Shooter, Mass Casualties	High	Public Safety	General Fund	New Action
NGH62	Research, evaluate and execute an internal emergency alert system.	Terrorism Event Active Shooter, Mass Casualties	High	Public Safety	General Fund	New Action
NGH63	Continue to improve methods of providing public information both pre and post storm. This shall include an automated voice messaging system with storm damage and re-entry information, a Mayor's radio broadcast, email broadcasts, improved real-time website information with relevant local contact information, available information at traffic stops, and designation of a post-storm public information officer.	Hurricanes, Nor'easters, Floods	Medium	Planning, Public Information Officer, Public Safety	General Fund	The Town is capable of providing these services through the Town's PIO and Dare County Joint Information Center.
NGH64	Communicate post-storm recovery and operations policies and procedures to residents and property owners prior to hurricane season. This includes providing this information through email the Local Government Access Channel, Town Website, and through social media.	Hurricanes, Nor'easters, Floods	Medium	Planning, Public Information Officer, Public Safety	General Fund	Information is provided to residents and property owners and through new media and traditional media outlets.
NGH65	Partner with Dare County's Joint Information Section and other neighboring municipalities to establish a process and protocol for informing visitors, residents and special needs population of potential hazard events prior, during, and after events. This includes storm-related information as well as evacuation and re-entry. The policy should explore alternative non-traditional methods of information dissemination.	All Hazards	Medium	Planning, Public Information Officer, Public Safety	General Fund	The Town has and will continue to partner with neighboring municipalities to inform residents and visitors of important storm related information.
NGH66	In its Emergency Operations Plan, the Town shall detail the process for distributing information internally and externally to the public before and after storms.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion	Medium	Planning, Public Information Officer, Public Safety	General Fund	(Delete) In 2006, the Town adopted an "Emergency Operations Plan" which details duties of Town staff before, during and after an emergency. That Plan was updated in August 2012 based on staff review of "lessons learned from hurricane Irene.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH67	Continue ~~its~~ the fire education program. This includes dissemination of information via newspaper articles, website or social media on fire protection, prescribed burns, fuel reduction activities and grants available from the State Division of Forestry for fire education.	Fire/Wildfire	Medium	Public Safety - Fire	General Fund, Grants	In 2011/2012, fire safety related topics and newsletter articles were distributed, and the website updated with current fire prevention information. The "Change your Clock, Change your Battery" program resulted in the installation of numerous new smoke detectors placed in homes in Town. Fire Prevention e mails, tweets and other valuable life safety information were forwarded to the public from the United States Fire Administration, helping to advance injury prevention in Nags Head. Fire information is supplied face to face to the community via the annual October Youth Fire Prevention Night and National Fire Prevention week activities.
NGH68	Continue to educate property owners to maintain fire safe landscaping and vegetation adjacent to structures.	Fire/Wildfire	Medium	Public Safety - Fire	General Fund	New Action
NGH69	Proactively educate citizens on the negative implications of using a septic system that has suffered storm damage through development of education materials on the proper care of a system impacted by floodwaters.	Hurricanes, Nor'easters, Floods, Thunderstorms	High	Public Safety - Fire	General Fund, Water Fund	New Action
NGH70	Develop outreach materials to educate the public and increase awareness on hazards, how to develop and retrofit their properties against hazards, and individual tasks that can help them better prepare and respond to hazards. Staff should explore alternative options to traditional on-site meetings. This may include increased use of social media, the public access channel and short videos and handouts.	All Hazards	High	Planning	General Fund	New Action
NGH71	The Town shall request authorization to extend any ocean outfall, which will be affected by any renourishment project.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	High	Public Works, Planning	General Fund, Grant Fund	The Town's CAMA permit for Beach Nourishment was modified to permit the extension of the outfalls to be affected by the widened beach. Three outfalls were extended as part of the project.
NGH72	The Town will sponsor studies designed to determine the financial contribution the beach makes to the Outer Banks and the region.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion	High	Town Managers Office, Planning, Board of Commissioners	General Fund	No recent action due to lack of support.
NGH73	Following a severe storm the Town shall consider purchasing land in damage prone areas.	Thunderstorm	High	Town Managers Office, Planning	General Fund, Grant Fund	In 2013 the Town purchased an oceanfront piece of property in South nags Head to be used for public beach access.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH74	The Town shall consider the applicability of requiring "V Zone" structural certification for structures in the 100-year (A) flood zone.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	High	Planning	General Fund	No additional action needed as the new flood maps addressed the Town's concerns. This will be removed next update.
NGH75	The Town will actively work with FEMA and the State during the Statewide floodplain mapping project.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	High	Planning	General Fund, Grant Fund	Completed
NGH76	The Town shall develop regulations to require fuel tanks, including LP tanks to be adequately anchored to prevent flotation or submersion in the event of flooding.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	High	Public Safety, Planning	General Fund, Grant Fund	The Town developed a regulation stating all new LP tank installations must meet the current building code. COMPLETE.
NGH77	During a hurricane the Town maintains a staff of essential personnel and elected officials within Town Hall, using the Town Hall building as the Emergency Operations Center of "EOC." When available the Town shall consider acquiring or building a command facility. Essential components may include a mobile radio transmission tower, satellite internet capability and enhanced telephone service.	Hurricanes	High	Mayor, Manager, Planning/Public Works, Administrative Services	General Fund	The Town has established the former Outer Banks Medical Center facility as a backup EOC. In 2006 the Town acquired a mobile command center. In 2012 the Town acquired and installed a HAM radio Tower for use during emergency events. NO RECENT ACTION.
NGH78	Following a hurricane the Town shall establish an information center staffed with Town, State and Federal employees who are available to assist property owners in the reentry and recovery process.	Hurricanes	High	Mayor, Manager, Planning, Administrative Services	General Fund	The Town has established areas and identified personnel to carry out the above as part of the ICS Plan. In addition, the Town's public information officer participates in a county wide Joint Information Section, an integral part of the ICS.
NGH79	The Town leases space to mobile phone service providers on the Town's two water tanks. Cellular phone service provides an essential form of communication after a storm. The Town shall consider requiring cellular phone service providers to structurally design their tower mounted equipment to withstand greater wind loads than is required by the State building code.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	High	Administration, Town Managers Office	General Fund	The Town enforces the State Building Code. A new fire alarm control panel was also installed and fire alarm service completed in the Town's emergency command center.
NGH80	The Town shall designate a Staff level Director and Deputy Director of Emergency Management.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	Medium	Administration, Public Safety	General Fund	In August of 2013 the Town hired a Deputy Fire Chief who will fulfill the role of Deputy Director of Emergency Management.
NGH81	The Town will develop regulations requiring a greater street standard (dimensional and construction) where it can be reasonably demonstrated that nearby streets may be destroyed by a storm or other natural event and that the proposed street may be required to accept greater amounts of traffic.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	Low	Planning, Public Works	General Fund, Grant Funds	Other coastal communities are being contacted to determine if this is a possible option, and if adopted, would it be enforceable.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH82	Prior to a flooding event, the Town's Street Department shall assemble the necessary traffic barricades and equipment to address flooding conditions noted in this plan.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	High	Public Works	General Fund	The Town shall continue to monitor storm events of significance allowing reasonable time to actively assemble storm mitigation strategies. The Town will also continue to work on these strategies making them as efficient as possible.
NGH83	The Town shall identify alternative means of ingress and egress to the Outer Banks Hospital site and Colony Ridge Nursing Home facility.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	Medium	Planning, Public Safety	General Fund	This has been investigated and no feasible alternative exists. However, public safety will be in communications with Colony Ridge staff to assist with evacuation procedures prior to an event if necessary and the helipad has been preserved for use if needed during or after an event. COMPLETE.
NGH84	The Town shall extend the "Red Drum" outfall (most northern outfall) to efficiently drain the NCDOT conveyance system. NDOT is currently in design.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	High	Planning, Public Works	General Fund, Grant Funds	NCDOT is currently in the design process for the extension of this outfall, which is critical to improving drainage conveyance in the northern part of Town.
NGH85	The Town Department of Public Works continually works to mitigate the impacts of flooding within identified areas of repetitive flooding within residential neighborhoods.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	High	Public Works	General Funds	Drainage infrastructure improvement projects servicing neighborhoods include Hags Head Pond, Hags Head Acres, Vista Colony and Carolina Circle Subdivisions as well as drainage pipe replacement projects along S. Memorial Ave., Albatross St. and Nags Head Realty all of which are located in the Northern end of Town.
NGH86	The Town has restructured the portion of the stormwater management ordinance as it relates to the use of fill. This approach is to treat runoff as the source and reduce the burden of Town drainage infrastructure from managing runoff originating from single-family development.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	High	Public Works, Planning	General Fund, Grant Funds	COMPLETE.
NGH87	The Town shall continue aggressive monitoring of entry into condemned homes to prevent safety hazards.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	Medium	Planning	General Fund	The Town shall continue to monitor homes in the community which a pose a hazard risk.
NGH88	Town shall create a policy that damaged Town infrastructure be built back to established Town standards only if it can be demonstrated that there is a reasonable and they have a reasonable expectation to survive future hazard events.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	Medium	All Town Departments	General Fund	Waterlines have been replaced only if they meet these criteria.
NGH89	Storm damage reconstruction shall reflect pre-storm conditions to the extent possible. Redevelopment shall comply with the Land Use Classification Map and the zoning ordinance.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	Medium	Planning	General Fund	Complete, will be removed next update.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH90	As the amount of available vacant oceanfront land diminishes, the Town can expect redevelopment of existing sites. It is the Town's position that the existing oceanfront development regulations adequately address concerns such as building height and density, and that currently permitted uses adequately represent the desired uses for the oceanfront.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	Medium	Planning	General Fund	Complete; will be removed next update.
NGH91	The Town shall require Hurricane Evacuation plans from sensitive, vulnerable or critical facilities which are likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a flood or hurricane, including, but not limited to: hospitals, nursing homes, police stations and fire stations	Hurricanes	High	Planning, Public Safety	General Fund	Critical facilities are being updated annually and added to Emergency Operations Plan.
NGH92	The design of the proposed elementary school shall address flooding and hurricane resistant construction.	Hurricanes; Flooding	High	Planning, Public Safety	General Fund	Project Complete, will be removed next update.
NGH93	It is strongly urged that evacuation drills and tornado drills be conducted at the proposed elementary school.	Hurricanes, Flood, Tsunami	High	Public Safety	General Fund	Police and Fire Departments are participating with and supporting School preparation activities.
NGH94	The town will identify important areas to be acquired as open space and shall request funds for acquisition of these areas through the budget, CIP, and grant process.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	Medium	Planning	General Fund, Grant Funds	The Town purchased the "Whalebone Park" site in the fall of 2008. It has been developed as a park that serves children between the ages of 2 and 12 and incorporates features which meet ADA guidelines. The park also allows for inclusive play for all children regardless of physical or sensory abilities. The Town is working with the Coastal Area Land Trust to look at additional properties for easement or conservation along the Roanoke Sound as part of a Boardwalk development effort.
NGH95	The Town will consider an incentive program rewarding those developers which set aside additional open space in perpetuity.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	Medium	Planning	General Fund	No action taken as of this date but is being considered as part of stormwater and fill updates currently under development by the Planning Board.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
NGH96	The Town shall continue to acquire land for open space and recreational purposes.	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion, Tsunami	High	Planning	General Fund	The Town purchased the "Whalebone Park" site in the fall of 2008. It has been developed as a park that serves children between the ages of 2 and 12 and incorporates features which meet ADA guidelines. The park also allows for inclusive play for all children regardless of physical or sensory abilities. The Town is also working with the Coastal Area Land Trust to look at additional properties for easement or conservation along the Sound as part of a Boardwalk development effort. The Town also completed and adopted a Parks and Recreation Plan in 2011. In 2011-12, the Town Board of Commissioners initiated a process of identifying and researching the feasibility of purchasing additional properties.
NGH97	The Town shall continue the program to remove dead wood in critically fire prone areas.	Fire	High	Public Safety	General Fund	Homeowners may access the fire prevention staff to determine an optimal way to create fire safe landscaping.
NGH98	The Town shall continue to review the water system throughout the Town for fire protection capabilities and prioritize capital improvements as necessary.	Fire	High	Public Safety, Town Managers Office, Public Works	General Fund	In 2009, Nags Head Fire staff worked with Nags Head Water staff to implement waterline improvements to benefit Northridge Subdivision, Old Nags Head Cove, West Side Court and Gray Eagle Street. No recent activity.
NGH99	With the installation of the new water tank, the Town shall install a new 12 inch water line from the Public Works facility to Barnes Street. This will increase fire flow to north end neighborhoods.	Fire	High	Public Works, Public Safety, Planning	General Fund, Grant Funds	Complete, will be removed next update.
NGH100	The Town shall research available data on underground storage tanks and leaking underground storage tanks.	Fire	High	Planning, Public Safety	General Fund	Underground fuel tanks, when required by fire code, have been removed or brought into compliance with Fire Code and DEHNR standards.
NGH101	The Town shall coordinate with Kill Devil Hills regarding fencing around their portion of the Fresh Pond.	Water	High	Public Works, Town Manager's Office	General Fund	The Fresh pond water treatment plant has been permanently decommissioned. Complete.
NGH102	The Town shall continue to evaluate the implementation of water restrictions during periods of drought.	Water	High	Public Works, Town Manager's Office	General Fund	The Town has developed a Water Shortage Supply Plan.
NGH103	The Town of Nags Head shall continue to monitor develop and the installation of onsite septic systems with the Fresh Pond Area of Environmental Concern.	Water	High	Planning	General Fund	Process monitored through the development and permitting process.

Table 7.2.10 Town of Manteo Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
MAN1	Making use of Dare County's flood plain, parcel data, and aerial photographs in digital format.	Hurricanes, Nor'easters, Flood	Medium	Town Planner	General Fund	Town of Manteo receives data from Dare County monthly that is used in overlaying capabilities it the Town's use of GIS data.
MAN2	Maintains documents about flood insurance, flood protection, flood plain management, and the natural and beneficial functions of flood plains	Hurricanes, Nor'easters, Flood	Medium	Town Planner	General Fund, Grant Funds	All documents are located and accessible to the public in the planning office of the Town of Manteo and updated as new information is changed at the State and Federal levels.
MAN3	Assist local real estate agents with information handouts that will advise potential buyers to investigate the flood hazard for the property they are considering purchasing.	Hurricanes, Nor'easters, Flood	High	Town Planner	General Fund	The planning department is accessible during the normal business hours to provide information to local realtors advising the buying public of property that may be located within a Special Flood Hazard Area.
MAN4	Send a flood protection flyer to all property owners in Manteo through a community newsletter, utility bill or other document. The flyer would include a general identification of the local flood hazard, flood safety, flood insurance, property protection, flood plain development permit requirements, and drainage system maintenance.	Hurricanes, Nor'easters, Flood	High	Public Works	General Fund	Completed. Upon new information that is available to the Town, new information is shared through the community's newsletter and can be sent with utility bill.
MAN5	Continue to stay current with all Community Rating System reporting requirements to ensure continued program participation.	Hurricanes, Nor'easters, Flood	High	Town Planner, Assistant Town Manager	General Fund	The Town along with Dare County are now recognized as a Storm Ready Community.
MAN6	Continue our policy controlling the development of critical public facilities in the 100-year flood plain in cases where viable alternatives exist.	Hurricanes, Nor'easters, Flood, Severe Thunderstorms, Erosion	Low	Town Planner	General Fund	All permit approvals for new facilities have to meet the Town's Flood Hazard Prevention Ordinance, and upon verification that facility may be located in Special Flood Hazard Area, where viable an alternative location is sought.
MAN7	Continue to actively pursue state and federal grant funds to assist in the hazard mitigation recommendations included in the plan	All Hazards	Low	Town Planner, Assistant Town Manger	General Fund	Town Staff is actively seeking grant applications for mitigation activities.
MAN8	Continue to encourage projects undertaken by the Manteo Police Department, Fire-Rescue-EMS, Public Works, and Planning Departments that will lessen the vulnerability of the Town and its residents to natural hazards.	All Hazards	Medium	Police, Fire, EMS, Public Works, Planning	General Fund, Grant Funds	Town reviews on an annual basis particularly during budget preparation, priority review of projects that lessen vulnerability of the Town and its residents to natural hazards.
MAN9	Continue to enhance the Water and Sewer Department's back-up generator system as well as continued and expanded use of SCADA, which allows for remote monitoring of all sewer lift stations	All Hazards	Public Works	General Fund, Grant Funds	Medium	New Action

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
MAN10	Mayor and other council members to participate in Dare County's Emergency Management training sessions.	All Hazards	Medium	Town Council	General Fund	County keeps Mayor and Council abreast of training opportunities available and invites representative to Council meetings offering training.
MAN11	Continue to maintain ditching along streets to facilitate drainage Public	Hurricanes, Nor'easters, Flood, Severe Thunderstorms, Erosion	Low	Public Works	General Fund	Reviewed during each budget cycle and on rotation as part of Town's Powell Bill program.
MAN12	Continue to update and use the existing Manteo Police Emergency Plan	All Hazards	Low	Police	General Fund	Presently utilizing Manteo Police Emergency Plan. Will be updated to reflect changes from Regional Plan.
MAN13	The Town Planner will actively research and identify mitigation initiatives for grant applications and establish target dates for completion.	All Hazards	Low	Town Planner	Grant Funds	Town Planner actively seeks grant funding opportunities that give priority to mitigation initiatives.
MAN14	Building inspector /Planner to enforce Town codified ordinances which include NFIP approved Flood Ordinance	Hurricanes, Nor'easters, Flood, Severe Thunderstorms, Erosion	Low	Town Planner, Building Inspector	General Funds	Town enforces adopted NFIP approved flood damage prevention ordinance.
MAN15	The Town Planner to file for grant applications.	All Hazards	High	Town Planner	Grant Funds	Town Planner actively seeks grant funding opportunities that give priority to mitigation initiatives.
MAN16	Building inspector /Planner to enforce Town codified ordinances which include NFIP approved Flood Ordinance.	Hurricanes, Floods, Nor'easters	High	Town Planner, Building Inspector	General Funds	This process is carried out through enforcement of the Town's Flood Damage Prevention Ordinance. These efforts will continue.
MAN17	Continue to acquire and maintain back-up generators for lift stations and to supply electricity to critical Town facilities during periods of power outage.	Hurricanes, Thunderstorms, Tornadoes, Flooding, Winter Storms, Nor'easters	Low	Public Works	General Fund	New Action
MAN18	Public Works Director to have regularly scheduled maintenance of storm water system.	Hurricanes, Thunderstorms, Flooding, Nor'easters	Low	Public Works	General Fund	New Action

Table 7.2.11 Town of Southern Shores Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
SOS1	Enforcement of the Zoning Ordinance as a hazard mitigation tool	All Hazards	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to enforce the adopted Zoning Ordinance. Zoning Permits are issued for new development, changes in use, and new uses in order to ensure compliance.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
SOS2	Identify "at risk" X Zone properties for added emphasis on flood risks and notify the responsible agencies about discrepancies between floodplain maps (FIRM versus SLOSH).	Hurricane, Nor'easter, Severe Thunderstorm, Flood	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to identify at risk properties following storm events by utilizing GIS data and in the field observations.
SOS3	Continue enforcement of the Flood Damage Prevention Ordinance	Hurricane, Nor'easter, Severe Thunderstorm, Flood, Erosion	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to enforce the Flood Damage Prevention Ordinance. Building permits are not issued unless plans demonstrate compliance with the established requirements
SOS4	Continue the enforcement of the NC State Fire Prevention Code, referenced by the Town Fire Code	Wildfire	High	Dare County Fire Marshall	General Fund	The Dare County Fire Marshall continues to conduct inspections (contracted service) of non-residential properties to ensure compliance.
SOS5	Continue enforcing the Lot Disturbance provisions of the Zoning Ordinance	Hurricane, Nor'easter, Severe Thunderstorm, Flood, Erosion	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to enforce the Lot Disturbance provisions of the Zoning Ordinance. No grading, filling, or other alteration of the topography or elevation of any unimproved lot, or demolition and clearing of improved property, nor any manmade change to any improved real estate resulting in the discharge of stormwater onto adjacent property and requiring a building permit, is undertaken without prior issuance of a lot disturbance permit.
SOS6	Continue the periodic controlled burns of marshland to reduce wildfire fuels	Wildfire	High	Southern Shores Volunteer Fire Department	General Fund	Has not been satisfied since 2009 as a result of piers/docks being built over the marsh areas so this is being removed.
SOS7	Continue the testing of fire hydrants once a year and recording data	Wildfire	Medium	Planning/Code Enforcement Department	General Fund	The Southern Shores Volunteer Fire Department continues to test fire hydrants once a year and records data. The last test was conducted in November, 2014.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
SOS8	Continue implementation of the Waterways and Beaches Ordinance	Hurricane, Nor'easter, Severe Thunderstorm, Flood, Erosion	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to implement the Waterways and Beaches Ordinance. The Town Community Resource Officer and contracted lifeguard service conduct patrols of the beach to ensure compliance. All development along Town waterways is approved following demonstration of compliance. The Town continues to send Notices of Violation for canal obstructions when warranted.
SOS9	Seek the maximum points available from the Community Rating System to keep flood insurance costs to the citizens as low as possible	Flood	Medium	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to seek the maximum points available from the Community Rating System. The Town's last cycle visit was in 2010 which gave the Town a rating of Class 7 which is recertified annually until the next cycle visit in 2015. Communities with a Class 7 rating receive a 15% discount on insurance policies issued for properties in special flood hazard areas (SFHA's).
SOS10	Conduct the Canal Inspection and Debris Removal program twice a year	Hurricane, Nor'easter, Severe Thunderstorm, Flood, Erosion	High	Planning/Code Enforcement Department	General Fund	The Southern Shores Civic Association Boat Club conducts inspections of the canals every three to four weeks. The amount of debris has been minimal following completion of the Town's canal dredging project
SOS11	Continue enforcement of the state building code, including wind load requirements	Hurricane, Nor'easter, Severe Thunderstorm, Winter Storms, Tornadoes	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to enforce the state building code, including wind load requirements. All building plans must demonstrate compliance prior to issuance of a building permit. The Building Inspector continues to conduct inspections during construction and no Certificate of Occupancy is issued unless all requirements are satisfied.
SOS12	Continue enforcement of the Beach and Dune Management Ordinance	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion	High	Planning/Code Enforcement Department	General Fund	The Town Community Resource Officer and contracted lifeguard service conduct patrols of the beach to ensure compliance

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
SOS13	Coordinate wildfire prevention efforts with tree preservation policies	Wildfire	Low	Planning/Code Enforcement Department, Southern Shores Volunteer Fire Department	General Fund	The Planning and Code Enforcement Department encourages all property owners to contact the Southern Shores Volunteer Fire Department prior to any open burning. The Department also coordinates with property owners and the fire department to make sure burns are not conducted on preserved trees.
SOS14	Continue enforcing Coastal Area Management Act (CAMA) regulations	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to enforce the Coastal Area Management Act (CAMA) regulations. The Town's Local Permit Officers continue to review and issue Minor Permits in accordance with the Coastal Area Management Act (CAMA).
SOS15	Continue enforcing the state Erosion and Sedimentation Control regulations	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion	High	Planning/Code Enforcement Department	General Fund	When applicable, all new development must obtain a State-issued permit prior to issuance of a building permit.
SOS16	Continue to have a standing Reconstruction Task Force	All Hazards	High	Reconstruction Task Force	General Fund	A new Reconstruction Task Force was appointed at the November 4, 2014 Town Council meeting
SOS17	Communicate with citizens about plans and the problems of providing services after a storm event	Hurricane, Nor'easter, Severe Thunderstorm, Flood	Medium	Reconstruction Task Force	General Fund	The Town utilizes social media and a bi-weekly newsletter to disseminate information regarding storm events and their affects
SOS18	Develop a better flood warning system	Hurricane, Nor'easter, Severe Thunderstorm, Flood	Low	Planning/Code Enforcement Department	General Fund	New Action
SOS19	Continue to monitor plans for the Mid-Currituck Bridge to expedite evacuation	All Hazards	High	Town Council	General Fund	The Town Council continues to monitor the NC Turnpike Authority plans for the Mid-Currituck Bridge to expedite evacuation. However, due to a lack of funding, the future construction of the bridge is uncertain
SOS20	Encourage food stores and pharmacies within the town to have alternative power supplies during and after storm events	All Hazards	Low	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to encourage food stores and pharmacies within the Town to have alternative power supplies during and after storm events. Provide guidance and potential funding source information as requested.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
SOS21	Continue to provide an Emergency Operations Center	All Hazards	High	Administration	General Fund	To ensure the protection of the citizens, the Town will continues operate its Emergency Operations Center during disasters. Coordinates with Dare County Emergency Operations Center for support.
SOS22	Keep emergency plans current and provide staff with continuing education opportunities	All Hazards	Low	Administration	General Fund	Town Administration updates its Emergency Management Plan annually and provides Town Staff with continuing education opportunities
SOS23	Educate citizens on expected impacts of hazards on daily lives	All Hazards	High	Planning/Code Enforcement Department	General Fund	A bi-weekly newsletter is distributed to citizens with information regarding the impacts of hazards on daily lives
SOS24	Continue current public information outreach efforts regarding flooding	Hurricane, Nor'easter, Severe Thunderstorm, Flood	High	Planning/Code Enforcement Department	General Fund	The Town mails an informational brochure to all property owners within a Special Flood Hazard Area annually to provide important floodplain information. The most recent mailing occurred in June 2014.
SOS25	Continue e-mail and website services	All Hazards	Medium	Administration	General Fund	The Town continues to use its website and email services to publish and share important with its citizens.
SOS 26	Provide property owners and developers with information regarding the construction of FEMA "Safe Rooms" from the effects of tornadoes and severe storms.	Tornadoes, Severe Thunderstorms	Medium	Planning/Code Enforcement Department	General Fund	Incomplete; An increasing number of property
SOS 27	Develop guidelines for reconstruction efforts.	All Hazards	High	Planning/Code Enforcement	General Fund	Complete.

Table 7.2.12 Gates County & Gatesville Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency/Department	Potential Funding Source	Implementation Status
*GAT1	Open waterways by clearing debris in ditches throughout county to minimize localized flooding.	Hurricanes, Nor'easters, Floods, Severe Thunderstorms	High	NCDOT	NCDOT	Working with NCDOT to get debris removed from ditches; Millpond Bridge Project- NCDOT completed this project correcting a flooding issue at the Dam/spillway and traffic concerns by separating pedestrian and automobile traffic.
*GAT2	Expansion of US Highway 13/158 for greater evacuation capacity.	All Hazards	Medium	Gates County Emergency Management, NCDOT	NCDOT	Continue to discuss widening project with NCDOT. Working with NCDOT on creating a delivery schedule for the project.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency/Department	Potential Funding Source	Implementation Status
*GAT3	Increase public awareness of local hazard mitigation plan and emergency response plan.	All Hazards	High	Gates County Emergency Management	General Fund	County Emergency Management Officials visit and work closely on an annual basis with local schools to prepare for natural disasters, especially tornadoes and hurricanes. Mass Notification Implementation- Gates County investigated and purchased Code RED as mass notification for emergencies.
*GAT4	Continue to enforce existing building code and fire code, and investigate appropriate ways to advance these codes for greater future effectiveness with regard to natural hazards.	All Hazards	Medium	Gates County Planning and Zoning	General Fund	Enforcement is accomplished through the issuance of building permits and inspections through the County's permitting office.
*GAT5	Annually review the Flood damage prevention ordinance and ensure regulations are in place to mitigate potential losses from events.	Hurricanes, Nor'easters, Floods. Severe Thunderstorms, Erosion	High	Gates County Planning and Zoning	General Fund	Review of Flood Damage Prevention Ordinance and other codes conducted annually.
*GAT6	Annually review HMP strategies and actions as they effect the Land Use Plan and Gates County Zoning Ordinance	All Hazards	Medium	Gates County Planning and Zoning	General Fund	Continue to conduct annual review of HMP strategies as well as making the necessary changes to Land Use and Zoning codes as recommended in updated plans.
*GAT7	Ensure floodplain mapping and management are considered in planning documents such as Land Use, Zoning Ordinance	All Hazards	Medium	Gates County Planning and Zoning	General Fund	Reference to flood maps and floodplain regulations are made in Zoning and Land Use codes are currently being enforced.
*GAT8	Increase emergency management training opportunities for town personnel.	All Hazards	Medium	Gates County Emergency Management, Gatesville Administration	General Fund, Grant Funds	Town staff attends regular training activities sponsored through FEMA, NCEM and County Emergency Management. Gates County continues to add additional EMS and Local Law Enforcement and as a result frees other staff to attend training.
*GAT9	Increase community awareness of wildlife-related issues and wildland fire safety by utilizing the Fire wise program and its resources (www.firewise.org).	Wildfire	High	NCDFR	Not required.	Continue to work closely with the Gates County Fireman's Association to educate residents on wildfire issues and safety. Fire Wise as a program has not been adopted due to the lack of defined "communities". Actions have been taken to adopt a portion of NFPA 1144 which addresses access and addressing to ensure firefighting operations can go on without delay.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency/Department	Potential Funding Source	Implementation Status
*GAT10	Further educate the public through ongoing public meetings.	All Hazards	High	Gates County Emergency Management	Not required.	The County is continually seeking alternative forms of communication with the public, however turnout for hazard mitigation remains low.
*GAT11	Increase EMS and law enforcement personnel resources.	All Hazards	High	Gates County Manager	General Fund	Incomplete. Reviewed annually at budget retreat with Board of Commissioners.
*GAT12	Keep power/utility right-of-way clear by routinely pruning trees and clearing tree limbs.	Hurricanes and Tropical Storms, Severe Thunderstorms, Tornadoes, Winter Storms	Medium	NC Power and Roanoke Electric	Utility companies provide this service countywide.	Power/Utility right of way clearance is done on a routine basis with little input from this committee. The utility companies however ensure that vital infrastructure lists are maintained and the utilities serving them remain in proper order.
*GAT13	Investigate the potential advantages and disadvantages, if any, of joining the NFIP's Community Rating System (CRS).	Flood	Medium	Gates County Emergency Management	Not required.	There is a halt on the project due to time constraints; however, the Planning Department has begun collecting data to be presented to key decision makers of the County.

**Gates County will be responsible for all mitigation actions shown herein, for the Town of Gatesville, See Appendix B.*

Table 7.2.13 Hertford County (Cofield, Como, Harrellsville and Murfreesboro) Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
**HER1	Maintain a continuously updated list of all approved shelters.	All Hazards	High	Hertford County Emergency Management	General Fund	Annual updates to shelter list and have MOU for sheltering with Red Cross.
**HER2	Continuously maintain, on the County's website, instructional information on ensuring that onsite sheltering is as safe an option as possible.	All Hazards	High	Hertford County Emergency Management	General Fund	Website currently being maintained and updated by County.
**HER3	Inspect local shelters to determine compliance with American Red Cross (ARC) Shelter Standards.	All Hazards	Medium	Hertford County Emergency Management, American Red Cross	General Fund	Annual updates to shelter list and have MOU for sheltering with Red Cross.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
**HER4	Maintain continuous contact/working relationship with electric service providers in the County to address the following (1) disaster preparedness techniques (e.g. tree trimming, vegetation planting requirements, pole replacement), (2) Identify critical electrical facilities needing retrofit or upgrade and map with elevation reference marks and (3) communication with County officials during and immediately after a natural hazard event that results in loss of electrical power.	Hurricanes, Nor'easters, Severe Thunderstorms, Winter Storms	High	Hertford County Emergency Management, Municipal Administration, Electrical Utility Providers	General Fund, Grant Funds, Utility Providers	Adding generators to County Facilities in capital improvement projects for secondary power. Electric Cooperative is on Local Emergency Planning Committee.
**HER5	Improve capability of secondary power source at all County and Municipal Critical Facilities	All Hazards	Medium	Hertford County Emergency Management, Municipal Administration, Hertford County Public Works, Municipal Public Works	General Fund, Grant Funds	As funds come available, generators are being added to County Facilities.
**HER6	Retrofit all County and Municipal facilities for lightning protection.	Severe Thunderstorms	Medium	Hertford County Emergency Management, Municipal Administration, Hertford County Public Works, Municipal Public Works	General Fund, Grant Funds	As funds come available, lightning protection products are being planned for and installed on County and Municipal Facilities.
**HER7	Support through local ordinances conservation easements on all flood prone property and impose such easements on all properties acquired with public assistance funds	Hurricane, Nor'easters, Floods	High	Hertford County Emergency Management, Municipal Administration, Hertford County Public Works, Municipal Public Works	General Fund, Grant Funds	New Action
**HER8	Coordinate open space planning and preservation with all local certified CAMA land use plans.	Hurricane, Nor'easters, Floods, Erosion	Low	Hertford County Emergency Management, Municipal Administration, Hertford County Administration	General Fund	New Action
**HER9	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.	Hurricane, Nor'easters, Floods, Erosion	High	Hertford County Emergency Management, Municipal Administration, Hertford County Administration	General Fund	New Action
**HER10	The MAC will review "firewise" zoning and subdivision standards and recommend their appropriateness for incorporation into existing (or new) zoning or subdivision ordinances. (Source http://www.firewise.org)	Wildfire	Medium	MAC in concert with the County and Participating Municipalities	General Fund	Completed (Community Wildfire Protection Program. Hazard reduction burns conducted by the NC Forest Service. NC Forest Service continues to educate the public on wildfire prevention.
**HER11	Coordinate public education on the hazards of wildfires with the NC Forestry Services ongoing wildfire education program.	Wildfire	Medium	Hertford County Emergency Management, Municipal Administration, Hertford County Administration	General Fund	N.C. Forest service continues to educate the Public.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
**HER12	Review County and Municipal Zoning, Subdivision, and Flood Damage Prevention Ordinances for improved control of flooding hazards and improvement of drainage.	Hurricane, Nor'easters, Floods, Erosion	High	Hertford County Inspections, Municipal Administration, Hertford County Administration	General Fund	The County continues to monitor ordinances and have not issuing building permit without Flood Elevation Certificate.
**HER13	Adopt and annually update a capital improvement plan with an emphasis on mitigation for critical facilities including relocation and retrofitting.	All Hazards	Medium	Hertford County Administration, Municipal Administration	General Fund	Incomplete at this time; As funding comes available, County will continue to work towards adopting a CIP with an emphasis on mitigation for critical facilities (relocating & retrofitting).
**HER14	At the local government staff level, work with the North Carolina Dept. 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	Hurricane, Nor'easters, Floods, Erosion	Medium	Hertford County Emergency Management, Municipal Administration, Hertford County Administration, NCDOT	General Fund	Incomplete at this time; working with NCDOT to implement a working plan on how to best fix drainage issue and then ultimately how to fund them as well.
**HER15	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.	Hurricane, Nor'easters, Floods, Erosion	High	Hertford County Emergency Management, Municipal Administration, Hertford County Administration	General Fund, Grant Funds	Incomplete at this time. Applied and awarded two (2) grants for debris removal.
**HER16	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.	Hurricane, Nor'easters, Floods, Erosion	High	Hertford County Inspections, Municipal Inspections	General Fund	The County continues to monitor ordinances and have not issuing building permit without Flood Elevation Certificate.
**HER17	Inspect debris blockage problems and secure funds for the clearance of debris from rivers, streams and tributaries	Hurricane, Nor'easters, Floods, Erosion	High	Hertford County Soil and Water Conservation, Hertford County Administration, Municipal Administration	General Fund	Applied and awarded two (2) grants for debris removal.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
**HER18	Maintain a map information service involving the following: (1) Provide information relating to Flood Insurance Rate Maps (FIRM) to all inquirers, including providing information on whether a given property is located within a flood hazard area. (2) Provide information regarding the flood insurance purchase requirement on the county's website. (3) Maintain historical and current FIRM's. (4) Locally advertise 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 flood prone area that they are subject to flooding. (8) Maintain a log of inquiries including: date, FIRM zone of subject property, address/location of subject property, indication that inquirer was informed of Insurance purchase requirement.	Floods	High	Hertford County and Ahoskie Inspections Departments	General Fund	(1) FIRM maps are located in respective county and Ahoskie inspection departments and the information is included on GIS maps. (2) Incomplete (3) Located in respective county and Ahoskie inspection offices (4) Incomplete (5) Information provided upon request (6) County does not have newsletter Letter on flood insurance should be handled under item 2. (7) & (8) Incomplete.
**HER19	Hertford County will once annually mail a notice to all property owners whose land is located within a special flood hazard area. This notice should clearly state that the recipients' property is susceptible to flooding.	Floods	High	Hertford County and Ahoskie Inspections Departments	General Fund	New Action
**HER20	Hertford County will work with local real estate agencies to ensure that agents are informing clients when property for sale is located within a Special Flood Hazard Area (SFHA). The County will provide these agencies with brochures documenting the concerns relating to development located within flood prone areas. Maintain a copy of the brochure and disclosure statements from at least five (5) local real estate agencies confirming brochure availability.	Floods	High	Hertford County and Ahoskie Inspections Departments	General Fund	County provides brochures to local real estate agencies documenting concerns relating to development within flood hazard areas. The County continues to provide a copy of the brochure to at least (5) local real estate agencies. The County will replace the brochures upon SFHA changing as a result of new FIRMs.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
**HER21	Hertford 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. (Maintain dates of distribution and librarian certification of availability.) (2) The County will provide a link on their website to FEMA resources addressing flooding and flood protection.	Floods	High	Hertford County Inspections Department	General Fund	(1) The County provides the local library with information relating to flooding and flood protection. (2) A link is provided on the County's website to FEMA resources addressing flooding and flood protection.
**HER22	Hertford County will coordinate with the Hertford County School System Hazards Awareness Educational Programs for use by educators within the Hertford County School System.	All Hazards	Low	MAC with Staff Support from Hertford County and participating municipalities	General Fund	Upon available resources.
**HER23	Hertford County will provide comprehensive services regarding planning and development activities within the defined SFHA. These services will include (1) Provide site-specific flood and flood related information on an as needed basis, (2) Maintain a list of contractors with experience in floodproofing and retrofitting techniques at the Building Inspections Dept., (3) Maintain materials providing an overview of how to select a qualified contractor at the Building Inspections Dept., (4) Site visits will be performed upon request by the Building Inspections Dept. to review occurrences of flooding, drainage, and sewer problems—if applicable, inspector should provide one-on-one advice to the property owner; (5) Advertise the availability of services once annually within the local newspaper; and (6) Maintain a log of all individuals assisted through these services, including site visits.	Floods	High	Hertford County and Ahoskie Inspections Departments	General Fund	(1) FIRM maps are located in respective county and Ahoskie inspection departments and the information is included on GIS maps. (2) the County maintains a list of contractors specific to flood proofing and retrofitting (3) Located in respective county and Ahoskie inspection offices (4) Incomplete (5) Incomplete (6) Incomplete
**HER24	Hertford County will 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 Hertford County Planning Department.	Floods	High	Hertford County Inspections Department	General Fund, Grant Funds	Hertford County maintains a comprehensive Geographic Information System (GIS) with current FIRM panels in an effort to make this information readily available to County citizens: http://www.hertfordcountync.gov/departments/departments-a-l/gis-land-records/ In addition to this digital data, bound copies of all historical and current FIRM panels are maintained within the Hertford County Planning Department.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
**HER25	Maintain a registry of special needs individuals which has been coordinated with the Hertford 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.	All Hazards	High	Hertford County Emergency Management	General Fund	Special Needs Registry is readily available and maintained.
**HER26	The MAC, in conjunction with Hertford County and the participating municipal jurisdictions, will work on the five-year implementation of this plan.	All Hazards	Medium	Hertford County and all participating jurisdictions	General Fund	The Hertford County Multi-Jurisdictional Plan will be replaced by the Albemarle Regional Hazard Mitigation Plan and the five-year implementation of the plan will begin upon adoption. Action strategies incomplete and being implemented will be carried forward accordingly.
**HER27	Maintain dialogue with the Tri-County Airport Authority to effectively regulate land use as the County continues to grow and encroach upon the airport environs.	Man-made Hazards	Low	Hertford County Planning Department	General Fund	Planning Director sits on the Tri-County Airport Board and maintains dialogue.
**HER28	Hertford 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.	Man-made Hazards	Low	NC Office of Dam Safety	General Fund	County continues to support NC Office of Dam Safety.
**HER29	Maintain a list of all hazardous material sites or transport corridors in Hertford County.	Man-made Hazards	Medium	Hertford County Emergency Management	General Fund	Hazardous Material site visits have been conducted on all EHS facilities and Plans have been created and added to the county Emergency Operations Plan.

**Notes: *Hertford County will be handling mitigation strategies for the Towns of Ahoskie, Cofield, Como, Harrellsville, Murfreesboro and Winton respectively. See Appendix B.*

Table 7.2.14 Pasquotank County-Elizabeth City Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
PAS1	Utilize best available data to identify the location and potential impacts of natural hazards on people, property and natural environment.	All Hazards	High	Planning, GIS, Emergency Management	General Fund, Grant Funds	Staff will continue to utilize FEMA Floodplain data provided by NCFMP along with tax parcel data to locate vulnerable areas. Storm Surge data from NOAA will also be used.
PAS2	Establish periodic monitoring and review of Multi-Hazard plan and ordinances to determine effectiveness at preventing and mitigating hazards.	All Hazards	High	Planning, Inspections Emergency Management, LEPC, Emergency Response Agencies	General Fund	New Action

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
PAS3	Continue to ensure through proper planning, zoning and building codes that all safety measure are in place for new construction and placement.	All Hazards	High	Planning, Inspections, County Commissioners/City Council	General Fund	Enforcement is accomplished through the issuance of building permits and inspections through the County's permitting office.
PAS4	Continue efforts for post-storm planning in an effort to reduce the time required to return the affected community to pre-storm status.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes, Winter Storms	High	Public Works, Solid Waste, Emergency Management	General Fund	County has just completed the RFP process for a new Debris Removal Contract and Debris Monitoring Contract. A Disaster Recovery Plan has been completed.
PAS5	Maintain "Storm Ready Community" Status	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes, Winter Storms	High	Emergency Management	General Fund	Information provided during various public events/educational events. Also posted to EM website and via social media. A notification plan is in place to alert critical facilities of watches/warnings. Coordination with the NWS should continue and additional methods of disseminating early warnings to the community/critical facilities should be continually evaluated and explored.
PAS6	Ensure that building codes are enforced to prevent damages from high winds.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes, Winter Storms	High	Inspections, Engineers, County Commissioners/City Council	General Fund	Enforcement is accomplished through the issuance of building permits and inspections through the County's permitting office.
PAS7	Continue to enforce regulatory measures that ensure new development will not increase flood threats to existing properties.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms	High	Planning, County Commissioners/City Council	General Fund	Pasquotank County has established a stormwater program and fee to conduct clearing and snagging maintenance activities on the County's major streams and ditches, and perhaps some dredging where permitted by the Army Corp of Engineers. The objective is to keep the downstream and forested areas clear of debris that impedes free flowing drainage.
PAS8	Minimize economic and property losses due to flooding through continued compliance in the National Flood Insurance Program (NFIP).	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms	High	Planning, Emergency Management, County Commissioners/City Council	General Fund	The flood damage prevention ordinance is reviewed annually to ensure that it is current, FIRMS are up to date and proper enforcement is being accomplished.
PAS9	Join the Community Rating System (CRS).	Hurricanes, Nor'easters, Flooding,	High	Planning, Emergency Management, County Commissioners/City Council	General Fund	New Action

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
PAS10	Develop and maintain comprehensive water management policies for Pasquotank County/Elizabeth City considering the connections between land-use, urban growth, and surface water, and ground water issues.	Hurricanes, Nor'easters, Flooding	High	Planning, CAMA, County Commissioners/City Council, Emergency Management	General Fund	New Action
PAS11	Seek/Encourage the development and implementation of long-term cost effective and environmentally sound mitigation projects.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms	Medium	Emergency Management, County Commissioners/City Council	Grant Funds	New Action
PAS12	As Funding allows, reduce flood-related damage to repetitive flood loss properties and structures through the buyout program.	Hurricanes, Nor'easters, Flooding	Medium	Emergency Management, County Commissioners/City Council, Finance Departments	Grant Funds	New Action
PAS13	Encourage critical facilities to apply structural hazard mitigation and sustainability concepts when building or remodeling their facilities; to include back-up power sources.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes	Medium	Emergency Management	General Funds, Grant Funds	New Action
PAS14	Acquire generators or other forms of redundant power supply to ensure that critical facilities and infrastructure remain operational where normal power supply is not available.	Hurricanes, Nor'easters, Severe Thunderstorms, Winter Storms, Tornadoes	Medium	Emergency Management	General Fund, Grants	A generator has been installed at the Pasquotank County Courthouse capable of running the critical functions of the county. Also, a Transfer Switch has been installed at the County/City's primary pre-hurricane shelter.
PAS15	Maintain Debris Removal and Monitoring Services Contracts	Hurricanes, Nor'easters, Severe Thunderstorms, Winter Storms, Tornadoes	Medium	Emergency Management, Public Works, Solid Waste, County Commissioners/City Council	Staff Time	New Action
PAS16	Educate and inform residents, businesses and visitors via public education, social media and print materials on ways to mitigate disasters including steps that they can protect themselves.	All Hazards	High	Emergency Management	General Fund, Grant Funds	Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.
PAS17	Encourage the use of weather radios/severe weather warning apps especially in schools, rest homes, convalescent homes, retirement centers and other locations where people congregate to inform them of the approach of severe weather.	All Hazards	High	Emergency Management	General Fund	New Action
PAS18	Increase awareness of hazards affecting Pasquotank County and provide information to assist in good decision-making.	All Hazards	High	Emergency Management	General Fund, Grant Funds	New Action
PAS19	Educate home and property owners about flood-proofing and wind-proofing measures.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes	Medium	Planning/Inspections, Emergency Management	General Fund	Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
PAS20	Continue to enforce the North Carolina Building Code. The requirement that new structures or structures undergoing significant renovation be resistant to wind loads of 110 m.p.h. is of particular importance.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes	High	Planning/Inspections	General Fund	The Planning and Code Enforcement Department continues to enforce the state building code, including wind load requirements. All building plans must demonstrate compliance prior to issuance of a building permit. The Building Inspector continues to conduct inspections during construction and no Certificate of Occupancy is issued unless all requirements are satisfied.
PAS21	Educate contractors about safe housing development through written materials or a county sponsored symposium.	Hurricane, Flooding, Tornado, Thunderstorm	High	Planning/Inspections	General Fund	The Planning and Code Enforcement Department continues to enforce the state building code, including wind load requirements.
PAS22	Hold a county/city-sponsored hazard mitigation symposium for the county residents and surrounding municipalities, including information on preparedness for all hazards significant to Pasquotank County.	Hurricanes, Tornadoes Thunderstorms,	High	Planning/Inspections, Emergency Management, County Commissioners/City Council	General Fund	Information is disseminated via various forums to include: talks to Civic Groups, distribution of information at Festivals/Public Events, Social Media, etc.
PAS23	Provide homeowners information on wind resistant measures.	Hurricanes, Tornadoes, Thunderstorms	High	Planning/Inspections	General Fund	Information is disseminated via various forums to include: talks to Civic Groups, distribution of information at Festivals/Public Events, Social Media, etc.
PAS24	Educate mobile home contractors and owners about wind proofing measures, including wood and light steel construction connectors and anchoring systems.	Hurricanes, Tornadoes, Thunderstorms	High	Planning/Inspections	General Fund	Information is disseminated via various forums to include: talks to Civic Groups, distribution of information at Festivals/Public Events, Social Media, etc.
PAS25	Post information about Pasquotank County's emergency evacuation routes.	Hurricanes, Tornadoes, Thunderstorms	High	Emergency Management Agency	General Fund	Information provided during various public events/educational events. Also posted to EM website and via social media.
PAS26	Review the Pasquotank-Camden-Elizabeth City Multi-Hazard Emergency Operations Plan annually and update the plan as necessary. Ensure all County and City departments continue to develop guidelines for response to emergencies and to maintain departmental operations. Work with County and City departments to ensure each department possesses a clear understanding of department responsibilities as outlined in the Pasquotank-Camden-Elizabeth City Multi-Hazard Emergency Operations Plan.	Hurricanes, Tornadoes, Thunderstorms	High	All County/City Departments,	General Fund	Annual update of Multi-Hazard Plan, conduct exercises with departments addressing their roles and responsibilities as outlined in the Multi-Hazard Plan

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
PAS27	Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees or branches on county/city property when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the community.	Hurricanes, Thunderstorms, Tornadoes	High	Public Works, County Maintenance	General Fund	Collaborative efforts between City/County toward vegetation monitoring
PAS28	Continue efforts to develop continuity of operational plans (COOP) for county/city departments.	Hurricanes, Thunderstorms	High	City/County Departments, Pasquotank County Manager, Elizabeth City Manager	General Fund	Continuity of operations for planning efforts are currently underway in the county/city.
PAS29	Encourage the installation of generator switches in new construction critical facilities. As projects go through Technical Review Committee, applicants can be encouraged to pre-wire facilities for a generator. New construction critical facilities that would benefit from pre-wiring include but are not limited to public schools, local government facilities, facilities that may be utilized as storm shelters, adult care facilities, etc.	Hurricanes	High	Pasquotank County Board of Commissioners, Elizabeth City Council, Planning Boards	General Fund	A generator has been installed at the Pasquotank County Courthouse capable of running the critical functions of the county. Also, a Transfer Switch has been installed at the County/City's primary pre-hurricane shelter.
PAS30	Record all tax parcel information and floodplain locations in a GIS system including repetitive loss areas, areas of greatest risk, and vulnerable populations. This information will be provided to the GIS Coordinator by the Emergency Management Agency.	Hurricanes, Flood, Tornadoes, Thunderstorms	High	GIS Coordinator	General Fund	Complete; will be updated as needed.
PAS31	Continue efforts to acquire the "Perry Properties" located in the area of Ehringhaus Street and McMorrine Street in Elizabeth City utilizing hazard mitigation grant funding for repetitive flood loss properties.	Flooding	High	Pasquotank County Managers, Elizabeth City Manager, Emergency Management Agency	General Fund, Grant Funds	No action taken, As funding comes available action will be taken to acquire "Perry Properties".
PAS32	Continue efforts to acquire repetitively flooded properties in the Oxford Heights subdivision of Elizabeth City utilizing hazard mitigation grant funding.	Flooding	High	Pasquotank County Managers, Elizabeth City Manager, Emergency Management Agency	General Fund, Grant Funds	No action taken, As funding comes available action will be taken to acquire "Perry Properties".
PAS33	Participate in the Community Rating System (CRS)	Flooding	High	Pasquotank County Board of Commissioners, Elizabeth City Manager	General Fund	County/City is in compliance with NFIP. Continued participation in CRS.
PAS34	Revise zoning and subdivision ordinances to increase lot sizes in areas with poor soils.	Flooding	High	Pasquotank County Board of Commissioners, Elizabeth City Manager	General Fund	Update – Complete – County lots increased to 43,000 square feet
PAS35	Reduce the vulnerability of infrastructure and the built environment by identifying infrastructure (i.e. pumping stations, roads) in the city/county that is repetitively damaged by flooding and consider ways to reduce those vulnerabilities.	Flooding	High	Pasquotank County Board of Commissioners, Elizabeth City Manager	General Fund, Grant Funds	Update – Infrastructure has been identified. County/City seeks ways to reduce vulnerabilities and opportunities for Mitigation Funding.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
PAS36	As with other hazards of concern to Pasquotank County and the City of Elizabeth City, a hazard mitigation symposium should be held for its residents, including information on preparedness for all hazards significant to its jurisdiction. The symposium should encourage property owners in flood prone areas to consider the options of elevation, relocation, and flood proofing.	Flooding	High	Emergency Management Agency	General Fund	Information regarding flood proofing has been provided via various forums.
PAS37	Distribute information identifying flood prone areas within the county/city. Address the need for evacuation and family preparedness plans especially for residents living within flood prone areas.	Flooding	High	Emergency Management Agency	General Fund	EM also maintains a Special Needs Registry – evacuation and family preparedness information is made available to this population as well as the non-English speaking population in Pasquotank County/Elizabeth City.
PAS38	Incorporate shoreline vegetation protection buffers into the City of Elizabeth City's Unified Development Ordinance as a stipulation to development in and near areas of environmental concern.	Flooding	High	Elizabeth City Council, Planning	General Fund	No Action Taken At This Time
PAS39	In order to reduce storm water runoff, the city should minimize construction of additional impervious surfaces within the floodplain. Elizabeth City's Stormwater Management Ordinance addresses mitigation measures to control the adverse effects of increased storm water runoff associated with both future land development and existing developed land within the City.	Flooding	Medium	Elizabeth City Council, Planning	General Fund	Stormwater management is be implemented as part of land development within the city.
PAS40	Provide new home and property buyers with information on wind proofing. This information may be most efficiently dispersed by the tax assessor's office because all home transactions are recorded there.	Hurricanes, Tornadoes, Thunderstorms	High	Tax Department	General Fund	Information is being provided at the tax assessor's office.
PAS41	Warning System Improvements.	Hurricanes, Tornadoes, Thunderstorms	High	Emergency Management Agency	General Fund	Citizens are given information regarding free applications available for severe weather alerts and are also encouraged to purchase weather radios.
PAS42	Encourage the practice of placing storm shelters in all mobile home areas and subdivisions.	Tornadoes, Thunderstorms	High	Pasquotank County Board of Commissioners, Elizabeth City Council	General Fund	No action taken; As funding comes available these storm shelters shall be planned and constructed.
PAS43	As with other hazards of concern to Pasquotank County and the City of Elizabeth City, the county/city can sponsor a hazard mitigation symposium for its residents, including information on preparedness for all hazards significant to Pasquotank County.	Hurricanes, Flood, Tornadoes, Thunderstorms	High	Emergency Management Agency	General Fund	Information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
PAS44	Encourage the installation of lightning detection devices be installed in public outdoor gathering areas such as school stadiums and ball parks.	Hurricanes, Flood, Tornadoes, Thunderstorms	High	Pasquotank County Board of Commissioners, Elizabeth City Council	General Fund	No action taken; As funding becomes available lightning protection devices are to be installed on public outdoor gathering areas.
PAS45	In order to minimize injury from lightning strikes, shelters should be placed every 10 acres in all public open space recreation areas. This recommendation should be encouraged by the county and the city.	Hurricanes, Tornadoes, Thunderstorms	High	Pasquotank County Board of Commissioners, Elizabeth City Council	General Fund	No action taken; As funding becomes available lightning protection shelters shall be installed in recreational areas.
PAS46	Provide new home and property buyers with information on wind proofing. This information may be most efficiently dispersed by the tax assessor's office because all home transactions are recorded there.	Tornadoes, Thunderstorms	High	Tax Department	General Fund	Information is being provided at the tax assessor's office.
PAS47	Driving in storm conditions can create hazardous road conditions, including decreased ability for drivers to see road boundaries. To improve road visibility, reflector tape or paint along road edges and in the dividing line should be placed on all major roads through city/county.	Hurricanes, Thunderstorms	High	Public Works, NCDOT	General Fund, Grant Funds	No action taken; As funding becomes available, highway reflector material is being installed.

Table 7.2.15 Perquimans County Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
PER1	Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees or branches on county property when they would pose an immediate threat to property, utility lines, or other significant structures or critical facilities in the county.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes	Medium	Buildings and Grounds	General Fund	Continue to monitor vegetation overgrowth.
PER2	Create a preferred foliage and wind resistant tree list for the County. Distribute the list to property owners in an effort to reduce the risk of trees and plants from breaking in high wind events.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes	Medium	Planning	General Fund	Incomplete; to implement as "best management practice" in brochure and/or soft regulatory requirement through text amendments to the zoning ordinance and run with other updates that the County will be dealing with once the CAMA Plan update is adopted.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
PER3	Record all tax parcel information and floodplain locations in a GIS system including repetitive loss areas, areas of greatest risk, and vulnerable populations. Maintain and update GIS layers that identify critical facilities/infrastructure and other facilities to include childcare centers, mobile home parks/subdivisions, and senior care facilities.	Flood	Medium	Planning, GIS, Emergency Management	General Fund	Tax parcel information relating to repetitive loss areas is being updated.
PER4	Consider participating in the Community Rating System (CRS).	Flood	Medium	Board of Commissioners, Building Inspections, Planning Department	General Fund	This has not been pursed.
PER5	Continue to review rebuilding activities after major storm events to determine how revisions to existing policies and procedures could help minimize repetitive losses.	All Hazards	Medium	Building Inspections	General Fund	Incomplete- continue to monitor Local building codes to assure they meet the ever-changing State updates and continue to educate staff on a yearly basis.
PER6	Ensure that mobile manufactured homes are installed and secured properly.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes	High	Building Inspections	General Fund	Incomplete- continue to monitor Local building codes to assure they meet the ever-changing State updates and continue to educate staff on a yearly basis.
PER7	Complete the review and consider adoption of "Stormwater and Drainage Management Standards" to augment current zoning and subdivision ordinances, as included in the Planning Board's Fiscal Year 2009-2010 Work Program. The TRC has recommended adoption of this Ordinance.	Hurricanes, Nor'easters, Flooding, Erosion	High	Planning Department	General Fund	Complete; Stormwater standards complete and enacted.
PER8	Continue to enforce the North Carolina Building Code. Enforce the use of wind-resistant construction techniques used in coastal regions. The requirement that new structures or structures undergoing significant renovations be resistant to wind loads of 110 mph is of particular importance.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes	Medium	Building Inspections	General Fund, Grant Funds	Incomplete- continue to monitor Local building codes to assure they meet the ever-changing State updates and continue to educate staff on a yearly basis.
PER9	Continue to acquire destroyed or substantially damaged properties and relocate households. Seek State and Federal funding. (voluntary program)	All Hazards	Medium	Board of Commissioners	General Fund, Grant Funds	Incomplete- continue to monitor any opportunity to utilize Federal funding to acquire damaged properties and any relocation efforts.
PER10	Maintain and annually update the county Emergency Operations Plan. This plan should contain detailed information on responsible parties and contact information. This information should be updated as positions and contact information change.	All Hazards	High	Emergency Management	General Fund	Incomplete- continue to update operations plans and monitoring detailed information of responsible parties assuring accurate information is always relevant.
PER11	Maintain evacuation routes.	All Hazards	Medium	NCDOT, Board of Commissioners	NCDOT	Incomplete- continue to collaborate with all departments to maintain routes preparedness and continue to educate staff and property owners along routes.
PER12	Enhance existing Warning Systems	All Hazards	Medium	Emergency Management, Emergency Services	General Fund, Grant Funds	Reverse 911 system instituted,

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
PER13	Ensure adequate evacuation time in case of major hazard events.	All Hazards	High	Emergency Management, Emergency Services	General Fund	Incomplete- continue to collaborate with all departments to maintain routes preparedness and continue to educate staff and property owners along routes.
PER14	Promote and encourage the training of Community Emergency Response Teams (CERT) throughout the county	All Hazards	Medium	Emergency Management	General Fund, Grant Funds	"CERTS" established during 2010 planning timeframe.
PER15	Work to develop continuity of operations plans (COOP) for county/town departments, assisted living facilities, long-term care facilities, day care centers, etc.	All Hazards	High	Board of Commissioners, Emergency Management	General Fund	Incomplete; continued efforts through collaborative meeting events and mail solicitation. Continued education within county/town staff on proper out-reaches to care facilities.
PER16	In order to reduce storm water runoff, the county should minimize construction of additional impervious surfaces within floodplains. This should include limiting construction of impervious surface parking lots in the areas near the rivers.	Hurricanes, Nor'easters, Flooding, Erosion	Low	Board of Commissioners	General Fund	Incomplete- to be added to the Planning Board's Work Program and scheduled during next 5-year HMP period. Continue to work with CAMA and provided staff yearly education opportunities.
PER17	Continue to support NC Sedimentation Control Commission efforts to ensure erosion and sedimentation control measures are properly installed and maintained during construction.	Hurricanes, Nor'easters, Flooding, Erosion	High	Planning Department, Natural Resource Conservation Service, Soil and Water Conservation	General Fund	Incomplete- to be added to the Planning Board's Work Program and scheduled during next 5-year HMP period.
PER18	Encourage the installation of generator switches in new construction critical facilities and existing shelters. As projects go through TRC, applicants can be encouraged to pre-wire facilities for a generator.	All Hazards	High	Planning Department, Board of Commissioners	General Fund, Grant Funds	Transfer switches have been installed.
PER19	Perquimans County should sponsor a hazard mitigation symposium for county residents, including information on preparedness for all significant hazards. The symposium should address the options of elevation, relocation, and flood proofing	Flooding	Medium	Board of Commissioners, Emergency Management	General Fund	Not yet pursued- however EMC hold annual Hurricane briefings for first responders and other interested citizens and residents.
PER20	Post information about emergency evacuation routes.	All Hazards	High	Emergency Management	General Fund	Incomplete- continue to collaborate with all departments to maintain routes preparedness and continue to educate staff and property owners along routes through soft mailers and county/town websites.
PER21	Use written materials to educate contractors about principles for quality redevelopment and safe housing development.	All Hazards	Medium	Building Inspections	General Fund	Incomplete- continue to educate staff on a yearly basis, continue to provide daily mailers to contractors based on state building updates.
PER22	Provide new home and property buyers with information on wind proofing. The information is probably most effectively dispersed by the Building Inspections Department.	Hurricanes, Nor'easters, Flooding, Severe Thunderstorms, Tornadoes	Medium	Administration	General Fund	Incomplete- continue to educate staff on a yearly basis, continue to provide daily mailers to property buyers based on state building updates.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
PER23	Create and disperse information about the plan and relevant emergency response actions the public can take.	All Hazards	High	Emergency Management, Emergency Services	General Fund	Incomplete- continue to educate staff on a yearly basis, continue to provide daily mailers to property buyers based on state building updates.
PER24	Continue to provide flood maps for public use with staff continuing to be available for public assistance.	Flooding	High	Planning Department, Building Inspections	General Fund	Complete- Worked with State to provide flood maps and have them posted on NCFLOODMAPS.com for public access/use.
PER25	Collect FEMA and NCEM educational material on natural hazards and place in public library.	All Hazards	High	Emergency Management	General Fund	Incomplete- continue to monitor Federal guideline updates, educating staff on State/Federal requirements, distributing this information to the public via mailers and various public common facilitates.
PER26	Develop and distribute information to the public regarding the requirements for anchoring LP gas tanks.	Hurricanes, Nor'easters, Flooding	Medium	Planning Department	General Fund	Incomplete- Ultimately regulated by NC Public Ag and NC Flood, but continue to monitor updates through these organizations and educate staff members who in turn educate the community via mailers and public common facilities.

Table 7.2.16 Town of Hertford Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency/Department	Potential Funding Source	Implementation Status
***HFT1	Update the CAMA Land Use Plan in conjunction with the County's Core Land Use Plan.	All Hazards	Medium	Town Manager	General Fund	The Town will continue to monitor its CAMA Land Use Plan and will make updates as needed to address the impacts of hazards on the Town. CAMA requires updates every 5 years.
***HFT2	Consider revising Hertford's Zoning Ordinance and Subdivision Regulations to improve storm water management practices in developments.	Flood	Low	Town Manager	General Fund	The town will review its Zoning Ordinance and Subdivision Regulations and make necessary amendments to enhance its stormwater management practices and protect against future flooding.
***HFT3	Update the Town of Hertford's Zoning Ordinance and Subdivision Regulations.	All Hazards	Low	Town Manager	General Fund	The town will review its Zoning Ordinance and Subdivision Regulations and make necessary amendments to help it mitigate the impacts of hazards on future development.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency/Department	Potential Funding Source	Implementation Status
***HFT4	Work in conjunction with NCDOT and other agencies to ensure that storm water facilities are maintained to allow for reasonable flows	Hurricanes, Nor'easters, Flood, Severe, Thunderstorm, Erosion	Medium	Town Manager	General Fund, NCDOT	Continue to coordinate with NCDOT to ensure drainage ways are kept clear of debris.
***HFT5	In cooperation with Perquimans County, continue to review areas adversely impacted by major storm events and to examine existing policies that can minimize repetitive losses in those areas.	Hurricanes, Nor'easters, Flood, Severe, Thunderstorm, Erosion	Medium	Perquimans County, Town Manager	General Fund	Continue to work with Perquimans County to identify vulnerable areas and repetitive loss properties, and develop policies and guidelines to minimize the impacts to these areas.
***HFT6	Work to develop continuity of operations plans (COOP) for county/town departments, assisted living facilities, long-term care facilities, day care centers, etc.	All Hazards	High	Town Manager	General Fund	Develop a Continuity of Operations Plan, along with Perquimans County, to ensure town operations can remain operational during a disaster event.
***HFT7	In conjunction with NCDOT, continue to examine the roadways of the town to determine if improvements are needed in areas affected by development and that all roadway are sufficient to carry traffic in time of evacuation.	All Hazards	Medium	Town Manager, NCDOT	General Fund, NCDOT	Continue to partner with NCDOT to make sure roadways are maintained so they can provide safe and efficient routes.

****Perquimans County will be responsible for all mitigation actions shown herein, for the Town of Hertford, See Appendix B.*

Table 7.2.16 Town of Winfall Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
WIN1	Complete Land Use Plan and ensure that hazard mitigation objectives are addressed.	All Hazards	High	Town Council, Planning Board, Perquimans County	General Fund	Incomplete- continue to update Land Use Plan and hold collaborative efforts to educate all parties on mitigation objectives via meetings or email correspondence.
WIN2	Update as needed the wastewater collection system and water system ordinances to meet hazard mitigation objectives.	All Hazards	Medium	Planning Board, Town Council	General Fund	Perquimans County assumed Winfall's water system during the 2010 planning timeframe.
WIN3	Continue to encourage efforts towards countywide water systems with Perquimans County.	All Hazards	Medium	Town Council	General Fund	Incomplete- Continue to collaborate with Perquimans County by holding meetings to discuss benefits of a countywide system. Continue to consult engineers on efficiency data and rates.
WIN4	Continue efforts to improve roads and bridges (both public and private) for critical services – fire, rescue, medical, evacuation, etc.	All Hazards	Medium	Town Council	General Fund	Work with RPO on recommendations, provide list and attend annual meeting for the State's Transportation Improvement Program for road and bridge improvement, (annual) based on priorities of RPO and budget.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
WIN5	Seek funding and/or action to clear debris in canals, waterways and drainage ditches to prevent flooding and to improve drainage and water quality.	Hurricanes, Nor'easters, Flood, Severe Thunderstorms, Winter Storms, Erosion	Medium	Town Council	General Fund, Grant Funds	Incomplete- funding is the key component driving the lack of forward movement.
WIN6	Work with the County Building Inspector to continue to enforce the NC Building Code, in particular, the tie down of buildings and resistance to wind loads.	Hurricanes, Nor'easters, Flood, Severe Thunderstorms, Winter Storms, Tornadoes	Medium	Town Council	General Fund	Continued enforcement of "required" NC Building Code with regards to tie down of buildings and wind load.
WIN7	Minimize construction of impervious surfaces adjacent to floodplains or near storm water drainage routes that empty into the river.	Hurricanes, Nor'easters, Flood,	Medium	Zoning Administrator	General Fund	The town follows the State's Stormwater regulations when dealing with impervious surfaces adjacent to floodplains or near storm water drainage on a case by case basis when the community is involved.
WIN8	Establish program for evacuation and improvement of Town critical services and facilities – wastewater collection system.	All Hazards	Medium	Town Council, Fire Department, Town Staff	General Fund	Incomplete- continue to organize collaborative efforts with public works and consultants. Continue to effort wastewater program based on meetings and outreach.
WIN9	Continue to partner with Perquimans County in the annual review and update of the Emergency Operations Plan (i.e. evacuation warnings, removal of persons in flood prone areas).	All Hazards	High	Town Council, Police, Fire, Perquimans County	General Fund	Reverse 911 system instituted during 2010 planning timeframe.
WIN10	Evaluate access problems for critical facilities; develop protection options. Identify alternate command post sites.	All Hazards	High	Police Department, Town Staff, Town Council	General Fund	Incomplete- continue outreach to care facilities providing
WIN11	Work to develop continuity of operations plans (COOP) for county/town departments, assisted living facilities, long-term care facilities, day care centers, etc.	All Hazards	High	Town Council, Town Staff	General Fund	Evaluated and scheduled for completion in 2015.
WIN12	Continue to work on removal of projectile/debris such as junked vehicles, mobile homes and dilapidated homes.	Hurricanes, Nor'easters, Flood, Severe Thunderstorms, Winter Storms, Tornadoes	Medium	Town Council, Town Staff	General Fund	Incomplete- continue efforts between all departments to monitor debris and enacting measures of removal on timely basis. Continue to educate the public on these efforts via mail and website.
WIN13	Continue to evaluate those businesses with potential hazardous liquids for adequate protection of the public.	All Hazards	Medium	Town Council, Fire Department	General Fund, Private Funds	Incomplete
WIN14	Participate in the annual review and update of the Hazard Mitigation Plan.	All Hazards	High	Town Council, Planning Board	General Fund	Participated in Update of Regional Plan
WIN15	Establish both a regular and emergency plan to communicate with residents.	All Hazards	High	Town Council	General Fund	Incomplete- continued efforts with the community to best understand dynamics of the community and how best to develop these plans efficiently and effectively.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
WIN16	Disseminate information on emergency actions procedures – notification, shelters, evacuation routes, etc.	All Hazards	High	Town Council, Town Staff	General Fund	Incomplete- continue towards creating a committee to generate required information to the public through mailing and website. Continue to educate staff members on the importance of this information as a community and keeping it updated.
WIN17	Each Town department establish/update plans for their respective operations for emergency operation situations.	All Hazards	High	Town Council, Town Staff	General Fund	Reviewed on annual basis during budget preparation (Nov-June).
WIN18	Continue to partner with Perquimans County to improve warning system, to ensure residents understand the system and that homebound residents are notified.	All Hazards	Medium	Police Department, Fire Department, Town Council	General Fund	Reverse 911 system instituted during 2010 planning timeframe.

Section 8: Plan Maintenance

8.1 Implementation

Each jurisdiction participating in this Plan is responsible for implementing specific mitigation actions as prescribed in their locally adopted Mitigation Action Plan (Section 7). In each Mitigation Action Plan, every proposed action is assigned to a specific local department or agency in order to assign responsibility and accountability and increase the likelihood of subsequent implementation. This approach enables individual jurisdictions to update their own unique mitigation action list as needed without altering the broader focus of the regional Plan. The separate adoption of locally specific actions also ensures that each jurisdiction is not held responsible for the monitoring and implementation of actions belonging to other jurisdictions involved in the planning process.

In addition to the assignment of a local lead department or agency, an implementation time period or a specific implementation date or window has been assigned to each mitigation action to help assess whether actions are being implemented in a timely fashion. The jurisdictions present within the Albemarle Region will seek outside funding sources to implement mitigation projects in both the pre-disaster and post-disaster environments. When applicable, potential funding sources have been identified for proposed actions listed in the Mitigation Action Plans.

It will be the responsibility of each participating jurisdiction to determine additional implementation procedures beyond those listed within their Mitigation Action Plan. This includes integrating the requirements of the Regional Hazard Mitigation Plan into other local planning documents, processes, or mechanisms such as comprehensive or capital improvement plans, when appropriate. The members of the Albemarle Hazard Mitigation Planning Committee (HMPC) will remain charged with ensuring that the goals and strategies of new and updated local planning documents for their jurisdictions or agencies are consistent with the goals and actions of the Albemarle Regional Hazard Mitigation Plan, and will not contribute to increased hazard vulnerability in the Albemarle Region. Opportunities to integrate the requirements of this Plan into other local planning mechanisms shall continue to be identified through future meetings of the Albemarle HMPC and through the five-year review process described herein. Although it is recognized that there are many possible benefits to integrating components of this Plan into other local planning mechanisms, the development and maintenance of this stand-alone Regional Hazard Mitigation Plan is deemed by the Albemarle HMPC to be the most effective and appropriate method to implement local hazard mitigation actions at this time.

8.2 Monitoring, Evaluation and Enhancement

In 2013, Gates County received a Pre-Disaster Mitigation (PDM) Program Grant through the North Carolina Division of Emergency Management (NCEM) for the creation of the Albemarle Regional Hazard Mitigation Plan. Per the grant agreement between NCEM and Gates County, Gates County Emergency Management will be the lead agency with the overall responsibility for monitoring this Plan. Periodic revisions and updates of the Albemarle Regional Hazard Mitigation Plan are required to ensure that the goals of the Plan are kept current, taking into account potential changes in hazard vulnerability and mitigation priorities. In addition, revisions may be necessary to ensure that the Plan is in full compliance with applicable federal and state regulations. Periodic evaluation of the Plan will also ensure that specific mitigation actions are being reviewed and carried out according to each jurisdiction's individual *Mitigation Action Plan*.

The Albemarle HMPC will continue to meet regularly, as determined by Gates County Emergency Management. These regular meetings will take place in the fall of each year so that sufficient time is available to prepare public outreach messages and assess the status of any mitigation actions relevant to the upcoming severe seasonal spring weather and the start of hurricane season. Meetings will also be convened as necessary following any disaster events warranting a reexamination of the mitigation actions being implemented or proposed by the participating jurisdictions.

County and local staff of each participating jurisdiction will also continue to attend training workshops sponsored by the North Carolina Division of Emergency Management or others as appropriate in order to keep up-to-date with any changing guidance or planning requirements and to communicate that information to other representatives of participating jurisdictions.

As part of this monitoring, evaluation, and enhancement process, each participating jurisdiction will be expected to provide an annual status update to Gates County Emergency Management for their respective *Mitigation Action Plans* in order to evaluate the Plan's implementation effectiveness. This will ensure that the Plan is continuously maintained and updated to reflect changing conditions and needs within the Albemarle Region. If determined appropriate or as requested, an annual report on the Plan will be developed and presented to local governing bodies of participating jurisdictions in order to report progress on the actions identified in the Plan and to provide information on the latest legislative requirements and/or changes to those requirements.

Dare County and its six municipalities will complete annual updates of their respective mitigation goals and implementation strategies as part of their participation activities in the Community Rating System. This update is approved by the local elected boards each year and a copy provided to the CRS representatives as part of the annual verification process.

Five (5) Year Plan Review

The Plan will be reviewed by the Albemarle HMPC every five years to determine whether there have been any significant changes in the Albemarle Region that may, in turn, necessitate changes in the types of mitigation actions proposed. New development in identified hazard areas, an increased exposure to hazards, the increase or decrease in capability to address hazards, and changes to federal or state legislation are examples of factors that may affect the necessary content of the Plan.

The plan review provides community officials with an opportunity to evaluate those actions that have been successful and to explore the possibility of documenting potential losses avoided due to the implementation of specific mitigation measures. The plan review also provides the opportunity to address mitigation actions that may not have been successfully implemented as assigned. Gates County Emergency Management Department will be responsible for reconvening the Albemarle HMPC and conducting the five-year review.

During the five-year plan review process, the following questions will be considered as criteria for assessing the effectiveness and appropriateness of the Plan:

- Do the goals address current and expected conditions?
- Has the nature or magnitude of risks changed?
- Are the current resources appropriate for implementing the Plan?
- Are there implementation problems, such as technical, political, legal, or coordination issues

with other agencies?

- Have the outcomes occurred as expected?
- Did the jurisdictions, agencies, and other partners participate in the plan implementation process as proposed?

Following the five-year review, any revisions deemed necessary will be summarized and implemented according to the reporting procedures outlined herein. Upon completion of the review and update/amendment process, the Albemarle Regional Hazard Mitigation Plan will be submitted to the State Hazard Mitigation Officer at the North Carolina Division of Emergency Management for final review and approval in coordination with the Federal Emergency Management Agency.

Disaster Declaration

Following a disaster declaration, the Plan will be revised as necessary to reflect lessons learned, or to address specific issues and circumstances arising from the event. It will be the responsibility of the Gates County Emergency Management Department to reconvene the Albemarle HMPC and ensure the appropriate stakeholders are invited to participate in the plan revision and update process following declared disaster events.

Reporting Procedures

The results of the five-year review will be summarized by the Albemarle HMPC in the relevant sections of the updated plan. This includes: a comprehensive description of the plan update process including an evaluation of plan effectiveness (Section 2); any updates to the planning area profile (Section 3); any notable revisions or updates to the risk assessment (Section 4) or capability assessment (Section 5); updated mitigation goals and consideration of mitigation action alternatives (Section 6); status updates on previously adopted mitigation action plans (including the identification of reasons for delays or obstacles to their implementation) as well as the identification of newly proposed mitigation actions (Section 7); and revisions or updates to plan maintenance procedures (Section 8).

Any necessary revisions or changes to the Regional Plan elements must follow the monitoring, evaluation, and enhancement procedures outlined herein. For changes and updates to the individual *Mitigation Action Plans*, appropriate local designees will assign responsibility for the completion of the task.

8.2.1 Monitoring and Evaluation Update

The following describes how well the monitoring and evaluation process in each of the previous local mitigation plans was followed:

- The Camden County Hazard Mitigation Plan was not reviewed annually as identified in previous plan. However, mitigation strategies were addressed in other forums as evident by the completion of several mitigation actions identified in the plan.
- The Chowan County Hazard Mitigation Plan (Including the Town of Edenton) was not reviewed annually as identified in previous plan. However, mitigation strategies were addressed in other forums as evident by the completion of several mitigation actions identified in the plan.
- The Currituck County Hazard Mitigation Plan was reviewed annually and a status report was

provided to the County Board of Commissioners each year. This status report was also submitted to the Community Rating System as part of the participation requirements. The local mitigation planning committed in Currituck County remains active and dedicated to mitigation planning.

- The Dare County Hazard Mitigation Plan (Including the Towns of Duck, Kitty Hawk, Kill Devil Hills, Manteo, Nags Head and Southern Shores) was reviewed annually and a status report was provided to the County Board of Commissioners and each Town Board each year. These status reports were also submitted to the Community Rating System as part of the participation requirements. The local mitigation planning committed in Dare County remains active and dedicated to mitigation planning.
- The Gates County Hazard Mitigation Plan (Including the Town of Gatesville) was not reviewed annually as identified in previous plan. However, mitigation strategies were addressed in other forums as evident by the completion of several mitigation actions identified in the plan.
- The Hertford County Hazard Mitigation Plan (Including the Towns of Ahoskie, Cofield, Como, Harrellsville, Murfreesboro and Winton) was not reviewed annually as identified in previous plan. However, mitigation strategies were addressed in other forums as evident by the completion of several mitigation actions identified in the plan.
- The Perquimans County Hazard Mitigation Plan (Including the Towns of Hertford and Winfall) was not reviewed annually as identified in previous plan. However, mitigation strategies were addressed in other forums as evident by the completion of several mitigation actions identified
- in the plan.
- The Pasquotank County Hazard Mitigation Plan (Including the Town of Elizabeth City) was not reviewed annually as identified in previous plan. However, mitigation strategies were addressed in other forums as evident by the completion of several mitigation actions identified in the plan.

At this time, no changes have been made to the monitoring and evaluation process. However, each participating County and Town will make a concerted effort to monitor the Regional Plan during this planning period and provide annual status updates.

8.3 Continued Public Involvement

Public participation is an integral component of the mitigation planning process and will continue to be essential as this Plan evolves and is updated over time.

The most appropriate and meaningful opportunities for the general public to be involved in the maintenance and implementation of the Albemarle Regional Hazard Mitigation Plan is during the five-year plan review process as described earlier in this section. As demonstrated in Section 2: *Planning Process*, the participating jurisdictions of the Albemarle Region have been diligent and successful in gaining widespread public involvement during the five-year plan review process through multiple methods. While the five-year plan review process represents the greatest opportunity for such involvement, other efforts to involve the public in the maintenance, evaluation, and revision process will continue to be made as necessary. These efforts may include:

- Advertising meetings of the Albemarle HMPC, as well as the local planning committees in Currituck and Dare Counties, in local newspapers, public bulletin boards, and/or City and

County office buildings;

- Designating willing and voluntary citizens and private sector representatives as official members of the Albemarle HMPC;
- Working with children through school programs and other appropriate venues in an effort to engage parents and other adults;
- Utilizing local media to update the public of any maintenance and/or periodic review activities taking place;
- Utilizing City and County Web sites to advertise any maintenance and/or periodic review activities taking place;
- Keeping copies of the Plan in public libraries; and
- Posting any Annual Reports on the Plan to City and County Web sites.

Appendix A – Maps

Camden County

Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- A
- AE
- Floodway
- Municipalities
- Camden County

0 2.5 5

Miles

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GATES COUNTY

PASQUOTANK COUNTY

CAMDEN COUNTY

CURRITUCK COUNTY

PERQUIMANS COUNTY

Elizabeth City

Winfall

Hertford

17 158 168 615 343 344 34 37

Town of Edenton Chowan County Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Streets
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- A
- AE
- Floodway
- Municipalities
- Chowan County

0 1,500 3,000

Feet

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Edenton

CHOWAN COUNTY

COUNTY

CHOWAN RIVER

Edenton Bay

Albemarle Sound

Queen Anne Creek

Pembroke Creek

Pollock Swamp

17

32

94

Chowan County

Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- A
- AE
- Floodway
- Municipalities
- Chowan County

0 2.5 5
Miles

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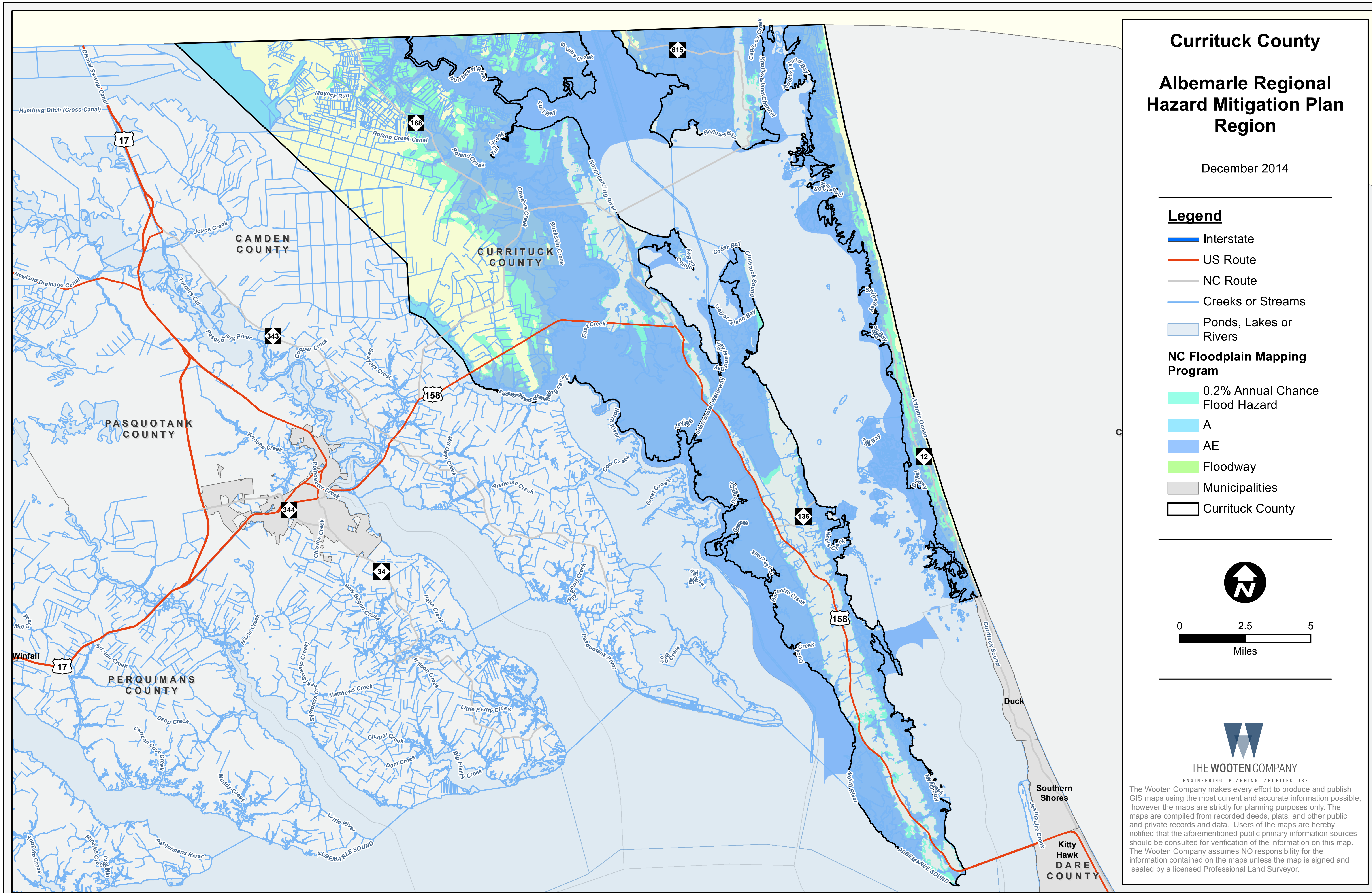

Currituck County
Albemarle Regional Hazard Mitigation Plan Region
December 2014
Legend
Interstate
US Route
NC Route
Creeks or Streams
Ponds, Lakes or Rivers
NC Floodplain Mapping Program
0.2% Annual Chance Flood Hazard
A
AE
Floodway
Municipalities
Currituck County
0
2.5
5
Miles
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CAMDEN COUNTY
CURRITUCK COUNTY
PASQUOTANK COUNTY
PERQUIMANS COUNTY
DARE COUNTY
Winfall
Duck
Southern Shores
Kitty Hawk
17
158
168
343
344
34
615
136
12
Dismal Swamp Canal
Hamburg Ditch (Cross Canal)
Newland Drainage Canal
Moyock Run
Roland Creek Canal
North Landing River
Currituck Sound
Intracoastal Waterway
Atlantic Ocean
Pasquotank River
Perquimans River
Little River
ALBEMARLE SOUND

Town of Duck, NC
Dare County
Albemarle Regional Hazard Mitigation Plan Region

February 2016

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- AE
- VE

0 1,500 3,000

Feet

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Duck

Southern Shores

DARE COUNTY

CURRITUCK COUNTY

Currituck Sound

Webster Creek

Atlantic Ocean

BALIN
STATION BAY
MARTIN
QUAIL
GANNET
WAXWING
RUDDY DUCK
PELICAN
BUNTING
OYSTER CATCHER
OCEAN PINES
OCEAN BAY
SOUND SEA
CARROL
SEA TERN
TRINITIE
MALLARD
DIANNE
OLD SQUAW
SPRIGTAIL
CANVAS BACK
WOOD DUCK
PINTAIL
WIDGEON
SNOW GEESE
SPYGLASS
SPINDRIFT
DUCK
SANDY RIDGE
SHIPS WATCH
BARRIER ISLAND STATION
OLDE DUCK
SEA COLONY
DUNE
COOK
BAYBERRY
GIFFORD
MARLIN
WAMPUM
SCHOONER RIDGE
DUCK LANDING
RAKIOCK
UPPOWOC
CHRISTOPHER
OCEAN
SCARBOROUGH
DUCK HUNT CLUB
FOUR SEASONS
PLOVER
NASH
SEABREEZE
OSPREY RIDGE
SEA HAWK
AZALEA
THRUSH
TUCKAHOE
BIAS
JAY CREST
THIRTEENTH
TWELFTH
ELEVENTH
TENTH
NINTH
EIGHTH
SEVENTH
HILLCREST
SEA OATS
KINGFISHER
NORTH DUNE
SPECKLE TROUT
Currituck Sound
12

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Dare County, North Carolina Albemarle Regional Hazard Mitigation Plan Region

February 2016

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Dare County

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- A
- AE
- VE

0 5 10
Miles

THE WOOTEN COMPANY
ENGINEERING | ARCHITECTURE | PLANNING
150 North Bayview Avenue, Raleigh North Carolina 27603-1423
ph: (919)828-0531 fax: (919)834-3686
License Number: P-1115
www.thewootencompany.com

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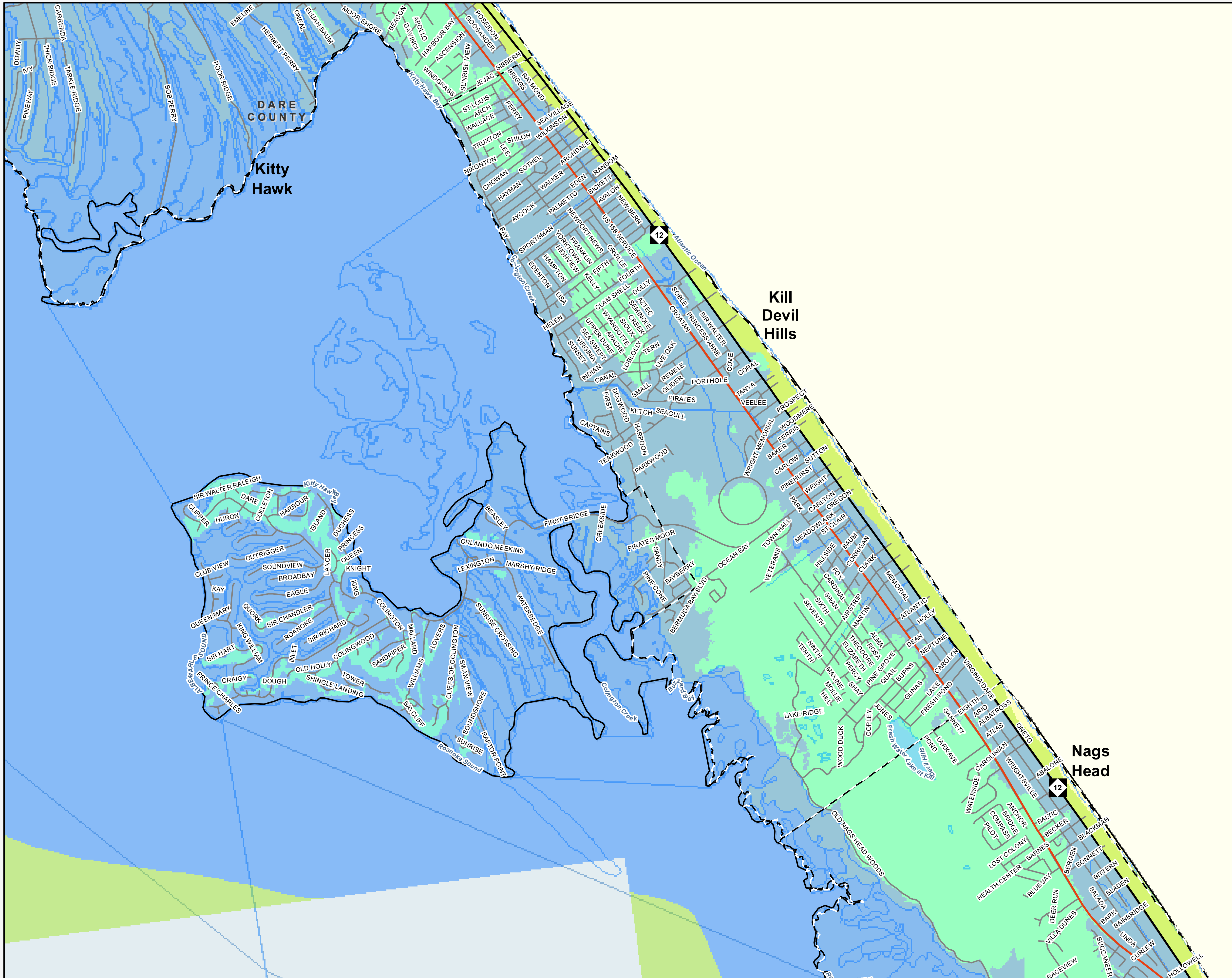

Town of Kill Devil Hills, NC Dare County Albemarle Regional Hazard Mitigation Plan Region

February 2016

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- A
- AE
- VE

0 1,500 3,000
Feet

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Town of Kitty Hawk, NC Dare County Albemarle Regional Hazard Mitigation Plan Region

February 2016

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- AE
- VE

0 1,500 3,000

Feet

THE WOOTEN COMPANY

ENGINEERING | ARCHITECTURE | PLANNING

110 North Raynor Avenue, Raleigh North Carolina 27603-1420
(919) 828-0531 (919) 828-2631
Licensed Number C-1179
www.thewootencompany.com

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Southern Shores

Kitty Hawk

Kill Devil Hills

DARE COUNTY

Currituck Sound

Atlantic Ocean

Kitty Hawk Bay

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Town of Manteo, NC Dare County Albemarle Regional Hazard Mitigation Plan Region

February 2016

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- AE
- VE

0 1,000 2,000
Feet

THE WOOTEN COMPANY
ENGINEERING | ARCHITECTURE | PLANNING

170 North Bayview Avenue, Raleigh North Carolina 27603-1423
p +1 (919) 828-0531 f +1 (919) 834-5086
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Manteo

DARE COUNTY

Roanoke Sound

Shallowbag Bay

Croatan Sound

Scarborn Creek

Doughs Creek

Job's Creek

Sand Beach Creek

Broad Creek

US 64

US 64-264

NC 400

NC 345

WASHINGTON BAUM BRIDGE

VIRGINIA DARE MEMORIAL

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Town of Nags Head, NC Dare County Albemarle Regional Hazard Mitigation Plan Region

February 2016

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- A
- AE
- VE

0 2,000 4,000

Feet

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Town of Southern Shores, NC Dare County Albemarle Regional Hazard Mitigation Plan Region

February 2016

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- AE
- VE

0 1,500 3,000

Feet

THE WOOTEN COMPANY

ENGINEERING | ARCHITECTURE | PLANNING

150 North Bayview Avenue, Raleigh North Carolina 27603-1423
p +1 (919) 828-0531 f +1 (919) 834-3585
License Number: C-1115
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Duck

Southern Shores

Kitty Hawk

DARE COUNTY

CURRITUCK COUNTY

Currituck Sound

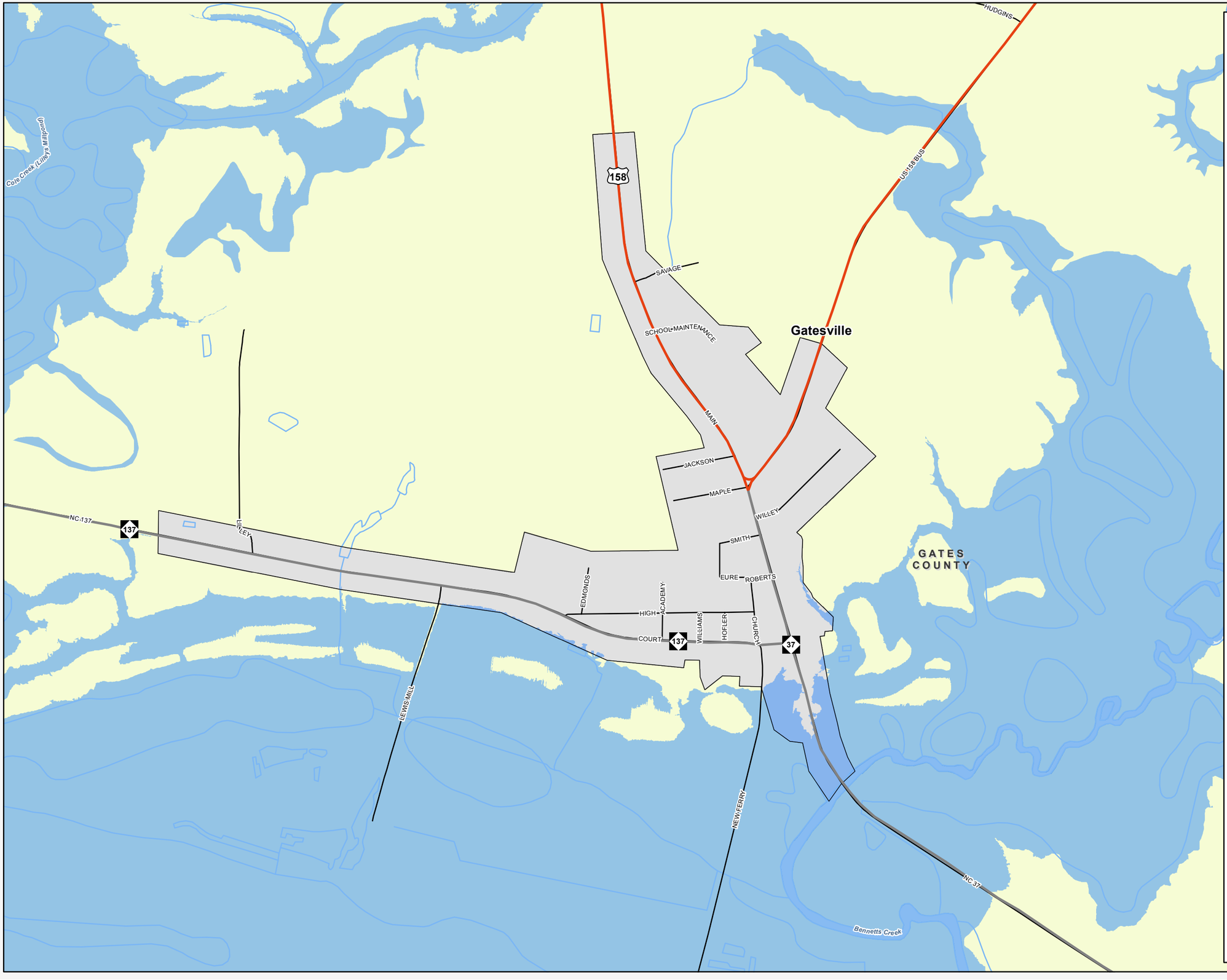
Atlantic Ocean

MARLIN · WAMPUM · SCHOONER RIDGE · DUCK LANDING · RAKIOCK · UPPOWOC · CHRISTOPHER · SCARBOROUGH · DUCK HUNT CLUB · FOUR SEASONS · PLOVER · NASH · SEABREEZE · OSPREY RIDGE · SEA HAWK · TUCKAHOE · THRUSH · BIAS · JAY CREST · THIRTEENTH · TWELFTH · ELEVENTH · TENTH · NINTH · EIGHTH · SEVENTH · SIXTH · FIFTH · FOURTH · THIRD · SECOND · FIRST · NORTH DUNE · KINGFISHER · DUCK · HILLWOOD · HILLCREST · SEA OATS · WAX MYRTLE · CIRCLE · SAND PIPER · PERIWINKLE · SANDPIDDLER · HICKORY · WOODLAND · REDBAY · MIZZEN MAST · DOLPHIN · TROUT · MARINA · SASSAFRAS · LIVE OAK · BEECHTREE · HONEYSUCKLE · MISTLETOE · PORPOISE · BLUEFIN · ACCESS · OCEAN · OYSTER BED · CLAM SHELL · CHICAHAUK · MILL POINT · POND · CURRITUCK · YAUPON · DOGWOOD · HOLLY · FAIRWAY · GRAY SQUIRREL · BENT OAK · TWISTED TREE · TALL PINE · OSPREY · WILD SWAN · MARTINS POINT · GRAVELY · CREEK · LEE · GINGUITE · MALLARD COVE · TEAL · BLUE PETE · WOOD DUCK · CATCO · PINTAIL · FOXWOOD · TRINITE · GRAVEY POND · POTESHEET · TEA PLANT · CROOKED BACK · LAND FALL · LAST HUNT · EAGLES NEST · DEER PATH · HAPPY INDIAN · TALL CLIFF · YUCCA · FERN · JUNIPER · PALMETTO · DUCKWOODS · WILD PONY · OCEAN VIEW · SKYLINE · SEA BASS · BYRD · CYPRESS KNEE · LUNAR · GRISSOM · RIBE · MAYNARD · PUTTER · BENNETT · PALMER · LUKE · VIRGINIA DARE · LINDBERGH · BLERIOT · UNKSIDE · CROATAN · PINNACLE · SERENITY · SEASCAPE · WILKINS · HAWK · BALCHEN · HILTOP · HERITAGE · JOHNSTON · SHADY · ECKNER · VISTA · CARRI · ELM · FIR · POPLAR · BIRCH · WINSOR · TREASURE · HANGING MOSS · HARIOT · GRENVILLE · THE WOODS · HORNBEAM · PROMENADE · AMADAS · PINE HILL · WATTS · RADCLIFF · COVERED BRIDGE · ALBEMARLE SOUND · WRIGHT MEMORIAL BRIDGE · Jean Guite Creek

12 · 158

Town of Gatesville
Gates County
Albemarle Regional Hazard Mitigation Plan Region

December 2014



Legend

- US Route
- NC Route
- Creeks or Streams
- Centerlines
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- AE
- Municipalities

0 500 1,000

Feet

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Gates County

Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- A
- AE
- Floodway
- Municipalities
- Gates County

0 2.5 5

Miles

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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VIRGINIA

NORTH CAROLINA

GATES COUNTY

HERTFORD COUNTY

CHOWAN COUNTY

PERQUIMANS COUNTY

BERTIE COUNTY

Gatesville

Winton

Cofield

Harrellsville

Ahoskie

CHOWAN RIVER

Corapeake Ditch

Northwest Ditch

Hamburg Ditch (Cross Canal)

Southwest Ditch

Sherrill Ditch

Newland Drainage Canal

Pasquotank R

Duke Swamp

Goodman Swamp

Taylor Swamp

Middle Swamp

Rainy Swamp

Goose Creek

Harris Swamp

Jones Pond

Bennetts Creek

Walton Pond

Trotman Creek

Warwick Creek (Welsh Pond)

Stumpy Creek

Indian Creek (Dillard Millpond)

Goodwin Mill Creek

Mill Creek

Perquimans R

Beaverdam Creek

Buckland Mill Branch

Laster Branch

Jordan Branch

Beasley Branch

Flat Branch (Jones Swamp)

Hackney Branch (Hackney Branch)

Ellis Swamp

Jacks Branch

Licking Branch

Cypress Swamp

Gum Branch

Buckhorn Creek

Mud Creek

Big Branch

Cole Creek (Tayloe Millpond)

Saren Creek (Taylor Millpond)

Barnes Creek

Bear Creek

Deep Creek

Mill Branch

Turnpike Branch (Dudys Millpond)

Flat Swamp

Horse Swamp

Bear Swamp

Whiteoak Swamp

Brooks Creek

Wiccacon River (Holleys Millpond)

Bear Creek

Goose Creek

Deep Swamp Branch (Taylor Pond)

From source to Chinkapin Creek

Long Branch

Keel Creek

Pembroke Creek

Mill Creek

258

13

158

37

32

137

461

45

561

Town of Ahoskie Hertford County Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- US Route
- NC Route
- Creeks or Streams
- Streets
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- AE
- Floodway
- Municipalities
- Hertford County

0 1,000 2,000

Feet

THE WOOTEN COMPANY

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Town of Cofield Hertford County Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- US Route
- NC Route
- Creeks or Streams
- Streets
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- AE
- Municipalities
- Hertford County

0 1,200 2,400

Feet

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Winton

Cofield

Mill Branch

Deep Creek

Catherine Creek

Turnpike Branch (Dudley Millpond)

Flat Swamp

MAIN

WEAVER

CAMP

R H REYNOLDS

ELKS

GOLF

WHITE OAK

DOGWOOD

HARRIS MILL

FREEMAN

SEA GULL

JOYNES

TUNIS CHURCH

CHOWAN RIV

OAK VILLA

OLD US 13

ADRON B JONES JR

POPS

PERDUE

RAILROAD

PINE

OAK

PREDUE

HERTFORD

HILL

HILTON

ARCHER

NICKENS

BOONE

COUNTRY

BLUE FOOT

SALUDA HALL

AHOSKIE COFIELD

MOBILE PARK

RHONDAS

WOODLAND

PERRY

THOMAS BRIDGE

TIMS CARSON

13

45

461

Town of Como
Hertford County
Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- US Route
- Creeks or Streams
- Streets
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- AE
- Floodway
- Municipalities
- Hertford County

0 1,000 2,000
Feet

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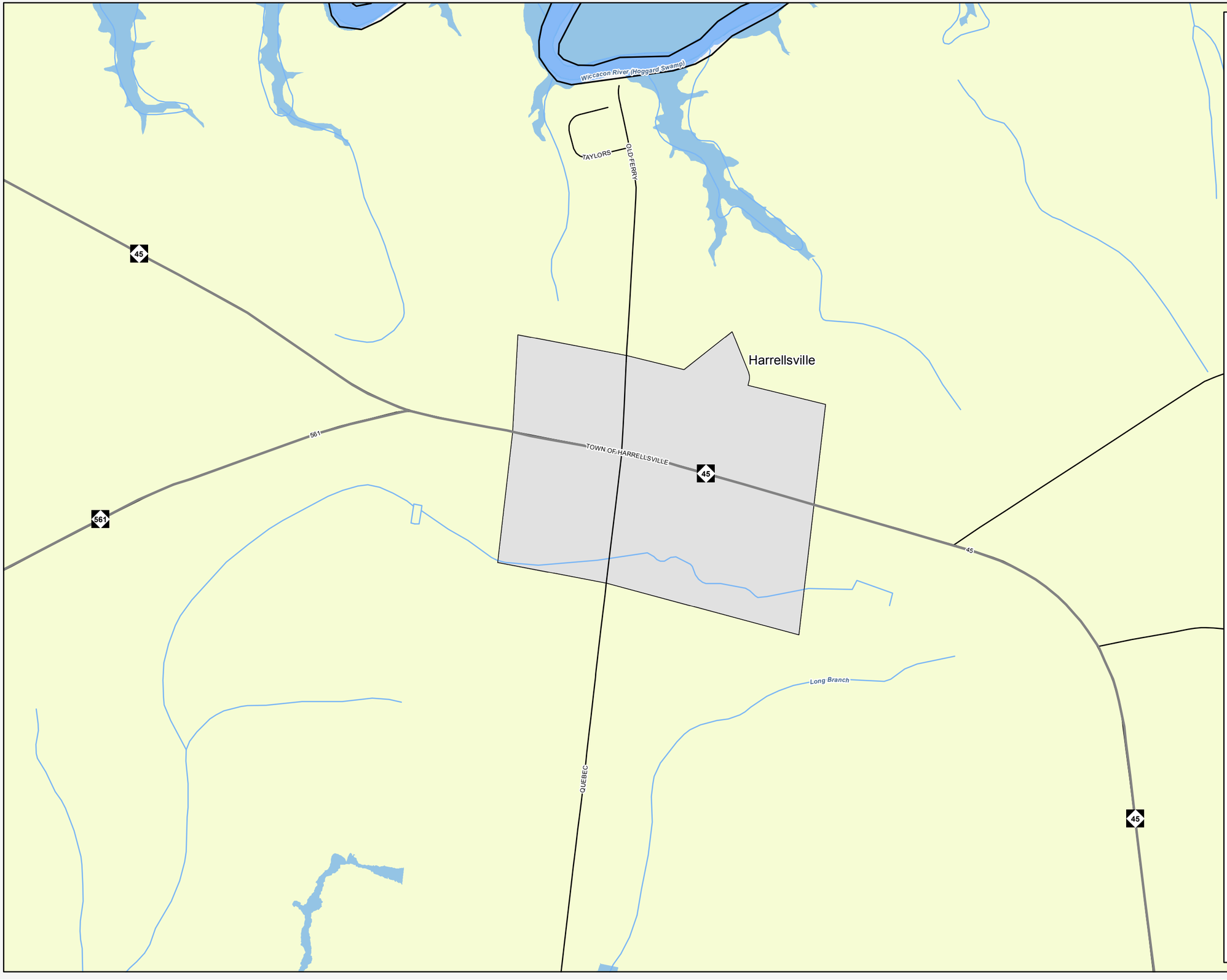
Como
NEW HOPE CHURCH
Buckhorn Creek
BUCKHORN CHURCH
GEORGE PARKER
Buckhorn Creek
BOONES BRIDGE
Liverman Creek
Beaman Branch
258
SPIERS
SCHOOL HOUSE
BOWLES PLACE
STATESVILLE
GATLING
Liverman Creek
COUNTY FARM
PARKERS FERRY
EBO
258
HILL FERRY
BRYANT
MURPHY
HILL
TARHEEL

Town of Harrellsville Hertford County Albemarle Regional Hazard Mitigation Plan Region

December 2014



Legend

- NC Route
- Creeks or Streams
- Streets
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- AE
- Municipalities
- Hertford County

0 500 1,000

Feet

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Hertford County

Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- A
- AE
- Floodway
- Municipalities
- Hertford County

0 2.5 5

Miles

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VIRGINIA

NORTH CAROLINA

NORTHAMPTON COUNTY

HERTFORD COUNTY

GATES COUNTY

BERTIE COUNTY

Severn

Como

Conway

Murfreesboro

Winton

Cofield

Gatesville

Harrellsville

Ahoskie

Woodland

Aulander

Powellsville

Colerain

CHOWAN RIVER

Meherrin River

Whitley Branch

Buckhorn Creek

Beaverdam Creek

Duke Swamp

Buckland Mill Branch

Laster Branch

Jordan Branch

Flat Branch (Jones Swamp)

Beasley Branch

Ellis Swamp

Cypress Swamp

Gum Branch

Mud Creek

Big Branch

Barnes Creek

Goose Creek

Brooks Creek

Bear Creek

Deep Swamp Branch (Taylor Pond)

Keys Creek

Kirby's Creek

Turkey Creek

Banks Branch

Liverman Creek

Reedy Creek

Reedy Branch

Maple Fork Branch

Panther Swamp

Catawhiskie Swamp

Painter Swamp

Old Tree Swamp

Mill Branch

Bells Branch

Potecasi Creek

Indian Creek

Hot House Branch

Bluewater Branch

Flat Swamp

Chapel Branch

Horse Swamp

Bear Swamp

Whiteoak Swamp

Urahaw Swamp

Catawhiskie Swamp

Ahoskie Creek (Ahoskie Swamp, Bear Swamp)

Fort Branch

Knee Branch

Turkey Creek

Snake Branch

Long Branch

Barbeque Swamp

Cypress Swamp

Chinkapin Swamp

Cabin Branch

Bull Branch

Peele Branch

Mare Branch

Mill Branch

Stony Creek

Wiccacon River (Hoggard Swamp)

Wiccacon Creek (Cypress Mill Pond)

Chinkapin Creek

From Source to Chinkapin Creek

Deep Swamp Branch (Taylor Pond)

Keys Creek

Sarem Creek (Taylor Mill Pond)

Goose Creek

Deep Creek

Turnpike Branch (Sykes Mill Pond)

Hare Branch (Hog Log Millpond)

Institute Branch

Potecasi Creek

Somerton Creek

Brantan Branch

Beaverdam Creek

Jordan Branch

Laster Branch

Buckland Mill Branch

Flat Branch (Jones Swamp)

Beasley Branch

Ellis Swamp

Joey Branch

Licking Branch

Cypress Swamp

Gum Branch

Buckman Creek

Mud Creek

Big Branch

Core Creek (Valley Millpond)

Barnes Creek

Sarem Creek (Taylor Mill Pond)

Goose Creek

Brooks Creek

Bear Creek

Deep Swamp Branch (Taylor Pond)

Keys Creek

Bennetts Creek

Walton Pond

Duke Swamp

Middle Swamp

Hackney Branch

Hackney Branch

Whitley Branch

Buckhorn Creek

Somerton Creek

Brantan Branch

Beaverdam Creek

Laster Branch

Jordan Branch

Buckland Mill Branch

Flat Branch (Jones Swamp)

Beasley Branch

Ellis Swamp

Joey Branch

Licking Branch

Cypress Swamp

Gum Branch

Buckman Creek

Mud Creek

Big Branch

Core Creek (Valley Millpond)

Barnes Creek

Sarem Creek (Taylor Mill Pond)

Goose Creek

Brooks Creek

Bear Creek

Deep Swamp Branch (Taylor Pond)

Keys Creek

Bennetts Creek

Walton Pond

Duke Swamp

Middle Swamp

Hackney Branch

Hackney Branch

Kirby's Creek

Turkey Creek

Banks Branch

Liverman Creek

Reedy Creek

Reedy Branch

Maple Fork Branch

Panther Swamp

Catawhiskie Swamp

Painter Swamp

Old Tree Swamp

Mill Branch

Bells Branch

Potecasi Creek

Indian Creek

Hot House Branch

Bluewater Branch

Flat Swamp

Chapel Branch

Horse Swamp

Bear Swamp

Whiteoak Swamp

Urahaw Swamp

Catawhiskie Swamp

Ahoskie Creek (Ahoskie Swamp, Bear Swamp)

Fort Branch

Knee Branch

Turkey Creek

Snake Branch

Long Branch

Barbeque Swamp

Cypress Swamp

Chinkapin Swamp

Cabin Branch

Bull Branch

Peele Branch

Mare Branch

Mill Branch

Stony Creek

Wiccacon River (Hoggard Swamp)

Wiccacon Creek (Cypress Mill Pond)

Chinkapin Creek

From Source to Chinkapin Creek

Deep Swamp Branch (Taylor Pond)

Keys Creek

Sarem Creek (Taylor Mill Pond)

Goose Creek

Deep Creek

Turnpike Branch (Sykes Mill Pond)

Hare Branch (Hog Log Millpond)

Institute Branch

Potecasi Creek

Somerton Creek

Brantan Branch

13

258

158

35

37

45

461

561

305

11

42

Town of Murfreesboro Hertford County Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- US Route
- NC Route
- Creeks or Streams
- Streets
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- AE
- Floodway
- Municipalities
- Hertford County

0 1,000 2,000

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Town of Winton
Hertford County
Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- US Route
- NC Route
- Creeks or Streams
- Streets
- Ponds, Lakes or

NC Floodplain Mapping Program

- AE
- Municipalities
- Hertford County

0 500 1,000

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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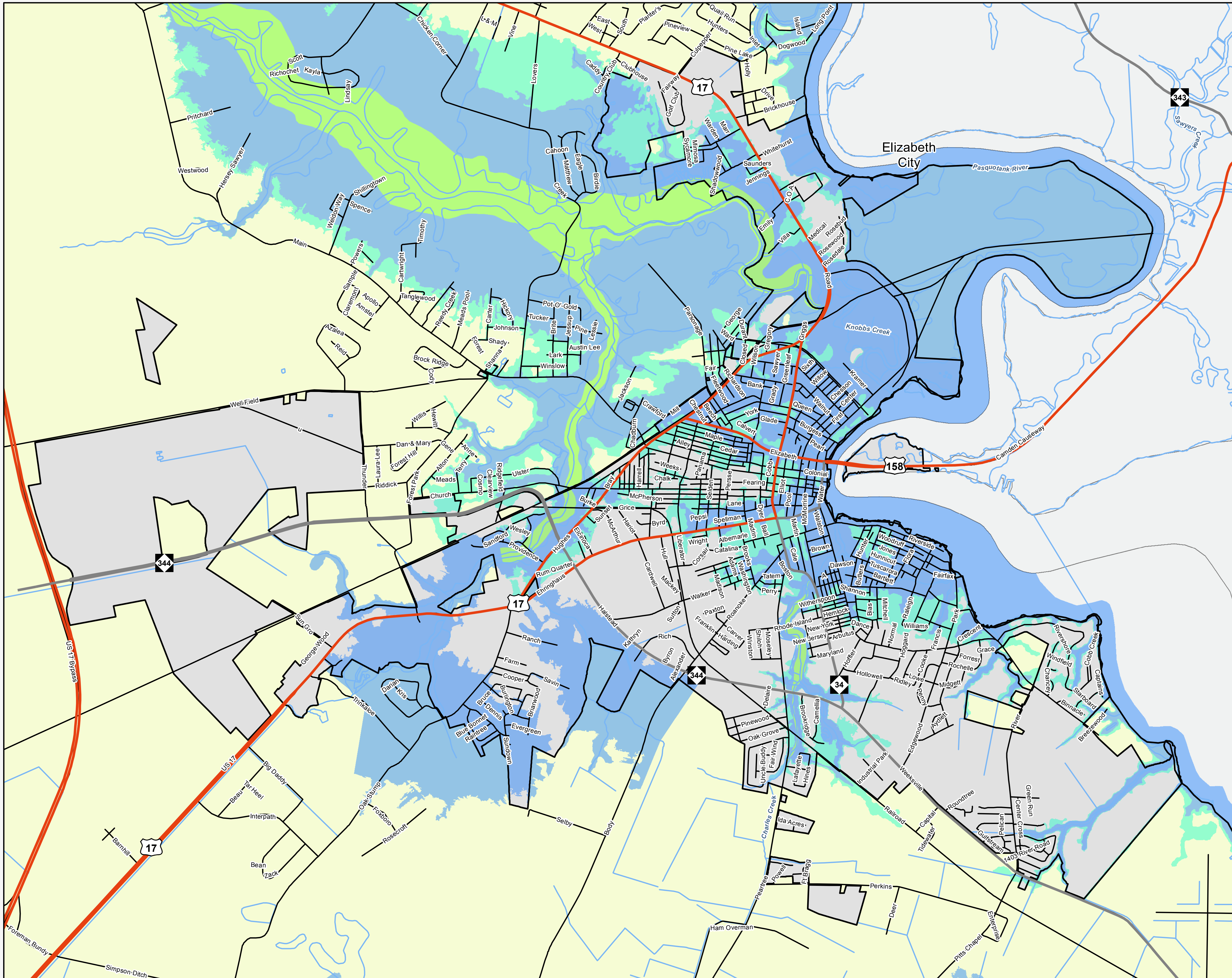
Winton
CHOWAN RIVER
Mud Cre
RIVERSEDGE
CHOWAN
158
13
INDUSTRIAL PARK
FOLLEY BRANCH
CHOWAN LANE
45
TAYLOR
CROSS
TRYON
KING
BRICKLE
METCALF
ASKEW
WYNN
MURPHY
DICKERSON
HILL
SHAW
RICHARD
MULBERRY
JOYNER
JORDAN
FACTORY
MITCHELL
PINE
TUSCARORA BEACH
JORDON
C.S.BROWN SCHOOL
BROWN
MAIN
WEAVER
CAMP
ELKS
GOLF
R.H.REYNOLDS
461
OLD US#13
OAKVILLA
WHITE OAK
DOGWOOD

City of Elizabeth City Pasquotank County Albemarle Regional Hazard Mitigation Plan Region

December 2014



Legend

- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- A
- AE
- Floodway
- Municipalities
- Pasquotank County

0 1,500 3,000
Feet

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Pasquotank County

Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- A
- AE
- Floodway
- Municipalities
- Pasquotank County

0 2.5 5

Miles

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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VIRGINIA

NORTH CAROLINA

GATES COUNTY

CHOWAN COUNTY

PERQUIMANS COUNTY

PASQUOTANK COUNTY

CAMDEN COUNTY

CURRITUCK COUNTY

Elizabeth City

Winfall

Hertford

ALBEMARLE SOUND

Southwest Ditch

Fourth Swamp

Goose Creek

Jones Pond

Newland Drainage Canal

Dismal Swamp Canal

Joyce Creek

Pasquotank River

Turners Cut

Roland Creek Canal

Roland Creek

Tull Bay

New Bridge Creek

Cowell's Creek

Buckskin Creek

North Landing River

Run Swamp Canal and all interconnecting canals

Cooper Creek

Sawyers Creek

Knobbs Creek

Poindexter Creek

Mill Dam Creek

Areneuse Creek

Bullfrog Creek

East Creek

Cow Creek

Bump Creek

Chapanoke Creek

Perquimans River

Little River

Mill Creek

Turkey Creek

Toms Creek

Raccoon Creek

Goodwin Mill Creek

Deep Creek

Cahoon Cove Creek

Perquimans River

Bethel Creek

Yeopim Creek

Muddy Creek

New Begin Creek

Palm Creek

Hollis Creek

Symonds Creek

Swamp Creek

Matthews Creek

Wilson Creek

Little Frisby Creek

Chapel Creek

Dam Creek

Big Flatty Creek

Little River

Charles Creek

Pasquotank River

Broad Creek

Hunting Creek

Bullocks Bay

Tull Bay

Bumpy Creek

Gregory Creek

Gum Neck Bay

168

158

343

17

344

34

37

Perquimans County

Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- A
- AE
- Floodway
- Municipalities
- Perquimans County

0 2.5 5

Miles

THE WOOTEN COMPANY

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GATES COUNTY

PERQUIMANS COUNTY

PASQUOTANK COUNTY

CHOWAN COUNTY

ALBEMARLE SOUND

Elizabeth City

Winfall

Hertford

Edenton

17 37 158 343 344 34 32 94

Town of Winfall and Town of Hertford Perquimans County Albemarle Regional Hazard Mitigation Plan Region

December 2014

Legend

- US Route
- NC Route
- Creeks or Streams
- Streets
- Ponds, Lakes or Rivers

NC Floodplain Mapping Program

- 0.2% Annual Chance Flood Hazard
- A
- AE
- Municipalities
- Perquimans County

0 1,500 3,000

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Winfall

Hertford

PERQUIMANS COUNTY

Perquimans River

Jennies Gut (Gum Pond Run)

Raccoon Creek

Mill Creek

Toms Creek

Pot Quinans River

37

17

17

Camden County

Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Camden County

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 2.5 5

Miles

GATES COUNTY

PASQUOTANK COUNTY

CURRITUCK COUNTY

CAMDEN COUNTY

PERQUIMANS COUNTY

Elizabeth City

Winfall

Hertford

17 158 168 615 343 344 34 37

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Document Path: N:\AlbemarleCommission\Camden\CamdenCountyHazardPlanFastSurge11x17.mxd

Date Saved: 2/11/2015 4:52:08 PM

Camden County

Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Camden County

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 2.5 5

Miles

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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GATES COUNTY

PASQUOTANK COUNTY

CAMDEN COUNTY

CURRITUCK COUNTY

PERQUIMANS COUNTY

Elizabeth City

Winfall

Hertford

17 158 168 615 343 344 34 37

Document Path: N:\AlbemarleCommission\Camden\CamdenCountyHazardPlanSlowSurge11x17.mxd

Date Saved: 2/11/2015 4:50:10 PM

Town of Edenton Chowan County Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Streets
- Ponds, Lakes or Rivers
- Municipalities
- Chowan County

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 1,500 3,000

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Edenton

CHOWAN COUNTY

Document Path: N:\AlbemarleCommission\Chowan\ChowanCountyEdentonHazardPlanFastSurge11x17.mxd

Date Saved: 2/11/2015 4:44:41 PM

Town of Edenton Chowan County Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Streets
- Ponds, Lakes or Rivers
- Municipalities
- Chowan County

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 1,500 3,000

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Chowan County

Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Chowan County

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 2.5 5

Miles

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Cofield
Harrellsville
Colerain
Windsor
Edenton
Winfall
Hertford
GATES COUNTY
HERTFORD COUNTY
PERQUIMANS COUNTY
CHOWAN COUNTY
BERTIE COUNTY
WASHINGTON COUNTY
CHOWAN RIVER
ALBEMARLE SOUND
Edenton Bay
461
45
561
42
37
32
17
94
308

Document Path: N:\AlbemarleCommission\Chowan\ChowanCountyHazardPlanFastSurge11x17.mxd

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Chowan County

Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Chowan County

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 2.5 5

Miles

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Cofield
Harrellsville
Colerain
Windsor
Edenton
Winfall
Hertford
GATES COUNTY
HERTFORD COUNTY
PERQUIMANS COUNTY
CHOWAN COUNTY
BERTIE COUNTY
WASHINGTON COUNTY
CHOWAN RIVER
ALBEMARLE SOUND
Edenton Bay
Yeopim River
Perquimans River
Little River
Deep Creek
Sutton Creek
Burnt Mill Creek
Pembroke Creek
Queen Anne Creek
Meadow Creek
Indian Creek (Dillard Millpond)
Warwick Creek (Walsh Pond)
Stump Creek
Keel Creek
Mare Branch
Long Branch
Chinkapin Swamp
Cabin Branch
Bull Branch
Peele Branch
Cypress Swamp
Barbeque Swamp
Quinoccoson Swamp
Chucklemaker Swamp
Cricket Swamp
Eastmost Swamp
First Swamp Creek
Hoggard Mill Creek
Miller Branch
Dunmore Branch
Willow Branch
Wading Place Creek
Salt Pon Creek
Black Walnut Swamp
Pollock Swamp
Bethel Creek
Goodwin Mill Creek
Raccoon Creek
Toms Creek
Mill Creek
Minnie Creek (Minnis Cr.)
Canaan Cove Creek
Middle Creek
Beef Creek
Hog Pen Creek
Barnes Creek
Isle of Creek
Brooks Creek
Bennetts Creek
Deep Swamp Branch
Taylor Pond
Trotman Creek
Wiston Pond
Ahoskie Creek
Ahoskie Creek (Hoggard Swamp)
Ahoskie Creek (Dillard Millpond)
Ahoskie Creek (Walsh Pond)
Ahoskie Creek (Bennetts Creek)
From source to Chinkapin Creek
Roaring Rock Creek (Bennett Millpond)
Document Path: N:\AlbemarleCommission\Chowan\ChowanCountyHazardPlanSlowSurge11x17.mxd
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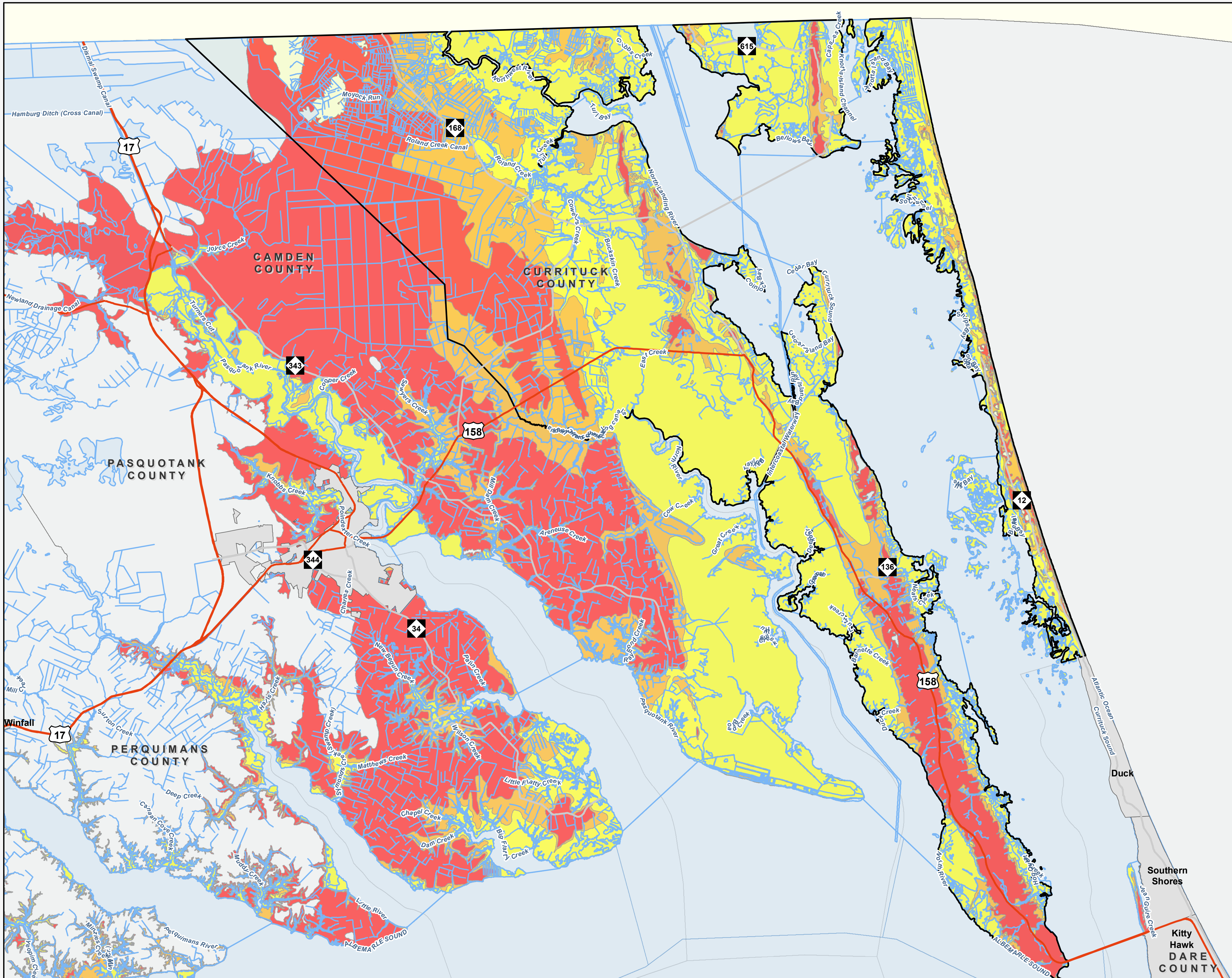
Currituck County

Albemarle Regional Hazard Mitigation Plan Region

February 2015



Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Currituck County

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 2.5 5
Miles

THE WOOTEN COMPANY
ENGINEERING | PLANNING | ARCHITECTURE

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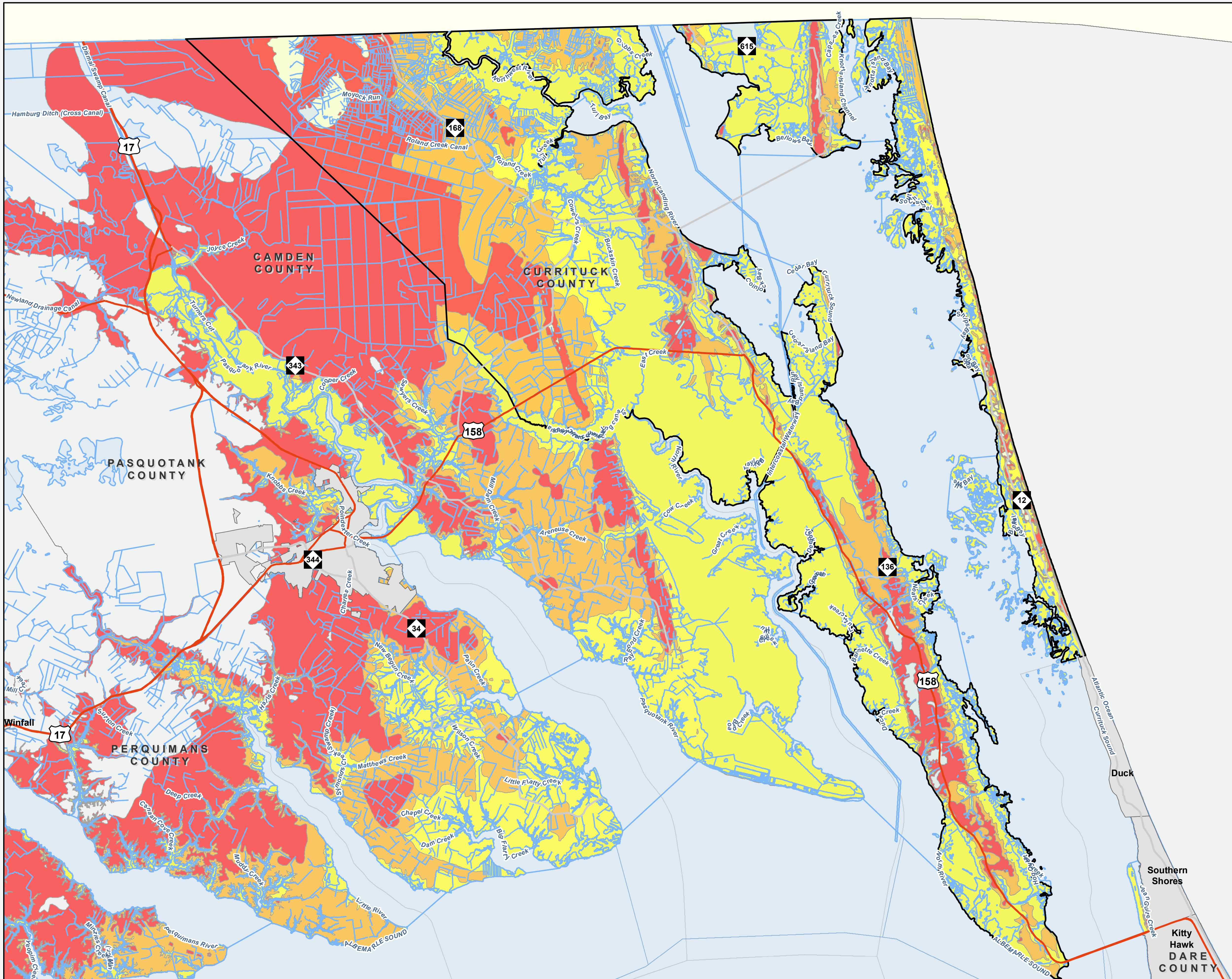

Currituck County

Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Currituck County

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 2.5 5
Miles

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Town of Duck
Dare County
Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

N

0 1,800 3,600

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Duck

Southern Shores

CURRITUCK COUNTY

DARE COUNTY

Currituck Sound

Webster Creek

Atlantic Ocean

12

BALIM
STATION BAY
QUAIL
GANNET
WAXWING
RUDDY DUCK
PELICAN
BUNTING
OYSTER CATCHER
OCEAN PINES
OCEAN BAY
SOUND SEA
CARROL
SEASTERN
TRINITTE
MALLARD
DIANNE
OLD SQUAW
SPRIGTAIL
CANVAS BACK
WOOD DUCK
PINTAIL
WIDGEON
SNOW GEESE
SPYGLASS
SPINDRIFT
DUCK
SANDY RIDGE
SHIPS WATCH
BARRIER ISLAND STATION
OLDE DUCK
SEA COLONY
DUNE
COOK
BAYBERRY
MARLIN
GIFFORD
WAMPUM
SCHOONER RIDGE
DUCK LANDING
RAKIOCK
UPPOWOC
OCEAN
CHRISTOPHER
SCARBOROUGH
DUCK HUNT CLUB
FOUR SEASONS
PLOVER
SEABREEZE
NASH
OSPREY RIDGE
SEA HAWK
TUCKAHOE
BIAS
JAY CREST
THRUSH
THIRTEENTH
TWELFTH
ELEVENTH
TENTH
NINTH
EIGHTH
SEVENTH
NORTH DUNE
KINGFISHER
SEA OATS
HILLCREST
SPECKLE TROUT

Document Path: N:\AlbemarleCommission\Dare\DareCountyDuckHazardPlanFastSurge11x17.mxd

Date Saved: 2/11/2015 4:27:40 PM

Town of Duck
Dare County
Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 1,800 3,600

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Duck

Southern Shores

DARE COUNTY

CURRITUCK COUNTY

Currituck Sound

Webster Creek

Atlantic Ocean

Document Path: N:\AlbemarleCommission\Dare\DareCountyDuckHazardPlanSlowSurge11x17.mxd

Date Saved: 2/11/2015 4:23:06 PM

Dare County

Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Dare County

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

N

0 5 10

Miles

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Document Path: N:\AlbemarleCommission\Dare\DareCountyHazardPlanFastSurge11x17.mxd

Date Saved: 2/11/2015 3:58:47 PM

Dare County

Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Dare County

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 5 10

Miles

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Date Saved: 2/11/2015 3:50:45 PM

Town of Kill Devil Hills, NC
Dare County
Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

N

0 1,800 3,600

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Kitty Hawk

Kill Devil Hills

Nags Head

DARE COUNTY

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Date Saved: 2/11/2015 3:44:12 PM

Town of Kill Devil Hills, NC Dare County Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

N

0 1,800 3,600

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Kitty Hawk

Kill Devil Hills

Nags Head

DARE COUNTY

Document Path: N:\AlbemarleCommission\Dare\DareCountyKDHillsHazardPlanSlowSurge11x17.mxd

Date Saved: 2/11/2015 3:41:42 PM

Town of Kitty Hawk, NC Dare County Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 1,800 3,600

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Southern Shores

Kitty Hawk

Kill Devil Hills

DARE COUNTY

Currituck Sound

Albemarle Sound

Atlantic Ocean

Kitty Hawk Bay

Jean Guite Creek

Colington Creek

WRIGHT MEMORIAL BRIDGE

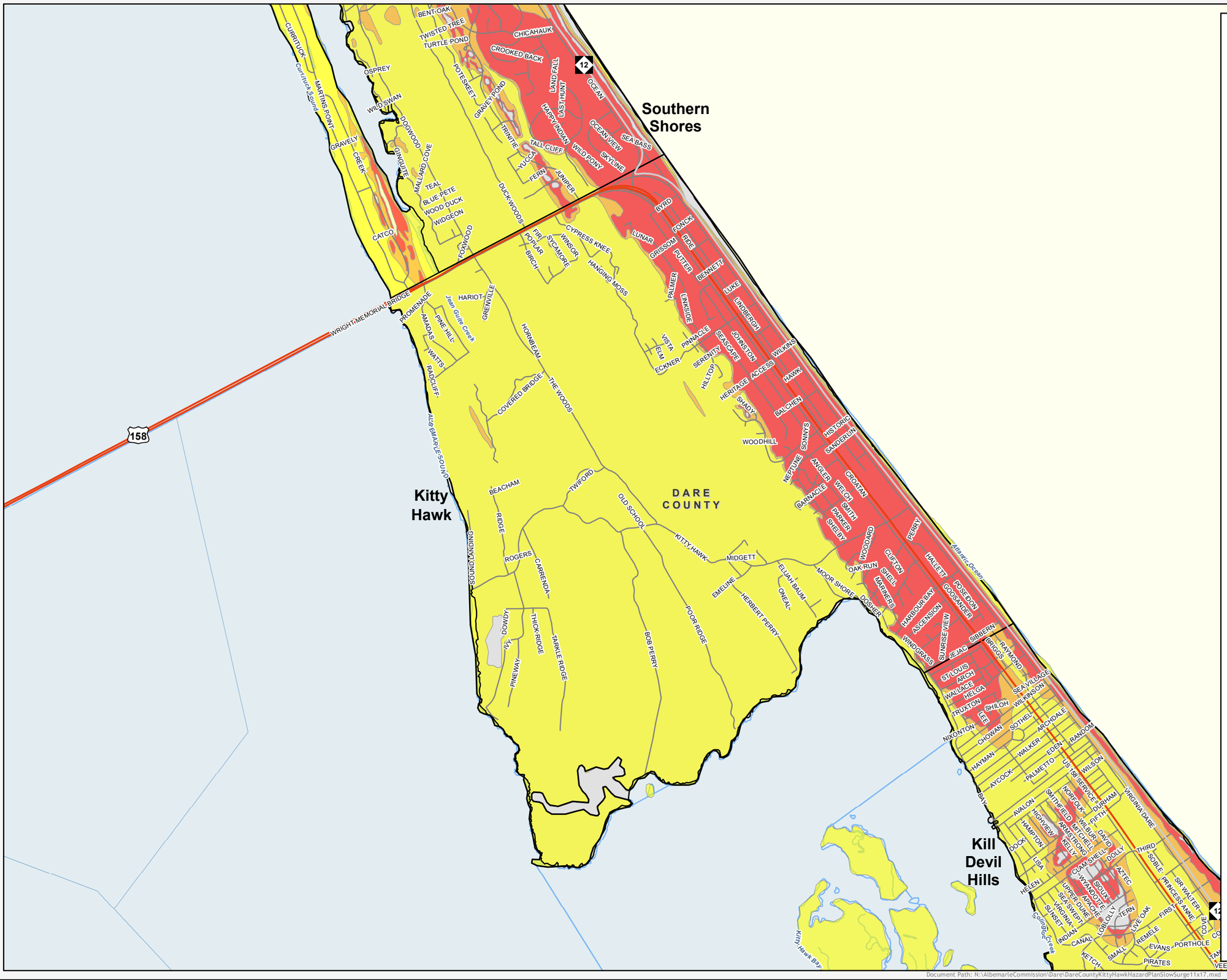
US 158

US 158 SERVICE

US 12

Town of Kitty Hawk, NC Dare County Albemarle Regional Hazard Mitigation Plan Region

February 2015



Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

N

0 1,800 3,600

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Town of Nags Head, NC Dare County Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 1,800 3,600

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Kill Devil Hills

Nags Head

Manteo

Roanoke Sound

Croatan Sound

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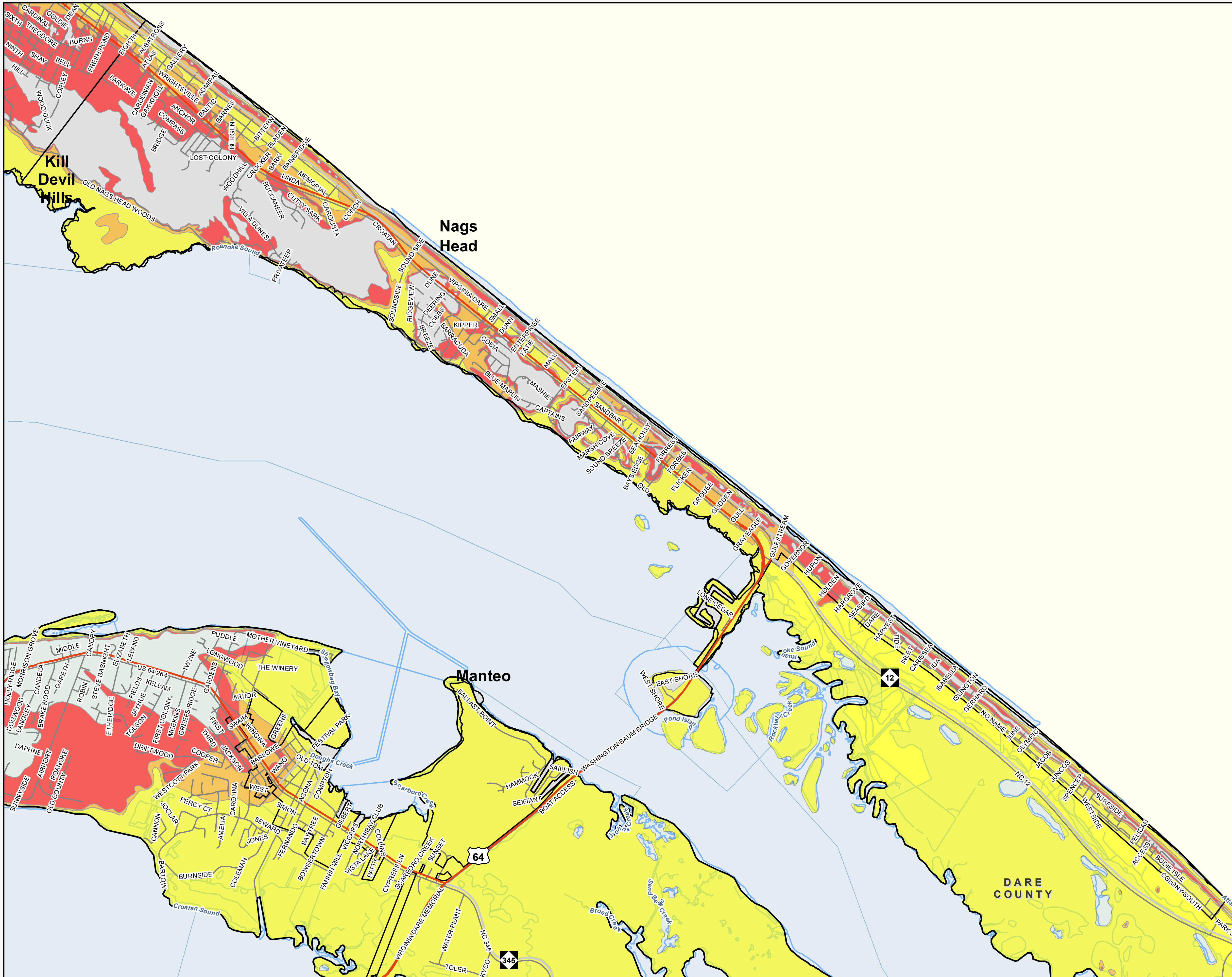
Town of Nags Head, NC
Dare County
Albemarle Regional Hazard Mitigation Plan Region

February 2015



Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 1,800 3,600
Feet

THE WOOTEN COMPANY
ENGINEERING | PLANNING | ARCHITECTURE

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Town of Southern Shores Dare County Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 1,800 3,600

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Duck

Southern Shores

Kitty Hawk

DARE COUNTY

CURRITUCK COUNTY

Currituck Sound

Atlantic Ocean

Document Path: N:\AlbemarleCommission\Dare\DareCountySouthernShoresHazardPlanFastSurge11x17.mxd

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Town of Southern Shores Dare County Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 1,800 3,600

Feet

THE WOOTEN COMPANY

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Duck

Southern Shores

Kitty Hawk

DARE COUNTY

CURRITUCK COUNTY

Currituck Sound

Atlantic Ocean

Document Path: N:\AlbemarleCommission\Dare\DareCountySouthernShoresHazardPlanSlowSurge11x17.mxd

Date Saved: 2/11/2015 2:42:50 PM

Town of Gatesville
Gates County
Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- US Route
- NC Route
- Creeks or Streams
- Centerlines
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 500 1,000

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Gatesville

GATES COUNTY

158

137

37

US-158 BUS

NC 137

NC 37

SAVAGE

SCHOOL-MAINTENANCE

MAIN

JACKSON

MAPLE

WILLEY

SMITH

EURE

ROBERTS

CHURCH

HOFLER

WILLIAMS

ACADEMY

HIGH

COURT

EDMONDS

FAIRLEY

LEWIS MILL

NEW FERRY

HUDGINS

Cole Creek (Lillys Millpond)

Bennetts Creek

Document Path: N:\AlbemarleCommission\Gates\GatesCountyGatesvilleHazardPlanFastSurge11x17.mxd

Date Saved: 2/11/2015 2:33:33 PM

Town of Gatesville Gates County Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- US Route
- NC Route
- Creeks or Streams
- Centerlines
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 500 1,000

Feet

THE WOOTEN COMPANY

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Gatesville

GATES COUNTY

158

137

37

US 158 BUS

NC 137

NC 37

SAVAGE

SCHOOL-MAINTENANCE

MAIN

JACKSON

MAPLE

WILLEY

SMITH

EURE

ROBERTS

CHURCH

HOFLER

WILLIAMS

ACADEMY

HIGH

COURT

EDMONDS

HUDGINS

LEWIS MILL

NEW FERRY

Cole Creek (Lillys Millpond)

Bennetts Creek

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Gates County

Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Gates County

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 2.5 5

Miles

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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VIRGINIA

NORTH CAROLINA

GATES COUNTY

HERTFORD COUNTY

CHOWAN COUNTY

PERQUIMANS COUNTY

BERTIE COUNTY

Gatesville

Winton

Cofield

Harrellsville

Ahoskie

CHOWAN RIVER

Document Path: N:\AlbemarleCommission\Gates\GatesCountyHazardPlanFastSurge11x17.mxd

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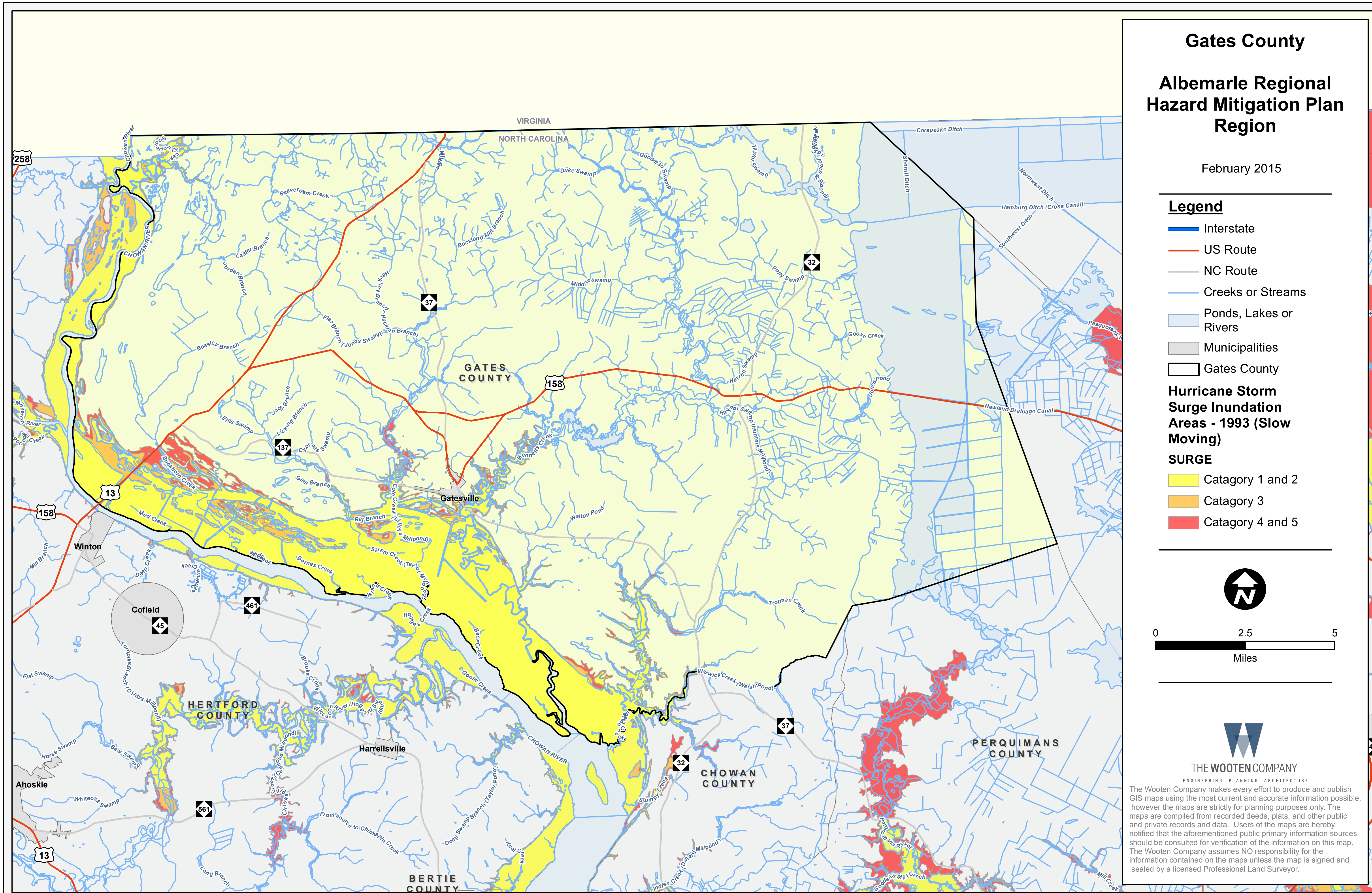
Gates County
Albemarle Regional Hazard Mitigation Plan Region
February 2015
Legend
Interstate
US Route
NC Route
Creeks or Streams
Ponds, Lakes or Rivers
Municipalities
Gates County
Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)
SURGE
Catagory 1 and 2
Catagory 3
Catagory 4 and 5
0
2.5
5
Miles
THE WOOTEN COMPANY
ENGINEERING | PLANNING | ARCHITECTURE
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VIRGINIA
NORTH CAROLINA
GATES COUNTY
HERTFORD COUNTY
CHOWAN COUNTY
PERQUIMANS COUNTY
BERTIE COUNTY
Gatesville
Winton
Cofield
Harrellsville
Ahoskie
258
158
13
37
32
137
461
45
561
Chowan River
CHOWAN RIVER
Somerton Creek
Beaverdam Creek
Laster Branch
Jordan Branch
Beasley Branch
Flat Branch (Jones Swamp)
Hackley Branch (Hacklan Branch)
Buckland Mill Branch
Duke Swamp
Goodman Swamp
Taylor Swamp
Middleswamp
Folly Swamp
Goose Creek
Hatrell Swamp
Jones Pond
Raynor Swamp (Hunters Millpond)
Bennetts Creek
Walton Pond
Trotman Creek
Warwick Creek (Welsh Pond)
Corapeake Ditch
Sherrill Ditch
Northwest Ditch
Hamburg Ditch (Cross Canal)
Southwest Ditch
Newland Drainage Canal
Pasquotank R
Ellis Swamp
Jady Branch
Licking Branch
Cypress Swamp
Gum Branch
Buckhorn Creek
Mud Creek
Cole Creek (Lilleys Millpond)
Big Branch
Sarem Creek (Taylor Millpond)
Barnes Creek
Island Creek
Hodges Creek
Beef Creek
Goose Creek
Meherrin River
Potecasi Creek
Mill Branch
Deep Creek
Turnpike Branch (Didys Millpond)
Flat Swamp
Horse Swamp
Bear Swamp
Whiteoak Swamp
Brooks Creek
Wiccacon River (Hoggard Swamp)
Chinkapin Creek (Cessons Millpond)
From source to Chinkapin Creek
Long Branch
Deep Swamp Branch (Taylor Pond)
Keel Creek
Stumpy Creek
Indian Creek (Dillard Millpond)
Perquimans River
Goodwin Mill Creek
Mill Creek
Document Path: N:\AlbemarleCommission\Gates\GatesCountyHazardPlanSlowSurge11x17.mxd
Date Saved: 2/11/2015 1:54:28 PM

City of Elizabeth City Pasquotank County Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Pasquotank County

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 1,500 3,000

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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City of Elizabeth City Pasquotank County Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- US Route
- NC Route
- Streets
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Pasquotank County

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

N

0 1,500 3,000

Feet

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Pasquotank County

Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Pasquotank County

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

N

0 2.5 5

Miles

THE WOOTEN COMPANY

ENGINEERING | PLANNING | ARCHITECTURE

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Pasquotank County

Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- Interstate
- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Pasquotank County

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 2.5 5

Miles

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ENGINEERING | PLANNING | ARCHITECTURE

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Date Saved: 2/11/2015 11:40:20 AM

Perquimans County

Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5
- Perquimans County

0 2.5 5

Miles

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Date Saved: 2/11/2015 11:10:52 AM

Perquimans County

Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- US Route
- NC Route
- Creeks or Streams
- Ponds, Lakes or Rivers
- Municipalities
- Perquimans County

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 2.5 5

Miles

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Date Saved: 2/11/2015 4:53:07 PM

Town of Winfall and Town of Hertford Perquimans County Albemarle Regional Hazard Mitigation Plan Region

February 2015

Legend

- US Route
- NC Route
- Creeks or Streams
- Streets
- Ponds, Lakes or Rivers
- Municipalities
- Perquimans County

Hurricane Storm Surge Inundation Areas - 1993 (Fast Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 1,500 3,000

Feet

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Winfall

Hertford

PERQUIMANS COUNTY

Perquimans River

Mill Creek

Toms Creek

Jennies Gut (Gum Pond Run)

Raccoon Creek

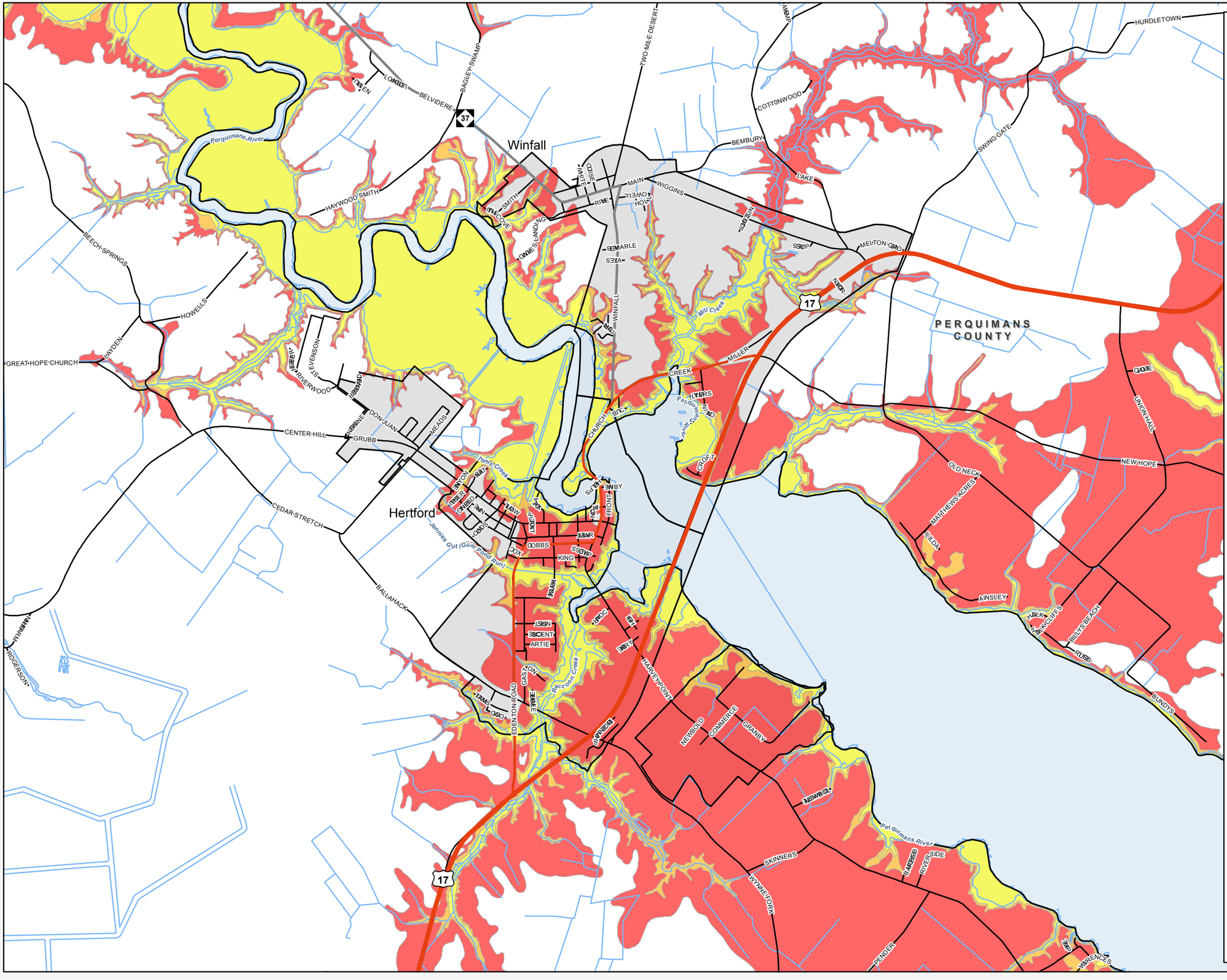
Pet quimans River

Document Path: N:\AlbemarleCommission\Perquimans\PerquimansCountyWinfallHertfordFastSurge11x17.mxd

Date Saved: 2/11/2015 11:24:00 AM

Town of Winfall and Town of Hertford Perquimans County Albemarle Regional Hazard Mitigation Plan Region

February 2015



Legend

- US Route
- NC Route
- Creeks or Streams
- Streets
- Ponds, Lakes or Rivers
- Municipalities
- Perquimans County

Hurricane Storm Surge Inundation Areas - 1993 (Slow Moving)

SURGE

- Catagory 1 and 2
- Catagory 3
- Catagory 4 and 5

0 1,500 3,000

Feet

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Appendix B – Local Government Participation Documentation

List of Communities (attached):

County of Camden
Village of Cofield
Town of Como
City of Elizabeth City
Town of Gatesville
Town of Harrellsville
Town of Hertford
Town of Murfreesboro
County of Pasqoutank
Town of Winfall

BOARD OF COMMISSIONERS
P. MICHAEL McLAIN
Chairman

SANDRA J. DUCKWALL
Vice Chairman

GARRY W. MEIGGS
CLAYTON D. RIGGS
TOM WHITE

CAMDENCOUNTY
new energy. new vision.

MICHAEL RENSHAW
County Manager

ANGELA WOOTEN
Clerk to the Board

JOHN S. MORRISON
County Attorney

March 16, 2015

J. Scott Chase, AICP
Planning Director
The Wooten Company
120 North Boylan Avenue
Raleigh, NC 27603

Dear Mr. Chase,

Please be advised that Camden County has been a participant in the Albemarle Regional Hazard Mitigation Plan. Our Emergency Management Coordinator, Christy Saunders, has attended several of the regional planning meetings and has communicated with Camden County staff via emails and phone calls over the course of the planning process, as needed.

Camden County believes that a Regional Hazard Mitigation plan is in the best interest of the county and region and that a Hazard Mitigation Plan is extremely important so that in the event of a natural disaster we can be prepared to better serve our citizens. It is our intent to formally adopt the plan pending its certification and adopting letter from FEMA.

Sincerely,

Mike Renshaw

Mike Renshaw, Camden County Manager

P. O. Box 190 ♦ 330 East Hwy 158 ♦ Camden, NC 27921 ♦ Phone (252) 338-6363 ♦ Fax (252) 331-7831
www.camdencountync.gov

TOWN OF COMO

P. O. BOX 117

COMO, NORTH CAROLINA 27818

March 17, 2015

J. Scott Chase, AICP
Planning Director
The Wooten Company
120 North Boylan Avenue
Raleigh, NC 27603

Dear Mr. Chase,

Please be advised that the Town of Como has been a participant in the Albemarle Regional Hazard Mitigation Plan. Our Emergency Management Director, Chris Smith has attended several of the regional planning meetings and has communicated with me via emails and phone calls over the course of the planning process, as needed.

The Town of Como believes that a Regional Hazard Mitigation plan is in the best interest of the town, county and region and that a Hazard Mitigation Plan is extremely important so that in the event of a natural disaster we can be prepared to better serve our citizens. It is our intent to formally adopt the plan pending its certification and adopting letter from FEMA.

Sincerely,

Irvin L Stephens, Mayor

Irvin Lee Stephens, Sr., Mayor

Village of Cofield

Phone 358-8611
Fax 358-0367

P. 0. BOX 99
COFIELD. NORTH CAROLINA 27922

Mr. Hermea Pugh, Sr.
MAYOR
MRS. BARBARA J. ARCHER
CLERK

March 17, 2015

J. Scott Chase, AICP
Planning Director
The Wooten Company
120 North Boylan Avenue
Raleigh, NC 27603

Dear Mr. Chase,

Please be advised that the Town of Cofield has been a participant in the Albemarle Regional Hazard Mitigation Plan. Our Emergency Management Director, Chris Smith has attended several of the regional planning meetings and has communicated with me via emails and phone calls over the course of the planning process, as needed.

The Town of Cofield believes that a Regional Hazard Mitigation plan is in the best interest of the town, county and region and that a Hazard Mitigation Plan is extremely important so that in the event of a natural disaster we can be prepared to better serve our citizens. It is our intent to formally adopt the plan pending its certification and adopting letter from FEMA.

Sincerely,

Hermea Pugh Sr

Hermea Pugh, Sr., Mayor

MAYOR
JOSEPH W. PEEL
MAYOR PRO-TEM
ANITA HUMMER
CITY MANAGER
RICHARD C. OLSON
CITY CLERK
VIVIAN WHITE, NCCMC

CITY COUNCIL MEMBERS
JEAN M. BAKER
MICHAEL E. BROOKS
RAYMOND T. DONNELLY
DARIUS J. HORTON
MONTRAVIAS D. KING
KEM K. SPENCE
TONY STIMATZ

CITY OF ELIZABETH CITY

March 16, 2015

J. Scott Chase, AICP
Planning Director
The Wooten Company
120 North Boylan Avenue
Raleigh, NC 27603

Dear Mr. Chase,

Please be advised that the City of Elizabeth City has been a participant in the Albemarle Regional Hazard Mitigation Plan. Our Emergency Management Coordinator, Christy Saunders, has attended several of the regional planning meetings and has communicated with Elizabeth City staff via emails and phone calls over the course of the planning process, as needed.

The City of Elizabeth City believes that a Regional Hazard Mitigation plan is in the best interest of the city, county and region and that a Hazard Mitigation Plan is extremely important so that in the event of a natural disaster we can be prepared to better serve our citizens. It is our intent to formally adopt the plan pending its certification and adopting letter from FEMA.

Sincerely,

Richard C. Olson
City Manager

Gates County Emergency Management

Emergency Management
Fire Marshal
E-911

308 US 158 West
Gatesville, NC 27938

Director – Billy Winn Office 252-357-5569 Fax 252-357-4131 bwinn@gatescountync.gov

March 17, 2015

Stephen Smith, Wooten Company

120 North Boylan Ave

Raleigh , NC 27603

This letter is to advise of the relationship of Gates County Emergency Management and the Town of Gatesville. With a population of less than 300 and no office staff, Emergency Management functions including Hazard Mitigation Planning is done in conjunction with Gates County. Billy Winn has attended the required planning meetings to satisfy the HMP process representing the Town of Gatesville as well as Gates County. The Town of Gatesville is fully aware of the HMP process and will adopt it without delay upon successful approval from FEMA.

Mayor, Elton Winslow

Town of Gatesville

WAWinn

Gates County Emergency Management Director

TOWN OF HARRELLSVILLE
EST. DEC. 8, 1847

P.O. Box 37
105 E. Main St.
Harrellsville, NC 27942
PH. & FAX (252) 356-4499

March 17, 2015

J. Scott Chase, AICP
Planning Director
The Wooten Company
120 North Boylan Avenue
Raleigh, NC 27603

Dear Mr. Chase,

Please be advised that the Town of Harrellsville has been a participant in the Albemarle Regional Hazard Mitigation Plan. Our Emergency Management Director, Chris Smith has attended several of the regional planning meetings and has communicated with me via emails and phone calls over the course of the planning process, as needed.

The Town of Harrellsville believes that a Regional Hazard Mitigation plan is in the best interest of the town, county and region and that a Hazard Mitigation Plan is extremely important so that in the event of a natural disaster we can be prepared to better serve our citizens. It is our intent to formally adopt the plan pending its certification and adopting letter from FEMA.

Sincerely,

Robert D. Dantz, Mayor

HORACE C. REID. JR.
MAYOR

BRANDON S. SHOAF
TOWN MANAGER

CINDY E. SHARBER
TOWN CLERK

BENJAMIN M. GALLOP
TOWN ATTORNEY

COMMISSIONERS:

LILLIAN ANN HOLMAN
MAYOR PRO TEM

CARLTON A. DAVENPORT

WILLIAM E. LANE

J. SIDNEY ELEY

March 23, 2015

J. Scott Chase, AICP
Planning Director
The Wooten Company
120 North Boylan Avenue
Raleigh, NC 27603

Dear Mr. Chase,

Please be advised that the Town of Hertford has been a participant in the Albemarle Regional Hazard Mitigation Plan. The Perquimans County Emergency Management Coordinator has attended several of the regional planning meetings and has communicated with Town of Hertford staff via emails and phone calls over the course of the planning process, as needed.

The Town of Hertford believes that a Regional Hazard Mitigation plan is in the best interest of the town, county and region and that a Hazard Mitigation Plan is extremely important so that in the event of a natural disaster we can be prepared to better serve our citizens. It is our intent to formally adopt the plan pending its certification and adopting letter from FEMA.

Sincerely,

Brandon S. Shoaf
Town Manager

MURFREESBORO
INNER BANKS, NC

John A. Hinton, Mayor

Town Hall
P.O. Box 6
105 E. Broad Street
Murfreesboro, NC 27855
Phone: 252.398.5904
Fax: 252.398.5973

Police Chief
R. Darrell Rowe
Public Works
Gene Byrd
Waste Water
Eric Parker

Town Clerk
Carolyn Brown
Town Attorney
W. Hugh Jones Jr.

Town Council
Sarah Wallace : Gloria Odum : Hal Thomas : Craig Dennis : Randy Roberts

RECEIVED
MAR 26 2015
THE WOOTEN COMPANY

March 17, 2015
J. Scott Chase, AICP
Planning Director
The Wooten Company
120 North Boylan Avenue
Raleigh, NC 27603

Dear Mr. Chase,

Please be advised that the Town of Murfreesboro has been a participant in the Albemarle Regional Hazard Mitigation Plan. Our Emergency Management Director, Chris Smith has attended several of the regional planning meetings and has communicated with me via emails and phone calls over the course of the planning process, as needed.
The Town of Murfreesboro believes that a Regional Hazard Mitigation plan is in the best interest of the town, county and region and that a Hazard Mitigation Plan is extremely important so that in the event of a natural disaster we can be prepared to better serve our citizens. It is our intent to formally adopt the plan pending its certification and adopting letter from FEMA.

Sincerely,

John A. Hinton

John A. Hinton, Mayor

COMMISSIONERS

Joseph S. Winslow, Jr., Chairman
Cecil Perry, Vice-Chairman
Jeff Dixon
Lloyd E. Griffin, III
Dr. William R. Sterritt
Frankie Meads
Bettie J. Parker

COUNTY MANAGER
Rodney Bunch

COUNTY ATTORNEY
R. Michael Cox

CLERK TO THE BOARD
Karen Jennings

COUNTY OF PASQUOTANK

Post Office Box 39
Elizabeth City, North Carolina 27907-0039
(252)335-0865
Fax (252)335-0866

March 16, 2015

J. Scott Chase, AICP
Planning Director
The Wooten Company
120 North Boylan Avenue
Raleigh, NC 27603

Dear Mr. Chase,

Please be advised that Pasquotank County has been a participant in the Albemarle Regional Hazard Mitigation Plan. Our Emergency Management Coordinator, Christy Saunders, has attended several of the regional planning meetings and has communicated with Pasquotank County staff via emails and phone calls over the course of the planning process, as needed.

Pasquotank County believes that a Regional Hazard Mitigation plan is in the best interest of the county and region and that a Hazard Mitigation Plan is extremely important so that in the event of a natural disaster we can be prepared to better serve our citizens. It is our intent to formally adopt the plan pending its certification and adopting letter from FEMA.

Sincerely,

Rodney Bunch

Rodney Bunch, Pasquotank County Manager

Town of Winfall

Frederick L. Yates, Mayor
Brenda G. Dillard, Town Clerk

Post Office Box 275
Winfall, North Carolina 27985
Telephone: (252) 426-5015
Fax: (252) 426-1763
Email: clerkdillard@centurylink.net / Website: townofwinfall.net

Town Council:
Kenneth Rominger
Debbie Whedbee – Mayor ProTem
Preston White
Steav Congdon

March 7, 2016

J. Scott Chase, AICP
Planning Director
The Wooten Company
120 North Boylan Avenue
Raleigh, NC 27603

Dear Mr. Chase,

Please be advised that the Town of Winfall has been a participant in the Albemarle Regional Hazard Mitigation Plan. The Perquimans County Emergency Management Coordinator has attended several of the regional planning meetings and has communicated with the Town of Winfall staff via emails and phone calls over the course of the planning process, as needed.

The Town of Winfall believes that a Regional Hazard Mitigation plan is in the best interest of the town, county and region and that a Hazard Mitigation Plan is extremely important so that in the event of a natural disaster we can be prepared to better serve our citizens. It is our intent to formally adopt the plan pending certification and adopting letter from FEMA.

Thank you,

Town of Winfall

Mayor, Frederick L. Yates

KICK-OFF MEETING/HMPC MEETING #1

Project:	Albemarle Regional Hazard Mitigation Plan	**Meeting Date:**	5/9/2014
Location	Currituck County Center, 120 Community Way, Barco, NC		

Name	Title	Jurisdiction/Organization	Phone	E-Mail
CHRIS SMITH	EM DIRECTOR	HERTFORD Co / EM	252-642-7000 252-358-7861	chris.smith@hertford countync.gov
Rebecca Christenbury	Program Asst.	Currituck EM	252-232-2115	rebecca.christenbury@currituckcountync.gov
Christy Saunders	Pasquotank-Camden EM Coodinator	Pasquotank-Camden EM	252-335-4444	Saunders@co.pasquotank.nc.us.
Rob Glover	Chief Fire-EM	Currituck Co.	252-232-2746	ROBERT.GLOVER@CURRITUCKCOUNTYNC.GOV
Cordell Palmer	Chowan EM	Chowan	Call Holly Colombo	cord.palmer@chowan.nc.gov
Wes Haskett	Town Manner	Southern Shores	(252) 261-2394	whaskett@southernshores-nc.gov
HOLLY COLOMBO	BUILDING INSPECTOR	CHOWAN	252-337-4566	HOLLY.COLOMBO@CHOWAN.N.C.GOV
Kevin Howard	County Mgr.	Chowan	252-482-8431	kevin.howard@chowan.nc.gov
Kent Pierce	Building Inspector	CHOWAN	252-482-5618	kent.pierce@chowan.nc.gov
Ben Woody	P/No. Dir.	Currituck	232 6029	ben.woody@currituckcountync.gov
DAN SCANLON	COUNTY MANAGER	CURRITUCK CO.	232-2075	dan.scanlon@currituckcountync.gov.
BRENDA M'QUEEN	SUPT BLDGS/Swaste	CURRITUCK Co.	232-2504	brenda.mcqueen@currituckcountync.gov.
Shelley Cox	Planning Director	Pasquotank Co.	335-1891	coxs@co.pasquotank.nc.us
Sam Barrow	Planner	Tom of Edenton	482-2155	sam.barrow@edenton.nc.gov
Erin Burke	Planner	Town of Manteo	473-4112	burke@townofmanteo.com
Andy Garman	Planner	Town of Duck	255-1234	agarman@townofduck.com
COSTIAN	PLANNER	[illegible]	482-5218	[illegible]okdhnc.com

KICK-OFF MEETING/HMPC MEETING #1

Project:	Albemarle Regional Hazard Mitigation Plan	**Meeting Date:**	5/9/2014
Location	Currituck County Center, 120 Community Way, Barco, NC		

Name	Title	Jurisdiction/Organization	Phone	E-Mail
Billy Winn	EM DIRECTOR	GATES Co. EM	252-357-5569	bwinn@gatescountync.gov
Jarvis Winslow	EM Coordinator	Perquimans Co. EM	252-426-7029	nceme@perquimanscountync.gov
N.H. SANDERSON	EM Coord	DARE	252-473-8326	darecoem@darenc.com
Donna Creef	Planning Dir.	DARE County	252-475-5873	donnac@darenc.com
Horace Reid	Mayor	Perquimans	252-333-7305	awka7@embarqmail.com

JURISDICTION LEAD SIGN UP

Project:	Albemarle Regional Hazard Mitigation Plan	**Meeting Date:**	5/9/2014
Location	Currituck County Center, 120 Community Way, Barco, NC		

Name	Title	Jurisdiction/Organization	Phone	E-Mail
Billy Winn	G.C. E.M	Gates Co. EM	357-5569	bwinn@gatescounty.nc.gov
Chris Smith	HCEM	Hertford Co. EM	252-358-7861	chris.smith@hertfordcounty.nc.gov
Mary Beth Newns	Currituck EM	Currituck EM	252-232-2115	mary.newns@currituckcounty.nc.gov
Christy Saunders	Pasquotank EM Camden EM	Pasq-Camden EM	252-335-4444	Saunderscc@co.pasquotank.nc.us
Jarvis Winslow	Perq. Co. EM	Perq. Co.	426-7029	ncem@perquimanscountync.gov
N.H. Sanderson	DARE EMCoord	DARE	252 473-8326	darecoem@abarre.com
Wes Haskett	Town Planner Southern Shores	Southern Shores	(252) 261-2394	whaskett@southernshores-nc.gov
Cordell Palmer	Chowan EM	Chowan	252-482-2484	cordell.palmer@chowan.nc.gov
Sam Barrow	Planner Edenton	Town of Edenton	482-2155	sam.barrow@edenton.nc.gov
Andy Garman	Planner Duck	Town of Duck	255-1234	agarman@townofduck.com
Erin Burke	Planner Manteo	Town of Manteo	473-2112	burke@townofmanteo.com
GREG COY	KDH PLANNER	KILL DEVIL HILLS	449-5318	greg@kdhnc.com
Joe Heard	Planning Director	Town of Kitty Hawk	261-3552	jheard@kittyhawktown.net

JURISDICTION LEAD SIGN UP

Project:	Albemarle Regional Hazard Mitigation Plan	**Meeting Date:**	5/9/2014
Location	Currituck County Center, 120 Community Way, Barco, NC		

Name	Title	Jurisdiction/Organization	Phone	E-Mail
Billy Winn.	G.C. E.M	Gates Co. EM	357-5569	bwinn@gatescountync.gov
Chris Smith.	HCEM	Hertford Co. EM	252-358-7861	chris.smith@hertfordcountync.gov
Mary Beth Newns	Currituck EM	Currituck EM	252-232-2115	mary.newns@currituckcountync.gov
Christy Saunders.	Pasquotank EM Camden EM	Pasq-Camden EM	252-335-4444	Saundersc@co.pasquotank.nc.us
Jarvis Winslow.	Perq. Co. EM	Perq. Co.	426-7029	ucemoperquimans~~co~~countync.gov
N.H. Sanderson	DARE EMCORD	DARE	252 473-8326	darecoemp@darenc.com
Wes Haskett.	Town Planner Southern Shores	Southern Shores	(252) 261-2394	whaskett@southernshores-nc.gov
Cordell Palmer.	Chowan EM	Chowan	252-482-8484	cordell.palmer@chowan.nc.gov
Sam Barrow	Planner Edenton	Town of Edenton	482-2155	sam.barrow@edenton.nc.gov
Andy Garman.	Planner Duck	Town of Duck	255-1234	agarman@townofduck.com
Erin Burke.	Planner Manteo	Town of Manteo	473-2112	burke@townofmanteo.com
GREG COY.	KDH PLANNER	KILL DEVIL HILLS	449-5318	greg@kdhnc.com
Joe Heard	Planning Director	Town of Kitty Hawk	261-3552	jheard@kittyhawktown.net

Sign IN Sheet

Meeting No 2
7/7/2014

NAME	LOC.	contact
Scott Chase	The Wooten Co.	schase@thewootencompan com
Stephen Smith	The Wooten Co.	SSmith@thewootencapany. com
Mary Beth Newns	Currituck Co EM	mary.newns@currituckcountyn .gov
Billy Wynn	GATES Co EM	bwynn@gatescountync.go
Ken Dilday	Town of Ahoskie	Kendilday@ahoskie.org
CHRIS SMITH	HERTFORD CO EM	chris.smith@hertfordcountync.gov
CARL PIERCE	Town of Winton	backfin@hotmail.com
Stanley Griggs	Currituck	sdgriggs@centurylink.net
Rob Glover	Currituck Fire-EMS	Robert.Glover@CurrituckCountyNC.gov
Ben Woody	Currituck	ben.woody " "
Jarvis Winslow	Perq. Co. EM	ncem@perquimanscountync.gov
Ken Rominger	Town of Winfall	krominger@embarqmail.com
Erin Burke	Town of Manteo	burke@townofmanteo.com
Donna Creef	Dare County	donna@darenc.com
Wes Haskett	Southern Shores	Whaskett@southernshores-nc.go
Joe Heard	Town of Kitty Hawk	jheard@kittyhawktown.net
MICHELLE PERRY	COUNTY OF CURRITUCK	MICHELLE.PERRY@CURRITUCKCOUNTYNC.GOV
Ashley Stoop ☆	ARHS - Public Health	astoop@arhs-nc.org
Meredith Guns	Town of Kill Devil Hills	meredith@kdhnc.com
Holly White	Currituck County	Holly.White@currituckcountync gov
Donna Godfrey	Perquimans County	dgodfrey@perquimanscountync.gov
Ronnie Sawyer	NCDOT - Eliz. City	rsawyer@ncdot.gov
BRENDA McQUEEN	CURRITUCK COUNTY	brenda.mcqueen@currituckcountync.go
ERIC WEATHERLY	CURRITUCK COUNTY	eric.weathery@currituckcounty nc.go
Sam Barrow	Town of Edenton	sam.barrow@edenton.nc.gov
Brian Parnell	NC Emerg Mgmt	brian.parnell@ncdps.gov

Spencer CASTello — Currituck Co — spence.castello@currituckcountync.gov

Andy Garman — Duck — agarman@townofduck.com

└ Nags Head

Doe & Hertford –
James Woolen –)
Caroline Smith)

} potential contact per Ashley Stoop

~~Target Capabilities (16) CBC.~~

THE WOOTEN COMPANY

CLIENT _____ TWC JOB No. _____ PAGE ____ OF ____

PROJECT ARHMP - CMTE MEETING 3

SUBJECT Sign in sheet DATE 10-22-14

Rebecca Christenbury	Currituck County EM
Jarvis Winslow	Perquimans County EM
Erin Burke	Town of Manteo
Joe Heard	Town of Duck
MaryBeth Nevins	Currituck Co EM
Donna Creef	Dare County
Sandy Sanderson	Dare County
Meredith Guns	Town of Kill Devil Hills
DONNA HEFFERNAN	TOWN OF KITTY HAWK
Andy Garman	Town of Nags Head
Kelly Wyatt	Town of Nags Head
CARI PIERCE	Town of Winton
Wes Haskett	Town of Southern Shores
Dabni Shelton	Town of Southern Shores
DREW PEARSON	DARE COUNTY EM

ARHMP TEAM MEETING #4

Project:	Albemarle Regional Hazard Mitigation Plan	**Meeting Date:**	1/15/2015
Location	Currituck County Center, 120 Community Way, Barco, NC		

Name	Title	Jurisdiction/Organization	Phone	E-Mail
Brian Parnell	Area Coordinator	NCEM	252 340-6325	brian.parnell@ncdps.gov
Christy Saunders	EM Coordinator	Pasquotank Camden, Eliz. City	252 335-4444	SaundersC@co.pasquotank.nc.us
ROB TESTERMAN	DIR OF PLANNING + INSPECTIONS	KITTY HAWK	252 261-3552	rob.testerman@kittyhawktown.net
DONNA HEFFERNAN	ZONING TECH	KITTY HAWK	252 261-3552	dheffernan@kittyhawktown.net
Cory Tate	Building Inspector	Town of Duck	252- 255-1234	ctate@townofduck.com
Joe Heard	Community Development Director	Town of Duck	(252) 255-1234	jheard@townofduck.com
Wes Haskett	Town Manner	Southern Shores	(252) 261-2394	whaskett@southernshores-nc.gov
Dubni Shelton	Town Permit Office	Southern Shores	252- 261-2394	dshelton@southernshores-nc.gov
Donna Creef	Planning D	Dare County	252-475-5873	donnac@darenc.com
CARL PIERCE	Public Works Town of Winton	Town of Winton	252-287710	townshop@hotmail.com
CHRIS SMITH	EM DIRECTOR	HERTFORD COUNTY	252.642.7000	chris.smith@hertfordcountync.gov
Jonathan Nixon	Emergency Services Director	Perquimans County	252-331-9817	jnixon@perquimanscountync.gov
BRYAN BRIGHTBILL	PLANNER	KILL DEVIL HILLS	252-4495318	BRYAN@KDHNC.COM
JASON LITTERAL	PLANNER	Currituck County	252-232-6052	jason.litteral@currituckcountync.gov

ARHMP TEAM MEETING #4

Project:	Albemarle Regional Hazard Mitigation Plan	**Meeting Date:**	1/15/2015
Location	Currituck County Center, 120 Community Way, Barco, NC		

Name	Title	Jurisdiction/Organization	Phone	E-Mail
Holly B White	Principal Planner	Town of Nags Head	252.449.6041	holly.white@nagsheadnc.gov
Brenda McQueen	SUPT of Bldgs / SW Dir.	County of Currituck	252-232-2504	brenda.mcqueen@currituckcountync.gov
Billy Wynn	Gates County EM	Gates County	252-357-1369	bwynn@gatescountync.gov
Mary Beth Newns	Currituck County EM Director	Currituck Co	252-232-2115	marybeth.newns@currituckcountync.gov
Bill Newns	Currituck County Bldg Insp	Currituck co	252 232 6023	bill.newns@currituckcountync.gov
S Sanderson	DARE EM	DARE	251 473 5326	darecoem@darenc.com
Drew Pearce	DARE EM	DARE County	252 216 6021	drew.pearce@darenc.com
Kevin Zorc	Fire Chief	Town of Nags Head	252-449-2018	kevin.zorc@nagsheadnc.gov

ARHMP PUBLIC MEETING #2

Project:	Albemarle Regional Hazard Mitigation Plan	**Meeting Date:**	1/15/2015
Location	Currituck County Center, 120 Community Way, Barco, NC		

Name	Title	Jurisdiction/Organization	Phone	E-Mail
S. SANDERSON	DARE CO EM	DARE	252 473-8326	darecoem@darenc.com
Donna Creef	Dare Planning	Dare Planning	252-475-5873	donnac@darenc.com
Tommy Grandy	EXTENSION Agent	Currituck	252-232-2264	tommy_grandy@ncsu.edu
Holly White	Principal Planner	Town of Nags Head	252.449.6041	holly.white@nagsheadnc.gov
DREW PEARSON	DARE COGM	DARE COUNTY	252 216 6012	drew.pearson@darenc.com
Mary Beth Newns	Currituck EM Director	Currituck Co.	252-232-2115	mary.newns@currituckcountync.gov
JASON LITTERAL	PLANNER	Currituck County	252-232-6052	jason.litteral@currituckcounty.gov

Appendix C – Public Involvement Documentation

AFFIDAVIT OF PUBLICATION

This is not an Invoice

Roanoke-Chowan News-Herald

Post Office Box 1325
Ahoskie, North Carolina 27910

IN ACCOUNT WITH

The Wooten Company
Attn: Scott Chase
120 North Boylan Avenue
Raleigh, NC 27603

Date	Description	Inches	Rate
2/3/2015	Albemarle Regional Hazard Mitigation Plan - 10.18.14	3x4	Legal Display

Attorneys placing legal advertising are held responsible for payment. All statements payable 10 days after billing.
Additional copies of this notice will be furnished except upon payment of fee of $20.00.

NORTH CAROLINA
HERTFORD COUNTY

AFFIDAVIT OF PUBLICATION

Before the undersigned, a Notary Public, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared the undersigned representative who being duly sworn, deposes and says that he (she) is an employee or other officer authorized to make this affidavit of Roanoke-Chowan Publications, LLC, engaged in the publication of a newspaper known as the Roanoke-Chowan News Herald, issued and entered as second class mailing in the Town Ahoskie, N.C., in said county and state; that he (she) is authorized to make this affidavit and sworn statement; and the notice or other legal advertisement, a true copy of which is attached hereto, was published in the Roanoke-Chowan News-Herald on the following date

October 18, 2014

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

This the 3rd day of February 2015.

Brittany Powell

(Signature of representative making affidavit)

Sworn to and subscribed before to me this 3rd day of February 2015.

Dana S. Snow

(Notary Public)

Cooke COMMUNICATIONS

NORTH CAROLINA LLC
The Daily Reflector - The Daily Advance - The Rocky Mount Telegram
Bertie Ledger - Chowan Herald - Duplin Times - Farmville Enterprise - Perquimans Weekly - Standard Laconic
Tarboro Weekly - Times Leader - Williamston Enterprise
PO Box 1967
Greenville NC 27835

PAID

Check # 52394
Date Paid 11/25/14
A/R Rep EHP

J. SCOTT CHASE
120 N BOYLAN AVE
RALEIGH NC 27603

Copy Line: PN-Hazard Mitigation Plan
Lines: 30
Total Price: $82.50

Account: 119855 Ticket: 10914

PUBLISHER'S AFFIDAVIT

NORTH CAROLINA
Pasquotank County

Susan Steel affirms that she is clerk of The Daily Advance, a newspaper published daily at Elizabeth City, North Carolina, and that the advertisement, a true copy of which is hereto attached, entitled PN-Hazard Mitigation Plan was published in said The Daily Advance on the following dates:

Sunday, October 19, 2014

and that the 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.

Susan Steel

Affirmed and subscribed before me this 3rd day of November 2014

Elizabeth H Poole
(Notary Public Signature)

Elizabeth H Poole
(Notary Public Printed Name)

My commission expires 1-17-2016

ELIZABETH H. POOLE NOTARY PUBLIC PITT COUNTY, NC

Public Notice
Meeting Announcement
Albemarle Regional Hazard Mitigation Plan

Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans counties, along with participating local jurisdictions and other participating partners, are now working to prepare a Regional Hazard Mitigation Plan. The purpose of this Plan, titled the Albemarle Regional Hazard Mitigation Plan, is to identify and assess our community's natural hazard risks and determine how to best minimize or manage those risks.

Public participation is a valuable component of the planning process and therefore a public meeting will be held on October 22, 2014 at the Currituck County Extension Center (Auditorium) located at 120 Community Way, Barco, NC. The meeting will be held from 6:00 pm to 7:30 pm. Anyone interested in learning more about the Albemarle Regional Hazard Mitigation Plan and helping us make the region less vulnerable to natural disasters is encouraged to attend.

10/19

President of Vidant Bertie Hospital. "Perdue has been so generous to the hospital throughout the years, always supporting us in various ways, including sponsoring the annual Denim to Diamonds Reverse Raffle Fund Raiser. But, this major gift is especially appreciated. The funds have been designated for the Family Consultation Room. We are so grateful for the grant and for everything Perdue does for the hospital and the community as a whole".

As Dial explains, "The Vidant Bertie Hospital Development Council is raising funds to add a chapel to the facility. Vidant Health considers patient-family centered care to be one of its most important principles. Caring for patients means more than caring for the physical—emotional and spiritual well-being are vitally important as well. The Vidant Bertie Chaplains Council has limited space in which to minister to patients and their families. It is especially trying when there is an emergency and more space, not to mention privacy, is needed. The patient-family consultation room provides just such a space. There is also no private place for physicians, case managers or social workers to meet with patients and family members to talk about options for patient care. Such conversations are difficult to have, especially when there is no area in which to have the needed discussions."

"The Vidant Bertie Development Council has appealed to businesses, individuals, churches and various foundations to assist us in the quest to raise funds for a couple of years now," said Dial.

"The Vidant Bertie Hospital is a wonderful asset

pital; and Silvia Rose, Director of Patient Care Services at Vidant Bertie Hospital.

Foundation, the charitable giving arm of Perdue Farms, was established in 1957 by company founder Arthur W. Perdue and is funded through the estates of Arthur W. Perdue and Frank Perdue.

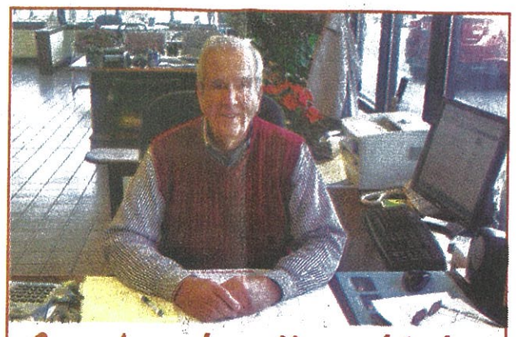
Soup & Sandwich Day

MENOLA – The Menola Community Club will hold it's 30th annual Soup and Sandwich Day from 11 a.m. until 1 p.m. on Saturday, Oct. 25 at the Menola Community Building.

Lunch, which consists of a bowl of homemade vegetable beef soup, a homemade pimento cheese sandwich, crackers, a cupcake and a drink, will be sold for $6. Quarts of soup will be sold for $7 each and baked goods will also be available.

A raffle drawing will take place at 1 p.m. Tickets for the raffle are $1 each with five chances to win. The prizes are: a quilt set, a gift certificate donated by Eddie Harrell's Auto and Sports Store, a gift donated by A Home and Garden Shop, a gift donated by NAPA of Murfreesboro, and a Christmas wreath. Proceeds will be used for repairs for the Community Building.

Ruby Bazemore of Rubies Tree House will have various antiques, vintage items and jewelry available for sale.



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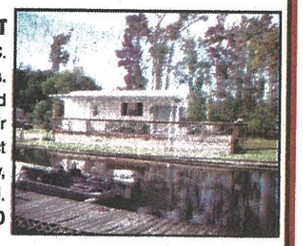

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PUBLIC NOTICE

Meeting Announcement
Albemarle Regional Hazard Mitigation Plan

Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans counties, along with participating local jurisdictions and other participating partners, are now working to prepare a Regional Hazard Mitigation Plan. The purpose of this Plan, titled the **Albemarle Regional Hazard Mitigation Plan,** is to identify and assess our community's natural hazard risks and determine how to best minimize or manage those risks.

Public participation is a valuable component of the planning process and therefore a public meeting will be held on October 22, 2014 at the Currituck County Extension Center (Auditorium) located at 120 Community Way, Barco, NC. The meeting will be held from 6:00 pm to 7:30 pm. Anyone interested in learning more about the **Albemarle Regional Hazard Mitigation Plan** and helping us make the region less vulnerable to natural disasters is encouraged to attend.

RECEIVED
FEB 4 2015
THE WOOTEN COMPANY

Cooke
COMMUNICATIONS

NORTH CAROLINA LLC
The Daily Reflector - The Daily Advance - The Rocky Mount Telegram
Bertie Ledger - Chowan Herald - Duplin Times - Farmville Enterprise - Perquimans Weekly - Standard Laconic
Tarboro Weekly - Times Leader - Williamston Enterprise
PO Box 1967
Greenville NC 27835

PAID

Check # 52676
Date Paid 2/2/15
A/R Rep EMH

J. SCOTT CHASE
120 N BOYLAN AVE
RALEIGH NC 28532

Copy Line: Public Meeting Jan 15
Lines: 30
Total Price: $82.50

Account: 119855 Ticket: 27891

PUBLISHER'S AFFIDAVIT

NORTH CAROLINA
Pasquotank County

Susan Steel affirms that she is clerk of Daily Advance, a newspaper published daily at Elizabeth City, North Carolina, and that the advertisement, a true copy of which is hereto attached, entitled Public Meeting Jan 15 was published in said Daily Advance on the following dates:

Tuesday, January 13, 2015

and that the said newspaper in which such notice, paper, document or legal advertisement was published, was at the time of each and every 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.

Susan Steel

Affirmed and subscribed before me this 13th day of January 2015

Elizabeth H Poole
(Notary Public Signature)

Elizabeth H Poole
(Notary Public Printed Name)

My commission expires 1-17-2016

ELIZABETH H. POOLE NOTARY PUBLIC PITT COUNTY, NC

Public Notice
Meeting Announcement
Albemarle Regional Hazard Mitigation Plan

Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans counties, along with participating local jurisdictions and other participating partners, are now working to prepare a Regional Hazard Mitigation Plan. The purpose of this Plan, titled the Albemarle Regional Hazard Mitigation Plan, is to identify and assess our community's natural hazard risks and determine how to best minimize or manage those risks.

Public participation is a valuable component of the planning process and therefore a public meeting will be held on January 15, 2015 at the Currituck County Extension Center (Auditorium) located at 120 Community Way, Barco, NC. The meeting will be held from 6:00 pm to 7:30 pm. Anyone interested in learning more about the Albemarle Regional Hazard Mitigation Plan and helping us make the region less vulnerable to natural disasters is encouraged to attend.

1/13

3RD GRADE

A
Elizabeth Brown
Landon Buck
Baylor Edwards
Blayden Miller
Camryn Piland
Karley Jo Rose
Camryn Taylor
Grafton Williams

AB
Aubrey Baker
Sawyer Chamblee
Caden Martin
Camille Pierce
Will Revelle
Abby Rountree
Makenzie Slaughter
Belle Turner
Bill Vaughan
Abby Vaughan
Landon Webb

4TH GRADE

A
Owen Black
John Boyd
Baron Chamblee
Matthew Davis
Colby Hauser
Alyssa Liverman
Fletcher Pierce
Clayson Spence
Leah Woodard

AB
Karlee Lynch

5TH GRADE

A
Riley Barnes
Watt Canipe
Ella Glaze
Camryn Joyner

AB
Jimmy Boone
Garrett Brown
Lanie Byrum
Brantley Edwards
Kacie Hoggard
Kyndall Jenkins
Carlie Kennington
Ciara Sumner
Katie Vinson
Isabella Woodard

B
Colleen Curley
Emma Ward

AB
Mirula Balaji
Boone Barkley
David Basnight
Emi Christison
Lane Slachta
Courtney Taylor

7TH GRADE

A
Blake Birdsong
Jamie Earley
Matty Gilliam
Nate Place
Mandy Spence

AB
Gracie Boswell
Helen Canipe
Dylan Edwards

B
Skylar Brown

8TH GRADE

A
Cameron Basnight
Annie diLustro
Cade Harrell
Sydney Lane

AB
Cassey Barnes
Trenton Barnett
Shelton Batts
Emma Wood Boone
Drew Davis
Shelby Hoggard
Josh Parker

Davis Buck
Lauren Buck
Alana Hull
Gage King

B
Cailan Carr
Grayson Joyner
Daniel Lane
David Liverman

10TH GRADE

A
Frank diLustro
Jacob El-Khoury
Lauren Harrell
Kathryn Outlaw
Boyd Tisdale

Emma Kate Clark
Emily Grace

AB
Nathan Askew

B
Stephen Hoggard

12TH GRADE

A
Hennie Larabee
Kristin Tyson

AB
Lewis Bridgers
Brice Jackson
Morgan Liverman
Evan Newsome
Bailey Vann

PUBLIC NOTICE
TOWN OF WINDSOR

The Town of Windsor is seeking public input on recreation improvements at and near the Elm Street Campground. The project potentially includes campground upgrades, treehouses, river access improvements and a greenway trail in a multi-phase approach.

There will be a public hearing at the Windsor Town Hall on the 15th day of January, 2015 at 8:30 A.M. to discuss the project and to receive any comments from the public. Citizens are invited and encouraged to attend.

PUBLIC NOTICE

Meeting Announcement
Albemarle Regional Hazard Mitigation Plan

Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans counties, along with participating local jurisdictions and other participating partners, are now working to prepare a Regional Hazard Mitigation Plan. The purpose of this Plan, titled the **Albemarle Regional Hazard Mitigation Plan**, is to identify and assess our community's natural hazard risks and determine how to best minimize or manage those risks.

Public participation is a valuable component of the planning process and therefore a public meeting will be held on January 15, 2015 at the Currituck County Extension Center (Auditorium) located at 120 Community Way, Barco, NC. The meeting will be held from 6:00 pm to 7:30 pm. Anyone interested in learning more about the **Albemarle Regional Hazard Mitigation Plan** and helping us make the region less vulnerable to natural disasters is encouraged to attend.

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252-332-4364

No Till Roundtable Discussion

Friday, Jan 30, 2015, 8:30 am

JW Faison Admin Building Auditorium
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Commercial Ready Mix Products, Inc.
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252-358-5461

Severn Peanut Company
Sepco Brand Seed Peanuts
Certified/Non-Certified Quality
585-0838
Severn, NC

AFFIDAVIT OF PUBLICATION

This is not an Invoice

Roanoke-Chowan News-Herald

Post Office Box 1325
Ahoskie, North Carolina 27910

IN ACCOUNT WITH

The Wooten Company
Attn: Scott Chase
120 North Boylan Avenue
Raleigh, NC 27603

Date	Description	Inches	Rate
2/3/2015	Albemarle Regional Hazard Mitigation Plan - 1.10.15	3x4	Legal Display

Attorneys placing legal advertising are held responsible for payment. All statements payable 10 days after billing.
Additional copies of this notice will be furnished except upon payment of fee of $20.00.

NORTH CAROLINA
HERTFORD COUNTY

AFFIDAVIT OF PUBLICATION

Before the undersigned, a Notary Public, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared the undersigned representative who being duly sworn, deposes and says that he (she) is an employee or other officer authorized to make this affidavit of Roanoke-Chowan Publications, LLC, engaged in the publication of a newspaper known as the Roanoke-Chowan News Herald, issued and entered as second class mailing in the Town Ahoskie, N.C., in said county and state; that he (she) is authorized to make this affidavit and sworn statement; and the notice or other legal advertisement, a true copy of which is attached hereto, was published in the Roanoke-Chowan News-Herald on the following date

January 10, 2015

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

This the 3rd day of February 2015.

Brittany Powell
(Signature of representative making affidavit)

Sworn to and subscribed before to me this 3rd day of February 2015.

Dana S. Snow
(Notary Public)

AFFIDAVIT OF PUBLICATION

This is not an Invoice

Roanoke-Chowan News-Herald

Post Office Box 1325
Ahoskie, North Carolina 27910

IN ACCOUNT WITH

Joleatha Chestnut, Town Clerk
Town of Ahoskie
P.O. Box 767
Ahoskie, NC 27910

Date	Description	Inches	Rate
8/19/2015	Notice of Public Hearing Town of Ahoskie	3x5 in.	Legal Inches

Attorneys placing legal advertising are held responsible for payment. All statements payable 10 days after billing.
Additional copies of this notice will be furnished except upon payment of fee of $20.00.

NORTH CAROLINA
HERTFORD COUNTY

AFFIDAVIT OF PUBLICATION

Before the undersigned, a Notary Public, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared the undersigned representative who being duly sworn, deposes and says that he (she) is an employee or other officer authorized to make this affidavit of Roanoke-Chowan Publications, LLC, engaged in the publication of a newspaper known as the Roanoke-Chowan News Herald, issued and entered as second class mailing in the Town Ahoskie, N.C., in said county and state; that he (she) is authorized to make this affidavit and sworn statement; and the notice or other legal advertisement, a true copy of which is attached hereto, was published in the Roanoke-Chowan News-Herald on the following date

June 30th, 2015

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

This the 19th day of August 2015.

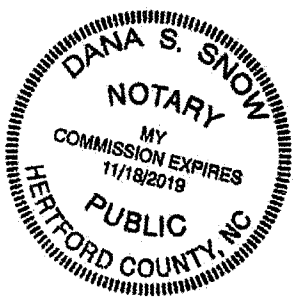
Terri L. Ives

(Signature of representative making affidavit)

Sworn to and subscribed before to me this 19th day of August 2015.

Dana S. Snow

(Notary Public)



Public Notice

Meeting Announcement

Albemarle Regional Hazard Mitigation Plan

Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans counties, along with participating local jurisdictions and other participating partners, have completed a Regional Hazard Mitigation Plan. The purpose of this Plan, titled the **Albemarle Regional Hazard Mitigation Plan**, is to identify and assess our community's natural hazard risks and determine how to best minimize or manage those risks.

Public participation is a valuable component of the planning process and therefore a public meeting will be held to approve the Final Draft plan on July 13, 2015 at the Ahoskie Fire Station located at 301 South Dr. Martin Luther King Jr. Drive. The meeting will be held at 7:00 p.m. Anyone interested in learning more about the **Albemarle Regional Hazard Mitigation Plan** and helping us make the region less vulnerable to natural disasters is encouraged to attend.

Please publish Tuesday, June 30, 2015. Send an affidavit to: Town of Ahoskie
Joleatha Chestnutt
PO Box 767
Ahoskie, NC 27910

AFFIDAVIT OF PUBLICATION

This is not an Invoice

Roanoke-Chowan News-Herald

Post Office Box 1325
Ahoskie, North Carolina 27910

IN ACCOUNT WITH

Hertford County Manager's Office
115 Justice Drive, Suite 1
Winton, NC 27986

Date	Description	Inches	Rate
8/05/2015	Public Notice Meeting Announcement Albemarle	3x5.	Legal Inches

Attorneys placing legal advertising are held responsible for payment. All statements payable 10 days after billing.
Additional copies of this notice will be furnished except upon payment of fee of $20.00.

NORTH CAROLINA
HERTFORD COUNTY

AFFIDAVIT OF PUBLICATION

Before the undersigned, a Notary Public, duly commissioned, qualified, and authorized by law to administer oaths, personally appeared the undersigned representative who being duly sworn, deposes and says that he (she) is an employee or other officer authorized to make this affidavit of Roanoke-Chowan Publications, LLC, engaged in the publication of a newspaper known as the Roanoke-Chowan News Herald, issued and entered as second class mailing in the Town Ahoskie, N.C., in said county and state; that he (she) is authorized to make this affidavit and sworn statement; and the notice or other legal advertisement, a true copy of which is attached hereto, was published in the Roanoke-Chowan News-Herald on the following date

July 23rd, 2015

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

This the 5th day of August 2015.

Terri L. Sm

(Signature of representative making affidavit)

Sworn to and subscribed before to me this 5th day of August 2015.

Dana S. Snow

(Notary Public)

DANA S. SNOW
NOTARY PUBLIC
MY COMMISSION EXPIRES 11/18/2019
HERTFORD COUNTY, NC

COUNTY OF CURRITUCK
LEGAL AD
Coastland Times

Currituck County Board of Commissioners will conduct a public hearing at the Historic Currituck County Courthouse on **September 21, 2015** at 5:00 p.m. and possibly take action on:

Albemarle Regional Hazard Mitigation Plan: Currituck County requests adoption of the Albemarle Regional Hazard Mitigation Plan to promote the public health, safety, and general welfare of the county's citizenry and to mitigate the impact of identified hazard risks.

The plan is available for review at the Historic Courthouse, Mon. – Fri., 8:00 am – 5:00 pm. Substantial changes in this proposal may be made following the public hearing.

PLEASE PUBLISH: Wednesday, September 9, 2015 and Sunday, September 20, 2015.

Date emailed to The Coastland Times 9/4/15

BY WHOM: Susan M. Tanner

9-4-15
Sent to Coastland Times

Currituck County Board of Commissioners will conduct a public hearing at the Historic Currituck County Courthouse on **September 21, 2015** at 5:00 p.m. and possibly take action on:

Albemarle Regional Hazard Mitigation Plan: Currituck County requests adoption of the Albemarle Regional Hazard Mitigation Plan to promote the public health, safety, and general welfare of the county's citizenry and to mitigate the impact of identified hazard risks.

The plan is available for review at the Historic Courthouse, Mon.-Fri., 8:00 am-5:00 pm Substantial changes in this proposal may be made following the public hearing.

9-9, 20c

NORTH CAROLINA
DARE COUNTY.

AFFIDAVIT OF PUBLICATION

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

Susan M. Simpson, Treasurer, who being first duly sworn, deposes and says: that he (she) is of The Times Printing Co., Inc., engaged in the publication of a newspaper known as THE COASTLAND TIMES, published, issued, and entered as second class mail in the Town of Manteo, in said County and State; that he is authorized to make this affidavit and sworn statement; that the notice or other legal advertisement, a true copy of which is attached hereto, was published in THE COASTLAND TIMES on the following dates:

September 9 and 20, 2015;

and that the said newspaper in which said notice, paper, document, or legal advertisement was published was, at the time of each and every such publication, a newspaper meeting all of the requirements and qualifications of Sections 1-596 and 1-597 of the General Statutes of North Carolina and was a qualified newspaper within the meaning of Section 1-597 of the General Statutes of North Carolina.

This 28th day of January, ~~2015~~ 2016

Sworn to and subscribed to before me, this 28th day of January, ~~2015~~ 2016

Kimberly A. Simpson
Notary Public

My Commission expires: July 13, 2019.

KIMBERLY A. SIMPSON
Notary Public
Dare County, North Carolina

NATION

WASHINGTON

4 billionaires helped fuel Cruz's rise

Four of America's wealthiest businessmen laid the foundation for Ted Cruz's now-surging Republican presidential campaign and have redefined the role of political donors.

With just over a week until voters get their first say, the 45-year-old Texas senator known as a conservative warrior has been ascendant. The $36 million committed last year by these donor families is now going toward broadcast and online advertisements, direct mailings and get-out-the-vote efforts in early primary states.

The donors' super political action committees sponsored Saturday rallies in Iowa featuring Cruz and conservative personality Glenn Beck. The state holds the leadoff caucuses on Feb. 1.

The long-believing benefactors are New York hedge fund billionaire Robert Mercer, Texas natural gas billionaires Farris and Dan Wilks, and private-equity partner Toby Neugebauer.

From AP reports

ANCHORAGE, ALASKA

Magnitude-7.1 quake jolts Alaska

A magnitude-7.1 quake knocked items off shelves and walls in Alaska early Sunday morning, jolting the nerves of residents in this earthquake-prone region. There were no reports of injuries, but four homes were lost to explosions or fire following the quake.

Alaska's state seismologist, Michael West, called it the strongest earthquake in the state's south-central region in decades. Alaska often has larger or more powerful earthquakes, such as a 7.9 last year in the remote Aleutian Islands.

"However, last night's earthquake is significant because it was close enough to Alaska's population centers," West said, adding that aftershocks could continue for weeks.

The earthquake was widely felt by Anchorage residents. But the Anchorage and Valdez police departments said they hadn't received any reports of injury or significant damage.

From AP reports

SANTA ANA, CALIF.

KEVIN WARN/AP PHOTO

Orange County sheriff's deputies investigate early Saturday after three inmates charged with violent crimes escaped from Central Men's Jail in Santa Ana, Calif. Sheriff's Lt. Jeff Hallock said Saturday that the inmates were last seen at 5 a.m. Friday and could have escaped anytime between then and late Friday. "The inmates cut through half-inch steel bars to facilitate their escape" and also cut through plumbing tunnels and used a makeshift rope to rappel from an unguarded roof, Hallock said.

LOS ANGELES

Feds' failures imperiled migrant kids

As tens of thousands of children fleeing violence in Central America crossed the border in search of safe harbor, overwhelmed U.S. officials weakened child protection policies, placing some young migrants in homes where they were sexually assaulted, starved or forced to work for little or no pay, an Associated Press investigation has found.

Without enough beds to house the record numbers of young arrivals, the U.S. Department of Health and Human Services lowered its safety standards during border surges in the last three years to swiftly move children out of government shelters and into sponsors' homes. The procedures were increasingly relaxed as the number of young migrants rose in response to spiraling gang and drug violence in Honduras, Guatemala and El Salvador, according to emails, agency memos and operations manuals obtained by AP, some under the Freedom of Information Act.

From AP reports

After wild weekend, East Coasters face difficult commute

BY MICHAEL R. SISAK AND VERENA DOBNIK
Associated Press

NEW YORK — After a weekend of sledding, snowboarding and staying put, the blizzard-blanketed Eastern U.S. will confront a Monday commute slowed by slick roads, damaged transit lines and endless mounds of snow.

Authorities cautioned against unnecessary driving, airline schedules were in disarray and commuter trains will be delayed or cancelled for many as the work week begins after a storm that dumped near record snows on the densely populated Washington, D.C. to New York City corridor.

The last flakes fell just before midnight Saturday, but crews raced the clock all day Sunday to clear streets and sidewalks devoid of their usual bustle.

Ice chunks plunging from the roofs of tall buildings menaced people who ventured out in Philadelphia and New York. High winds on Manhattan's Upper West Side kept the snow from entirely swallowing the tiny Mini Cooper of Daniel Bardman, who nervously watched for falling icicles as he dug out.

New York Mayor Bill de Blasio encouraged people to leave their plowed-in cars covered with snow all week after a 1-day record of 26.6 inches fell in Central Park.

That advice came too late for Bob Raldiris, who tried shoveling his Nissan Maxima out of a spot in Ridgewood, Queens, before passing plows and trucks spoiled his labor. "This is terrible," he said, pointing to a pile of snow three feet high.

CLIFF OWEN/ASSOCIATED PRESS

Rhianna McCarte, 30, joins her neighbors to dig out their cars in Alexandria, Va., Sunday. Millions of Americans were preparing to dig themselves out Sunday after a blizzard brought much of the East Coast to an icy standstill.

Sunday's brilliant sunshine and gently rising temperatures provided a respite from the blizzard that paralyzed Washington and dropped a record 29.2 inches on Baltimore. The weekend timing could not have been better, enabling many to enjoy a gorgeous winter day.

It was just right for a huge snowball fight in Baltimore, where more than 600 people responded to organizer Aaron Brazell's invite on Facebook.

"I knew people would be cooped up in their houses and wanting to come outside," said Brazell, who was beaned by multiple blasts of perfectly soft but firm snow.

But treacherous conditions remained: Of at least 29 deaths blamed on the weather, shoveling snow and breathing carbon monoxide claimed more lives than car crashes as people recovered from a storm that dropped snow from the Gulf Coast to New England.

The Pennsylvania Turnpike reopened Sunday afternoon near Pittsburgh after more than 500 cars, trucks and buses — some carrying the Duquesne University men's basketball team and the Temple University women's gymnastics squad — got stuck Friday night. The huge backup happened after trucks couldn't climb through the mountains toward the Allegheny tunnels in what would become 35 inches of snow.

But one day of sunshine wasn't enough to clear many other roads. Federal offices were closed today, and Virginia's state workers were told to stay home.

TRIAL

Continued from 1A

got to Crandall's house they played Foosball in the garage out back and continued drinking.

Under cross-examination by defense attorney Andy Gay, Harrison said he drank six or seven beers and two shots of rum during the day and early evening.

Harrison said later that evening, he saw Burton talking to Crystal Trotman, his fiancee. They were on opposite sides of a fence at Black's house, he said. Trotman has already testified in Byrum's trial that she asked Burton not to go to Byrum's house, but he did anyway.

Harrison said he heard Burton say he was going to get his truck and decided to walk with him. But as they were walking, Harrison noticed Burton turn in the opposite direction from where his truck was and heard Burton say he was going to Byrum's house, which was nearby.

Asked by District Attorney Andrew Womble if the two were planning an attack on Byrum, Harrison said they were not.

"I didn't know who he was," Harrison added, referring to Byrum.

Harrison testified that they walked onto the porch at Byrum's house and one of them — he thought it was Burton — knocked on the door.

Byrum's younger brother Bryan opened the door and Burton asked where Josh Byrum was, Harrison said.

Around that time Harrison's brother, Brandon Harrison, showed up. Meanwhile, Josh Byrum came to the door, Harrison said.

Burton and Josh Byrum talked for about two minutes on the porch and then they all walked into the house, according to Harrison.

"They invited us in so Josh and Dylan could talk," Harrison testified.

Harrison contradicted earlier testimony by Bryan Byrum that Harrison had forced his way into the house.

"We just walked in," Harrison said.

When Josh Byrum kept giving smart-aleck answers to Burton's questions, Harrison said he told him that he had 30 seconds to give a straight answer.

"Did you have a weapon?" Womble asked.

"No," Harrison answered, adding that Burton didn't either.

Harrison said he did not hear Burton make any threat to Byrum.

Harrison testified that because of Byrum's smart-aleck answers, he hit him a couple of times and then followed him back toward the kitchen, hitting him about six times.

By Harrison's account, he then insulted Byrum and turned around and walked out of the house.

"Did you see Dylan strike Josh?" Womble asked.

"No," Harrison said.

Harrison testified that he then heard a gunshot and ran out of the front door of the house.

He said he and his brother Brandon then went back in the house to the kitchen, where they tried to help Burton by covering his wound.

Harrison said he then went outside to comfort Trotman and another woman while his brother stayed with Burton.

During cross-examination, Gay asked Harrison if he liked to fight.

"No, not really," Harrison said.

In response to questions from Gay, Harrison said the incident the night Burton was shot and killed was not a fight. When Gay asked him what he expected to happen at Byrum's house, Harrison said he just thought Byrum and Burton were going to talk.

Gay asked Harrison why he hit Byrum and Harrison replied that it was because Byrum was not answering Burton's questions.

"Were you trying to frighten these boys?" Gay asked.

"No," Harrison said.

"Why did you get in Josh's face?" Gay asked.

"I don't know," Harrison said.

During Gay's cross-examination, Harrison said that as he walked away after hitting Byrum, he passed Burton, who was walking toward where Byrum was. Right after Burton passed him he heard a gunshot, he said.

SNOW

Continued from 1A

and secondary roadways in the county were clear, but noted some icy spots remain.

Some of the secondary roadways were still wet, increasing the chance of black ice forming in isolated areas Sunday evening, Sawyer said.

With that in mind, officials in the Elizabeth City-Pasquotank Public Schools announced Sunday afternoon that schools would delay opening by two hours today. The delay affects both students and staff.

Monday is a scheduled teacher workday in the Camden County Schools. There have been no reported delays for any other school districts or area colleges.

The N.C. Highway Patrol's Williamston dispatch said Sunday there weren't any reports of fatalities or any major wrecks overnight Saturday.

City Manager Rich Olson said one outage was reported in the city Saturday at three houses connected to the same power line. He said city crews quickly restored service.

Dominion N.C. Power spokeswoman Bonita Billingsley Harris said the firm hadn't received any reports of outages for its customers in the Elizabeth City area Saturday or Sunday.

Chris Powell, a spokesman for Albemarle Electric Membership Corp., said the electrical co-op reported one small outage in the northern part of Pasquotank.

"We weathered the storm well," he said.

The National Weather Service forecast called for mostly clear skies Sunday evening, with the low dipping to 20 degrees.

The forecast today calls for sunny skies, with a high of 46, followed by partly cloudy skies in the evening and a low of 32.

NOTICE OF PUBLIC HEARING
ON ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

Notice is hereby given that a Public Hearing will be held regarding the Albemarle Regional Hazard Mitigation Plan on February 4, 2016 at 7:00 pm at the Pasquotank County Public Safety Building, 200 E. Colonial Ave., Elizabeth City. Following the public hearing, the Pasquotank and Camden Counties Board of Commissioners and Elizabeth City Council will consider adoption of the plan. All citizens are encouraged to attend.

A copy of the plan is available for public review at the following web address: http://albemarlereghazardmitigationplan.wikispaces.com/Plan+Sections. The public is encouraged to review the draft plan.

For questions and/or additional information, please contact Christy Saunders, Pasquotank-Camden Emergency Management Coordinator at 335-4444.

FEBRUARY IS BLACK HISTORY MONTH!

Acknowledge someone you know for his or her contributions to our community's growth and success in observance of Black History Month.

Purchase a 1x4 or 2x2 ad for only $25 or a 2x4 ad for $40 detailing accomplishments in an honorarium or memoriam. This may include a color photograph.

These acknowledgments will publish on **February 2** on a special page recognizing Black History Month.

Tributes may be submitted three ways: mail with information below and check or money order to The Daily Advance, C/O Black History Month, PO box 588, Elizabeth City, NC 27907; bring information and payment to our office at 215 S. Water St., Elizabeth City; or email your information to occasions@dailyadvance.com and call in your credit card payment to 335-8076. All entries must arrive at The Daily Advance and be paid by Thursday, Jan. 28 at 4 p.m.
Ask about our subscriber discount.

This is a note of honor___ or remembrance___ (check one)
I choose this size: 1x4 ($25)___ 2x2 ($25)___ 2x4 ($40)___
Person to be honored: _____

Tell us a little about the person's contributions to the community and why you choose to honor him/her: _____

Would you like your name to appear in your tribute? ___Yes ___No

Your Name: _____
Address: _____
City: _____ State: _____ Zip: _____
Daytime Phone: _____

Albemarle Regional Hazard Mitigation Plan

Survey Results

October 22, 2014

Powered by SurveyMonkey

Albemarle Regional Hazard Mitigation Plan Public Participation Survey

May to September 2014

484 Total Response

Powered by SurveyMonkey

Q1: Which County do you live in?

Answered: 471 Skipped: 13

Answer Choices	Responses	
Camden County	2.34%	11
Chowan County	5.31%	25
Currituck County	13.16%	62
Dare County	40.76%	192
Gates County	18.68%	88
Hertford County	1.91%	9
Pasquotank County	10.19%	48
Perquimans County	7.64%	36
Total		**471**

Q2: Do you live in one of the towns listed below? If so, please select your town.

Answered: 309 Skipped: 175

Answer Choices	Responses	
I live in the County, not in a town/city	0.32%	1
Ahoskie	1.29%	4
Cofield	0.65%	2
Como	0.32%	1
Duck	11.33%	35
Edenton	6.15%	19
Elizabeth City	14.56%	45
Harrellsvile	0.32%	1
Hertford	6.47%	20
Gatesville	9.39%	29
Kill Devil Hills	16.50%	51
Kitty Hawk	2.59%	8
Manteo	4.21%	13
Murfreesboro	0.97%	3
Nags Head	9.39%	29
Southern Shores	17.80%	55
Winfall	1.62%	5
Winton	1.29%	4
Total Respondents: 309		

Q3: How concerned are you about the possibility of your community being impacted by a disaster?

Answered: 483 Skipped: 1

Answer Choices	Responses	
Extremely concerned	42.44%	205
Somewhat concerned	51.97%	251
Not Concerned	5.59%	27
Total		**483**

Powered by SurveyMonkey

Q4: Of these Natural Hazards, which one do you think is the highest threat to your community?

Answered: 480 Skipped: 4

Answer Choices	Responses	
Dam/Levee Failure	0.00%	0
Drought	0.21%	1
Earthquake	0.00%	0
Erosion	1.25%	6
Extreme Heat	0.21%	1
Flood	8.75%	42
Hail	0.00%	0
Hazardous Materials Incident	0.21%	1
Hurricane/Tropical Storm	63.75%	306
Nor'easters	10.42%	50
Land Subsidence/Sink Hole	0.00%	0
Landslide	0.00%	0
Lightning	0.42%	2
Severe Winter Storm/Freeze	0.83%	4
Severe Thunderstorms/High Wind	6.88%	33
Tornado	6.88%	33
Wildfire	0.21%	1
Total		480

Q5: Of these Natural Hazards, which one do you think is the second-highest threat to your community?.

Answered: 479 Skipped: 5

Answer Choices	Responses	
Dam/Levee Failure	0.00%	0
Drought	1.04%	5
Earthquake	0.21%	1
Erosion	3.76%	18
Extreme Heat	0.84%	4
Flood	21.92%	105
Hail	0.21%	1
Hazardous Materials Incident	1.46%	7
Hurricane/Tropical Storm	25.05%	120
Land Subsidence/Sink Hole	0.00%	0
Landslide	0.00%	0
Lightning	1.88%	9
Sever Winter Storm/Freeze	5.85%	28
Severe Thunderstorms/High Wind	21.92%	105
Tornado	15.03%	72
Wildfire	0.84%	4
Total		479

Q6: Is there another hazard not listed that you think is a threat to your community?

Answered: 422 Skipped: 62

Answer Choices	Responses	
Yes	22.51%	95
No	77.49%	327
Total		422

Powered by SurveyMonkey

Q7: Have you ever experienced or been impacted by a disaster?

Answered: 476 Skipped: 8

Answer Choices	Responses	
Yes	69.12%	329
No	31.09%	148
Total Respondents: 476		

Powered by SurveyMonkey

Q8: Do you have flood insurance for your home/personal property?

Answered: 480 Skipped: 4

Answer Choices	Responses	
Yes	48.54%	233
No	48.33%	232
I don't know	3.13%	15
Total		**480**

Powered by SurveyMonkey

Q9: If you answered No to question 8, why don't you have flood insurance?

Answered: 253 Skipped: 231

Answer Choices	Responses	
I am a renter	**11.07%**	28
My home is not located in the floodplain	**58.89%**	149
Flood Insurance is to expensive	**5.93%**	15
I don't need it beacuse it never floods	**1.19%**	3
I don't need it because my home is elevated or otherwise protected	**7.91%**	20
I never really considered getting flood insurance	**5.14%**	13
Other (please specify)	**9.88%**	25
Total		**253**

Q10: Have you taken any actions to make your home, community or family safer from natural hazards?

Answered: 471 Skipped: 13

Answer Choices	Responses	
Yes	59.24%	279
No	40.76%	192
Total		471

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Q11: Are you interested in taking a proactive approach to protecting your home, community or family from the impacts of natural hazards?

Answered: 475 Skipped: 9

Answer Choices	Responses	
Yes	90.95%	432
No	9.05%	43
Total		475

Powered by SurveyMonkey

Q12: Do you know who to contact in your jurisdiction for information regarding the risk from hazards in your area?

Answered: 478 Skipped: 6

Answer Choices	Responses	
Yes	57.53%	275
No	42.47%	203
Total		478

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Q13: Which do you feel is the most effective way for you to receive information on how to protect your home, community or family from natural hazards?

Answered: 477 Skipped: 7

Answer Choices	Responses	
Newspaper	4.19%	20
Television	16.14%	77
Radio	4.40%	21
Internet	21.38%	102
Email	28.51%	136
Postal Mail	11.53%	55
Public workshops/meetings	8.39%	40
School meetings	0.21%	1
Other	5.24%	25
Total		**477**

Q16: These activities can be classified under six broad categories including Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services and Public Education and Awareness. a few moments to let us know how important you feel each category is for your community.

Answered: 478 Skipped: 6

	Extremely Important	Somewhat Important	Not Important	Total	Average Rating
Prevention	**77.89%** 370	**20.21%** 96	**1.89%** 9	475	2.76
Property Protection	**68.71%** 325	**29.60%** 140	**1.69%** 8	473	2.67
Natural Resources Protection	**66.88%** 315	**30.36%** 143	**2.76%** 13	471	2.64
Structural Projects	**57.66%** 271	**34.26%** 161	**8.09%** 38	470	2.50
Emergency Services	**89.03%** 422	**10.76%** 51	**0.21%** 1	474	2.89
Public Education and Awareness	**84.14%** 398	**14.38%** 68	**1.48%** 7	473	2.83

Powered by SurveyMonkey

Appendix D – NCEM/FEMA Comments

APPENDIX A:
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: Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans Counties	**Title of Plan:** Albemarle Regional Hazard Mitigation Plan	**Date of Plan:** 3/09/2015
Local Point of Contact: Billy Winn	**Address:** PO Box 536 Gatesville, NC 27938	
Title: Emergency Management Director		
Agency: Gates County		
Phone Number: **252-357-5569**	**E-Mail:** bwinn@gatescountync.gov	

State Reviewer:	**Title:**	**Date:**
John Mello, Cindy Harrison John Mello, Cindy Harrison John Mello	Hazard Mitigation Planner	3/09/2015 3/20/2015 4/01/2015

FEMA Reviewer:	**Title:**	**Date:**
Linda L. Byers **Brenda Stirrup (QC)** Linda Byers (ADD Letter for highlighted counties and jurisdictions See Section 3)	R4 Lead Planning Specialist Planning Specialist	05-07-15 05-12-15 01-21-16
Date Received in FEMA Region IV	April 15, 2015	
Plan Not Approved		
Plan Approvable Pending Adoption	May 12, 2015 (Pending NCDEM email revisions and receipt of adoption resolution(s) Revision corrections received 5/11/15	

Plan Approved	June 12, 2015

SECTION 1:
REGULATION CHECKLIST

INSTRUCTIONS: The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the Plan by Element/sub-element and to determine if each requirement has been 'Met' or 'Not Met.' The 'Required Revisions' summary at the bottom of each Element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is 'Not Met.' Sub-elements should be referenced in each summary by using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in this *Plan Review Guide* in Section 4, Regulation Checklist.

1. REGULATION CHECKLIST **Regulation** (44 CFR 201.6 Local Mitigation Plans)	**Location in Plan (section and/or page number)**	**Met**	**Not Met**
ELEMENT A. PLANNING PROCESS			
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))	Sec 2.2	x	
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	Sec 2.6	x	
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	Sec 2.5	x	
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))	Sec 6	x	
A5. Is there discussion of how the community (ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	Sec 8	x	
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	Sec 8	x	
RECOMMENDATION: In the next annual review or update meeting, include PNP (private non-profit) organizations, homeowner associations, churches, and school districts as these entities often provide shelter or community facilities during the implementation of disaster operations. Colleges and universities also can provide technical support including conducting surveys or community meetings. *The FEMA reviewer validated the data on the pages cited by the state* LLB			
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT			

1. REGULATION CHECKLIST **Regulation** (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
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))	Sec 3 Sec 4	x	
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))	Sec 3, Sec 4, Appendix E	x	
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))	Sec 4, Sec 5	x	
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))	Sec 5.7	x	
ELEMENT B: REQUIRED REVISIONS **FEMA NOTATION**: The regional plan provided excellent documentation of all of the "merging" counties. The planning process is very well constructed with excellent examples of how the regional process was started and how previous occurrences of hazard events had impacted the regional area. For Element B3, there is excellent documentation and inclusion of scientific explanations of previous occurrences. All of the most recent events are depicted and maps are accurately documented to include appropriate legends. These are found in Tables and charts, and maps. *The FEMA reviewer validated the data on the pages cited by the state* LLB			
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))	Sec 6	x	
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	Sec 6, pages 7-10	x	
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	Sec 7	x	
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))	Sec 7	x	
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	Sec 7	x	
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	Sec 8.2	x	

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

REQUIRED REVISION:

C2. Update the charts on Section 6 page 3 (Table 6.1 and Table 6.8) to show that Hertford and Colfield are NFIP participants. Harrellsville is not currently NFIF participants in the NFIP. Does the plan address what strategy will be implemented for areas not participating in the program or is the jurisdiction not mapped at this time?

Reference: Local Planning Guidance October 2011.
*The plan **must** describe each jurisdiction's participation in the NFIP and describe their floodplain management program for continued compliance. 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.*

For additional information, please see Element C2 Mitigation Strategy, in the "Local Mitigation Plan Review Guide", October 1, 2011 Page 61.

The FEMA reviewer validated the data on the pages cited by the state LLB
C2. Revisions were received via email on 5/11/15, reviewed, and approved, to correct the NFIP status of the Hertford, Cofield, and Harrellsville jurisdictions. These corrections will be included in the final plan document.

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))	Sec 5	x	
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	Appendix F	x	
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	Appendix F	x	

ELEMENT D: REQUIRED REVISIONS

The new regional plan successfully addressed changes in development, progress in local mitigation and changes in priorities as a result of the efforts to develop a regional plan. Tremendous efforts were taken by the consultants, planners, and local emergency directors on the planning committee completing a comprehensive review of all of the previous plans. The regional planning efforts are recognized as a comprehensive effort by the NCDEM as it maximizes resources and supports its mitigation planning program. The Capability Assessment Survey that was used to capture information on each jurisdiction's fiscal capability through the identification of local available financial resources is another excellent example of the completeness of the planning process.

Section 8.2.1 described how the monitoring and evaluation of each county plan was conducted according to the stated process in the previously approved county plans. Where there was no documentation of meetings held, a strategy was provided for future monitoring of the plan in the future for each county.

For example: Currituck County Hazard Mitigation Plan was reviewed annually and a status report was Provided to the County Board of Commissioners each year. The Dare County Hazard Mitigation Plan (Including the Towns of Duck, Kitty Hawk, Kill Devil Hills, Manteo, Nags Head and Southern Shores) was reviewed annually and a status report was provided to the County Board of Commissioners and each Town Board each year. Camden County Hazard Mitigation Plan was not reviewed annually as identified in previous plan. However, mitigation strategies were addressed in other forums.

1. REGULATION CHECKLIST **Regulation** (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
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))	Sec 1.4, Appendix J		x
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))enhanced	Sec 1.4, Appendix J		x

ELEMENT E: REQUIRED REVISIONS

The plan has not been adopted.

REQUIRED REVISION:

E1: The plan must include documentation of plan adoption, usually a resolution by the governing body or other authority.

E2: Each jurisdiction that is included in the plan must have its governing body adopt the plan prior to FEMA approval, even when a regional agency has the authority to prepare such plans. At least one participating jurisdiction must formally adopt the plan within one calendar year of FEMA's designation of the plan as "Approvable Pending Adoption." The plan documentation reserved a placeholder for the Adoption Resolution(s). Provide documentation that the final meeting was held to review the plan for formal adoption.

For additional information, please see Element E, Plan Adoption, in the "Local Mitigation Plan Review Guide", October 1, 2011, Pages 28-29 and Task 8 of the Local Mitigation Planning Handbook, March 2013.

Adoption Resolutions received: See Section Three for AR's received in yellow

Dare County, Uninc. 6/8/15
Town of Manteo 6/8/15
Town of Southern Shores 6/8/15
Town of Duck 6/18/15
Kill Devil Hills 7/14/15
Kitty Hawk 7/30/15
Nags Head 9/2/15
Currituck County Uninc. 10/27/15
Town of Hertford 11/23/15
Perquimans County 11/23/15
Town of Winfall 11/23/15
Chowan County 11/24/15
Town of Edenton 11/24/15
Gates County, Uninc. 01/21/2016
Town of Gatesville, 1/14/2016
Hertford County, Uninc. 11/23/2015
Town of Murfreesboro, 1/14/2016
Town of Harrellsville, 1/14/2016
Town of Ahoskie, 1/14/2016
Town of Cofield 1/14/2016
Town of Como, 1/14/2016
Camden County, Uninc. 4/5/2016
City of Elizabeth City 4/5/2016
Pasquotank County, Uninc. 4/5/2016
Town of Winton 11/23/2015

ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)			
F1.			

1. REGULATION CHECKLIST **Regulation** (44 CFR 201.6 Local Mitigation Plans)	Location in Plan (section and/or page number)	Met	Not Met
F2.			
ELEMENT F: REQUIRED REVISIONS			

SECTION 2:
PLAN ASSESSMENT

INSTRUCTIONS: The purpose of the Plan Assessment is to offer the local community more comprehensive feedback to the community on the quality and utility of the plan in a narrative format. The audience for the Plan Assessment is not only the plan developer/local community planner, but also elected officials, local departments and agencies, and others involved in implementing the Local Mitigation Plan. The Plan Assessment must be completed by FEMA. The Assessment is an opportunity for FEMA to provide feedback and information to the community on: 1) suggested improvements to the Plan; 2) specific sections in the Plan where the community has gone above and beyond minimum requirements; 3) recommendations for plan implementation; and 4) ongoing partnership(s) and information on other FEMA programs, specifically RiskMAP and Hazard Mitigation Assistance programs. The Plan Assessment is divided into two sections:

1. Plan Strengths and Opportunities for Improvement
2. Resources for Implementing Your Approved Plan

Plan Strengths and Opportunities for Improvement is organized according to the plan Elements listed in the Regulation Checklist. Each Element includes a series of italicized bulleted items that are suggested topics for consideration while evaluating plans, but it is not intended to be a comprehensive list. FEMA Mitigation Planners are not required to answer each bullet item, and should use them as a guide to paraphrase their own written assessment (2-3 sentences) of each Element.

The Plan Assessment must not reiterate the required revisions from the Regulation Checklist or be regulatory in nature, and should be open-ended and to provide the community with suggestions for improvements or recommended revisions. The recommended revisions are suggestions for improvement and are not required to be made for the Plan to meet Federal regulatory requirements. The italicized text should be deleted once FEMA has added comments regarding strengths of the plan and potential improvements for future plan revisions. It is recommended that the Plan Assessment be a short synopsis of the overall strengths and weaknesses of the Plan (no longer than two pages), rather than a complete recap section by section.

Resources for Implementing Your Approved Plan provides a place for FEMA to offer information, data sources and general suggestions on the overall plan implementation and maintenance process. Information on other possible sources of assistance including, but not limited to, existing publications, grant funding or training opportunities, can be provided. States may add state and local resources, if available.

A. Plan Strengths and Opportunities for Improvement

This section provides a discussion of the strengths of the plan document and identifies areas where these could be improved beyond minimum requirements.

Element A: Planning Process

The new Albemarle Sound Regional Plan was completed by the Wooten Group and eight (8) counties with the assistance of the NCDEM planners, EMA directors, and the Albemarle Hazard Mitigation Planning Committee members. It was evident that there was a concerted effort and quality time spent to deliver an exemplary regional plan. Progress in hazard mitigation planning for the participating jurisdictions in the Albemarle Region is documented in this plan update The format that was used has been successful for the state in ensuring that all elements are addressed and that the plan is a comprehensive updated product. There were no sections that required major revisions and consequently the Plan as presented will be a "living document". It is suggested that the involvement of stakeholders (elected officials/decision makers, plan implementers, business owners, academic institutions, utility companies, water/sanitation districts, etc.) be listed by name and title for future reference and for contacting and informing the annual planning update meeting invitees.

Element B: Hazard Identification and Risk Assessment: Strengths/Opportunities for Improvement

The new Albemarle Sound Regional Plan addresses above and beyond minimum requirements and documents the Hazard Identification and Risk Assessments for all of the counties and participating jurisdictions. The plan identified all elements that were included as part of the plan's risk assessment. The plan described vulnerability in terms of all of the following:

- A general description of land uses and future development trends within the community so that mitigation options can be considered in future land use decisions;
- The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas; and
- A description of potential dollar losses to vulnerable structures, and a description of the methodology used to prepare the estimate.

All of the suggested minimum and above requirements to document the Hazard Identification and Risk Assessment were found in the new regional plan.

Element C: Mitigation Strategy

In addition to the requirements listed on the Regulation Checklist, the Updated 2015 Albemarle Regional Local Mitigation Plan met all of the requirements and provided documentation for every hazard that impacted the planning area for each jurisdiction. The mitigation strategies that were developed and provided in the plan addressed the needs for each county and participating jurisdictions. The Plan meets and goes above and beyond minimum requirements to document the Mitigation Strategy in the following areas:

- Linkages to the vulnerability assessment
- Provided a blueprint for reducing potential losses identified in the Risk Assessment by county and participating jurisdictions
- Plan content flow from the risk assessment (problem identification) to goal setting to mitigation action development is excellent and well-structured for the inclusion of all of the 25 cities and/or towns. Section Seven (7) consists of regional goal statements and specific Mitigation actions for each local government jurisdiction participating in the planning process, along with a set of regional mitigation actions to be implemented by the Albemarle Hazard 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*)

No changes were made to the monitoring and evaluation process at the submission of the regional plan. However, each participating County and Town will begin a consolidated effort to monitor the Regional Plan during this planning period and provide annual status updates. Because this is a newly re-organized regional hazard mitigation plan, there was varying documentation of the last five (5) years specific to the monitoring of the county plans. The Regional plan provided a specific strategies for future updates, monitoring, and evaluation of the regional plan. The following statement from the plan adequately address the goals and plans for the future. "The Albemarle HMPC will continue to meet regularly, as determined by Gates County Emergency Management. These regular meetings will take place in the **fall** of each year so that sufficient time is available to prepare public outreach messages and assess the status of any mitigation actions relevant to the upcoming severe seasonal spring weather and the start of hurricane season. Meetings will also be convened as necessary following any disaster events warranting a re-examination of the mitigation actions being implemented or proposed by the participating jurisdictions."

The Plan addresses the requirements with respect to the following

- Status of previously recommended mitigation actions for all counties and jurisdictions
- Documentation of the former mitigation plans reviews and committee involvement;
- Identification of a lead community plan to take ownership of, and champion the Plan. In 2013, Gates County received a Pre-Disaster Mitigation (PDM) Program Grant through the North Carolina Division of Emergency Management (NCEM) for the creation of the Albemarle Regional Hazard Mitigation Plan. Per the grant agreement between NCEM and Gates County, Gates County Emergency Management will be the lead agency and will and take ownership and champion the Plan.
- An approach to evaluating future conditions (i.e. socio-economic, environmental, demographic, change in built environment etc.) was addressed in the regional plan
- Discussion of how changing conditions and opportunities could impact community resilience in the long term; and

B. Resources for Implementing Your Approved Plan

Ideas for implementation of the mitigation plan and continuing relationships through other funding sources:

Program	Details	Notes
Flood Mitigation Assistance Program (FMA)	Provides funding to implement measures to reduce or eliminate the long-term risk of flood damage http://www.fema.gov/government/grant/fma/index.shtm	States and localities
Hazard Mitigation Grant Program (HMGP)	Provides grants to implement long-term hazard mitigation measures after a major disaster declaration http://www.fema.gov/government/grant/hmgp/index.shtm	Open
National Flood Insurance Program (NFIP)	Enables property owners to purchase insurance as a protection against flood losses in exchange for state and community floodplain management regulations that reduce future flood damages http://www.fema.gov/business/nfip/	States, localities, and individuals
Pre-Disaster Mitigation Program (PDM)	Provides funds for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event http://www.fema.gov/government/grant/pdm/index.shtm	States, localities and tribal governments

Environmental Protection Agency

The EPA makes available funds for water management and wetlands protection programs that help mitigate against future costs associated with hazard damage.

Mitigation Funding Sources Program	Details	Notes
Clean Water Act Section 319 Grants	Grants for water source management programs including technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and	Funds are provided only to designated state

	regulation. http://www.epa.gov/OWOW/NPS/cwact.html	and tribal agencies
Clean Water State Revolving Funds	State grants to capitalize loan funds. States make loans to communities, individuals, and others for high-priority water-quality activities. http://www.epa.gov/owow/wetlands/initiative/srf.html	States and Puerto Rico
Wetland Program Development Grants	Funds for projects that promote research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of water pollution. http://www.epa.gov/owow/wetlands/initiative/#financial	See website

National Oceanic and Atmosphere Administration (NOAA)

NOAA is the major source for mitigation funding related to coastal zone management and other coastal protection projects.

Mitigation Funding Sources Program	Details	Notes
Coastal Services Center Cooperative Agreements	Funds for coastal wetlands management and protection, natural hazards management, public access improvement, reduction of marine debris, special area management planning, and ocean resource planning. http://www.csc.noaa.gov/funding/	May only be used to implement and enhance the states' approved Coastal Zone Management programs
Coastal Services Center Grant Opportunities	Formula and program enhancement grants for implementing and enhancing Coastal Zone Management programs that have been approved by the Secretary of Commerce. http://www.csc.noaa.gov/funding/	Formula grants require non-federal match

Coastal Zone Management Program	The Office of Ocean and Coastal Resource Management (OCRM) provides federal funding and technical assistance to better manage our coastal resources. http://coastalmanagement.noaa.gov/funding/welcome.html	Funding is reserved for the nation's 34 state and territory Coastal Zone Management Programs
Marine and Coastal Habitat Restoration	Funding for habitat restoration, including wetland restoration and dam removal. http://www.nmfs.noaa.gov/habitat/recovery/	Funding available for state, local and tribal governments and for- and non-profit organizations.

Floodplain, Wetland and Watershed Protection Programs

USACE and the U.S. Fish and Wildlife Service offer funding and technical support for programs designed to protect floodplains, wetlands, and watersheds.

Funding and Technical Assistance for Wetlands and Floodplains Program	Details	Notes
USACE Planning Assistance to States (PAS)	Fund plans for the development and conservation of water resources, dam safety, flood damage reduction and floodplain management. http://www.lre.usace.army.mil/planning/assist.html	50 percent non-federal match
USACE Flood Plain Management Services (FPMS)	Technical support for effective floodplain management. http://www.lrl.usace.army.mil/p3md-o/article.asp?id=9&MyCategory=126	See website
USACE Environmental Laboratory	Guidance for implementing environmental programs such as ecosystem restoration and reuse of dredged materials. http://el.erdc.usace.army.mil/index.cfm	See website
U.S. Fish & Wildlife Service Coastal Wetlands Conservation Grant Program	Matching grants to states for acquisition, restoration, management or enhancement of coastal wetlands. http://ecos.fws.gov/coastal_grants/viewContent.do?viewPage=home	States only. 50 percent federal share
U.S. Fish & Wildlife Service Partners for Fish and Wildlife Program	Program that provides financial and technical assistance to private landowners interested in restoring degraded wildlife habitat. http://ecos.fws.gov/partners/viewContent.do?viewPage=home	Funding for volunteer-based programs

Housing and Urban Development

The Community Development Block Grants (CDBG) administered by HUD can be used to fund hazard mitigation projects.

Mitigation Funding Sources Program	Details	Notes
Community Development Block Grants (CDBG)	Grants to develop viable communities, principally for low and moderate income persons. CDBG funds available through Disaster Recovery Initiative. http://www.hud.gov/offices/cpd/communitydevelopment/programs/	Disaster funds contingent upon Presidential disaster declaration
Disaster Recovery Assistance	Disaster relief and recovery assistance in the form of special mortgage financing for rehabilitation of impacted homes. http://www.hud.gov/offices/cpd/communitydevelopment/programs/dri/assistance.cfm	Individuals
Neighborhood Stabilization Program	Funding for the purchase and rehabilitation of foreclosed and vacant property in order to renew neighborhoods devastated by the economic crisis. http://www.hud.gov/offices/cpd/communitydevelopment/programs/neighborhoodspg/	State and local governments and non-profits

Bureau of Land Management

The Bureau of Land Management (BLM) has two technical assistance programs focused on fire mitigation strategies at the community level.

Mitigation Funding Sources Program	Details	Notes
Community Assistance and Protection Program	Focuses on mitigation/prevention, education, and outreach. National Fire Prevention and Education teams are sent to areas across the country at-risk for wildland	See website

	fire to work with local residents. http://www.blm.gov/nifc/st/en/prog/fire/community_assistance.html	
Firewise Communities Program	Effort to involve homeowners, community leaders, planners, developers, and others in the effort to protect people, property, and natural resources from the risk of wildland fire before a fire starts. http://www.firewise.org/	See website

U.S. Department

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 Require-ments
1	Camden	County					Y	Y	Y	Y	Y	
2	Chowan	County					Y	Y	Y	Y	Y	
3	Edenton	Town					Y	Y	Y	Y	Y	
4	Currituck	County					Y	Y	Y	Y	Y	
5	Dare	County					Y	Y	Y	Y	Y	
6	Duck	Town					Y	Y	Y	Y	Y	
7	Kill Devil Hills	Town					Y	Y	Y	Y	Y	
8	Kitty Hawk	Town					Y	Y	Y	Y	Y	

MULTI-JURISDICTION SUMMARY SHEET													
#	Jurisdiction Name	Jurisdiction Type (city/borough / township/ Village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Require-ments
9	Manteo	Town					Y	Y	Y	Y	Y	
10	Nags Head	Town					Y	Y	Y	Y	Y	
11	Southern Shores	Town					Y	Y	Y	Y	Y	
12	Gates	County					Y	Y	Y	Y	Y	
13	Gatesville	Town					Y	Y	Y	Y	Y	
14	**Hertford**	County					Y	Y	Y	Y	Y	
15	Ahoskie	Town					Y	Y	Y	Y	Y	
16	Cofield	Town					Y	Y	Y	Y	Y	
17	Como	Town					Y	Y	Y	Y	Y	
18	Harrellsville	Town					Y	Y	Y	Y	Y	
19	Murfreesboro	Town					Y	Y	Y	Y	Y	
20	Winton	Town					Y	Y	Y	Y	Y	
21	**Pasquotank**	County					Y	Y	Y	Y	Y	
22	Elizabeth City	City					Y	Y	Y	Y	Y	

MULTI-JURISDICTION SUMMARY SHEET												
#	Jurisdiction Name	Jurisdiction Type (city/borough / township/ Village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Require-ments
23	**Perquimans**	County					Y	Y	Y	Y	Y	
24	Hertford	Town					Y	Y	Y	Y	Y	
25	Winfall	City					Y	Y	Y	Y	Y	

Appendix E – Regional Storm History

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
EASTERN CURRITUCK (ZONE)	NC	11/22/2006	Coastal Flood		0	0	15.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	11/22/2006	Coastal Flood		0	0	15.00K	0.00K
EASTERN DARE (ZONE)	NC	11/22/2006	Coastal Flood		0	0	2.100M	0.00K
EASTERN DARE (ZONE)	NC	11/22/2006	Coastal Flood		0	0	2.100M	0.00K
EASTERN DARE (ZONE)	NC	4/16/2007	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	4/16/2007	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	5/7/2007	Coastal Flood		0	0	30.00K	0.00K
EASTERN DARE (ZONE)	NC	5/7/2007	Coastal Flood		0	0	30.00K	0.00K
EASTERN HYDE (ZONE)	NC	5/7/2007	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	11/3/2007	Coastal Flood		0	0	72.00K	0.00K
EASTERN DARE (ZONE)	NC	11/3/2007	Coastal Flood		0	0	72.00K	0.00K
EASTERN DARE (ZONE)	NC	3/8/2008	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	3/8/2008	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	9/24/2008	Coastal Flood		0	0	5.00K	0.00K
EASTERN DARE (ZONE)	NC	9/24/2008	Coastal Flood		0	0	5.00K	0.00K
EASTERN DARE (ZONE)	NC	9/25/2008	Coastal Flood		0	0	3.00K	0.00K
EASTERN DARE (ZONE)	NC	9/25/2008	Coastal Flood		0	0	3.00K	0.00K
EASTERN DARE (ZONE)	NC	11/5/2008	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	11/5/2008	Coastal Flood		0	0	0.00K	0.00K
EASTERN HYDE (ZONE)	NC	8/22/2009	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	8/22/2009	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	8/22/2009	Coastal Flood		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	11/12/2009	Coastal Flood		0	0	5.000M	0.00K
EASTERN CURRITUCK (ZONE)	NC	11/12/2009	Coastal Flood		0	0	5.000M	0.00K
WESTERN CURRITUCK (ZONE)	NC	11/12/2009	Coastal Flood		0	0	700.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	11/12/2009	Coastal Flood		0	0	700.00K	0.00K
EASTERN DARE (ZONE)	NC	11/12/2009	Coastal Flood		0	0	5.800M	0.00K
EASTERN DARE (ZONE)	NC	11/12/2009	Coastal Flood		0	0	5.800M	0.00K
EASTERN DARE (ZONE)	NC	11/27/2009	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	11/27/2009	Coastal Flood		0	0	0.00K	0.00K
EASTERN HYDE (ZONE)	NC	11/27/2009	Coastal Flood		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	12/19/2009	Coastal Flood		0	0	10.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	12/19/2009	Coastal Flood		0	0	10.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	12/19/2009	Coastal Flood		0	0	10.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	12/19/2009	Coastal Flood		0	0	10.00K	0.00K
EASTERN DARE (ZONE)	NC	12/19/2009	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	12/19/2009	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	2/10/2010	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	2/10/2010	Coastal Flood		0	0	0.00K	0.00K
EASTERN HYDE (ZONE)	NC	2/10/2010	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	2/12/2012	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	2/12/2012	Coastal Flood		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	10/28/2012	Coastal Flood		0	0	200.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	10/28/2012	Coastal Flood		0	0	200.00K	0.00K
EASTERN DARE (ZONE)	NC	3/6/2013	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	3/6/2013	Coastal Flood		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	6/1/2011	Drought		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	7/1/2011	Drought		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	8/1/2011	Drought		0	0	0.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
CAMDEN (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
GATES (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
GATES (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	7/21/2011	Excessive Heat		0	0	0.00K	0.00K
CAMDEN	NC	8/9/2005	Flash Flood		0	0	0.00K	0.00K
BELVIDERE	NC	8/9/2005	Flash Flood		0	0	0.00K	0.00K
SUNBURY	NC	10/8/2005	Flash Flood		0	0	0.00K	0.00K
MURFREESBORO	NC	6/14/2006	Flash Flood		0	0	0.00K	0.00K
STORYS XRDS	NC	6/14/2006	Flash Flood		0	0	0.00K	0.00K
HERTFORD	NC	8/30/2006	Flash Flood		0	0	0.00K	0.00K
ELIZABETH CITY	NC	8/30/2006	Flash Flood		0	0	0.00K	0.00K
AHOSKIE	NC	9/1/2006	Flash Flood		0	0	0.00K	0.00K
GATES	NC	9/1/2006	Flash Flood		0	0	0.00K	0.00K
CAMDEN	NC	9/1/2006	Flash Flood		0	0	0.00K	0.00K
CURRITUCK	NC	9/1/2006	Flash Flood		0	0	0.00K	0.00K
EDENTON	NC	9/1/2006	Flash Flood		0	0	0.00K	0.00K
ELIZABETH CITY	NC	9/1/2006	Flash Flood		0	0	0.00K	0.00K
HERTFORD	NC	9/1/2006	Flash Flood		0	0	0.00K	0.00K
SYMONDS CREEK	NC	4/21/2008	Flash Flood		0	0	0.00K	0.00K
ELIZABETH CITY	NC	7/6/2008	Flash Flood		0	0	5.00K	0.00K
LAMBS CORNER	NC	7/6/2008	Flash Flood		0	0	5.00K	0.00K
UNION	NC	6/16/2010	Flash Flood		0	0	0.00K	0.00K
AHOSKIE	NC	9/29/2010	Flash Flood		0	0	0.00K	0.00K
MURFREESBORO	NC	9/29/2010	Flash Flood		0	0	0.00K	0.00K
GATESVILLE	NC	9/29/2010	Flash Flood		0	0	0.00K	0.00K
OKISKO	NC	9/30/2010	Flash Flood		0	0	0.00K	0.00K
AHOSKIE	NC	9/30/2010	Flash Flood		0	0	0.00K	0.00K
GATES CO.	NC	6/13/2014	Flash Flood		0	0	0.00K	0.00K
RODANTHE	NC	11/5/2008	Flood		0	0	0.00K	0.00K
(ECG)ELIZABETH CITY	NC	8/27/2011	Flood		0	0	0.00K	0.00K
AHOSKIE	NC	8/27/2011	Flood		0	0	0.00K	0.00K
BELVIDERE	NC	8/27/2011	Flood		0	0	0.00K	0.00K
EDENTON	NC	8/27/2011	Flood		0	0	0.00K	0.00K
MOYOCK	NC	8/27/2011	Flood		0	0	0.00K	0.00K
SAVAGES XRDS	NC	8/27/2011	Flood		0	0	0.00K	0.00K
SOUTH MILLS	NC	8/27/2011	Flood		0	0	0.00K	0.00K
KILL DEVIL HILLS ARP	NC	5/30/2012	Flood		0	0	0.00K	0.00K
KITTY HAWK	NC	5/30/2012	Flood		0	0	0.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
DUCK	NC	7/21/2012	Flood		0	0	0.00K	0.00K
SNOWDEN	NC	8/7/2012	Flood		0	0	0.00K	0.00K
SNOWDEN	NC	8/7/2012	Flood		0	0	0.00K	0.00K
CAMDEN	NC	10/29/2012	Flood		0	0	0.00K	0.00K
CURRITUCK	NC	10/29/2012	Flood		0	0	0.00K	0.00K
WESTERN DARE (ZONE)	NC	3/23/2004	Frost/freeze		0	0	0.00K	0.00K
WESTERN HYDE (ZONE)	NC	3/23/2004	Frost/freeze		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
GATES (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
GATES (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	4/6/2004	Frost/freeze		0	0	0.00K	0.00K
SOUTH MILLS	NC	3/7/2004	Hail	0.75 in.	0	0	0.00K	0.00K
AYDLETT	NC	5/25/2004	Hail	0.75 in.	0	0	0.00K	0.00K
WANCHESE	NC	5/25/2004	Hail	0.88 in.	0	0	0.00K	0.00K
EAST LAKE	NC	5/25/2004	Hail	1.00 in.	0	0	0.00K	0.00K
MANNS HARBOR	NC	5/25/2004	Hail	1.25 in.	0	0	0.00K	0.00K
MANTEO	NC	5/25/2004	Hail	0.75 in.	0	0	0.00K	0.00K
ROCKYHOCK	NC	6/11/2004	Hail	1.75 in.	0	0	5.00K	0.00K
EDENTON	NC	6/11/2004	Hail	1.00 in.	0	0	0.00K	0.00K
GATES	NC	6/23/2004	Hail	0.88 in.	0	0	0.00K	0.00K
DUCK	NC	6/25/2004	Hail	0.88 in.	0	0	0.00K	0.00K
MOYOCK	NC	3/23/2005	Hail	1.75 in.	0	0	0.00K	0.00K
EAST LAKE	NC	3/28/2005	Hail	0.75 in.	0	0	0.00K	0.00K
KITTY HAWK	NC	3/28/2005	Hail	1.25 in.	0	0	0.00K	0.00K
WEEKSVILLE	NC	3/28/2005	Hail	0.88 in.	0	0	0.00K	0.00K
EDENTON	NC	4/23/2005	Hail	1.00 in.	0	0	0.00K	0.00K
GATES	NC	4/23/2005	Hail	0.88 in.	0	0	0.00K	0.00K
HERTFORD	NC	4/23/2005	Hail	0.75 in.	0	0	0.00K	0.00K
BELVIDERE	NC	4/23/2005	Hail	0.75 in.	0	0	0.00K	0.00K
ELIZABETH CITY	NC	4/23/2005	Hail	0.75 in.	0	0	0.00K	0.00K
SOUTH MILLS	NC	4/23/2005	Hail	0.75 in.	0	0	0.00K	0.00K
WATERLILY	NC	5/28/2005	Hail	0.88 in.	0	0	0.00K	0.00K
KILL DEVIL HILLS	NC	5/28/2005	Hail	0.75 in.	0	0	0.00K	0.00K
MANTEO	NC	6/15/2005	Hail	0.75 in.	0	0	0.00K	0.00K
ELIZABETH CITY	NC	7/2/2005	Hail	1.00 in.	0	0	0.00K	0.00K
TYNER	NC	4/3/2006	Hail	0.88 in.	0	0	0.00K	0.00K
HERTFORD	NC	4/3/2006	Hail	0.75 in.	0	0	0.00K	0.00K
ECG CST GRD AIR STN	NC	4/3/2006	Hail	1.00 in.	0	0	0.00K	0.00K
SHILOH	NC	4/3/2006	Hail	0.75 in.	0	0	0.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
MANNS HARBOR	NC	4/3/2006	Hail	0.75 in.	0	0	0.00K	0.00K
WINFALL	NC	4/3/2006	Hail	0.75 in.	0	0	0.00K	0.00K
WANCHESE	NC	5/14/2006	Hail	0.75 in.	0	0	0.00K	0.00K
MANNS HARBOR	NC	5/14/2006	Hail	0.75 in.	0	0	0.00K	0.00K
DUCK	NC	5/14/2006	Hail	0.75 in.	0	0	0.00K	0.00K
DUCK	NC	5/14/2006	Hail	0.75 in.	0	0	0.00K	0.00K
KITTY HAWK	NC	5/15/2006	Hail	0.88 in.	0	0	0.00K	0.00K
EDENTON	NC	5/26/2006	Hail	1.00 in.	0	0	0.00K	0.00K
HERTFORD	NC	5/26/2006	Hail	0.75 in.	0	0	0.00K	0.00K
CURRITUCK	NC	6/8/2006	Hail	0.88 in.	0	0	0.00K	0.00K
BARCO	NC	6/29/2006	Hail	1.00 in.	0	0	0.00K	0.00K
BELCROSS	NC	6/29/2006	Hail	0.75 in.	0	0	0.00K	0.00K
KITTY HAWK	NC	7/3/2006	Hail	0.88 in.	0	0	0.00K	0.00K
CAMDEN	NC	5/12/2007	Hail	0.75 in.	0	0	0.00K	0.00K
NAGS HEAD	NC	6/5/2007	Hail	0.75 in.	0	0	0.00K	0.00K
TUNIS	NC	6/6/2007	Hail	0.88 in.	0	0	0.00K	0.00K
STUMPY PT	NC	7/17/2007	Hail	0.75 in.	0	0	0.00K	0.00K
CURRITUCK	NC	4/12/2008	Hail	0.88 in.	0	0	0.00K	0.00K
GATES	NC	5/20/2008	Hail	1.00 in.	0	0	0.00K	0.00K
SOUTH MILLS	NC	5/20/2008	Hail	0.75 in.	0	0	0.00K	0.00K
ST JOHN	NC	5/20/2008	Hail	0.75 in.	0	0	0.00K	0.00K
WINTON	NC	5/20/2008	Hail	0.88 in.	0	0	0.00K	0.00K
SOUTH MILLS	NC	5/20/2008	Hail	0.88 in.	0	0	0.00K	0.00K
RODANTHE	NC	6/1/2008	Hail	0.75 in.	0	0	0.00K	0.00K
ROCKYHOCK	NC	6/1/2008	Hail	1.00 in.	0	0	0.00K	0.00K
CISCO	NC	6/1/2008	Hail	1.00 in.	0	0	0.00K	0.00K
BETHEL	NC	6/1/2008	Hail	1.00 in.	0	0	0.00K	0.00K
CURRITUCK	NC	6/10/2008	Hail	0.88 in.	0	0	0.00K	0.00K
CURRITUCK	NC	6/10/2008	Hail	0.75 in.	0	0	0.00K	0.00K
CURRITUCK	NC	6/10/2008	Hail	0.75 in.	0	0	0.00K	0.00K
STUMPY PT	NC	6/20/2008	Hail	0.75 in.	0	0	0.00K	0.00K
COINJOCK	NC	7/22/2008	Hail	0.88 in.	0	0	0.00K	0.00K
SPOT	NC	7/22/2008	Hail	0.75 in.	0	0	0.00K	0.00K
KITTY HAWK	NC	7/22/2008	Hail	0.75 in.	0	0	0.00K	0.00K
NAGS HEAD	NC	7/22/2008	Hail	1.00 in.	0	0	0.00K	0.00K
ELEANORS XRDS	NC	7/23/2008	Hail	0.88 in.	0	0	0.00K	0.00K
REYNOLDSON	NC	7/23/2008	Hail	0.75 in.	0	0	0.00K	0.00K
MAPLE	NC	10/1/2008	Hail	0.88 in.	0	0	0.00K	0.00K
ALDER BRANCH	NC	10/1/2008	Hail	0.88 in.	0	0	0.00K	0.00K
NAGS HEAD	NC	10/1/2008	Hail	0.75 in.	0	0	0.00K	0.00K
NAGS HEAD	NC	10/1/2008	Hail	0.75 in.	0	0	0.00K	0.00K
AHOSKIE	NC	1/7/2009	Hail	0.88 in.	0	0	2.00K	0.00K
ELEANORS XRDS	NC	4/6/2009	Hail	0.88 in.	0	0	0.00K	0.00K
ST JOHN	NC	4/6/2009	Hail	0.88 in.	0	0	0.00K	0.00K
ELIZABETH CITY	NC	4/22/2009	Hail	1.00 in.	0	0	0.00K	0.00K
KILL DEVIL HILLS ARP	NC	4/22/2009	Hail	1.75 in.	0	0	0.00K	0.00K
SUNBURY	NC	5/4/2009	Hail	1.75 in.	0	0	10.00K	0.00K
WEEKSVILLE	NC	6/9/2009	Hail	0.88 in.	0	0	0.00K	0.00K
ELIZABETH CITY	NC	6/22/2009	Hail	1.00 in.	0	0	0.00K	0.00K
ELIZABETH CITY	NC	6/22/2009	Hail	0.75 in.	0	0	0.00K	0.00K
Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage

BURGESS	NC	6/22/2009	Hail	1.00 in.	0	0	0.00K	0.00K
HERTFORD	NC	7/12/2009	Hail	1.00 in.	0	0	0.00K	0.00K
HERTFORD	NC	7/12/2009	Hail	0.88 in.	0	0	0.00K	0.00K
HERTFORD	NC	7/12/2009	Hail	0.75 in.	0	0	0.00K	0.00K
HERTFORD	NC	7/12/2009	Hail	2.00 in.	0	0	0.00K	0.00K
ELIZABETH CITY	NC	7/17/2009	Hail	1.75 in.	0	0	0.00K	0.00K
NAGS HEAD	NC	8/6/2009	Hail	0.75 in.	0	0	0.00K	0.00K
GATESVILLE	NC	5/16/2010	Hail	0.75 in.	0	0	0.00K	0.00K
MEEGE XRDS	NC	5/27/2010	Hail	1.00 in.	0	0	0.00K	0.00K
EDENTON	NC	5/27/2010	Hail	0.75 in.	0	0	0.00K	0.00K
MINTONS STORE	NC	5/27/2010	Hail	1.25 in.	0	0	0.00K	0.00K
ELIZABETH CITY	NC	10/14/2010	Hail	1.00 in.	0	0	0.00K	0.00K
HOLLY GROVE	NC	4/16/2011	Hail	1.00 in.	0	0	0.00K	0.00K
HOLLY GROVE	NC	6/10/2011	Hail	1.00 in.	0	0	0.00K	0.00K
ACORN HILL	NC	6/27/2011	Hail	1.75 in.	0	0	0.00K	0.00K
KITTY HAWK	NC	5/23/2012	Hail	0.75 in.	0	0	0.00K	0.00K
AHOSKIE JERNIGAN ARP	NC	5/23/2012	Hail	1.00 in.	0	0	0.00K	0.00K
EURE	NC	5/23/2012	Hail	1.00 in.	0	0	0.00K	0.00K
HICKORY XRDS	NC	7/9/2012	Hail	1.00 in.	0	0	0.00K	0.00K
BELVIDERE	NC	7/9/2012	Hail	1.00 in.	0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
GATES (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	7/5/2012	Heat		0	0	0.00K	0.00K
(ECG)ELIZABETH CITY	NC	10/24/2007	Heavy Rain		0	0	0.00K	0.00K
AHOSKIE	NC	10/24/2007	Heavy Rain		0	0	0.00K	0.00K
CAMDEN	NC	10/24/2007	Heavy Rain		0	0	0.00K	0.00K
CURRITUCK	NC	10/24/2007	Heavy Rain		0	0	0.00K	0.00K
EDENTON	NC	10/24/2007	Heavy Rain		0	0	0.00K	0.00K
GATES	NC	10/24/2007	Heavy Rain		0	0	0.00K	0.00K
HERTFORD	NC	10/24/2007	Heavy Rain		0	0	0.00K	0.00K
AHOSKIE	NC	9/6/2008	Heavy Rain		0	0	0.00K	0.00K
GATESVILLE	NC	9/6/2008	Heavy Rain		0	0	0.00K	0.00K
(ECG)ELIZABETH CITY	NC	12/10/2008	Heavy Rain		0	0	0.00K	0.00K
AHOSKIE	NC	12/10/2008	Heavy Rain		0	0	0.00K	0.00K
EDENTON	NC	12/10/2008	Heavy Rain		0	0	0.00K	0.00K
GATESVILLE	NC	12/10/2008	Heavy Rain		0	0	0.00K	0.00K
JOHNSONS CORNER	NC	12/10/2008	Heavy Rain		0	0	0.00K	0.00K
MOYOCK	NC	12/10/2008	Heavy Rain		0	0	0.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
(ECG)ELIZABETH CITY	NC	11/11/2009	Heavy Rain		0	0	0.00K	0.00K
CAMDEN	NC	11/11/2009	Heavy Rain		0	0	0.00K	0.00K
CURRITUCK	NC	11/11/2009	Heavy Rain		0	0	0.00K	0.00K
EDENTON	NC	11/11/2009	Heavy Rain		0	0	0.00K	0.00K
GATESVILLE	NC	11/11/2009	Heavy Rain		0	0	0.00K	0.00K
HERTFORD	NC	11/11/2009	Heavy Rain		0	0	0.00K	0.00K
MURFREESBORO	NC	11/11/2009	Heavy Rain		0	0	0.00K	0.00K
BELVIDERE	NC	3/29/2010	Heavy Rain		0	0	0.00K	0.00K
CURRITUCK	NC	3/29/2010	Heavy Rain		0	0	0.00K	0.00K
EDENTON	NC	3/29/2010	Heavy Rain		0	0	0.00K	0.00K
ELIZABETH CITY	NC	3/29/2010	Heavy Rain		0	0	0.00K	0.00K
GATESVILLE	NC	3/29/2010	Heavy Rain		0	0	0.00K	0.00K
MURFREESBORO	NC	3/29/2010	Heavy Rain		0	0	0.00K	0.00K
AHOSKIE	NC	9/29/2010	Heavy Rain		0	0	0.00K	0.00K
EDENTON	NC	9/29/2010	Heavy Rain		0	0	0.00K	0.00K
GATESVILLE	NC	9/29/2010	Heavy Rain		0	0	0.00K	0.00K
HERTFORD	NC	9/29/2010	Heavy Rain		0	0	0.00K	0.00K
MOYOCK	NC	9/29/2010	Heavy Rain		0	0	0.00K	0.00K
SOUTH MILLS	NC	9/29/2010	Heavy Rain		0	0	0.00K	0.00K
WEEKSVILLE	NC	9/29/2010	Heavy Rain		0	0	0.00K	0.00K
EURE	NC	8/29/2011	Heavy Rain		0	0	0.00K	0.00K
KILL DEVIL HILLS ARP	NC	5/30/2012	Heavy Rain		0	0	0.00K	0.00K
ELIZABETH CITY	NC	7/11/2013	Heavy Rain		0	0	0.00K	0.00K
GATES CO.	NC	5/16/2014	Heavy Rain		0	0	0.00K	0.00K
PASQUOTANK CO.	NC	5/16/2014	Heavy Rain		0	0	0.00K	0.00K
GATES CO.	NC	7/9/2014	Heavy Rain		0	0	0.00K	0.00K
PASQUOTANK CO.	NC	7/16/2014	Heavy Rain		0	0	0.00K	0.00K
CAMDEN CO.	NC	9/8/2014	Heavy Rain		0	0	0.00K	0.00K
CHOWAN CO.	NC	9/8/2014	Heavy Rain		0	0	0.00K	0.00K
CURRITUCK CO.	NC	9/8/2014	Heavy Rain		0	0	0.00K	0.00K
GATES CO.	NC	9/8/2014	Heavy Rain		0	0	0.00K	0.00K
HERTFORD CO.	NC	9/8/2014	Heavy Rain		0	0	0.00K	0.00K
PASQUOTANK CO.	NC	9/8/2014	Heavy Rain		0	0	0.00K	0.00K
PERQUIMANS CO.	NC	9/8/2014	Heavy Rain		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	4/8/2008	High Surf		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	10/17/2009	High Surf		0	0	0.00K	0.00K
EASTERN HYDE (ZONE)	NC	11/12/2009	High Surf		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	11/15/2009	High Surf		1	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	11/11/2010	High Surf		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	3/9/2013	High Surf		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	3/8/2008	High Wind	52 kts. MG	0	0	1.00K	0.00K
GATES (ZONE)	NC	1/7/2009	High Wind	72 kts. EG	0	0	2.00K	0.00K
HERTFORD (ZONE)	NC	1/7/2009	High Wind	50 kts. EG	0	0	2.00K	0.00K
EASTERN DARE (ZONE)	NC	8/3/2004	Hurricane (typhoon)		0	0	2.500M	0.00K
EASTERN HYDE (ZONE)	NC	8/3/2004	Hurricane (typhoon)		0	0	5.000M	0.00K
WESTERN DARE (ZONE)	NC	8/3/2004	Hurricane (typhoon)		0	0	0.00K	0.00K
WESTERN HYDE (ZONE)	NC	8/3/2004	Hurricane (typhoon)		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	8/14/2004	Hurricane (typhoon)		0	0	100.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
EASTERN HYDE (ZONE)	NC	8/14/2004	Hurricane (typhoon)		0	0	50.00K	0.00K
WESTERN DARE (ZONE)	NC	8/14/2004	Hurricane (typhoon)		0	0	25.00K	50.00K
WESTERN HYDE (ZONE)	NC	8/14/2004	Hurricane (typhoon)		0	0	25.00K	75.00K
EASTERN DARE (ZONE)	NC	9/13/2005	Hurricane (typhoon)		0	0	100.00K	0.00K
EASTERN HYDE (ZONE)	NC	9/13/2005	Hurricane (typhoon)		0	0	50.00K	0.00K
WESTERN DARE (ZONE)	NC	9/13/2005	Hurricane (typhoon)		0	0	0.00K	0.00K
WESTERN HYDE (ZONE)	NC	9/13/2005	Hurricane (typhoon)		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	8/26/2011	Hurricane (typhoon)		0	0	10.000M	0.00K
EASTERN HYDE (ZONE)	NC	8/26/2011	Hurricane (typhoon)		0	0	10.000M	0.00K
WESTERN DARE (ZONE)	NC	8/26/2011	Hurricane (typhoon)		0	0	5.000M	15.000M
WESTERN HYDE (ZONE)	NC	8/26/2011	Hurricane (typhoon)		0	0	5.000M	15.000M
CAMDEN (ZONE)	NC	8/27/2011	Hurricane (typhoon)		0	0	500.00K	500.00K
CAMDEN (ZONE)	NC	8/27/2011	Hurricane (typhoon)		0	0	500.00K	500.00K
EASTERN CURRITUCK (ZONE)	NC	8/27/2011	Hurricane (typhoon)		0	0	500.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	8/27/2011	Hurricane (typhoon)		0	0	500.00K	0.00K
PASQUOTANK (ZONE)	NC	8/27/2011	Hurricane (typhoon)		0	0	500.00K	500.00K
PASQUOTANK (ZONE)	NC	8/27/2011	Hurricane (typhoon)		0	0	500.00K	500.00K
WESTERN CURRITUCK (ZONE)	NC	8/27/2011	Hurricane (typhoon)		0	0	500.00K	500.00K
WESTERN CURRITUCK (ZONE)	NC	8/27/2011	Hurricane (typhoon)		0	0	500.00K	500.00K
ELIZABETH CITY	NC	8/1/2004	Lightning		0	2	0.00K	0.00K
RODANTHE	NC	6/20/2008	Lightning		0	2	0.00K	0.00K
CORAPEAKE	NC	8/10/2008	Lightning		0	0	5.00K	0.00K
DELIGHT NIXON XRDS	NC	6/9/2009	Lightning		0	0	1.00K	0.00K
DUCK	NC	7/27/2009	Lightning		1	0	0.00K	0.00K
CURRITUCK	NC	8/6/2009	Lightning		0	0	2.00K	0.00K
PASQUOTANK CO.	NC	6/19/2014	Lightning		0	0	5.00K	0.00K
CURRITUCK CO.	NC	7/10/2014	Lightning		0	0	25.00K	0.00K
NAGS HEAD	NC	8/5/2004	Rip Current		1	0	0.00K	0.00K
COROLLA	NC	9/22/2004	Rip Current		1	0	0.00K	0.00K
COROLLA	NC	9/23/2004	Rip Current		1	0	0.00K	0.00K
KILL DEVIL HILLS	NC	5/27/2005	Rip Current		1	0	0.00K	0.00K
NAGS HEAD	NC	6/22/2005	Rip Current		1	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	9/22/2006	Rip Current		1	0	0.00K	0.00K
EASTERN HYDE (ZONE)	NC	5/27/2007	Rip Current		1	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	7/1/2007	Rip Current		1	0	0.00K	0.00K
EASTERN HYDE (ZONE)	NC	7/4/2007	Rip Current		1	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	7/24/2009	Rip Current		1	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	9/18/2009	Rip Current		1	0	0.00K	0.00K
WESTERN HYDE (ZONE)	NC	8/7/2010	Rip Current		1	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	6/20/2012	Rip Current		1	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	6/26/2013	Rip Current		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	3/10/2004	Storm Surge/tide		0	0	10.00K	0.00K
EASTERN DARE (ZONE)	NC	4/3/2005	Storm Surge/tide		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	4/15/2005	Storm Surge/tide		0	0	50.00K	0.00K
EASTERN DARE (ZONE)	NC	5/6/2005	Storm Surge/tide		0	0	0.00K	0.00K
EASTERN HYDE (ZONE)	NC	5/6/2005	Storm Surge/tide		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	9/9/2007	Storm Surge/tide		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	7/20/2008	Storm Surge/tide		0	0	0.00K	0.00K
EASTERN HYDE (ZONE)	NC	7/20/2008	Storm Surge/tide		0	0	0.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
EASTERN DARE (ZONE)	NC	10/19/2008	Storm Surge/tide		0	0	10.00K	0.00K
EASTERN DARE (ZONE)	NC	9/2/2010	Storm Surge/tide		0	0	380.00K	0.00K
EASTERN DARE (ZONE)	NC	8/26/2011	Storm Surge/tide		0	0	40.000M	0.00K
EASTERN HYDE (ZONE)	NC	8/26/2011	Storm Surge/tide		0	0	0.00K	0.00K
WESTERN DARE (ZONE)	NC	8/26/2011	Storm Surge/tide		0	0	1.000M	0.00K
EASTERN DARE (ZONE)	NC	10/28/2012	Storm Surge/tide		0	0	13.000M	0.00K
EASTERN HYDE (ZONE)	NC	10/28/2012	Storm Surge/tide		0	0	100.00K	0.00K
EASTERN DARE (ZONE)	NC	6/6/2013	Storm Surge/tide		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	5/6/2007	Strong Wind	46 kts. MG	0	0	2.00K	0.00K
PASQUOTANK (ZONE)	NC	11/2/2007	Strong Wind	37 kts. MG	0	0	1.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	11/3/2007	Strong Wind	47 kts. MG	0	0	1.00K	0.00K
PASQUOTANK (ZONE)	NC	2/10/2008	Strong Wind	40 kts. MG	0	0	1.00K	0.00K
PASQUOTANK (ZONE)	NC	12/31/2008	Strong Wind	43 kts. MG	0	0	1.00K	0.00K
PASQUOTANK (ZONE)	NC	7/17/2009	Strong Wind	47 kts. MG	0	0	1.00K	0.00K
SANY CROSS	NC	3/7/2004	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
SUNBURY	NC	3/7/2004	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
EDENTON	NC	5/26/2004	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
HARRELLSVILLE	NC	6/11/2004	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
RYLAND	NC	6/18/2004	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
BELVIDERE	NC	6/18/2004	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
GATES	NC	6/25/2004	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
CAMDEN	NC	6/25/2004	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
JARVISBURG	NC	6/25/2004	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
COMO	NC	7/7/2004	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
WINTON	NC	7/7/2004	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
GATES	NC	7/7/2004	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SUNBURY	NC	7/7/2004	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
ELIZABETH CITY	NC	7/7/2004	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
POPLAR BRANCH	NC	10/15/2004	Thunderstorm Wind	52 kts. EG	0	0	5.00K	0.00K
AHOSKIE	NC	3/8/2005	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
EDENTON	NC	3/8/2005	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
HERTFORD	NC	3/8/2005	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
HERTFORD	NC	3/8/2005	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
ELIZABETH CITY	NC	3/8/2005	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
WEEKSVILLE	NC	3/8/2005	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
CAMDEN	NC	3/8/2005	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
POINT HARBOR	NC	3/8/2005	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
BELVIDERE	NC	4/2/2005	Thunderstorm Wind	50 kts. EG	1	0	5.00K	0.00K
ELIZABETH CITY	NC	4/23/2005	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
WEEKSVILLE	NC	7/20/2005	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
HERTFORD	NC	7/27/2005	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
(ECG)ELIZABETH CITY	NC	7/27/2005	Thunderstorm Wind	51 kts. MG	0	0	0.00K	0.00K
ELIZABETH CITY	NC	1/14/2006	Thunderstorm Wind	60 kts. EG	0	0	10.00K	0.00K
CAMDEN	NC	1/14/2006	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
VALHALLA	NC	4/3/2006	Thunderstorm Wind	60 kts. EG	0	0	10.00K	0.00K
HERTFORD	NC	4/3/2006	Thunderstorm Wind	60 kts. EG	0	0	15.00K	0.00K
HERTFORD	NC	4/3/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
EDENTON	NC	5/26/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
ROCKYHOCK	NC	6/7/2006	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
AHOSKIE	NC	7/28/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
ELIZABETH CITY	NC	7/28/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
BELVIDERE	NC	7/28/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
CAMDEN	NC	7/28/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
WINFALL	NC	7/28/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
GLIDEN	NC	7/28/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
HOBBSVILLE	NC	7/28/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
COINJOCK	NC	7/28/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
MOYOCK	NC	8/4/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
BELCROSS	NC	8/4/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
EDENTON	NC	8/7/2006	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
AYDLETT	NC	8/8/2006	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SOUTH MILLS	NC	7/11/2007	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
CORAPEAKE	NC	8/10/2007	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
MORGANS CORNERS	NC	8/10/2007	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
SOUTH MILLS	NC	8/10/2007	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
DELIGHT NIXON XRDS	NC	8/10/2007	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
EDENTON	NC	8/21/2007	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
HERTFORD	NC	8/21/2007	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
EDENTON	NC	2/18/2008	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
HERTFORD	NC	2/18/2008	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
ELIZABETH CITY	NC	2/18/2008	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SHILOH	NC	2/18/2008	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
COMO	NC	3/5/2008	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
EDENTON	NC	3/5/2008	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
EDENTON	NC	5/11/2008	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
EDENTON ARPT	NC	5/11/2008	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
HOLLY GROVE	NC	5/11/2008	Thunderstorm Wind	61 kts. MG	0	0	2.00K	0.00K
CURRITUCK CO ARPT	NC	5/11/2008	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
GRANDY	NC	5/11/2008	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
AHOSKIE	NC	5/20/2008	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
SOUTH MILLS	NC	5/20/2008	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
ROCKYHOCK	NC	6/1/2008	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
CISCO	NC	6/1/2008	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
BURGESS	NC	6/1/2008	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
ROCKYHOCK	NC	6/10/2008	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
ROCKYHOCK	NC	6/10/2008	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
EDENTON	NC	6/10/2008	Thunderstorm Wind	60 kts. EG	0	0	3.00K	0.00K
ELEANORS XRDS	NC	7/23/2008	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
REYNOLDSON	NC	7/23/2008	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
ST JOHN	NC	7/30/2008	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
OKISKO	NC	1/7/2009	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SNOWDEN	NC	1/7/2009	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
ELIZABETH CITY	NC	1/7/2009	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
CAMDEN	NC	1/7/2009	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
GATES	NC	1/28/2009	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
GATESVILLE	NC	1/28/2009	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
DRUM HILL	NC	5/7/2009	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
HOLLY GROVE	NC	5/7/2009	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SOUTH MILLS	NC	5/7/2009	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
TROTVILLE	NC	5/7/2009	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SOUTH MILLS	NC	6/3/2009	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
SOUTH MILLS	NC	6/3/2009	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
AHOSKIE	NC	6/9/2009	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
MURFREESBORO	NC	7/12/2009	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
COMO	NC	7/12/2009	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
HICKORY XRDS	NC	7/27/2009	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
ELIZABETH CITY	NC	7/27/2009	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
ELEANORS XRDS	NC	9/28/2009	Thunderstorm Wind	50 kts. MG	0	0	1.00K	0.00K
SNOWDEN	NC	9/28/2009	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
KNOTTS IS	NC	9/28/2009	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
EDENTON	NC	4/9/2010	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
DURANTS NECK	NC	5/16/2010	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
EDENTON	NC	5/27/2010	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
ECG CST GRD AIR STN	NC	7/17/2010	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
BURGESS	NC	7/17/2010	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
WEEKSVILLE	NC	7/17/2010	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
WEEKSVILLE	NC	7/17/2010	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
GATESVILLE	NC	7/20/2010	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SUNBURY	NC	7/20/2010	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
AYDLETT	NC	7/20/2010	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
CAMDEN	NC	7/20/2010	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
GRANDY	NC	7/20/2010	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
HASTINGS CORNER	NC	7/20/2010	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
INDIAN TOWN	NC	7/20/2010	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
LAMBS CORNER	NC	7/20/2010	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
MENOLA	NC	8/12/2010	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
DELIGHT NIXON XRDS	NC	9/27/2010	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
NEW HOPE	NC	9/29/2010	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
HAZELTON	NC	9/29/2010	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SOUTH MILLS	NC	9/29/2010	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
COMO	NC	11/17/2010	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
UNION	NC	11/17/2010	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
AHOSKIE	NC	4/5/2011	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
MURFREESBORO	NC	4/5/2011	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
VALHALLA	NC	4/28/2011	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
KNOTTS IS	NC	4/28/2011	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
LYNCHS CORNER	NC	6/10/2011	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
MORGANS CORNERS	NC	7/20/2011	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
EURE	NC	7/23/2011	Thunderstorm Wind	50 kts. EG	0	0	1.00K	0.00K
GATESVILLE	NC	7/23/2011	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
EASON XRDS	NC	5/1/2012	Thunderstorm Wind	50 kts. EG	1	0	2.00K	0.00K
ACORN HILL	NC	5/1/2012	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
ELIZABETH CITY	NC	6/1/2012	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
AYDLETT	NC	6/25/2012	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
GATES	NC	6/29/2012	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
ELIZABETH CITY	NC	6/29/2012	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
HERTFORD	NC	6/29/2012	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SOUTH MILLS	NC	6/29/2012	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
CURRITUCK	NC	6/29/2012	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SNOWDEN	NC	6/30/2012	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
EDENTON ARPT	NC	7/24/2012	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
SNOWDEN	NC	8/15/2012	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
LLOYD XRDS	NC	8/19/2012	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
EDENTON	NC	4/19/2013	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
(ECG)ELIZABETH CITY	NC	6/13/2013	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
TEXACO BEACH	NC	6/13/2013	Thunderstorm Wind	54 kts. MG	0	0	0.00K	0.00K
PERQUIMANS CO.	NC	1/11/2014	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
WATERLILY	NC	4/25/2014	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
GATES CO.	NC	6/11/2014	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
GATES CO.	NC	6/11/2014	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
CURRITUCK CO.	NC	6/19/2014	Thunderstorm Wind	50 kts. EG	0	0	10.00K	0.00K
HERTFORD CO.	NC	6/19/2014	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
CHOWAN CO.	NC	6/19/2014	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
PASQUOTANK CO.	NC	6/19/2014	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
ROCKYHOCK	NC	6/11/2004	Tornado	F1	0	0	10.00K	0.00K
NAGS HEAD	NC	8/14/2004	Tornado	F1	0	0	225.00K	0.00K
WEEKSVILLE	NC	7/29/2005	Tornado	F0	0	0	0.00K	0.00K
HERTFORD	NC	1/14/2006	Tornado	F1	0	0	25.00K	0.00K
FRISCO	NC	6/14/2006	Tornado	F0	0	0	0.00K	0.00K
RODANTHE	NC	7/15/2007	Tornado	EF0	0	0	0.00K	0.00K
NEWSOME STORE	NC	5/9/2008	Tornado	EF2	0	0	50.00K	0.00K
CANNON FERRY	NC	5/9/2008	Tornado	EF1	0	0	20.00K	0.00K
ELIZABETH CITY	NC	5/9/2008	Tornado	EF0	0	0	15.00K	0.00K
SUNBURY	NC	4/6/2009	Tornado	EF0	0	0	1.00K	0.00K
MORGANS CORNERS	NC	7/20/2010	Tornado	EF0	0	0	0.00K	0.00K
NEWSOME STORE	NC	4/16/2011	Tornado	EF2	0	3	1.000M	1.200M
NEWSOME STORE	NC	4/16/2011	Tornado	EF2	0	0	800.00K	800.00K
VIVIAN	NC	4/16/2011	Tornado	EF1	0	0	30.00K	0.00K
HARBINGER	NC	4/16/2011	Tornado	EF1	0	0	40.00K	0.00K
DUCK	NC	4/16/2011	Tornado	EF1	0	0	767.00K	0.00K
MURFREESBORO	NC	11/16/2011	Tornado	EF0	0	0	10.00K	2.00K
PASQUOTANK CO.	NC	6/1/2012	Tornado	EF0	0	0	0.00K	0.00K
WANCHESE	NC	7/30/2012	Tornado	EF0	0	0	0.00K	0.00K
WANCHESE	NC	7/30/2012	Tornado	EF0	0	0	0.00K	0.00K
RODANTHE	NC	8/19/2012	Tornado	EF0	0	0	0.00K	0.00K
EDENTON	NC	4/25/2014	Tornado	EF2	0	0	20.00K	0.00K
YEOPIM	NC	4/25/2014	Tornado	EF2	0	0	1.000M	0.00K
EDENTON ARPT	NC	4/25/2014	Tornado	EF2	1	1	500.00K	0.00K
NIXONTON	NC	4/25/2014	Tornado	EF1	0	0	100.00K	0.00K
NIXONTON	NC	4/25/2014	Tornado	EF2	0	0	500.00K	0.00K
OKISKO	NC	4/25/2014	Tornado	EF2	0	2	1.000M	0.00K
ELIZABETH CITY	NC	4/25/2014	Tornado	EF0	0	0	0.00K	0.00K
CHANTILLY	NC	4/25/2014	Tornado	EF2	0	0	100.00K	0.00K
JARVISBURG	NC	4/25/2014	Tornado	EF0	0	0	15.00K	0.00K
HERTFORD CO.	NC	7/3/2014	Tornado	EF0	0	0	25.00K	15.00K
EASTERN CURRITUCK (ZONE)	NC	8/3/2004	Tropical Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	8/3/2004	Tropical Storm		0	0	0.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
CAMDEN (ZONE)	NC	8/14/2004	Tropical Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	8/14/2004	Tropical Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	8/14/2004	Tropical Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	8/14/2004	Tropical Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	8/14/2004	Tropical Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	8/14/2004	Tropical Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	8/14/2004	Tropical Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	8/14/2004	Tropical Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	8/14/2004	Tropical Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	8/14/2004	Tropical Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	8/14/2004	Tropical Storm		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	8/31/2006	Tropical Storm		0	0	50.00K	0.00K
EASTERN HYDE (ZONE)	NC	8/31/2006	Tropical Storm		0	0	10.00K	0.00K
WESTERN DARE (ZONE)	NC	8/31/2006	Tropical Storm		0	0	10.00K	0.00K
WESTERN HYDE (ZONE)	NC	8/31/2006	Tropical Storm		0	0	10.00K	0.00K
WAYNE (ZONE)	NC	9/1/2006	Tropical Storm		0	0	0.00K	1.600M
EASTERN DARE (ZONE)	NC	9/5/2008	Tropical Storm		0	0	10.00K	0.00K
EASTERN HYDE (ZONE)	NC	9/5/2008	Tropical Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	9/6/2008	Tropical Storm		0	0	5.00K	0.00K
CAMDEN (ZONE)	NC	9/6/2008	Tropical Storm		0	0	5.00K	0.00K
CHOWAN (ZONE)	NC	9/6/2008	Tropical Storm		0	0	5.00K	0.00K
CHOWAN (ZONE)	NC	9/6/2008	Tropical Storm		0	0	5.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	9/6/2008	Tropical Storm		0	0	10.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	9/6/2008	Tropical Storm		0	0	10.00K	0.00K
PASQUOTANK (ZONE)	NC	9/6/2008	Tropical Storm		0	0	5.00K	0.00K
PASQUOTANK (ZONE)	NC	9/6/2008	Tropical Storm		0	0	5.00K	0.00K
PERQUIMANS (ZONE)	NC	9/6/2008	Tropical Storm		0	0	5.00K	0.00K
PERQUIMANS (ZONE)	NC	9/6/2008	Tropical Storm		0	0	5.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	9/6/2008	Tropical Storm		0	0	10.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	9/6/2008	Tropical Storm		0	0	10.00K	0.00K
EASTERN DARE (ZONE)	NC	9/2/2010	Tropical Storm		0	0	157.00K	0.00K
EASTERN HYDE (ZONE)	NC	9/2/2010	Tropical Storm		0	0	20.00K	0.00K
WESTERN DARE (ZONE)	NC	9/2/2010	Tropical Storm		0	0	10.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	9/3/2010	Tropical Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	9/3/2010	Tropical Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	9/3/2010	Tropical Storm		0	0	5.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	9/3/2010	Tropical Storm		0	0	5.00K	0.00K
CHOWAN (ZONE)	NC	8/27/2011	Tropical Storm		0	0	500.00K	1.000M
CHOWAN (ZONE)	NC	8/27/2011	Tropical Storm		0	0	500.00K	1.000M
GATES (ZONE)	NC	8/27/2011	Tropical Storm		0	0	500.00K	5.000M
GATES (ZONE)	NC	8/27/2011	Tropical Storm		0	0	500.00K	5.000M
HERTFORD (ZONE)	NC	8/27/2011	Tropical Storm		0	0	500.00K	14.000M
HERTFORD (ZONE)	NC	8/27/2011	Tropical Storm		0	0	500.00K	14.000M
PERQUIMANS (ZONE)	NC	8/27/2011	Tropical Storm		0	0	500.00K	1.000M
PERQUIMANS (ZONE)	NC	8/27/2011	Tropical Storm		0	0	500.00K	1.000M
EASTERN DARE (ZONE)	NC	10/28/2012	Tropical Storm		0	0	1.000M	0.00K
EASTERN HYDE (ZONE)	NC	10/28/2012	Tropical Storm		0	0	0.00K	0.00K
WESTERN DARE (ZONE)	NC	10/28/2012	Tropical Storm		0	0	0.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
WESTERN HYDE (ZONE)	NC	10/28/2012	Tropical Storm		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	6/6/2013	Tropical Storm		0	0	0.00K	0.00K
EASTERN HYDE (ZONE)	NC	6/6/2013	Tropical Storm		0	0	0.00K	0.00K
WESTERN DARE (ZONE)	NC	6/6/2013	Tropical Storm		0	0	0.00K	0.00K
WESTERN HYDE (ZONE)	NC	6/6/2013	Tropical Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	7/4/2014	Tropical Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	7/4/2014	Tropical Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	7/4/2014	Tropical Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	7/4/2014	Tropical Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	7/4/2014	Tropical Storm		0	0	10.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	7/4/2014	Tropical Storm		0	0	10.00K	0.00K
PASQUOTANK (ZONE)	NC	7/4/2014	Tropical Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	7/4/2014	Tropical Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	7/4/2014	Tropical Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	7/4/2014	Tropical Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	7/4/2014	Tropical Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	7/4/2014	Tropical Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
GATES (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
GATES (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	1/9/2004	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
GATES (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
GATES (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	1/25/2004	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
EASTERN CURRITUCK (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
GATES (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
GATES (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	2/15/2004	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
GATES (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
GATES (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	12/26/2004	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
GATES (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
GATES (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	1/30/2010	Winter Storm		0	0	0.00K	0.00K
GATES (ZONE)	NC	12/25/2010	Winter Storm		0	0	0.00K	0.00K
GATES (ZONE)	NC	12/25/2010	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	12/25/2010	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	12/25/2010	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	12/25/2010	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	12/25/2010	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	12/25/2010	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	12/25/2010	Winter Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	12/25/2010	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	12/26/2010	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	12/26/2010	Winter Storm		0	0	0.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
EASTERN CURRITUCK (ZONE)	NC	12/26/2010	Winter Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	12/26/2010	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	12/26/2010	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	12/26/2010	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	2/9/2011	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	2/9/2011	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	2/9/2011	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	2/9/2011	Winter Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	2/9/2011	Winter Storm		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	2/9/2011	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	2/9/2011	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	2/9/2011	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	2/9/2011	Winter Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	2/9/2011	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	1/21/2014	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	1/21/2014	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/21/2014	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/21/2014	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/21/2014	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/21/2014	Winter Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	1/21/2014	Winter Storm		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	1/28/2014	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	1/28/2014	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	1/28/2014	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	1/28/2014	Winter Storm		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	1/28/2014	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	1/28/2014	Winter Storm		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	1/28/2014	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/28/2014	Winter Storm		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/28/2014	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/28/2014	Winter Storm		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/28/2014	Winter Storm		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	1/28/2014	Winter Storm		0	0	0.00K	0.00K
EASTERN DARE (ZONE)	NC	2/11/2014	Winter Storm		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	12/19/2004	Winter Weather		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	12/19/2004	Winter Weather		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	12/19/2004	Winter Weather		0	0	0.00K	0.00K
GATES (ZONE)	NC	12/19/2004	Winter Weather		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	12/19/2004	Winter Weather		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	12/19/2004	Winter Weather		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	12/19/2004	Winter Weather		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	12/19/2004	Winter Weather		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	1/19/2005	Winter Weather		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	1/19/2005	Winter Weather		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	1/19/2005	Winter Weather		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	1/19/2005	Winter Weather		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/19/2005	Winter Weather		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/19/2005	Winter Weather		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	1/19/2005	Winter Weather		0	0	0.00K	0.00K
GATES (ZONE)	NC	1/20/2005	Winter Weather		0	0	0.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
HERTFORD (ZONE)	NC	1/20/2005	Winter Weather		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	1/28/2007	Winter Weather		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/28/2007	Winter Weather		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/28/2007	Winter Weather		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	1/28/2007	Winter Weather		0	0	0.00K	0.00K
GATES (ZONE)	NC	1/19/2008	Winter Weather		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	11/21/2008	Winter Weather		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	11/21/2008	Winter Weather		0	0	0.00K	0.00K
GATES (ZONE)	NC	11/21/2008	Winter Weather		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	11/21/2008	Winter Weather		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	11/21/2008	Winter Weather		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	11/21/2008	Winter Weather		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	11/21/2008	Winter Weather		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	1/20/2009	Winter Weather		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/20/2009	Winter Weather		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	1/20/2009	Winter Weather		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	2/13/2010	Winter Weather		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	2/13/2010	Winter Weather		0	0	0.00K	0.00K
GATES (ZONE)	NC	2/13/2010	Winter Weather		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	2/13/2010	Winter Weather		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	2/13/2010	Winter Weather		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	2/13/2010	Winter Weather		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	3/2/2010	Winter Weather		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	12/16/2010	Winter Weather		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	12/16/2010	Winter Weather		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	12/16/2010	Winter Weather		0	0	0.00K	0.00K
GATES (ZONE)	NC	12/16/2010	Winter Weather		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	12/16/2010	Winter Weather		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	12/16/2010	Winter Weather		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	12/16/2010	Winter Weather		0	0	0.00K	0.00K
GATES (ZONE)	NC	2/9/2011	Winter Weather		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	2/9/2011	Winter Weather		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	1/25/2013	Winter Weather		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	1/25/2013	Winter Weather		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	1/25/2013	Winter Weather		0	0	0.00K	0.00K
GATES (ZONE)	NC	1/25/2013	Winter Weather		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	1/25/2013	Winter Weather		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	1/25/2013	Winter Weather		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	1/25/2013	Winter Weather		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	1/25/2013	Winter Weather		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	2/16/2013	Winter Weather		0	0	0.00K	0.00K
GATES (ZONE)	NC	2/16/2013	Winter Weather		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	2/16/2013	Winter Weather		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	2/16/2013	Winter Weather		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	1/21/2014	Winter Weather		0	0	0.00K	0.00K
GATES (ZONE)	NC	1/21/2014	Winter Weather		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	1/21/2014	Winter Weather		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	2/12/2014	Winter Weather		0	0	0.00K	0.00K
GATES (ZONE)	NC	2/12/2014	Winter Weather		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	2/12/2014	Winter Weather		0	0	0.00K	0.00K

Location	St.	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
PERQUIMANS (ZONE)	NC	2/12/2014	Winter Weather		0	0	0.00K	0.00K
HERTFORD (ZONE)	NC	3/3/2014	Winter Weather		0	0	0.00K	0.00K
GATES (ZONE)	NC	3/3/2014	Winter Weather		0	0	0.00K	0.00K
CAMDEN (ZONE)	NC	3/3/2014	Winter Weather		0	0	0.00K	0.00K
CHOWAN (ZONE)	NC	3/3/2014	Winter Weather		0	0	0.00K	0.00K
EASTERN CURRITUCK (ZONE)	NC	3/3/2014	Winter Weather		0	0	0.00K	0.00K
PASQUOTANK (ZONE)	NC	3/3/2014	Winter Weather		0	0	0.00K	0.00K
PERQUIMANS (ZONE)	NC	3/3/2014	Winter Weather		0	0	0.00K	0.00K
WESTERN CURRITUCK (ZONE)	NC	3/3/2014	Winter Weather		0	0	0.00K	0.00K

Appendix F – Update on Hazard Mitigation Goals

CAMDEN COUNTY – UPDATE ON HAZARD MITIGATION GOALS

HURRICANE MITIGATION STRATEGY

Goal 1: Minimize the Impact of Hurricane Wind Events

Objective 1*: Improve the wind resistance of structures in the county.*

1. Continue to enforce the North Carolina Building Code. The requirement that new structures or structures undergoing significant renovation be resistant to wind loads of 110 mph. is of particular importance.
    - Update – Ongoing through county inspection department.

~~2. Educate contractors about safe housing development through written materials or during county sponsored events.~~

Objective 2*: Educate home and property owners about wind resistant measures.*

1. Provide hazard mitigation information for the county residents including information on preparedness for all hazards significant to Camden County during various public events, in public buildings, and through media outlets.
    - Update – Ongoing (information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.

2. Provide homeowners information on wind resistant measures.
    - Update – Ongoing – Ongoing via talks to Civic Groups, social media and through Planning/Inspections Departments.

Objective 3: *Maintain and publicize the Camden County hurricane evacuation route in order to facilitate evacuation to inland areas.*

1. Post information about Camden County's emergency evacuation routes.
    - Update – Information provided during various public events/educational events. Also posted to EM website and via social media.

Objective 4: *Maintain and publicize the Pasquotank – Camden – Elizabeth City County Multi-Hazard Operations plan.*

1. Review the Pasquotank-Camden-Elizabeth City Multi-Hazard Operations Plan annually and update the plan as necessary. Ensure all departments establish guidelines for response to emergencies and to maintain departmental operations. Work with County departments to ensure each department possesses a clear understanding of department responsibilities as outlined in the Pasquotank-Camden-Elizabeth City Multi-Hazard Operations Plan.

- Update – Annual update of Multi-Hazard Plan, conduct exercises with departments addressing their roles and responsibilities as outlined in the Multi-Hazard Plan.

Objective 5: ***Reduce the impact of wind on trees near county structures.***

1. Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees or branches on county property when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the community.
    - Update – Ongoing actions through maintenance.

2. Install generator switches in new construction critical facilities. As projects go through Technical Review Committee, applicants should pre-wire facilities for a generator, new construction critical facilities that would benefit from pre-wiring include but are not limited to public schools, local government facilities, adult care facilities, emergency departments, etc.
    - Update – Ongoing. Camden Sheriff's Office has installed a generator for their department.

Objective 6: ***Reduce the vulnerability of local government agencies and facilities to hurricane events.***

1. Continue efforts to develop continuity of operations plans (COOP) for county departments. Continuity of operations planning has been completed by several departments and additional planning efforts are currently underway.
    - Update – Ongoing - Completed by Camden Sheriff's Office and additional planning efforts are underway by other departments.

Objective 7: ***Reduce the time required to return the affected community to pre-storm status.***

1. Continue efforts for post-storm planning. In addition to the debris removal contract and NCDOT MOA already in place consider having pre-bid debris removal monitoring contracts in place as well. Develop a Disaster Recovery Plan that will clearly outline the responsibilities of each department/agencies following a major hurricane.
    - Update – Camden County has just completed the RFP process for a new Debris Removal Contract and Debris Monitoring Contract. A Disaster Recovery Plan has been completed.

FLOOD MITIGATION STRATEGY

Goal 1. Identify and Map Areas Flooded by Previous Floods

Objective 1: ***Record all structures within the floodplain as well as areas of repetitive losses due to flooding.***

1. Record all tax parcel information and floodplain locations in a GIS system including repetitive loss areas, areas of greatest risk, and vulnerable populations.
    - Update – Completed – Updated as needed.

2. In conjunction with NCEM/GTM, produce an up-to-date flood map of Camden County that can be utilized to reduce development in the floodplain.
    - Update – Completed – Updated as needed.

Goal 3: Minimize the Impacts of Flooding

Objective 1: ***Minimize economic and property losses due to flooding.***

1. Continued compliance with NFIP – participate in the Community Rating System (CRS).
   The National Flood Insurance Program's (NFIP) Community Rating System (CRS) allows counties and municipalities to reduce flood insurance rate premiums for citizen property owners. In order to capitalize on these reductions, counties and cities must take specific steps to improve upon the minimum floodplain management requirements of the NFIP. The CRS awards flood insurance premium discounts from 5-45% for eighteen different flood management activities that fall into the following four categories: public information, mapping and regulation, flood damage reduction, and flood preparedness. Participation in the CRS, which is contingent upon county compliance with NFIP rules, provides Camden County the opportunity to dramatically reduce flood insurance rate premiums for its residents. In order to participate, the county must designate a CRS coordinator to handle the application and serve as a liaison between the county and the Federal Emergency Management Agency. Camden County will continue to update and enforce floodplain management ordinances to minimize future flood losses by new construction, will encourage homeowners in flood zones to mitigate their properties and provide homeowners information on the NFIP. The county should take steps towards participation in the CRS.
    - Update – Continued compliance with NFIP – County does not participate in CRS

2. Camden County's 15-member stormwater advisory committee should continue its work in identifying some of the major drainage issues in the four stormwater districts. Coordination should continue with the state in regards to the state spraying program to kill alligator weed which has already been identified as a problem throughout the county; notably in Joyce Creek and Bell Ditch. Maintenance of ditches, woods and swamps is also necessary and the committee should continue their work to identify what level of maintenance is needed in these areas. The Joyce Creek Stormwater District has a 2 cents tax per $100 of land valuation to maintain the two main tributaries that feed into the creek, the committee should continue

to seek means to identify a budget to help maintain the drainage system in the remaining three districts.

- Update – Camden County has established a stormwater program and fee to conduct clearing and snagging maintenance activities on the County's major streams and ditches, and perhaps some dredging where permitted by the Army Corp of Engineers. The objective is to keep the downstream and forested areas clear of debris that impedes free flowing drainage.

Objective 2: ***Provide information to citizens on flooding preparedness.***

1. As with other hazards of concern to Camden County, hazard mitigation information should be distributed to residents, including information on preparedness for all hazards significant to its jurisdiction. The information should educate on methods of elevation and flood proofing property.
    - Update – Ongoing – Information regarding flood proofing provided via various forums.

2. Distribute information identifying flood prone areas within the county. Sixty –seven percent of Camden County is within the flood zone. Evacuation and family preparedness information should be distributed to all residents living within flood prone areas and especially to the special needs population located within these areas.
    - Update – Ongoing. EM also maintains a Special Needs Registry – evacuation and family preparedness information is made available to this population as well as the non-english speaking population in Camden County.

Objective 3: ***Work with the National Weather Service to provide early warning to the community and critical facilities***

1. Pasquotank-Camden Emergency Management Agency has been officially recognized by the National Weather Service as a NC StormReady Community. There is access to, and considerable cooperation from, local broadcast media to warn the public to the potential for flooding. Weather alert radios are also located in each school and many government agencies to provide early warning. In addition, a notification plan is in place to alert critical facilities of watches/warnings. Coordination with the NWS should continue and additional methods of disseminating early warnings to the community/critical facilities should be continually evaluated and explored.
    - Update – Ongoing (information is also disseminated via social media)

TORNADO MITIGATION STRATEGY

Goal 1: Minimize the Impacts of Tornadoes on life and property

Objective 1: *Improve the wind resistance of structures in the county.*

1. Continue to enforce the North Carolina Building Code. The requirement that new structures or structures undergoing significant renovation be resistant to wind loads of 110 m.p.h. is of particular importance.
    - Update - Ongoing through county inspection department.

~~2. Educate contractors about principles for quality redevelopment and safe housing development through written materials and county sponsored events.~~

Objective 2: *Educate home and property owners about wind proofing measures.*

1. Provide hazard mitigation information for the county residents including information on preparedness for all hazards significant to Camden County during various public events, in public buildings, and through media outlets.
    - Update – Ongoing (information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.

~~2. Provide new home and property buyers with information on wind proofing. This information may be most efficiently dispersed by the tax assessor's office because all home transactions are recorded there.~~

3. Educate mobile home contractors and owners about wind proofing measures, including wood and light steel construction connectors and anchoring systems.
    - Update - Mobile homes are only allowed in R-2 and R-1 residential zones. Single wides are permitted to be replaced on site, and moved around the county to R-1 zones or trailer parks – but are not allowed to be brought into county otherwise. All homes must meet 110 mph wind codes. Mobile homes older than 1993 when the wind regulations changed are not permitted.

Objective 3: *Reduce the impact of wind on trees near county structures.*

1. Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees or branches on county property when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the community.
    - Ongoing actions through maintenance.

Objective 4*: *Maximize Citizen Preparedness for Tornadoes.

~~1. Zoning and Subdivision Ordinances should require storm shelters in all mobile home areas and subdivisions.~~

THUNDERSTORM MITIGATION STRATEGY

Goal 1: Minimize the Impacts of Severe Thunderstorms

Objective 1: *Educate the public on the hazards of thunderstorms*

1. As with other hazards of concern to Camden County, the county should provide hazard mitigation materials to county residents for all hazards significant to Camden County. This information may be made available during various public events, in public buildings, and through media outlets.
    - Update – Ongoing (information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.

Objective 2: *Minimize the impacts of lightning strikes.*

1. Zoning ordinances should require that lightning detection devices be installed in public outdoor gathering areas such as school stadiums and ball parks.
    - Update – Funds not available.

2. Continue to educate the public on severe thunderstorm safety and the safety measures to be taken to protect from lightening injuries.
    - Update – Ongoing (information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook. Information is also shared in the Public Schools and during community meetings/trainings.

Objective 3: *Improve the wind resistance of structures in the county.*

1. Continue to enforce the North Carolina Building Code. The requirement that new structures or structures undergoing significant renovation be resistant to wind loads of 110 m.p.h. is of particular importance.
    - Update – Ongoing through county inspection department.

~~2. Educate contractors about principles for quality redevelopment and safe housing development through written materials or county sponsored events.~~

Objective 4: *Educate home and property owners about wind proofing measures.*

1. Provide hazard mitigation information for the county residents including information on preparedness for all hazards significant to Camden County during various public events, in public buildings, and through media outlets.
    - Update – Ongoing (information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.

~~2. Provide new home and property buyers with information on wind proofing. This information may be most efficiently dispersed by the tax assessor's office because all home transactions are recorded there.~~

3. Educate mobile home contractors and owners about wind proofing measures, including wood and light steel construction connectors and anchoring systems.
    - Update - Mobile homes are only allowed in R-2 and R-1 residential zones. Single wides are permitted to be replaced on site, and moved around the county to R-1 zones or trailer parks – but are not allowed to be brought into county otherwise. All homes must meet 110 mph wind codes. Mobile homes older than 1993 when the wind regulations changed are not permitted.

Objective 5: ***Reduce the impact of wind on trees near county structures.***

1. Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees or branches on county/city property when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the county.
    - Update – Ongoing actions through maintenance.

Objective 6*: Increase driving safety during thunderstorms*

1. Driving in storm conditions can create hazardous road conditions, including decreased ability for drivers to see road boundaries. To improve road visibility, reflector tape or paint along road edges and in the dividing line should be placed on all major roads throughout the county.
    - Update – As funds are available this is maintained by NCDOT.

Goal 1: Minimize Risk of Wildfires

Objective 1: **Maintain a current action plan for wildfire response.**

1. Conduct an annual review of the Pasquotank-Camden-Elizabeth City Multi-Hazard Operations Plan. Maintain current emergency contact information.
    - Update - Annual update of Multi-Hazard Plan. Emergency Management Coordinator attends annual NC Forest Service Cooperative Meeting. EM Coordinator maintains current contact information.

Objective 2: **Ensure proper access and firefighting capacity in order to effectively respond to wildfires and protect property.**

1. Continue inter-agency and multi-jurisdictional efforts to identify, contain and extinguish wildfires.
    - Update – Ongoing. NC Forestry representatives are also regular attendees at monthly Public Safety Meetings.

Objective 3: **Educate home and property owners about Wildland/Urban Interface fire safety.**

1. Educate homeowners within wildfire threat areas about Wildland/Urban Interface fire safety. Implement Firewise Program within hazard communities.
    - Update – Ongoing through local fire departments and NC Forest Service

~~Minimize the number of new structures that are built along the Wildland/Urban Interface as these structures would be particularly vulnerable to wildfire~~.

GOAL 1: Continue to improve stormwater drainage and land management preparation for flooding.					
Action Steps	***Hazard Addressed***	***Time Frame***	***Funding***	***Responsible Party***	***Status***
a. Routinely inspect and clear debris from drainage system *Priority: High*	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding	On going	County/NCDOT	NCDOT, Soil Conservation	Routinely checking
b. Create stormwater management ordinance *Priority: High*	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding	Less than 5 years	General fund	County Engineer, Planning	Complete
c. Continue stormwater drainage studies and planning for known problem areas *Priority: High*	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding	On going	Local service districts	Soil Conservation, County Engineer	Complete
d. Prepare and adopt a community-wide stormwater management master plan *Priority: High*	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding	Less than 5 years	General fund Staff Time	County Engineer, Planning	Complete
e. Find funding for public hazard mitigation *Priority: Moderate*	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding	On going	Impact Fees, Hazard Mitigation Grants	BOC, EM	Hazmit grant funds received for generators at shelters
GOAL 2: Improve traffic flow throughout Currituck County.					
Action Steps	***Hazard Addressed***	***Time Frame***	***Funding***	***Responsible Party***	***Status***
a. Continue to identify bridges for retrofitting *Priority: High*	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding, Earthquake	On going	NCDOT	NCDOT	Routinely checking
b. Evaluate congested areas on Hwy 12 and Caratoke Hwy and implement level of service standards for new development *Priority: High*	Hurricane	Less than 5 years	NCDOT	NCDOT, Planning	Complete
c. Continue road improvements (stop lights, turn/deceleration lanes, etc.)	Hurricane	On going	NCDOT	NCDOT, Planning	Routinely checking

Priority: High			New development projects		Routinely checking and making impovements
d. Continue Mid-County bridge project *Priority: Moderate*	Hurricane	More than 5 years	NC Turnpike Authority	NC Turnpike Authority, NCDOT, BOC	Project held up in Raleigh
GOAL 3: Create a more thorough hazard mitigation plan which will aid our response in all hazards.					
Action Steps	***Hazard Addressed***	***Time Frame***	***Funding***	***Responsible Party***	***Status***
a. Incorporate manmade hazards such as hazardous materials spills and terrorism *Priority: High*	All Hazards	Less than 5 years	Staff Time	Hazard Mitigation Planning Committee	Working on during this planning cycle
b. Explore regional hazard mitigation plans with surrounding counties. *Priority: Moderate*	All Hazards	More than 5 years	Hazard Mitigation Grant funds	Hazard Mitigation Planning Committee, Surrounding county officials	Working on during this planning cycle
GOAL 4: Encourage NC Building Code to strengthen building codes and incorporate those higher standards for hazard resistance to mitigate structure damage.					
Action Steps	***Hazard Addressed***	***Time Frame***	***Funding***	***Responsible Party***	***Status***
a. Send delegation to Code Council *Priority: Moderate*	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding, Winter Weather, Earthquake	Less than 5 years	Staff Time	Inspections	Incomplete
GOAL 5: Maintain participation and membership in the National Flood Insurance Program (NFIP)					
Action Steps	***Hazard Addressed***	***Time Frame***	***Funding***	***Responsible Party***	***Status***
a. Support the NC Floodplain Mapping Program in updating flood maps as needed *Priority: High*	Nor'easter, Hurricane, Severe Thunderstorm, Tornado	On going	Staff Time	Planning	Complete

GOAL 6: Continue participation in the Community Rating System (CRS) Program					
Action Steps	***Hazard Addressed***	***Time Frame***	***Funding***	***Responsible Party***	***Status***
a. Adopt appropriate land use or other regulatory polices/ordinances that assist repetitive loss properties. *Priority: Moderate*	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding, Winter Weather, Earthquake	More than 5 years	Staff Time	Planning	Complete
b. Investigate the feasibility of adopting higher standards such as freeboard and protection of critical facilities *Priority: High*	Nor'easter, Hurricane, Severe Thunderstorm, Tornado, Flooding, Winter Weather, Earthquake	More than 5 years	Staff Time	Planning	Complete
c. Develop a joint public outreach document that addresses all hazards (published by the Planning and Emergency Management Departments) *Priority: High*	All Hazards	Less than 5 years	Staff Time	Planning, Emergency Management	Incomplete
GOAL 7: Enhance existing or create new policies and ordinances that will help reduce the damaging effects of hazards on the environment.					
Action Steps	***Hazard Addressed***	***Time Frame***	***Funding***	***Responsible Party***	
a. Protect/enhance landforms that serve as natural mitigation features by promoting dune grass plantings, installation of sand fencing and other appropriate measures *Priority: High*	Nor'easter, Hurricane, Flooding, Coastal Erosion	Less than 5 years	Staff	County Manager, Planning	Incomplete
b. Retain vegetation and require buffers in areas adjacent to wetlands, water bodies and Maritime forests *Priority: Moderate*	Nor'easter, Hurricane, Flooding, Coastal Erosion	Less than 5 years	Staff	Planning, Soil Conservation	Complete
c. Direct development away from high-risk and vulnerable areas and establish redevelopment standards that decrease hazard risk *Priority: Moderate*	Nor'easter, Hurricane, Flooding, Coastal Erosion	More than 5 years	Staff	Planning	Complete
GOAL 8: Continue to educate public about how to develop and retrofit their properties against hazards.					
Action Steps	***Hazard Addressed***	***Time Frame***	***Funding***	***Responsible Party***	***Status***

a. Create an ordinance to require that all utility lines will be buried in areas of new development *Priority: Moderate*	Nor'easters, Hurricane, Severe Thunderstorm, Tornado	Less than 5 years	Staff time	Planning	Complete
b. Develop an annual household hazardous materials collection site. *Priority: High*	Flood, Extreme Heat	On going	Grant General Fund	Public Works	Complete
c. Open a permanent hazardous materials collection site *Priority: Moderate*	Flood, Extreme Heat	More than 5 years	Grant General Fund	Public Works	Incomplete
d. Encourage community participation in the Fire Wise program *Priority: High*	Wildfire	On going	Staff Time Grant	Fire Marshal	Complete
e. Encourage use of sprinkler systems in residential structures with emphasis on beach communities *Priority: Moderate*	Wildfire	On going	Staff Time Grant	Fire Marshal	Complete
f. Create fire/draught resistant plant list *Priority: High*	Wildfire, Drought	Less than 5 years	Staff	Planning	Complete
g. Provide and educate people about fire/draught resistant plant list *Priority: Moderate*	Wildfire, Drought	On going	Staff	Fire Marshal	Complete

GOAL 9: Protect the most vulnerable populations, buildings, and critical facilities through implementation of cost-effective and technically feasible mitigation actions.

Action Steps	*Hazard Addressed*	*Time Frame*	*Funding*	*Responsible Party*	*Status*
a. Survey County owned property to retrofit for hazards *Priority: High*	Nor'easter, Flood, Hurricane, Severe Thunderstorm, Tornado, Winter Weather, Wildfire, Earthquake	Less than 5 years	Staff time	Public Works	Incomplete
b. Survey County owned property to mitigate against hazards	Nor'easter, Flood, Hurricane, Severe Thunderstorm, Tornado, Winter Weather, Wildfire, Earthquake	More than 5 years	General Fund	County Engineer, Planning	Incomplete

Priority: High			Grant		
c. Establish appropriate buffers/setbacks between critical facilities and hazardous materials, operations and uses *Priority: High*	Nor'easter, Flood, Hurricane, Severe Thunderstorm, Tornado, Winter Weather, Wildfire, Earthquake	On going	Staff General Fund	County Engineer, Planning	Incomplete
d. Continue to update and maintain flood maps and other hazard maps *Priority: High*	Nor'easter, Flood, Hurricane, Severe Thunderstorm, Tornado, Winter Weather, Wildfire, Earthquake	On going	Staff	Planning, GIS	Complete
e. Update and amend County ordinances as needed *Priority: High*	Nor'easter, Flood, Hurricane, Severe Thunderstorm, Tornado, Winter Weather, Wildfire, Earthquake	On going	Staff	Planning	Complete
GOAL 10: Enhance existing or create new policies and ordinances that will help reduce the damaging effects of hazards.					
Action Steps	***Hazard Addressed***	***Time Frame***	***Funding***	***Responsible Party***	***Status***
a. Clarify and strengthen the Maritime Forest Ordinance *Priority: High*	Flooding, Drought	Less than 5 years	Staff time	Planning	Complete
b. Educate property owners and visitors on the benefits of dune grasses and vegetation preservation *Priority: Moderate*	Flooding, Drought	On going	Staff time	Tourism, PIO	Incomplete
c. Encourage clustering of residential lots outside of hazard areas in subdivision design/review and discourage development intensity and infrastructure improvements in known hazard areas *Priority: High*	Flooding, Drought	Less than 5 years	Staff time	Planning	Complete
d. Preserve natural environmental features to naturally absorb water run-off and serve as wind buffers *Priority: High*	Nor'easter, Flood, Hurricane, Tornado	On going	Staff	Planning	Complete

GOAL 11: Protect the public health, safety and welfare by increasing public awareness of hazards and by encouraging collective and individual responsibility for mitigating hazard risks.					
Action Steps	***Hazard Addressed***	***Time Frame***	***Funding***	***Responsible Party***	***Status***
a. Educate on household hazardous materials *Priority: High*	Flood, Extreme Heat, Infectious Disease	On going	Staff time	PIO, EM	Incomplete
b. Expand publications to include other languages *Priority: Low*	All Hazards	Less than 5 year	Staff time	PIO	Incomplete
c. Continue communicating with other counties about hazard mitigation *Priority: Moderate*	All Hazards	On going	Staff time	EM	Complete
d. Continue to work on requirement for a real estate disclosure statement for home buyers and renters *Priority: Moderate*	Flooding	Less than 5 years	Local real estate Staff time	BOC, North Carolina Real Estate Commissions	Incomplete
e. Evaluate effectiveness of Currituck's warning systems *Priority: High*	All Hazards	On going	Staff Time	Public Safety Depts.	Complete
f. Continue to develop Community Emergency Response Teams (CERT) *Priority: High*	All Hazards	On going	Private, Staff time	EM	Complete
g. Create curriculums for all hazards preparedness to present at community meetings *Priority: High*	All Hazards	Less than 5 years	PIO, EM	PIO, EM	Incomplete
GOAL 12: Improve technical capability to respond to hazards and to improve the effectiveness of hazard mitigation action hazard risks.					
Action Steps	***Hazard Addressed***	***Time Frame***	***Funding***	***Responsible Party***	***Status***
a. Improve radio communications throughout public safety *Priority: High*	All Hazards	Less than 5 years	Local, Grants	Public Safety Depts.	Complete
b. Maintain and improve current technology *Priority: High*	All Hazards	On going	Local/State/Federal	BOC, Public Safety Depts.	Complete

c. Provide continuous training and information for first responders in hazard response *Priority: High*	All Hazards	On going	Local Regional Grants	BOC, Public Safety Depts.	Complete
d. Improve water safety and water response *Priority: High*	Rip Currents	Less than 5 years	Local	Public Safety Depts., Property Management Companies, Realtors	Complete
e. Coordinate response to bridge incidents, most specifically the new Mid-County Bridge and Wright Memorial Bridge *Priority: Moderate*	All Hazards	Less than 5 years	Local, State	Local, State, Federal	Complete
f. Facilitate post-disaster and recovery plans with the private sector *Priority: High*	Nor'easter, Flood, Hurricane, Severe Thunderstorm, Tornado, Winter Weather, Wildfire	Less than 5 years	Staff Time	Public Safety Depts.	Complete
g. EOC/Public Safety Facility *Priority: High*	All Hazards	More than 5 years	Local, Regional Funding	Public Safety, BOC	Incomplete

Dare County Mitigation Status Update

PREVENTATIVE

Goals: 1. Improve stormwater drainage and land management preparation for flooding.
2. Assist property owners with safe and efficient clean up after storm events

Action	Hazard	Status	Comments
Identify Funding	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tide Flooding	Ongoing	Work with Dare County Soil and Water board to identify and secure grants as opportunities are available.
Identify Problem Areas	**Hurricanes, Nor'easters, Flooding, Thunderstorms, Tide** Flooding	Not Complete	No dedicated County funding for stormwater drainage plan
Prioritize and Fund Critical Drainage Projects	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Ongoing	Grants funds are secured when available to assist **homeowners with** drainage improvements
Enforce ordinance preventing fill or structures without a drainage plan	**Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal** Flooding	Ongoing/Met	Regulations from Flood Ordinances for V zone structural fill enforced as appropriate
2a Identify Available Resources	**Hurricanes, Nor'easters, Flooding, Thunderstorms, Tide** Flooding	Ongoing/Met	Resources are identified during individual storm **events**
2b Public Education	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Ongoing	Annual CRS mailing addresses drainage methods/ storm recovery
2c Fund and Implement	**Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal** Flooding	Ongoing	Storm dean-up/debris **removal activities** completed as needed after any storm event

Property Protection Goals: 3. Increase the number of properties that meet and exceed BFE.			
Action	Hazard	Status	**Comments**
3a Identify the Most Vulnerable Structures Within the County	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	Ongoing	New FIRM maps expected to be released in 2014; to be effective in 2015
3b Develop Plan	**Hurricanes, Nor'easters, Flooding, Thunderstorms,** Coastal Erosion. Tidal Flooding, Tsunami	Ongoing / Being Reviewed	Hazard Mitigation Plan scheduled for update in 201S, initial meeting with committee scheduled for early December 2013.
3c Identify Funding	**Hurricanes, Nor'easters, Flooding, Thunderstorms,** Coastal Erosion, Tidal Flooding, Tsunami	Ongoing	Additional grant funding to elevate 44 homes secured by Dare County after Hurricane Irene, work on elevation to be completed by 201S
3d Prioritize Funding	**Hurricanes, Nor'easters, Flooding, Thunderstorms,** Coastal Erosion, Tidal Flooding, Tsunami	Ongoing	Elevation of structures identified as preferred mitigation activity for grant funds.
3e Implement Plan to Reduce Potential Damage in Future	**Hurricanes, Nor'easters, Flooding, Thunderstorms,** Coastal Erosion, Tidal Flooding, Tsunami	Ongoing / Being Reviewed	Repetitive loss map/plan identified as CRS goal for 201S update
Natural Resource Protection Goals: 4. Advocate the Use of Existing (2002) State and Federal Regulatory Programs for Protecting and Preserving Coastal Wetland Areas of Environmental Concern. 5. Continue to Support the U.S. Army Corps of Engineers Permit Program.			
Action	Hazard	Status	**Comments**
4a Implementation and Enforcement of CAMA Use Standards for Coastal Wetland AECs as Identified under 1SNCAC7H, Section 020S and 0208	Hurricanes, Nor'easters, Tidal Flooding	Ongoing	Dare County works with CAMA for coastal wetlands issues
4b Continue to Administer the CAMA Local Enforcement Program and Maintain the Staff Necessary for this Work	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	Dare County continues to provide LPO assistance in unincorporated Dare County
Sa Refer Applicants to U.S. Army Corps of Engineers Permit Program, Specifically Section 404	Flooding	Ongoing	As needed for individual development projects and subdivision projects
Sb Facilitate Implementation of Permit Program for Wetland Management	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	No local wetland permit program established, continue to rely on Federal and State programs

Structural Projects Goal: 6. Improve traffic flow on NC 12 7. Protect transportation routes, including the Bonner Bridge			
Action	Hazard	Status	**Comments**
6a Two lane highway NC 12 to improve traffic flow	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	County staff works closely with NCDOT officials
6b Coordinate traffic lights to create efficient flow	Flooding	Ongoing	County staff works closely with NCDOT officials
7a Replace the Bonner Bridge	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	NCDOT working to replace bridge; lawsuits from environmental courts have resulted in delays
Public Information Goals: 8. Require Realtors to Disclose Flood Zones. 9. Enhance NFIP Information. 10. Develop Emergency Response Plan for Road/Bridge Loss. 11. Advocate for Beach Replacement. 12. Develop Educational Brochures on Additional Hazards that could Possibly Occur Within the County.			
Action	Hazard	Status	Comments
8a Develop Relations with Real Estate Community	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	As needed
8b Meet With Realtors to Coordinate Public Education Activities	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	As needed
8e Develop Floodplain Map for Public Dissemination	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Met	Flood zones on County webpage
8d Lobby State Legislators	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	As needed
8e Lobby Local Realtors Board	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	As needed
9a Circulate Brochure on NFIP	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	CRS outreach activities completed annually; brochures available in Planning offices
9b Put Flood Maps on the County's Website	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Met	Flood maps on County webpage
9c Continue to Participate in CRS Activities	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	CRS participation continues
9d Update F.I.R.M.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	New FIRM for Dare County expected to be released in 2014; effective 2015
9e Continue Storm Readiness	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	
Develop Emergency Response Plan for Road/Bridge Loss	Bridge Collapse	Ongoing	County staff works closely with NCDOT officials
la Advocate for Beach Replacement	Coastal Erosion	Ongoing	County working with NCDOT for

CRS 510 Floodplain Management
Progress Report for
Floodplain Management/Hazard Mitigation Plan

1. **Name of Plan: Dare County Multi-Jurisdictional Hazard Mitigation Plan**
Date Adopted: July 7, 2010
Location where copies are available for review: Town of Duck Administration Offices

Duck Hazard Mitigation Action Plan (Updated Items Highlighted In Yellow)

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
Preventive Goals: 1. Continue enforcement of current hazard mitigation regulations 2. Locate a regional debris removal area 3. Improve stormwater drainage in vulnerable areas 4. Preserve, protect, and enhance the Atlantic Ocean and Currituck Sound shorelines and ensure future generations are able to enjoy its beauty and bounty and can continue to use the beach and water for active and passive recreation and leisure activities 5. Reduce loss of life, property, and resources due to wildland/urban interface fires							
1a	Continue to provide funding for enforcement positions	Hurricanes, Nor'easters	General Fund	Town Council	Ongoing	High	Ongoing/met
2a	Meet with Currituck County and Southern Shores to discuss possible locations for a debris removal area	Hurricanes, Nor'easters, Thunderstorms	General Fund	Town Manager	January 2005	High	Completed (Identification of the Newbern property)
3a	Identify areas vulnerable to stormwater problems	Hurricanes, Nor'easters, Thunderstorms	General Fund	Planning Board	Ongoing	High	NCDOT drainage study completed – January 2006; additional work continues to resolve localized roadway flooding
3b	Coordinate town roles and state roles in stormwater management problems	Hurricanes, Nor'easters, Thunderstorms	General Fund	Planning Board	Ongoing	High	Same as above

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
3c	Provide funding for stormwater improvements	Hurricanes, Nor'easters, Thunderstorms	General Fund	Town Council	Ongoing	Medium (environmentally sound and technically feasible)	Town/NCDOT have completed major stormwater project on NC 12 in South Duck. Engineering has been completed to rectify localized drainage projects on other parts of NC 12 and funding is being provided in the CIP annually. Drainage Project on NC12 at Waterfront Shops/Stan White has been funded in CIP for FY 2014.
4a	Adopt and apply development policies that balance protection of natural resources and fragile areas with residential and economic development	Hurricanes, Nor'easters, Thunderstorms, Wildfire, Flooding	N/A	Town Council	Ongoing	Medium (environmentally sound and technically feasible)	Ongoing – Adopted Town Code amendments including Tree and Vegetation Preservation, Land Disturbing Activities, Beach and Dune Management, Wind and Solar Energy, Ocean and Sound Overlay, Parking, Lot Coverage, etc. Currently working on ordinances related to Stormwater Management and low-impact development.
4b	Develop policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, flooding, or sea level rise	Hurricanes, Nor'easters, Thunderstorms, Wildfire, Flooding	N/A	Town Council	Ongoing	Medium (environmentally sound and technically feasible)	Ongoing – Adoption of revised Flood Insurance Rate Maps and Flood Damage Prevention Ordinance, Local Participation in CAMA LPO program, completed enrollment in FEMA Community Rating System, Enforcement of NC State Building Code Revisions and Amendments including Wind-Borne Debris Provisions. The Town has also revised policies related to oceanfront development including additional setbacks for accessory structures, new dune walkway standards, and remedies for structures encroaching on the ocean beach.
4c	Develop location, density, and intensity criteria for new, existing development and redevelopment including public facilities and infrastructure so that they can better avoid or withstand natural hazards	Hurricanes, Nor'easters, Thunderstorms, Wildfire, Flooding	N/A	Town Council	Completed 2012	Medium (environmentally sound and technically feasible)	Ongoing – Town Code revisions including lot coverage regulations, limitations on residential dwelling size (ratio of number of bedrooms to lot area), increased setbacks for accessory structures, additional elevation requirements for V-Zone structures.

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
5a	Identify areas most at risk and investigate strategies to reduce risk from wildland/urban interface fires	Wildland/urban interface fires	N/A	Fire Department/ Town Staff	Ongoing	Medium (environmentally sound and technically feasible)	*New Action Item*
5b	Investigate how the Town of Duck can become a Firewise Community	Wildland/urban interface fires	N/A	Fire Department/ Town Council	Ongoing	Medium (environmentally sound and technically feasible)	*New Action Item*
5c	Collaborate with DVFD and the Town of Duck to educate the homeowners, developers and landscapers on designing fire safe communities.	Wildland/urban interface fires	N/A	Fire Department/ Town Council	Ongoing	Medium (environmentally sound and technically feasible)	*New Action Item*
Property Protection Goals: 6. Educate property owners on dune maintenance effectiveness 7. Develop policies and educate property owners on proper siting and coastal construction techniques 8. Encourage and promote through various methods the proper installation, use, and storage of propane							
6a	Develop dune maintenance education materials	Hurricanes, Nor'easters, Coastal Erosion	General Fund / CAMA grants	Consultant / NC Division of Coastal Management/Sea Grant	Ongoing	High	Ongoing – Town distributes information regarding proper sand fence installation techniques and native vegetation information; the Town also provides copies of the NC SeaGrant Publication "The Dune Book" upon request.
6b	Make education materials available on-line	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Duck Webmaster	Ongoing	High	Partially Complete – Town maintains links to FEMA and Division of Coastal Management websites regarding NFIP and CAMA. Additional information needs to be provided regarding coastal construction techniques, retrofitting, and anchoring of underground storage tanks.
7a	Provide information on good construction techniques for coastal communities	Hurricanes, Nor'easters	General Fund	Duck Webmaster/Town Staff	Ongoing	High	Ongoing – Provide FEMA/NC Department of Insurance publications/ resources as mentioned above.

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
7b	Develop good construction materials information	Hurricanes, Nor'easters	General Fund	Planning Board	Ongoing	High	New strategy implemented to provide existing FEMA publications to the general public via the internet and maintain an in-house library of these materials.
7c	Enroll in the FEMA Community Rating System and take advantage of the various mitigation strategies promoted by this program	Hurricanes, Nor'easters, Flooding	General Fund	Town Council/ Department of Community Development	Ongoing	High	Enrollment in the program has been completed. However, the Town continues to develop actions and strategies that will lower its CRS rating and therefore provide lower flood insurance premiums to property owners within the Town.
8a	Research the use and storage of propane	Hurricanes, Nor'easters, Flooding	General Fund	Fire Department / Planning Board	Ongoing	High	Not Complete – The Town needs to investigate the legal authority to regulate underground storage tanks since they are under the control of the NC Dept. of Agriculture.
8b	Draft a "propane" ordinance	Hurricanes, Nor'easters, Flooding	General Fund	Planning Board	Ongoing	High	Not Complete – The Town needs to investigate the legal authority to regulate underground storage tanks since they are under the control of the NC Dept. of Agriculture.

Natural Resource Protection Goals:

9. Mitigate ocean overwash and sound erosion
10. Develop and dedicate more open space
11. Support the continued management of oceanfront shoreline development to protect and preserve the natural and recreational resources along the oceanfront
12. Re-nourish and maintain the ocean beach

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
9a	Identify vulnerable areas and conditions	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Ongoing – The Town has been monitoring high oceanfront erosion areas by documenting storm damage and taking photos/video. The Town has used GIS information provided by Dare County and the North Carolina Division of Coastal Management to monitor movement of the oceanfront shoreline. Additionally, a beach erosion study has been developed for the Town by the USACOE and Coastal Planning and Engineering which documents erosion patterns and existing conditions. NCDOT in conjunction with the Towns of Duck and Southern Shores conducted a drainage study on NC 12 to determine areas vulnerable to flooding. The Town needs to develop a method to track soundside erosion.
9b	Develop public information about the uses of sand, grasses, and fences	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Completed – The Town distributes information regarding proper sand fence installation techniques and native vegetation information; the Town also provides copies of the NC Seagrant Publication, "The Dune Book", upon request.
9c	Disseminate the public information	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Ongoing – the Town maintains a database of oceanfront property owner contact information and routinely distributes information on dune planting and sand fencing, oceanfront building regulations, and efforts to re-nourish areas with eroded beaches.
10a	Identify available property for open space	Hurricanes, Nor'easters, Coastal Erosion, Wildfire	General Fund	Town Council	Ongoing	High	Ongoing – The Town has purchased an 11-acre park in the center of the Village Commercial area which is partially maintained as open space. The Town is 90 percent developed and there are few other areas available to purchase and maintain as open space. Town funds for this activity are limited. Future activities in this area will largely depend on the success of the Town in acquiring property with available grants.

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
10b	Acquire the property through donation and purchase or dedication of easements	Hurricanes, Nor'easters, Coastal Erosion, Wildfire	General Fund	Town Council	Ongoing	Medium (environmentally sound and technically feasible)	Ongoing. The Town is in the process of acquiring easements to construct an elevated soundside boardwalk. No other projects are being considered at this time.
10c	Develop and maintain the open space	Hurricanes, Nor'easters, Coastal Erosion, Wildfire	General Fund	Town Council	Ongoing	Medium (environmentally sound and technically feasible)	Ongoing. The Town drafted a Municipal Property Master Plan in 2004 in order to develop the Town Park property and this has now been completed. No other open space areas are currently being pursued for acquisition by the Town.
11a	Support programs and initiatives to annually assess shoreline changes (erosion and accretion)	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Ongoing – The Town has been monitoring high oceanfront erosion areas by documenting storm damage and taking photos/video. The Town has used GIS information provided by Dare County and the North Carolina Division of Coastal Management to monitor movement of the oceanfront shoreline. Additionally, a beach erosion study has been developed for the Town by the USACOE and Coastal Planning and Engineering which documents erosion patterns and existing conditions. The Town has enacted an additional tax to support beach management activities. It is anticipated that some of the revenue will be used in future years to collect detailed beach and dune profile information that will allow the town to track shoreline change.
11b	Develop policies to deal with encroaching development on the Town beaches.	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council/ Town Manager	September 2011	High	The Town has adopted an ordinance to limit the encroachment of structures on the beach. Additionally, new setbacks have been adopted for accessory structures such as pools and dune decks to provide additional protection to the dune system. The Town has also prohibited sandbags.

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
11c	Develop policies to preserve native dune plants and vegetation within the Town's Dune System	Hurricanes, Nor'easters, Coastal Erosion	N/A	Town Council	April 2009	High	An ordinance was adopted to prohibit destroying dune vegetation and altering dunes. The Town annually funds dune planting and sand fencing projects.
12a	Stay informed and involved relative to Federal, State, and/or regional studies and initiatives concerning beach re-nourishment and maintenance	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Ongoing. The Town participates in the annual program established by the Dare County Shoreline Commission to provide funds for beach maintenance. The Town is actively participating in a beach nourishment project in conjunction with Dare County and the Towns of Kill Devil Hills and Kitty Hawk.
12b	Work with and support efforts by CAMA concerning beach re-nourishment and maintenance	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Ongoing. The Town participates in the CAMA LPO program and issues permits for regulated beach activities. The Town has adopted a Beach and Dune Management ordinance to protect dunes and dune vegetation. The Town is currently pursuing a strategy to nourish the beach.
12c	Seek ways to ensure residents receive information and links to technical assistance from the Division of Coastal Management concerning beach re-nourishment and maintenance activities and options such as sand fencing	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Ongoing. The Town provides information and issues CAMA permits to oceanfront property owners seeking to maintain their primary and frontal dunes. The Town website is used to provide this information as well.
Structural Project Goals: 13. Build the Mid-County Bridge 14. Address localized drainage problems on NC 12							

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
13a	Lobby the NC Board of Transportation and the NC Department of Transportation and NC Turnpike Authority (resolution and letter to staff members regarding environmental studies, attendance at meetings./public hearings	Hurricanes	NC DOT	Town Council	Ongoing	High	Ongoing. The Town Council has issued several resolutions to support the construction of the Mid-Currituck Bridge and to identify the Town's preferred design alternative for the project. The Town has sent letters to NCDOT and NC Turnpike Authority Staff providing comments on the project studies that have been underway for several years. The Town frequently discusses the project at regular Town Council meetings and is kept informed of the status of the project by Town staff and residents who serve on a local committee to support construction of the bridge.
14a	Lobby the NC Board of Transportation and the NC Department of Transportation	Hurricanes	NC DOT	Town Council	Ongoing	High	Ongoing. The Town has worked with NCDOT to develop solutions to localized drainage problems on NC 12. NCDOT has completed a project to raise NC 12 in the southern portion of Town to address a flooding issue.
14b	Identify capital projects to address drainage issues on NC 12	Hurricanes, Nor'easters, Flooding	General Fund	Town Council	Ongoing	High	Engineering has been completed to rectify localized drainage projects on other parts of NC 12 and funding is being provided in the CIP annually. Drainage Project on NC12 at Waterfront Shops/Stan White has been funded in CIP for FY 2014.
Public Information Goals: 15. Develop an emergency communications network 16. Develop effective public information regarding natural hazards and disseminate to citizens 17. Communicate hurricane information to tourists 18. Improve methods to communicate with property owners in areas most vulnerable to storm damage 19. Improve Ocean and Beach Safety through public education efforts and continued training of Ocean Rescue Personnel							
15a	Maintain a roster of business owners and homeowners associations	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council	Ongoing	High	This Town is actively maintaining this information.

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
15b	Continue to research methods to disseminate information	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council	Ongoing	High	Major improvements have been made to communicate with stakeholders. Use of social media and internet based communication tools has drastically improved the town's ability to disseminate and receive information.
16a	Continue to identify who needs natural hazards information	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council	Ongoing	High	Ongoing
16b	Continue to develop/disseminate this information (dune protection, wind, erosion)	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council	Ongoing	High	Ongoing.
16c	Continue to research methods to get information to citizens	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council/Town Manager	Ongoing	High	Ongoing.
17a	Develop/disseminate hurricane information to provide to tourists	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council	Ongoing	High	Ongoing.
17b	Continue to disseminate the information through realtors and businesses	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council	Ongoing	High	Ongoing.
18a	Develop and maintain a database of contact information for oceanfront property owners where storm damage is likely to occur	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Department of Community Development	Ongoing	High	This information has been collected and is being actively maintained by the Town.
18b	Develop a method to post storm damage information on the Town website including property specific damage information	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Department of Community Development	Ongoing	High	Property specific data has been posted to the Town's website via spreadsheet as it is collected by Damage Assessment teams. Photos of general damage have been posted to Facebook and other social media outlets to provide a summary of storm impacts.
19a	Develop public education materials to educate beachgoers on beach safety (rip currents, beach holes, beach fires, etc.)	Rip Currents	General fund	Town Manager/ PIO/ Ocean Rescue	Ongoing	High	New signs have been developed for beach safety and beach rules. Additional rip current signs have been posted on rip-currents provide by NC SeaGrant.

Kill Devil Hills Hazard Mitigation Action Plan

Goals and Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Preventive **Goals: 1. Reduce damages to existing and future development** **2. Assist in maintaining a stable tax base by providing for sound use of land which may be located in storm hazard areas** **3. Continue to monitor changes in building codes and materials and research construction techniques that can mitigate storm Damage**					
Planning and Zoning – Continue to enforce the zoning ordinance and amend when necessary Ordinances were enforced and amended.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Planning Dept, Board of Commissioners, Building Inspec.	Ongoing	High
Floodplain Regulations – Provide technical assistance to customers/citizens and continue to enforce current flood hazard ordinance Customers were provided technical assistance and flood damage prevention ordinance was enforced. Difficult construction below BFE violations were corrected and others in process.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Planning Dept, Building Inspector, Board of Commissioners	Ongoing	High
Open Space Preservation – Support efforts to preserve natural areas The Town took no action other than to maintain ownership of its natural areas	Flooding, Hurricanes, Tropical Storms, Nor'easters	N/A	Planning Dept	Ongoing	High
Stormwater Management – Continue to implement the stormwater management plan. The Stormwater Management Plan Update August 8, 2011. Concepts were implemented through site plan review. Drainage projects implemented through Streets Division.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Planning Dept, Public Services	Ongoing	Medium (environmentally sound and technically feasible)
Drainage System Maintenance – Continue mowing drainage ditches and conduct normal maintenance and storm event driven maintenance. Ditch maintenance was accomplished as scheduled throughout the year as well as	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Public Services, NC DOT	Ongoing	High

Goals and Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
prior to and after storm events.					
Building Code – Monitor changes to the State Building Code and modify local regulations as necessary to minimize damage. Inspectors accomplished annual training and enforced revisions to building codes which became effective in 2012.	Flooding, Hurricanes, Tropical Storms, Nor'easters	N/A	Planning Dept, Building Inspector	Ongoing	High
Property Protection **Goal: Minimize losses associated with storm events to individual properties and provide a framework for storm event reconstruction**					
Relocation – Expedite permitting for the relocation of repetitive loss situations. No repetitive loss relocation opportunities were presented.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Planning Dept	Ongoing	Low
Acquisition – Encourage repetitive loss properties to consider acquisition as a possible solution. The Town took no action other than outreach efforts.	Flooding, Hurricanes, Tropical Storms, Nor'easters	NC Division of Emergency Management, FEMA	Planning Director, Board of Comm.	Ongoing	Low (environmentally sound and technically feasible)
Building Elevation – Continue enforcing the base flood elevation requirement of the Town's Flood Damage Prevention Ordinance. The Town continued to enforce FDPO requiring documentation for new construction and additions to existing structures.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Asst Planning Director, Building Inspector	Ongoing	High
Insurance – Maintain outreach efforts and continue making flood insurance available to the Town's residents. The Town continued its outreach efforts to educate citizens about flooding, flood insurance and the Biggert-Waters Insurance Reform Act of 2012 and Grimm Waters Act of 2014.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Planning Dept, Town Clerk	Ongoing	High

Goals and Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Dune and Beach Maintenance – Continue ongoing beach nourishment efforts. The Town contracted an engineering consultant to provide engineering support and permitting services and offshore sand search for beach renourishment.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund, US Army Corps of Engineers	Planning Director, Board of Comm.,	Ongoing	High
Natural Resource Protection **Goal: Preserve and restore natural areas while maintaining the function of the floodplain**					
Wetlands Protection – Continue to utilize the zoning ordinance and the Land Use Plan to protect wetlands. The Town continued implementation of the zoning ordinance and Land Use Plan to protect wetland areas.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	US Army Corps of Engineers, Planning Dept, NCDENR	Ongoing	High
Coastal Barrier Protection – Continue to support coastal barrier protection efforts by the State. The Town continued to support the State's coastal barrier protection by educating public on these efforts.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	N/A	CAMA, Planning Dept	Ongoing	High
Erosion and Sediment Control – Continue to enforce local and state regulations. The Town continued to participate and enforce Erosion and Sediment Control Ordinance through plan approvals, site inspections and reporting to the State.	Flooding, Coastal Erosion	General Fund	Planning Dept	Ongoing	High
Areas of Environmental Concern (AECs) – Support local CAMA officer with compliance efforts within the AECs. The Town continued to participate, remain active, train and implement the CAMA Local Permit Officer Program.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	CAMA LPO	Ongoing	High

Goals and Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Surface Water Quality – Preserve surface water quality and enhance water quality through stormwater management and zoning. The Stormwater Management Plan Update was implemented through site plan review (zoning). The update has a greater focus on water quality and includes strategies to preserve and enhance water quality.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Planning Dept, Public Services	Ongoing	Medium (environmentally sound and technically feasible)
Maritime Forest Environmental Zoning District – Continue to enforce the Maritime Forest Environmental Zoning District. The Town continued to enforce the Maritime Forest Environmental District Ordinance (Zoning) to preserve the Town's maritime forest.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Wildfire	General Fund	Planning Dept	Ongoing	High
Emergency Services **Goals: 1. Facilitate a safe and efficient evacuation and, where possible, reduce damage** **2. Promote rebuilding and reconstruction in a prompt and orderly manner** **3. Minimize prolonged business interruption, especially involving businesses providing critical supplies and services** **4. Restore the community by minimizing difficulties in continuation of essential public and private services**					
Flood Warning – Facilitate evacuation The Town continued to coordinate and participate with the Dare County Control Group in event of evacuation.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Dare County Control Group	Ongoing	High
Flood Response – Coordinate efforts to expedite reconstruction and rebuilding efforts in cooperation with Dare County Emergency Management staff. The Town continued to coordinate and participate with the Dare County Emergency Management staff and Town staff.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms,	General Fund	Planning Dept	Ongoing	High

Goals and Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Flood Recovery – Coordinate efforts to expedite recovery. The Town continued to coordinate efforts within its organization and with state and local agencies.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms	General Fund	Board of Commissioners, Planning Dept	Ongoing	High
Critical Facilities Protection – Take appropriate actions to prevent and/or minimize damages to critical facilities. The Town continued to train for preparedness, response and recovery and to protect critical facilities by utilizing shutters on windows of Town buildings. Accomplished scheduled maintenance of Town drainage ditches.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	General Fund	Police, Fire & Rescue, Public Works, NC Dominion Power	Ongoing	High
Health and Safety Maintenance – Develop ongoing protocols to assure the maintenance of critical public services. Town Departments were exercised and trained for preparedness, response and recovery.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	General Fund	Police, Fire & Rescue, Public Works, Dare County Emergency Management	Ongoing	Medium (environmentally sound and technically feasible)
Structural Projects **Goal: Implement flood control measures to protect people and property and assure continuation of essential public services**					
Reservoirs – 1. Continue protection efforts concerning the Fresh Pond. The Town continued to support Fresh Pond AEC although it is no longer used as a potable water source. 2. Maintain liaison with NC Division of Coastal Management concerning the development of the Kill Devil Hills Land Use Plan. The Town continued progress on update of its comprehensive Land Use Plan for review and approval by the Coastal Resources	Flooding, Hurricanes, Tropical Storms, Nor'easters, Winter Storms	General Fund	Planning Dept, CAMA	Ongoing	High

Goals and Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Commission.					
Stormwater Management – Continue to implement the stormwater management plan. The Stormwater Management Plan Update August 8, 2011. Concepts were implemented through site plan review.	Flooding	General Fund	Public Services	Ongoing	Medium (environmentally sound and technically feasible)
Beach Nourishment – Encourage beach nourishment as a storm protection measure and search for funding. The Town contracted an engineering consultant to provide engineering support and permitting services and offshore sand search for beach renourishment.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	Town of Kill Devil Hills and Dare County	Board of Commissioners, Dare County Commissioners	Ongoing	High
Public Information Goal: 1. **Inform and advise property owners and visitors about potential damage from flooding** 2. **Use the Town's website to disseminate hazard mitigation information**					
Map Information – Maintain updated flood map information for citizens and customers. The Town continued to maintain updated flood maps and provided information to citizens through public outreach and customers.	Flooding, Hurricanes, Tropical Storms, Nor'easters	NC Division of Emergency Management	NC Division of Emergency Management, Planning Dept	Ongoing	High
Library – Compile and maintain current information in the Kill Devil Hills Floodplain Management Library. The Town continued to maintain current information in the Floodplain Management Library. The Town began scanning old documents to maintain and enhance digital archives.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	CRS Coordinator	Ongoing	Medium (cost-effective and technically feasible)

Goals and Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Technical Assistance – Continue to utilize technical assistance from state and federal agencies and private consultants to provide appropriate technical assistance to citizens and customers. The Town continued to utilize outside resources to provide high level of service to its citizens.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	N/A.	Building Inspector, Planning Dept.	Ongoing	High
Outreach Projects – 1. Initiate outreach projects to inform the public on Town and County initiatives that will reduce hazard related losses of property and life. The Town continued annual outreach projects though joint mailings, public library and Town website. 2. Work with print, radio, and television media to effectuate outreach efforts in cooperation with Dare County and neighboring municipalities. The Town provided printed information and continues to air a hurricane awareness video for television and provided web site updates for its citizenry.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	General Fund	CRS Coordinator	Ongoing	High

CRS 510 Floodplain Management 2014 Progress Report for Floodplain Management /Hazard Mitigation Plan

TOWN OF KILL DEVIL HILLS Hazard Mitigation Plan - Adopted July 12, 2010
Copies available for review at the Kill Devil Hills Planning Department

Review of Action Plan

Action Plan review is below in red text

Implementation

Most action items found in the plan were implemented in the past year. Following is a discussion on why some objectives were not fully implemented:

Open space preservation – The Town was unable to secure more open space in the floodplain due to budgetary concerns, however was able to maintain existing inventory of open space. The Town established a committee to study the remaining 41 acres of open space on the Baum Tract.

Relocation/acquisition of repetitive loss properties - The Town was unable to relocate or acquire repetitive losses due to budgetary limitations however relocation or elevation of structures was encouraged.

Compile and maintain current information in the Kill Devil Hills Floodplain Management Library – Archives Flood Maps have been scanned and are stored on the Town server which is regularly backed up. All elevation Certificates received to date have been scanned and cataloged in laser fiche in the Planning Department. This is a useful tool for citizens and staff.

Recommendations

No recommendations are included for new or revised projects.

Dissemination

The 2014 Progress Report will be submitted to the Kill Devil Hills Board of Commissioners, October 13, 2014 and released to the media and public on that date.

September 16, 2014

Memorandum

To: Planning Board

From: Meredith Guns, Assistant Planning Director

Subject: 2014 Progress Report for Floodplain Management/Hazard Mitigation Plan

Attached is a progress report on action items in the Town's Hazard Mitigation Plan. As you may recall, the Town joined the county in a multijurisdictional Hazard Mitigation Plan in 2010. Our plan is an appendix of the Dare County Plan. To maintain Town participation in the National Flood Improvement Program/Community Rating System, the action items outlined in the plan must to be reviewed yearly. The progress report reviews each action item outlined in the plan including accomplishments for the year. This report also analyzes implementation of the action items and provides recommendations for new projects or new objectives for the upcoming year.

In order to meet the requirements of the CRS, the progress report must be reviewed in an open meeting, released to the media and available to the public each year.

No action is required on this item.

October 13, 2014

Memorandum

To: Debbie Diaz, Town Manager

From: Greg Loy, Planning Director

Subject: 2014 Progress Report for Floodplain Management/Hazard Mitigation Plan

Attached is a progress report on action items in the Town's Hazard Mitigation Plan. As you may recall, the Town joined the County in a multijurisdictional Hazard Mitigation Plan in 2010. Our plan is an appendix of the Dare County Plan. To maintain Town participation in the National Flood Insurance Program/Community Rating System, the action items outlined in the plan must be reviewed yearly. The progress report reviews each action item outlined in the plan including accomplishments for the year. This report also analyzes implementation of the action items and provides recommendations for new projects or new objectives for the upcoming year.

In order to meet the requirements of the CRS, the progress report must be reviewed by the Board of Commissioners in an open meeting, released to the media and made available to the public each year.

No action is required on this item.

October 13, 2014

Memorandum

To: Media and Public

From: Bryan Brightbill, Planner

Subject: 2014 Progress Report for Floodplain Management/Hazard Mitigation Plan

Attached is a progress report on action items in the Town's Hazard Mitigation Plan. As you may recall, the Town joined the County in a multi-jurisdictional Hazard Mitigation Plan in 2010. Our plan is an appendix of the Dare County Plan. The progress report reviews each action item outlined in the plan including accomplishments for the year. This report also analyzes implementation of the action items and provides recommendations for new projects or new objectives for the upcoming year.

Progress Report for
Town of Kitty Hawk
Hazard Mitigation Plan

Date of Plan Adoption: October 5, 2009
(later incorporated into the Dare County HMP)

REVIEW OF THE ACTION PLAN/IMPLEMENTATION

This section includes a review of each recommendation in the action plan, including a statement on how much was accomplished during the previous year. This section also includes a discussion on why any objectives were not reached or why implementation is behind schedule.

1. PREVENTIVE GOALS

- **GOAL: Pursue beach and dune renourishment as funding becomes available.**

  Action: Implement beach and dune renourishment projects as funding becomes available.

  Responsible Person: Town Council, Public Works Department
  Completion Date: Ongoing
  Funding: Federal & State Grants/Programs, County Shoreline Management Commission
  Prioritization: High

  STATUS: The Town of Kitty Hawk is actively proceeding with efforts to design, permit, and fund beach/dune renourishment. In 2013, Dare County agreed to provide $250,000 toward the costs of completing preliminary studies, design, and permitting for beach renourishment. Kitty Hawk spent $22,454 to hire an engineering consultant to prepare a beach management conceptual plan that was presented at the Town Council meeting on September 3, 2013. In 2013, the Town entered into an agreement with Dare County to help fund the planned beach renourishment project. The County committed over $13.5 million toward this project.

  In January 2014, The Town entered into a $619,773 contract with an engineering consultant to conduct studies, design, engineer, and obtain permits to implement a beach renourishment project along the entire Kitty Hawk oceanfront. The Town is scheduled to consider the adoption of special tax districts to help fund projects relating to beach renourishment and stormwater damage reduction in the Fall of 2014.

  In 2008-09, the Town of Kitty Hawk installed sand fencing on the primary oceanfront dune along nearly three miles of beach. The installation of sand fence and vegetation allows windblown sand to accumulate and form dunes. The Town's Public Works Department has maintained and repaired the sand fencing when damaged by storms.

During 2013, it is estimated that approximately one-half mile of the sand fencing was repaired or replaced following storms.

To supplement public efforts to maintain the primary dunes, the Town has distributed educational materials to the public (including copies of *The Dune Book*) and makes "Stay off the Dune" signs available to oceanfront property owners.

- **GOAL: Resolve identified stormwater drainage issues.**

  Action: Implement stormwater drainage improvements per the studies/plan.

  Responsible Person: Town Manager, Public Works Department
  Completion Date: Ongoing
  Funding: General Fund, State Transportation Funds
  Prioritization: High

  STATUS: In 2011, the Town of Kitty Hawk and N.C. Department of Transportation jointly funded a stormwater management plan that identifies areas prone to significant flooding and offers recommendations for improving stormwater drainage issues in each of these areas. A key component of the plan is the identification of specific projects and funding sources for the potential solutions.

  In 2012, the Town hired an engineering consultant to complete more detailed specifications and begin the permitting process for installation of drainage improvements in seven (7) of the areas facing stormwater drainage issues. Officials from the Town and the consultant met with state environmental permitting agencies and received approval to implement a series of temporary stormwater pumping systems to be used in the immediate aftermath of storms causing significant flooding.

  The Town of Kitty Hawk has subsequently submitted requests for grant assistance with the design, permitting, and construction of these projects. The more fiscally manageable projects have been reviewed on an annual basis and funding incorporated into the Town's budget and 5-year Capital Improvements Plan. In September 2013, the Town spent $26,759 to construct the first of the stormwater pumping systems in the Hawks Street area. In May 2014, the second stormwater pumping system was completed in the area of Poseidon/Goosander Streets at a cost of $77,426.

  The stormwater management plan and results of similar, past studies have been shared with the N.C. Department of Transportation (NCDOT). The Town has requested NCDOT's assistance with the construction of identified improvements affecting State maintained streets and highways.

  Following a meeting with Governor Pat McCrory, the Town of Kitty Hawk is also pursuing approval to construct a series of three ocean outfalls to help alleviate stormwater drainage issues. The Town retained an engineering consultant to prepare a preliminary study on potential ocean outfalls. This study was presented to the Town Council in July

2013. Further studies and permitting are on hold pending the identification of a funding source for the outfall projects. The Town is in discussions with NCDOT as a funding partner, as the outfalls would relieve significant flooding issues on N.C. Highway 12.

- **GOAL: Revise storm preparedness, response & recovery plan.**

Action: Revise the storm preparedness, response, and recovery plan for Kitty Hawk.

Responsible Person: Town Manager, All Town Departments, Town Council
Completion Date: Ongoing
Funding: General Fund
Prioritization: High

STATUS: The Town of Kitty Hawk's Storm Preparedness, Response, and Recovery Plan is reviewed annually and updated as needed. The Town Manager completed the most recent review and update with input from all department heads in May 2014. Updates were presented to the Town Council in June 2014.

All required employees from every Town department have completed NIMS and ICS training to improve emergency response.

2. PROPERTY PROTECTION

- **GOAL: Reduce individual property owners' losses.**
- **GOAL: Find cost effective solutions.**
- **GOAL: Streamline damage assessment procedures.**

Action: Educate homeowners on various mitigation techniques and resources available to them.

Responsible Person: Planning & Inspections Department
Completion Date: Ongoing
Funding: General Fund
Prioritization: High

STATUS: The Planning & Inspection Department advises contractors, homeowners, and other interested parties on the flood damage mitigation techniques and available resources on a daily basis. Staff also provides FEMA technical bulletins, fact sheets, the Coastal Construction Manual, and important website information to homeowners interested in mitigation techniques. Detailed outreach brochures that include information on hurricane preparations, flood insurance, and how to obtain information about hazard mitigation techniques are mailed to all property owners twice a year. The Town also makes information available to the public on the Town's website and through articles published in the Town's newsletter (sent every month).

Building Inspector Dennis Speight attended a damage assessment training workshop in May 2012. Based on his information, the Planning & Inspections Department has implemented improvements in the process and accuracy of its damage assessment estimates. In July 2013, the department debuted new damage assessment forms that allow for more accurate and detailed information to be provided in the field.

Action: Provide information to homeowners on how to individually hazard-proof their own homes.

Responsible Person: Planning & Inspections Department
Completion Date: Ongoing
Funding: General Fund
Prioritization: High

STATUS: The Planning & Inspections Department advises homeowners and other interested parties on ways to hazard-proof their homes. Staff also provides FEMA technical bulletins, fact sheets, and important website information. Detailed outreach brochures that include information on hurricane preparations, flood insurance, and how to obtain information about hazard mitigation techniques are mailed to all property owners twice a year. The Town also makes information available to the public on the Town's website and through articles published in the Town's newsletter (sent every month).

During the permitting process, homeowners are given information about flood insurance, flood vents, flood resistant materials, and the location of the required flood protection elevation in relation to proposed first floor. In addition, the building inspector reviews house plans for compliance with the Town's adopted Flood Damage Prevention Ordinance and N.C. Building Codes, then makes recommendations for improvements or compliance as needed. At the completion of a project, homeowners are given information about flood insurance and flood damage prevention. Planning & Inspection Department staff members also make site visits when requested to assist property owners in complying with the Flood Damage Prevention Ordinance and N.C. Building Codes.

Action: Encourage homeowners to conduct an inventory of their assets to assist with damage claims.

Responsible Person: Planning & Police Departments
Completion Date: Ongoing
Funding: General Fund
Prioritization: High

STATUS: Through day-to-day interaction (by phone and in person), Town staff encourages property owners in a special flood hazard areas (SFHA) to inventory their assets. Detailed outreach brochures mailed twice a year also inform property owners about flood insurance for their assets. In addition, the Police Department speaks at

several homeowners association meetings a year and encourages residents to inventory their assets in case of significant storm damage or burglary.

3. NATURAL RESOURCE PROTECTION

- **GOAL: Educate citizens about the importance of open space and natural resource protection.**

  Action: Educate citizens about dune vegetation.

  Responsible Person: Public Works & Planning Departments
  Completion Date: ongoing
  Funding: General Fund
  Prioritization: High

  STATUS: Planning staff has written articles that appear in the bi-weekly Town newsletter explaining the importance and function of sand dunes. Staff has also developed a brochure that explains how to install and maintain sand fencing in order to help dunes grow. In addition, a list of vendors that sell dune grasses and copies of *The Dune Book* have been compiled for property owners interested in maintaining their dunes. All the above information has been added to the Town's website.

  As part of the development of the second phase of Sandy Run Park, the Town of Kitty Hawk worked with the N.C. Coastal Reserve to install interpretive signs that explain many of the natural features and processes that occur within local beaches and the Kitty Hawk Woods Coastal Reserve.

- **GOAL: Promote dune and beach renourishment and support local actions.**

  STATUS: The Town of Kitty Hawk continues to participate in the on-going efforts to pursue beach and dune renourishment. In 2005, a Shoreline Management Commission was formed to oversee and advocate the preservation and restoration of shorelines in Dare County. The Commission is comprised of elected officials from the county and municipal governments in Dare County.

  The Town of Kitty Hawk is actively proceeding with efforts to design, permit, and fund beach/dune renourishment. The Town recently entered into a contract with an engineering consultant to conduct studies, design, engineer, and obtain permits to implement a beach renourishment project along the entire Kitty Hawk oceanfront. The Town is scheduled to consider the adoption of special tax districts to help fund projects relating to beach renourishment and stormwater damage reduction in the Fall of 2014.

  As part of these efforts, the Town Council has held numerous public meetings during which it discussed a variety of alternatives and requested public input. To date, the Town

has received comments from dozens of property owners and residents regarding beach renourishment. The Town Council will be holding a special public hearing in the Fall of 2014 to receive comments about the special tax district proposal. Plans and updated information about the beach renourishment efforts have been posted regularly on the Town's website and included in the Town's monthly newsletter.

- **GOAL: Establish a hazard mitigation plan, a disaster preparedness plan, and a storm reconstruction/recovery plan.**

  Action: Establish town plans for mitigation and recovery through information on disaster planning, recovery, and reconstruction.

  Responsible Person: Town Council, All Town Departments
  Completion Date: Ongoing
  Funding: General Fund
  Prioritization: High

  STATUS: In 2009, Town Council approved an updated Hazard Mitigation Plan that has been incorporated into the multi-jurisdictional Dare County Hazard Mitigation Plan. The Town of Kitty Hawk's Storm Preparedness, Response, and Recovery Plan is reviewed and updated annually. The most recent updates were presented to the Town Council in June 2014. This plan establishes policies and guidance for storm preparedness, response, recovery, and mitigation operations. It outlines a system for the coordinated and efficient use of Kitty Hawk's resources to preserve the health, safety, and welfare of people and the condition of properties during hazard-related situations. The plan also details the authority and responsibilities for each of the Town's departments during a storm/emergency event.

- **GOAL: Maintain the existing stormwater drainage system including all waterways, ditches, and canals.**

  Action: Clean out culverts, ditches, and waterways to relieve standing water and facilitate stormwater drainage.

  Responsible Person: Town Manager, Public Works Department
  Completion Date: Ongoing
  Funding: General Fund, State Grants, NCDOT
  Prioritization: High

  STATUS: In Fall of 2005, the Planning Department collaborated with Dare County to have canals and waterways cleared of debris. This project was funded through grants. The Public Works Department also cleans out culverts on an as needed basis. The Town has worked with the N.C. Department of Transportation to clean and maintain culverts under NCDOT roadways. More consistent debris removal has been challenging due to a lack of funding, limited manpower, and private ownership of many drainage ditches and canals.

- **GOAL: Closely monitor beach erosion.**

  Action: Collect beach erosion information annually.

  Responsible Person: N.C. Division of Coastal Management
  Completion Date: Ongoing
  Funding: N.C. Division of Coastal Management, FEMA
  Prioritization: High

  STATUS: The Town monitors beach erosion before and after every storm to ensure public safety and document damage to public and private property. The Town also provides a CAMA Local Permit Officer to serve as a resource for local residents. FEMA and the N.C. Division of Coastal Management conduct studies and provide the Town with updated flood zone and erosion rate maps. The Town has been informed that updated flood maps for Dare County may be available as soon as the Fall of 2014.

4. EMERGENCY SERVICES

- **GOAL: Improve public safety during and after a storm event.**

  Action: Update and improve the protocols and procedures (local, county, and state) by which the citizens in Kitty Hawk are made aware of impending storm events and expected impacts.

  Responsible Person: Town Council, Dare County Emergency Management
  Completion Date: Ongoing
  Funding: General Fund, Dare County
  Prioritization: High

  STATUS: Both the Town of Kitty Hawk and Dare County update their Storm Preparedness, Recovery, and Response plans annually. Citizens are notified of any storm threats, storm preparations, recommended and required evacuations by television, radio, Town and County websites, special editions of the Town's newsletter, and door-to-door visits by the Fire Department.

  Action: Work with the Dare County Control Group to prepare the provision of needed equipment and services to persons and businesses in need of assistance.

  Responsible Person: Town Council, All Town Departments, Dare County Emergency Management
  Completion Date: Ongoing
  Funding: General Fund, Dare County
  Prioritization: High

STATUS: The Town of Kitty Hawk annually enters into contracts with private individuals and companies to provide necessary equipment and assistance in recovery efforts to supplement other resources. The Town of Kitty Hawk also participates in the N.C. Statewide Mutual Aid Agreement. By entering into this agreement, the Town is able to access additional resources from other municipalities, counties, and the state. The Town also has representation on the Dare County Control Group as well as the County's Coordination Group.

Action: Define procedures and practices to maintain critical facilities and services to the maximum extent possible during and after a storm event.

Responsible Person: Town Council, All Town Departments
Completion Date: Ongoing
Funding: General Fund
Prioritization: High

STATUS: The Town's Storm Preparedness, Response, and Recovery Plan outlines the authority and responsibilities of each of the Town's departments during a storm/emergency event. The plan describes a system for the efficient use of Kitty Hawk's resources necessary to preserve the health, safety, and welfare of people affected during storm related emergencies. Several of the procedures and practices the Town implements prior, during, and after storm events include: securing all critical and Town owned facilities, securing an amateur ham radio operator, back-up all important files that will be needed after the storm event and place in a secure location, testing generators at all Town departments, locating "TOD" army trucks at designated points in the Town, stationing Fire and Police vehicles and equipment at higher elevations to prevent flooding or damage, and having personnel stay on-site to ensure proper staffing after storm events.

5. STRUCTURAL PROJECTS

- **GOAL: Pursue beach and dune renourishment.**

Action: Implement beach and dune renourishment projects as funding becomes available.

Responsible Person: Town Council
Completion Date: Ongoing
Funding: Federal & State Grants/Programs
Prioritization: High

STATUS: The Town of Kitty Hawk is actively proceeding with efforts to design, permit, and fund beach/dune renourishment. In 2013, Dare County agreed to provide $250,000 toward the costs of completing preliminary studies, design, and permitting for beach renourishment. Kitty Hawk spent $22,454 to hire an engineering consultant to prepare a beach management conceptual plan that was presented at the Town Council meeting on

September 3, 2013. In 2013, the Town entered into an agreement with Dare County to help fund the planned beach renourishment project. The County committed over $13.5 million toward this project.

In January 2014, The Town entered into a $619,773 contract with an engineering consultant to conduct studies, design, engineer, and obtain permits to implement a beach renourishment project along the entire Kitty Hawk oceanfront. The Town is scheduled to consider the adoption of special tax districts to help fund projects relating to beach renourishment and stormwater damage reduction in the Fall of 2014.

In 2008-09, the Town of Kitty Hawk installed sand fencing on the primary oceanfront dune along nearly three miles of beach. The installation of sand fence and vegetation allows windblown sand to accumulate and form dunes. The Town's Public Works Department has maintained and repaired the sand fencing when damaged by storms. During 2013, it is estimated that approximately one-half mile of the sand fencing was repaired or replaced following storms.

- **GOAL: Raise roadways above the expected flood levels.**

  Action: Encourage the N.C. Department of Transportation to elevate Kitty Hawk Road to Kitty Hawk Landing.

  Responsible Person: Town Council, NCDOT
  Completion Date: Ongoing
  Funding: NCDOT
  Prioritization: High

  STATUS: As part of the previously referenced studies, the Town of Kitty Hawk has identified this area as a location that is prone to frequent flooding. The Town has also presented the results of the studies to NCDOT and requested NCDOT's assistance in completing identified improvements along W. Kitty Hawk Road, which is a State maintained street. In the fall of 2009, the Town was successful in having this project placed on the regional Traffic Improvement Program (TIP) list. According to NCDOT officials, funding is not currently available for the entire project. In 2012, NCDOT completed paving and road elevation improvements along a short stretch of W. Kitty Hawk Road.

6. PUBLIC INFORMATION

- **GOAL: Inform property owners about hazard mitigation.**

  Action: Maintain updated flood map information for citizens and customers.

  Responsible Person: Planning Department, N.C. Div. of Emergency Management
  Completion Date: Ongoing

Funding: General Fund
Prioritization: High

STATUS: Kitty Hawk has adopted a Public Information Plan that outlines the many ways that the Town provides information to local residents, businesses, and property owners about risks of flooding and other natural hazards, as well as the opportunities to prevent or minimize damage during these situations. This plan is reviewed, updated, and many of its recommendations implemented on an annual basis.

The Planning & Inspections Department maintains a thorough library of current/past flood maps, brochures, and other flood/emergency preparedness resource materials as a public resource. Updated information is provided on the Town's website about flood damage prevention, emergency preparedness, and links to related information. Information about flooding risks, flood damage prevention, and emergency evacuation is also provided on the local public cable channel.

Every year, the Town sends out two (2) outreach project informational brochures (Spring/Fall) to all property owners about flooding risks and flood damage prevention. The latest of these was mailed in April 2014. The Town also works with local rental realty companies to distribute information to visitors about emergency preparedness and evacuation procedures. In recognition of National Flood Awareness Week, the Town Council adopted a resolution declaring March 16-22, 2014 as Flood Safety Awareness Week in Kitty Hawk.

- **GOAL: Improve communication with other government agencies and the media.**

Action: Initiate outreach projects to inform the public on Town and County initiatives that will reduce hazard related losses of property and life.

Responsible Person: Planning & Inspections Department, Management Assistant
Completion Date: Ongoing
Funding: General Fund
Prioritization: High

STATUS: The Town annually reviews and updates its Public Information Strategy with a committee made up of representatives from local real estate companies, insurance companies, and Town employees. Outreach efforts over the past year have included mailing out two public informational brochures to all property owners, sending letters to owners of repetitive loss properties, adding website information and links, posting information at Town Hall, distributing information by hand to local businesses, and proclaiming a Flood Awareness Week.

Twice annually, the Planning & Inspections Department disseminates a newsletter to property owners with information on the local flood (and other) hazards, flood warning system, storm preparations, flood insurance, various property protection measures, substantial improvements, development work that requires permits, drainage system

maintenance, and the purpose and benefits of floodplains. The Eastern Albemarle Regional Library system also maintains information on coastal construction, flood proofing, retrofitting, and other mitigation measures.

Working in cooperation with Dare County's Emergency Management and Public Information departments, the Town's Management Assistant distributes a variety of safety information through the local media (radio, television, email, websites, newspaper, etc.) in the days leading up to, during, and in the aftermath of significant storms.

Manteo Mitigation Status Update

G. Hazard Mitigation Goals NO CHANGES

The town of Manteo views the Hazard Mitigation Plan as an opportunity to protect its citizens and the local economy. The Mitigation Advisory Committee set forth specific goals as a way to grasp this opportunity. They are as follows:

1. Reduce loss of life and personal injury from natural hazards
2. Minimize the damage to public infrastructure resulting from natural and manmade hazards
3. Manage future development so that vulnerability of private property to natural and manmade hazards is reduced
4. Expedite post-disaster clean-up, repair, and construction.
5. Protect the fragile natural and scenic areas located along our shoreline.
6. To preserve and protect key facilities and services from the threat of terrorists or others wishing to damage, destroy or contaminate public assets.

H. Community Capability Assessment

The Town has a very small staff and therefore is limited in its capabilities. The mitigation strategies chosen are financially feasible and appropriate to meet the needs and capabilities of the Town.

Participation in the National Flood Insurance Program's (NFIP) Community Rating System (CRS) has been occurring from the program's inception in 1973. The Town has achieved a class 8 rating. This has been accomplished by continuing the Town's commitment to reduce property damage and save lives while facilitating development of our Town in accordance with Local, State, and Federal Regulations. The Town along with Dare County are now recognized as a StormReady Community.

In addition to the Town's CRS program there are some existing and proposed policies, programs, and ordinances that may affect the Town's vulnerability to hazards. The following documents were identified:

- Town of Manteo Subdivision Ordinance
- Town of Manteo Zoning Ordinance
- Dare County Comprehensive Plan
- Town of Manteo Flood Damage Prevention Ordinance

I. Mitigation Efforts in Place

A summary of existing policies used by the Town is as follows:

<u>Rising Water</u>

1. The National Weather Service monitors and reports rainfall and stream gauges to predict flooding
2. Local TV stations have state-of-the-art equipment to predict and accurately report weather. They are able to pinpoint specific geographic areas. There is a special audible alert that precedes weather advisories.
3. Manteo joins with Dare County in lobbying the state to update the FIRMS. The updated maps are anticipated to be published in Spring of 2015.
4. Manteo participates in the CRS program and is taken measure to improve the class 8 rating.

5. Manteo's zoning ordinance Article 26 establishes specifications for construction in flood hazard areas to minimize flood damage
6. Property owners are provided advice through site visits to property to review flooding, drainage and related problems.
7. Homeowners are advised on retrofitting techniques.
8. State buffer rules are enforced to improve the quality of storm water runoff. The Town also implemented a stormwater management ordinance to help mitigate the effects of development on surrounding properties and to encourage new and existing development to treat stormwater on site.
9. Town removes debris as soon as possible after a flood event.
10. The Town manages and cleans stormwater catch basins, and culverts, pipes and ditches on a regular basis to allow for flood water to recede as quickly as possible.
11. The Town adopted a 3% tax spefically to address stormwater management issues. The entire stormwater system was mapped and the Town has begun an aggressive replacement program to addressed aged and undersized pipes in the stormwater system.

Winds

1. The National Weather Service monitors and reports wind speeds and storm conditions.
2. Local TV stations have state-of-the-art equipment to predict and accurately report weather. They are able to pinpoint specific geographic areas. There is a special audible alert that precedes weather advisories.
3. The Town removes debris as soon as possible after the event. The town has a contingency contract for expeditious removal of storm debris.
4. Manufactured homes must meet Category 3 hurricane standards.
5. The town uses social media and the town website to warn the public of flooding do to winds.

Winter Storms

1. The National Weather Service monitors and reports winter storms.
2. Local TV stations have state-of-the-art equipment to predict and accurately report weather. They are able to pinpoint specific geographic areas. There is a special audible alert that precedes weather advisories.

Terrorism

1. Lock all facilities when staff is not present.
2. Alarms are in place to monitor sewage and water facilities.
3. Manteo Police Department is linked to the Dare County Law Enforcement System.
4. Manteo Police have attended in-service training and are current in terrorist training.

J. Implementation Strategies for Manteo

As this plan was formed it was reliant on a few main strategies that the county already employs. Those strategies are as follows:

1. The county's Emergency Operations Plan. This plan includes evacuation procedures and response to hazards included in this plan and those listed in Dare County's Plan.
2. Its storm hazard mitigation policies provided in the most recent Dare County Coastal Management Act (CAMA) Land Use Plan and in the 2007 Manteo CAMA Land Use Plan.
3. Maintain elevation certificate information in hard copy format to be provided by Manteo upon request.

The Town of Manteo also has some implementation strategies that it wishes to use. These include:

A. Making use of Dare County's flood plain, parcel data, and aerial photographs in digital format. The county should be capable of overlaying these coverages on its Geographic Information System (GIS)
B. Ensure that Manteo maintains documents about flood insurance, flood protection, flood plain management, and the natural and beneficial functions of flood plains.
C. Assist local real estate agents with information handouts that will advise potential buyers to investigate the flood hazard for the property they are considering purchasing.
D. Send a flood protection flyer to all property owners in Manteo through a community news letter, utility bill or other document. The flyer would include a general identification of the local flood hazard, flood safety, flood insurance, property protection, flood plain development permit requirements, and drainage system maintenance.
E. Continue to stay current with all Community Rating System reporting requirements to ensure continued program participation.
F. Continue our policy controlling the development of critical public facilities in the 100-year flood plain in cases where viable alternatives exist.
G. Continue to actively pursue state and federal grant funds to assist in the hazard mitigation recommendations included in the plan.
H. Continue to encourage projects undertaken by the Manteo Police Department, Fire-Rescue-EMS, Public Works, and Planning Departments that will lessen the vulnerability of the Town and its residents to natural hazards. When projects are found to address hazard mitigation, the availability of state and federal grant funds should be investigates that may assist the Town with the cost
I. Continue to enhance the Water and Sewer Department's back-up generator system as well as continued and expanded use of SCADA, which allows for remote monitoring of all sewer lift stations.
J. Mayor and other council members to participate in Dare County's Emergency Management training sessions.

~~K. Continue to Acquire and maintain back-up generators for lift stations and to supply electricity to critical Town facilities during periods of power outage.~~

L. Continue to maintain ditching along streets to facilitate drainage

M. Continue to use the Vac Truck to effectively clean all stormwater catch basins, pipes and culverts.

N. Continue to update and use the existing Manteo Police Emergency Plan

O. The Town Planner to file for grant applications,

P. Building inspector /Planner to enforce Town codified ordinances which include NFIP approved Flood Ordinance

Q. Public Works Director to have regularly scheduled maintenance of storm water system

R. The Town Planner will actively research and identify mitigation initiatives for grant applications and establish target dates for completion.

NAGS HEAD STATUS UPDATE

Updates since 2010 - 2013 are in red while updates for 2013-2014 are in blue for Commissioners

V. MITIGATION GOALS AND VALUES

The primary objective of the Town of Nags Head related to hazard mitigation is to reduce to the extent possible, damage to life and property from hurricanes, severe coastal storms, and the other hazards identified in this plan. To support this objective, the Town pursues the following goals and mitigation strategies:

1. Reduce damage to property through policies, ordinances, operational procedures, and infrastructure that reflect careful consideration of mitigation planning efforts.

2. Enhance the safety of, and service to, the public through pre- and post-storm communications, policies and procedures and the Incident Command System.

3. Develop and maintain infrastructure and critical facilities that have a low-vulnerability to hazard induced damage. Coordinate with staff of critical medical facilities to ensure safe evacuation as necessary.

4. Seek methods to protect existing structures from storm-related damage through hazard mitigation efforts and enforcement of Town floodplain, zoning and building regulations, as well as enforcement of all CAMA regulations in accordance with CAMA rules and the Local Permitting Officer Program.

5. Provide public education opportunities and information regarding storm preparedness, hazard mitigation and planning initiatives.

6. To minimize the loss of life and property due to flooding by;
    a. Minimizing the impact of flooding to life and property to include buildings, critical facilities and infrastructure.
    b. Pursue flood mitigation projects in repetitive flood areas to improve stormwater management.
    c. Continue coordinated efforts with outside agencies to maintain, repair, and improve infrastructure servicing repetitive flood areas.

VI. MITIGATION STRATEGIES AND POLICIES

The 2004 Plan provides background on the development of mitigation strategies and policies originally developed. The following policies and strategies were updated from that original Plan using information provided from a review of the 2010 Hazard Mitigation Plan by Town Department Heads. Updates are developed based on the following criteria.

- Cost vs. Benefits
- Staffing capability
- Local, State, and Federal political climate
- Funding sources (internal and external)
- Effectiveness in satisfying mitigation goals

- Third party participation

A. Beach Nourishment

1. Background

Islands have a dynamic and ever-changing environment. Barrier islands have been shown to migrate, and are subject to a complex and numerous sets of natural forces, e.g., overwash processes, littoral drift, inlet formation, and dune and beach dynamics. They are further modified by storms and hurricanes. Coastal erosion, as a result of normal offshore littoral patterns, the occurrence of hurricanes and storms, and the general sea level rise which has been occurring (Titus, 1985), make development along the shores of barrier islands particularly tenuous.

In other localities, problems have arisen by allowing the construction of immovable buildings along the ocean shore, necessitating the expenditure of public funds to protect these structures when natural forces threaten them. Several methods have been used to stabilize the ocean beach. Primary among them are: (1) sand moving programs, e.g., beach nourishment, sand pushing; (2) sand trapping structures, e.g., groins, jetties; and artificial reefs, and (3) shoreline protection works, e.g., bulkheads, seawalls, revetments.

Beach nourishment programs involve efforts to push or place sand onto the beach in an attempt to build back former dunes and upper beach. Beach nourishment projects are typically expensive and the results are temporary and often require continual nourishment. A single nor'easter may eliminate much of the sand deposited under a nourishment program. Beach nourishment programs, however, represent efforts to preserve oceanfront property without damaging neighboring property or destroying the public's use of the beach.

Groins and jetties are structures built perpendicular to the shoreline. Jetties are often very long and intended to keep sand from filling in inlets and shipping channels. Groins are smaller and attempt to trap sand flowing in the littoral current. Such structures are expensive, unsightly and cause extensive erosion problems down-current, as they rob these beach areas of the natural sand replenishment they would normally receive. So far the State of North Carolina has not supported the establishment of such structures along our Coast, however, there is currently discussion at the state level to introduce consideration of such structures at key areas along the Coast, including South Oregon Inlet.

Shoreline protection works, such as seawalls and revetments, are built parallel to the coastline and are designed to directly shield shoreline property from the ocean forces. The City of Galveston, Texas, for instance, has constructed a 17-foot high seawall, which protects its urban area. Such structures, however, reflect wave action, and intensify currents that steepen the profile of the beach and damage the property beyond the ends of the structure. In the long run these structures serve to destroy or seriously undermine the beach, require continual maintenance and investment, and are largely ineffective in protecting property from shoreline processes without perpetual nourishment of the beach seaward of the hardened shoreline. Moreover, these structures are extremely costly to build. The Coastal Resources Commission, recognizing the inappropriateness of shore-hardening devices such as wooden bulkheads, seawalls, rock or rubble revetments, jetties, groins and breakwaters, has prohibited their use on North Carolina ocean beaches and restricted their use in other areas such as the Sound. The Town of Nags Head defers to Coastal Area Management Agency regulations for such requests.

On the oceanfront, several actions can result in the destruction or removal of homes. Houses can be destroyed by storms or erosion or they can be relocated either on the same lot or off the lot. Tracking the fate of oceanfront houses can be problematic. If the house is moved either on the same lot or off the lot, the Town will issue a permit. If the house is condemned (for lack of septic or building code problems), the Town will also issue a permit for its removal. These properties can soon become a public nuisance and it is often difficult to require their removal. Town records reveal that there have been approximately 96 houses moved from the oceanfront or demolished from 1987 through 1996, 44 houses relocated on the same lot, and 56 properties listed as "washouts" on the Dare County tax listing. A "washout" represents a property where the building no longer exists and in all likelihood was destroyed by a storm or erosion. Since the Veterans Day Storm, the Town has facilitated the relocation or demolition of 17 homes. Most of the building permit activity for destroyed homes or relocated structures has occurred in South Nags Head.

Since 1989, the US Army Corps of Engineers has been conducting studies to determine the feasibility of constructing a federal Hurricane and Storm Damage Prevention Berm on portions of the northern beaches of Dare County.

These studies have: (1) determined the value of land development along the oceanfront, (2) the cost of constructing such a project, (3) the supply of recoverable, compatible sand available, and (4) the benefit cost ratio between berm construction costs and the value of oceanfront and near ocean structures that would be protected by such a berm.

Three sections of the northern beaches have been identified as meeting the standards for federal appropriations. Virtually all of Nags Head is included within this identified project area. The costs for initial construction of the entire Dare County project are estimated at approximately 70 million dollars. Previous nourishment projects have been funded 65 percent by the federal government, with the remaining 35 percent coming from state and local sources. The federal beach nourishment study was completed in the fall of 2000. At the time this document was written originally, easements were acquired for the first phase of the project.

Since that time, the Town carried out a successful beach nourishment project. The nourishment project performed very well during Hurricane Sandy in 2012, with the Town sustaining minimal damage, while ocean front areas to the north and south of Nags Head sustaining significant damage.

The Town anticipated renourishing the beach within six years of initial construction. The Town is currently conducting planning efforts to complete the renourishment. This project will be completed by Spring of 2017.

2. Beach Nourishment Funding

The Town supports beach nourishment projects for the Town beaches subject to commensurate funding appropriations from federal, state and local sources. The Town will support and encourage the establishment of a statewide beach management strategy and policy along with a dedicated funding program designed for beach restoration and nourishment projects.

Implementing actions.

The Town will actively lobby the State for a state policy and strategy on beach nourishment and beach renourishment. Timetable A: Board Of Commissioners, Planning,

Administration: The Town received required permits in late 2010. The beach nourishment project was completed in October 2011.

The Town will lobby the State to establish an annually state funded statewide nourishment program. Timetable A: Town Managers Office, Planning. In 2005, Dare County enacted an increase in the general sales tax devoted to beach nourishment. Although it was repealed in 2006 the Town currently receives interest payments from the fund. The Town uses the funds for Town wide sand fencing projects.

The Town will seek funding from local and regional sources to assist with the local match for federally funded beach nourishment projects. Timetable A; Town Managers office, Planning. In 2005, Dare County enacted an increase in the general sales tax devoted to beach nourishment that was repealed in 2006. In 2008, the Town established a beach nourishment fund. In 2009, the Town applied for a Water Resources grant that was not funded. Because of the lack of financial assistance from federal and state government, Nags Head raised taxes in 2011 to help pay for the $36 million nourishment project.

The Town shall request authorization to extend any ocean outfall, which will be affected by any renourishment project. Timetable D: Public Works, Planning. The Town's CAMA permit for Beach Nourishment was modified to permit the extension of the outfalls to be affected by the widened beach. Three outfalls were extended as part of the project.

3. Beach Nourishment-General

The Town recognizes beach nourishment as our preferred alternative for addressing the impacts from barrier island migration and ocean erosion. However, the Town also supports a variety of methods to abate the impacts to ocean erosion; these include but are not limited to: acquisition of threatened structures, relocation of threatened structures, and the establishment of innovative technology or designs which may be considered experimental, which can be evaluated by the CRC to determine consistency with 15A NCAC 7M .0200 and the other general and specific use standards within the CAMA rules.

Implementing actions

The Town will sponsor studies designed to determine the financial contribution the beach makes to the Outer Banks and the region. Timetable D: Administration, Planning. In 2006, the Town established a committee to address this. December-January 2007 the committee presented a recommendation to the Board of Commissioners. A Town referendum was held April 17, 2007 and failed to gain enough support for passage.

Following a severe storm the Town shall consider purchasing land in damage prone areas. Timetable A: Planning, Administration. In 2013 the Town purchased an oceanfront piece of property in South nags Head to be used for public beach access.

B. Mitigation and FEMA

Mitigation represents a proactive approach to reducing the vulnerability of risk to properties in the Town. The Town will investigate innovative programs and seek funds for mitigation measures such as relocation of threatened structures and more stringent building codes for high hazard areas that support the growth management policies of the Town.

Implementing actions.

The Town shall consider the applicability of requiring "V Zone" structural certification for structures in the 100-year (A) flood zone. Timetable D: Planning. New flood maps were adopted September 20, 2006: No additional action needed as the new flood maps addressed the Town's concerns.

The Town will consider establishing a committee comprised of a cross section of interests to explore and make recommendations to the Board of Commissioners regarding amendments to our Flood Ordinance which address freeboard and other flood mitigative measures recognized by FEMA and the CRS program to reduce flood loses. Timetable C: Board of Commissioners. 2006: The model flood ordinance was reviewed by staff; the Town's Planning Board and the Board of Commissioners and was modified to address higher regulatory standards and adopted on September 20, 2007. In November, 2014 the Town adopted language within the existing Flood Damage Prevention Ordinance to require a one foot (1') freeboard.

The Town shall support the continued education and training of the Town's Building Inspectors and planning staff in inspections and mitigation activities. Timetable A: Planning. 2011: Inspectors attend periodic training workshops and have increased training as a result of BCEGS.

The Town will actively work with FEMA and the State during the Statewide floodplain mapping project. Timetable A: Planning. The new flood maps were adopted September 20, 2006. The Town anticipates the release of draft maps in Spring of 2015 and will actively work to provide comments and data to FEMA in support of map implementation.

The Town shall develop a program to identify businesses and material storage areas where significant amounts of toxic or hazardous products are stored which would be subject to flooding. Timetable C: Public Safety, Public Works. Through annual fire prevention inspections, Nags Head Fire staff evaluates and determines protection of toxic or hazardous products stored in areas prone to flooding.

The Town shall develop regulations to require fuel tanks, including LP tanks to be adequately anchored to prevent flotation or submersion in the event of flooding. Timetable D: Public Safety, Planning. All new LP tank installations must met the current building code.

The Town will continue to identify properties in repetitive loss areas and will continue to inform property owners in these areas of flood mitigation actions they can take to reduce flood losses. Timetable A: Planning. The Town informs repetitive loss property owners of yearly retrofitting workshops held in the fall or winter.

The Town shall participate in the Community Rating System program by continuing the following CRS credit activities: Timetable A: Planning. The Town is actively training on the 2013 CRS manual in preparation for its 2015 five year cycle visit.

Table 9. CRS Credit Activities

Activity	Description of Activity
310	Elevation certificates
320	Map determinations
330	Outreach projects
340	Hazard disclosure

Activity	Description of Activity
350	Flood protection library
360	Flood protection assistance
410	Additional flood data
420	Open space preservation
430	Higher regulatory standards
440	Flood data maintenance
450	Stormwater management
510	Repetitive loss projects
530	Retrofitting
540	Drainage systems maintenance
610	Flood warning program
630	Dam safety

C. Post Storm Mitigation

The time period after a storm is a critical time to ensure that all Town regulations are adhered to and that the area is safe for visitors to return. This time period is also an opportunity to utilize current building codes and available regulations to mitigate future damage potential.

Implementing actions.

Following a severe storm or hurricane, reconstruction will be evaluated for compliance with the adopted zoning ordinance, CAMA regulations, and all other applicable local, state and federal regulations. Timetable A: Planning. This is an ongoing endeavor.

D. Recovery and Operations

Intergovernmental cooperation and employee safety are essential components for a safe recovery. Effective communication of policies and procedures among Town Staff and to residents and property owners is crucial to strengthen the reentry and recovery process.

Implementing actions

On issues of mutual concern, the Town shall coordinate recovery and post storm response activities with Dare County, the State of North Carolina, and the Federal Government. Timetable A: All Town Departments. The Town participates in preparedness meetings such as the VA/NC hurricane meeting and hurricane recovery exercises with adjacent jurisdictions (mutual aid).

During a hurricane the Town maintains a staff of essential personnel and elected officials within Town Hall, using the Town Hall building as the Emergency Operations Center of "EOC." When available the Town shall consider acquiring or building a command facility. Essential components may include a mobile radio transmission tower, satellite internet capability and enhanced telephone service. Timetable A: All Departments. The Town has established the former Outer Banks Medical Center facility as a backup EOC. In 2006 the Town acquired a mobile command center. In 2012 the Town acquired and installed a HAM radio Tower for use during emergency events.

Following a hurricane the Town shall establish an information center staffed with Town, State and Federal employees who are available to assist property owners in the reentry

and recovery process. Timetable A: Mayor, Manager, Planning, Administrative Services. The Town has established areas and identified personnel to carry out the above as part of the ICS Plan. In addition, the Town's public information officer participates in a county wide Joint Information Section, an integral part of the ICS.

Following a declared emergency storm event, only those areas where damage assessment is complete and that have been declared relatively secure shall be open to the public. Timetable A: Public Safety, Planning. Material, staffing and procedures have been identified to carry out this task.

The Town leases space to mobile phone service providers on the Town's two water tanks. Cellular phone service provides an essential form of communication after a storm. The Town shall consider requiring cellular phone service providers to structurally design their tower mounted equipment to withstand greater wind loads than is required by the State building code. Timetable (when leases expire): Administration, Town Managers Office. The Town enforces the State Building Code. A new fire alarm control panel was also installed and fire alarm service completed in the Town's emergency command center.

The Town shall identify and implement methods to streamline the damage assessment process. This may include collection of damage assessment data utilizing handheld GIS units. This shall also include methods to expedite the availability of damage and condemnation information to Town staff and the public. Timetable C: Planning. The Town's equipment used to collect digital information in the field proved unreliable in the field and will be discontinued. The Planning and Development Department's installation of Blue Prince Software, and trial usage of cell phone devices in the field will be used to determine a better digital collection approach. The Town will use a trained team to collect data and photos from the field.

The Town shall continue to pre-position debris removal agreements on a yearly basis. Timetable A: Public Works, Administration. The Town has secured agreements with two debris haulers, a memorandum of Agreement with Dare County (for debris removal using their contractor) and one debris monitoring contractor.

The Town shall obtain pre-storm authorization from the NC Department of Transportation (DOT) to clear DOT maintained roads after storm events. Timetable A: Public Works, Town Manager. This was accomplished in 2007 and again in 2012.

The Town shall continue to work with other North Carolina communities to obtain post-storm mutual aid personnel assistance when necessary. This could include assistance with building inspections, damage assessment, utilities repair and public facilities maintenance, and additional public safety personnel. Timetable A: Administration, Planning, Public Safety, Public Works. The Town has mutual aid agreements with other Dare County agencies. The Town also participates in the Statewide Mutual Aid Compact. The Town will no longer enlist community volunteers for the damage assessment process after a storm, but has pre-identified Town personnel to work with the Planning and Development Department on damage assessment so that the process is more timely and utilizes only personnel authorized to use Town equipment and those covered under Town liability insurance.

The Town shall designate a Staff level Director and Deputy Director of Emergency Management. Timetable B: Administration, Public Safety. The Town has designated the Fire Chief as the Emergency Management Coordinator under the ICS Structure. In 2009,

the Town designated the Deputy Fire Chief as Deputy Emergency Management Coordinator. In 2010, the Deputy Fire Chief was hired to fill the retired Fire Chief's position. In August of 2013 the Town hired a Deputy Fire Chief who will fulfill the role of Deputy Director of Emergency Management.

The Town shall continue to improve methods to provide public information after a storm. This shall include an automated voice messaging system with storm damage and re-entry information, a Mayor's radio broadcast, email broadcasts, improved real-time website information with relevant local contact information, available information at traffic stops, and designation of a post-storm public information officer. Timetable A: Administration, Town Manager's Office, The Town is capable of providing the above services through the Town's PIO and Dare County Joint Information Center.

The Town shall communicate post-storm recovery and operations policies and procedures to residents and property owners prior to hurricane season. The Town shall consider providing this information in the Town Newsletter, on the Local Government Access Channel, and the Town Website. Timetable B: Administration, Management Information Systems. Information is provided to residents and property owners as described above and through new media and traditional media outlets.

The Town shall develop a Crisis Communications Plan which will detail the process for distributing information internally and externally to the public before and after storms. Timetable B: Administration. In 2006, the Town adopted an "Emergency Operations Plan" which details duties of Town staff before, during and after an emergency. That Plan was updated in August 2012 based on staff review of "lessons learned from hurricane Irene.

E. Transportation and Drainage

Implementing actions

The Town will develop regulations requiring a greater street standard (dimensional and construction) where it can be reasonably demonstrated that nearby streets may be destroyed by a storm or other natural event and that the proposed street may be required to accept greater amounts of traffic. Timetable D: Planning, Public Works. Other coastal communities are being contacted to determine if this is a possible option, and if adopted, would it be enforceable.

The Town shall consider the establishment of an emergency transportation route parallel to US 158 from the northern Town boundary at Eighth Street south to Health Center Drive. Timetable D: Planning, Public Works, Public Safety. Wrightsville, Memorial and even the Nags Head Woods Road could be used as needed for emergency access if something happens to US158.

Prior to a flooding event, the Town's Street Department shall assemble the necessary traffic barricades and equipment to address flooding conditions noted in this plan. Timetable A: Public Works. This action is performed prior to a storm.

The Town shall identify alternative means of ingress and egress to the Outer Banks Hospital site and Colony Ridge Nursing Home facility. Timetable B: Planning, Public Safety. This has been investigated and no feasible alternative exists. However, public safety will be in communications with Colony Ridge staff to assist with evacuation procedures prior to an

event if necessary and the helipad has been preserved for use if needed during or after an event.

Through the budget and CIP process, the Public Works Department shall request funds to comprehensively review and improve the Town's drainage system. Additionally, funds shall be requested to address specific, localized drainage issues. Examples include the North Ridge, Vista Colony and Nags Head Acres subdivisions. Timetable A: Public Works. The Town established a Stormwater Utility, funded by a $2 per month charge on all water bills, in the spring of 2005. The first project funded was a major update to the Town's Stormwater Management Plan, and the creation of a Stormwater CIP. The list of stormwater management projects has been expanded greatly as a result of Tropical Storm Beryl and the wet season experienced from June through August of 2012. The Town is working to develop engineered solutions with NCDOT to prioritize projects as funds permit.

The most northern outfall (known as the "Red Drum" outfall), was not included in the beach nourishment project and therefore was not extended. This outfall has proven to need repair and improvement in order to efficiently drain the NCDOT conveyance system. In 2012, Tropical Storm Beryl and heavy rain events have caused standing water in several areas of Town where the groundwater has breached and street conveyance systems backed up. NCDOT is currently in the design process for the extension of this outfall, which is critical to improving drainage conveyance in the northern part of Town. The design and letting of this project has been completed with construction tentatively scheduled for the winter/spring 2015.

The Town Department of Public Works continually works to mitigate the impacts of flooding within identified areas of repetitive flooding within residential neighborhoods. Recent examples of drainage infrastructure improvement projects servicing neighborhoods include Nags Head Pond, Nags Head Acres, Vista Colony and Carolinian Circle Subdivisions as well as drainage pipe replacement projects along S. Memorial Ave., Albatross St. and Nags Head Realty all of which are located in the northern end of Town.

The performance of an annual drainage maintenance program which includes vegetation removal, sediment removal, culvert cleaning and the re-establishment of drainage grade lines to improve drainage flow.

The Town continues to explore and investigate innovative solutions to unconventional drainage problems. This includes the implementation of a groundwater lowering system along the western portion of the Vista Colony Subdivision to lower surrounding surface and groundwater increasing available stormwater storage capacity in advance of storm events.

Continue with the approach of incorporating drainage improvements into roadway, pathway, and related development projects in an effort to eliminate impediments, improve flow and enhance hydraulic capacity which can effectively result in an increased level of service and system efficiency. Examples include the continued development of the W. Side Multi-Use Path, Holy Trinity Catholic Church, Flicker St. and Moongate Subdivision located in the Village of Nags Head.

The Town has restructured the portion of the stormwater management ordinance as it relates to the use of fill. This approach is to treat runoff at the source and reduce the

burden of Town drainage infrastructure from managing runoff originating from single-family development.

F. Damaged Homes

The Town recognizes that damaged homes and structures on the oceanfront present nuisance and aesthetic concerns. The Town shall take appropriate measures to abate this nuisance. The Town will investigate changes in NFIP regulations to establish realistic policies and procedures for declaration of destroyed structures.

Implementing actions

The Town will take a more proactive approach to enforcing removal of nuisance structures, with upfront communication of policies to property owners and the issuance of civil citations to abate the nuisance. This shall include the establishment of a new timetable for compliance of condemned structures, with the goal of full compliance within four months of initial condemnation. Timetable A: Planning. The Town continues to explore procedures to expedite removal of nuisances. In 2010, 10 nuisance structures were moved or had permits to be moved and in 2011, 7 structures were removed. However, several property owners have refused to work with the Town and are planning to repair structures now that beach nourishment is completed, even though they are partially east of the static line in what is still considered a high erosion area by CAMA. In the fall of 2013, CAMA issued several exemption letters for repairs on these homes, and the property owners began pursuing building permits. To date permits have been issued to repair five of the six structures located on Sea Gull Drive in south Nags Head.

The Town will petition FEMA through our state and regional NFIP representatives to consider adopting realistic regulations regarding the determination of destroyed structures. Timetable C: Planning. On March 5, 2008 the Town adopted a resolution requesting Congress to readopt the Upton-Jones amendment.

Relocation of threatened structures is a viable option for reducing storm damage and erosion and mitigating nuisance properties. The Town may seek funds and consider changes to the flood ordinance which will assist in the in the relocation or removal of these threatened structures. Timetable C: Planning. Town Staff is aware of grant programs; however, the grants require a local match and the Town has not taken the position to support relocation with government financial assistance.

The Town shall continue aggressive monitoring of entry into condemned homes to prevent safety hazards. Timetable A: Planning. Enforcement of Building Code and nuisance regulations is on-going.

G. Infrastructure

The proper placement or replacement of the Town's Infrastructure (roads, water lines etc.) after a storm is an essential mitigation tool to limit damage from future storm events.

Implementing actions

It shall be a Town policy that damaged Town infrastructure be built back to established Town standards only if it can be demonstrated that there is a reasonable and they have a

reasonable expectation to survive future hazard events. Timetable C: All Town Departments. Waterlines have been replaced only if they meet these criteria.

The Town shall develop contingency plans for those Town streets that may be lost as a result of erosion. This can include development of alternative routes or access, or upfront declaration of the potential for future improvements. Timetable D: Public Works, Town Manager, Board of Commissioners.

- The Town has followed the same procedure for waterlines, and water services that cannot be restored in their previous location.
- The Town, with assistance from the Town Attorney, in 2006-2007 has identified alternative means of access to several properties along the ocean front where property owners agreed to work cooperatively.
- The Town modified development regulations to assist with providing access to properties where a Town road has been damaged or lost. The Town took action to officially close Surfside Avenue in 2011 as a Town Road when it was lost due to erosion.
- In 2012, the Town worked with the Nature Conservancy, and Clean Water Management Trust Fund to relocate a portion of Nags Head Woods Road damaged by Hurricane Irene in coordination with a soundside stabilization and natural restoration project.

H. Zoning

Another key element in the reconstruction process is the enforcement of existing zoning rules and land use regulations.

Implementing actions

Storm damage reconstruction shall reflect pre-storm conditions to the extent possible. Redevelopment shall comply with the Land Use Classification Map and the zoning ordinance. Timetable A: Planning. Enforcement is ongoing.

As the amount of available vacant oceanfront land diminishes, the Town can expect redevelopment of existing sites. It is the Town's position that the existing oceanfront development regulations adequately address concerns such as building height and density, and that currently permitted uses adequately represent the desired uses for the oceanfront. Timetable A: Planning. This policy is presently in place.

I. Sewage treatment plants and septic systems

The Town relies primarily on on-site septic systems; however, within the Town there are several sewage treatment plants and numerous low-pressure septic systems. During recovery after a severe storm, monitoring the function of on-site septic systems and treatment plants is critical to ensure that environmental damage does not occur.

Implementing actions

- The Town shall consider seeking authority and adopting regulations which would allow qualified Town staff to inspect sewer treatment facilities and on-site septic systems after a storm. These regulations should also allow staff to request the corrective actions necessary

to ensure proper operation of these systems. Timetable C: Board of Commissioners, Administration, Planning and Septic Health. Town staff is trained to inspect systems, but no authority to enter private property has been requested. In 2007 the Town adopted a regulation that prohibits "pump and haul" operations for residential uses where the septic system cannot be repaired.

- The Town shall take a proactive approach to educating citizens on the negative implications of using a septic system that has suffered storm damage. The Town will develop educational materials informing homeowners on the proper care of a system impacted by floodwaters. Timetable B: Septic Health, Public Works. This process is ongoing through the Septic Health Initiative.

J. Critical facilities

An essential component to storm preparedness and the recovery process is the protection of critical facilities and the individuals they serve.

Implementing actions

The Town shall require Hurricane Evacuation plans from sensitive, vulnerable or critical facilities which are likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a flood or hurricane, including, but not limited to: hospitals, nursing homes, police stations and fire stations. Timetable A: Planning, Public Safety. Emergency plans concerning critical facilities are updated annually and added to the Emergency Operations Plan.

The evacuation, operation, and recovery plans for the Outer Banks Hospital and the Colony Ridge Nursing Home shall be reviewed and approved by the Town's Public Safety Department. These plans shall address the evacuation of critically ill patients, securing the facility prior to and during the storm, and plans for startup after the storm. Timetable B: Planning, Public Safety. In 2012, Fire, Police, Emergency Management and EMS Staff met with representatives of The Outer Banks Hospital and Colony Ridge Nursing Home to determine methods to best serve the affected special needs population. These interactive meetings identified several deficiencies. Steps have been taken to mitigate hazards and implement new procedures.

The design of the proposed elementary school shall address flooding and hurricane resistant construction. Timetable (when plans submitted): Planning, Public Safety. The school is complete and construction meets or exceeds State Building Code requirements.

It is strongly urged that evacuation drills and tornado drills be conducted at the proposed elementary school. Timetable (when school completed): Public Safety. This is a school function; however, our Police and Fire Department have participated with and support School preparation activities.

K. Natural Resource Protection

Open and natural spaces are important elements in Nags Head for their aesthetic value as well as to provide important natural flood mitigation functions such as stormwater retention. The

Town will inventory open space, actively pursue grants and funding opportunities, and develop and implement a plan to acquire and preserve open space throughout the Town.

Implementing actions

The town will identify important areas to be acquired as open space and shall request funds for acquisition of these areas through the budget, CIP, and grant process. Timetable A: Planning. The Town purchased the "Whalebone Park" site in the fall of 2008. It has been developed as a park that serves children between the ages of 2 and 12 and incorporates features which meet ADA guidelines. The park also allows for inclusive play for all children regardless of physical or sensory abilities. The Town is working with the Coastal Area Land Trust to look at additional properties for easement or conservation along the Roanoke Sound as part of a Boardwalk development effort.

The Town has recently purchased the site of the former Dowdy's Amusement Park at the corner of US Hwy 158 and Bonnett Street. This site will be developed as a community park as funding becomes available.

The Town will consider an incentive program rewarding those developers which set aside additional open space in perpetuity. Timetable E: Planning. No action taken as of this date but is being considered as part of stormwater and fill updates currently under development by the Planning Board.

The Town shall continue to acquire land for open space and recreational purposes. Timetable A: Planning. The Town purchased the "Whalebone Park" site in the fall of 2008. It has been developed as a park that serves children between the ages of 2 and 12 and incorporates features which meet ADA guidelines. The park also allows for inclusive play for all children regardless of physical or sensory abilities. The Town is also working with the Coastal Area Land Trust to look at additional properties for easement or conservation along the Sound as part of a Boardwalk development effort. The Town also completed and adopted a Parks and Recreation Plan in 2011. In 2011-12, the Town Board of Commissioners initiated a process of identifying and researching the feasibility of purchasing additional properties. The Town will complete the work needed to dedicate appropriate Town owned property(ies) to the State of North Carolina as a nature preserve. Timetable A: Administration, Planning. No action taken since last update.

L. Brush Fires/Fire Protection

The Town has several areas with greater property damage potential resulting from brush fires. Nags Head Woods is a 1,000 acre maritime forest which abuts several residential neighborhoods. The residential areas in South Nags Head west of SR 1243 from Gulfstream Street to the southern Town limits are susceptible to brush fires because of their proximity to the Cape Hatteras National Seashore. The Nags Head Public Safety Department has an ongoing program to mitigate the potential for damage in these areas.

Implementing actions

The Town shall maintain fire breaks where appropriate. The Town shall coordinate with the National Park Service to maintain the fire break in South Nags Head. Timetable A: Public Safety. The addition of a staffed South Nags Head Station 21 on February 14, 2006 vastly improved the firefighting capabilities of the Town and specifically benefits the South Nags Head residential community. Providing prompt firefighting services in the wild land/urban interface reduce the hazard and damage potential of uncontrolled wildfire in this area.

Ongoing fire prevention efforts include wild land fire prevention discussions with homeowners to assist in maintaining safe clearances from combustible vegetation. 2009, the National Park service and Dominion Power created a 30'-40' firebreak between homes located west of Old Oregon Inlet Road and NPS property. The firebreak lessens the opportunity for uncontrolled fires to affect residences. In March 2012, nearly 200 acres of sound front marsh vegetation was subject to a control burn fuel reduction program that removed extensive fuel loading and helped to decrease the possibility of an uncontrolled wildfire in the Nags Head Woods area. In May 2012, a buffer zone fuels reduction program was completed, effectively removing combustible materials from a firebreak located adjacent Well Field Road and back to Nags Head Woods Road. In February and April of 2013, the Town, NC Forestry and The Nature Conservancy worked together to prescribe burn 50+ acres of private sound front marsh area in Nags Head Woods. This was the first intentional fire in this area and homeowners were pleased with the tremendous fuel reduction afforded by the prescribed burn.

In 2014, Nature Conservancy and Town of Nags Head Fire Staff worked together to complete prescribed burn activities on 10 acres in Nags Head Woods. These events served to reduce loose fuels in firebreak areas, create and improve existing separations from woods and residential areas, and increase proficiency and familiarity with wild land firefighting techniques.

- The Town shall continue the program to remove dead wood in critically fire prone areas. Timetable A: Public Safety. Homeowners may access the fire prevention staff to determine an optimal way to create fire safe landscaping.
- The Town shall review and require maintenance of access for emergency vehicles and fire apparatus. Timetable A: Public Safety. Annual fire inspections of commercial facilities identify areas of fire lane non-compliance and required corrections are mandated by code enforcement officials. Technical reviews of proposed commercial developments incorporate NC fire code access lane requirements. A Nags Head Woods roadway deficiency created by severe storm erosion left fire crews unable to navigate large apparatus along the entire roadway for much of 2011 and a portion of 2012; this has been corrected. The Town of Nags Head provided the 2012 review of Nags Head Woods road to determine if adequate fire apparatus clearance is available, and all was determined to be sufficient to sustain fire equipment access.
- The Town shall evaluate the Nags Head Woods Fire Plan on a regular basis and coordinate information with Nature Conservancy Staff. Timetable A: Public Safety. An evaluation meeting and update of Nags Head Woods Fire Plan was conducted in the spring of 2011. Fire staff performed an annual drive through of Nags Head Woods and conducted the regular meeting with Nags Head Woods Steward Aaron McCall to discuss observed hazards and mitigation/prevention. It appears that State of NC grant funding is potentially available for fuel removal program funding and Fire/Conservancy staffs are meeting in October 2011 to discuss a plan of action and implementation. Currently, homeowners may access the fire prevention staff to determine an optimal way to create fire safe landscaping. A series of fire prevention fuels reduction meetings were conducted to inform/educate the public of the forthcoming Nags Head Woods Marsh controlled burn in March 2012. A series of public fuel reduction meetings were conducted in the fall of 2012 to answer homeowner questions about Nags Head Wood fire prevention and planning for prescribed burns to be conducted in the spring of 2013.

- The Town shall continue cooperation with the US Forest Service and Dare County for mutual aid fire protection. Timetable A: Town Manager's Office, Public Safety. Nags Head Fire Rescue provided mutual aid structural firefighting services to all those Dare County Fire Departments requesting assistance in 2011/2012, as well as utilizing incoming resources to assist in mitigating hazards exceeding the capabilities of Nags Head Fire Rescue. Nags Head continues to maintain excellent mutual aid working relationships with all Dare County fire departments.

  - The Town shall continue to evaluate and update the Nags Head Urban Wild Fire Interface Plan as necessary. Timetable A: Public Safety. An evaluation was completed in 2012 and no changes were made to current plan.

- The Town shall continue to review the water system throughout the Town for fire protection capabilities and prioritize capital improvements as necessary. Timetable A: Public Safety, Town Manager's Office, Public Works. In 2009, Nags Head Fire staff worked with Nags Head Water staff to implement waterline improvements to benefit Northridge Subdivision, Old Nags Head Cove, West Side Court and Gray Eagle Street.

- The Town shall continue to inventory fire hydrants, water distribution infrastructure, and other town infrastructure in support of fire planning efforts. Timetable C: Public Safety, Planning. In 2008 the inventory was reviewed and updated. An additional 1,640 feet of 8-inch waterline under design for US 158 Bypass from Bonnett to Baltic streets was determined to be needed. Lack of funding has prevented the line from being built. A detailed Hydraulic Study was completed in 2010. Several projects to improve domestic flow, and fire protection, were recommended. These have been prioritized and will be constructed when funds are available. The 2013-2014 budget allowed for funding of five additional fire hydrants spaced equally along Wellfield Road. These additional hydrants will enhance fire protection and provide a firefighting water source for uncontrolled wildfires in Nags head Woods.

- The Town shall continue to evaluate and update the capital improvements plan for fire protection infrastructure. Timetable E: Public Safety The Town of Nags Head anticipates a "shared fire facility" partnership with the Town of Kill Devil Hills. This arrangement is based on NC ratings system recommendations that determined a strategically placed fire station would enhance response and lower insurance ratings in both towns. Nags Head and KDH fire administrations met in 2012 to review the future of a shared station and discussed their commitment to working together in this effort. In September 2011, the Town of Nags Head submitted an application for the 2011 FEMA "Assistance to Firefighters" grant program. The application requested funding for a new aerial apparatus to replace the Nags Head 1987 E-One ladder truck. FY 2012/2013 budget process realized funding for the acquisition of a modern aerial fire apparatus to replace the current aged apparatus. The new "quint" type fire apparatus is currently under construction and delivery is expected in the late summer of 2013.

  In October 2013, the Town of Nags Head accepted delivery of a Quint Aerial Fire apparatus to replace an aging lady truck. Designed to provide more versatility to firefighting operations, the Quint is equipped with a water tank, pump, aerial device and compliment of ground ladders.

- The Town shall continue its fire education program. This includes newsletter and newspaper articles on fire protection as well as grants from the State Division of Forestry for fire education. Timetable A: Public Safety. The Town shall improve fire

protection in Nags Head Woods with the installation of 'dry hydrants' and maintenance and improvements to Nags Head Woods Road. Timetable B: Public Safety. The Nags Head Woods road is maintained by Nags Head Public Works and roadway material is added as needed to maintain an acceptable driving surface. In 2011/2012, fire safety related topics and newsletter articles were distributed, and the website updated with current fire prevention information. The "Change your Clock, Change your Battery" program resulted in the installation of numerous new smoke detectors placed in homes in Town. Fire Prevention e mails, tweets and other valuable life safety information were forwarded to the public from the United States Fire Administration, helping to advance injury prevention in Nags Head. Fire information is supplied face to face to the community via the annual October Youth Fire Prevention Night and National Fire Prevention week activities.

- With the installation of the new water tank, the Town shall install a new 12 inch water line from the Public Works facility to Barnes Street. This will increase fire flow to north end neighborhoods. Timetable C: Public Works, Public Safety, Planning. This was completed in 2006.
- The Town shall research available data on underground storage tanks and leaking underground storage tanks. Timetable C: Planning, Public Safety. Underground fuel tanks, when required by fire code, have been removed or brought into compliance with Fire Code and DEHNR standards.

M. Water Protection

Nags Head is a member of the Dare County Regional Water System, but no longer operates the Fresh Pond Water Treatment Plant. This has eliminated the threat from natural, or man-made, disasters to this former Public Water Supply source. The Town does operate over 75 miles of distribution system waterlines, and two major pump stations. The town shall continue to identify improvements to make the water system safer.

Implementing actions

- The Town shall coordinate with Kill Devil Hills regarding fencing around their portion of the Fresh Pond. Timetable B: Public Works, Town Manager's Office. The Fresh pond water treatment plant has been permanently decommissioned.
- The Town shall continue to evaluate the implementation of water restrictions during periods of drought. Timetable A: Public Works, Town Manager's Office. The Town has a Water Shortage Supply Plan.
- The Town of Nags Head shall continue to monitor develop and the installation of on-site septic systems with the Fresh Pond Area of Environmental Concern. Timetable A: Planning. Process monitored through the development and permitting process.
- The Town shall continue to cooperate with Dare County on the development of additional water supply well facilities. Timetable A: Planning, Public Works. The Town continues to cooperate with Dare County as requested. Additional wells and 2 million gallons of treatment capacity added to Dare County Water Plant in Kill Devil Hills in 2005-2006.

Town of Southern Shores Status Report

1. Continue enforcement of the zoning ordinance as a hazard mitigation tool
    - Ongoing
2. Identify "at risk" X Zone properties for added emphasis on flood risks and notify the responsible agencies about discrepancies between floodplain maps (FIRM versus SLOSH).
    - Ongoing
3. Continue enforcement of the Flood Damage Prevention Ordinance
    - Ongoing
4. Implement stormwater management regulations
    - Ongoing.
5. Continue the enforcement of the NC State Fire Prevention Code, referenced by the Town Fire Code
    - Ongoing
6. Continue enforcing the Lot Disturbance provisions of the Zoning Ordinance
    - Ongoing
7. Continue the periodic controlled burns of marshland to reduce wildfire fuels
    - Has not been satisfied since 2009 as a result of piers/docks being built over the marsh areas
8. Continue testing the fire hydrants once a year and recording data
    - Ongoing
9. Continue implementation of the Waterway Ordinance
    - Ongoing
10. Seek the maximum points available from the Community Rating System to keep flood insurance costs to the citizens as low as possible
    - Ongoing
11. Conduct the Canal Inspection and Debris Removal program twice a year
    - Ongoing
12. Continue enforcement of the state building code, including wind load requirements
    - Ongoing
13. Provide property owners and developers with information regarding the construction of FEMA "Safe Rooms" from the effects of tornadoes and severe storms
    - Not satisfied
14. Continue enforcement of the Dune Protection Ordinance
    - Ongoing
15. Coordinate wildfire prevention efforts with tree preservation policies
    - Ongoing

16. Continue enforcing Coastal Area Management Act (CAMA) regulations
    - Ongoing
17. Continue enforcing the state Erosion and Sedimentation Control regulations
    - Ongoing
18. Continue to have a standing Reconstruction Task Force
    - Ongoing
19. Develop guidelines for reconstruction efforts
    - Satisfied
20. Communicate with citizens about plans and the problems of providing services after a storm event
    - Ongoing
21. Develop a better flood warning system
    - Satisfied
22. Continue to monitor NC Turnpike Authority plans for the Mid-Currituck Bridge to expedite evacuation
    - Ongoing
23. Encourage food stores and pharmacies within the town to have alternative power supplies during and after storm events
    - Ongoing
24. Continue to provide an Emergency Operations Center
    - Ongoing
25. Keep emergency plans current and provide staff with continuing education opportunities
    - Ongoing
26. Educate citizens on expected impacts of hazards on daily lives
    - Ongoing
27. Continue current public information outreach efforts regarding flooding
    - Ongoing
28. Continue e-mail and website services
    - Ongoing

Gatesville Status Update

MITIGATION ACTION 1	Open waterways by clearing debris in ditches throughout county to minimize localized flooding.
Category:	Preventative Maintenance
Hazard(s) Addressed:	Flood, Hurricanes and Tropical Storms, Thunderstorms
Priority (High, Moderate, Low):	High
Estimated Cost:	Not known (NCDOT provides this service countywide).
Potential Funding Sources:	NCDOT
Lead Agency/Department Responsible:	NCDOT
Status	Working with NCDOT to get debris removed from ditches
MITIGATION ACTION 2	**Expansion of US Highway 13/158 for greater evacuation capacity.**
Category:	Infrastructure
Hazard(s) Addressed:	Hurricanes and Tropical Storms, Flood
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Not known.
Potential Funding Sources:	NCDOT
Lead Agency/Department Responsible:	NCDOT
Status	Continue to discuss widening project with NCDOT
MITIGATION ACTION 3	**Increase public awareness of local hazard mitigation plan and emergency response plan.**
Category:	Public Education and Awareness
Hazard(s) Addressed:	All Hazards
Priority (High, Moderate, Low):	High
Estimated Cost:	Minimal costs for booklets, brochures and other printing (in addition to publications available free through such organizations as FEMA and the American Red Cross).Electronic Communication will also be used through our website and Social Media Campaigns
Potential Funding Sources:	None needed.
Lead Agency/Department Responsible:	Gates County Emergency Management
Status	Ongoing- providing outreach to citizens

MITIGATION ACTION 4	Continue to enforce existing building code and fire code, and investigate appropriate ways to advance these codes for greater future effectiveness with regard to natural hazards.
Category:	Property Protection
Hazard(s) Addressed:	All Hazards
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Administrative time and costs only.
Potential Funding Sources:	None needed.
Lead Agency/Department Responsible:	Gates County Inspections and Planning
Status	Inspections Department continues to enforce existing codes
MITIGATION ACTION 5	**Annually review the Flood damage prevention ordinance and ensure compliance with HMP**
Category:	Planning and Policy
Hazard(s) Addressed:	Flood
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Administrative time and costs only.
Potential Funding Sources:	None needed.
Lead Agency/Department Responsible:	Gates County Planning and Zoning
Status	Conduct annual review of Flood Damage Prevention Ordinance and other codes
MITIGATION ACTION 6	**Annually review HMP strategies and actions as they effect the Land Use Plan and Gates County Zoning Ordinance**
Category:	Planning and Policy
Hazard(s) Addressed:	Flood
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Administrative time and costs only.
Potential Funding Sources:	None needed.
Lead Agency/Department Responsible:	Gates County Planning and Zoning
Status	Continue to conduct annual review of HMP strategies as well as making the necessary changes to Land Use and Zoning codes
MITIGATION ACTION 7	**Ensure floodplain mapping and management are considered in planning documents such as Land Use, Zoning Ordinance**
Category:	Planning and Policy
Hazard(s) Addressed:	Flood
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Administrative time and costs only.
Potential Funding Sources:	None needed.
Lead Agency/Department Responsible:	Gates County Planning and Zoning
Status	Reference to floodmaps and floodplain regulations are made in Zoning and Land Use codes

Completed Actions: Millpond Bridge Project- NCDOT completed this project correcting a flooding issue at the Dam/spillway and traffic concerns by separating pedestrian and automobile traffic.

County Communications Tower- Through a coordinated effort with NCSHP and Gates County our communications antennas were moved from 100' to more than 300' correcting issues with public safety radio deficiencies.

Mass Notification Implementation- Gates County investigated and purchased CodeRED as mass notification for emergencies.

Increase Law Enforcement and EMS Personnel- Gates County was able to bolster emergency response capabilities by hiring additional Law Enforcement Officers and EMS was able to double its capability as well as increasing the level of care to Paramedic.

Gatesville Status Update

MITIGATION ACTION 1	Increase emergency management training opportunities for town personnel.
Category:	Personnel Resources
Hazard(s) Addressed:	All Hazards
Priority (High, Moderate, Low):	Moderate
Estimated Cost:	Many training and educational opportunities—campus-based as well as Web-based—are available through FEMA's Emergency Management Institute (EMI). There are no tuition fees for on-campus courses and all instruction, course materials and housing (for most participants) is provided at no cost. (Participants must pay for on-campus meals and personal, incidental expenses.)
Potential Funding Sources:	None needed.
Lead Agency/Department Responsible:	Gates County Emergency Management
Status	Continue to provide training for town staff

Completed Actions: Repetitive Loss Property Claims- Through investigation it has been discovered that the alleged Repetitive Loss Property was actually not within the town limits therefore no longer relevant.

Hertford County Status Report (Including Ahoskie, Como, Harrellsville, Murfreesboro ,Winton)

Objective 1: Ensure that sheltering facilities are well publicized, accessible and meet national standards for safety and supply. (E) – **Ongoing**

Meet with Red cross and DSS annually, in the process of shelter assessments, adding additional small shelters.

Website is maintained and updated by the county.

Have MOU for sheltering with Red Cross.

Action Item	Mitigation Goals Addressed	CRS Activity/ NFIP*	Focus Areas	Hazards Addressed	Supplemental Funding Options (Appendix I)	Priority	Reference to 2005 Plan (see pgs 7-1 to 7-5)	Responsible Party
Maintain a continuously updated list of all approved shelters. (N)	1		Emergency Services	All Hazards	Staff Resources, General Funding	High	New	Hertford County Emergency Management
Continuously maintain, on the County's website, instructional information on ensuring that onsite sheltering is as safe an option as possible. (N)	1		Emergency Services	All Hazards	Staff Resources, General Funding	High	New	Hertford County Emergency Management
Inspect local shelters to determine compliance with American Red Cross (ARC) Shelter Standards (see Appendix J). (E)	1,3		Emergency Services	All Hazards	Staff Resources, General Funding	Medium	Action #11	Hertford County Emergency Management with the American Red Cross

Objective 2: Reduce the frequency of electrical outages and the length of time such outages last. (E) – **Ongoing**

Have Electric Cooperative on Local Emergency Planning Committee.

Continue to add generators to county facilities in capital improvement projects for secondary power. Power company websites with outages allows for loss of power results.

Action Item	Mitigation Goals Addressed	CRS Activity/ NFIP*	Focus Areas	Hazards Addressed	Supplemental Funding Options (Appendix I)	Priority	Reference to 2005 Plan (see pgs 7-1 to 7-5)	Responsible Party
Maintain continuous contact/working relationship with electric service providers in the County to address the following (1) disaster preparedness techniques (e.g tree trimming, vegetation planting requirements, pole replacement), (2) Identify critical electrical facilities needing retrofit or upgrade and map with elevation reference marks and (3) communication with County officials during and immediately after a natural hazard event that results in loss of electrical power. The MAC will meet at least once per year with electric service providers. (A)	3		Emergency Services	Wind/Ice Storms	Staff Resources, General Funding, Utility Provider Funding	High	Action #12	Hertford County Emergency Management, Municipal Managers/Administrators or Mayors, and Electrical Utility Providers
Improve capability of secondary power source at all County and Municipal Critical Facilities. (N)	3		Emergency Services	All Hazards	Staff Resources, General Funding, State Funding, Federal Funding	Medium	New	Hertford County Emergency Management, Municipal Managers/Administrators or Mayors, Public Works Director
Retrofit all County and Municipal facilities for lightning protection. (N)	3		Property Protection and Emergency Services	Lightning/ Fire	Staff Resources	Medium	New	Hertford County Emergency Management, Municipal Managers/Administrators or Mayors, Public Works Director

Objective 3: Preserve open space in floodplain areas. (E) – **Ongoing -**								
Action Item	Mitigation Goals Addressed	CRS Activity/ NFIP*	Focus Areas	Hazards Addressed	Supplemental Funding Options (Appendix I)	Priority	Reference to 2005 Plan (see pgs 7-1 to 7-5)	Responsible Party
Support through local ordinances conservation easements on all flood prone property and impose such easements on all properties acquired with public assistance funds. (N)	1, 2	420/NFIP	Prevention	Flooding	Staff Resources, General Funding	High	New	Hertford County Emergency Management, Municipal Managers/Administrators or Mayors, Public Works Director
Coordinate open space planning and preservation with all local certified CAMA land use plans. (N)	1,2	420/NFIP	Prevention and Natural Resource Protection	Flooding/ Erosion	Staff Resources, General Funding	Low	New	Hertford County, Municipal Managers/Administrators or Mayors
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 (see Appendix K for minimum National Flood Insurance Program (NFIP) requirements). (N)	1,2	430/NFIP	Prevention, Property Protection, and Natural Resource Protection	Flooding/ Erosion	Staff Resources, General Funding	High	New	Hertford County Emergency Management, Municipal Managers/ Administrators or Mayors

Objective 4: Reduce the risk of damage from wildfires (including underfires) to existing and future development. (E) – **Ongoing**

Completed (Community Wildfire Protection Program), ongoing hazard reduction burns conducted by the NC Forest Service.

NC Forest Service continues to educate the public on wildfire prevention.

Action Item	Mitigation Goals Addressed	CRS Activity/ NFIP*	Focus Areas	Hazards Addressed	Supplemental Funding Options (Appendix I)	Priority	Reference to 2005 Plan (see pgs 7-1 to 7-5)	Responsible Party
The MAC will review "firewise" zoning and subdivision standards and recommend their appropriateness for incorporation into existing (or new) zoning or subdivision ordinances. (Source http://www.firewise.org) (E)	1,2,4		Property Protection	Fire	Staff Resources, General Funding	Medium	Action #9	MAC in concert with the County and Participating Municipalities
Coordinate public education on the hazards of wildfires with the NC Forestry Services ongoing wildfire education program. (N)	3		Property Protection	Fire	Staff Resources, General Funding	Medium	New	MAC in concert with the County and Participating Municipalities

Objective 5: Reduce flooding and erosion vulnerability through land use development initiatives, maintenance and improvement of storm drainage. (A) – **Ongoing**

A finished Floor elevation Certificate is already required for construction in an SFHA. We do not issue building permits without it.
It would be helpful to the public if every Zoning Permit noted if the proposed construction was in a flood zone or not. This eliminates them coming from zoning to our office only to discover they need and elevation certificate before we will issue any permits.

Action Item	Mitigation Goals Addressed	CRS Activity/ NFIP*	Focus Areas	Hazards Addressed	Supplemental Funding Options (Appendix I)	Priority	Reference to 2005 Plan (see pgs 7-1 to 7-5)	Responsible Party
Annually review County and Municipal Zoning, Subdivision, and Flood Damage Prevention Ordinances for improved control of flooding hazards and improvement of drainage. Such revisions should meet or exceed National Flood Insurance Program Minimum Requirements for Safer Development in Floodprone Areas (see Appendix K for minimum NFIP requirements). Specifically, the Town of Como will pursue adoption of a Flood Damage Prevention Ordinance. (A)	1,2,3	430/NFIP	Prevention	All Hazards	Staff Resources, General Funding	High	Action #5	Inspections Department ~~Hertford County Planning Department~~, Municipal Managers/Administrators or Mayors

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). This strategy applies to the County and the Towns of Ahoskie, Murfreesboro, and Winton. (A)	1,2,3,6				Staff Resources, General Funding	Medium	Action #6	Hertford County Manager, Municipal Managers/ Administrators or Mayors
At the local government staff level, work with the North Carolina Dept. 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. (A)	1,2	540/NFIP			Staff Resources, General Funding	Medium	Action #8	MAC, Hertford County and participating municipalities coordinate with the transportation regional planning organization

Objective 5 continued: Reduce flooding and erosion vulnerability through land use development initiatives, maintenance and improvement of storm drainage. (A) **– Ongoing**

In 2012 the Bertie, Hertford, Northampton Drainage District # 1 applied for a Grant from the NC Department of Agriculture And Consumer Services for Stream Debris Removal. We were awarded $ 57916 and removed debris from 21.7 miles of Ahoskie Creek Main Cannel. An annual inspection is done on this project every year. In July of 2014 the Hertford Drainage District # 1 obtained a grant from the NC Department of Agriculture and Consumer Services for debris removal on various locations on Horse Swamp Flat Swamp Watershed Project for the Sum of $3450.00. An annual inspection is done on this project every year.

Action Item	Mitigation Goals Addressed	CRS Activity/ NFIP*	Focus Areas	Hazards Addressed	Supplemental Funding Options (Appendix I)	Priority	Reference to 2005 Plan (see pgs 7-1 to 7-5)	Responsible Party
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. (A)	1,2,3,6	520/NFIP	Prevention	Flooding	Staff Resources, General Funding	High	Action #13	Hertford County Emergency Management, Hertford ~~County Planning Department,~~ Municipal Managers/ Administrators or Mayors
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. (N)	1,2,4	310/NFIP	Prevention	Flooding	Staff Resources, General Funding	High	New	Hertford County, Ahoskie, and Murfreesboro Building Inspections Departments
Inspect debris blockage problems and secure funds for the clearance of debris from rivers, streams, and tributaries. (N)	1, 6		Prevention	Flooding	Staff Resources, General Funding		New	~~Hertford County Planning Department,~~ and Municipal Managers/Administrators or Mayors, Hertford County Soil and Water Conservation Service

Objective 6: Improve the public understanding of local vulnerability to hazards and improve disaster warning/post-disaster information efforts. (A) **-ongoing**
(1) We do this already. And the information is included on GIS maps. (2) I found this information nowhere. Should be fairly simple to create a page in the information section providing the information noted here. (3) Where do I find historical FIRMs? (4) Advertise what? Who pays for it? (5) Already done to the best of our ability. (6) The County has a newsletter? Letter on flood insurance should be handled under item 2. (7)How often do you propose to notify these property owners? And owners are not always the occupants impacted by flooding. (8) What is purpose of this log? (9) And where would we maintain this log?

Action Item	Mitigation Goals Addressed	CRS Activity/ NFIP*	Focus Areas	Hazards Addressed	Supplemental Funding Options (Appendix I)	Priority	Reference to 2005 Plan (see pgs 7-1 to 7-5)	Responsible Party
Maintain a map information service involving the following: (1) Provide information relating to Flood Insurance Rate Maps (FIRM) to all inquirers, including providing information on whether a given property is located within a flood hazard area. (2) Provide information regarding the flood insurance purchase requirement on the county's website. (3) Maintain historical and current FIRM's. (4) Locally advertise 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 flood prone area that they are subject to flooding. (8) Maintain a log of inquiries including: date, FIRM zone of subject property, address/location of subject property, indication that inquirer was informed of Insurance purchase requirement. (N)	5	320, 330/NFIP	Public Education/ Information	Flooding	Staff Resources and General Funding	High	New	~~Hertford County Planning Department~~, and Hertford County and Ahoskie Inspections Departments
Hertford County will once annually mail a notice to all property owners whose land is located within a special flood hazard area. This notice should clearly state that the recipients' property is susceptible to flooding. (N)	5	330/NFIP	Public Education/ Information	Flooding	Staff Resources and General Funding	High	New	~~Hertford County Planning Department~~ Inspections Department

Objective 6 continued: Improve the public understanding of local vulnerability to hazards and improve disaster warning/post-disaster information efforts. (A) **–ongoing**

(1)We do this already to the best of our abilities. (2)We maintain a list of contractors though to specific to flood proofing and retrofitting. I will see what we can do. (3) Costs for pamphlets will need to be included in the budget. I will check to see what funds are available. (4)We are not qualified to provide advice on flooding, drainage and sewer problems. Soil Conservation and the Health Department handle those items. (5)Advertise what services? And who submits and pays for advertisement? (6) Again purpose of log? And where is it to be maintained?

Action Item	Mitigation Goals Addressed	CRS Activity/ NFIP*	Focus Areas	Hazards Addressed	Supplemental Funding Options (Appendix I)	Priority	Reference to 2005 Plan (see pgs 7-1 to 7-5)	Responsible Party
Hertford County will work with local real estate agencies to ensure that agents are informing clients when property for sale is located within a Special Flood Hazard Area (SFHA). The County will provide these agencies with brochures documenting the concerns relating to development located within flood prone areas. Maintain a copy of the brochure and disclosure statements from at least five (5) local real estate agancies confirming brochure availability. (A)	5	330, 340/ NFIP	Public Education/ Information	Flooding	Staff Resources and General Funding	High	Action #10	~~Hertford County Planning Department~~ Inspections Department
Hertford 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. (Maintain dates of distribution and librarian certification of availability.) (2) The County will provide a link on their website to FEMA resources addressing flooding and flood protection. (A)	5	330, 350/ NFIP	Public Education/ Information	Flooding	Staff Resources and General Funding	High	Action #10	~~Hertford County Planning Department~~ Inspection Department
Hertford County will coordinate with the Hertford County School System Hazards Awareness Educational Programs for use by educators within the Hertford County School System. (A)	5	330/NFIP	Public Education/ Information	All Hazards	Staff Resources, General Funding	Low	Action #10	MAC with Staff Support from the Hertford County ~~Planning Department~~ and participating municipalities

Objective 6 continued: Improve the public understanding of local vulnerability to hazards and improve disaster warning/post-disaster information efforts. (A) **-ongoing**

Action Item	Mitigation Goals Addressed	CRS Activity/ NFIP*	Focus Areas	Hazards Addressed	Supplemental Funding Options (Appendix I)	Priority	Reference to 2005 Plan (see pgs 7-1 to 7-5)	Responsible Party
Hertford County will provide comprehensive services regarding planning and development activities within the defined SFHA. These services will include (1) Provide site-specific flood and flood related information on an as-needed basis, (2) Maintain a list of contractors with experience in floodproofing and retrofitting techniques at the Building Inspections Dept., (3) Maintain materials providing an overview of how to select a qualified contractor at the Building Inspections Dept., (4) Site visits will be performed upon request by the Building Inspections Dept. to review occurrences of flooding, drainage, and sewer problems--if applicable, inspector should provide one-on-one advice to the property owner; (5) Advertise the availability of services once annually within the local newspaper; and (6) Maintain a log of all individuals assisted through these services, including site visits. (A)	5	360/ NFIP	Public Education/ Information	Flooding	Existing Department and Staff Resources	Medium	Action #10	~~Hertford County Planning Director~~, Hertford County and Ahoskie Inspections Departments
Hertford County will 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 Hertford County Planning Department. (N)	5	330, 440/ NFIP	Public Education/ Information	Flooding	Staff Resources, General Funding	High	New	~~Hertford County Planning Department/Land Records~~ Inspections Department

Objective 7: Ensure effective local/interagency communication and response during disaster events. (N) **Ongoing – Special Needs registry is available.**

Action Item	Mitigation Goals Addressed	CRS Activity/ NFIP*	Focus Areas	Hazards Addressed	Supplemental Funding Options (Appendix I)	Priority	Reference to 2005 Plan (see pgs 7-1 to 7-5)	Responsible Party
Maintain a registry of special needs individuals which has been coordinated with the Hertford 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. (N)	5		Emergency Services	All Hazards	Staff Resources and General Funding	High	New	Hertford County EM Director
The MAC, in conjunction with Hertford County and the participating municipal jurisdictions, will work on the five-year implementation of this plan. (N)	1, 2, 3, 4,5,6	510/NFIP	Prevention, Property Protection, Resource Protection, Emergency Services, Structural Mitigation, Public Education/ Information	All Hazards	Staff Resources and General Funding	Medium	New	Hertford County and all participating jurisdictions

bjective 8: Identify specific potential man-made hazards and mitigate potential risks. (N) **Ongoing**

Planning Direcctor sits on the Tri-County Airport Board and maintains dialog.

County continues to support NC Office of Dam Safety when needed.

Hazardous Material site visits have been conducted on all EHS facilities and Plans have been created and added to the county EOP.

Action Item	Mitigation Goals Addressed	CRS Activity/ NFIP*	Focus Areas	Hazards Addressed	Supplemental Funding Options (Appendix I)	Priority	Reference to 2005 Plan (see pgs 7-1 to 7-5)	Responsible Party
Maintain dialogue with the Tri-County Airport Authority to effectively regulate land use as the County continues to grow and encroach upon the airport environs. (N)	1, 2, 6		Emergency Services, Property Protection	Man-made Hazards	Staff Resources and General Funding	Low	New	Hertford County Planning Department
Hertford 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. (E)	1, 4, 7	630/NFIP		Man-made Hazards	Staff Resources	Low	Action #7	NC Office of Dam Safety
Maintain a list of all hazardous material sites or transport corridors in Hertford County. (N)	1, 2, 6		Emergency Services	Man-made Hazards	Staff Resources	Medium	New	Hertford County Emergency Management

PASQUOTANK COUNTY – UPDATE ON HAZARD MITIGATION GOALS

HURRICANE MITIGATION STRATEGY

Goal 1: Minimize the Impact of Hurricane Wind Events

***Objective 1*: Improve the wind resistance of structures in the county/city.**

1. Continue to enforce the North Carolina Building Code. The requirement that new structures or structures undergoing significant renovation be resistant to wind loads of 110 m.p.h. is of particular importance.
    - Update – Ongoing through county/city inspections departments.

~~2. Educate contractors about safe housing development through written materials or a county sponsored symposium.~~

***Objective 2*: Educate home and property owners about wind resistant measures.**

1. Hold a county/city-sponsored hazard mitigation symposium for the county residents and surrounding municipalities, including information on preparedness for all hazards significant to Pasquotank County.
    - Update – Information is disseminated via various forums to include: talks to Civic Groups, distribution of information at Festivals/Public Events, Social Media, etc.

2. Provide homeowners information on wind resistant measures
    - Update – Ongoing via talks to Civic Groups, distribution of information at Festivals/Public Events and through Planning/Inspections Departments.

3. Educate mobile home contractors and owners about wind proofing measures, including wood and light steel construction connectors and anchoring systems.
    - Update – Ongoing (information provided by inspections departments)

***Objective 3*: Maintain and publicize the Pasquotank County/Elizabeth City hurricane evacuation route in order to facilitate evacuation to inland areas.**

1. Post information about Pasquotank County's emergency evacuation routes.
    - Update – Information provided during various public events/educational events. Also posted to EM website and via social media.

***Objective 4*: Maintain and publicize the Pasquotank – Camden – Elizabeth City County Multi-Hazard Emergency Operations Plan.**

1. Review the Pasquotank-Camden-Elizabeth City Multi-Hazard Emergency Operations Plan annually and update the plan as necessary. Ensure all County and City departments continue to develop guidelines for response to emergencies and to maintain departmental operations. Work with County and City departments to ensure each department possesses a

clear understanding of department responsibilities as outlined in the Pasquotank-Camden-Elizabeth City Multi-Hazard Emergency Operations Plan.

- Update – Annual update of Multi-Hazard Plan, conduct exercises with departments addressing their roles and responsibilities as outlined in the Multi-Hazard Plan.

***Objective 5*: Reduce the impact of wind on trees near county/city structures.**

1. Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees or branches on county/city property when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the community.
    - Update – Ongoing actions through maintenance.

***Objective 6*: Reduce the vulnerability of local government agencies and facilities to hurricane events.**

1. Continue efforts to develop continuity of operations plans (COOP) for county/city departments. Continuity of operations planning efforts are currently underway in the county/city.
    - Update – Ongoing planning in county/city departments.

2. Encourage the installation of generator switches in new construction critical facilities. As projects go through Technical Review Committee, applicants can be encouraged to pre-wire facilities for a generator. New construction critical facilities that would benefit from pre-wiring include but are not limited to public schools, local government facilities, facilities that may be utilized as storm shelters, adult care facilities, etc.
    - Update – Ongoing – A generator has been installed at the Pasquotank County Courthouse capable of running the critical functions of the county. Also, a Transfer Switch has been installed at the County/City's primary pre-hurricane shelter.

FLOOD MITIGATION STRATEGY

Goal 1. Identify and Map Flood Prone Areas

***Objective 1*: Record all structures within the floodplain as well as areas of repetitive losses due to flooding.**

1. Record all tax parcel information and floodplain locations in a GIS system including repetitive loss areas, areas of greatest risk, and vulnerable populations. This information will be provided to the GIS Coordinator by the Emergency Management Agency.
    - Update – Completed – Updated as needed.

Goal 2: Avoid the Hazards of the Floodplain

***Objective 1*: Acquire and preserve properties subject to repetitive flooding from willing and voluntary property owners through hazard mitigation grant funding. Continue to identify areas and properties subject to repetitive flooding.**

1. Continue efforts to acquire the "Perry Properties" located in the area of Ehringhaus Street and McMorrine Street in Elizabeth City utilizing hazard mitigation grant funding for repetitive flood loss properties.
    - Update – As funding becomes available.

2. Continue efforts to acquire repetitively flooded properties in the Oxford Heights subdivision of Elizabeth City utilizing hazard mitigation grant funding.
    - Update – As funding becomes available.

Goal 3: Minimize the Impacts of Flooding

Objective 1*: *Minimize economic and property losses due to flooding.

1. Participate in the Community Rating System.
   The National Flood Insurance Program's (NFIP) Community Rating System (CRS) allows counties and municipalities to reduce flood insurance rate premiums for citizen property owners. In order to capitalize on these reductions, counties and cities must take specific steps to improve upon the minimum floodplain management requirements of the NFIP. The CRS awards flood insurance premium discounts from 5-45% for eighteen different flood management activities that fall into the following four categories: public information, mapping and regulation, flood damage reduction, and flood preparedness. Participation in the CRS, which is contingent upon county compliance with NFIP rules, will provide Pasquotank County and the city of Elizabeth City with the opportunity to dramatically reduce flood insurance rate premiums for its residents. In order to participate, the county/city must designate a CRS coordinator to handle the application and serve as a liaison between the county/city and the Federal Emergency Management Agency. Work on a CRS plan is facilitated by completion of a county/city hazard mitigation plan.

- Update – County/City is in compliance with NFIP – Ongoing work towards participation in the CRS.

2. Revise zoning and subdivision ordinances to increase lot sizes in areas with poor soils. As flooding is exacerbated by soils that cannot adequately absorb the water, areas with poor soil conditions should be avoided as much as possible in future developments. Increasing the lot size within subdivisions will provide more area for soil water absorption and lessen damages to properties in the area. The county/city land use plan policy should be implemented to revise the zoning ordinance so that the minimum lot size in future subdivisions is increased, and existing subdivisions should be re-platted to the largest extend possible. The subdivision standards require that the building pad be at least 1 foot above the base flood elevation for a 100 year floodplain.
    - Update – Complete – County lots increased to 43,000 square feet

3. Reduce the vulnerability of infrastructure and the built environment by identifying infrastructure (i.e. pumping stations, roads) in the city/county that is repetitively damaged by flooding and consider ways to reduce those vulnerabilities. Areas of concern include, but are not limited to: Water Street, Herrington Road, Southern Avenue/Parkview Drive, Roanoke Avenue, Road Street, Elizabeth Street, Creek Road, Providence Road (Oxford Heights), and Riverside Road.
    - Update – Ongoing. Infrastructure has been identified. County/City seeks ways to reduce vulnerabilities and opportunities for Mitigation Funding.

Objective 2: Provide information to citizens on flooding preparedness.

1. As with other hazards of concern to Pasquotank County and the City of Elizabeth City, a hazard mitigation symposium should be held for its residents, including information on preparedness for all hazards significant to its jurisdiction. The symposium should encourage property owners in flood prone areas to consider the options of elevation, relocation, and flood proofing.
    - Update – Ongoing – Information regarding flood proofing provided via various forums.

2. Distribute information identifying flood prone areas within the county/city. Address the need for evacuation and family preparedness plans especially for residents living within flood prone areas.
    - Update – Ongoing. EM also maintains a Special Needs Registry – evacuation and family preparedness information is made available to this population as well as the non-English speaking population in Pasquotank County/Elizabeth City.

Goal 4: Protect Pasquotank River and Little River, as well as surrounding ecosystems

Objective 1: **Protect/Enhance Shoreline Vegetation.**

~~1. Incorporate shoreline vegetation protection buffers into the City of Elizabeth City's Unified Development Ordinance as a stipulation to development in and near areas of environmental concern.~~

Objective 2**: Control Adverse Effects of Storm Water Runoff.**

1. In order to reduce storm water runoff, the city should minimize construction of additional impervious surfaces within the floodplain. Elizabeth City's Stormwater Management Ordinance addresses mitigation measures to control the adverse effects of increased storm water runoff associated with both future land development and existing developed land within the City.
    - Update – Ongoing – stormwater management is a part of land development within the city.

TORNADO MITIGATION STRATEGY

Goal 1: Minimize the Impacts of Tornadoes on Life and Property

Objective 1: **Improve the wind resistance of structures in the county/city.**

1. Continue to enforce the North Carolina Building Code. The requirement that new structures or structures undergoing significant renovation be resistant to wind loads of 110 m.p.h. is of particular importance.
    - Update - – Ongoing through county/city inspections departments.

~~2. Educate contractors about principles for quality redevelopment and safe housing development through written materials or a county/city-sponsored symposium.~~

Objective 2: **Educate home and property owners about wind proofing measures.**

1. Hold a county/city-sponsored hazard mitigation symposium for the county residents and surrounding municipalities, including information on preparedness for all hazards significant to Pasquotank County.
    - Update – Ongoing (information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.

~~2. Provide new home and property buyers with information on wind proofing. This information may be most efficiently dispersed by the tax assessor's office because all home transactions are recorded there.~~

3. Educate mobile home contractors and owners about wind proofing measures, including wood and light steel construction connectors and anchoring systems.
    - Update – Mobile homes are only allowed in designated residential zones and newly placed homes must be built in compliance with the Federal Manufactured Housing and Construction Safety Standards (110 mph wind codes). Requirements for anchoring the mobile home are also a part of the county's Zoning Ordinance.

Objective 3**: Reduce the impact of wind on trees near county/city structures.**

1. Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees or branches on county/city property when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the community.
    - Update – Ongoing actions through maintenance.

Objective 4: Maximize Citizen Preparedness for Tornadoes.

1. Warning System Improvements. Several options exist for a tornado warning system. One option is to position sirens in heavily populated areas with a specific signal that indicates a tornado warning. Residents in hearing distance at the moment of the sounding will hear the signal. One tornado siren is presently located on the water tower behind Elizabeth City Police Department and is manually activated when a tornado warning is received.
    - Update – Citizens are given information regarding free applications available for severe weather alerts and are also encouraged to purchase weather radios.

2. Encourage the practice of placing storm shelters in all mobile home areas and subdivisions.
    - Update – Ongoing – encouraged if funding is available.

THUNDERSTORM MITIGATION STRATEGY

Goal 1: Minimize the Impacts of Severe Thunderstorms

***Objective 1*: Educate the public on the hazards of thunderstorms.**

1. As with other hazards of concern to Pasquotank County and the City of Elizabeth City, the county/city can sponsor a hazard mitigation symposium for its residents, including information on preparedness for all hazards significant to Pasquotank County.
    - Update – Ongoing (information is distributed during public events and is posted on Camden-Pasquotank Emergency Management Website and Facebook.

***Objective 2*: Minimize the impacts of lightning strikes.**

1. Encourage the installation of lightning detection devices be installed in public outdoor gathering areas such as school stadiums and ball parks.
    - Update – Ongoing (funds not available).

2. In order to minimize injury from lightning strikes, shelters should be placed every 10 acres in all public open space recreation areas. This recommendation should be encouraged by the county and the city.
    - Update – Ongoing (funding not available at this time).

***Objective 3*: Improve the wind resistance of structures in the county/city.**

1. Continue to enforce the North Carolina Building Code. The requirement that new structures or structures undergoing significant renovation be resistant to wind loads of 110 m.p.h. is of particular importance.
    - Update – Ongoing through county/city inspections departments.

2. ~~Educate contractors about principles for quality redevelopment and safe housing development through written materials or a county/city sponsored symposium~~.

***Objective 4:* Educate home and property owners about wind proofing measures.**

Recommended Mitigation Measures

1. Hold a county/city-sponsored hazard mitigation symposium for the county residents and surrounding municipalities, including information on preparedness for all hazards significant to Pasquotank County.
    - Update – Ongoing (information is distributed during public events/civic talks and is posted on Camden-Pasquotank Emergency Management Website and Facebook.

2. ~~Provide new home and property buyers with information on wind proofing. This information may be most efficiently dispersed by the tax assessor's office because all home transactions are recorded there.~~

3. Educate mobile home contractors and owners about wind proofing measures, including wood and light steel construction connectors and anchoring systems.
    - Update – Mobile homes are only allowed in designated residential zones and newly placed homes must be built in compliance with the Federal Manufactured Housing and Construction Safety Standards (110 mph wind codes). Requirements for anchoring the mobile home are also a part of the county's Zoning Ordinance.

Objective 5: **Reduce the impact of wind on trees near county/city structures.**

1. Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees or branches on county/city property when they would pose an immediate threat to property, utility lines or other significant structures or critical facilities in the county.
    - Update – Ongoing actions through maintenance.

Objective 6: **Increase driving safety during thunderstorms**

1. Driving in storm conditions can create hazardous road conditions, including decreased ability for drivers to see road boundaries. To improve road visibility, reflector tape or paint along road edges and in the dividing line should be placed on all major roads through city/county.
    - Update – As funds are available this is maintained by NCDOT

FIRE MITIGATION

Goal 1: Minimize Risk of Fire

Objective 1: **Maintain a current action plan for fire response.**

1. Conduct an annual review of the Pasquotank-Camden-Elizabeth City Multi-Hazard Emergency Operations Plan. Maintain current emergency contact information.
    - Update - Annual update of Multi-Hazard Plan. Emergency Management Coordinator attends annual NC Forest Service Cooperative Meeting. EM Coordinator maintains current contact information.

2. Educate homeowners and farmers on fire control methods.
    - Update – Ongoing (information provided by fire departments, Emergency Management and NC Cooperative Extension Service)

Objective 2: **Educate home and property owners about Wildland/Urban Interface fire safety.**

1. Educate homeowners within wildfire threat areas about Wildland/Urban Interface fire safety. Implement Firewise Program within hazard communities.
    - Update – Ongoing through local fire departments and NC Forest Service.

Perquimans County Status Update

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
Preventive Actions							
P-1	Monitor trees and branches at risk of breaking or falling in windstorms. Prune or thin trees or branches on county property when they would pose an immediate threat to property, utility lines, or other significant structures or critical facilities in the county.	All	1.1	Moderate	Local	BG	Ongoing
P-2	Create a preferred foliage and wind resistant tree list for the County. Distribute the list to property owners in an effort to reduce the risk of trees and plants from breaking in high wind events. This has not yet been pursued.	All	1.1	Moderate	Local	PL	Ongoing
P-3	Record all tax parcel information and floodplain locations in a GIS system including repetitive loss areas, areas of greatest risk, and vulnerable populations. Maintain and update GIS layers that identify critical facilities/infrastructure and other facilities to include childcare centers, mobile home parks/subdivisions, and senior care facilities.	Flood	3.1	Moderate	Local	GIS PL EM	Ongoing
P-4	Consider participating in the Community Rating System (CRS). This has not yet been pursued.	Flood	2.2	Moderate	Local	BOC BI PL	~~2011~~ 2020
P-5	Continue to review rebuilding activities after major storm events to determine how revisions to existing policies and procedures could help minimize repetitive losses.	All	1.1	Moderate	Local	BI	Ongoing
P-6	Ensure that mobile manufactured homes are installed and secured properly.	All	4.1	High	Local	BI	Ongoing
P-7	Complete the review and consider adoption of "Stormwater and Drainage Management Standards" to augment current zoning and subdivision ordinances, as included in the Planning Board's Fiscal Year 2009-2010 Work Program. The TRC has recommended adoption of this Ordinance.	Flood	2.1	High	Local	PL	~~2010~~ Complete – Enacted by BCC on 11-1-2010
Property Protection Actions							
PP-1	Continue to enforce the North Carolina Building Code.	Wind	1.1	Moderate	Local	BI	Ongoing

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
	Enforce the use of wind-resistant construction techniques used in coastal regions. The requirement that new structures or structures undergoing significant renovations be resistant to wind loads of 110 mph is of particular importance.				State		
PP-2	Continue to acquire destroyed or substantially damaged properties and relocate households. Seek State and Federal funding. (voluntary program)	All	2.2	Moderate	FEMA NCDEM	BOC	On-going
Emergency Services							
ES-1	Maintain and annually update the county Emergency Operations Plan. This plan should contain detailed information on responsible parties and contact information. This information should be updated as positions and contact information change.	All	1.1 1.3	High	Local	EM	Ongoing
ES-2	Maintain evacuation routes.	All	1.1	Moderate		BOC	Ongoing
ES-3	Warning System Improvements. Several options exist and the county will explore and decide upon the most feasible option to warn county residents. Reverse 911 system instituted during 2010 planning timeframe.	Tornado / High Wind	1.1	Moderate	Local	ES EM	Ongoing
ES-4	Ensure adequate evacuation time in case of major hazard events.	All	1.1 1.3	High	Local	EM ES	Ongoing
ES-5	Promote and encourage the establishment and training of Community Emergency Response Teams (CERT) throughout the county (2 active CERTs established during the 2010 planning timeframe).	All	1.1 2.1	Moderate	Local NCDEM	EM	Ongoing
ES-6	Work to develop continuity of operations plans (COOP) for county/town departments, assisted living facilities, long-term care facilities, day care centers, etc	All	1.1	High	Local	BOC EM	~~2012~~ 2015
Natural Resource Protection							
NR-1	In order to reduce storm water runoff, the county should minimize construction of additional impervious surfaces within floodplains. This should include limiting construction of impervious surface parking lots in the areas near the rivers.	All	1.1 3.1	Low	Local	BOC	Ongoing
NR-2	Continue to support NC Sedimentation Control Commission efforts to ensure erosion and sedimentation control measures are properly installed	Flood	3.2	High	Local NCDENR	PL NRCS SWCD	Ongoing

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
	and maintained during construction.						
Structural Projects							
S-1	Encourage the installation of generator switches in new construction critical facilities and existing shelters. As projects go through TRC, applicants can be encouraged to pre-wire facilities for a generator. Transfer switches were installed at PCHS (primary shelter) during the 2010 planning timeframe.	All	1.1 2.1	High		PL BOC	Ongoing
Public Information Activities							
PI-1	As with other hazards of concern to Perquimans County, the county should sponsor a hazard mitigation symposium for county residents, including information on preparedness for all significant hazards. The symposium should address the options of elevation, relocation, and flood proofing. This has not yet been pursued; however, the EMC holds annual Hurricane Briefings for first responders and other interested citizens and residents, with speakers on related topics.	Flood	1.2	Moderate	Local	BOC EM	Ongoing
PI-2	Post information about emergency evacuation routes.	All	1.2	High	Local	EM	Ongoing
PI-3	Use written materials to educate contractors about principles for quality redevelopment and safe housing development.	All	1.2	Moderate	Local	BI	Ongoing
PI-4	Provide new home and property buyers with information on wind proofing. The information is probably most effectively dispersed by the Building Inspections Department.	Wind	1.1 1.2	Moderate	Local	PC	Ongoing
PI-5	Create and disperse information about the plan and relevant emergency response actions the public can take.	All	1.2	High	Local	ES EM	Ongoing
PI-6	Continue to provide flood maps for public use with staff continuing to be available for public assistance. Encourage residents to visit the NFIP website, www.floodsmart.gov, and NC Flood plain Mapping Program website, www.ncfloodmaps.com, for more information about the National Flood Insurance Program and floodplain management.	Flood	1.1 1.2	High	Local	BI PL	Ongoing

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
PI-7	Collect FEMA and NCEM educational material on natural hazards and place in public library.	All	1.1 1.2	High	Local	EM	Ongoing
PI-8	Develop and distribute information to the public regarding the requirements for anchoring LP gas tanks.	Flood	1.2	Moderate	Local	PL EM ES	~~2011~~ 2020

Town of Hertford Status Update

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party*	Target Completion Date
P-1	Update the CAMA Land Use Plan in conjunction with the County's Core Land Use Plan	All	1.1	Moderate	Local	HM	~~2010~~ 2015
P-2	Consider revising Hertford's Zoning Ordinance and Subdivision Regulations to improve storm water management practices in developments.	All	1.1 3.1	~~Moderate~~ Low	Local	HM	~~2010~~ 2020
P-3	Update the Town of Hertford's Zoning Ordinance and Subdivision Regulations.	All	1.1	Low	Local	HM	~~2010~~ As needed
P-4	Work in conjunction with NCDOT and other agencies to ensure that storm water facilities are maintained to allow for reasonable flows.	All	1.1 3.1	Moderate	State	NCDOT HM	As Needed
PP-1	In cooperation with Perquimans County, continue to review areas adversely impacted by major storm events and to examine existing policies that can minimize repetitive losses in those areas.	Flood	1.1 3.1	Moderate	Local	PC HM	As Needed
ES-1	Work to develop continuity of operations plans (COOP) for county/town departments, assisted living facilities, long-term care facilities, day care centers, etc	All	1.1	High	Local	HM	~~2012~~ 2015
S-1	In conjunction with NCDOT, continue to examine the roadways of the town to determine if improvements are needed in areas affected by development.	All	1.1	Moderate	State	NCDOT HM	As Needed

Town of Winfall Status Update

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
Preventive Actions							
P-1	Complete Land Use Plan and ensure that hazard mitigation objectives are addressed.	All	1.1	High	Local	TC PB PC	~~2010~~ 2015
P-2	Update as needed the wastewater collection system and water system ordinances to meet hazard mitigation objectives.	All	2.1	Moderate	Local	PB TC	~~2010~~ 2020
P-3	Continue to encourage efforts towards countywide water systems with Perquimans County. Perquimans County assumed Winfall's water system during the 2010 planning timeframe.	All	1.1	Moderate	Local	TC	Completed
P-4	Continue efforts to improve roads and bridges (both public and private) for critical services – fire, rescue, medical, evacuation, etc.	All	3.1	Moderate	State	TC	Ongoing
Property Protection Actions							
PP-1	Seek funding and/or action to clear debris in canals, waterways and drainage ditches to prevent flooding and to improve drainage and water quality.	Flood Storms	1.1	Moderate	NCDOT NCDENR	TC	Ongoing
PP-2	Work with the County Building Inspector to continue to enforce the NC Building Code, in particular, the tie down of buildings and resistance to wind loads.	High Winds	4.1	Moderate	Local	PC TC	Ongoing
Natural Resources							
NR-1	Minimize construction of impervious surfaces adjacent to floodplains or near storm water drainage routes that empty into the river.	All	4.1	Moderate	Local	ZA	Ongoing
Emergency Services							
ES-1	Establish program for evacuation and improvement of Town critical services and facilities – ~~water system and~~ wastewater collection system.	All	1.1 2.1	Moderate	Local	TC FD Staff	Ongoing
ES-2	Continue to partner with Perquimans County in the annual review and update of the Emergency Operations Plan (i.e. evacuation warnings, removal of persons in	All	1.1	High	PC Town	PC TC	Ongoing

Action #	Actions	Hazard	Objective(s) Addressed	Relative Priority	Funding Sources	Responsible Party	Target Completion Date
	flood prone areas).						
ES-3	Continue to partner with Perquimans County to improve warning system, to ensure residents understand the system and that homebound residents are notified. Reverse 911 system instituted during 2010 planning timeframe.	All	1.1 1.2	Moderate	Local	TC PD FD	Ongoing
ES-4	Evaluate flood or access problems for critical facilities; develop protection options. Identify alternate command post sites.	All	1.1	High	Local	PD Staff TC	Ongoing
ES-5	Work to develop continuity of operations plans (COOP) for county/town departments, assisted living facilities, long-term care facilities, day care centers, etc	All	1.1	High	Local	TC Staff	~~2012~~ 2015
Structural Projects							
S-1	Continue to work on removal of projectile/debris such as junked vehicles, mobile homes and dilapidated homes.	All	1.1	Moderate	Local	TC Staff	Ongoing
S-2	Continue to evaluate those businesses with potential hazardous liquids for adequate protection of the public.	All	1.1 4.2	Moderate	Town Private	TC FD	Ongoing
Public Information Activities							
PI-1	Participate in the annual review and update of the Hazard Mitigation Plan.	All	1.1	High	Local	PB TC	Ongoing
PI-2	Establish both a regular and emergency plan to communicate with residents.	All	1.2	High	PC Town	TC	Ongoing
PI-3	Disseminate information on emergency actions procedures – notification, shelters, evacuation routes, etc.	All	1.2	High	Local	TC Staff	Ongoing
PI-4	Each Town department establish/update plans for their respective operations for emergency operation situations.	All	1.1	High	Local	TC Staff FD	Ongoing

Appendix G – Funding Sources

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: NCDEM, 919/825-2500, https://www.ncdps.gov/index2.cfm?a=000003,000010

Adopt-a-Trail Program

Through the North Carolina Department of Environment and Natural Resources, this program provides grant funding for trail planning, construction, maintenance, and administration.

Contact: NCDENR, 919/846-9991, http://www.enr.state.nc.us

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

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.

Clean Water Management Trust Fund

An agency of the North Carolina Department of Environment and Natural Resources (NCDENR), the Clean Water Management Trust Fund (CWMTF) provides grants for enhancement and restoration of degraded waters. In addition, funding is provided for development of buffers and greenways near rivers for environmental, educational, and recreational needs. Contact: CWMTF, 252/830-3222, http://www.cwmtf.net

Community Facilities 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

Disaster Preparedness Improvement Grant (DPIG)

This grant provides federal matching funds for communities to develop hazard mitigation plans, expand existing plans, update disaster preparation plans, and to prepare the administrative plans required to qualify for Hazard Mitigation Grant Program grants. Funds for the DPIG are provided by FEMA and the Division of Emergency Management administers the program in North Carolina.
Contact: NCDEM, 919/825-2500, https://www.ncdps.gov/index2.cfm?a=000003,000010

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

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, https://www.ncdps.gov/index2.cfm?a=000003,000010

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, Division of Water Quality, 919/733-5083, http://h2o.ehnr.state.nc.us/wrp

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, 919/715-2662, http://www.enr.state.nc.us/

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/

Property Improvement Loan Insurance

The US Department of Housing and Urban Development (HUD) insures lenders against loss on loans for alterations, repairs and improvements to existing structures and new construction of nonresidential structures. Contact: HUD, 202/708-1112, http://www.hud.gov/

Public Assistance Program (PA)

The Public Assistance provides federal aid to communities to help save lives and property in the immediate aftermath of a disaster and to help rebuild damaged facilities. Grants cover eligible costs associated with the repair, replacement, and restoration of facilities owned by state and local governments and nonprofit organizations. The Public Assistance program is administered by FEMA. Contact: FEMA, http://www.fema.gov/r-n-r/pa/index.htm

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

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

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

Snagging and Clearing for Flood Control

The Office of the Chief of Engineers, Department of the Army, Department of Defense provides this service in order to reduce flood control. Contact: http://www.usace.army.mil

Soil and Water Conservation

The US Department of Agriculture, Natural Resources Conservation Service provides this in-kind service in order to provide for the conservation, development and productive use of the nation's soil, water, and related resources. Contact: USDA, NRCS, http://www.nrcs.usda.gov

Urban Park and Recreation Recovery Program

This program of the Department of the Interior, National Park Service (NPS) provides grants for local governments for improvements in park system management and recreational opportunities. Contact: NPS, 202/565-1200, http://www.cr.nps.gov/index.htm

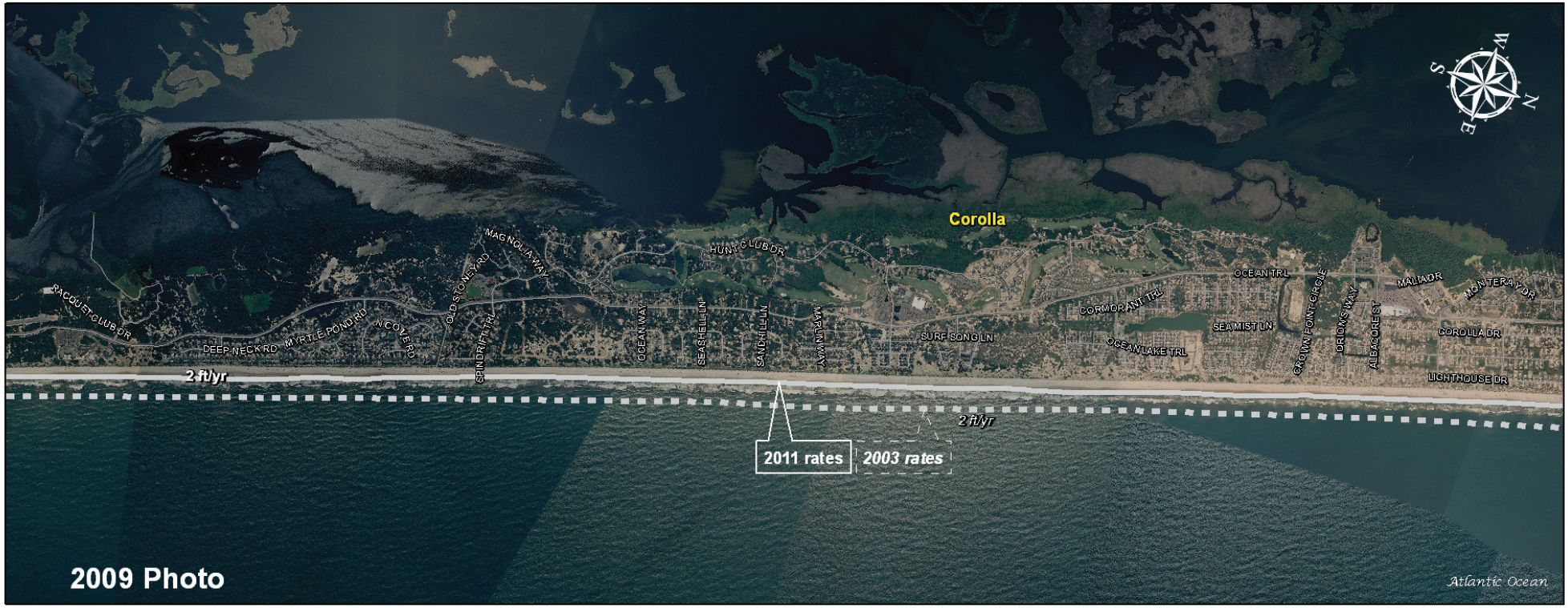
Watershed Protection and Flood Prevention Loans

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/rus/index.html

Watershed Surveys and Planning

The US Department of Agriculture, Natural Resources Conservation Service provides technical and financial assistance for sharing costs of watershed protection measures, including flood prevention, sedimentation control and recreation. Contact: NRCS, http://www.nrcs.usda.gov

Appendix H – Currituck County Supplemental Data



2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Corolla), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Vicinity Map

Map Scale: 1:24,000

0 1,000 2,000 4,000 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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NC DIVISION OF COASTAL MANAGEMENT

400 Commerce Avenue
Morehead City, North Carolina 28557
1-888-4RCOAST

http://www.nccoastalmanagement.net

Map No. Corolla - 1 of 2

Ken Richardson - April, 2011

North Carolina Department of Environment and Natural Resources

Division of Coastal Management - 2011

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Corolla), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
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Map No. Corolla - 2 of 2

Ken Richardson - April, 2011

North Carolina Department of Environment and Natural Resources

Division of Coastal Management - 2011

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Currituck Nat'l Wildlife Refuge & County), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
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Map No. Currituck - 1 of 2

Ken Richardson - April, 2011

North Carolina Department of Environment and Natural Resources

Division of Coastal Management - 2011

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Currituck Nat'l Wildlife Refuge & County), North Carolina

Legend

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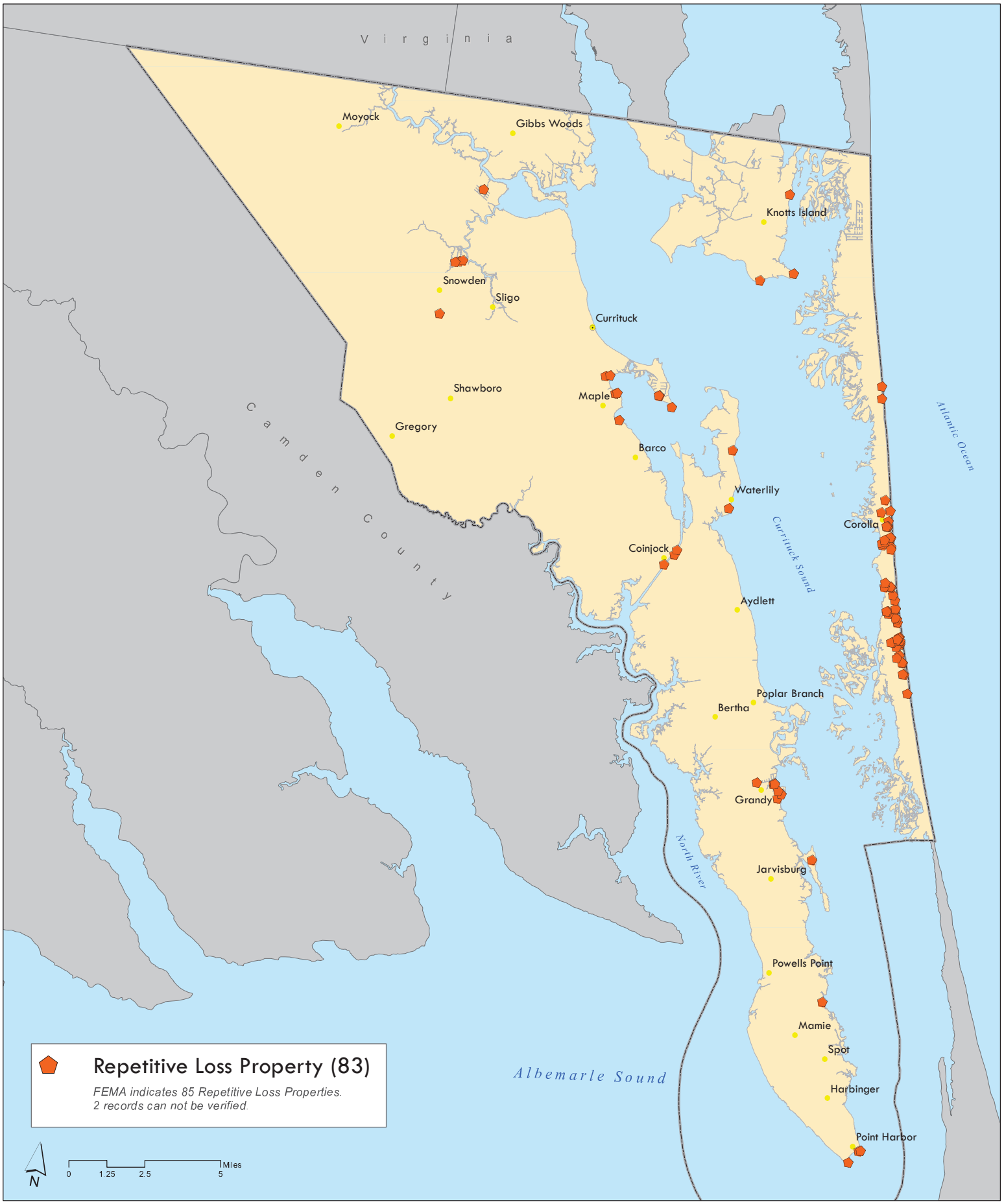
http://www.nccoastalmanagement.net

Map No. Currituck - 2 of 2

Ken Richardson - April, 2011

Repetitive Loss Properties: Currituck County



Currituck CRS 510
Public Planning Committee (PPC)

Floodplain management planning (FMP) -- must follow a 10-step planning process . Hazard mitigation plans prepared according to this process can receive credit. (TABLE 510-1 from CRS manual illustrates the FEMA mitigation process compared to the CRS program)

STEP 1	**Organize**
STEP 2	**Involve the public**
STEP 3	**Coordinate**
STEP 4	**Assess the hazard**
STEP 5	**Assess the problem**
STEP 6	**Set goals**
STEP 7	**Review possible activities**
STEP 8	**Draft an action plan**
STEP 9	**Adopt the plan**
STEP 10	**Implement, evaluate, revise**

These steps will be followed during the development of the ARHMP based on input from the Currituck County 510 committee. The information provided to WOOTEN from the ARHMP will be based on input at the 510 PPC committee meetings from reviewing/updating our 2010 hazard mitigation plans. The County will review the adopted hazard mitigation plan to update information for 510 PPC committee and ARHMP.

STEP 1 – ORGANIZE TO PREPARE THE PLAN –

The 510 Floodplain Management Plan (FMP) Staff Committee met on November 5, 2014 and the first official meeting of full 510 committee is November 12, 2014.

The 510 Public Planning Committee (PPC) must meet a sufficient number of times to involve the committee in the discussion of the following key steps:

STEP 4 Assess the hazard
STEP 5 Assess the problem
STEP 6 Set goals

STEP 7 Review possible activities
STEP 8 Draft an action plan

PPC Committee must involve the staff committee and half of the PPC members must be from outside the local government (stakeholders).

STEP 2 – INVOLVE THE PUBLIC

Hold the first Public Planning Committee Meeting. Committee members include stakeholders from the community.

Meetings will be open to the public and publicly posted – posted on Currituck's website, at the Courthouse, and other local media. (Currituck County will advertise and post on our website for each meeting and for separate meetings to be held later in process)

Public meetings held within first 2 months of process – separate from committee meetings

Public meetings held on recommended plan – 2 weeks before submission to local governing boards – we will have to complete once ARHMP is finalized and ready for adoption (May-June 2015)

Additional points for other public outreach activities – website postings, etc.

STEP 3 – COORDINATE

Points for review of existing plans by 510 PPC committee

Points for coordinating with other agencies and organizations (examples from CRS manual page 510-13)

STEP 4 – ASSESS THE HAZARD

Discussion by 510 committee of information from WOOTEN

Must include repetitive loss information for the community

Must all discuss all hazards discussed in each mitigation plan

STEP 5 ASSESS THE PROBLEM

Discussion by 510 PPC committee of hazards identified to summarize what is at risk. We will need an assessment on the types of affected buildings. Identify community buildings that are insured for flood damage by town.

STEP 6 – GOALS

Goals for all hazards identified by 510 PPC committee

STEP 7 – REVIEW POSSIBLE ACTIVITIES

Discussion by 510 PPC committee of possible activities (pros and cons discussed) of each activity. This step serves as the basis for the selection of projects and activities in STEP 8. (Figure 510-4 from CRS manual lists examples)

STEP 8 – DRAFT AN ACTION PLAN

Identify actions to be taken in response to alternatives from STEP 7, must identify responsible agency, timeline for action, and how it will be funded. Actions must be prioritized.

STEP 9 – ADOPT THE PLAN

Adopt by local governing boards of ARHMP – each government involved in ARHMP will need to adopt regional plan (July 2015)

STEP 10 – IMPLEMENT, EVALUATE, AND REVISE

Must be an annual evaluation of plan for CRS credit each year

Currituck CRS 510
Public Planning Committee (PPC)

Name	Phone Number	Email	Representing
Anthony Dickinson	252.232.2277	anthony.dickinson@ncfbins.com	Farm Bureau - Insurance/Mainland Resident
Warren Eadus	252.261.3300	weadus@quible.com	Quibble- Design Professional
Al Marzetti	919.475.4064	apmarzetti@gmail.com	Tax Attorney/Insurance/ Risk Assessment
Rick Galganski	252.453.3242	chief@corollafireandrescue.com	Corolla Vol. Fire Chief
Mike Hudson	252.207.3055	michael.hudson@islandsurf.org	Alternate Corolla Vol. Fire
Stanley Griggs	252.207.9011	sdgriggs@centurylink.net	First Responder/Mainland
Heidi Corsello	252.453.4011	hcorsellotcc@gmail.com	Corolla
Jeremy Graves	252.336.4332	Jeremy.Graves@ncagr.gov	Forestry
Jackie Chunn	252.457.9302 ext 226	jchunn@southerninsurance.com	Southern Insurance Agency, Inc. - Corolla Branch

Currituck CRS 510
Public Planning Committee (PPC)

November 12, 2014

Agenda

1. Call to Order

2. Introduction of Members

3. Purpose of Committee (Step 1)
    a. CRS Handout- Credit for Planning Committees
    b. Summary of Meeting with State Officials
    c. Discussion of CRS 510 Public Planning Committee (PPC)
    d. Website

4. Involvement of the Public (Step 2)
    a. Public Involvement
    b. Outreach Activities

5. Review of Existing Plan (Step 3)
    a. Discussion of Agencies to Contact
    b. Plan Review

6. Assess the Hazard (Step 4)
    a. Hazard Assessment- discussion of information from Wooten by Committee

7. Homework
    a. Action Plan Review
    b. Review portions of draft plan ready

8. Committee comments or concerns

9. Adjournment

Albemarle Regional Hazard Mitigation Website
http://albemarlereghazardmitigationplan.wikispaces.com/

Currituck County Hazard Mitigation Plan
http://ncemplans.us/currituck/webver/cchazardmitigationplan.htm

Currituck CRS 510
Public Planning Committee (PPC)

November 18, 2014

Agenda

1. Call to Order

2. Recap and questions from last meeting
    a. Outreach(Step 2)
        i. Website update
        ii. Survey responses
        iii. Advertisement of meetings
    b. Review list of agencies to contact and letter (Step 3)

3. Assess the Hazard (Step 4)
    a. Repetitive Loss Properties Map

4. Assess the Problem (Step 5)
    a. Critical Facilities
    b. Communities Major Employers

5. Goals (Step 6)
    a. Review of existing 2010 Hazard Mitigation Plan Goals
        i. The committee can keep, remove, or modify these goals.
        ii. Need to address 6 categories noted in figure 510-4:
            1. Preventive
            2. Property protection
            3. Natural resource protection
            4. Emergency services
            5. Structural projects
            6. Public information

6. Review existing action plan (Step 8)
    a. Review existing action plan along with the goals and determine which actions should be kept, modified, deleted, or new actions added.

7. Committee comments or concerns

8. Adjournment

Albemarle Regional Hazard Mitigation Website
http://albemarlereghazardmitigationplan.wikispaces.com/

Currituck County Hazard Mitigation Plan
http://ncemplans.us/currituck/webver/cchazardmitigationplan.htm

Currituck CRS 510
Public Planning Committee (PPC)

November 24, 2014

Agenda

1. Call to Order

2. Recap and questions from last meeting
    a. Repetitive Loss Properties Map Update (Step 4)
    b. Update of 2010 Hazard Mitigation Plan Goals (Step 6)

3. Review existing action plan (Step 8)
    a. Review existing action plan along with the goals and determine which actions should be kept, modified, deleted, or new actions added.

4. Updated Information Vulnerability to Flooding (Step 4 & 5)
    a. Flood Hazard Zones
        i. Developed vs Undeveloped
            - Acres
            - Values
            - Residential structure numbers
            - Population
    b. Storm Surge
        i. Fast Moving Storm
            - Acres
            - Structures
            - Value
        ii. Slow Moving Storm
            - Acres
            - Structures
            - Value

5. Review Possible Activities (Step 7)

6. Committee comments or concerns

7. Adjournment

Albemarle Regional Hazard Mitigation Website
http://albemarlereghazardmitigationplan.wikispaces.com/

Currituck County Hazard Mitigation Plan
http://ncemplans.us/currituck/webver/cchazardmitigationplan.htm

Currituck CRS 510
Public Planning Committee (PPC)

December 2, 2014

Agenda

1. Call to Order

2. Review Possible Activities (Step 7)
    a. Review of preventive activities:
        i. Land Use Plan
        ii. Building Code
        iii. Unified Development Ordinance
            - Floodplain Management Ordinance
            - Subdivision Ordinance
            - Stormwater Management Ordinance
    b. Discussion of preventive activities:
        i. How do these tools reduce future flood losses?
        ii. The current regulations and standards addressed.
        iii. Should the adopted ordinances be revised due to vulnerability (outlined in step 5) and goals (step 6)?
        iv. Are the community's floodplain management regulatory standards sufficient for current and future conditions (steps 4c and 5f)?
        v. What property protection measures are appropriate for Currituck? Acquisition, retrofitting, flood insurance, other, all of the above, none of the above?
        vi. How can we work to protect the natural and beneficial functions of the floodplain (i.e. wetlands protection)?
        vii. What are our emergency services activities (i.e. warning and sand bagging)? Are there others that would be helpful?
        viii. What type of structural projects does the County engage in to prevent flooding? (levees, reservoirs, channel modification)
        ix. What type of public information activities, such as outreach and environmental education, does the County conduct?

3. Identification of areas of localized flooding (Step 4)

4. Recap and questions from last meeting
    a. Review of revised goals by committee (Step 6)- Review of revised goals
    b. Review of revised action plan by committee (Step 8)- Review of revised action plan.

5. Committee comments or concerns
6. Homework
    a. Review of Plan Sections that are finished. Be ready to suggest any modifications needed and make a motion for approval at 12.9.14 meeting.
    b. Next meeting 12.9.14 at 1:00 pm- Historic Courthouse Conference Room.

7. Adjournment

Albemarle Regional Hazard Mitigation Website
http://albemarlereghazardmitigationplan.wikispaces.com/

Currituck County Hazard Mitigation Plan
http://ncemplans.us/currituck/webver/cchazardmitigationplan.htm

Currituck CRS 510
Public Planning Committee (PPC)

December 9, 2014

Agenda

1. Call to Order

2. Review of final draft goals and actions (Steps 6 & 8)
   a. The committee should modify, delete, or approve draft goals and actions.
   b. Prioritize actions

3. Review of draft Regional Plan sections
   a. Section 1- Introduction
   b. Section 3- Regional Profile
   c. Section 8- Plan Maintenance

   The committee should modify, delete, or approve draft plan sections.

4. Set up date for follow up meeting in early January to vote on a draft Regional Plan
   a. Look at dates- January 6th-16th

5. Committee comments or concerns

6. Adjournment

Albemarle Regional Hazard Mitigation Website
http://albemarlereghazardmitigationplan.wikispaces.com/

Currituck County Hazard Mitigation Plan
http://ncemplans.us/currituck/webver/cchazardmitigationplan.htm

Currituck CRS 510
Public Planning Committee (PPC)

January 20, 2015

Agenda

1. Call to Order
2. Comments or concerns regarding prioritized actions.
3. Review of regional plan
4. Homework (submit comments)
5. Adjournment

Albemarle Regional Hazard Mitigation Website
http://albemarlereghazardmitigationplan.wikispaces.com/

Currituck County Hazard Mitigation Plan
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Outside Agency Coordination

Currituck County is participating in a multi-jurisdictional Hazard mitigation Plan called the Albemarle Regional Hazard Mitigation Plan.

We are requesting your input on the identified hazards and hope to receive your organization's ideas about any additional hazards by Monday, December 8th. Hazards may include natural hazards and manmade hazards.

The plan includes Currituck County and six municipalities and seven other counties in the Albemarle area. FEMA strongly encourages regional plans and the Albemarle plan is funded through a FEMA Grant. The Albemarle Regional Plan is to be drafted by the consulting firm Wooten and Company. Hazard Mitigation Plans are required to be updated every five years and Currituck County's last plan was adopted in 2010. FEMA approved Hazard Plans are required in order to receive disaster assistance following a federally declared disaster.

Currituck County participates in the Community Rating System (CRS) which is a voluntary program aimed at lowering flood insurance costs for our property owners. The County receives points for CRS based activities including a Hazard Mitigation Plan. The County receives credit if a 10 step process is followed in development of the plan. One of the steps in the process is public outreach, including requesting input for outside agencies.

Attached is the preliminary list of potential hazards developed by the consultant, based on meetings with all participating counties for the plan and a risk assessment for each individual county. Also attached is the Currituck County Hazard Mitigation Plan.

We really appreciate your time and input.

Appendix I – Dare County Supplemental Data

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Hatteras), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
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Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

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http://www.nccoastalmanagement.net

Map No. Outer Banks - 1 of 3

Ken Richardson - April, 2011

North Carolina Department of Environment and Natural Resources

Division of Coastal Management - 2011

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Hatteras), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
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Map No. Outer Banks-Hatteras - 2 of 3

Ken Richardson - April, 2011

North Carolina Department of Environment and Natural Resources

Division of Coastal Management - 2011

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Hatteras), North Carolina

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Map No. Outer Banks-Hatteras - 3 of 3

Ken Richardson - April, 2011

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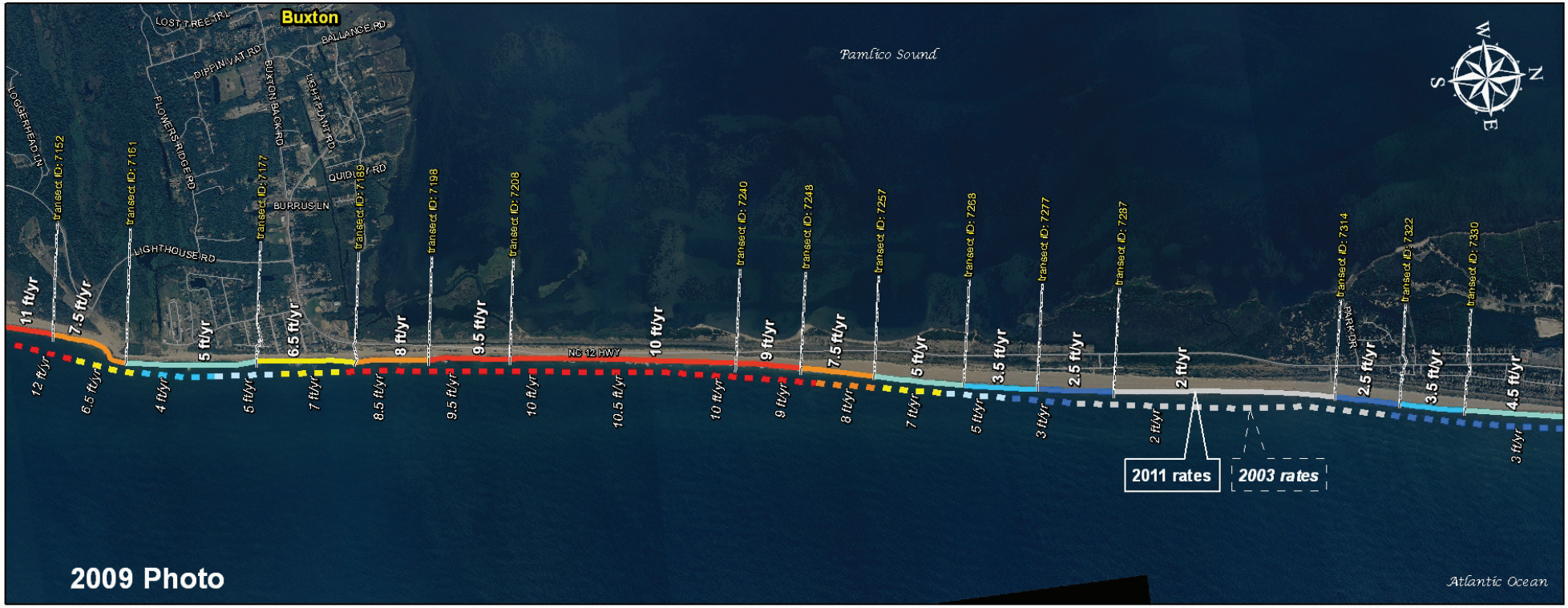
Division of Coastal Management - 2011



2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Buxton), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:24,000

0 1,000 2,000 4,000 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

The information presented here is not predictive, nor does it reflect short-term erosion potential. This map may not be suitable for property specific determination of erosion rate factors near rate transition boundaries due to its small scale. For site specific determinations contact your CAMA Local Permit Official, or regional Division of Coastal Management field office.

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Map No. Outer Banks - Buxton - 1 of 1

Ken Richardson - April, 2011

North Carolina Department of Environment and Natural Resources

Division of Coastal Management - 2011

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Avon), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:24,000

0 1,000 2,000 4,000 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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Map No. Outer Banks - Avon - 1 of 1

Ken Richardson - April, 2011

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Division of Coastal Management - 2011

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (National Seashore), North Carolina

Legend

2011 Setback Factors (feet/year)

- 2.0
- 2.1 - 3.0
- 3.1 - 4.0
- 4.1 - 5.0
- 5.1 - 6.0
- 6.1 - 7.0
- 7.1 - 8.0
- > 8.0
- Erosion Rate Factor Transition Boundary
- Beach Fill Project > 300,000 cubic yards

2003 Setback Factors (feet/year)

- 0.0 - 2.0
- 2.1 - 3.0
- 3.1 - 4.0
- 4.1 - 5.0
- 5.1 - 6.0
- 6.1 - 7.0
- 7.1 - 8.0
- > 8.0
- Inlet Hazard Area

Photo: 2009 USDA NAIP

Map Scale: 1:50,000

0 2,000 4,000 8,000 Feet

0 0.5 1 2 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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Map No. Outer Banks - 1 of 4

Ken Richardson - April, 2011

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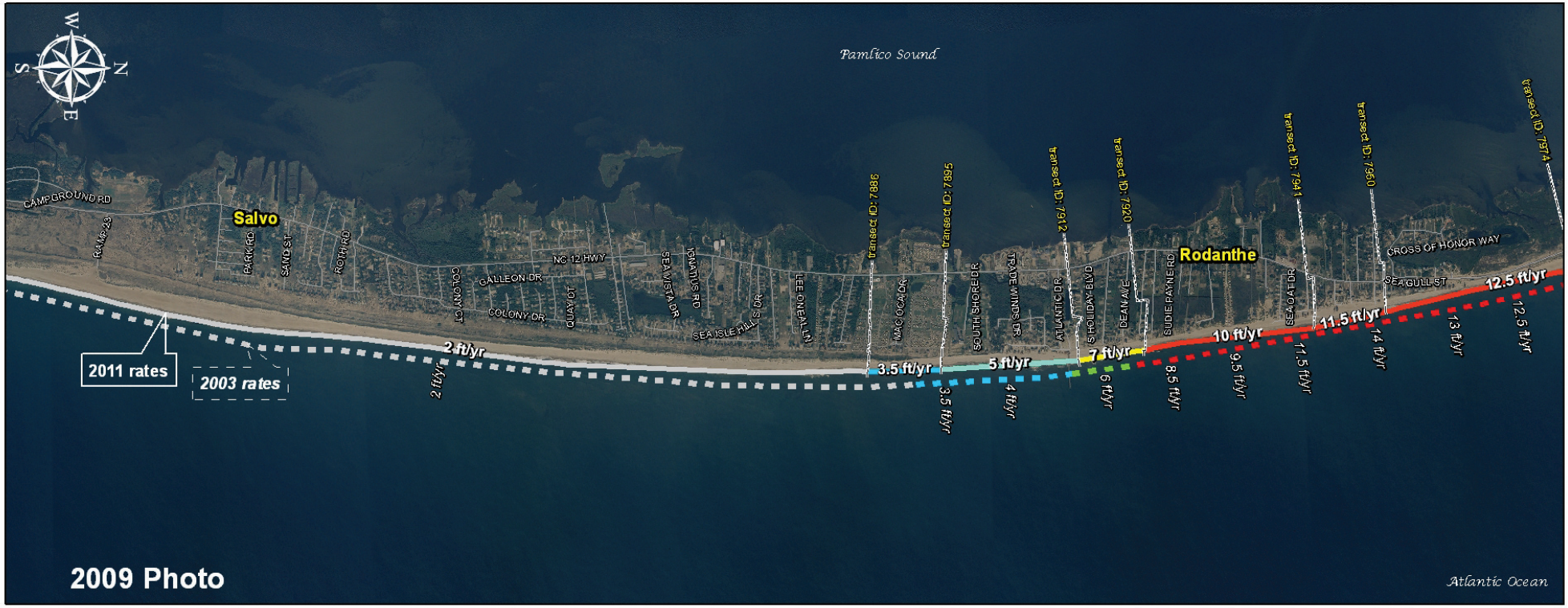
Division of Coastal Management - 2011



2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Salvo, Waves, & Rodanthe), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:24,000

0 950 1,900 3,800 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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Map No. Outer Banks - 2 of 4

Ken Richardson - April, 2011

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Division of Coastal Management - 2011

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Rodanthe), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:24,000

0 1,000 2,000 4,000 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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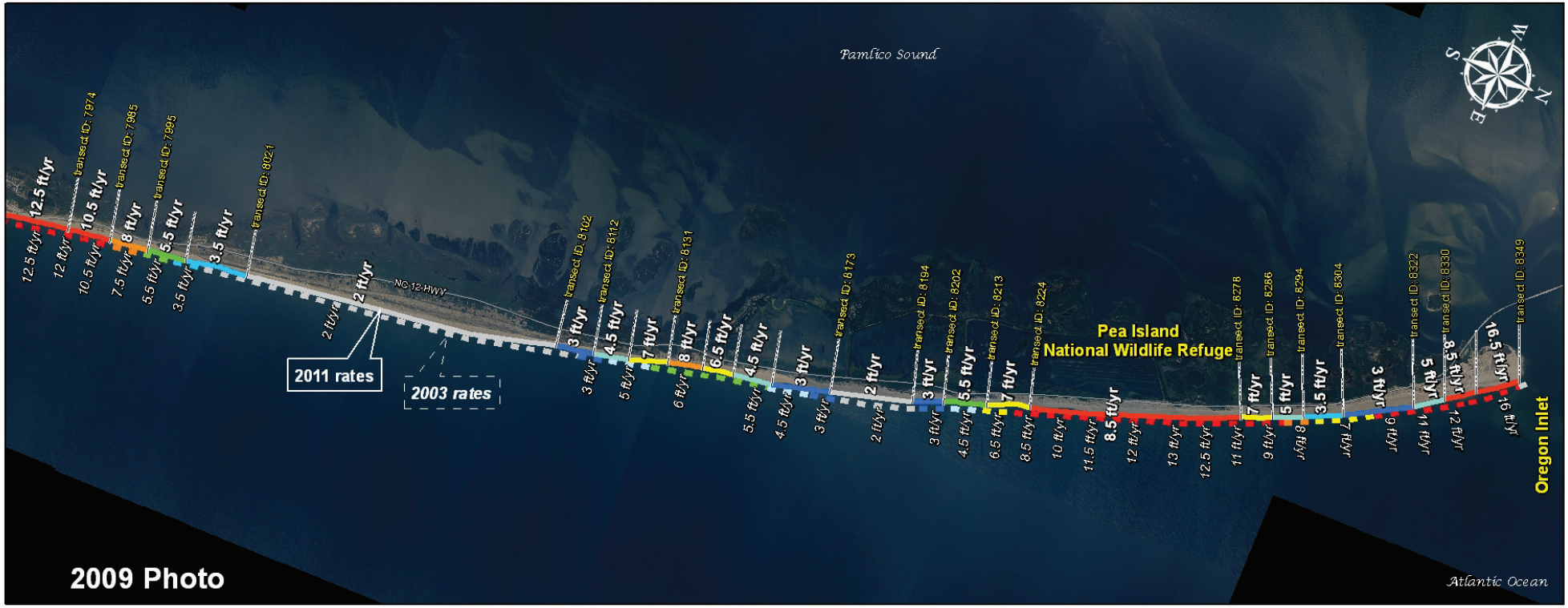
Map No. Outer Banks - 3 of 4

Ken Richardson - April, 2011

North Carolina Department of Environment and Natural Resources

Division of Coastal Management - 2011



2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Pea Island Nat'l Wildlife Refuge), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:50,000

0 2,000 4,000 8,000 Feet

0 0.5 1 2 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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Map No. Outer Banks - 4 of 4

Ken Richardson - April, 2011

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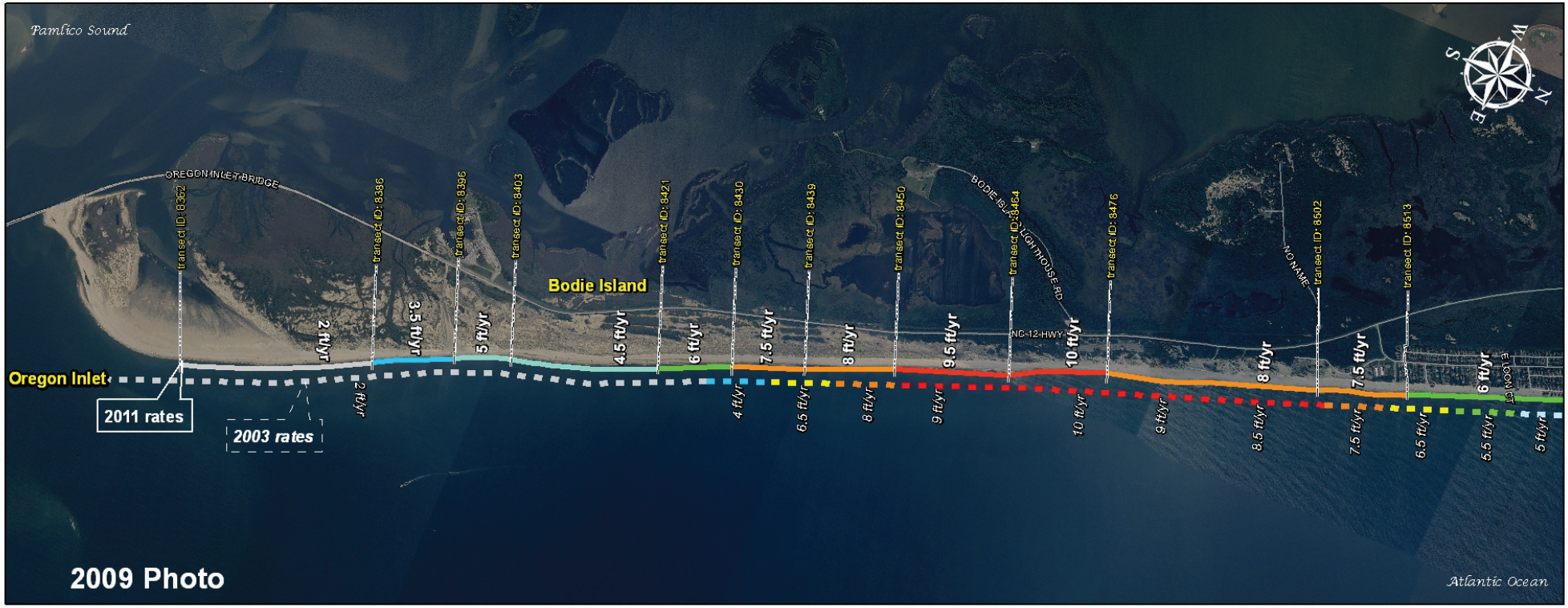
Division of Coastal Management - 2011



2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Bodie Island), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:24,000

0 1,000 2,000 4,000 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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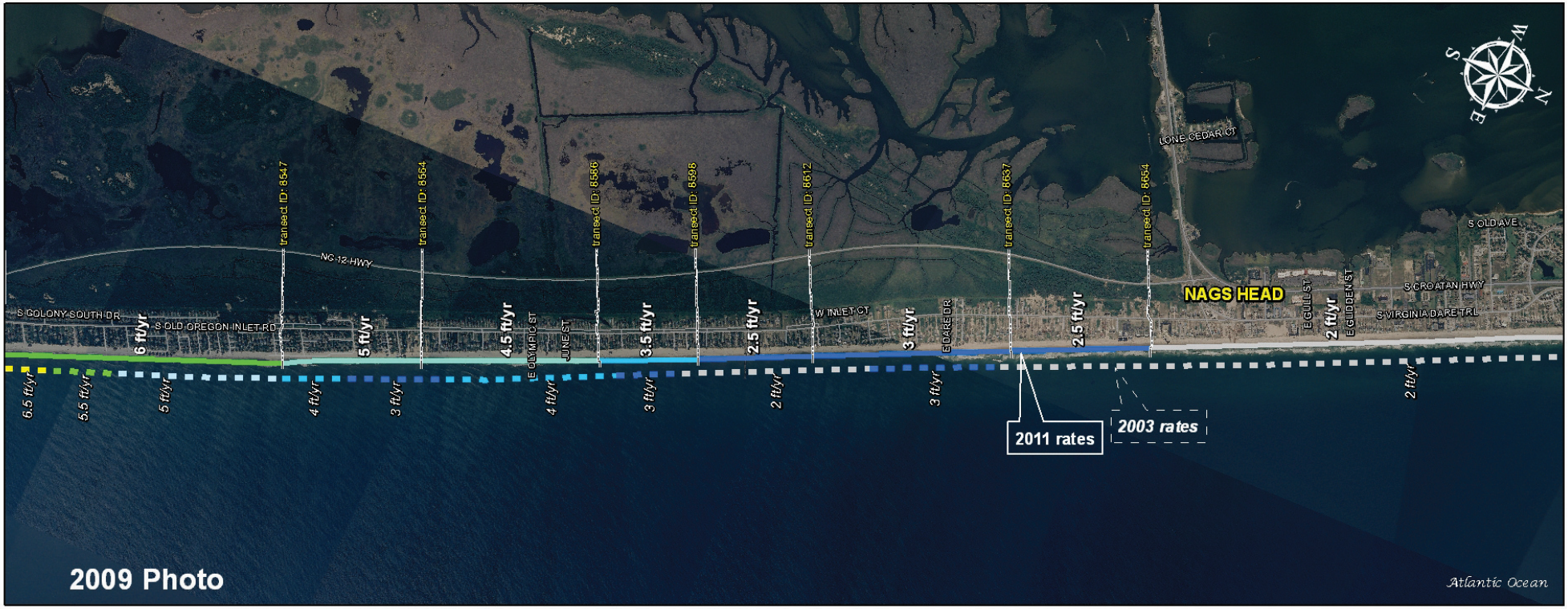
Map No. Bodie Island - 1 of 1

Ken Richardson - April, 2011



2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Nags Head), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Vicinity Map

Map Scale: 1:24,000

0 1,000 2,000 4,000 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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Map No. Nags Head - 1 of 1

Ken Richardson - April, 2011

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Nags Head & Kill Devil Hills), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:24,000

0 1,000 2,000 4,000 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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Map No. Nags Head - KDH - 1 of 1

Ken Richardson - April, 2011

North Carolina Department of Environment and Natural Resources

Division of Coastal Management - 2011

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Kill Devil Hills), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:24,000

0 1,000 2,000 4,000 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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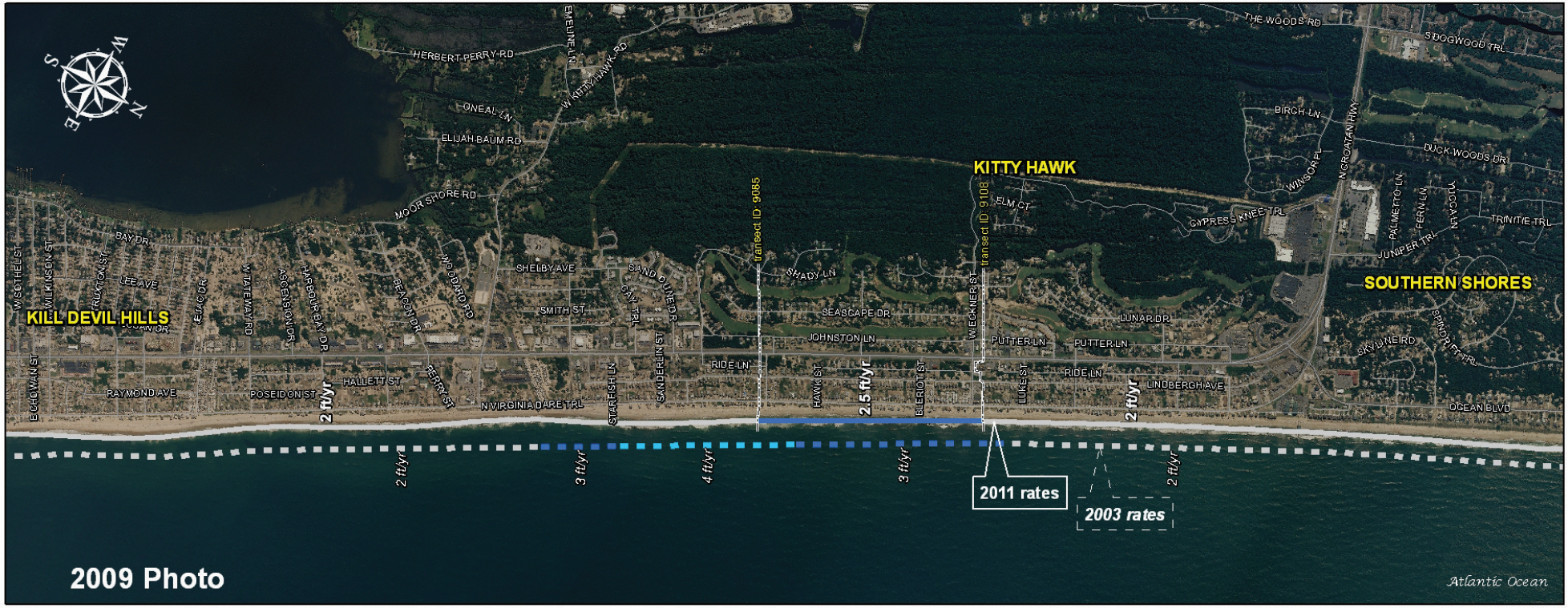
Map No. Kill Devil Hills - 1 of 1

Ken Richardson - April, 2011



2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Kitty Hawk), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:20,000

0 1,000 2,000 4,000 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

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Map No. Kitty Hawk - 1 of 1

Ken Richardson - April, 2011

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Southern Shores), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:24,000

0 1,200 2,400 4,800 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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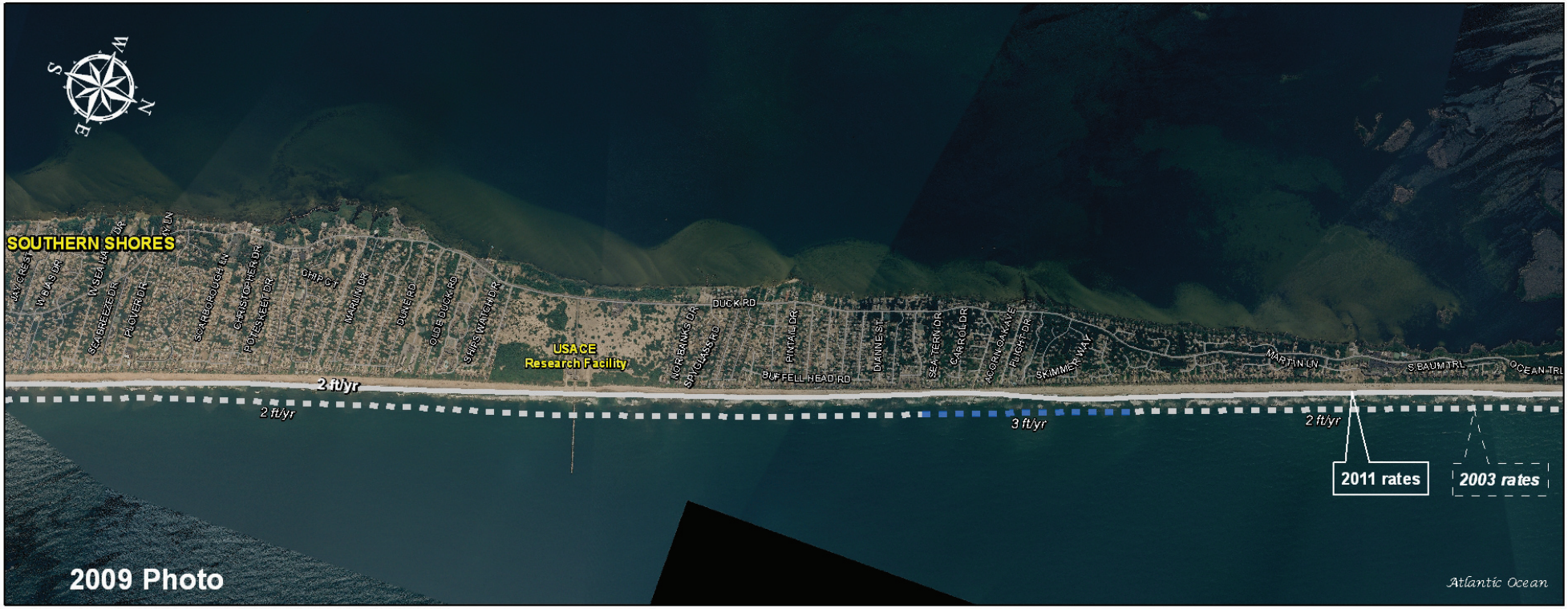
Map No. Southern Shores - 1 of 2

North Carolina Department of Environment and Natural Resources

Division of Coastal Management - 2011

Ken Richardson - April, 2011



2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Southern Shores), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:24,000

0 1,200 2,400 4,800 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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Map No. Southern Shores - 2 of 2

Ken Richardson - April, 2011

North Carolina Department of Environment and Natural Resources

Division of Coastal Management - 2011

2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Duck), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:24,000

0 1,000 2,000 4,000 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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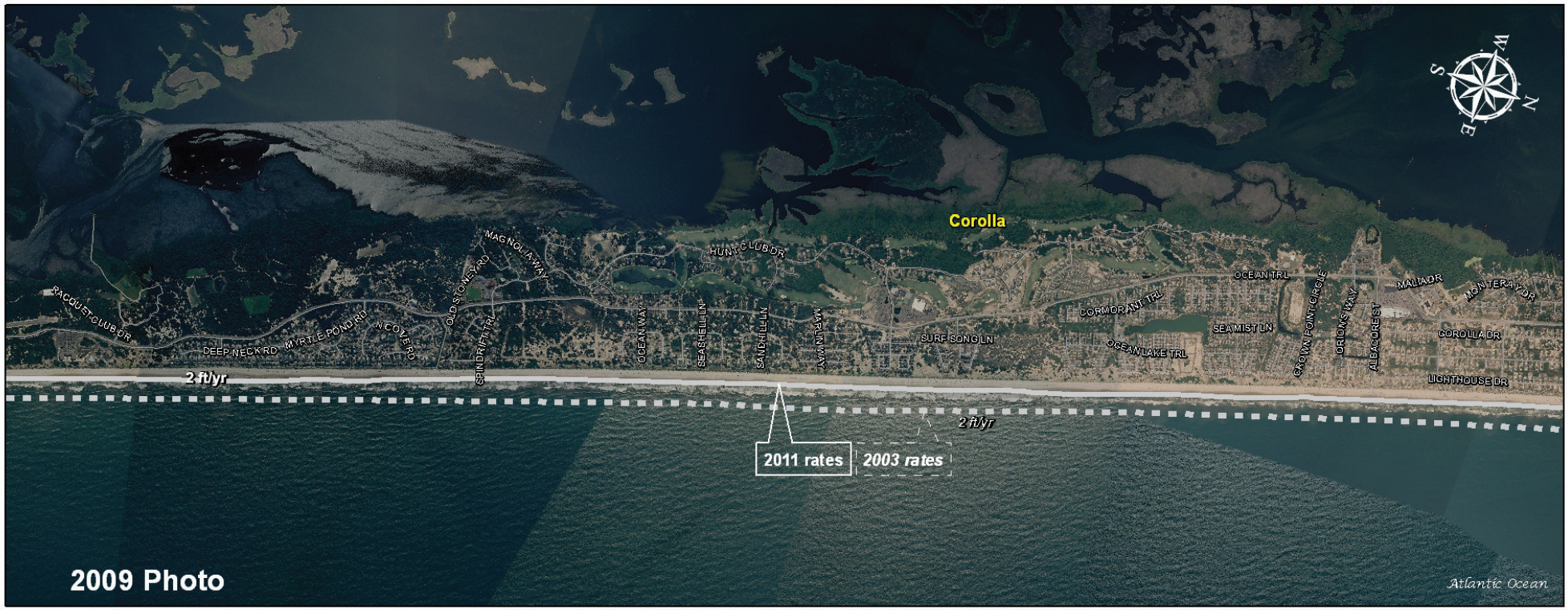
Map No. Duck - 1 of 1

Ken Richardson - April, 2011



2011 Long-Term Average Annual Erosion Rate Update

at Outer Banks (Corolla), North Carolina

Legend

2011 Setback Factors (feet/year)	2003 Setback Factors (feet/year)
2.0	0.0 - 2.0
2.1 - 3.0	2.1 - 3.0
3.1 - 4.0	3.1 - 4.0
4.1 - 5.0	4.1 - 5.0
5.1 - 6.0	5.1 - 6.0
6.1 - 7.0	6.1 - 7.0
7.1 - 8.0	7.1 - 8.0
> 8.0	> 8.0
Erosion Rate Factor Transition Boundary	Inlet Hazard Area
Beach Fill Project > 300,000 cubic yards	Photo: 2009 USDA NAIP

Map Scale: 1:24,000

0 1,000 2,000 4,000 Feet

0 0.25 0.5 1 Miles

Horizontal Datum: NC State Plane NAD 83 Feet

Setback Factors on this map represents long-term average annual erosion rates measured in feet per year. Shoreline segments that are accreting or have erosion rates less than two feet per year receive a setback factor value equal to two.

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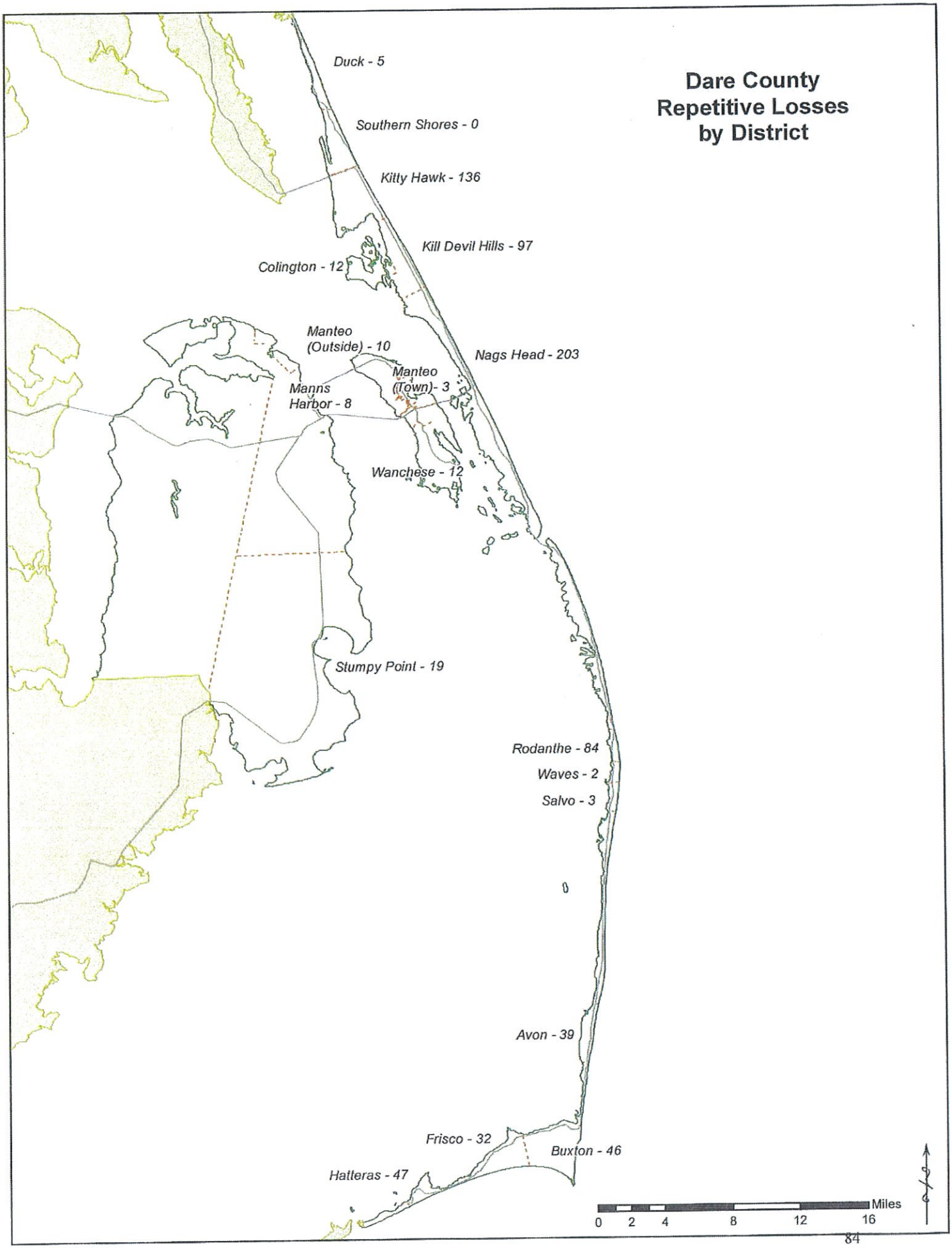
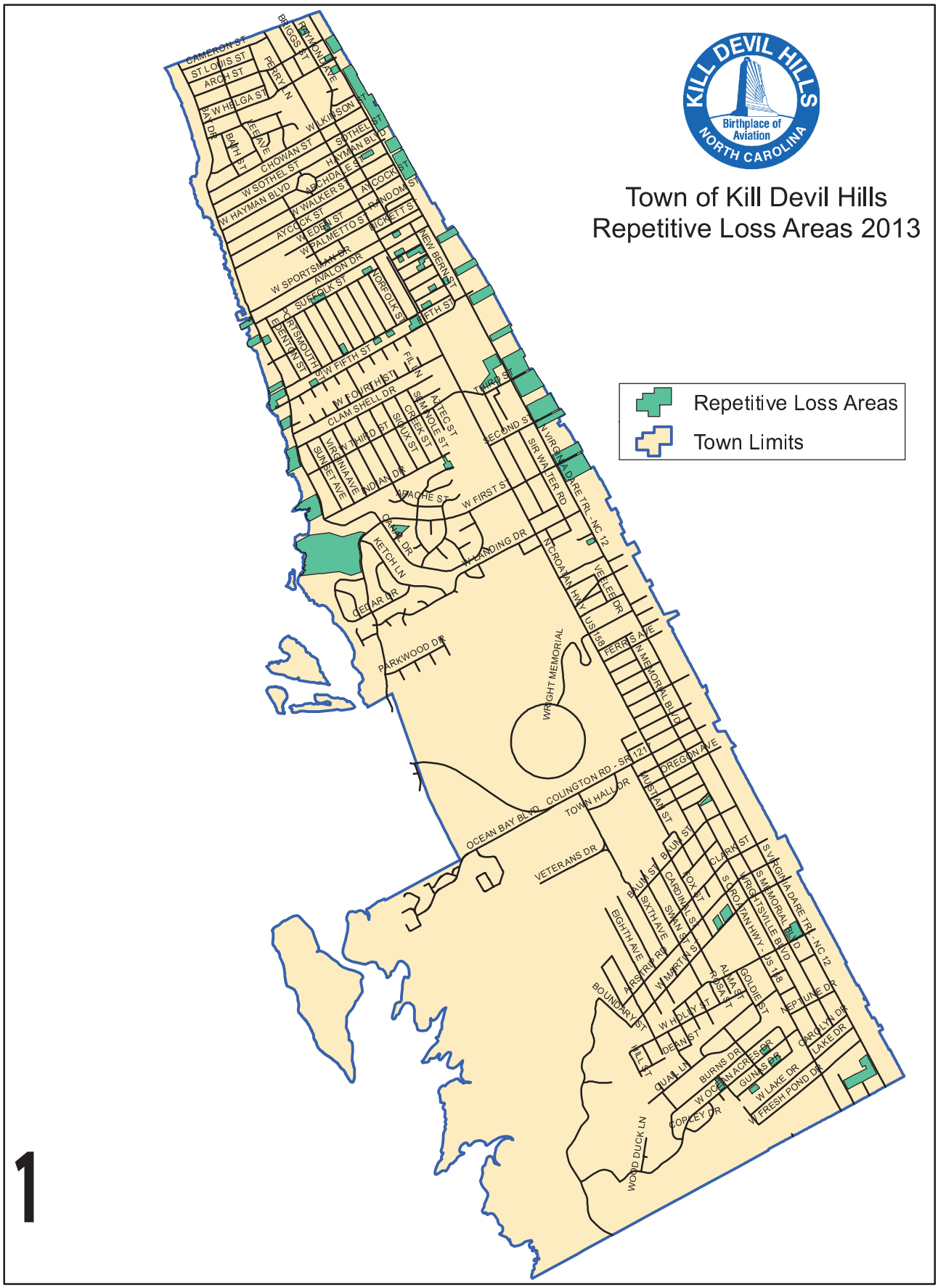
Map No. Corolla - 1 of 2

Ken Richardson - April, 2011

North Carolina Department of Environment and Natural Resources

Division of Coastal Management - 2011


Dare County
Repetitive Losses
by District
Duck - 5
Southern Shores - 0
Kitty Hawk - 136
Kill Devil Hills - 97
Colington - 12
Manteo
(Outside) - 10
Nags Head - 203
Manteo
(Town)- 3
Manns
Harbor - 8
Wanchese - 12
Stumpy Point - 19
Rodanthe - 84
Waves - 2
Salvo - 3
Avon - 39
Frisco - 32
Buxton - 46
Hatteras - 47
Miles
0 2 4 8 12 16



Map Created By: Kill Devil Hills Planning Department
December 2014

ATTACHMENT 1

ARHMP/CRS 510 Planning Committee

Dare County –	Sandy Sanderson, Emergency Management Coordinator Drew Pearson, Asst. Emergency Management Coordinator Donna, Creef, Planning Director Bonnie Rowe, Hatteras Island Resident/Property Mgmt. Glenn Rainey, Colington Fire Department Chief Nancy White- Director -- UNC-CSI
Manteo	Erin Burke
Nags Head	Kelly Wyatt/Andy Garman Mark Cornwell –Planning Board Member
Kill Devil Hills	Meredith Guns Doug Styons – surveyor
Kitty Hawk	Joe Heard Larry Sanders – Insurance representative
Southern Shores	Wes Haskett/Dabni Shelton Gary Berryman – PB member and real estate broker
Duck	Cory Tate Mark Murray – PB member and local contractor

ATTACHMENT 2

Albemarle Regional Hazard Mitigation Plan – Dare County Group

July 23, 2014

9:30 a.m. Greetings – Sandy Sanderson

1. Mitigation Hazard Plan Survey – Link on webpages

2. ARHMP – Capabilities Assessment Survey -- completion of document and return to Wooten

3. CRS Credit for ARHMP –

    a. Extension Request for 2014 Verifications

    b. Activity 510 Process and Information

    c. Formation of CRS Committee for ARMP -- members, stakeholders

    d. Next steps for committee

10:30 a.m. Closing Remarks

SUMMARY OF CRS 510 ACTIVTY PLANNING COMMITTEE – July 23, 2014

On Wednesday, July 23, 2014 the Dare County CRS 510 Activity Planning Committee held its first meeting at the Dare County Administrative Building in Manteo, NC. The purpose of the meeting was for local government officials to discuss the formation of a planning committee to supplement efforts undertaken by The Wooten Company in the development of a regional hazard mitigation plan for the Albemarle region (ARHMP). The Wooten Company has been hired to develop a regional hazard mitigation plan for the eight-county Albemarle area. Dare County, its six municipalities, and Currituck County are involved in the development of the regional plan. It is the goal of Dare and Currituck counties to receive credit under the CRS program for the regional hazard mitigation plan. At a meeting held on August 7, 2014 in Currituck County for the ARHMP, the lead consultant from Wooten, Stephen Smith, advised the CRS counties that local committees would be needed in Dare and Currituck in order to ensure the maximum amount of CRS points are credited to participating CRS communities. All of the towns in Dare County, the County of Dare, and Currituck County participate in the CRS program. Currently, Dare County and its six municipalities have a multi-jurisdictional plan which is credited under the 2007 CRS manual. With the enactment of the 2013 CRS plan, the point system is changing and hazard mitigation plans must follow the 10-step process outlined in the 2013 CRS manual for credit.

The meeting was called to order by Sandy Sanderson, at 9:35 a.m. A copy of the agenda and the packet of information were provided to each attendee as noted below:

Dare County – Sandy Sanderson and Donna Creef
Nags Head – Kelly Wyatt and David Morton
Duck – Andy Garman, Donna Black, Sandy Cross and Corey Tate
Kill Devil Hills – Greg Loy and Meredith Guns
Kitty Hawk – Joe Heard
Manteo – Erin Burke
Southern Shores – Wes Haskett
Currituck County – Holly White and Jason Litteral

Mr. Sanderson briefed the group on the ARHMP process to date. He indicated that a Capabilities Assessment report for each community has been provided by Wooten and each jurisdiction should be completing this report. The reports should be returned directly to Wooten by August 15, 2014. He then reminded the group to make sure a copy of the hazard mitigation survey emailed by Wooten last week is provided on each jurisdiction's webpage. The survey is intended to solicit public input as part of the ARHMP plan development.

The group then discussed the 510 CRS planning committee and its interaction with the ARHMP group. Garman asked how each town's information would be assessed and updated.

Sanderson advised that each town should be reviewing their individual mitigation plans and update that information as needed for the ARHMP and for the CRS 510 committee. Several people questioned how the regional plan would be organized and how each communities' information would be incorporated into the ARHMP and if appendices would be used similar to the current Dare County hazard mitigation plan. Creef and Sanderson both acknowledged this is one of the first regional plans to be prepared and some issues would need to be worked out as things proceed. Meredith Guns asked about the various committees outlined in the CRS manual. It was the consensus of those present that the other committees discussed in the CRS manual would need to be separately organized at the town level for each jurisdiction's CRS program.

Creef requested each town provide a tentative indication of the staff member and public member and requested a confirmation email be sent to her once the public members have been confirmed. As outlined in the CRS manual, the 510 planning committee members should include local government staff and representatives of the public or "stakeholders" to receive maximum CRS credit. A total of two representatives from each participating jurisdiction is required. Based on this formula, approximately 16 to 20 members will be needed. It was the consensus of the group that a committee with more than 20 members will not be effective. The public members from each jurisdiction to be counted as "public" should not be advisory board members if those advisory boards are delegated decision-making authority by their elected officials. The jurisdiction's members are listed below:

Kitty Hawk – Joe Heard (town) and Larry Sanders , a local insurance agent

Manteo -- Ms. Burke indicted that she would have to provide a name at a later date since both of her original choices were members of the Manteo Planning Board and cannot be used since the Planning Board is delegated permit authority by the Town Board. She will serve as the Town's staff person.

Nags Head – A member of Planning Department and member of Planning Board to be confirmed at later date.

Duck – Corey Tate (town) and Mark Murray, contractor and Duck Planning Board member

Kill Devil Hills – Meredith Guns (town), Doug Styons ((local surveyor) and Rob Rollason (appraiser) as an alternate

Southern Shores – Wes Haskett (town) and Mike Florez, architect and Planning Board member

Dare- Sanderson and Creef (county). Creef indicated possibly a volunteer fireman from the unincorporated area and someone from Hatteras Island maybe a property management representative. She also stated that they may ask James Wooten from the Dare County Health Department to serve on the committee.

A second meeting of the CRS committee was scheduled for September 4, 2014 at which time both staff members and public members should be in attendance. The Dare County staff will be responsible for administrative support of the CRS committee (summaries of meetings, posting notices, copies etc.) Creef stated she would email an agenda and packet of information to everyone before the next meeting.

There being no other business, the meeting ended at 10:20 a.m.

Donna Creef, Planning Director

7-23-2014

Date

NAME AND AGENCY	PHONE NUMBER	PAGER AND E-MAIL	OTHER / FAX
Cory Tate Town of Duck	252-722-1257	ctate@townofduck.com	252-255-1236
DAVID MORTON TOWN OF NAGS HEAD	252-441-7016	DAVID.MORTON@NAGSHEAD NC.GOV	252-441-4290 FAX
Kelly Wyatt TOWH	252-449-6043	kelly.wyatt@nagsheadnc.gov	852-441-4290 (FAX)
Andy Garman Town of Duck	252-255-1234	agarman@townofduck.com	
Sandy Cross Town of Duck	"	scross@townofduck.com	252-255-1236 (F)
Erin Burke Town of Manteo	252-473-4112	burke@townofmanteo.com	252-473-2135 (F)
Donna Black Town of Duck	252 255-8134	dblack@townofduck.com	252-261-5961 (F)
Holly White Currituck Co.	232-6028	holly.whit@currituckcounty nc.gov	252.209.4910 (C)

NAME AND AGENCY	PHONE NUMBER	PAGER AND E-MAIL	OTHER / FAX
JASON LITTERAL CURRITUCK COUNTY	252-232-6052	jason.litteral@currituckcountync.gov	
Meredith Guns Town of Kill Devil Hills	252 449 5318	meredith@kdhnc.com	
GREG COY KDH	252-449-5318	greg@kdhnc.com	FAX 441-4102
Wes Haskett Southern Shores	252-261-2394	whaskett@southernshores-nc.gov	
Joe Heard Kitty Hawk	252-261-3552	jheard@kittyhawktown.net	
Sandy Sanderson Donna Creef	Dare County		

Dare County 510 Planning Committee

September 4, 2014

Room 168 Dare County Administrative Building
Manteo, NC

10:00 a.m. Greeting and Introductions of Committee Members

1. Purpose of Committee/Outline of Process (STEP 1)
    a. CRS Handout –Credit for Planning Committees (Attachment 1a)
    b. Discussion of Outline Prepared by Dare County (attachment 1b)
    c. Summary of Meeting with State Officials (attachment 1c)

2. Multi-Jurisdictional Committee Organization (STEP 2)
    a. Public Involvement (attachment 2)
    b. Outreach Activities

3. Review of Existing Plans/Coordination with Other Agencies (STEP 3)
    a. Identification of Existing Plans to be Reviewed
    b. Discussion of Agencies to Contact (attachment 3)

4. Next Meeting Date and Tasks

ALBEMARLE REGIONAL HAZARD MITIGATION PLAN
DARE COUNTY 510 PLANNING COMMITTEE MEETING
SEPTEMBER 4, 2014

CURRITUCK COUNTY:	Jason Litteral, Holly White
DARE COUNTY:	Donna Creef, Drew Pearson, Glen Rainey, Bonnie Rowe, Sandy Sanderson, Nancy White
DUCK:	Mark Murray, Cory Tate
KILL DEVIL HILLS:	Meredith Guns, Greg Loy, Doug Styons,
KITTY HAWK:	Larry Barker, Joe Heard (absent due to illness)
MANTEO:	Erin Burke
NAGS HEAD:	Mark Cornwell, Kelly Wyatt
SOUTHERN SHORES:	Gary Berryman, Wes Haskett, Dabni Shelton

Sandy Sanderson, Dare County Emergency Management Director, opened the meeting. Sandy will be stepping down as Emergency Management Director effective March 2015 and he introduced Drew Pearson, Assistant Emergency Management Director, who will continue the work for the Regional Mitigation Plan which has a due date of July 2015.

Sandy told the committee that, initially, the Hazard Mitigation Plans were done by Dare County as well as the individual municipalities and they were updated every five years. FEMA is now encouraging the development of regional plans. We need to prepare a regional plan, approve it, forward it to the state for approval, and submit it to FEMA for approval. FEMA must approve all of the plans in order for us to get accreditation. This year FEMA has asked us to prepare the Albemarle Regional Hazard Mitigation Plan (ARHMP). The ARHMP incorporates multiple counties and the Community Rating System (CRS). This should reduce the number of plans that are submitted to FEMA and need to be reviewed and approved. Everyone needs to understand what we are trying to do with mitigation so we get approval from FEMA for the plan and points for the CRS.

Donna Creef, Dare County Planning Director and CRS Coordinator, spoke next. Planners are usually responsible for the CRS reviews and assessments as part of our job duties. When Sandy asked Donna to participate in the ARHMP development, she saw an opportunity to earn CRS points for our community. THE ARHMP is being prepared by Wooten and Company, a private consultant firm. At the first ARHMP meeting, Wooten staff said the ARHMP will follow the exact outline of the CRS plan, which will help communities earn CRS points. At the second ARHMP meeting, we were told the CRS communities (Dare and Currituck Counties) will be required to have a local planning committee. That is why we are here today. After the local Hazard Mitigation Plans are developed, we need to bring our plans to this committee for discussion and we will pass our information along to Wooten for the regional plan. We need to document everything and, while some of this may seem redundant, the number of CRS points we can get is substantial.

The CRS points we earn provide discounts on the flood insurance rates offered to our area so it is important to get as many points as we can. Next year, we will transition to a new CRS manual and the point assignments have increased for Hazard Mitigation Plans. It is worth the extra work and effort if we can get our citizens and property owners discounts on their flood insurance.

Donna continued, saying that when the planners met in July, Greg Loy suggested we prepare an outline of how to proceed. Attachment B summarizes the process and steps to be taken by our local committee. Section 510 of the CRS manual discusses Floodplain Management Plans and Hazard Mitigation Plans and how to get credit. They are very specific that there is a 10-step process that must be followed and each step must be documented. We are at Steps 1 and 2 now. Step 2 is involving the public in the process which we do by publicizing on the webpage and advertising. As we get further along, and have the actual regional draft plan, we will hold public meetings and invite the public. Public involvement earns a lot of points.

Donna outlined steps 1 through 3: Step 1, we have organized and are preparing a plan. We can document that. We have advertised it and have posted it on our web page. There is a link on the Dare County webpage to the Albemarle Regional Plan and other committee members have placed the link on their respective webpages. Some of the points earned are from public outreach activities (Step 2). The consultants have sent the municipalities and the county a link for a survey they are conducting. It has been put on the Dare County website. Everyone should complete this survey. If your organization is performing other public outreach activities, we need to know about it and it needs to be discussed in your hazard mitigation plan update that you should be doing for your annual CRS paperwork. Sandy and Donna will meet with Dare County staff to do their annual CRS update. Donna asked the committee members to send her an email outlining any additional public outreach activities being done by their organization so it can be documented and reported at the next meeting.

Regarding step 3, Coordination of the Plan and Review of Other Existing Plans, Donna said part of the Hazard Mitigation Plan includes reviewing the hazards that affect us. There are some handouts from Wooten about their review of the hazards which she will email to the committee members after the meeting today. Generally, the hazards include flooding, hurricanes, storm surge, nor'easters, and they go broader than that, including the earthquakes, mudslides, volcanoes, etc. Wooten is ranking the potential hazards for all of the counties involved in the regional plan. At the next meeting, the committee will discuss this as a group and rank them. There needs to be a review of existing hazard mitigation plans, and any other plans that are reviewed as part of the town's current hazard mitigation plans.

Sandy said within the Emergency Operations Plans there may be certain aspects of the planning process that could be incorporated in the Hazard Mitigation Plan. He advised the committee to look that over too and, if necessary, provide that information in your plan. A copy of the EOP can be found on the Dare County emergency management webpage.

Donna recommended documenting coordination with other agencies and organizations outside of our 510 Committee to show that we have given them an opportunity to provide feedback on hazards. She explained that during emergencies, at the Emergency Operations Center, there are many representatives of agencies that provide assistance. Donna will be contacting those people on behalf of Dare County. If there are people internal to the Towns that need to be contacted, including the

individual fire and police departments, or anyone the local governments would want to include - even if they don't respond – they should be provided the opportunity. This is something that should be done before the next time we meet.

Regarding future committee meetings, Donna said she would prefer to have fewer meetings that are more productive and last longer rather than more frequent, shorter meetings. The schedule will also be dictated by what Wooten requires from the committee. At the next meeting, everyone should be prepared to review what each organization is bringing to the table under step 3 and move forward with steps 4 and 5. The next meeting for the committee was scheduled for Thursday, October 30, at 10 a.m. There will be a meeting with Wooten sometime in October, but a date has not been set yet.

Meredith asked if Donna would provide a list of what is to be brought to the October 30 meeting and Donna said she will send out an email to everyone after the meeting. Donna continued, offering the following information:

- Look at your town's existing Hazard Mitigation Plan, and any other plans that are pertinent to the towns relative to hazard mitigation planning. The CRS manual has some examples of what needs to be reviewed. Sandy added that it's best to look for confirmation of what has been identified as a hazard and any hazards that may have come forward since that time. Mass shooters and terrorism have been identified as a potential hazard. Sandy would like to see the local governments having discussions about these items within their communities and bring forward suggestions. Or, if they feel what we have is adequate, that should be reported.
- Contact appropriate organizations in your community and solicit input to the Hazard Mitigation Plan. Donna said some of the people asked to comment on the Hazard Mitigation Plan include Public Works, Police, and Fire Departments as well as local charitable organizations, such as the Interfaith Outreach Group. Dare County works closely with them during recovery efforts.
- Identify repetitive loss properties. For some organizations, that's easy to do. For others, it's a very long list. This is already in the Hazard Mitigation Plan. Municipal and community buildings that are susceptible to flooding also need to be identified.

Mark Murray asked about documentation requirements. Donna Creef said she believes we need to write up a summary which states each individual organization's hazard mitigation committee actions, submitted to the Planning Board or whoever the town determines. Individual organizations will need to each write up a summary, updating this information, so it can be provided to Wooten. Mark Murray asked if this should be provided prior to the next meeting and Donna said yes. She also asked that an electronic copy be provided to her. Donna recommended providing an electronic copy of the Hazard Mitigation Plan (or a link to it) when soliciting agencies for their input.

Mark Cornwell asked if the public should complete the survey and Donna said yes. He asked if it makes a difference if we get more citizens to participate. Sandy said we hope to get some feedback on participation and what answers they are getting in the surveys. If there are areas that we need to concentrate on, we will be able to devote attention to that. We want to see feedback on what the survey is providing.

Sandy thanked everyone for attending. The meeting adjourned at 10:45 a.m.

Donna Creef 10/30/2014

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Dare County is also where the Wright Brothers first experienced powered flight and much more.

Thursday, September 4, 2014
Weather Forecast

Public Meetings:

Dare County ARHMP/CRS Local Planning Committee
9/4/2014 10:00:00 AM
more

Game and Wildlife Commission
9/4/2014 7:00:00 PM
more

Planning Board
9/8/2014 7:00:00 PM
more

Dare County Center Advisory Board
9/9/2014 9:00:00 AM

Events & Activities:

Investment Fraud Prevention Program

Presented by the N.C. Secretary of State Securities Division on Tuesday, September 16 at 1 p.m. at the Baum Center
more info

Fitness Assessments and Body Composition Measurements

Fitness Assessments and Body Composition Measurements are available free of charge to local residents and property owners at the Dare County Center in Manteo.

News:

F.C. Minton Charity Basketball Tournament Raises $3,400

Sixteen teams from across North Carolina competed in the 5th Annual F.C. Minton Charity Basketball Tournament held July 4-6 at the Youth Center in Kill Devil Hills. more info

Albemarle Regional Hazard Mitigation Plan

As part of a regional effort to reduce vulnerability to natural disasters, Dare County is requesting public feedback on natural disaster risk and preparedness. more info

News

Albemarle Regional Hazard Mitigation Plan

posted: 7/16/2014

As part of a regional effort to reduce vulnerability to natural disasters, Dare County is requesting public feedback on natural disaster risk and preparedness. This feedback will assist the efforts of Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans Counties to combine respective local natural hazard mitigation plans into one regional plan. A mitigation plan identifies and assesses a community's natural hazard risks, and determines how to best minimize or manage those risks.

A brief survey provides the public an opportunity to share opinions and participate in the regional planning process. Responses will help the planning team to better understand the region's hazard concerns, which can lead to mitigation activities and help reduce the impact of future hazard events.

By maintaining a Hazard Mitigation Plan, Dare County is eligible for FEMA's Hazard Mitigation Assistance (HMA) grants, which provide funds for eligible mitigation activities that reduce disaster losses and protect life and property from future disaster damages. HMA provides funding opportunities for mitigation activities both before and after a disaster, as well as long-term hazard mitigation measures after a Presidential Disaster Declaration.

Click here to access the survey.

DARE COUNTY GOVERNMENT
954 Marshall C Collins Dr
PO Box 1000 Manteo NC 27954
Phone: 252.475.5000

DARE COUNTY CRS 510/HAZARD MITIGATION LOCAL PLANNING COMMITTEE

Thursday, September 4, 2014
Room 168 Dare County Administrative Building

NAME	AGENCY	EMAIL ADDRESS
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MEREDITH GUNN	" "	meredith@kdhnc.com
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JASON LITTERAL	Currituck	jason.litteral@currituckcountync.gov

DARE COUNTY CRS 510/HAZARD MITIGATION LOCAL PLANNING COMMITTEE

Thursday, September 4, 2014
Room 168 Dare County Administrative Building

NAME	AGENCY	EMAIL ADDRESS
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Nancy M White	UNC CSI	nmwhite@unc.edu

COUNTY OF DARE
Planning Department
P.O. Box 1000, Manteo, North Carolina 27954

Manteo: (252) 475-5870
KDH Satellite: (252) 475-5871
Buxton: (252) 475-5878

August 27, 2014

MEMORANDUM

TO: Dare County 510 Planning Committee

FROM: Donna Creef, Planning Director

RE: Committee Meeting and Outline of Process

The first official committee meeting of the Dare County 510 Planning Committee is scheduled for September 4, 2014 at 10:00 a.m. Dare County and the six local towns all participate in the Community Rating System (CRS), a voluntary program that credits certain activities in the form of flood insurance discounts for each flood policy. Currently, the county and the towns receive credit for the Dare County Hazard Mitigation Plan under Section 510 of the CRS manual. The CRS program award credit points for multi-jurisdictional hazard mitigation plans that are developed using a 10-step process.

The local planning committee is needed in conjunction with the development of a regional hazard mitigation plan, the Albemarle Regional Hazard Mitigation Plan, which includes Dare County, our six municipalities, and seven other counties in the Albemarle area. FEMA strongly encourages regional plans and the ARHMP is being developed with grant funding from FEMA. Hazard mitigation plans are required to be updated every five years and the 2010 Dare County Hazard Mitigation Plan is scheduled for updating. Our participation in the ARHMP will serve as the update for the County's 2010 plan. The 2010 Dare County hazard mitigation plan includes each of the local towns' hazard plans hence their participation in the regional plan also. FEMA-approved hazard mitigation plans are needed in order to receive disaster assistance following federally-declared disasters.

The ARHMP is being drafted by a consultant firm, The Wooten Company. To date, there have been two meetings of the ARHMP group. At the second meeting in July, the consultants informed us that Dare County would need to organize a local planning committee to augment the development of the ARHMP to ensure we received as much as CRS credit as possible. The local planners and emergency management staff met in July to discuss this committee and its suggested make-up. It was noted at this meeting that the CRS reviewers are uncertain of how the regional hazard mitigation plans will mesh with the CRS scoring system. On August 20, 2014 Dare and Currituck staff met with representatives of the State Emergency Management office to get some clarification on review of the

regional plans and the CRS scoring process. A summary of this meeting is attached along with the agenda and other attachments we will be discussing on September 4.

I have attempted to summarize the CRS process with an outline of the ten CRS steps. The CRS manual outlines the process for development of a floodplain management plan. The manual notes that credit will be offered for FEMA- approved hazard mitigation plans. Each of the 10-steps in the CRS process must be followed. Each town will still need to review the information in their local hazard mitigation plans for updating and reporting to the 510 committee. All of the information from the towns will be discussed by the committee and then forwarded to Wooten for the ARHMP.

I look forward to seeing everyone at our meeting on September 4. If you have any questions before then, please give me a call or send me an email. I will have hard copies of all of this information at the meeting.

SUMMARY OF MEETING WITH NCEM OFFICALS

Planning Department Conference Room, 11:30 a.m. Wednesday August 20, 2014

On August 20, 2014 Chris Crew and Ryan Cox visited Dare County to meet with Dare and Currituck staff to discuss the development of the Albemarle regional hazard mitigation plan and the CRS program's scoring of regional plans. The following individuals were present:

Dare County:	Sandy Sanderson, Emergency Management Coordinator
	Drew Pearson, Deputy Emergency Management Coordinator
	Donna Creef, Planning Director
Currituck County:	Holly White, Senior Planner
WOOTEN Company:	Stephen Smith
NCDOEM:	Chris Crew, Hazard Mitigation Section Chief, NCDEM
	Ryan Cox, Mitigation Planning Supervisor, NCDEM

The group reviewed the 2013 CRS manual 510 section and discussed the 10 steps of the process and how this would relate to the development of a regional hazard mitigation plan. It was noted by Smith and the County officials that the planning committee requirements for 50/50 government officials and stakeholders was of concern since the Albemarle regional plan involved eight counties and their respective municipal partners. Of these eight counties, only Dare and Currituck, participated in the CRS program. Gathering a crowd of stakeholders and government officials for involvement in the regional plan will be extremely difficult due to the number of governments involved and the geographic size of the region. Both Dare and Currituck will organize local committees to supplement the regional plans following the formula local planning committees set forth in the CRS manual.

To date, no other regional plans have been developed in North Carolina. The ISO staff has acknowledged that scoring of regional hazard mitigation plans is not specifically addressed in the CRS manual and that they are unsure of how much credit will be granted to CRS communities for regional hazard mitigation plans. Crew has spoken with his ISO contacts but specific answers are not available yet since regional plans are just now being developed and submitted for CRS scoring.

Crew indicated that the State will review the regional plan before it is submitted to FEMA but does not have any involvement with the ISO grading of regional plans. This was acknowledged by Dare and Currituck officials. In further discussion, it was the consensus of the group that we will involve Crew and Cox throughout our process for guidance and agreement with our interpretations of the CRS manual 10-step process. Although they do not have any involvement with ISO grading, it was acknowledged that positive feedback from the State would benefit us in our efforts for CRS credit scoring. White and Creef both stated that although we may not get the total of 382 CRS points available for floodplain management plans, we needed to pursue as many points as possible under the 2013 CRS plan. Dare currently receives 91 plans for the Dare County hazard mitigation plan and does not anticipate losing any CRS points for the mitigation plan. Currituck currently earns 170 points and does not anticipate losing any points either.

The importance of following the 10-step process in the CRs manual was discussed at length. Smith and the State officials emphasized the need to ensure that every step was followed. If any one-step is missed then CRS points will be pro-rated accordingly. The most points are awarded for public involvement in the plan. A survey is being conducted by WOOTEN on the regional plan now. Crew provided a copy of the 510 Floodplain Management Planning Checklist from the CRS website which listed the 10-steps and the individual components of each step. Creef stated that documentation of our work will be vital for CRS scoring. There was some discussion about the number of meetings that must be held and how each meeting could be conducted. Crew stated he would be glad to attend any meetings or at least participate by conference call which is an option in the CRS manual. Sanderson suggested that we produce a preliminary outline/rough copy of the planning checklist for Crew which he could then submit to his FEMA/ISO contacts for feedback. All attendees agreed that FEMA/ISO review was critical and would help ensure the actions that are underway align with FEMA/ISO requirements allowing Dare and Currituck to maximize CRS credits when the final plan is reviewed. State officials indicated they would research the possibility of having FEMA/ISO officials provide a review of how the regional plan was being developed along with the approach being used to fulfill the CRS 10-step process.

Crew and Cox advised Smith and County officials of the importance to detail implementation activities in the regional hazard mitigation plan. The use of "on-going" as a response will not be an option in the updated plans, numbers or statistics will be needed. They also advised against the inclusion of unrealistic mitigation activities in our regional plan.

Sanderson thanked the State officials and Smith for coming to meet with us and for their feedback.

The meeting ended around 12:30 p.m.

Donna Creef, CFM

Planning Director

8-21-2014

Date

Sandy Sanderson

From: Angela Welsh <awelsh@albemarlecommission.org>
Sent: Friday, September 12, 2014 11:31 AM
To: Sandy Sanderson; Donna Andrews
Subject: RE: HMP

Sandy and Donna,

Sandy per my request, in our phone conversation, I'm going to place a link to the Albemarle Regional HMP on the ARPO's Facebook page.

Thank you,

Angela

Angela M. Welsh
Albemarle Commission
Albemarle Rural Planning Organization
Planning Director/RPO Coordinator
252.426.5775
www.albemarlecommission.org

From: Angela Welsh
Sent: Friday, September 12, 2014 11:23 AM
To: 'darecoem@darenc.com'; 'donna@darenc.com'
Subject: HMP

Sandy and Donna,

I received your letter regarding the Hazard Mitigation Plan and have participated in the survey. When I took the survey, it was for a Regional HMP so I've attached a portion of the Mid-Currituck Bridge study you may find helpful when drafting the document. The entire document can also be accessed here:
http://www.ncdot.gov/projects/midcurrituckbridge/download/midcurrituck_archives_purposeneed102008.pdf

I've also attached a letter regarding some changes the Albemarle Rural Planning Organization (ARPO) is requesting for the next round of requests for funding which will take place in two years. The other attachment is a resolution regarding the Strategic Transpiration Corridors map. Since Donna is a member of the RTCC, one of the ARPO's Boards, she is familiar with the letter and resolution, however if either of you have any questions, please let me know.

Thank you,

Angela

Angela M. Welsh
Albemarle Commission
Albemarle Rural Planning Organization
Planning Director/RPO Coordinator
252.426.5775
www.albemarlecommission.org

NFIP/CRS

CRS Credit for Planning Committees

— A Handout for the National Flood Insurance Program Community Rating System —

The CRS strongly encourages locally designed programs to prevent and reduce flood losses. Three CRS activities specifically credit local planning committees that design such programs and periodically evaluate their effectiveness:

Activity 330 (Outreach Projects) credits a committee that develops and evaluates a Program for Public Information (PPI).

Activity 370 (Flood Insurance Promotion) credits a committee that helps develop and evaluate a flood insurance coverage improvement plan (CI).

Activity 510 (Floodplain Management Planning) has two credits for a committee that helps draft a floodplain management or a hazard mitigation plan. The Step 1 committee consists of staff with expertise in different areas and the Step 2 committee is designed to involve the public in the planning process. Members of the public may be part of the planning committee created under Step 1 or they may be organized as a separate committee.

Three of the committees have similar membership criteria. In fact, it is recommended that a community have only one committee, charged with work on all three activities. The committee could be one that already exists, such as a mitigation planning committee or advisory board, or a subcommittee of an existing group, as long as it meets the membership criteria.

Membership. The number of participants and their identities are determined by the community, but the committee's membership must meet the following CRS criteria.

Activity 330 Program for Public Information (PPI) Committee

- There must be at least five people on the committee.
- At least half of the members must be from outside the local government ("stakeholders").
- There must be representation from the community's floodplain management office and public information office (if there is one).

Activity 370 Committee for the Flood Insurance Coverage Improvement Plan

- Same three criteria as for the 330 PPI committee, plus
- There must be representation from a local insurance agency and a local bank or lender.

Activity 510 Step 1 Floodplain Management Plan Staff Committee

- The members are staff members from those community departments that implement or have expertise in the activities that will be reviewed in Step 7. Credit is based on how many of the six categories are represented by the offices.

Step 7 Categories

- Preventive measures (e.g., codes)
- Property protection (e.g., elevation)
- Natural resource protection
- Emergency services
- Structural flood control projects
- Public Information

Activity 510 Step 2 Public Planning Committee

- Staff members from the Step 1 staff committee, plus
- For full credit, at least half of the members must be from outside the local government ("stakeholders"). Credit can be prorated if less than half of the members are stakeholders.

Stakeholders. For three of the four committees, it is required that at least half of the members be "stakeholders." Stakeholders are people from outside the local government. They could be members of the public, representatives of key community organizations, and/or agencies and organizations that will likely implement the recommended outreach projects.

Stakeholder participants could be

- Floodplain residents, representatives of neighborhood or homeowner associations
- Emergency/disaster responders, e.g., Red Cross, Salvation Army
- Utility companies
- Chamber of commerce/business organization
- Builders/contractors trade association
- Developers/real estate organization
- Environmental organizations, "Friends of the River," etc.
- Real estate agents, insurance agencies, lenders (for Activity 370 credit)
- Major employer(s)
- Government agencies other than the community, e.g., school district, levee or flood control district, regional planning agency, state coastal management office, or the National Weather Service.

Employees and elected officers of a community do not qualify as stakeholders. A member of an advisory board, such as a planning commission, can qualify provided that the board's authority is limited to making recommendations to another body. If the board has the final authority (as is often the case with a board of appeals), its members are considered community employees or officers.

Stakeholders are counted as individuals. If one person is a member of two or three organizations (e.g., a homeowners association, chamber of commerce, and planning commission), that person is counted as one person toward the 50% criterion. An employee of the community cannot be appointed as a representative of a stakeholder organization, unless that person is an active member of that organization and is not counted as an employee.

Multi-jurisdictional committees. Sometimes CRS communities in a metropolitan area or members of a CRS Users Group want to develop a joint or coordinated program or plan. This approach has the advantage of sharing resources and avoiding duplication of effort.

This approach can also have a disadvantage if an individual community's needs are lost in the bigger operation. Accordingly, in order to avoid this, if a community wants CRS credit for a multi-jurisdictional committee under any of the four credits, then

(1) The community must send at least two representatives to the multi-jurisdictional committee,

(2) At least half of the community's representatives must be stakeholders from outside the local government, and

(3) At least half of the representatives must attend all the meetings of the multi-jurisdictional committee. In effect, there must be a quorum from each community. Remote attendance, e.g., via a webinar that allows for everyone to talk, is acceptable.

Getting members. Several communities have noted problems getting volunteer stakeholders because of the potential workload. It must be noted that the committee is the focal point for discussions and decisions. That doesn't mean that committee members have to do all the work. Staff should conduct the research and draft the reports for review at committee meetings. For a PPI, for example, the work could be done with as few as three committee meetings. For an Activity 510 floodplain management plan, there needs to be at least five committee meetings.

CRS 510 Planning Committee

Outline of Process and Steps to be Taken by Local 510 Committee

Floodplain management planning (FMP) -- must follow a 10-step planning process . Hazard mitigation plans prepared according to this process can receive credit. TABLE 510-1 from CRS manual illustrates the FEMA mitigation process compared to the CRS program

STEP 1	Organize
STEP 2	Involve the public
STEP 3	Coordinate
STEP 4	Assess the hazard
STEP 5	Assess the problem
STEP 6	Set goals
STEP 7	Review possible activities
STEP 8	Draft an action plan
STEP 9	Adopt the plan
STEP 10	Implement, evaluate, revise

These steps will be followed during the development of the ARHMP based on input from the Dare 510 committee for Dare County and its respective municipalities. The information provided to WOOTEN from the ARHMP will be based on input at the 510 committee meetings from reviewing/updating our 2010 hazard mitigation plans. Each town will need to review their existing hazard mitigation plans to update information for 510 committee and ARHMP.

STEP 1 – ORGANIZE TO PREPARE THE PLAN –

Local planners met on August 21, first official meeting of full committee is September 4.

Committee must meet a sufficient number of times to involve the committee in the discussion of the following key steps:

STEP 4	Assess the hazard
STEP 5	Assess the problem
STEP 6	Set goals
STEP 7	Review possible activities
STEP 8	Draft an action plan

Committee must involve two representatives from each community; at least half must attend all meetings

STEP 2 – INVOLVE THE PUBLIC

Committee members include stakeholders from each community.

Meetings will be open to the public and publicly posted – posted on Dare's website and advertised in local paper. (Dare County will advertise and post on our website for each meeting and for separate meetings to be held later in process)

Public meetings held within first 2 months of process – separate from committee meetings (we missed this opportunity)

Public meetings held on recommended plan – 2 weeks before submission to local governing boards – we will have to complete once ARHMP is finalized and ready for adoption (May-June 2015)

Additional points for other public outreach activities – website postings, etc.

STEP 3 – COORDINATE

Points for review of existing plans by 510 committee

Points for coordinating with other agencies and organizations (examples from CRS manual page 510-13)

STEP 4 – ASSESS THE HAZARD

Discussion by CRS 510 committee of information from WOOTEN

Must include repetitive loss information for each community – each town must be prepared to discuss this for their respective jurisdictions

Must discuss all hazards addressed in each mitigation plan

STEP 5 ASSESS THE PROBLEM

Discussion by 510 committee of hazards identified to summarize what is at risk. We will need an assessment from each town on types of affected buildings in each community. Identify community buildings that are insured for flood damage by town.

STEP 6 – GOALS

Goals for all hazards identified by 510 committee

STEP 7 – REVIEW POSSIBLE ACTIVITIES

Discussion by 510 committee of possible activities (pros and cons discussed) of each activity. This step serves as the basis for the selection of projects and activities in STEP 8. (Figure 510-4 from CRS manual lists examples)

STEP 8 – DRAFT AN ACTION PLAN

Identify actions to be taken in response to alternatives from STEP 7, must identify responsible agency, timeline for action, and how it will be funded. Actions must be prioritized.

STEP 9 – ADOPT THE PLAN

Adopt by local governing boards of ARHMP – each government involved in ARHMP will need to adopt regional plan (July 2015)

STEP 10 – IMPLEMENT, EVALUATE, AND REVISE

Must be an annual evaluation of plan for CRS credit each year

Dare County 510 Planning Committee

October 30, 2014

Room 238 Dare County Administrative Building
Manteo, NC

10:00 a.m. Call to Order

1. Approval of September 4, 2014 Meeting Summary
2. Summary of ARHMP Meeting Held on October 22, 2014
3. Coordination Activities and Review of Other Plans
4. Assessment of Hazards -- identified hazards list
5. Assessment of Problems --impacts of hazards on area
6. Next Meeting Date and Topics for Next Meeting

MEETING SIGN-IN SHEET

Topic:	510 Planning Committee	**Meeting Date:**	1000 AM October 30, 2014
Location:	Dare County Admin Building	**Room:**	238

Name	Title	Organization	Phone	E-Mail
Donna Creef	Planning Director	Dare County	475 5873	donnac@darenc.com
Drew Pearson	Emergency Management	Dare County	475 5894	drew.pearson@darenc.com
Sandy Sanderson	Emergency Management	Dare County	475 5897	darecoem@darenc.com
Cory Tate	Building Insp.	Town of Duck	255-1234	ctate@townofduck.com
Kelly Wyatt	Deputy Plan Director	Town of Nags Head	449-6042	kelly.wyatt@nagsheadnc.gov
Bonnie Rowe	Sun Realty Avon Property Manager	Dare Co	216-8586	bonnierowe@sunrealtync.com
Erin Burke	Town Planner	Town of Manteo	473-4112	burke@townofmanteo.com
Susan Ditta	Accountant	Town of Manteo	473-4107	ditta@townofmanteo.com
Doug Symons	citizen/bd	Town of KDH	441-1415	dsphs@centurylink.net
Wes Haskett	Town Manner	Southern Shores	261-2394	whaskett@southernshores-nc.gov
Dabni Shelton	Permit Officer	Southern Shores	261-2394	dshelton@southernshores-nc.gov
MARK CORNWELL	CITIZEN	NAGS HEAD	619-0862	mcornwell4562@embarqmail.com
DONNA HEFFERNAN	KITTY HAWK ZONING TECH	KITTY HAWK	261-3552	dheffernan@kittyhawktown.net
Glenn Rainey	Fire Chief	Colington VFD	202-6048	chief15@outlook.com

Name	Title	Organization	Phone	E-Mail
MARC MURRAY	DUCK PLANNING BOARD	Town of Duck	202 9879	mrmurray@gmail.com
Charles Earley	EMS	EMS	305 0052	Cearley@clarenc.com
GREG LOY	KDH PLANNING DIRECTOR	KDH	449-5318	greg@kdhnc.com
Gray Berryman		Southern Shores	2525734503	Graye@grayberryman.com
Meredith Guns	Asst Plan Dir KDH Planner	KDH	4495318	meredith@kdhnc.com
Holly B White	Senior Planner	Currituck Co	232 6028	holly.white@currituckcountync.gov

List of agencies contacted by Dare – CRS 510 Step 3 Coordination

1. Dare County Soil and Water Board
2. Division of Coastal Management
3. National Park Service –
4. Outer Banks Homebuilders
5. Outer Banks Association of Realtors
6. Albemarle RPO
7. Coastal Federal
8. Outer Banks Hospital
9. Dominion Power, Cape Hatteras Electric and Tideland Electric
10. NCDOT
11. Interfaith Outreach
12. US Coast Guard
13. US Fish and Wildlife Service
14. NC Forestry Service
15. Dare County Sheriff
16. Dare County Public Schools

COUNTY OF DARE
P.O. Box 1000, Manteo, North Carolina 27954

September 10, 2014

(252) 475-5000

Jim Winebarger, Facilities Director
Dare County Schools
P.O. Box 1508
Nags Head, NC 27959

Dear Mr. Winebarger:

Hazard Mitigation Plans (HMP) outline actions taken by a community to reduce or eliminate the long-term risk to human life and property from hazards, either natural or man-made. Dare County's HMP was last approved in June of 2010. Every five years we must update it and we recently began our efforts. Our HMP can be found at http://www.darenc.com/emgymgmt/docs/HMGP.pdf. To ensure Dare County remains eligible for state and federal mitigation funding under Title 44, Part 201.6 of the Code of Federal Regulations, the HMP must be approved by North Carolina Emergency Management and Federal Emergency Management Agency (FEMA) officials.

Stakeholder input is needed and critical to ensuring our HMP properly addresses all hazards and meets regulatory requirements. While our most likely hazards remain significant weather events and the associated impacts like flooding and wind damage, we must reassess all hazards while also identifying emerging threats. While hazards like earthquakes, mass shootings, pandemics, cyber-attacks are not generally associated with our community they must be considered as part of our HMP update process.

We believe you and your agency are key stakeholders in the HMP update process. We invite you to provide input on potential hazards, especially the identification of any activities involving your agency which may affect flooding or flood-prone properties. If your agency has studies or plans used for hazard mitigation purposes, we ask that you share those with us along with any other information you feel may help as we update the HMP. Electronic versions of documents and any replies to this invitation can be sent to either Sandy Sanderson at darecoem@darenc.com or Donna Creef at donnac@darenc.com.

In addition, public input is an important component of our efforts. There are numerous opportunities for outreach activities from the initial stages of the process to the review and approval of the HMP. We currently have a public survey open until September 30, 2014 that we encourage you and others to complete at https://www.surveymonkey.com/s/JZS5YSY. Notices of additional public engagement will be posted on the County's website over the next few months. Attendance at public meetings of the local planning committee assisting with the update is welcomed and we hope you or someone from your organization will participate.

Thank you in advance for you participation and comments. Our contact information is provided should you have any questions.

Regards,

N.H. "Sandy" Sanderson
Emergency Management Coordinator
252-475-5897

Donna Creef
Planning Director
252-475-5873

2014 Progress Report of Hazard Mitigation Plan

Description

Attached is the 2014 progress report of the goals/actions included in the 2010 Hazard Mitigation Plan. Each year, a progress report must be submitted for credit under the CRS program. The goals and the hazards were discussed by the Dare County Hazard Mitigation Committee on October 8 as detailed in meeting summary included with the progress report. The CRS guidelines require submission of this annual report to the Board of Commissioners.

Board Action Requested

CONSENT AGENDA ITEM

Approved 10/20/14
Clerk to the Board

Item Presenter

Donna Creef

Dare County Hazard Mitigation Plan Committee Annual Meeting
October 8, 2014

The Dare County Hazard Mitigation Plan Committee met on Wednesday October 8, 2014 in Planning Department conference room. The attendees were as follows: Sandy Sanderson, Emergency Management; Drew Pearson, Emergency Management; Steve Kovacs, Fire Marshal; Greg Ball, Dare County GIS; Dorothy Hester Public Relations; Donna Creef, Planning ; James Wooten, Health and Human Services; and Jenny Jones, Grants and Waterways. The purpose of the meeting was to review the list of hazards that affect Dare County and the goals/actions report included in the 2010 Hazard Mitigation Plan.

After discussing the hazard lists, the following changes to the list were made by the group:

At the suggestion of Kovacs, wildfires hazard was assigned a new likelihood of occurrence of possible, the intensity changed to moderate and the rank to 4.

Two new categories were added to terrorism event: active shooter/mass casualties and cyber security attacks. The group discussed these two hazards and assigned varying degrees of responses based on the potential likelihood of occurrences, intensity ranking, impacts, and overall rank relative to Dare County. The revised hazard table reflects these responses.

At the suggestion of Wooten, a new category of "public health event" as added to pandemic events. This is based on the potential of a public health terrorist event, such as water supply poisoning, which is different that an infectious disease pandemic threat.

At the suggestion of Creef, a new category "transportation infrastructure impacts" was added to distinguish infrastructure damage to roads versus bridge collapses.

The committee then discussed the goals/action plan from the hazard mitigation plan. Kovacs requested that two new goals (8a and 9a) be added in response to pending grant applications for local fire departments. The committee acknowledged these additions.

Sanderson briefed the group on the pending Albemarle regional hazard mitigation plan activities and how this will replace the Dare County hazard mitigation plan. The development of regional plans is encouraged by FEMA and the State of North Carolina.

There being no other discussion items, the meeting ended at 10:15 a. m.

Prepared by:

Donna Creef

Donna Creef, Planning Director

10/9/2014

Date

Hazard Type	Likelihood of Occurance *(Highly Likely, Likely, Possible, Unlikely)*	Intensity Rating *(Relative Terms)*	Impacts *(Critical, Limited, Negligible)*	Conclusion Rank
Earthquake	Unlikely	Low	Negligible	2
Tidal Flooding	**Highly Likely**	**High**	**Critical**	**5**
Hurricanes	**Highly Likely**	**High**	**Catastrophic**	**5**
Land Slides	Unlikely	Low	Negligible	1
Nor'Easters	Highly Likely	High	Critical	4
Thunderstorms	Highly Likely	Moderate	Negligible	2
Tornadoes	Possible	Moderate	Limited	3
Wildfires	Likely	Moderate	Limited	4
Winterstorms	Likely	Moderate	Limited	3
Tsunami	Unlikely	High	Critical	1
Coastal Erosion	**Highly Likely**	**Moderate**	**Critical**	**5**
Rip Currents	Highly Likely	High	Limited	3
Drought	Unlikely	Low	Negligible	1
Bridge Collapse	Possible	Moderate	Critical	3
Transportation Infrastructure Impacts	Possible	Moderate	Critical	3
Terrorism Event	Unlikely	Low	Negligible	1
Active Shooter/Mass Casualties	Possible	Moderate	Critical	3
Cyber Security Attacks	Likely	High	Critical	4
Pandemic Event	Unlikely	Moderate	Critical	1
Public Health Event	Possible	Moderate	Critical	2

Likelihood of Occurrence -- estimates the likelihood of each type of hazard occurring in Dare County. Highly likely= near 100% probably in the next year. Likely = between 10 and 100% probability in the next 100 years. Possible=between 1 and 10% probability in the next year, or at least one chance in the next 100 years. Less than 1% probability in the next year, or at least one chance in the next 100 years.

Intensity Rating – varying levels of potential intensity using relative terms.

Impacts – A combination of the severity of the event, its magnitude, and the density of human activity in the affected areas. Catastrophic= >50% magnitude, multiple deaths, complete shutdown of critical facilities for >30 days, >50% of property is severely damaged. Critical=25% to 50% magnitude, multiple sever injuries, complete shutdown of critical facilities for >13 days, >25% of property is severely damaged. Limited= 10% to 25% magnitude, some injuries, complete shutdown of critical facilities for > 7 days, > 10 % of property is severely damaged. Negligible=<10% magnitude, minor injuries, shutdown of critical facilities for < 24 hours, <10% of property is severely damaged.

A TABLE OUTLINING DARE COUNTY'S HAZARD MITIGATION PLAN

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	10	11	12	13	14	Priority
					Deadline					
Preventative **Goals: 1. Improve stormwater drainage and land management preparation for flooding.** **2. Assist property owners with safe and efficient clean up after storm events.**										
1a Identify Funding	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Ongoing monitoring for potential grant funds	Planning	General Fund, Grants		X				Medium
1b Identify Problem Areas	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tide Flooding	Not completed	Planning	General Fund		X				High
1c Prioritize and Fund Critical Drainage Projects	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Ongoing monitoring for potential grant funds	Planning	General Fund, Grants			X			High
1d Enforce ordinance preventing fill or structures without a drainage plan	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	On-going enforcement of flood ordinance regulations	Planning	General Fund		X				High
2a Identify Available Resources	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tide Flooding	Monitor for grant opportunities	Planning/Soil and Water Board	General Fund, Grants	X	X	X	X	X	Medium
2b Public Education	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Annual outreach activities of CRS	Planning/Soil and Water Board	General Fund	X	X	X	X	X	Medium
2c Fund and Implement	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	On-going	Planning	General Fund		X	X	X	X	Medium
Property Protection **Goals: 3. Increase the number of properties that meet and exceed BFE.**										
3a Identify the Most Vulnerable Structures Within the County	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	Repetitive loss plan to be developed in early 2015	Planning/ Emergency Mgmt.	Grants						High
3b Develop Plan	Hurricanes, Nor'easters,	Repetitive loss plan	Planning	General Fund					X	High

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	10	11	12	13	14	Priority
					Deadline					
	Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	to be developed in 2015								
3c Identify Funding	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	Monitor for grant opportunities	Emergency Mgmt	Grants		X	X			Low
3d Prioritize Funding	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	Ongoing as funds are secured	Emergency Mgmt	Grants	X	X	X	X	X	High
3e Implement Plan to Reduce Potential Damage in Future	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	Repetitive loss plan to be developed as 2015 CRS work	Planning/ Hurricane Recovery	General Fund		X				Medium
Natural Resource Protection **Goals: 4. Advocate the Use of Existing (2002) State and Federal Regulatory Programs for Protecting and Preserving Coastal Wetland Areas of Environmental Concern. 5. Continue to Support the U.S. Army Corps of Engineers Permit Program.**										
4a Implementation and Enforcement of CAMA Use Standards for Coastal Wetland AECs as Identified under 15NCAC7H, Section 0205 and 0208	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Continued work with CAMA/Corps as needed with site conditions	Planning	Grants	X	X	X	X	X	Medium
4b Continue to Administer the CAMA Local Enforcement Program and Maintain the Staff Necessary for this Work	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Continued participation on LPO program	Planning	General Fund	X	X	X	X	X	Medium
5a Refer Applicants to U.S. Army Corps of Engineers Permit Program, Specifically Section 404	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Continued work with Corps as needed with site conditions	Planning	General Fund	X	X	X	X	X	Medium
5b Facilitate Implementation of Permit Program for Wetland Management	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Rely on federal and state standards	Planning	General Fund, Grants	X	X	X	X	X	Medium

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	10	11	12	13	14	Priority
					Deadline					
Goals 6. Improve traffic flow on NC 12 7. Protect transportation routes, including Bonner Bridge. 8. Establish secondary water supplies for fire protection 9. Acquire redundant power supply for critical facilities.										
6a Two lane highway NC 12 to improve traffic flow	Hurricanes, Nor'easters, Tidal Flooding	Monitoring efforts on-going	NCDOT	State/Fed	X	X	X	X	X	Medium
6b Coordinate traffic lights to create efficient flow	Flooding	As needed	NCDOT	State	X	X	X	X	X	Medium
7a Replace Bonner Bridge	Hurricanes, Nor'easters, Tidal Flooding	On-going	NCDOT	Federal/state	X	X	X	X	X	High
8a Establish secondary water supplies/points for fire protection efforts	Hurricanes, Nor'easters, Tidal Flooding	New 2014	Fire Marshal	Grants					X	Medium
9a Acquire generators or other forms of redundant power supply to ensure that critical facilities and infrastructure remain operational where normal power supply is not available.	Hurricanes, Nor'easters, Tidal Flooding	New 2014	Fire Marshal	Grants					X	Medium
Public Information **Goals: 10. Require Realtors to Disclose Flood Zones. 11. Enhance NFIP Information. 12. Develop Emergency Response Plan for Road/Bridge Loss. 13. Advocate for Beach Replacement. 14. Develop Educational Brochures on Additional Hazards that could Possibly Occur Within the County.**										
10a Develop Relations with Real Estate Community	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Stakeholders included on CRS committee	Planning	General Fund	X		X			Medium
10b Meet With Realtors to Coordinate Public Education Activities	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	Planning	General Fund						Medium
10c Develop Floodplain Map for Public Dissemination	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Tentative map release in 2015	NC Floodplain Mapping	General Fund						High
10d Lobby State Legislators	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing, as needed	DCBC/Manager	General Fund	X					Medium
108e Lobby Local Realtors Board	Hurricanes, Nor'easters,	Ongoing, as needed	Planning	General Fund	X					Medium

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	10	11	12	13	14	Priority
					Deadline					
	Tidal Flooding, Flooding									
11a Circulate Brochure on NFIP	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Annual outreach efforts	Planning	General Funds, Grant	X		X	X		Medium
11b Put Flood Maps on the County's Website	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Completed	GIS	General Fund	X		X	X	X	Medium
11c Continue to Participate in CRS Activities	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Continued CRS participation	Planning	General Fund	X		X	X	X	High
11d Update F.I.R.M.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	No complete	NC Floodplain Mapping	General Fund						Medium
11e Continue Storm Readiness	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Renewed	Emergency Mgmt.	General Fund	X		X	X	X	High
12a Develop Emergency Response Plan for Road/Bridge Loss	Bridge Collapse, Trans. Infrastructure	Met, updated based on specific incident	Emergency Mgmt. NCDOT	General Fund	X		X			High
13a Advocate for Beach Replacement	Hurricanes, Nor'easters, Tidal Flooding, Flooding	On-going	DCBC/Manager	Grants			X	X	X	High
14a Circulate Brochures on Additional Hazards Identified in the Risk Assessment to Educate the Public on Protective Actions that they can Prepare for in their Disaster Plans.	Earthquakes, Landslides, Tornadoes, Rip Currents, Terrorism Events, Pandemic Events	Annual outreach activities	Emergency Management	General Fund			X	X	X	Low
14b Increase awareness of hazards affecting Dare County	Earthquakes, Landslides, Tornadoes, Rip Currents, Terrorism Events, Pandemic Events	New 2014	Emergency Management /Planning	General Fund					X	Medium

Each action item is prioritized. The selection criteria used to analyze the action steps are: 1) Cost Effective; 2) Environmentally Sound; 3) Technically Feasible. An item has to meet all three criteria if it is given a High priority, if it meets two criteria it is given a Medium priority, and if it only meets one, it is given a Low Priority.

Dare County 510 Planning Committee

November 19, 2014

Room 168 Dare County Administrative Building
Manteo, NC

10:00 a.m. Call to Order

1. Approval of October 30, 2014 Meeting Summary
2. Report from Dare County on Update Work
3. Report from Towns on Update Work
4. Next Meeting Date

Dare County 510 Planning Committee
November 19, 2014

NAME	ORGANIZATION
Glenn Rainey	Dare Co Citizen
Bonnie Rowe	Dare Co. citizen
SANAY SANDERSON	DARE CO EM
Cory Tate	Town of Duck
Tracy Barrymm	S/Shores
Debbi Shelton	Southern Shores
Donna Huffman	TOWN OF KITTY HAWK
Wes Haskett	Southern Shores
Kelly Wyatt	Nags Head
Mac Murray	DUCK
Andy Garman	Nags Head
DOUG STYONS	KDH
Meredith GUNS	KDH
GREG LOY	KDH
Nancy White	DI

ALBEMARLE REGIONAL HAZARD MITIGATION PLAN DARE COUNTY 510 PLANNING COMMITTEE MEETING November 19, 2014

DARE COUNTY:	Donna Creef, Glen Rainey, Bonnie Rowe, Sandy Sanderson, Nancy White
DUCK:	Mark Murray, Cory Tate
KILL DEVIL HILLS:	Meredith Guns, Greg Loy, Doug Styons,
KITTY HAWK:	Donna Hefferon
MANTEO:	No members present
NAGS HEAD:	Mark Cornwell, Kelly Wyatt, Andy Garman
SOUTHERN SHORES:	Gary Berryman, Wes Haskett, Dabni Shelton

Sandy Sanderson opened the meeting at 10:05 a.m. and welcomed everyone. He reminded everyone to sign the attendance sheet.

1. Approval of October 30, 2014 Meeting Summary – A motion was made by Greg Loy, seconded by Donna Creef, to approve the summary of the meeting as presented. The vote was unanimous.

2. Progress Report from Dare County – Creef advised the group that she had received an email from Stephen Smith (WOOTEN) indicating that a form will be sent out soon for the goals/actions plans which should be completed and returned to him. She has been monitoring the WOOTEN webpage for the regional plan and no new information has been posted since the committee met on October 30. Creef then briefed the committee on the work the County staff has completed for the update of the Dare County Hazard Mitigation Plan. Updated information from The Tax Appraisal office has been received to update damage assessment reports from 2006 to the present including the most recent report for Hurricane Arthur. Other work on updating the plan should be completed soon and a copy will be forwarded to all of the towns. Some of the information in the County's updated plan may be useful to the towns as they update their plans. She emphasized that the goals/action plan report used annually for CRS purposes should be reviewed. The goals/action plan will be what WOOTEN will be requesting. There is some demographic information that WOOTEN has posted on the regional plan site which should be consulted by the towns for their updates to ensure consistency. She asked that all of the towns provide her an update of the total of repetitive loss properties so the map in the Dare County plan can be updated accordingly.

3. Reports from Each Town –Sanderson asked that each town report on their progress to date in updating the town's hazard mitigation plans.

Manteo – No report due to lack of representation.

Nags Head – Kelly Wyatt told the group that the hazard list had been updated but no other work has been completed.

Duck – Tate said the Duck committee had not meet since the October meeting but there had been staff-level discussions. The critical facilities list will be reviewed and updated and he will report back to Creef about the RL number.

Kitty Hawk – Hefferon indicated the new Planning Director would be reporting on December 1, 2014. She will recommend that the Kitty Hawk Planning Board serve as the local hazard mitigation plan committee. She provided a list of the town's critical facilities and the updated annual hazard progress report to Creef.

Southern Shores – Haskett reported that their town committee had met after the October 30 meeting. The group had decided to add ground water contamination as a new hazard to the town's list. The town has no repetitive loss structures. Work on the update is continuing.

Kill Devil Hills – Guns reported that the Kill Devil Hills Planning Board which serves as the town's local hazard mitigation plan had met to review the hazards in the 2010 town plan. No new hazards were identified. The committee discussed the town's repetitive loss structures and the outreach activities they use for repetitive loss areas. Minutes of the Planning Board meeting and the goals/action plan for Kill Devil Hills were presented to Creef.

4. Next Meeting Date – Sanderson asked the group to have all of their local plans updated and submitted to Dare by the second week of December. The next meeting date of December 18, 2014 was selected at which time the updates will be discussed.

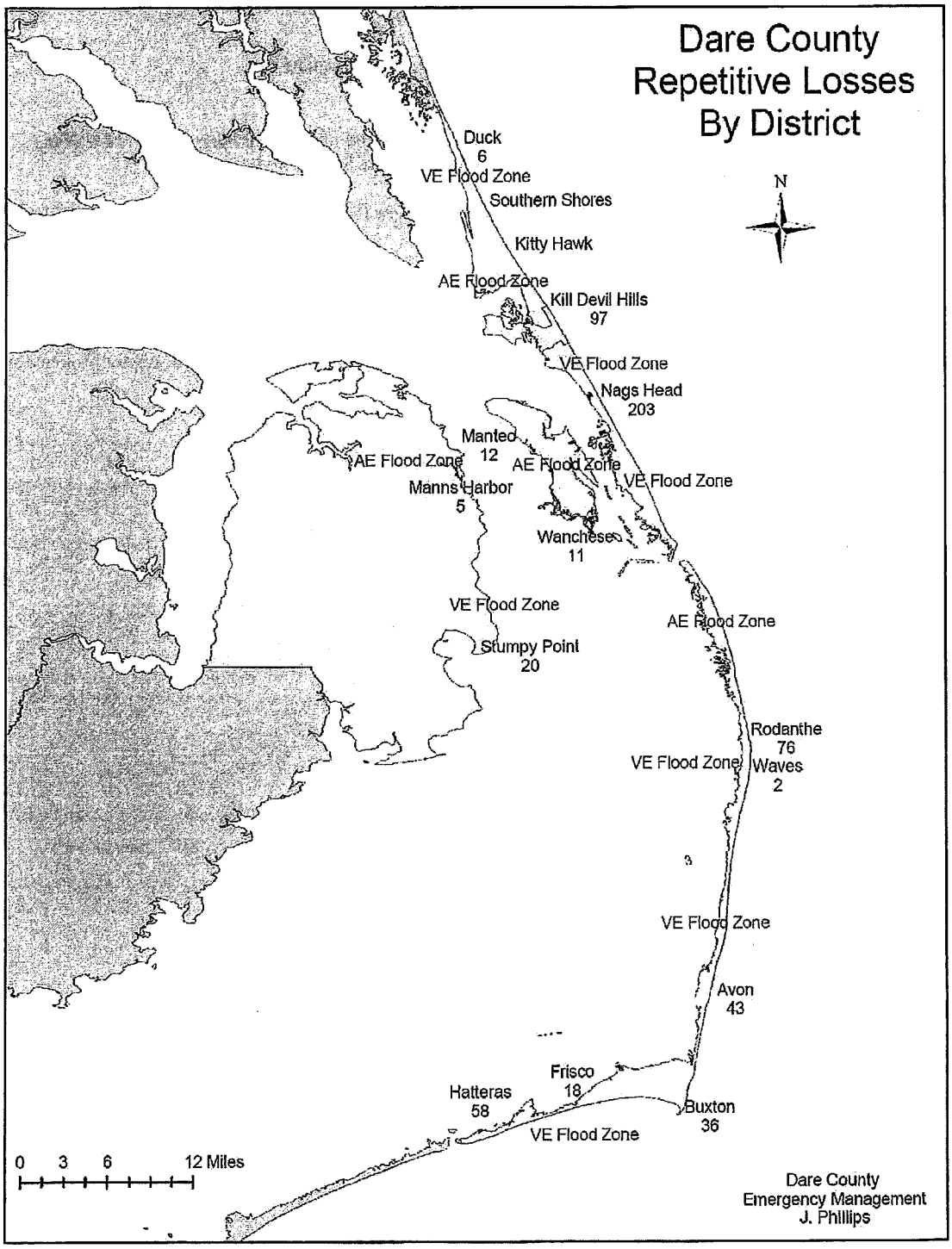
There being no further business, the meeting ended at 10:40 a.m.

Donna Creef

Donna Creef, CFM
Dare County

7-1-2015

Date


Dare County
Repetitive Losses
By District
N
Duck
6
VE Flood Zone
Southern Shores
Kitty Hawk
AE Flood Zone
Kill Devil Hills
97
VE Flood Zone
Nags Head
203
Manted
12
AE Flood Zone
AE Flood Zone
VE Flood Zone
Manns Harbor
5
Wanchese
11
VE Flood Zone
AE Flood Zone
Stumpy Point
20
Rodanthe
76
VE Flood Zone
Waves
2
VE Flood Zone
Avon
43
Frisco
18
Hatteras
58
Buxton
36
VE Flood Zone
0 3 6 12 Miles
Dare County
Emergency Management
J. Phillips

A TABLE OUTLINING DARE COUNTY'S HAZARD MITIGATION PLAN

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	10	11	12	13	14	Priority
					Deadline					
Preventative **Goals: 1. Improve stormwater drainage and land management preparation for flooding.** **2. Assist property owners with safe and efficient clean up after storm events.**										
1a Identify Funding	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Ongoing monitoring for potential grant funds	Planning	General Fund, Grants		X				Medium
1b Identify Problem Areas	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tide Flooding	Not completed	Planning	General Fund		X				High
1c Prioritize and Fund Critical Drainage Projects	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Ongoing monitoring for potential grant funds	Planning	General Fund, Grants			X			High
1d Enforce ordinance preventing fill or structures without a drainage plan	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	On-going enforcement of flood ordinance regulations	Planning	General Fund		X				High
2a Identify Available Resources	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tide Flooding	Monitor for grant opportunities	Planning/Soil and Water Board	General Fund, Grants	X	X	X	X	X	Medium
2b Public Education	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Annual outreach activities of CRS	Planning/Soil and Water Board	General Fund	X	X	X	X	X	Medium
2c Fund and Implement	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	On-going	Planning	General Fund		X	X	X	X	Medium
Property Protection **Goals: 3. Increase the number of properties that meet and exceed BFE.**										
3a Identify the Most Vulnerable Structures Within the County	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	Repetitive loss plan to be developed in early 2015	Planning/ Emergency Mgmt.	Grants						High
3b Develop Plan	Hurricanes, Nor'easters,	Repetitive loss plan	Planning	General Fund					X	High

Draft

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	10	11	12	13	14	Priority
					Deadline					
	Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	to be developed in 2015								
3c Identify Funding	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	Monitor for grant opportunities	Emergency Mgmt	Grants		X	X			Low
3d Prioritize Funding	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	Ongoing as funds are secured	Emergency Mgmt	Grants	X	X	X	X	X	High
3e Implement Plan to Reduce Potential Damage in Future	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	Repetitive loss plan to be developed as 2015 CRS work	Planning/ Hurricane Recovery	General Fund		X				Medium
Natural Resource Protection **Goals: 4. Advocate the Use of Existing (2002) State and Federal Regulatory Programs for Protecting and Preserving Coastal Wetland Areas of Environmental Concern. 5. Continue to Support the U.S. Army Corps of Engineers Permit Program.**										
4a Implementation and Enforcement of CAMA Use Standards for Coastal Wetland AECs as Identified under 15NCAC7H, Section 0205 and 0208	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Continued work with CAMA/Corps as needed with site conditions	Planning	Grants	X	X	X	X	X	Medium
4b Continue to Administer the CAMA Local Enforcement Program and Maintain the Staff Necessary for this Work	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Continued participation on LPO program	Planning	General Fund	X	X	X	X	X	Medium
5a Refer Applicants to U.S. Army Corps of Engineers Permit Program, Specifically Section 404	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Continued work with Corps as needed with site conditions	Planning	General Fund	X	X	X	X	X	Medium
5b Facilitate Implementation of Permit Program for Wetland Management	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Rely on federal and state standards	Planning	General Fund, Grants	X	X	X	X	X	Medium

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	10	11	12	13	14	Priority
					Deadline					
Goals 6. Improve traffic flow on NC 12 7. Protect transportation routes, including Bonner Bridge. 8. Establish secondary water supplies for fire protection 9. Acquire redundant power supply for critical facilities.										
6a Two lane highway NC 12 to improve traffic flow	Hurricanes, Nor'easters, Tidal Flooding	Monitoring efforts on-going	NCDOT	State/Fed	X	X	X	X	X	Medium
6b Coordinate traffic lights to create efficient flow	Flooding	As needed	NCDOT	State	X	X	X	X	X	Medium
7a Replace Bonner Bridge	Hurricanes, Nor'easters, Tidal Flooding	On-going	NCDOT	Federal/state	X	X	X	X	X	High
8a Establish secondary water supplies/points for fire protection efforts	Hurricanes, Nor'easters, Tidal Flooding	New 2014	Fire Marshal	Grants					X	Medium
9a Acquire generators or other forms of redundant power supply to ensure that critical facilities and infrastructure remain operational where normal power supply is not available.	Hurricanes, Nor'easters, Tidal Flooding	New 2014	Fire Marshal	Grants					X	Medium
Public Information **Goals: 10. Require Realtors to Disclose Flood Zones. 11. Enhance NFIP Information. 12. Develop Emergency Response Plan for Road/Bridge Loss. 13. Advocate for Beach Replacement. 14. Develop Educational Brochures on Additional Hazards that could Possibly Occur Within the County.**										
10a Develop Relations with Real Estate Community	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Stakeholders included on CRS committee	Planning	General Fund	X	X				Medium
10b Meet With Realtors to Coordinate Public Education Activities	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing	Planning	General Fund						Medium
10c Develop Floodplain Map for Public Dissemination	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Tentative map release in 2015	NC Floodplain Mapping	General Fund						High
10d Lobby State Legislators	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Ongoing, as needed	DCBC/Manager	General Fund	X					Medium
108e Lobby Local Realtors Board	Hurricanes, Nor'easters,	Ongoing, as needed	Planning	General Fund	X					Medium

Draft

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	10	11	12	13	14	Priority
					Deadline					
	Tidal Flooding, Flooding									
11a Circulate Brochure on NFIP	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Annual outreach efforts	Planning	General Funds, Grant	X		X	X		Medium
11b Put Flood Maps on the County's Website	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Completed	GIS	General Fund	X		X	X	X	Medium
11c Continue to Participate in CRS Activities	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Continued CRS participation	Planning	General Fund	X		X	X	X	High
11d Update F.I.R.M.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	No complete	NC Floodplain Mapping	General Fund						Medium
11e Continue Storm Readiness	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Renewed	Emergency Mgmt.	General Fund	X		X	X	X	High
12a Develop Emergency Response Plan for Road/Bridge Loss	Bridge Collapse, Trans. Infrastructure	Met, updated based on specific incident	Emergency Mgmt. NCDOT	General Fund	X		X			High
13a Advocate for Beach Replacement	Hurricanes, Nor'easters, Tidal Flooding, Flooding	On-going	DCBC/Manager	Grants			X	X	X	High
14a Circulate Brochures on Additional Hazards Identified in the Risk Assessment to Educate the Public on Protective Actions that they can Prepare for in their Disaster Plans.	Earthquakes, Landslides, Tornadoes, Rip Currents, Terrorism Events, Pandemic Events	Annual outreach activities	Emergency Management	General Fund			X	X	X	Low
14b Increase awareness of hazards affecting Dare County	Earthquakes, Landslides, Tornadoes, Rip Currents, Terrorism Events, Pandemic Events	New 2014	Emergency Management /Planning	General Fund					X	Medium

Draft

Each action item is prioritized. The selection criteria used to analyze the action steps are: 1) Cost Effective; 2) Environmentally Sound; 3) Technically Feasible. An item has to meet all three criteria if it is given a High priority, if it meets two criteria it is given a Medium priority, and if it only meets one, it is given a Low Priority.

Donna Creef <donnac@darenc.com>

FW: Disasters

1 message

Kelly Wyatt <kelly.wyatt@nagsheadnc.gov> Tue, Nov 18, 2014 at 11:19 AM
To: "Donna Creef (donnac@darenc.com)" <donnac@darenc.com>, Mark Cornwell <mcornwell4502@embarqmail.com>, Andy Garman <andy.garman@nagsheadnc.gov>

Good Morning Donna-

After reviewing the hazards lists our Fire Chief Kevin Zorc noted the additional hazards for consideration/inclusion/discussion.

Thank you – see you tomorrow morning.

Kelly

Kelly Wyatt, CZO, NCLID

Deputy Planning Director & Zoning Administrator

Town of Nags Head

Department Phone: 252-441-7016

Direct Phone: 252-449-6042

Fax: 252-441-4290

Email: Kelly.wyatt@nagsheadnc.gov

Website: www.nagsheadnc.gov

From: Kevin Zorc
Sent: Monday, November 10, 2014 10:05 AM
To: Kelly Wyatt
Subject: Disasters

As requested

From: Jackie Hart
Sent: Monday, November 10, 2014 9:51 AM
To: Kevin Zorc
Subject: notes

Plane / aeronautic disaster / land or sea

Large occupancy vessel in distress / near shore

Uncontrolled structure fires, wind driven wildland fires

Explosion / gas leak / fire / evacuations

Structural collapses

Water system compromises

Haz Mat - transportation

Damage to critical facilities / hospital fire, nursing home, etc

Utilities interruptions – gas, water

Terrorism – biological agent

Debris management

Haz Mat, tanks leaking, waterway contamination from Haz Mat

November 2014

610 Critical Facilities – Names & Contact Numbers

Dare Central – 252-473-3444

Dare County Pumping Stations – Dare County Water Plant 252-475-5990 (24/7)

Dominion Power – Neil Rozier – 252-232-3580 or 252-331-9235

Piedmont Natural Gas – Jeff Klein – 252-331-9060

Century Link – Operations – 888-4404 option 2 or Shirl Swindell - 252-441-3101

Regional Medical – John Henderson
Cell: 252-256-0179
Office: 252-255-6010

Telecommunication Facility/Antenna at 4334 The Woods Rd.
Crown Castle 24 hr. emergency # 800-788-7011 unit # 870584
Verizon Contacts:

Jack Tymchyn
Manager Network Operations
434-841-6992 – cell phone

Carrie Spencer
Director Operations
Cell 610-420-0020
Work address:
15001 Jefferson Ave.
Newport News, VA 23603

Steve Summers
757-681-7510 – cell phone
Same address as above

Donna Creef <donnac@darenc.com>

Flood Hazard Mitigation

1 message

Donna Heffernan <dheffernan@kittyhawktown.net> Tue, Nov 18, 2014 at 3:10 PM
To: Donna Creef <donnac@darenc.com>

Hi Donna,

Repetitive Loss Properties: The Town of Kitty Hawk has **not** received an update on their Repetitive Loss Properties since 2011. At that time we were given the number 183.

We updated that number & sent documentation as follows:
- 7 properties were flood protected
- 1 building was removed from the property
- 43 properties were previously updated & no longer considered a RL property

So Kitty Hawk's total for RL properties = 132 properties

Hurricane Irene & Sandy will definitely increase the RL properties in Kitty Hawk.

I have attached a List of the **Town's Critical Facilities - Names & Contact Numbers** and our **Annual Hazard Mitigation Progress Report.**

Town staff previously acted as Hazard Mitigation Committee. I am suggesting to new Planning Director when he arrives that the Planning Board fill that role for the Town and for it to be on his first Planning Board Agenda.

Thank you!!!
--
Donna Heffernan, CFM
Administrative Zoning Technician
The Town of Kitty Hawk
PO Box 549
Kitty Hawk, NC 27949
Phone: 252-261-3552
Fax: 252-261-7900
E-mail: dheffernan@kittyhawktown.net

2 attachments

Kitty Hawk Annual Hazard Mitigation Progress Report 2014.doc
70K

Contact List of Critical Facilities.doc
26K

Donna Creef <donnac@darenc.com>

FW: ARHMP Outreach

1 message

Dabni Shelton <DShelton@southernshores-nc.gov> Wed, Oct 29, 2014 at 1:52 PM
To: Donna Creef <donnac@darenc.com>
Cc: Wes Haskett <WHaskett@southernshores-nc.gov>

Donna,

You requested that each Municipality provide you with a list of "other public outreach activities" performed within each respective jurisdiction. For the Town of Southern Shores – we have provided the public notice advertised through Social Media as well as a list of other public notices in the email thread below.

Social Media – Facebook

October 14, 2014

- Notice of Public Meeting - Albemarle Regional Hazard Mitigation Plan - to identify and assess our community's natural hazard risks and determine how to best minimize or manage those risks - October 22, 2014 (6:00 pm to 7:30 pm) at the Currituck County Extension Center (Auditorium) located at 120 Community Way, Barco, NC

Dabni Shelton CZO, CFM

Permit Officer

Town of Southern Shores

5375 N. Virginia Dare Trail

Southern Shores, NC 27949

Office 252-261-2394 ext 4 Fax 252-255-0876

dshelton@southernshores-nc.gov

www.southernshores-nc.gov

From: Wes Haskett
Sent: Wednesday, October 29, 2014 11:39 AM
To: Dabni Shelton
Subject: ARHMP Outreach

The following outreach activities have been conducted so far for the ARHMP (on Town website and biweekly newsletter):

- 7-23-14: Plan info and survey link posted on Town website.
- 7-24-14: Plan info and survey link included in Town biweekly newsletter.
- 8-22-14: Plan info and survey link included in Town biweekly newsletter.
- 9-19-14: Plan info and survey link included in Town biweekly newsletter.
- 10-3-14: Plan info and survey link included in Town biweekly newsletter.
- 10-17-14: Plan info and notice of 10-22-14 public input meeting in Currituck.

Wes Haskett

Town Planner/Code Enforcement Officer

Town of Southern Shores

(252) 261-2394 (ph)

(252) 255-0876 (fx)

www.southernshores-nc.gov

Hazard	Likelihood of Occurrence (ex. Highly likely, likely, possible, unlikely)	Location (ex. Small, medium, large)	Impacts (ex. Catastrophic, critical, limited, negligible)	Hazard Index
Hurricane	Likely	Large	Limited	5
Nor'easter	Highly Likely	Large	Limited	5
Wildfire	Possible	Small	Limited	3
Thunderstorm/Lightning	Highly Likely	Medium	Negligible	3
Coastal Erosion	Highly Likely	Medium	Negligible	3
Tornado	Possible	Small	Limited	2
Heat Wave/Drought	~~Possible~~ Likely	Large	Negligible	2
Landslide/Sinkhole	Unlikely	Small	Negligible	1
Severe Winter Storm	Possible	Large	Negligible	1
Earthquake/Tsunami	Unlikely	Large	Catastrophic	1
Groundwater Contamination	Possible	Medium	Limited	2

DRAFT

Town of Southern Shores

5375 N. Virginia Dare Trail, Southern Shores, NC 27949
Phone 252-261-2394 / Fax 252-255-0876
info@southernshores-nc.gov
www.southernshores-nc.gov

Hazard Mitigation Committee Meeting
October 28, 2014
2:00 p.m., Pitts Center

MEETING MINUTES

I. INTRODUCTION:

Wes Haskett called the meeting to order and thanked everyone for attending. Committee members Wes Haskett, Town Planner; David Kole, Chief of Police; Ed Limbacher, SSVFD Chief; Jason Sawyer, Public Works Supervisor; Dabni Shelton; Permit Officer; Peter Rascoe; Town Manager; Gray Berryman, Planning Board member; David Sanders, Council member; and Tom Bennett, Mayor were present.

II. CURRENTLY ADOPTED HMP:

Wes Haskett stated that the Town's currently adopted HMP was incorporated in the Dare County HMP in June, 2010 which must be updated every five years in order to remain eligible for State and Federal funding. The Committee reviewed the established goals and preventive activities in the HMP and suggestions were made regarding two of the preventive activities.

The first was to consider removing the periodic controlled burns of marshland to reduce wildfire fuels since a large portion of the marshland has been developed. It was noted that this preventive activity could be revised to only include the remaining undeveloped portion of marshland. David Sanders suggested adding a new preventive activity to require regular inspections of the marshland and other areas of the Town, conducted by the N.C. Forestry Service, to determine potential hazards. The Committee agreed to leave the preventive activity as established and to add a new preventive activity requiring regular inspections of the marshland and other areas of the Town, conducted by the N.C. Forestry Service, to determine potential hazards.

The second suggestion was to remove the N.C. Turnpike Authority from the preventive activity for monitoring N.C. Turnpike Authority plans for the Mid-Currituck Bridge to expedite evacuation. The Committee agreed to remove the N.C. Turnpike Authority reference from the preventive activity.

III. ALBEMARLE REGIONAL HMP:

Wes Haskett stated that Gates County had applied and received funding for the ARHMP which includes Dare County and its respective Municipalities. It was noted at the October 22, 2014 ARHMP Committee meeting that the consultant, the Wooten Company, hopes to have a draft plan finalized no later than January, 2015. The reason given for the short timeframe was to allow enough time for FEMA to review and approve the plan prior to seeking local adoption by the Counties and Municipalities.

IV. REVIEW OF HAZARDS:

The Committee reviewed and discussed the hazards identified in the currently adopted HMP and agreed to revise the likelihood of occurrence for heat wave/drought from possible to likely. Wes Haskett stated that Dare County Emergency Management had suggested at a prior Dare County ARHMP Committee meeting to consider including potential man-made hazards in the HMP update. The suggested hazards include: terrorism, active shooter/mass casualties, pandemic, transportation infrastructure impacts, haz mat incidents, groundwater contamination, cyber security attacks, and bridge collapse.

The Committee discussed the suggested hazards and agreed to add groundwater contamination to the current list of hazards with a possible likelihood of occurrence, medium location, limited impact, and hazard index of 2. With respect to the remaining suggested hazards, the Committee decided to take no action until after further discussion with Dare County to determine what advantage the Town may gain by adding the remaining suggested hazards and why are they now a concern.

V. NEXT STEPS:

Following further discussion of the suggested man-made hazards with Dare County, the Committee will consider what, if any, of the suggested hazards should be included in the HMP update. Wes Haskett stated that the Dare County ARHMP Committee would meet on October 30, 2014 which will include discussion of identified hazards.

VI. ADJOURNMENT:

The meeting adjourned at 3:00 p.m.

RESPECTFULLY SUBMITTED:

_____

Wes Haskett, Town Planner

List of agencies to contact

1. Division of Coastal Management – Frank Jennings
2. Outer Banks Homebuilders -- Willo Kelly
3. Outer Banks Association of Realtors – Willo Kelly
4. Albemarle RPO – Angela Welsh
5. Dominion Power – Michael Thompson
6. NCDOT – Gretchen Byrum
7. Dare County Public Schools – Jim Winebarger
8. U.S. Army Corps. Of Engineers– Kyle Barnes (Washington, N.C. office)
9. Joe Heard – Town of Duck
10. John Stockton – Town of Kitty Hawk
11. Donna Creef– Dare County Planning
12. Steve Kovacs – Dare County Fire Marshall
13. Southern Shores Civic Association
14. Chicahauk Property Owners Association

Town of Southern Shores

5375 N. Virginia Dare Trail, Southern Shores, NC 27949
Phone 252-261-2394 / Fax 252-255-0876
info@southernshores-nc.gov
www.southernshores-nc.gov

October 24, 2014

Dear Agency/Organization:

Hazard Mitigation Plans (HMP) outline actions taken by a community to reduce or eliminate the long-term risk to human life and property from hazards, either natural or man-made. The Town of Southern Shores HMP was incorporated in the Dare County HMP in June, 2010. Every five years we must update it and we recently began our efforts. Our HMP can be found at http://southernshores-nc.gov/wp-content/uploads/2014/09/2010-Hazard-Mitigation-Plan.pdf. To ensure that the Town of Southern Shores remains eligible for State and Federal mitigation funding under Title 44, Part 201.6 of the Code of Federal Regulations, the HMP must be approved by North Carolina Emergency Management and Federal Emergency Management Agency (FEMA) officials.

Stakeholder input is needed and critical to ensuring our HMP properly addresses all hazards and meets regulatory requirements. While our most likely hazards remain significant, weather events and the associated impacts like flooding and wind damage, we must reassess all hazards while also identifying emerging threats. While hazards like earthquakes, mass shootings, pandemics, cyber-attacks are not generally associated with our community they must be considered as part of our HMP update process.

We believe you and your agency are key stakeholders in the HMP update process. We invite you to provide input on potential hazards, especially the identification of any activities involving your agency which may affect flooding or flood-prone properties. If your agency has studies or plans used for hazard mitigation purposes, we ask that you share those with us along with any other information you feel may help as we update the HMP. Electronic versions of documents and any replies to this invitation can be sent to me at whaskett@southernshores-nc.gov or you may contact me at (252) 261-2394 to discuss any comments or input you can provide.

In addition, public input is an important component of our efforts. There are numerous opportunities for outreach activities from the initial stages of the process to the review

and approval of the HMP. Notices of public engagement will be posted on the Town's website over the next few months. Attendance at public meetings of the local planning committee assisting with the update is welcomed and we hope you or someone from your organization will participate.

Thank you in advance for you participation and comments.

Sincerely,

Wes Haskett
Town Planner/Code Enforcement Officer
Town of Southern Shores

Cc: Peter Rascoe, Town Manager

Progress Report for
Town of Kitty Hawk
Hazard Mitigation Plan

Date of Plan Adoption: October 5, 2009
(later incorporated into the Dare County HMP)

REVIEW OF THE ACTION PLAN/IMPLEMENTATION

This section includes a review of each recommendation in the action plan, including a statement on how much was accomplished during the previous year. This section also includes a discussion on why any objectives were not reached or why implementation is behind schedule.

1. PREVENTIVE GOALS

- **GOAL: Pursue beach and dune renourishment as funding becomes available.**

  Action: Implement beach and dune renourishment projects as funding becomes available.

  Responsible Person: Town Council, Public Works Department
  Completion Date: Ongoing
  Funding: Federal & State Grants/Programs, County Shoreline Management Commission
  Prioritization: High

  STATUS: The Town of Kitty Hawk is actively proceeding with efforts to design, permit, and fund beach/dune renourishment. In 2013, Dare County agreed to provide $250,000 toward the costs of completing preliminary studies, design, and permitting for beach renourishment. Kitty Hawk spent $22,454 to hire an engineering consultant to prepare a beach management conceptual plan that was presented at the Town Council meeting on September 3, 2013. In 2013, the Town entered into an agreement with Dare County to help fund the planned beach renourishment project. The County committed over $13.5 million toward this project.

  In January 2014, The Town entered into a $619,773 contract with an engineering consultant to conduct studies, design, engineer, and obtain permits to implement a beach renourishment project along the entire Kitty Hawk oceanfront. The Town is scheduled to consider the adoption of special tax districts to help fund projects relating to beach renourishment and stormwater damage reduction in the Fall of 2014.

  In 2008-09, the Town of Kitty Hawk installed sand fencing on the primary oceanfront dune along nearly three miles of beach. The installation of sand fence and vegetation allows windblown sand to accumulate and form dunes. The Town's Public Works Department has maintained and repaired the sand fencing when damaged by storms. During 2013, it is estimated that approximately one-half mile of the sand fencing was

repaired or replaced following storms.

To supplement public efforts to maintain the primary dunes, the Town has distributed educational materials to the public (including copies of *The Dune Book*) and makes "Stay off the Dune" signs available to oceanfront property owners.

- **GOAL: Resolve identified stormwater drainage issues.**

Action: Implement stormwater drainage improvements per the studies/plan.

Responsible Person: Town Manager, Public Works Department
Completion Date: Ongoing
Funding: General Fund, State Transportation Funds
Prioritization: High

STATUS: In 2011, the Town of Kitty Hawk and N.C. Department of Transportation jointly funded a stormwater management plan that identifies areas prone to significant flooding and offers recommendations for improving stormwater drainage issues in each of these areas. A key component of the plan is the identification of specific projects and funding sources for the potential solutions.

In 2012, the Town hired an engineering consultant to complete more detailed specifications and begin the permitting process for installation of drainage improvements in seven (7) of the areas facing stormwater drainage issues. Officials from the Town and the consultant met with state environmental permitting agencies and received approval to implement a series of temporary stormwater pumping systems to be used in the immediate aftermath of storms causing significant flooding.

The Town of Kitty Hawk has subsequently submitted requests for grant assistance with the design, permitting, and construction of these projects. The more fiscally manageable projects have been reviewed on an annual basis and funding incorporated into the Town's budget and 5-year Capital Improvements Plan. In September 2013, the Town spent $26,759 to construct the first of the stormwater pumping systems in the Hawks Street area. In May 2014, the second stormwater pumping system was completed in the area of Poseidon/Goosander Streets at a cost of $77,426.

The stormwater management plan and results of similar, past studies have been shared with the N.C. Department of Transportation (NCDOT). The Town has requested NCDOT's assistance with the construction of identified improvements affecting State maintained streets and highways.

Following a meeting with Governor Pat McCrory, the Town of Kitty Hawk is also pursuing approval to construct a series of three ocean outfalls to help alleviate stormwater drainage issues. The Town retained an engineering consultant to prepare a preliminary study on potential ocean outfalls. This study was presented to the Town Council in July 2013. Further studies and permitting are on hold pending the identification of a funding

source for the outfall projects. The Town is in discussions with NCDOT as a funding partner, as the outfalls would relieve significant flooding issues on N.C. Highway 12.

- **GOAL: Revise storm preparedness, response & recovery plan.**

  Action: Revise the storm preparedness, response, and recovery plan for Kitty Hawk.

  Responsible Person: Town Manager, All Town Departments, Town Council
  Completion Date: Ongoing
  Funding: General Fund
  Prioritization: High

  STATUS: The Town of Kitty Hawk's Storm Preparedness, Response, and Recovery Plan is reviewed annually and updated as needed. The Town Manager completed the most recent review and update with input from all department heads in May 2014. Updates were presented to the Town Council in June 2014.

  All required employees from every Town department have completed NIMS and ICS training to improve emergency response.

2. PROPERTY PROTECTION

- **GOAL: Reduce individual property owners' losses.**
- **GOAL: Find cost_effective solutions.**
- **GOAL: Streamline damage assessment procedures.**

  Action: Educate homeowners on various mitigation techniques and resources available to them.

  Responsible Person: Planning & Inspections Department
  Completion Date: Ongoing
  Funding: General Fund
  Prioritization: High

  STATUS: The Planning & Inspection Department advises contractors, homeowners, and other interested parties on the flood damage mitigation techniques and available resources on a daily basis. Staff also provides FEMA technical bulletins, fact sheets, the Coastal Construction Manual, and important website information to homeowners interested in mitigation techniques. Detailed outreach brochures that include information on hurricane preparations, flood insurance, and how to obtain information about hazard mitigation techniques are mailed to all property owners twice a year. The Town also makes information available to the public on the Town's website and through articles published in the Town's newsletter (sent every month).

Building Inspector Dennis Speight attended a damage assessment training workshop in May 2012. Based on his information, the Planning & Inspections Department has implemented improvements in the process and accuracy of its damage assessment estimates. In July 2013, the department debuted new damage assessment forms that allow for more accurate and detailed information to be provided in the field.

Action: Provide information to homeowners on how to individually hazard-proof their own homes.

Responsible Person: Planning & Inspections Department
Completion Date: Ongoing
Funding: General Fund
Prioritization: High

STATUS: The Planning & Inspections Department advises homeowners and other interested parties on ways to hazard-proof their homes. Staff also provides FEMA technical bulletins, fact sheets, and important website information. Detailed outreach brochures that include information on hurricane preparations, flood insurance, and how to obtain information about hazard mitigation techniques are mailed to all property owners twice a year. The Town also makes information available to the public on the Town's website and through articles published in the Town's newsletter (sent every month).

During the permitting process, homeowners are given information about flood insurance, flood vents, flood resistant materials, and the location of the required flood protection elevation in relation to proposed first floor. In addition, the building inspector reviews house plans for compliance with the Town's adopted Flood Damage Prevention Ordinance and N.C. Building Codes, then makes recommendations for improvements or compliance as needed. At the completion of a project, homeowners are given information about flood insurance and flood damage prevention. Planning & Inspection Department staff members also make site visits when requested to assist property owners in complying with the Flood Damage Prevention Ordinance and N.C. Building Codes.

Action: Encourage homeowners to conduct an inventory of their assets to assist with damage claims.

Responsible Person: Planning & Police Departments
Completion Date: Ongoing
Funding: General Fund
Prioritization: High

STATUS: Through day-to-day interaction (by phone and in person), Town staff encourages property owners in a special flood hazard areas (SFHA) to inventory their assets. Detailed outreach brochures mailed twice a year also inform property owners about flood insurance for their assets. In addition, the Police Department speaks at several homeowners association meetings a year and encourages residents to inventory their assets in case of significant storm damage or burglary.

3. NATURAL RESOURCE PROTECTION

- **GOAL: Educate citizens about the importance of open space and natural resource protection.**

  Action: Educate citizens about dune vegetation.

  Responsible Person: Public Works & Planning Departments
  Completion Date: ongoing
  Funding: General Fund
  Prioritization: High

  STATUS: Planning staff has written articles that appear in the bi-weekly Town newsletter explaining the importance and function of sand dunes. Staff has also developed a brochure that explains how to install and maintain sand fencing in order to help dunes grow. In addition, a list of vendors that sell dune grasses and copies of *The Dune Book* have been compiled for property owners interested in maintaining their dunes. All the above information has been added to the Town's website.

  As part of the development of the second phase of Sandy Run Park, the Town of Kitty Hawk worked with the N.C. Coastal Reserve to install interpretive signs that explain many of the natural features and processes that occur within local beaches and the Kitty Hawk Woods Coastal Reserve.

- **GOAL: Promote dune and beach renourishment and support local actions.**

  STATUS: The Town of Kitty Hawk continues to participate in the on-going efforts to pursue beach and dune renourishment. In 2005, a Shoreline Management Commission was formed to oversee and advocate the preservation and restoration of shorelines in Dare County. The Commission is comprised of elected officials from the county and municipal governments in Dare County.

  The Town of Kitty Hawk is actively proceeding with efforts to design, permit, and fund beach/dune renourishment. The Town recently entered into a contract with an engineering consultant to conduct studies, design, engineer, and obtain permits to implement a beach renourishment project along the entire Kitty Hawk oceanfront. The Town is scheduled to consider the adoption of special tax districts to help fund projects relating to beach renourishment and stormwater damage reduction in the Fall of 2014.

  As part of these efforts, the Town Council has held numerous public meetings during which it discussed a variety of alternatives and requested public input. To date, the Town has received comments from dozens of property owners and residents regarding beach renourishment. The Town Council will be holding a special public hearing in the Fall

of 2014 to receive comments about the special tax district proposal. Plans and updated information about the beach renourishment efforts have been posted regularly on the Town's website and included in the Town's monthly newsletter.

- **GOAL: Establish a hazard mitigation plan, a disaster preparedness plan, and a storm reconstruction/recovery plan.**

  Action: Establish town plans for mitigation and recovery through information on disaster planning, recovery, and reconstruction.

  Responsible Person: Town Council, All Town Departments
  Completion Date: Ongoing
  Funding: General Fund
  Prioritization: High

  STATUS: In 2009, Town Council approved an updated Hazard Mitigation Plan that has been incorporated into the multi-jurisdictional Dare County Hazard Mitigation Plan. The Town of Kitty Hawk's Storm Preparedness, Response, and Recovery Plan is reviewed and updated annually. The most recent updates were presented to the Town Council in June 2014. This plan establishes policies and guidance for storm preparedness, response, recovery, and mitigation operations. It outlines a system for the coordinated and efficient use of Kitty Hawk's resources to preserve the health, safety, and welfare of people and the condition of properties during hazard-related situations. The plan also details the authority and responsibilities for each of the Town's departments during a storm/ emergency event.

- **GOAL: Maintain the existing stormwater drainage system including all waterways, ditches, and canals.**

  Action: Clean out culverts, ditches, and waterways to relieve standing water and facilitate stormwater drainage.

  Responsible Person: Town Manager, Public Works Department
  Completion Date: Ongoing
  Funding: General Fund, State Grants, NCDOT
  Prioritization: High

  STATUS: In Fall of 2005, the Planning Department collaborated with Dare County to have canals and waterways cleared of debris. This project was funded through grants. The Public Works Department also cleans out culverts on an as needed basis. The Town has worked with the N.C. Department of Transportation to clean and maintain culverts under NCDOT roadways. More consistent debris removal has been challenging due to a lack of funding, limited manpower, and private ownership of many drainage ditches and canals.

- **GOAL: Closely monitor beach erosion.**

Action: Collect beach erosion information annually.

Responsible Person: N.C. Division of Coastal Management
Completion Date: Ongoing
Funding: N.C. Division of Coastal Management, FEMA
Prioritization: High

STATUS: The Town monitors beach erosion before and after every storm to ensure public safety and document damage to public and private property. The Town also provides a CAMA Local Permit Officer to serve as a resource for local residents. FEMA and the N.C. Division of Coastal Management conduct studies and provide the Town with updated flood zone and erosion rate maps. The Town has been informed that updated flood maps for Dare County may be available as soon as the Fall of 2014.

4. EMERGENCY SERVICES

- **GOAL: Improve public safety during and after a storm event.**

Action: Update and improve the protocols and procedures (local, county, and state) by which the citizens in Kitty Hawk are made aware of impending storm events and expected impacts.

Responsible Person: Town Council, Dare County Emergency Management
Completion Date: Ongoing
Funding: General Fund, Dare County
Prioritization: High

STATUS: Both the Town of Kitty Hawk and Dare County update their Storm Preparedness, Recovery, and Response plans annually. Citizens are notified of any storm threats, storm preparations, recommended and required evacuations by television, radio, Town and County websites, special editions of the Town's newsletter, and door-to-door visits by the Fire Department.

Action: Work with the Dare County Control Group to prepare the provision of needed equipment and services to persons and businesses in need of assistance.

Responsible Person: Town Council, All Town Departments, Dare County Emergency Management
Completion Date: Ongoing
Funding: General Fund, Dare County
Prioritization: High

STATUS: The Town of Kitty Hawk annually enters into contracts with private individuals and companies to provide necessary equipment and assistance in recovery

efforts to supplement other resources. The Town of Kitty Hawk also participates in the N.C. Statewide Mutual Aid Agreement. By entering into this agreement, the Town is able to access additional resources from other municipalities, counties, and the state. The Town also has representation on the Dare County Control Group as well as the County's Coordination Group.

Action: Define procedures and practices to maintain critical facilities and services to the maximum extent possible during and after a storm event.

Responsible Person: Town Council, All Town Departments
Completion Date: Ongoing
Funding: General Fund
Prioritization: High

STATUS: The Town's Storm Preparedness, Response, and Recovery Plan outlines the authority and responsibilities of each of the Town's departments during a storm/ emergency event. The plan describes a system for the efficient use of Kitty Hawk's resources necessary to preserve the health, safety, and welfare of people affected during storm related emergencies. Several of the procedures and practices the Town implements prior, during, and after storm events include: securing all critical and Town owned facilities, securing an amateur ham radio operator, back-up all important files that will be needed after the storm event and place in a secure location, testing generators at all Town departments, locating "TOD" army trucks at designated points in the Town, stationing Fire and Police vehicles and equipment at higher elevations to prevent flooding or damage, and having personnel stay on-site to ensure proper staffing after storm events.

5. STRUCTURAL PROJECTS

- **GOAL: Pursue beach and dune renourishment.**

Action: Implement beach and dune renourishment projects as funding becomes available.

Responsible Person: Town Council
Completion Date: Ongoing
Funding: Federal & State Grants/Programs
Prioritization: High

STATUS: The Town of Kitty Hawk is actively proceeding with efforts to design, permit, and fund beach/dune renourishment. In 2013, Dare County agreed to provide $250,000 toward the costs of completing preliminary studies, design, and permitting for beach renourishment. Kitty Hawk spent $22,454 to hire an engineering consultant to prepare a beach management conceptual plan that was presented at the Town Council meeting on September 3, 2013. In 2013, the Town entered into an agreement with Dare County to help fund the planned beach renourishment project. The County committed over $13.5

million toward this project.

In January 2014, The Town entered into a $619,773 contract with an engineering consultant to conduct studies, design, engineer, and obtain permits to implement a beach renourishment project along the entire Kitty Hawk oceanfront. The Town is scheduled to consider the adoption of special tax districts to help fund projects relating to beach renourishment and stormwater damage reduction in the Fall of 2014.

In 2008-09, the Town of Kitty Hawk installed sand fencing on the primary oceanfront dune along nearly three miles of beach. The installation of sand fence and vegetation allows windblown sand to accumulate and form dunes. The Town's Public Works Department has maintained and repaired the sand fencing when damaged by storms. During 2013, it is estimated that approximately one-half mile of the sand fencing was repaired or replaced following storms.

- **GOAL: Raise roadways above the expected flood levels.**

Action: Encourage the N.C. Department of Transportation to elevate Kitty Hawk Road to Kitty Hawk Landing.

Responsible Person: Town Council, NCDOT
Completion Date: Ongoing
Funding: NCDOT
Prioritization: High

STATUS: As part of the previously referenced studies, the Town of Kitty Hawk has identified this area as a location that is prone to frequent flooding. The Town has also presented the results of the studies to NCDOT and requested NCDOT's assistance in completing identified improvements along W. Kitty Hawk Road, which is a State maintained street. In the fall of 2009, the Town was successful in having this project placed on the regional Traffic Improvement Program (TIP) list. According to NCDOT officials, funding is not currently available for the entire project. In 2012, NCDOT completed paving and road elevation improvements along a short stretch of W. Kitty Hawk Road.

6. PUBLIC INFORMATION

- **GOAL: Inform property owners about hazard mitigation.**

Action: Maintain updated flood map information for citizens and customers.

Responsible Person: Planning Department, N.C. Div. of Emergency Management
Completion Date: Ongoing
Funding: General Fund
Prioritization: High

STATUS: Kitty Hawk has adopted a Public Information Plan that outlines the many ways that the Town provides information to local residents, businesses, and property owners about risks of flooding and other natural hazards, as well as the opportunities to prevent or minimize damage during these situations. This plan is reviewed, updated, and many of its recommendations implemented on an annual basis.

The Planning & Inspections Department maintains a thorough library of current/past flood maps, brochures, and other flood/emergency preparedness resource materials as a public resource. Updated information is provided on the Town's website about flood damage prevention, emergency preparedness, and links to related information. Information about flooding risks, flood damage prevention, and emergency evacuation is also provided on the local public cable channel.

Every year, the Town sends out two (2) outreach project informational brochures (Spring/ Fall) to all property owners about flooding risks and flood damage prevention. The latest of these was mailed in April 2014. The Town also works with local rental realty companies to distribute information to visitors about emergency preparedness and evacuation procedures. In recognition of National Flood Awareness Week, the Town Council adopted a resolution declaring March 16-22, 2014 as Flood Safety Awareness Week in Kitty Hawk.

- **GOAL: Improve communication with other government agencies and the media.**

Action: Initiate outreach projects to inform the public on Town and County initiatives that will reduce hazard related losses of property and life.

Responsible Person: Planning & Inspections Department, Management Assistant
Completion Date: Ongoing
Funding: General Fund
Prioritization: High

STATUS: The Town annually reviews and updates its Public Information Strategy with a committee made up of representatives from local real estate companies, insurance companies, and Town employees. Outreach efforts over the past year have included mailing out two public informational brochures to all property owners, sending letters to owners of repetitive loss properties, adding website information and links, posting information at Town Hall, distributing information by hand to local businesses, and proclaiming a Flood Awareness Week.

Twice annually, the Planning & Inspections Department disseminates a newsletter to property owners with information on the local flood (and other) hazards, flood warning system, storm preparations, flood insurance, various property protection measures, substantial improvements, development work that requires permits, drainage system maintenance, and the purpose and benefits of floodplains. The Eastern Albemarle Regional Library system also maintains information on coastal construction, flood

proofing, retrofitting, and other mitigation measures.

Working in cooperation with Dare County's Emergency Management and Public Information departments, the Town's Management Assistant distributes a variety of safety information through the local media (radio, television, email, websites, newspaper, etc.) in the days leading up to, during, and in the aftermath of significant storms.

Donna Creef <donnac@darenc.com>

FW: 2014 Hazard Mitigation Plan - Agency Input

1 message

Guns, Meredith <MEREDITH@kdhnc.com> Mon, Nov 10, 2014 at 4:02 PM
To: "Donna Creef (donnac@darenc.com)" <donnac@darenc.com>

Donna,

Below is the email we sent out to other agencies and attachments requesting input on the identified hazard and updates to the existing Hazard Plan. The email was sent to: Arron McCall, The Nature Conversancy; Barry Hobbs, PE NCDOT; Jerry Jennings, PE, NCDOT; Frank Jennings, CAMA; Jeff Moore, NC Marine Fisheries; Paul Stephens, National Park Service. Greg spoke with Paul Stephens and Jeff Moore about the information on September 10, 2014.

Thanks

Meredith B. Guns

Assistant Planning Director

PO Box 1719

Kill Devil Hills, NC 27948

Phone: 252-449-5318

Fax: 252-441-4102

From: Guns, Meredith
Sent: Wednesday, September 10, 2014 11:28 AM
To: ajmccall@tnc.org; bhobbs@ncdot.gov; jjennings@ncdot.gov; Frank.jennings@ncdenr.gov
Cc: Loy, Greg
Subject: 2014 Hazard Mitigation Plan - Agency Input

The Town of Kill Devil Hills is participating in a multi-jurisdictional Hazard mitigation Plan called the Albemarle Regional Hazard Mitigation Plan. The plan includes Dare County and our six municipalities and seven other counties in the Albemarle area. FEMA strongly encourages regional plans and the Albemarle plan is be funded through a FEMA Grant. The Albemarle regional plan is be drafted by the consulting firm Wooten and Company.

Hazard Mitigation Plans are required to being updated every five year and Kill Devil Hills last plan was in 2010 (in conjunction with Dare County). FEMA approved Hazard plans are required in order to receive disaster assistance following a federally declared disaster.

The Town of Kill Devil Hills participates in the Community Rating System (CRS) which is a voluntary program to helps the Town lower Flood Insurance cost for our property owners. The Town receives points for CRS based on activities including a Hazard Mitigation Plan. The Town receives credit if a 10 step process is followed in development of the plan. One of the steps is public outreach including requesting input for outside agencies.

Attached is the preliminary list of potential hazards developed by the consultant based on meetings with all participating counties for the plan and a risk assessment for each individual county. Also attached is the Town of Kill Devil Hills portion of the 2010 Dare County Hazard Mitigation Plan.

We are requesting your input on the identified hazards and hope to receive your organizations ideas on an additional hazards by **Friday, October 17th**. Hazards may include natural hazards and manmade hazards.

We really appreciate you time and input

Meredith B. Guns

Assistant Planning Director

PO Box 1719

Kill Devil Hills, NC 27948

Phone: 252-449-5318

Fax: 252-441-4102

3 attachments

AlbemarleHazardsAssessment.docx
16K

Copy of AlbemareHazards.xlsx
12K

KDH Storm HazardPlan update_Oct09.pdf
1316K

Donna Creef <donnac@darenc.com>

Hazard Mitigation Plan - KDH Committee Minutes

1 message

Guns, Meredith <MEREDITH@kdhnc.com> Mon, Nov 10, 2014 at 4:10 PM
To: "Donna Creef (donnac@darenc.com)" <donnac@darenc.com>

Attached is the agenda and minutes of the Planning Board meeting which the Hazard Mitigation Plan was discussed. The Planning Board is serving has the Kill Devil Hills Municipal Hazard Mitigation Plan Committee. They were given the ID Hazards from the Regional Committee and the goals and strategies report for input.

Meredith B. Guns

Assistant Planning Director

PO Box 1719

Kill Devil Hills, NC 27948

Phone: 252-449-5318

Fax: 252-441-4102

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1552K

TOWN OF KILL DEVIL HILLS

Land Where Flight Began

PUBLIC NOTICE

NOTICE IS HEREBY GIVEN that the Town of Kill Devil Hills Planning Board will hold its only meeting of the month on Tuesday, September 16, 2014 at 5:30 p.m. in the Meeting Room of the Administration Building, 102 Town Hall Drive, off Colington Road. The items to be discussed are listed below:

AGENDA

Call to Order
Agenda Approval
Approval of the Minutes of July 15, 2014
Public Comment (Time limit of 3 minutes per person; 5 minutes per group)
Response to Public Comment
Old Business
New Business
1. Election of Chair
2. Appointment to Street Improvement/Special Project Subcommittee
3. 2010 Hazard Mitigation Plan Review and Annual Update

Worksession
1. Floor Area Ratio (FAR) – Continue Discussion regarding FAR regulations in the Ocean Impact Residential Zone

Public Comment (Time limit of 3 minutes per person; 5 minutes per group)
Response to Public Comment
Board Member Comment
Adjournment

All citizens are cordially invited to attend.

Posted this 11th day of September 2014.

Rebecca Dudzinski
Administrative Specialist

Copies to: *Mayor and Board of Commissioners, Planning Board members in their packet materials; TM; all town bulletin boards; Sunshine List, including all news media; Electronic Distribution List; KDH website and Facebook; file*

Minutes of the September 16, 2014 meeting of the Kill Devil Hills Planning Board held at 5:30 p.m. in the Meeting Room of the Administration Building, 102 Town Hall Drive, off Colington Road.

Members Present: Vice Chair Stan Clough, James Almoney, Howard Buchanan, Pris Shea, Ben Sproul, and Eddie Valdivieso

Members Absent: Beverly Boswell

Others Present: Greg Loy, Planning Director; Meredith Guns, Assistant Planning Director Bryan Brightbill, Planner; and Rebecca Dudzinski, Administrative Specialist

Call to Order

Vice Chair Stan Clough brought the meeting to order at 5:30 p.m. noting that all members of the Planning Board were present except for Beverly Boswell. Vice Chair Clough welcomed Pris Shea as the newly appointed member to the Board. Ms. Shea was appointed to the Planning Board by the Board of Commissioners on Monday, September 8, 2014 for a three-year term expiring in September of 2017, filling Howard Kimble's vacant seat (**Clerks Note:** Ms. Shea was administered the oath of office just prior to tonight's meeting).

Agenda Approval

Howard Buchanan made a motion to approve the agenda as presented. Ben Sproul seconded that motion, and the motion carried, 5-0.

Approval of the Minutes of July 15, 2014

Eddie Valdivieso made a motion to approve the minutes of July 15, 2014 as presented. James Almoney seconded that motion, and the motion carried by unanimous vote, 5-0.

Public Comment (Time limit of 3 minutes per person; 5 minutes per group)

Sue Kelly – 211 Sea Village Lane, Ms. Kelly said she came to tonight's meeting as a representative of the Community Appearance Commission (CAC). She asked the Planning Board to consider the last Floor Area Ratio (FAR) discussion, which was a joint worksession between the Planning Board and the CAC. Ms. Kelly felt the issue of FAR might be one of the most potentially significant items to come before the Town. She brought up two counterpoints about lowering FAR as disused in previous CAC meetings, one brought up the need to promote ongoing development, which provides revenue for the Town and the community. The other brought up the need to maintain and preserve the ecosystem, its resources, the look and feel of

the Town, which also provides revenue, as our area's beaches are the biggest draw for this tourist driven industry. CAC Chair Kelly acknowledged that both items are in conflict with one another and thanked the Board for giving this item serious consideration. She felt the specific measurement of FAR is an improvement on the previous means of measurement of Units Per Acre, but would like to see the current measurement of 0.06 lowered to 0.03. The thought behind lowering FAR to 0.30 or 0.35 with exceptions, would still maintain the look of our area's beaches while allowing for sufficiently sized structures along the Ocean Impact Residential Zone (OIR) in Ms. Kelly's opinion.

Response to Public Comment

Old Business

New Business

1. Election of Chair

Assistant Planning Director Meredith Guns explained that with the resignation of former Chair Howard Kimble, the Planning Board has a vacancy in the Chair position that needs to be filled for the unexpired term until December of 2014. The Board discussed the possibility of extending that term length until December of 2015.

Mr. Almoney made a motion to appoint Vice Chair Stan Clough to fill the unexpired term of Planning Board Chair and to extend the term until December of 2015. That motion was seconded by Ms. Shea, and the vote was 5-0.

2. Appointment to Street Improvement/Special Project Subcommittee

Ms. Guns informed the Board that former Chair Howard Kimble was appointed as the Planning Board's representative to the Street Improvement and Special Project Subcommittee and a new representative would need to be appointed. She told the Board that the Subcommittee usually meets before the Planning Board meetings at 4:00 p.m. and the duties of the Street Improvement and Special Project Subcommittee are to make yearly street improvement recommendations, review the Street Improvements Master Plan when it is updated as well as take on any special projects as assigned by the Board of Commissioners.

Mr. Buchanan made a motion to appoint Chair Stan Clough as the Planning Board representative to the Street Improvement and Special Projects Committee, there are no term limits established for the Committee. That motion was seconded by Mr. Valdivieso, and the vote was 5-0.

3. 2010 Hazard Mitigation Plan Review and Annual Update

Ms. Guns presented the 2014 Flood Plain Management/Hazard Mitigation Plan progress

report to the Planning Board and explained that the Town's current Hazard Mitigation Plan is a part of the 2010 Dare County Multijurisdictional Hazard Mitigation Plan. This report identifies the Town's current hazards and action items outlined to mitigate related hazards as well as records the progresses and accomplishments for the year. By presenting this report at an open meeting it keeps the Town in compliance with the National Flood Insurance Program/Community Rating System, which results in lower flood insurance rates for the Town's property owners. Ms. Guns announced Kill Devil Hills as having the largest discounted flood insurance in all of Dare County. She told the Planning Board that no action was required of them and she would be presenting this report to the Board of Commissioners at their next meeting. She asked the Board for their input or any additional points that might need to be added.

Ms. Guns further informed the Board that currently there are seven counties working together to update the 2010 Multijurisdictional Hazard Mitigation Plan. She acknowledged Doug Styons sitting in the audience as a member of the Dare County 510 Hazard Mitigation Committee. The consensus of the Planning Board was to favorably forward the 2014 Progress Report for Floodplain Management/Hazard Mitigation Plan to the Board of Commissioners.

Worksession

1. **Floor Area Ratio (FAR) – Continue Discussion regarding FAR regulations in the Ocean Impact Residential Zone**

Chair Clough noted at the last meeting when FAR was discussed attendance was at minimum with only a quorum and it was desired to obtain more Board member's opinions before making any recommendations to the Board of Commissioners.

Planning Director Greg Loy opened the discussion by showing a PowerPoint presentation containing excerpts from Town's Zoning Ordinance, Land Use Plan and other points to consider (The Floor Area Ratio PowerPoint presentation is attached to these minutes). Mr. Loy paraphrased the OIR zoning ordinance in Chapter 153 Zoning Code, Section §153.095 as being established in an effort to promote health, safety and welfare and to limit the level of peril to the public welfare associate with dwellings and other structures located in that part of the Town that boarders on the Atlantic Ocean and which is subject to tropical storms, storm surges, hurricanes and shoreline migration. He showed a picture taken from Google Earth along NC Highway 12 between First Street and roughly Coral Drive demonstrating how close the ocean came to the structures located in that OIR district. The next item was highlighted from a section of the 1997 Land Use Plan referring to housing densities and building heights being restricted in an effort to discourage the location of high-rise, bulk immovable structures along the immediate shoreline. Ms. Mogowski's request from the July 15, 2014 Planning Board/CAC joint worksession was brought up when Mr. Loy showed the results of the 2007 Kill Devil Hills Land Use Plan Citizen Survey to the Board. The survey results were sent out for an independent study done by the Regional Development Institute of East Carolina University Greenville and what came back was roughly 78% of the citizens disagreed or strongly disagreed with increasing the OIR density.

Director of
Planning and Inspection
GREG LOY

Planner
BRYAN BRIGHTBILL

Enforcement Officer
CARL HUNT

Secretary
NANCY MILLER

THE TOWN OF KILL DEVIL HILLS
NORTH CAROLINA

PLANNING DEPARTMENT

Assistant Director of
Planning and Inspection
MEREDITH GUNS

Zoning Administrator
DONNA ELLIOTT

Chief Building Inspector
MATT LOWCHER

Building Inspector
CHRIS JENKINS

November 18, 2014

Memorandum

To: Planning Board

From: Meredith Guns, Assistant Planning Director MG

Subject: **2014 Albemarle Regional Hazard Mitigation Plan** – Review Kill Devil Hills Critical Facilities, Areas Hazards, Goals and Strategies and Hazard Survey Results.

At the September 2014 Planning Board meeting staff introduced the Albemarle Regional Hazard Mitigation Plan. The Albemarle Regional Hazard Mitigation Plan includes eight counties and their municipalities. Dare County and its municipalities are part of this plan. The Wooten Company has been hired to develop the plan and Town staff has been involved in the regional planning meetings. In addition to the large regional group there is a smaller Dare County Group that is working on hazard issues to specific our area. The Dare County Group includes Town staff and a citizen representative, Doug Styons.

The Planning Board is in the process to specifically address any issues or comments from the Kill Devil Hills that can be forwarded to the larger groups for inclusion in the Regional Plan. In September 2014, the Planning Board reviewed the goals and strategies for hazard mitigation as part of the Community Rating System (CRS) renewal. The report was part of the Town's requirements to receive the community flood insurance discount and stay in good standing with the National Flood Insurance Program (NFIP). Since that time the regional plan has identified hazards for our region and established regional goals and strategies. Staff has updated the Town of Kill Devil Hills goals and strategies for inclusion in the plan.

The Wooten Company also conducted a hazard survey that was electronically distributed throughout all eight counties. The results are attached for your review and comment.

Another part of the plan includes identification of the Town critical facilities. These facilities will be reviewed and revised as necessary.

Analysis of the Town Repetitive Loss Areas is also an important exercise to prevent future damage. A repetitive loss area means that a property or properties within an specific area have made multiple insurance claims within a certain time frame and the NFIP has identified it as a repetitive loss. As part of the Hazard Mitigation Plan staff recommends possible solutions to minimize loss in repetitive loss areas. The north end of Kill Devil Hills has a large area of repetitive loss. The recommendation for repetitive loss on the oceanfront north of Landing Drive is to continue to pursue beach nourishment to increase protection from ocean over wash. Most of the other areas are not as concentrated and staff recommends continuing to send out a letter to the property owners in the repetitive loss areas informing them that they are located in areas that have experienced repetitive damage. The letter informs the owner on how protect the property, minimize loss and possible grant opportunities to protect private property.

Finally, Staff emailed each member a copy of the Town portion of the 2010 Dare County Hazard Mitigation Plan for review and comments. If you have any comments please provide them as soon as possible.

Attached to this memo are several items for review and consideration:

1. Albemarle Regional Hazard Plan – Identified Hazards and Regional Goals
2. Revised Kill Devil Hills Hazard Mitigation Goals and Strategies
3. Albemarle Regional Hazard Mitigation Survey Results
4. 2010 Kill Devil Hills Critical Facilities
5. 2014 Repetitive Loss Area map and outreach letter

Please be prepared to briefly discuss each item and provide input.

Attachment 1

Regional Goals:

1. Evaluate and revise local plans, policies, procedures, regulations and ordinances to further enhance the regions ability to mitigate natural hazards.
2. Maintain and/or improve existing transportation infrastructure to aid in evacuations.
3. Implement a public outreach campaign to increase awareness about the hazards that can impact the region.
4. Pursue mitigation of repetitive flood loss properties.
5. Identify Implement mitigation projects that are cost effective and will help reduce the effects of natural hazards.

Attachment 1

Hazard	Severity	Risk Frequency	Risk Level
[redacted]			
[redacted]			
[redacted]			
[redacted]			
[redacted]			
[redacted]			
[redacted]			
Rip Currents	Minor	High	Moderately-Low Risk
Extreme Heat	Minor	Moderate	Moderately-Low Risk
Coastal Erosion	Minor	Moderate	Moderately-Low Risk
Infectious Disease	Serious	Low	Moderately-Low Risk
Drought	Minor	Low	Low Risk
*Landslide	Minor	Low	Low Risk
*Tsunami	Serious	Very Low	Low Risk
*Earthquake	Minor	Very Low	Low Risk

*** These are hazards that do not have any historical data and assessment is based on worst case scenario.**

SEVERITY CATEGORIES

Catastrophic: Greater than 50% magnitude, Multiple deaths, complete shutdown of critical facilities for more than 30 days, more than 50% of property is severely damaged

Extensive: 25% to 50% magnitude, multiple severe injuries, complete shutdown of critical facilities for more than 14 days

Serious: 10% to 25% magnitude, some injuries, complete shutdown of critical facilities for more than 7days, 10% of property is severely damaged

Minor: Less than 10% magnitude, minor injuries, shutdown of critical facilities for less than 24 hours, less than 10% of property is severely damaged. Near 100% probability in the next year.

Risk Frequency

High Frequency:	
Moderate Frequency:	Between 10% and 100% probability in the next year
Low Frequency:	Between 1% and 10% probability in the next year
Very Low Frequency:	Less than 1% probability in the next year

Hazards

THE WOOTEN COMPANY

	Camden	Chowan	Currituck	Dare				
Hurricanes	x	x	x	x	x	x	x	x
Floods	x	x	x	x	x	x	x	x
Tornados	x	x	x	x	x	x	x	x
Winter Storms	x	x	x	x	x	x	x	x
Severe Thunderstorm	x	x	x	x	x	x	x	x
Wildfires	x	x	x	x	x	x	x	x
Erosion		x	x	x	x	x		x
Nor'easters		x	x	x	x			x
Drought/Heat Wave		x	x	x	x	x		x
Severe Winter Storms		x	x	x	x			x
Volcanos		x		x		x		x
Earthquakes		x	x	x	x	x		x
Storm Surge		x	x	x				
Landslides/Sinkholes		x	x	x	x	x		x
Dam/Levee Failure		x		x	x		x	x
Tsunamis		x	x	x	x	x		x
Rip Currents			x	x				
Terrorism				x			x	
Pandemic			x	x				
Transportation				x				
Haz Mat Incidents				x			x	
Nuclear Incidents							x	
Groundwater contamination				x			x	
Infectious disease			x					

Attachment 1

Kill Devil Hills Hazard Mitigation Action Plan						
Identified Hazards: Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire, Earthquake, Land Slide, Tornado, Tsunami, Rip Currents, Drought, Bridge Collapse, Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Security Attack, Pandemic Event, Public Health Event						
Goals	**Actions**	**Hazard**	**Funding Sources**	**Responsibility**	**Target Completion Date**	**Priority**
Preventive Goals: 1. Reduce damages to existing and future development. 2. Assist in maintaining a stable tax base by providing for sound use of land which may be located in storm hazard areas. 3. Continue to monitor changes in building codes and materials and research construction techniques that can mitigate storm damage.						
Planning and Zoning – Continue to enforce the zoning ordinance and amend when necessary	Ordinances were enforced and amended.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Planning Dept., Board of Commissioners, Building Inspect.	Ongoing enforcement of current zoning regulations. Amend as necessary.	High
Floodplain Regulations – Provide technical assistance to customers/citizens and continue to enforce current flood hazard ordinance.	Customers were provided technical assistance and flood damage prevention ordinance was enforced. Difficult construction below BFE violations were corrected and others in process.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Planning Dept., Building Inspector, Board of Commissioners	Ongoing enforcement of current flood damage prevention ordinance. Amend ordinance as necessary. Prepare for new flood maps and regulations in 2015.	High
Open Space Preservation – Support efforts to preserve natural areas.	The Town took no action other than to maintain ownership of its natural areas.	Flooding, Hurricanes, Tropical Storms, Nor'easters	N/A	Planning Dept.	Ongoing effort to maintain current Town owned open space areas.	High
Stormwater Management – Continue to implement the stormwater management plan.	The Stormwater Management Plan Update August 8, 2011. Concepts were implemented through site plan review. Drainage projects implemented through Streets Division.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Planning Dept., Public Services	Ongoing enforcement of local and state stormwater regulations. Amend as necessary. Continue projects with available funding.	Medium (Environmentally sound and technically feasible.)
Drainage System Maintenance – Continue mowing drainage ditches and conduct normal maintenance and storm event driven maintenance.	Ditch maintenance was accomplished as scheduled throughout the year as well as prior to and after storm events.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Public Services, NCDOT	Ongoing regular maintenance cycles as outlined by the Public Services Department. Follow state regulations.	High

Goals	Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Building Code – Monitor changes to the State Building Code and modify local regulations as necessary to minimize damage.	Inspectors accomplished annual training and enforced revisions to building codes which became effective in 2012.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Planning Dept., Building Inspector	Ongoing monitoring of NCBC. Occasionally modify local ordinances to reflect NCBC changes. Inspectors completed continuing education.	High
Property Protection Goals: 1. Minimize losses associated with storm events to individual properties and provide a framework for storm event reconstruction						
Relocation – Expedite permitting for the relocation of repetitive loss situations.	No repetitive loss relocation opportunities were presented.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Planning Dept.	Ongoing as updated repetitive loss information is provided to the Town. Provided information on possible grant opportunities to the public.	Low
Acquisition – Encourage repetitive loss properties to consider acquisition as a possible solution.	The Town took no action other than outreach efforts.	Flooding, Hurricanes, Tropical Storms, Nor'easters	NC Division of Emergency Management, FEMA	Planning Director, Board of Commissioners	Ongoing outreach efforts as a result of repetitive loss mailings and CRS participation.	Low (Environmentally sound and technically feasible.)
Building Elevation – Continue enforcing the base flood elevation requirement of the Town's Flood Damage Prevention Ordinance.	The Town continued to enforce FDPO requiring documentation for new construction and additions to existing structures.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Asst. Planning Director, Building Inspector	Ongoing enforcement of the FDPO. Amend as necessary.	High
Insurance – Maintain outreach efforts and continue making flood insurance available to the Town's residents.	The Town continued its outreach efforts to educate citizens about flooding, flood insurance and the Biggert-Waters Insurance Reform Act of 2012 and Grimm Waters Act of 2014.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Planning Dept., Town Clerk	Ongoing efforts to inform residents and property owners through various outreach projects as part of CRS.	High
Dune and Beach Maintenance – Continue ongoing beach nourishment efforts.	The Town contracted an engineering consultant to provide engineering support and permitting services and offshore sand search for beach renourishment.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Planning Director, Board of Commissioners	Ongoing in an effort to start beach nourishment in the spring of 2016.	High
Natural Resource Protection Goals: 1. Preserve and restore natural areas while maintaining the function of the floodplain.						

Goals	Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Wetlands Protection – Continue to utilize the zoning ordinance and the Land Use Plan to protect wetlands, implement and enforce CAMA AEC regulations and refer applicants to US Amry Corps of Engineers for Section 404 wetlands.	The Town continued implementation of the zoning ordinance and Land Use Plan to protect wetland areas and CAMA buffer enforced applicable regulations and refered applicants to other agencies for specific needs.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	US Army Corps of Engineers, Planning Dept., NCDENR	Ongoing enforcement of zoning ordinance and CAMA buffer regulations.	High
Coastal Barrier Protection – Continue to support coastal barrier protection efforts by the State.	The Town continued to support the State's coastal barrier protection by educating public on these efforts.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	N/A	CAMA, Planning Dept.	Ongoing efforts to inform residents and property owners of coastal barrier protection efforts.	High
Erosion and Sediment Control – Continue to enforce local and state regulations.	The Town continued to participate and enforce Erosion and Sediment Control Ordinance through plan approvals, site inspections and reporting to the State.	Flooding, Coastal Erosion	General Fund	Planning Dept.	Ongoing enforcement of E&S ordinance. Staff completed annual recertification for local program.	High
Areas of Environmental Concern (AECs) – Support local CAMA officer with compliance efforts within the AECs.	The Town continued to participate, remain active, train and implement the CAMA Local Permit Officer Program.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	CAMA LPO	Ongoing enforcement of CAMA regulations. Staff completed annual CAMA LPO recertification.	High
Surface Water Quality – Preserve surface water quality and enhance water quality through stormwater management and zoning.	The Stormwater Management Plan Update was implemented through site plan review (zoning). The update has a greater focus on water quality and includes strategies to preserve and enhance water quality.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Planning Dept., Public Services	Ongoing enforcement of local and state stormwater regulations. Amend as necessary.	Medium (environmentally sound and technically feasible)
Maritime Forest Environmental Zoning District – Continue to enforce the Maritime Forest Environmental Zoning District.	The Town continued to enforce the Maritime Forest Environmental District Ordinance (Zoning) to preserve the Town's maritime forest.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Wildfire	General Fund	Planning Dept.	Ongoing enforcement of MFED zoning regulations. Amend as necessary.	High

Goals	Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Emergency Services Goals: 1. Facilitate a safe and efficient evacuation and, where possible, reduce damage 2. Promote rebuilding and reconstruction in a prompt and orderly manner 3. Minimize prolonged business interruption, especially involving businesses providing critical supplies and services 4. Restore the community by minimizing difficulties in continuation of essential public and private services						
Flood Warning – Facilitate evacuation	The Town continued to coordinate and participate with the Dare County Control Group in event of evacuation.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Dare County Control Group	Ongoing coordination with Dare County.	High
Flood Response – Coordinate efforts to expedite reconstruction and rebuilding efforts in cooperation with Dare County Emergency Management staff.	The Town continued to coordinate and participate with the Dare County Emergency Management staff and Town staff.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms,	General Fund	Planning Dept.	Ongoing coordination with Dare County Emergency Management.	High
Flood Recovery – Coordinate efforts to expedite recovery.	The Town continued to coordinate efforts within its organization and with local, state and federal agencies.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms	General Fund	Planning Dept., Board of Commissioners	Ongoing coordination with local, state and federal agencies.	High
Critical Facilities Protection – Take appropriate actions to prevent and/or minimize damages to critical facilities. Use generators or other forms of redundant power to ensure that critical facilities and infrastructure remain operational.	The Town continued to train for preparedness, response and recovery and to protect critical facilities by utilizing shutters on windows of Town buildings. Accomplished scheduled maintenance of Town drainage ditches. Continue to maintain existing redundant power supply equipment.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	General Fund	Police, Fire & Rescue, Public Works, NC Dominion Power	Ongoing general maintenance and preparedness of Town facilities.	High
Transportation - Work with NCDOT Strategic Office of Planning to enhance and construct infrastructure for evacuation.	Atteended Albemarle Rural Planning Organization's (RPO) meetings to provide input to NCDOT representatives on importance and necessity of enhancements of evacuation routes.	Hurricanes, Tropical Storms	General Fund	Planning Dept.	Ongoing attendance at quarterly meetings of the Rural Planning Organization.	High
Fire Protection - Implement Water Systems Master Plan.	The Town has continued to implement parts of the plan with each year of capital projects.	Fire, Wildfires	Water Fund	Public Services, Water Department	Ongoing based on annual Town capital improvements funding.	High

Goals	Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Health and Safety Maintenance – Develop ongoing protocols to assure the maintenance of critical public services.	Town Departments were exercised and trained for preparedness, response and recovery.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire, Pandemic Event, Public Health Event, Cyber Security Attack, Active Shooter/Mass Casualties, Terrorism Transportation Infrastructure Impacts	General Fund	Police, Fire & Rescue, Public Works, Dare County Emergency Management	Ongoing training and	Medium (environmentally sound and technically feasible)
Structural Projects Goals: 1. Implement flood control measures to protect people and property and assure continuation of essential public services.						
Reservoirs 1. Continue protection efforts concerning the Fresh Pond. 2. Maintain liaison with NC Division of Coastal Management concerning the development of the Kill Devil Hills Land Use Plan.	The Town continued to support Fresh Pond AEC although it is no longer used as a potable water source. The Town continued progress on update of its comprehensive Land Use Plan for review and approval by the Coastal Resources Commission.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Winter Storms	General Fund	Planning Dept., CAMA	Ongoing protection of AEC. Staff completed annual CAMA LPO recertification.	High
Stormwater Management – Continue to implement the stormwater management plan.	The Stormwater Management Plan Update August 8, 2011. Concepts were implemented through site plan review.	Flooding	General Fund	Public Services	Ongoing enforcement of stormwater regulations. Amend as necessary.	Medium (environmentally sound and technically feasible)
Beach Nourishment – Encourage beach nourishment as a storm protection measure and search for funding.	The Town contracted an engineering consultant to provide engineering support and permitting services and offshore sand search for beach renourishment.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	Town of Kill Devil Hills and Dare County	Board of Commissioners, Dare County Commissioners	Ongoing in an effort to start beach nourishment in the spring of 2016.	High
Public Information Goals: 1. Inform and advise property owners and visitors about potential damage from flooding. 2. Use the Town's website to disseminate hazard mitigation information Use the Town's website to disseminate hazard mitigation information.						
Map Information – Maintain updated flood map information for citizens and customers.	The Town continued to maintain updated flood maps and provided information to citizens through public outreach and customers.	Flooding, Hurricanes, Tropical Storms, Nor'easters	NC Division of Emergency Management	NC Division of Emergency Management, Planning Dept	Ongoing effort to educate citizens and customers about flood maps and inform them of upcoming changes.	High

Goals	Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Library – Compile and maintain current information in the Kill Devil Hills Floodplain Management Library.	The Town continued to maintain current information in the Floodplain Management Library. The Town began scanning old documents to maintain and enhance digital archives.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	CRS Coordinator	Ongoing effort to keep library materials up to date for CRS participation.	Medium (cost-effective and technically feasible)
Technical Assistance – Continue to utilize technical assistance from state and federal agencies and private consultants to provide appropriate technical assistance to citizens and customers.	The Town continued to utilize outside resources to provide high level of service to its citizens.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	N/A	Building Inspector, Planning Dept.	Ongoing cooperation with outside resources to provide the most accurate information possible.	High
Outreach Projects 1. Initiate outreach projects to inform the public on Town and County initiatives that will reduce hazard related losses of property and life.	The Town continued annual outreach projects though joint mailings, public library and Town website.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire, Earthquake, Land Slide, Tornado, Tsunami, Rip Currents, Drought, Bridge Collapse, Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Security Attack, Pandemic Event, Public Health Event	General Fund	Planning Dept., Dare County Emergency Management	Ongoing effort to produce and implement as many outreach projects as possible in regards to all types of hazards.	Varies
2. Work with print, radio, and television media to effectuate outreach efforts in cooperation with Dare County and neighboring municipalities to educate the public on additional hazards identified in the risk assessment.	The Town provided printed information and continues to air a hurricane awareness video for television and provided web site updates for its citizenry.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire, Earthquake, Land Slide, Tornado, Tsunami, Rip Currents, Drought, Bridge Collapse, Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Security Attack, Pandemic Event, Public Health Event	General Fund	Planning Dept., Dare County Emergency Management	Ongoing effort to produce and implement as many outreach projects as possible in regards to all types of hazards.	Varies

Goals	Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
3. Develop updated floodplain map for public dissemination.	The Town continued to prepare for the release of updated flood maps by informing the public of the pending changes.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	General Fund	Planning Dept.	Ongoing effort to educate the public of upcoming changes to the regulatory flood maps.	Medium
4. Continue to participate in CRS	The Town completed its annual CRS recertification to promote floodplain awareness.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	General Fund	Planning Dept.	Ongoing effort to document CRS efforts for annual recertification.	High
5. Circulate brochure specifically on NFIP.	Completed as part of annual CRS recertification.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	General Fund	Planning Dept.	Ongoing effort to document CRS efforts for annual recertification.	Medium
6. Conduct contractor's meeting.	The Town hosted an annual contractors meeting as a refresher to local developers and industry professionals on floodplain regulations and required documentation.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	General Fund	Planning Dept.	Ongoing effort to document CRS efforts for annual recertification.	Medium

Albemarle Regional Hazard Mitigation Plan
Survey Results

October 22, 2014

Powered by SurveyMonkey

Albemarle Regional Hazard Mitigation Plan Public Participation Survey

May to September 2014

484 Total Response

Powered by SurveyMonkey

Q1: Which County do you live in?

Answered: 471 Skipped: 13

Answer Choices	Responses	
Camden County	2.34%	11
Chowan County	5.31%	25
Currituck County	13.16%	62
Dare County	40.76%	192
Gates County	18.68%	88
Hertford County	1.91%	9
Pasquotank County	10.19%	48
Perquimans County	7.64%	36
Total		**471**

Q2: Do you live in one of the towns listed below? If so, please select your town.

Answered: 309 Skipped: 175

Answer Choices	Responses	
I live in the County, not in a town/city	0.32%	1
Ahoskie	1.29%	4
Cofield	0.65%	2
Como	0.32%	1
Duck	11.33%	35
Edenton	6.15%	19
Elizabeth City	14.56%	45
Harrellsville	0.32%	1
Hertford	6.47%	20
Gatesville	9.39%	29
Kill Devil Hills	16.50%	51
Kitty Hawk	2.59%	8
Manteo	4.21%	13
Murfreesboro	0.97%	3
Nags Head	9.39%	29
Southern Shores	17.80%	55
Winfall	1.62%	5
Winton	1.29%	4
Total Respondents: 309		

Q3: How concerned are you about the possibility of your community being impacted by a disaster?

Answered: 483 Skipped: 1

Answer Choices	Responses	
Extremely concerned	42.44%	205
Somewhat concerned	51.97%	251
Not Concerned	5.59%	27
Total		**483**

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Q4: Of these Natural Hazards, which one do you think is the highest threat to your community?

Answered: 480 Skipped: 4

Answer Choices	Responses	
Dam/Levee Failure	0.00%	0
Drought	0.21%	1
Earthquake	0.00%	0
Erosion	1.25%	6
Extreme Heat	0.21%	1
Flood	8.75%	42
Hail	0.00%	0
Hazardous Materials Incident	0.21%	1
Hurricane/Tropical Storm	63.75%	306
Nor'easters	10.42%	50
Land Subsidence/Sink Hole	0.00%	0
Landslide	0.00%	0
Lightning	0.42%	2
Severe Winter Storm/Freeze	0.83%	4
Severe Thunderstorms/High Wind	6.88%	33
Tornado	6.88%	33
Wildfire	0.21%	1
Total		**480**

Q5: Of these Natural Hazards, which one do you think is the second-highest threat to your community?.

Answered: 479 Skipped: 5

Answer Choices	Responses	
Dam/Levee Failure	0.00%	0
Drought	1.04%	5
Earthquake	0.21%	1
Erosion	3.76%	18
Extreme Heat	0.84%	4
Flood	21.92%	105
Hail	0.21%	1
Hazardous Materials Incident	1.46%	7
Hurricane/Tropical Storm	25.05%	120
Land Subsidence/Sink Hole	0.00%	0
Landslide	0.00%	0
Lightning	1.88%	9
Sever Winter Storm/Freeze	5.85%	28
Severe Thunderstorms/High Wind	21.92%	105
Tornado	15.03%	72
Wildfire	0.84%	4
Total		**479**

Q6: Is there another hazard not listed that you think is a threat to your community?

Answered: 422 Skipped: 62

Answer Choices	Responses	
Yes	22.51%	95
No	77.49%	327
Total		**422**

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Q7: Have you ever experienced or been impacted by a disaster?

Answered: 476 Skipped: 8

Answer Choices	Responses	
Yes	69.12%	329
No	31.09%	148
Total Respondents: 476		

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Q8: Do you have flood insurance for your home/personal property?

Answered: 480 Skipped: 4

Answer Choices	Responses	
Yes	48.54%	233
No	48.33%	232
I don't know	3.13%	15
Total		**480**

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Q9: If you answered No to question 8, why don't you have flood insurance?

Answered: 253 Skipped: 231

Answer Choices	Responses	
I am a renter	11.07%	28
My home is not located in the floodplain	58.89%	149
Flood Insurance is to expensive	5.93%	15
I don't need it beacuse it never floods	1.19%	3
I don't need it because my home is elevated or otherwise protected	7.91%	20
I never really considered getting flood insurance	5.14%	13
Other (please specify)	9.88%	25
Total		**253**

Q10: Have you taken any actions to make your home, community or family safer from natural hazards?

Answered: 471 Skipped: 13

Answer Choices	Responses	
Yes	59.24%	279
No	40.76%	192
Total		**471**

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Q11: Are you interested in taking a proactive approach to protecting your home, community or family from the impacts of natural hazards?

Answered: 475 Skipped: 9

Answer Choices	Responses	
Yes	90.95%	432
No	9.05%	43
Total		**475**

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Q12: Do you know who to contact in your jurisdiction for information regarding the risk from hazards in your area?

Answered: 478 Skipped: 6

Answer Choices	Responses	
Yes	57.53%	275
No	42.47%	203
Total		**478**

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Q13: Which do you feel is the most effective way for you to receive information on how to protect your home, community or family from natural hazards?

Answered: 477 Skipped: 7

Answer Choices	Responses	
Newspaper	4.19%	20
Television	16.14%	77
Radio	4.40%	21
Internet	21.38%	102
Email	28.51%	136
Postal Mail	11.53%	55
Public workshops/meetings	8.39%	40
School meetings	0.21%	1
Other	5.24%	25
Total		**477**

Q16: These activities can be classified under six broad categories including Prevention, Property Protection, Natural Resource Protection, Structural Projects, Emergency Services and Public Education and Awareness. a few moments to let us know how important you feel each category is for your community.

Answered: 478 Skipped: 6

	Extremely Important	Somewhat Important	Not Important	Total	Average Rating
Prevention	77.89%	20.21%	1.89%		
	370	96	9	475	2.76
Property Protection	68.71%	29.60%	1.69%		
	325	140	8	473	2.67
Natural Resources Protection	66.88%	30.36%	2.76%		
	315	143	13	471	2.64
Structural Projects	57.66%	34.26%	8.09%		
	271	161	38	470	2.50
Emergency Services	89.03%	10.76%	0.21%		
	422	51	1	474	2.89
Public Education and Awareness	84.14%	14.38%	1.48%		
	398	68	7	473	2.83

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Attachment 4

Identification of Critical Facilities

Kill Devil Hills has identified properties in town deemed "critical facilities." By their very definition, "critical facilities" are essential to the health, safety, and viability of a community. These are the buildings, services, and utilities without which residents and businesses cannot survive for long.

Critical facilities include those facilities that are necessary in the daily operation of a community and those that might be hazardous to a community. Certain critical facilities are vital to the response and recovery efforts in the wake of a disaster and others will be critical for long-term recovery operations, resulting from a natural or technological hazard. Identification of critical facilities will make it possible to predict the consequences of disaster, and to expedite the response of necessary resources from outside the area of impact.

These include fire and rescue facilities, schools, Health/Medical Facilities, major thoroughfares and communication facilities.

- Administration Building on Town Hall Drive
- Baum Center
- Embarq Telephone Substation
- Desalination Water Plant
- Emergency Operations Center
- First Flight Airport
- First Flight Schools
- Fire Station
- Dominion Power Substation
- Kill Devil Hills Wastewater Treatment Plant (private)
- Public Works Services Building
- Water Administration

Many of these critical facilities are located in flood hazard areas. However, elevation and other construction techniques have been used to make them more resilient to flooding. Considering that much of Kill Devil Hills' jurisdiction is located in a mapped flood zone or potential storm inundation area, it would be impractical at this time to re-locate these critical facilities to areas outside of mapped flood areas.

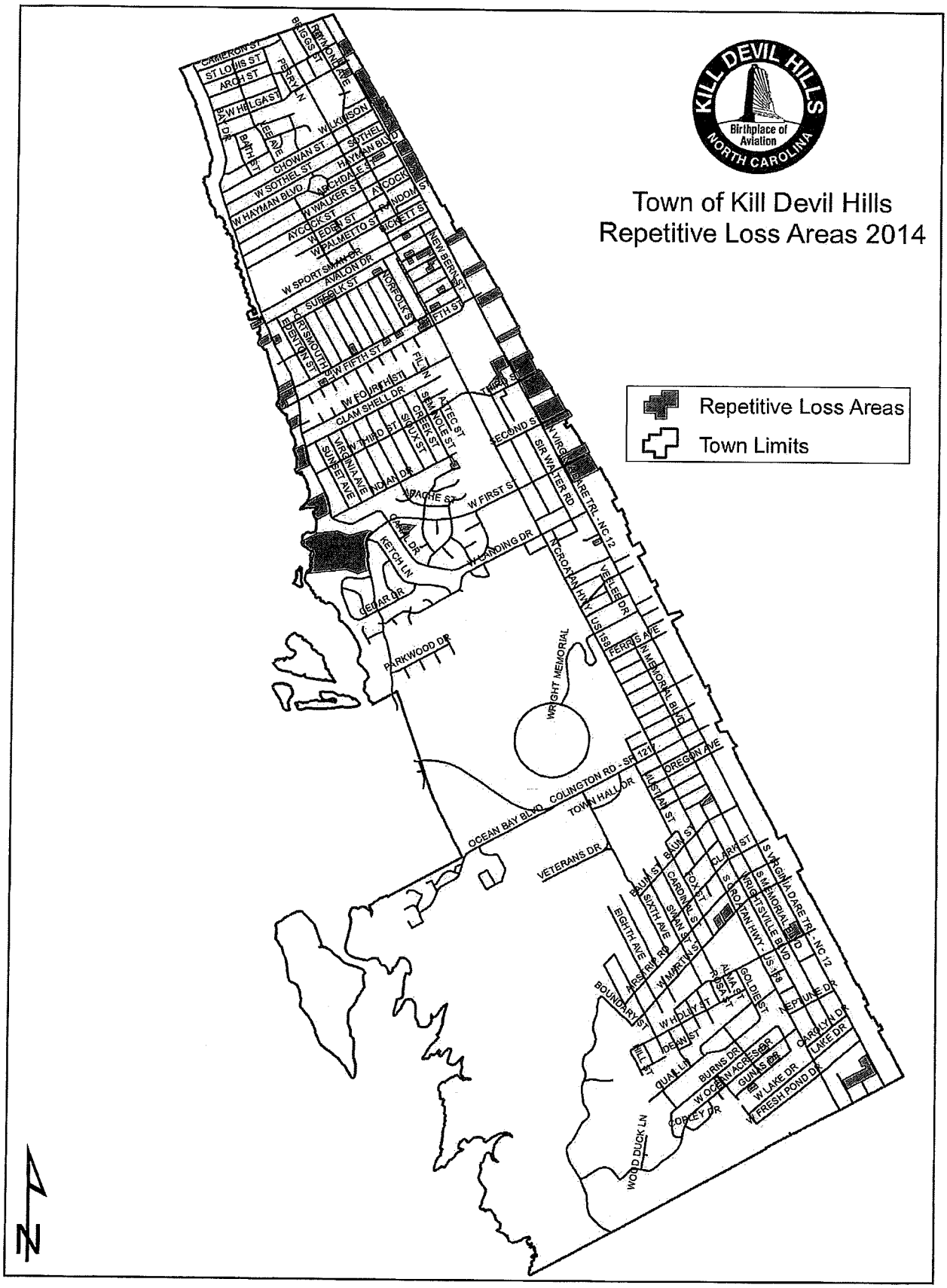
Wetlands and Sensitive Areas

Kill Devil Hills, because of its coastal location, is home to a notable percentage of sensitive areas. Along with wetlands, Kill Devil Hills has Areas of Environmental Concern (AECs), as defined by the Coastal Area Management Act (CAMA). The designation of AECs is to protect the State's valuable natural resources. Seven types of AECs in three categories are found in Kill Devil Hills (*Kill Devil Hills 1997 Land Use Plan Update*). These are:

<u>Estuarine System AECs</u>

- Estuarine waters

Attachment 4



Map Created By: Kill Devil Hills Planning Department
October 2014

Subject: **Repetitive Loss Area Outreach Project**

Dear Property Owners:

Every year the hurricane season brings attention to the damage caused by hurricanes under the spotlight of national media attention. It is important that property owners on the Outer Banks take steps to prepare for these natural disasters. So please take time to review this annual outreach project and examine opportunities to protect your property and yourself.

According to the National Flood Insurance Program (NFIP) Community Rating System, your property has been listed in a Repetitive Loss Area or is in or near an area subject to flooding. Please review the attached map for these Repetitive Loss Areas. The Dare County tax parcel data was used to determine mailing address and contact information for this project. A Repetitive Loss Property is a property for which two or more claims of at least $1,000 have been paid by the NFIP within any 10-year period since 1978.

The dominant source of flooding in Kill Devil Hills is rainfall and storm surges generated in the Atlantic Ocean by tropical storms, nor'easters and hurricanes. In addition, this surge can be found in the Albemarle Sound, Buzzards Bay, Colington Creek and Kitty Hawk Bay where high winds can produce intense wave action as we learned during Hurricane Irene in 2011. Historically, storm surge in Kill Devil Hills has produced severe floods as well as structural damage.

The Town of Kill Devil Hills would like to inform you of several ways you can protect your property from flooding and repetitive loss. There are ways this cycle of repetitive flooding can be broken. Throughout the country, numerous examples can be found to illustrate practical and cost-effective methods for reducing or eliminating the risk of a house being flooded again. Or, in cases where flooding may be unavoidable, steps are taken to reduce the amount of damages incurred.

Appropriate property protection measures may include temporary measures such as moving furniture and equipment to higher elevations if an impending storm is approaching or you are vacating your home for an extended period of time.

More permanent approaches have also been used. The Federal Insurance Administration has published a manual that describes various techniques that can be used to flood proof an existing building. This process is also known as "retrofitting."

The *Homeowner's Guide To Retrofitting - Six Ways To Protect Your House From Flooding* (FEMA publication 312) presents a series of retrofitting measures that can be incorporated into an existing house to reduce or eliminate the potential of future flooding. These measures include:

- Elevation of a structure
- Relocation of a structure
- Wet Floodproofing
- Dry Floodproofing
- Levees and Floodwalls
- Demolition

FEMA publication 312 can be ordered by calling the Federal Emergency Management Agency at 1-800-480-2520. A limited number of these publications are also available in the Planning and Inspections Department located at 102 Town Hall Drive.

Homeowner's insurance policies will not cover losses due to flooding thus making the purchase of flood insurance very important for people living in the coastal environment. Kill Devil Hills participates in the National Flood Insurance Program, which makes flood insurance available to everyone within the Town of Kill Devil Hills. For many people, their home and its contents represent their greatest investment. We strongly urge you to consider buying flood insurance to protect yourself from devastating losses due to flooding. There is a 30-day waiting period (Section 579) before flood insurance policies can become effective. This began on March 1, 1995. Information about flood insurance can be obtained from your insurance agent. You do not have to live in the floodplain to qualify for flood insurance. Property owners can insure their buildings and contents and renters can insure their possessions. Just because your house has not flooded in the recent past does not mean that you are safe.

If you are interested in elevating your building above the flood level, you may apply for a FEMA grant. Most FEMA grants provide 75% of the cost of the project. The owner is expected to fund the other 25%. Each grant program has a different Congressional authorization and slightly different rules. The Small Business Administration offers low-interest loans that can fund repairs and mitigation project after a disaster declaration.

Please feel free to call the Kill Devil Hills Planning Department at (252) 449-5318 if you have questions or need more information regarding flood zones, flooding, retrofitting, repetitive loss or financial assistance. Old Elevation Certificates are also available at the Planning Department. In addition, the Town of Kill Devil Hills' website can be found at www.kdhnc.com and contains information and links to related sites.

Regards,

Meredith B. Guns

Meredith B. Guns, Assistant Planning Director

c: Mandy Todd, ISO/CRS Specialist

Dare County 510 Planning Committee

June 30, 2015

Room 238 Dare County Administrative Building
Manteo, NC

2:00 p.m. Call to Order

1. Approval of November 19, 2014 Summary
2. Report from Dare County on Albemarle Regional Hazard Mitigation Plan
3. Report from Towns
4. Closing Remarks

ALBEMARLE REGIONAL HAZARD MITIGATION
PLAN DARE COUNTY 510 PLANNING
COMMITTEE MEETING June 30, 2015

DARE COUNTY:	Donna Creef, Glen Rainey, Bonnie Rowe, Drew Pearson
DUCK:	Mark Murray,
KILL DEVIL HILLS:	Meredith Guns, Doug Styons,
KITTY HAWK:	Donna Hefferon
MANTEO:	Erin Burke
NAGS HEAD:	Holly White
SOUTHERN SHORES:	Wes Haskett, Dabni Shelton

Donna Creef opened the meeting at 2:10 p.m. and welcomed everyone. She indicated that the first item of business was the approval of the summary of the November 19, 2014 meeting. Drew Pearson made a motion to accept the summary as presented, seconded by Meredith Guns. The vote was unanimous.

Creef then briefed the committee on the status of the Albemarle regional hazard mitigation plan and what had occurred since the group last met in November 2014. WOOTEN submitted to the plan to State in early March. There were some revisions to the actin matrix for Dare County and Kill Devil Hills requested by the WOOTEN and the State. The plan was then submitted to FEMA in late March with FEMA granting approval in early May. Dare County was notified of the approval on May 11. The Dare County Board of Commissioners approved the plan at their June 1 meeting. The approval of the ARHMP was important since the approval for Dare's 2010 multi-jurisdiction plan expired May 23, 2015.

Creef inquired as to the status of approval by each of the towns. All town representatives reported adoption of the plan by their respective elected officials except Kitty Hawk. Hefferon indicated the Kitty Hawk board was scheduled to adopt the plan on July 7, 2015. Haskett indicated that he had recently spoke to Mandy Todd, the CRS representative that reviews our local plans and she indicated Dare and the towns had scored well on the Section 600 flood response activities.

Creef then explained to the committee recent developments related to the CRS scoring of the ARHMP. The ARHMP did not include some information that was submitted by Currituck County and there is some concern among the local planners that additional information is also needed from Dare County and the towns to ensure CRS credit for the ARHMP. The goals and action strategy matrices submitted by Dare County and the towns to WOOTEN were modified in the ARHMP and may not include enough information for CRS scoring purposes. Creef spoke to Sherry Harper, the CRS reviewer of flood management plans, on June 15 and Creef hopes to have some comments from Ms. Harper soon.

There was a general discussion about what information would be need to be submitted and how this would impact the FEMA approval as a hazard mitigation plan. White questioned the need for local boards to re-adopt any changes. Pearson said he did not see the need for such action since the ARHMP is intended to be living document used by local governments with amendments made to the action strategies each year as items are completed. Pearson said he would follow up with the State officials in Emergency Management to determine what constitutes substantial changes and the exact process to be followed. Burke agreed with Pearson and felt the supplemental Dare County information should be adequate for CRS purposes since the entire plan was already approved as a hazard mitigation plan by FEMA. Language can be included in the supplement to acknowledge the use of the information for CRS scoring. The representatives from Kill Devil Hills and Nags Head questioned if all of the changes should be routed through one local government. Creef and Pearson agreed to serve as the coordinator of submission to the State/WOOTEN and as the coordinator for the submission of information to CRS. Guns expressed concern about the lack of information included in the plan by WOOTEN although it had been submitted in a timely fashion as requested by WOOTEN.

Creef asked the towns to review their action matrices and to provide information on insurance coverage for town-owned facilities. Section 510 of the CRS manual indicates insurance coverage for community facilities should be discussed but there is no discussion in the ARHMP. Such information can be added to the Dare County supplement to insure CRS scoring for this information.

The group agreed to forward all local changes to Creef by July 15. She will compile all of the changes into one document and will also prepare a revised 510 worksheet for CRS review. Guns suggested the committee meet again to review everything before it was submitted. The committee scheduled another meeting for July 23 at 10:00 a.m. to review all revisions and endorse the revisions that will be forwarded for additional consideration. Confirmation of this date and meeting room location will be emailed to committee members.

There being no other business, the meeting ended at 3:20 p.m.

Donna Creef

Donna Creef, CFM
Dare County

7-23-2015

Date

Dare County 510 Planning Committee

July 23, 2015

Room 238 Dare County Administrative Building
Manteo, NC

10:00 a.m. Call to Order

1. Approval of June 30 2015 Summary
2. Submission of Information – WOOTEN -NCDEM
3. Review of 510 Worksheet
4. Closing Remarks

LIST OF CORRECTIONS TO ARHMP – DATED MARCH 3, 2015

1. The Appendix A maps for Dare County and its towns do not indicate the location of any VE zones. The table in Section 5, page 5 lists 126, 630 acres of VE zone designated areas but this is not carried forward and illustrated in Appendix A.
2. Section 5 page 19 and 20, critical facilities list -- the Southern Shores Substation and the Southern Shores Fire Department are both listed in Kitty Hawk – this should be changed to Southern Shores. The Fire Department is listed twice – once on page 19 and again on page 20. Also, Kitty Hawk Elementary is in Southern Shores, not Kitty Hawk as currently noted.
3. Section 5, pages 18-20, some of the critical facilities for the Town of Nags Head are not included on the lists. Please add the following:
    a. Water Processing Facility
    b. Eighth Street Pump Station
    c. Britthaven Nursing Home
    d. Outer Banks Medical Center
    e. Villas Package Plant
    f. Fire Station #20
    g. Outer Banks Hospital
    h. Fire Station #16
    i. Village Central Sewage
    j. Nags Head Municipal Complex/Police Station
    k. Power Transmission Facility
    l. Gull Street Pump Station
    m. Water Tower S. Nags Head
    n. Public Works Facilities
4. The Town of Kill Devil Hills is requesting the information in Secion 6, page 14 about Kill Devil Hills be replaced with the following language – "*The Town of Kill Devil Hills actively participates, enforces and addresses many items which support hazard resiliency and mitigation. The Town participates in the Community Rating System (CRS) which provides flood insurance premium discounts to all property owners located in the floodplain. The Town has also adopted and amended a Flood Damage Prevention Ordinance (FDPO) to include a one foot freeboard, a higher regulatory standard than what is required by the National Flood Insurance Program. In addition to the FDPO, the Town has also adopted a stormwater management ordinance for commercial sites which requires onsite retention of a ten year, two hour storm. The Town also participates in enforcing the Coastal Area Management Act (CAMA) by having three Local Permit Officer's (LPOs) on staff to regulate development along the ocean and estuarine shorelines. Two of the Town's LPOs are also Certified*

Floodplain Managers (CFMs) accredited by the North Carolina Association of State Floodplain Managers."

5. The Town of Kill Devil Hills has asked that the mitigation strategies table (Table 7.2.7) found in section 7 pages 44-46 be replaced with KDH Attachment-1
6. The Town of Nags Head has asked that mitigation strategies table (Table 7.2.9), Section 7 pages 49-63 be replaced with NH Attachment-1
7. Section 8 page 2 add the following information –"*Dare County and its six municipalities will complete annual updates of their respective mitigation goals and implementation strategies as part of their participation activities in the Community Rating System. This update is approved by the local elected boards each year and a copy provided to the CRS representatives as part of the annual verification process..*"

LIST OF ATTACHMENTS FOR ARHMP FOR SECTION 7

Attachment KDH 1 – For replacement of Table 7.2.7

Attachment NH 1- For replacement of Table 7.2.9

LIST OF ATTACHMENTS FOR APPENDIX I

Attachment 1 – Dare County 510 Committee Membership

Attachment 2 --Dare County 510 Committee Meeting Packets -- (July 23, 2014, September 4, 2014, October 30, 2104, November 19, 2014, *June 30, 2015, July 23, 2105 –to be added after July 23 meeting*)

Attachment 3 – Dare County 510 Committee Outreach Letter and List of Agencies

Attachment 4 – Insurance Coverage of County and town-owned facilities

Attachment 5 – repetitive loss maps for Dare County, Nags Head, Kill Devil Hills and Kitty Hawk

Attachment 6 – capabilities assessment surveys completed during ARHMP process

Attachment 7 – mitigation goals and implementation actions matrices *(pending Manteo)*

Attachment 8 – resolutions of ARHMP adoption from Dare and towns *(pending KH)*

Attachment 9 –Dare County and Town of Manteo Program for Public Information

Attachment 10 – Additional Information from Nags Head (from PB and BOC meetings)

Attachment 11 –Additional information from Southern Shores (outreach brochure)

Complete section/page numbers & return with HMP & adoption resolution

Community: Dare County and towns

NAME OF PLAN HERE

510 FLOODPLAIN MANAGEMENT PLANNING

511.a Floodplain Management Planning (FMP)

Credit Points: *Enter the section or page number in the plan where each credited item can be found. Add notes on AW-510-4.*

CRS Step	Section/Page	Item Score	Step Total
1. Organize to prepare the plan. (15 Max)			
a. Involvment of Office Responsible for Community Planning	Section 2, page 3	4	
b. Planning committee of department staff (9)	Section 2 pages 4-5	9	
c. Process formally created by the community's governing			13
2. Involve the public. (120 Max)			
a. Planning process conducted through a planning	Section 2 pages 4-9 and Appendix I	60	
b. Public meetings held at the beginning of the planning			
c. Public meeting held on draft plan (15)	Section 2 pages 9-10	15	
f . Other public information activities to encourage input (Up	Section 2, page 10 and Appendix I	10	85
3. Coordinate with other agencies. (35 Max)			
a. Review of existing studies and plans (required) (5)	Section 6 pages 3-10	5	
b.Coordinating with communities and other agencies (Up to	Appendix I	22	27
4. Assess the hazard: (Max 35)			
a. Plan includes an assessment of the flood hazard	Section 4 page 1-2		
(1) A map of known flood hazards (5)	Appendix A pgs 212-217 and pgs 239-250	5	
(2) A description of known flood hazard (5)	Section 4 pages 15-19	5	
(3) A discussion of past floods (5)	Section 4, page 19	5	
b. Plan includes assessment of less frequent floods (10)			
c. Plan includes assessment of areas likely to flood (5)	Section 4, page 18	5	
d. The plan describes other natural hazards (REQUIRED FOR	Section 4 pages 20-40	5	25
5. Assess the problem. (Max 52)			
a. Summary of each hazard identified in the hazard			

their community impact (REQUIRED) (2)	Section 4 page 39 and Section 5	2	
b. Description of the impact of the hazards on: (Max 25)			
(1) Life, safety, health, procedures for warning and			
(2) Public health inlcuding health hazards to floodwaters/mold	Section page 38		
(3) Critical facilities and infrastructure (5)	Section 5, pages 18-20 and Appednix I	5	
(4) The community's economy and tax base (5)	Section 5, page 3, page 24	5	
(5) Number and type of affected buildings (5)	Section 5, -page 3, page 7 and page 12	5	
c. Review of all damaged buildings/flood insurance claims (5)	Section 5, page 25 and Appendix I	5	
d. Areas the provide natural floodplain functions (5)			
e. Development/redevelopment/Population Trends (7)	Section 5, page 24	7	
f. Impact of future flooding conditions outline in Step 4, item c			29
6. Set goals. (required) (2)	Section 7, page 3 and Appendix I	2	2
7. Review possible activities. (Max 35)			
a. Preventive activities (5)	Section 6, page 3	5	
b. Floodplain Management Regulatory/current & future	Section 6, pages 4-16 and Appendix I	5	
c. Property protection activities (5)	Section 6 pages 4-16 and Appendix I	5	
d. Natural resource protection activities (5)	Section 6, pages 4-16 and Appendix I	5	
e. Emergency services activities (5)	Section 6 pages 4-16 and Appendix I	5	
f. Structural projects (5)			
g . Public information activities (5)	Section 6 pages 4-16 and Appendix I	5	30
8. Draft an action plan. (Max 60)			
a. Actions must be prioritized (required)			
1. Recommendations for activities from two of the six			
2. Recommendations for activities from three of the six			
3. Recommendations for activities from four of the six			
4. Recommendations for activities from five of the six	Section 7 pages 19-21 and Appednix I	45	
b. Post-disaster mitigation policies and procedures (10)			
c. Action items for mitigation of other hazards (5)			45
9. Adopt the plan. (2)	Appendix I	2	2

10. Implement, evaluate and revise.(Max 26)

a. Procedures to monitor and recommend revisions (required)

b. Same planning committee or successor committee that under Section 511.a.2 (a) does the evaluation (24)

Section 8 page 1	2	
Section 8 page 2	24	26

Maximum Credit for 510 FMP = 382 **Plan Total** **284**

DARE COUNTY CRS 510/HAZARD MITIGATION LOCAL PLANNING COMMITTEE

Thursday, July 23, 2015
Room 238 Dare County Administrative Building

NAME	AGENCY	EMAIL ADDRESS
Donna Creef	Planning - Dare	donnac@darenc.com
BRYAN BRIGHTBILL	KDH Planning	BRYAN@KDHPC.COM
Steven Kovacs	Dare Co. Emergency Mgmt	steve.kovacs@darenc.com
Glenn Rainey	Dare Co Citizen	chief15@outlook.com
Bonnie Rowe	Dare Co. Citizen	bonnierowe@sunrealtync.com
[signature]	KITTY HAWK	DHEFFERNAN@kittyhawk.com
ROB TESTERMAN	KITTY HAWK	rob.testerman@kittyhawk.town.net
Holly White	Nags Head	holly.white@nagsheadnc.gov
Erin Burke	Town of Manteo	burke@townofmanteo.com
Wes Haskett	Southern Shores	whaskett@southernshores-nc.gov
Dabni Shelton	Southern Shores	dshelton@southernshores-nc.gov

ATTACHMENT 3

List of agencies contacted by Dare

1. Dare County Soil and Water Board
2. Division of Coastal Management
3. National Park Service –
4. Outer Banks Homebuilders
5. Outer Banks Association of Realtors
6. Albemarle RPO
7. Coastal Federal
8. Outer Banks Hospital
9. Dominion Power, Cape Hatteras Electric and Tideland Electric
10. NCDOT
11. Interfaith Outreach
12. US Coast Guard
13. US Fish and Wildlife Service
14. NC Forestry Service
15. Dare County Sheriff
16. Dare County Public Schools

COUNTY OF DARE

P.O. Box 1000, Manteo, North Carolina 27954

(252) 475-5000

September 10, 2014

Tideland Electric Membership Corp.
P.O. Box 159
Pantego, NC 27860

Hazard Mitigation Plans (HMP) outline actions taken by a community to reduce or eliminate the long-term risk to human life and property from hazards, either natural or man-made. Dare County's HMP was last approved in June of 2010. Every five years we must update it and we recently began our efforts. Our HMP can be found at http://www.darenc.com/emgymgmt/docs/HMGP.pdf. To ensure Dare County remains eligible for state and federal mitigation funding under Title 44, Part 201.6 of the Code of Federal Regulations, the HMP must be approved by North Carolina Emergency Management and Federal Emergency Management Agency (FEMA) officials.

Stakeholder input is needed and critical to ensuring our HMP properly addresses all hazards and meets regulatory requirements. While our most likely hazards remain significant weather events and the associated impacts like flooding and wind damage, we must reassess all hazards while also identifying emerging threats. While hazards like earthquakes, mass shootings, pandemics, cyber-attacks are not generally associated with our community they must be considered as part of our HMP update process.

We believe you and your agency are key stakeholders in the HMP update process. We invite you to provide input on potential hazards, especially the identification of any activities involving your agency which may affect flooding or flood-prone properties. If your agency has studies or plans used for hazard mitigation purposes, we ask that you share those with us along with any other information you feel may help as we update the HMP. Electronic versions of documents and any replies to this invitation can be sent to either Sandy Sanderson at darecoem@darenc.com or Donna Creef at donnac@darenc.com.

In addition, public input is an important component of our efforts. There are numerous opportunities for outreach activities from the initial stages of the process to the review and approval of the HMP. We currently have a public survey open until September 30, 2014 that we encourage you and others to complete at https://www.surveymonkey.com/s/JZS5YSY. Notices of additional public engagement will be posted on the County's website over the next few months. Attendance at public meetings of the local planning committee assisting with the update is welcomed and we hope you or someone from your organization will participate.

Thank you in advance for you participation and comments. Our contact information is provided should you have any questions.

Regards,

N.H. "Sandy" Sanderson
Emergency Management Coordinator
252-475-5897

Donna Creef
Planning Director
252-475-5873

COUNTY OF DARE

P.O. Box 1000, Manteo, North Carolina 27954

(252) 475-5000

September 10, 2014

Michael Thompson
Manager of Government Affairs
Dominion Power
5300 The Woods Road
Kitty Hawk, NC 27949

Dear Mr. Thompson:

Hazard Mitigation Plans (HMP) outline actions taken by a community to reduce or eliminate the long-term risk to human life and property from hazards, either natural or man-made. Dare County's HMP was last approved in June of 2010. Every five years we must update it and we recently began our efforts. Our HMP can be found at http://www.darenc.com/emgymgmt/docs/HMGP.pdf. To ensure Dare County remains eligible for state and federal mitigation funding under Title 44, Part 201.6 of the Code of Federal Regulations, the HMP must be approved by North Carolina Emergency Management and Federal Emergency Management Agency (FEMA) officials.

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Regards,

N.H. "Sandy" Sanderson
Emergency Management Coordinator
252-475-5897

Donna Creef
Planning Director
252-475-5873

COUNTY OF DARE

P.O. Box 1000, Manteo, North Carolina 27954

(252) 475-5000

September 10, 2014

Larry Bray, Chairman
Dare Co. Soil & Water Conservation District Board
P.O. Box 1000
Manteo, NC 27954

Dear Mr. Bray:

Hazard Mitigation Plans (HMP) outline actions taken by a community to reduce or eliminate the long-term risk to human life and property from hazards, either natural or man-made. Dare County's HMP was last approved in June of 2010. Every five years we must update it and we recently began our efforts. Our HMP can be found at http://www.darenc.com/emgymgmt/docs/HMGP.pdf. To ensure Dare County remains eligible for state and federal mitigation funding under Title 44, Part 201.6 of the Code of Federal Regulations, the HMP must be approved by North Carolina Emergency Management and Federal Emergency Management Agency (FEMA) officials.

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Regards,

N.H. "Sandy" Sanderson
Emergency Management Coordinator
252-475-5897

Donna Creef
Planning Director
252-475-5873

COUNTY OF DARE

P.O. Box 1000, Manteo, North Carolina 27954

(252) 475-5000

September 10, 2014

Frank Jennings, District Manager
Division of Coastal Management
1367 US 17 South
Elizabeth City, NC 27909

Dear Mr. Jennings:

Hazard Mitigation Plans (HMP) outline actions taken by a community to reduce or eliminate the long-term risk to human life and property from hazards, either natural or man-made. Dare County's HMP was last approved in June of 2010. Every five years we must update it and we recently began our efforts. Our HMP can be found at http://www.darenc.com/emgvmgmt/docs/HMGP.pdf. To ensure Dare County remains eligible for state and federal mitigation funding under Title 44, Part 201.6 of the Code of Federal Regulations, the HMP must be approved by North Carolina Emergency Management and Federal Emergency Management Agency (FEMA) officials.

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Thank you in advance for you participation and comments. Our contact information is provided should you have any questions.

Regards,

N.H. "Sandy" Sanderson
Emergency Management Coordinator
252-475-5897

Donna Creef
Planning Director
252-475-5873

COUNTY OF DARE
P.O. Box 1000, Manteo, North Carolina 27954

September 10, 2014

(252) 475-5000

Paul Stevens, Chief Ranger
National Park Service
Outer Banks Group
1401 National Park Drive
Manteo, NC 27954

Dear Mr. Stevens:

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Thank you in advance for you participation and comments. Our contact information is provided should you have any questions.

Regards,

N.H. "Sandy" Sanderson
Emergency Management Coordinator
252-475-5897

Donna Creef
Planning Director
252-475-5873

COUNTY OF DARE
P.O. Box 1000, Manteo, North Carolina 27954

September 10, 2014

(252) 475-5000

Maxine Rossman, Executive Officer
Outer Banks Homebuilders Association
105 W. Airstrip Road
Kill Devil Hills, NC 27948

Dear Ms. Rossman:

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252-475-5897

Donna Creef
Planning Director
252-475-5873

COUNTY OF DARE

P.O. Box 1000, Manteo, North Carolina 27954

(252) 475-5000

September 10, 2014

Willo Kelly, Government Affairs Director
Outer Banks Association of Realtors
201 W. Eighth Street
Nags Head, NC 27959

Dear Ms. Kelly:

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252-475-5897

Donna Creef
Planning Director
252-475-5873

COUNTY OF DARE

P.O. Box 1000, Manteo, North Carolina 27954

(252) 475-5000

September 10, 2014

Angela Welsh, Planning Director
Albemarle Rural Planning Organization
512 Church Street
Hertford, NC 27944

Dear Ms. Welsh:

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Donna Creef
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COUNTY OF DARE
P.O. Box 1000, Manteo, North Carolina 27954

September 10, 2014

(252) 475-5000

Ladd Bayliss, Coastal Advocate
NC Coastal Federation
128 Grenville Street
Manteo, NC 27954

Dear Ms. Bayliss:

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Donna Creef
Planning Director
252-475-5873

COUNTY OF DARE

P.O. Box 1000, Manteo, North Carolina 27954

(252) 475-5000

September 10, 2014

Todd Warlitner
VP, Business Operations
The Outer Banks Hospital
4800 S. Croatan Highway
Nags Head, NC 27959

Dear Mr. Warlitner:

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252-475-5897

Donna Creef
Planning Director
252-475-5873

COUNTY OF DARE

P.O. Box 1000, Manteo, North Carolina 27954

(252) 475-5000

September 10, 2014

Susan Flythe
Executive VP / General Manager
Cape Hatteras Electrical Cooperative
P.O. Box 9
Buxton, NC 27920

Dear Ms. Flythe:

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COUNTY OF DARE

P.O. Box 1000, Manteo, North Carolina 27954

(252) 475-5000

September 10, 2014

Gretchen Byrum, Planning Engineer
NC Department of Transportation
113 Airport Drive, Suite 100
Edenton, NC 27932

Dear Ms. Byrum:

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COUNTY OF DARE

P.O. Box 1000, Manteo, North Carolina 27954

(252) 475-5000

September 10, 2014

Jenniffer Albanese, Executive Director
Interfaith Community Outreach
P.O. Box 87
Nags Head, NC 27959

Dear Ms. Albanese:

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COUNTY OF DARE
P.O. Box 1000, Manteo, North Carolina 27954

September 10, 2014

(252) 475-5000

Lt. Hasif Gordon
U.S. Coast Guard
Sector Field Office Cape Hatteras
114 Wood Hill Drive
Nags Head, NC 27959

Dear Lt. Gordon:

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COUNTY OF DARE
P.O. Box 1000, Manteo, North Carolina 27954

September 10, 2014

(252) 475-5000

Mike Bryant, Refuge Manager
U.S. Fish and Wildlife Service
Alligator River National Wildlife Refuge
P.O. Box 1969
Manteo, NC 27954

Dear Mr. Bryant:

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COUNTY OF DARE

P.O. Box 1000, Manteo, North Carolina 27954

(252) 475-5000

September 10, 2014

Rob Shackleford, Dare County Ranger
NC Forestry Service
406 Airport Road
Manteo, NC 27954

Dear Mr. Shackleford:

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COUNTY OF DARE
P.O. Box 1000, Manteo, North Carolina 27954

September 10, 2014

(252) 475-5000

Steve Hoggard, Chief Deputy
Dare County Sheriff's Office
P.O. Box 757
Manteo, NC 27954

Dear Chief Deputy Hoggard:

Hazard Mitigation Plans (HMP) outline actions taken by a community to reduce or eliminate the long-term risk to human life and property from hazards, either natural or man-made. Dare County's HMP was last approved in June of 2010. Every five years we must update it and we recently began our efforts. Our HMP can be found at http://www.darenc.com/emgymgmt/docs/HMGP.pdf. To ensure Dare County remains eligible for state and federal mitigation funding under Title 44, Part 201.6 of the Code of Federal Regulations, the HMP must be approved by North Carolina Emergency Management and Federal Emergency Management Agency (FEMA) officials.

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We believe you and your agency are key stakeholders in the HMP update process. We invite you to provide input on potential hazards, especially the identification of any activities involving your agency which may affect flooding or flood-prone properties. If your agency has studies or plans used for hazard mitigation purposes, we ask that you share those with us along with any other information you feel may help as we update the HMP. Electronic versions of documents and any replies to this invitation can be sent to either Sandy Sanderson at darecoem@darenc.com or Donna Creef at donnac@darenc.com.

In addition, public input is an important component of our efforts. There are numerous opportunities for outreach activities from the initial stages of the process to the review and approval of the HMP. We currently have a public survey open until September 30, 2014 that we encourage you and others to complete at https://www.surveymonkey.com/s/JZS5YSY. Notices of additional public engagement will be posted on the County's website over the next few months. Attendance at public meetings of the local planning committee assisting with the update is welcomed and we hope you or someone from your organization will participate.

Thank you in advance for you participation and comments. Our contact information is provided should you have any questions.

Regards,

N.H. "Sandy" Sanderson
Emergency Management Coordinator
252-475-5897

Donna Creef
Planning Director
252-475-5873

COUNTY OF DARE
P.O. Box 1000, Manteo, North Carolina 27954

(252) 475-5000

September 10, 2014

Jim Winebarger, Facilities Director
Dare County Schools
P.O. Box 1508
Nags Head, NC 27959

Dear Mr. Winebarger:

Hazard Mitigation Plans (HMP) outline actions taken by a community to reduce or eliminate the long-term risk to human life and property from hazards, either natural or man-made. Dare County's HMP was last approved in June of 2010. Every five years we must update it and we recently began our efforts. Our HMP can be found at http://www.darenc.com/emgymgmt/docs/HMGP.pdf. To ensure Dare County remains eligible for state and federal mitigation funding under Title 44, Part 201.6 of the Code of Federal Regulations, the HMP must be approved by North Carolina Emergency Management and Federal Emergency Management Agency (FEMA) officials.

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Thank you in advance for you participation and comments. Our contact information is provided should you have any questions.

Regards,

N.H. "Sandy" Sanderson
Emergency Management Coordinator
252-475-5897

Donna Creef
Planning Director
252-475-5873

INSURANCE ASSESSMENT FOR DARE AND TOWNS

DARE COUNTY -- Dare County owns numerous facilities located throughout the unincorporated portions of Dare County and in the municipal boundaries of the six towns. Some of these facilities are identified as critical facilities in Section 5 of the ARHMP. Dare County owns a total of 68 facilities throughout the County, four of these properties are located in X zones. The others are located in AE flood zones. Flood insurance policies are maintained on all of these buildings including the X zone properties.

TOWN OF MANTEO -- **Manteo's Critical Facilities List**

Roanoke Island Volunteer Fire Department (Not town owned, insured by RIVFD)

Manteo High School (Not town owned, insured by Dare Board of Education)

Manteo Elementary School (Not town owned, insured by Dare Board of Education)

Manteo Town Hall and Police Department (insured by the Town of Manteo)

Dare County Health Department (Not town owned, insured by Dare County

Dialysis Center (Not town owned, insured by Dare County)

EMS Station 2 (Not town owned, insured by Dare County)

Manteo Waste Water Treatment Plant and Public Works (not insured)

Sewer Lift Stations (not insured):

- Burnside
- Bowsertown
- Ballast Pt.
- East Hammock
- West Hammock
- Roanoke Village
- Waterfront
- Wingina
- Cypress Cove
- Cedar Bay

TOWN OF KILL DEVIL HILLS -- The Town of Kill Devil Hills Fire Department and Water Department Pump Building are located within the SFHA, specifically AE9. Both buildings are covered by a Flood Insurance policy for building coverage of $500,000 for the building and varying coverage for the content. Additionally the Town of Kill Devil

Hills holds Flood Insurance Policies for the Town Hall, the Public Works Complex and Water Administration which are located in an X Flood Zone. All municipal buildings, including critical facilities, are under Flood Insurance policies including those located outside the Special Flood Hazard District.

TOWN OF NAGS HEAD -- All Critical Facilities in the Town of Nags Head are insured. The Town also maintains insurance on all of its other facilities that are not listed as critical facilities

TOWN OF KITTY HAWK -- The Town of Kitty Hawk has flood insurance on all town owned buildings located in Special Flood Hazard Area (SFHA).

Town Hall, 101 Veterans Memorial Drive

Police Department, 722 W. Kitty Hawk Drive

Fire Department, 859 W. Kitty Hawk Drive

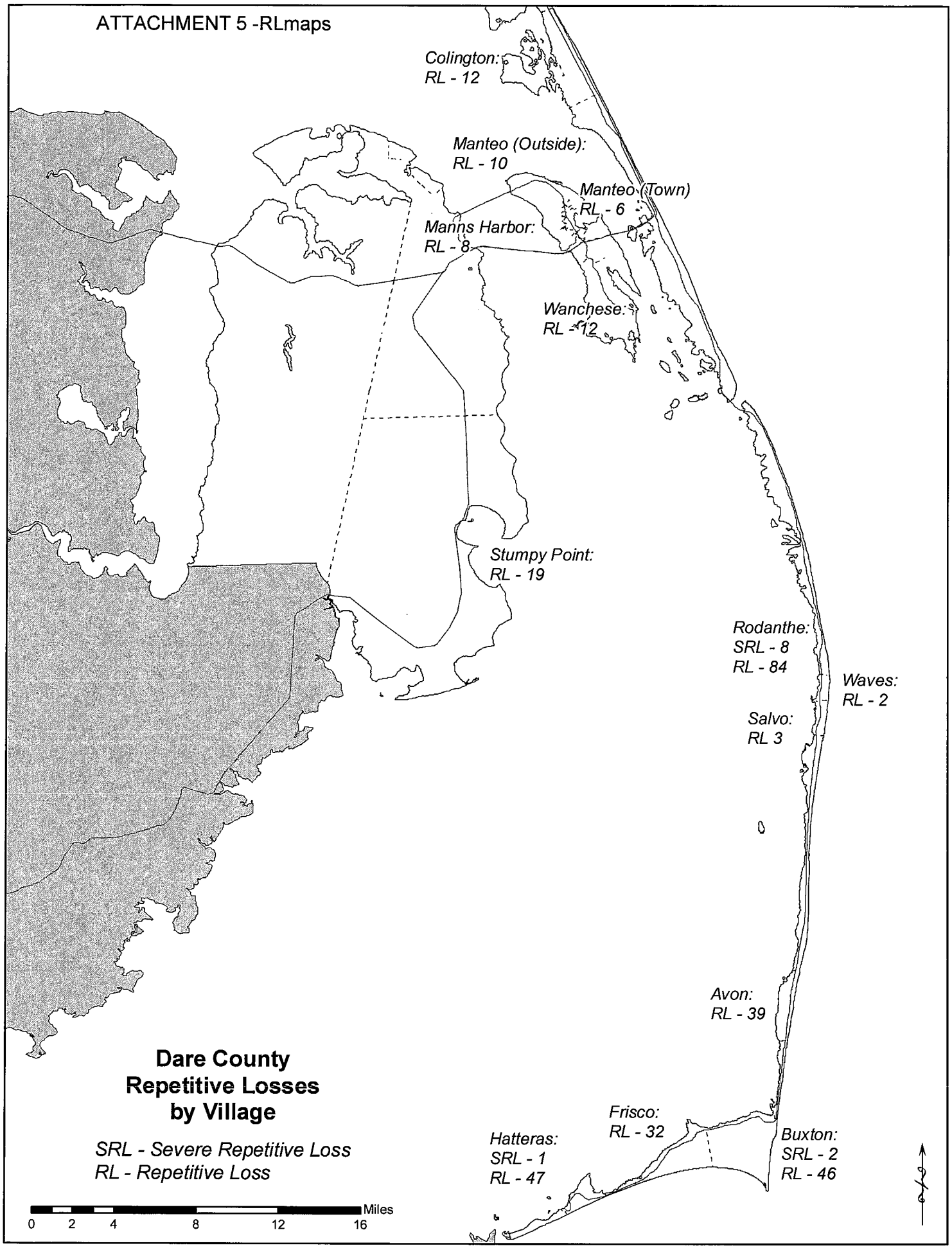
Public Works, 865 W. Kitty Hawk Drive

Coastal Reserve Building, 983 W. Kitty Hawk Drive

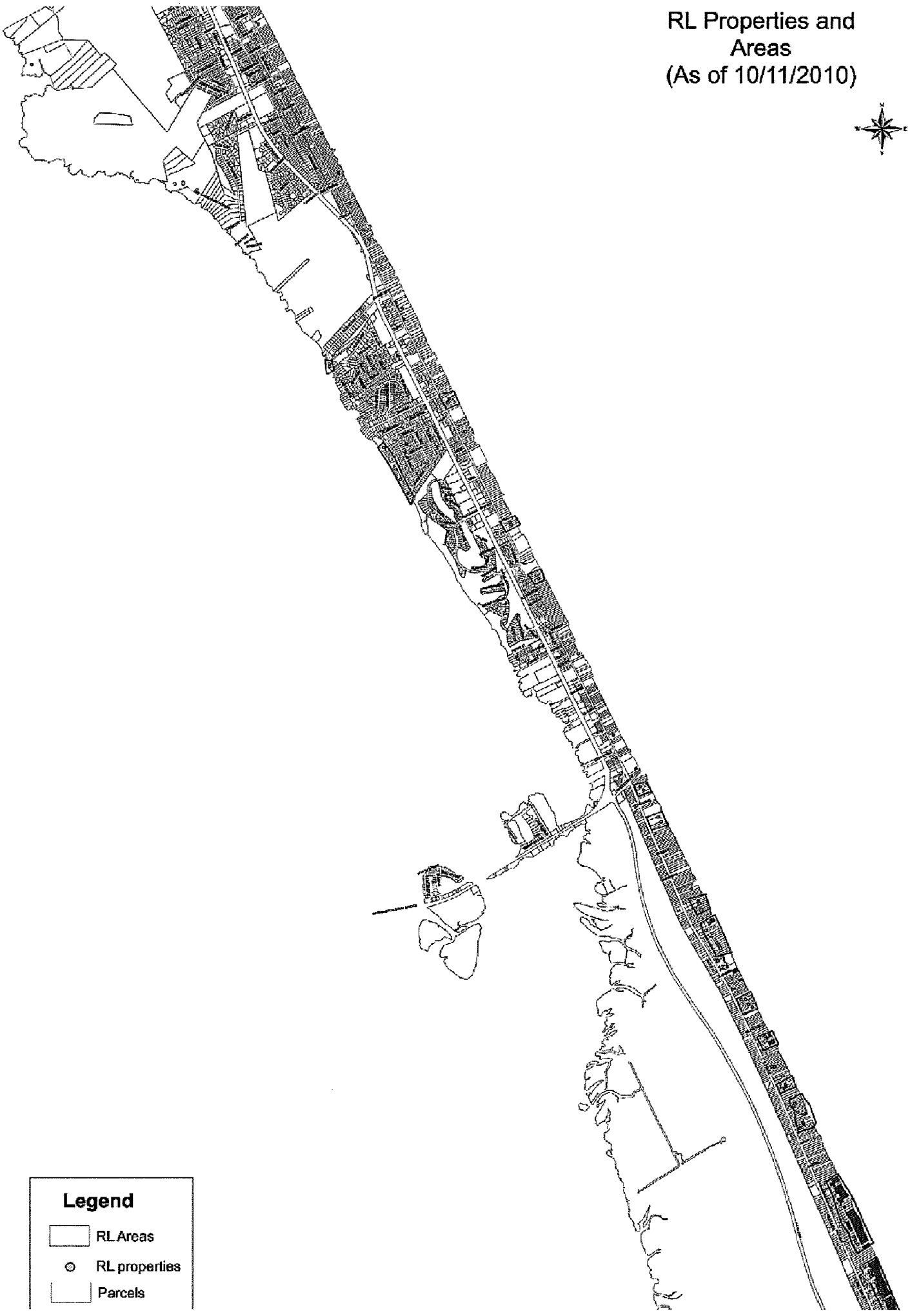
Bath House, 3840 N. Virginia Dare Trail

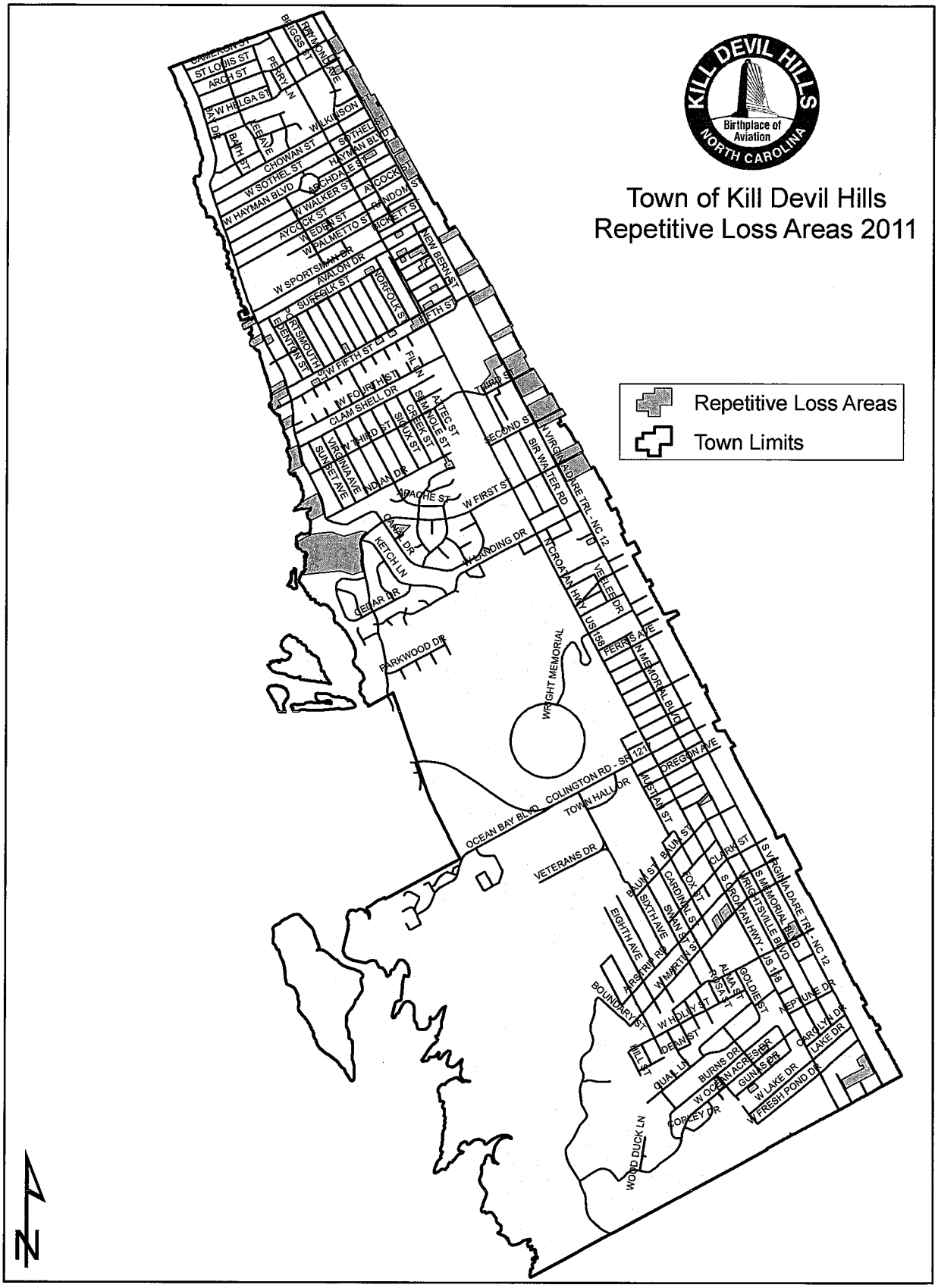
TOWN OF SOUTHERN SHORES – The Town of Southern Shores owns four buildings and one of the four buildings is located in a Special Flood Hazard Area (SFHA). The building is located at 27 Pintail Court and it is in the AE7 SFHA. The Town carries a flood insurance policy on this building.

TOWN OF DUCK -- The Town of Duck owns a 9.37 acre parcel at 1200 Duck Road that contains the Town's meeting hall, administration building, and public park. Both buildings are located within an AE flood zone and conform with current flood elevation standards. Additionally, the Town of Duck leases an approximately 1.5 acre site from the federal government at 1259 Duck Road that houses its police and fire departments. This property is located in an X flood zone. The Town of Duck maintains flood insurance on both of these properties.


ATTACHMENT 5 -RLmaps
Colington:
RL - 12
Manteo (Outside):
RL - 10
Manteo (Town)
RL - 6
Manns Harbor:
RL - 8
Wanchese:
RL - 12
Stumpy Point:
RL - 19
Rodanthe:
SRL - 8
RL - 84
Waves:
RL - 2
Salvo:
RL 3
Avon:
RL - 39
Frisco:
RL - 32
Hatteras:
SRL - 1
RL - 47
Buxton:
SRL - 2
RL - 46
Dare County
Repetitive Losses
by Village
SRL - Severe Repetitive Loss
RL - Repetitive Loss
Miles
0 2 4 8 12 16

RL Properties and Areas (As of 10/11/2010)

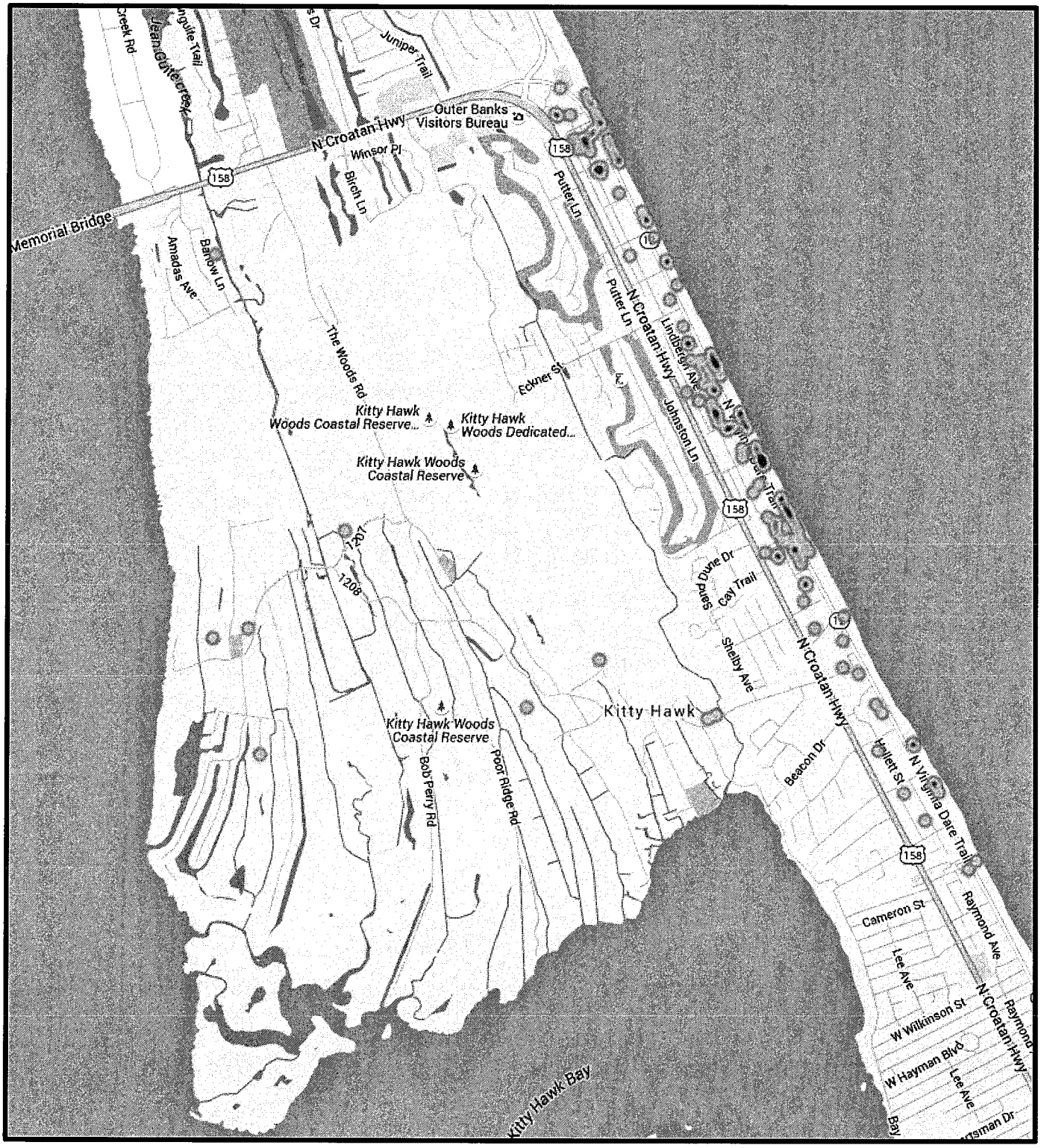




Map Created By: Kill Devil Hills Planning Department
October 2012

Repetitive Loss Properties

July 2015



1. PLANNING AND REGULATORY CAPABILITY - Please indicate whether the following planning or regulatory tools (plans, ordinances, codes or programs) are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Strongly Supports, Helps Facilitate or Hinders) with another "X". Finally, please provide additional comments or explanations in the space provided or with attachments.

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Helps Facilitate	Hinders	
Hazard Mitigation Plan	X		Emer. Mgmt	x			
Comprehensive Land Use Plan (or General, Master or Growth Mgt. Plan)	X		Planning	X			
Floodplain Management Plan		X	Planning				Regional HMP to follow steps to qualify as FMP under CRS guidelines
Open Space Management Plan (or Parks & Rec./ Greenways Plan)							
Stormwater Management Plan / Ordinance							Relies on State regulations
Natural Resource Protection Plan							
Flood Response Plan	X		Emer. Mgmt	X			Addressed in EOP
Emergency Operations Plan	X		Emer. Mgmt	X			
Continuity of Operations Plan	X		Emer. Mgmt	X			Addressed in EOP
Evacuation Plan	X		Emer. Mngt.	X			Addressed in EOP
Other Plans (please explain under Comments)							

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Facilitates	Hinders	
Disaster Recovery Plan	X		Emer Mgmt	X			Addressed in EOP
Capital Improvements Plan	X		Finance				
Economic Development Plan							
Historic Preservation Plan							
Floodplain Ordinance (or Flood Damage Prevention Ordinance)	X		Planning	X			Includes 1-foot freeboard as of 1-6-2014
Zoning Ordinance	X		Planning				
Subdivision Ordinance	X		Planning				
Unified Development Ordinance							
Post-disaster Redevelopment / Reconstruction Ordinance							
Building Code	X		Planning/Inspectors				State building code
Fire Code	X		Bdlg. Inspect. And Fire Marshal				State fire code
National Flood Insurance Program (NFIP)	X		Planning	X			
NFIP Community Rating System (CRS Program)	X		Planning	X			

2. ADMINISTRATIVE AND TECHNICAL CAPABILITY - Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box . Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff / Personnel Resources	Yes	No	Department / Agency	Comments
Planners with knowledge of land development and land management practices	X		Planning	
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	X		Planning	Inspectors certified by NC Dept. of Insurance
Planners or engineers with an understanding of natural and/or human-caused hazards	X		Planning	
Emergency manager	X		Emer. Mgmt	
Floodplain manager	X		Planning	Three staff members are certified floodplain managers
Land surveyors		X		
Scientist familiar with the hazards of the community		X		
Staff with education or expertise to assess the community's vulnerability to hazards	X		Emer. Mgmt	
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	X		GIS	
Resource development staff or grant writers	X		Planning	

3. **FISCAL CAPABILITY** - Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources for hazard mitigation purposes (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	Yes	No	Department / Agency	Comments
Capital Improvement Programming	X		Finance	
Community Development Block Grants (CDBG)	X		Planning/Emer. Mgmt	
Special Purpose Taxes (or taxing districts)		X		
Gas / Electric Utility Fees		X		
Water / Sewer Fees	X		Water	
Stormwater Utility Fees		X		
Development Impact Fees		X		
General Obligation, Revenue and/or Special Tax Bonds	X		Finance	
Partnering arrangements or intergovernmental agreements	X		Various	
Other: _____				

Local Capability Assessment Survey

4. POLITICAL CAPABILITY - Political capability can be generally measured by the degree to which local political leadership is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Please identify some general examples of these efforts if available and/or reference where more documentation can be found.

Dare County participates in the CRS program in addition to our participation in the NFIP. This provides an opportunity for discounts on flood Insurance for all property owners located in the flood hazard areas. The Dare County Flood Ordinance includes a 1-foot freeboard requirement to ensure structures are elevated to a level that exceeds NFIP standards. A copy of the Flood Ordinance is available from the Dare County Planning Department. This freeboard requirement was adopted earlier this year despite opposition from local homebuilders.

The County also participates in the CAMA program which establishes setbacks for development along the ocean and estuarine shorelines. Minor CAMA permits are issued as part of the agreement with the State enforcement procedures of the CAMA regulations.

Dare County has actively pursued FEMA mitigation funding after federally-declared disasters for grant funds to elevate flood-damaged structures to mitigate/eliminate future flood damages. Currently, the County is administering grants to elevate 44 homes in unincorporated Dare County with funds made available after Hurricane Irene.

Local Capability Assessment Survey

5. SELF-ASSESSMENT OF CAPABILITY - Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-4 of this survey.

	DEGREE OF CAPABILITY		
	LIMITED	MODERATE	HIGH
Planning and Regulatory Capability			X
Administrative and Technical Capability			X
Fiscal Capability			X
Political Capability			X
OVERALL CAPABILITY			X

Local Capability Assessment Survey

Jurisdiction/Agency: Town of Manteo **Phone:** 252-473-4112

Point of Contact: Erin Burke **E-mail:** burke@townofmanteo.com

1. PLANNING AND REGULATORY CAPABILITY - Please indicate whether the following planning or regulatory tools (plans, ordinances, codes or programs) are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Strongly Supports, Helps Facilitate or Hinders) with another "X". Finally, please provide additional comments or explanations in the space provided or with attachments.

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Helps Facilitate	Hinders	
Hazard Mitigation Plan	X		Planning and Zoning	X			
Comprehensive Land Use Plan (or General, Master or Growth Mgt. Plan)	X		Planning and Zoning	X			Required by CAMA due for update
Floodplain Management Plan	X		Planning and Zoning	X			Required for CRS
Open Space Management Plan (or Parks & Rec./ Greenways Plan)							
Stormwater Management Plan / Ordinance	X		Planning and Zoning	X			Adopted in 2005 stringent fill requirements encourages BMPs
Natural Resource Protection Plan							
Flood Response Plan	X		Dare County EM	X			
Emergency Operations Plan	X		Dare County EM	X			
Continuity of Operations Plan							
Evacuation Plan	X		Dare County EM	X			
Other Plans (please explain under Comments)							

Local Capability Assessment Survey

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Facilitates	Hinders	
Disaster Recovery Plan	X		Dare County EM	X			
Capital Improvements Plan	X		Water and Sewer/ Finance	X			Adopted Plan from Wooten
Economic Development Plan							None on File
Historic Preservation Plan							None on File
Floodplain Ordinance (or Flood Damage Prevention Ordinance)	X		Planning and Zoning	X			Chapter 26 in the Zoning Ordinance recently adopted one foot freeboard
Zoning Ordinance	X		Planning and Zoning	X			
Subdivision Ordinance	X		Planning and Zoning	X			
Unified Development Ordinance							None on File
Post-disaster Redevelopment / Reconstruction Ordinance							None on File
Building Code	X		Planning and Zoning	X			Contracted services with Dare County
Fire Code	X		Planning and Zoning	X			Contracted services with Dare County
National Flood Insurance Program (NFIP)	X		Planning and Zoning	X			
NFIP Community Rating System (CRS Program)	X		Planning and Zoning	X			Rating level 8

Local Capability Assessment Survey

2. ADMINISTRATIVE AND TECHNICAL CAPABILITY - Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "**X**" in the appropriate box . Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff / Personnel Resources	Yes	No	Department / Agency	Comments
Planners with knowledge of land development and land management practices	X		Planning and Zoning	
Engineers or professionals trained in construction practices related to buildings and/or infrastructure		X		Building Inspection services are contracted with Dare County.
Planners or engineers with an understanding of natural and/or human-caused hazards	X		Planning and Zoning	
Emergency manager		X		
Floodplain manager	X		Planning and Zoning	
Land surveyors		X		
Scientist familiar with the hazards of the community		X		
Staff with education or expertise to assess the community's vulnerability to hazards	X		Planning and Zoning Water and Sewer Public Works	
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	X		Planning and Zoning	Basic knowledge and skills
Resource development staff or grant writers	X		Planning and Zoning Finance	

Local Capability Assessment Survey

3. **FISCAL CAPABILITY** - Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources for hazard mitigation purposes (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	Yes	No	Department / Agency	Comments
Capital Improvement Programming	X		Finance	Our CIP cover multiple departments but is administered by Finance and the Town Manager
Community Development Block Grants (CDBG)	X		Planning and Zoning	
Special Purpose Taxes (or taxing districts)	X		Finance	3% property tax for Stormwater Improvements
Gas / Electric Utility Fees		X		
Water / Sewer Fees	X		Finance Water and Sewer	
Stormwater Utility Fees	X		Finance	See "Special Purpose Taxes (or taxing districts)"
Development Impact Fees	X		Planning and Zoning Finance	
General Obligation, Revenue and/or Special Tax Bonds		X		
Partnering arrangements or intergovernmental agreements		X		
Other: _____				

Local Capability Assessment Survey

4. POLITICAL CAPABILITY - Political capability can be generally measured by the degree to which local political leadership is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Please identify some general examples of these efforts if available and/or reference where more documentation can be found.

The Town of Manteo's Board of Commissioners has a standing history of implement policies and funding projects that address hazards that may be experienced within their jurisdiction. The adoption of the "Stormwater Tax" has allowed for more than $300,000.00 of stormwater improvements with additional projects in the works. The adoption and enforcement of the Stormwater Ordinance also help mitigate flood threats to new and existing structures. The Town's continued participation in the CRS program allows residents to collect a 10% break on flood policies as well.

Local Capability Assessment Survey

5. SELF-ASSESSMENT OF CAPABILITY - Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-4 of this survey.

	DEGREE OF CAPABILITY		
	LIMITED	MODERATE	HIGH
Planning and Regulatory Capability			X
Administrative and Technical Capability			X
Fiscal Capability			X
Political Capability			X
OVERALL CAPABILITY			X

Local Capability Assessment Survey

Jurisdiction/Agency: Nags Head **Phone:** 252-449-6045

Point of Contact: Kelly Wyatt **E-mail:** kelly.wyatt@nagsheadnc.gov

1. PLANNING AND REGULATORY CAPABILITY - Please indicate whether the following planning or regulatory tools (plans, ordinances, codes or programs) are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Strongly Supports, Helps Facilitate or Hinders) with another "X". Finally, please provide additional comments or explanations in the space provided or with attachments.

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Helps Facilitate	Hinders	
Hazard Mitigation Plan	X		Town Wide	X			
Comprehensive Land Use Plan (or General, Master or Growth Mgt. Plan)	X		Planning + Dev		X		
Floodplain Management Plan	X		Planning, Public Works				
Open Space Management Plan (or Parks & Rec./ Greenways Plan)	X		Planning + Dev.		X		
Stormwater Management Plan / Ordinance	X		Planning, Public Works		X		
Natural Resource Protection Plan	—	—	—	—	—	—	—
Flood Response Plan	X		Planning, Public Works				
Emergency Operations Plan	X		Town Wide	X			
Continuity of Operations Plan	Within EOP						Referenced w/i EOP
Evacuation Plan	X		Public Safety	X			
Other Plans (please explain under Comments)							

Local Capability Assessment Survey

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Facilitates	Hinders	
Disaster Recovery Plan	Within EOP						Folded w/: EOP
Capital Improvements Plan	X		Finance		X		
Economic Development Plan	—	—	—	—	—	—	—
Historic Preservation Plan No District	—	—	—	—	—	—	—
Floodplain Ordinance (or Flood Damage Prevention Ordinance)	X		Planning & Dev.	X			
Zoning Ordinance	X		Planning + Dev.		X		
Subdivision Ordinance	X		Planning + Dev.		X		
Unified Development Ordinance	—	—	—	—	—	—	—
Post-disaster Redevelopment / Reconstruction Ordinance	X		Town-Wide	X			Chapter 32 of Town Code.
Building Code	X		Planning; Bldg Inspections	X			
Fire Code	X		Fire Dept	X			
National Flood Insurance Program (NFIP)	X		Planning + Dev.	X			
NFIP Community Rating System (CRS Program)	X		Planning + Dev.	X			

Local Capability Assessment Survey

2. ADMINISTRATIVE AND TECHNICAL CAPABILITY - Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff / Personnel Resources	Yes	No	Department / Agency	Comments
Planners with knowledge of land development and land management practices	X		Planning, Public Works	
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	X		Planning, Public Works	
Planners or engineers with an understanding of natural and/or human-caused hazards	X		Planning, Public Works	
Emergency manager	X		Kevin Zorc, Fire Chief	
Floodplain manager	X		David Morton Chief Bldg. Insp.	
Land surveyors	–	–	—	—
Scientist familiar with the hazards of the community	–	–	—	—
Staff with education or expertise to assess the community's vulnerability to hazards	X		Town-Wide	
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	X		Planning + Dev.	
Resource development staff or grant writers	X		Planning + Dev.	

Local Capability Assessment Survey

3. **FISCAL CAPABILITY** - Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources for **hazard** mitigation purposes (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency **responsible for its** administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	Yes	No	Department / Agency	Comments
Capital Improvement Programming	X		Finance	
Community Development Block Grants (CDBG)		X		
Special Purpose Taxes (or taxing districts)				For Beach Nourishment only - Hazard Mitigation *
Gas / Electric Utility Fees		X		
Water / Sewer Fees	X		Finance	
Stormwater Utility Fees	X		Finance	
Development Impact Fees	X		Finance	
General Obligation, Revenue and/or Special Tax Bonds	X		Finance	
Partnering arrangements or intergovernmental agreements	X		Finance	
Other: _____				

Local Capability Assessment Survey

4. POLITICAL CAPABILITY - Political capability can be generally measured by the degree to which local political leadership is willing to enact **policies and** programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development **away from** identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards **that go beyond** minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Please identify some general examples of these **efforts if available** and/or reference where more documentation can be found.

- Stormwater Ordinance - even Residential must retain runoff onsite
- 1' Freeboard
- Max 300 sq ft storage allowed below BFE

Local Capability Assessment Survey

5. SELF-ASSESSMENT OF CAPABILITY - Please provide an approximate measure of your jurisdiction's capability to effectively implement **hazard mitigation** strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-4 of this survey.

	DEGREE OF CAPABILITY		
	LIMITED	**MODERATE**	**HIGH**
Planning and Regulatory Capability		X	
Administrative and Technical Capability		X	
Fiscal Capability		X	
Political Capability		X	
OVERALL CAPABILITY		X	

Local Capability Assessment Survey

Jurisdiction/Agency: Kill Devil Hills **Phone:** 252 449 5318

Point of Contact: Meredith Guns **E-mail:** meredith@kdhnc.com

1. PLANNING AND REGULATORY CAPABILITY - Please indicate whether the following planning or regulatory tools (plans, ordinances, codes or programs) are currently in place or under development for your jurisdiction by placing an "**X**" in the appropriate box. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Strongly Supports, Helps Facilitate or Hinders) with another "**X**". Finally, please provide additional comments or explanations in the space provided or with attachments.

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Helps Facilitate	Hinders	
Hazard Mitigation Plan	✓		Planning & Dev.		✓		
Comprehensive Land Use Plan (or General, Master or Growth Mgt. Plan)	✓		Planning & Dev		✓		
Floodplain Management Plan	✓		Planning & Dev	✓			
Open Space Management Plan (or Parks & Rec./ Greenways Plan)	✓		Planning & Dev				Recreational Facilities Plan and Pedestrian Plan
Stormwater Management Plan / Ordinance	✓		"	✓			
Natural Resource Protection Plan	✓			✓			CAMA & Sedimentation erosion Dune Control ordinance & Prote ord.
Flood Response Plan							
Emergency Operations Plan	✓		Administration	✓			
Continuity of Operations Plan	✓			✓			Admin. by Dare County EM
Evacuation Plan	✓			✓			Admin by Dare County EM
Other Plans (please explain under Comments)	✓						Shoreline Access Plan (Control Access to beach to preserve dunes

- Street Master Plan - Help drainage
- Water System Master Plan - ensure

Local Capability Assessment Survey

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Facilitates	Hinders	
Disaster Recovery Plan	✓		Dare Co	✓			Admin. by Dare County EM
Capital Improvements Plan	✓		Finance Dept		✓		
Economic Development Plan							
Historic Preservation Plan	✓		Planning & Dev				
Floodplain Ordinance (or Flood Damage Prevention Ordinance)	✓		Planning & Dev	✓			Chapter 151 Town Code
Zoning Ordinance	✓		Planning & Dev	✓			Chapter 153 Town Code
Subdivision Ordinance	✓		Planning & Dev		✓		Chapter 152 Town Code
Unified Development Ordinance							
Post-disaster Redevelopment / Reconstruction Ordinance	✓		Planning & Dev	✓			incorporated in zoning ord. and policy in Land Use Plan
Building Code	✓		Planning & Dev	✓			Full time Building inspectors & Ch. 150 of Town Code
Fire Code	✓		Building Insp.	✓			
National Flood Insurance Program (NFIP)	✓		Planning	✓			
NFIP Community Rating System (CRS Program)	✓		Planning	✓			

Local Capability Assessment Survey

2. ADMINISTRATIVE AND TECHNICAL CAPABILITY - Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "**X**" in the appropriate box. Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff / Personnel Resources	Yes	No	Department / Agency	Comments
Planners with knowledge of land development and land management practices	✓		Planning	
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	✓		Public Services	Contracted Services
Planners or engineers with an understanding of natural and/or human-caused hazards	✓		Planning	
Emergency manager		X		
Floodplain manager	✓		Planning	CFM on Staff
Land surveyors		X		contracted as needed
Scientist familiar with the hazards of the community		X		
Staff with education or expertise to assess the community's vulnerability to hazards		X		
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	✓		Planning	
Resource development staff or grant writers	✓		Planning	

Local Capability Assessment Survey

3. **FISCAL CAPABILITY** - Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources for hazard mitigation purposes (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	Yes	No	Department / Agency	Comments
Capital Improvement Programming	✓		Finance	
Community Development Block Grants (CDBG)		X		
Special Purpose Taxes (or taxing districts)		X		
Gas / Electric Utility Fees		X		
Water / Sewer Fees	X			Impact Fees for Water & Central Sewage
Stormwater Utility Fees		X		
Development Impact Fees		X		
General Obligation, Revenue and/or Special Tax Bonds		X		
Partnering arrangements or intergovernmental agreements	X			Dare County Emergency Management Disaster Recovery Plan & Hazard Mit. Plan
Other: _____				

Local Capability Assessment Survey

4. POLITICAL CAPABILITY - Political capability can be generally measured by the degree to which local political leadership is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Please identify some general examples of these efforts if available and/or reference where more documentation can be found.

- CRS Participant
- CFM on staff
- NC Licensed Arch on staff (Building Insp)
- CAMA LPO on staff
- Adopted Flood Damage Prevention ordinance w/ certain amount freeboard
-

Local Capability Assessment Survey

5. SELF-ASSESSMENT OF CAPABILITY - Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-4 of this survey.

	DEGREE OF CAPABILITY		
	LIMITED	**MODERATE**	**HIGH**
Planning and Regulatory Capability			X
Administrative and Technical Capability			X
Fiscal Capability		X	
Political Capability		X	
OVERALL CAPABILITY		X	

Local Capability Assessment Survey

Jurisdiction/Agency: Town of Kitty Hawk **Phone: (252)261-3552**

Point of Contact: Rob Testerman **E-mail: rob.testerman@kittyhawktown.net**

1. PLANNING AND REGULATORY CAPABILITY - Please indicate whether the following planning or regulatory tools (plans, ordinances, codes or programs) are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Strongly Supports, Helps Facilitate or Hinders) with another "X". Finally, please provide additional comments or explanations in the space provided or with attachments.

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Helps Facilitate	Hinders	
Hazard Mitigation Plan	X		Planning & Inspections	X			
Comprehensive Land Use Plan (or General, Master or Growth Mgt. Plan)	X		Planning & Inspections		X		
Floodplain Management Plan	X		Planning & Inspections	X			
Open Space Management Plan (or Parks & Rec./ Greenways Plan)	X		Administration		X		
Stormwater Management Plan / Ordinance	X		Administration	X			
Natural Resource Protection Plan							
Flood Response Plan	X		Administration	X			
Emergency Operations Plan	X		Administration/Fire /Police		X		
Continuity of Operations Plan							
Evacuation Plan							
Other Plans (please explain under Comments)							

Local Capability Assessment Survey

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Facilitates	Hinders	
Disaster Recovery Plan							
Capital Improvements Plan	X		Administration		X		
Economic Development Plan							
Historic Preservation Plan							
Floodplain Ordinance (or Flood Damage Prevention Ordinance)	X		Planning & Inspections	X			
Zoning Ordinance	X		Planning & Inspections		X		
Subdivision Ordinance	X		Planning & Inspections		X		
Unified Development Ordinance							
Post-disaster Redevelopment / Reconstruction Ordinance							
Building Code	X		Planning & Inspections	X			
Fire Code	X		Fire/Planning & Inspections		X		
National Flood Insurance Program (NFIP)	X		Planning & Inspections	X			
NFIP Community Rating System (CRS Program)	X		Planning & Inspections	X			

Local Capability Assessment Survey

2. ADMINISTRATIVE AND TECHNICAL CAPABILITY - Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box . Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff / Personnel Resources	Yes	No	Department / Agency	Comments
Planners with knowledge of land development and land management practices	X		**Planning & Inspections**	
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	X		**Planning & Inspections**	
Planners or engineers with an understanding of natural and/or human-caused hazards	X		**Planning & Inspections**	
Emergency manager		X		
Floodplain manager	X		**Planning & Inspections**	
Land surveyors		X		
Scientist familiar with the hazards of the community		X		
Staff with education or expertise to assess the community's vulnerability to hazards		X		
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	X		**Planning & Inspections**	GIS program not in house, but researching options. At present time use County's GIS
Resource development staff or grant writers	X		**Planning & Inspections**	

Local Capability Assessment Survey

3. **FISCAL CAPABILITY** - Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources for hazard mitigation purposes (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	Yes	No	Department / Agency	Comments
Capital Improvement Programming	X		**Administration**	
Community Development Block Grants (CDBG)		X		
Special Purpose Taxes (or taxing districts)	X		**Administration/ Finance**	
Gas / Electric Utility Fees		X		
Water / Sewer Fees		X		
Stormwater Utility Fees		X		
Development Impact Fees	X		**Administration/ Finance**	
General Obligation, Revenue and/or Special Tax Bonds	X		**Administration/ Finance**	
Partnering arrangements or intergovernmental agreements	X		**Administration**	
Other: _____				

Local Capability Assessment Survey

4. POLITICAL CAPABILITY - Political capability can be generally measured by the degree to which local political leadership is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Please identify some general examples of these efforts if available and/or reference where more documentation can be found.

In response to repetitive flooding in certain locations, Kitty Hawk Town Council has funded several stormwater management studies, the most recent of which identified potential solutions to the flooding issues. As the potential stormwater management improvements cost a significant amount of money, but only benefit certain areas of the town, many property owners in the community do not support funding the recommended improvements. During the last two fiscal years, the Kitty Hawk Town Council members have budgeted funds to implement the first two phases of the stormwater management improvements and sought supplemental funds to install the remaining improvements in a quicker timeframe.

The Town of Kitty Hawk has also adopted a flood damage protection ordinance with a one-foot freeboard requirement that exceeds the Minimum base flood elevation standards in AE and VE flood zones. Although this requirement places a greater expense on the property owner and/or contractor at the time of construction, the Town recognizes the greater long-term good of preventing flood damage.

The Town of Kitty Hawk has partnered with the State of North Carolina and Nature Conservancy on the acquisition and conservation of the Kitty Hawk Woods Coastal Reserve, which consists of 1,877 acres of unique maritime forest land. Although the Town has a very limited amount of remaining, developable land, Town leaders recognized the importance of preserving the coastal reserve properties as a natural amenity and mechanism to prevent over-development and provide a large area of natural stormwater management.

Kitty Hawk participates in the CRS program in addition to our participation in the NFIP. This provides an opportunity for discounts on flood Insurance for all property owners located in the flood hazard areas. The Kitty Hawk Flood Damage Prevention Ordinance includes a 1-foot freeboard requirement to ensure structures are elevated to a level that exceeds NFIP standards. A copy of the Flood Ordinance is available from the Kitty Hawk Planning & Inspection Department.

The Town also participates in the CAMA program which establishes setbacks for development along the ocean and estuarine shorelines. Minor CAMA permits are issued as part of the agreement with the State enforcement procedures of the CAMA regulations.

Local Capability Assessment Survey

5. SELF-ASSESSMENT OF CAPABILITY - Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-4 of this survey.

	DEGREE OF CAPABILITY		
	LIMITED	MODERATE	HIGH
Planning and Regulatory Capability			X
Administrative and Technical Capability		X	
Fiscal Capability		X	
Political Capability		X	
OVERALL CAPABILITY		X	

Local Capability Assessment Survey

Jurisdiction/Agency: Southern Shores **Phone:** (252) 261-2394

Point of Contact: Wes Haskett **E-mail:** whaskett@southernshores-nc.gov

1. PLANNING AND REGULATORY CAPABILITY - Please indicate whether the following planning or regulatory tools (plans, ordinances, codes or programs) are currently in place or under development for your jurisdiction by placing an "X" in the appropriate box. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Strongly Supports, Helps Facilitate or Hinders) with another "X". Finally, please provide additional comments or explanations in the space provided or with attachments.

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Helps Facilitate	Hinders	
Hazard Mitigation Plan	X		Planning & Code Enforcement	X			
Comprehensive Land Use Plan (or General, Master or Growth Mgt. Plan)	X		" "		X		
Floodplain Management Plan							
Open Space Management Plan (or Parks & Rec./ Greenways Plan)							
Stormwater Management Plan / Ordinance							
Natural Resource Protection Plan							
Flood Response Plan							
Emergency Operations Plan	X		All depts.		X		
Continuity of Operations Plan							
Evacuation Plan							
Other Plans (please explain under Comments)							

Local Capability Assessment Survey

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Facilitates	Hinders	
Disaster Recovery Plan							
Capital Improvements Plan	X		Finance / Admin.		X		
Economic Development Plan							
Historic Preservation Plan							
Floodplain Ordinance (or Flood Damage Prevention Ordinance)	X		Planning + Code Enf.	X			
Zoning Ordinance	X		" "		X		
Subdivision Ordinance	X		" "		X		
Unified Development Ordinance							
Post-disaster Redevelopment / Reconstruction Ordinance							
Building Code	X		" "		X		
Fire Code	X		" "		X		
National Flood Insurance Program (NFIP)	X		" "	X			
NFIP Community Rating System (CRS Program)	X		" "	X			

Local Capability Assessment Survey

2. ADMINISTRATIVE AND TECHNICAL CAPABILITY - Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "**X**" in the appropriate box . Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff / Personnel Resources	Yes	No	Department / Agency	Comments
Planners with knowledge of land development and land management practices	X		Planning + Code Enf.	
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	X		other	Contracted Service
Planners or engineers with an understanding of natural and/or human-caused hazards	X		Planning + Code Enf.	
Emergency manager		X		
Floodplain manager	X		" "	
Land surveyors	X		other	Contracted Service
Scientist familiar with the hazards of the community		X		
Staff with education or expertise to assess the community's vulnerability to hazards	X		Planning + Code Enf.	
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	X		" "	
Resource development staff or grant writers	X		All depts.	

Local Capability Assessment Survey

3. **FISCAL CAPABILITY** - Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources for hazard mitigation purposes (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	Yes	No	Department / Agency	Comments
Capital Improvement Programming	X		Administration	
Community Development Block Grants (CDBG)		X		
Special Purpose Taxes (or taxing districts)	X		Administration	
Gas / Electric Utility Fees		X		
Water / Sewer Fees		X		
Stormwater Utility Fees		X		
Development Impact Fees	X		Planning + Code Enf.	
General Obligation, Revenue and/or Special Tax Bonds	X		Admin.	
Partnering arrangements or intergovernmental agreements	X		Admin.	
Other: _____				

Local Capability Assessment Survey

4. POLITICAL CAPABILITY - Political capability can be generally measured by the degree to which local political leadership is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Please identify some general examples of these efforts if available and/or reference where more documentation can be found.

- 2 ft. freeboard required in SFHA

Local Capability Assessment Survey

5. SELF-ASSESSMENT OF CAPABILITY - Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-4 of this survey.

	DEGREE OF CAPABILITY		
	LIMITED	MODERATE	HIGH
Planning and Regulatory Capability			X
Administrative and Technical Capability		X	
Fiscal Capability		X	
Political Capability		X	
OVERALL CAPABILITY		X	

Local Capability Assessment Survey

Jurisdiction/Agency: Duck **Phone:** 252-255-1234

Point of Contact: William Tate/Donna Black **E-mail:** ctate@townofduck.com

1. PLANNING AND REGULATORY CAPABILITY - Please indicate whether the following planning or regulatory tools (plans, ordinances, codes or programs) are currently in place or under development for your jurisdiction by placing an "**X**" in the appropriate box. Then, for each particular item in place, identify the department or agency responsible for its implementation and indicate its estimated or anticipated effect on hazard loss reduction (Strongly Supports, Helps Facilitate or Hinders) with another "**X**". Finally, please provide additional comments or explanations in the space provided or with attachments.

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Helps Facilitate	Hinders	
Hazard Mitigation Plan	x		Community Development/Fire		x		
Comprehensive Land Use Plan (or General, Master or Growth Mgt. Plan)	x		Community Development	x			
Floodplain Management Plan		x	Community Development	x			
Open Space Management Plan (or Parks & Rec./ Greenways Plan)	x		Community Development		x		
Stormwater Management Plan / Ordinance	x		Community Development		x		
Natural Resource Protection Plan							
Flood Response Plan							
Emergency Operations Plan	x		Fire/Public Safety	x			
Continuity of Operations Plan							
Evacuation Plan	x		Town/County Control Group	x			
Other Plans (please explain under Comments)							

Local Capability Assessment Survey

Planning / Regulatory Tool	In Place	Under Development	Department / Agency Responsible	Effect on Loss Reduction			Comments
				Strongly Supports	Facilitates	Hinders	
Disaster Recovery Plan							
Capital Improvements Plan	x		Town Manager	x			
Economic Development Plan							
Historic Preservation Plan							
Floodplain Ordinance (or Flood Damage Prevention Ordinance)	x		Community Development	x			
Zoning Ordinance	x		Community Development	x			
Subdivision Ordinance	x		Community Development		x		
Unified Development Ordinance							
Post-disaster Redevelopment / Reconstruction Ordinance	x		Community Development	x			
Building Code	x		Community Development	x			
Fire Code	x		Community Development	x			
National Flood Insurance Program (NFIP)	x		Community Development	x			
NFIP Community Rating System (CRS Program)	x		Community Development		x		

Local Capability Assessment Survey

2. ADMINISTRATIVE AND TECHNICAL CAPABILITY - Please indicate whether your jurisdiction maintains the following staff members within its current personnel resources by placing an "X" in the appropriate box . Then, if YES, please identify the department or agency they work under and provide any other comments you may have in the space provided or with attachments.

Staff / Personnel Resources	Yes	No	Department / Agency	Comments
Planners with knowledge of land development and land management practices	x		Community Development	
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	x		Building Inspections	
Planners or engineers with an understanding of natural and/or human-caused hazards	x		Building Inspections	
Emergency manager	x		Fire	
Floodplain manager	x		Community Development	
Land surveyors				
Scientist familiar with the hazards of the community				
Staff with education or expertise to assess the community's vulnerability to hazards	x		Community Development	
Personnel skilled in Geographic Information Systems (GIS) and/or FEMA's HAZUS program	x		Community Development	
Resource development staff or grant writers	x		Multiple Departments	

Local Capability Assessment Survey

3. **FISCAL CAPABILITY** - Please indicate whether your jurisdiction has access to or is eligible to use the following local financial resources for hazard mitigation purposes (including as match funds for State of Federal mitigation grant funds). Then, identify the primary department or agency responsible for its administration or allocation and provide any other comments you may have in the space provided or with attachments.

Financial Resources	Yes	No	Department / Agency	Comments
Capital Improvement Programming	x		Town Manager	
Community Development Block Grants (CDBG)				
Special Purpose Taxes (or taxing districts)	x		Town Manager	
Gas / Electric Utility Fees				
Water / Sewer Fees				
Stormwater Utility Fees				
Development Impact Fees	x		Community Development	
General Obligation, Revenue and/or Special Tax Bonds	x		Town Manager	
Partnering arrangements or intergovernmental agreements	x		Town Manager	
Other: _____				

Local Capability Assessment Survey

4. POLITICAL CAPABILITY - Political capability can be generally measured by the degree to which local political leadership is willing to enact policies and programs that reduce hazard vulnerabilities in your community, even if met with some opposition. Examples may include guiding development away from identified hazard areas, restricting public investments or capital improvements within hazard areas, or enforcing local development standards that go beyond minimum State or Federal requirements (e.g., building codes, floodplain management, etc.). Please identify some general examples of these efforts if available and/or reference where more documentation can be found.

The Town of Duck Town Council and Town Management have championed policies and ordinances that reduce community vulnerability. The Town has adopted many higher regulatory standards in local ordinances to protect development and reduce property damage. Some examples include additional setback restrictions for oceanfront structures, freeboard requirements for structures in the floodplain, fill limitations and stormwater management, and a restriction on the size of dwellings. The Town has also been very proactive in addressing stormwater issues on NC 12 which have historically created problems with storm evacuations.

Local Capability Assessment Survey

5. SELF-ASSESSMENT OF CAPABILITY - Please provide an approximate measure of your jurisdiction's capability to effectively implement hazard mitigation strategies to reduce hazard vulnerabilities. Using the following table, please place an "**X**" in the box marking the most appropriate degree of capability (Limited, Moderate or High) based upon best available information and the responses provided in Sections 1-4 of this survey.

	DEGREE OF CAPABILITY		
	LIMITED	MODERATE	HIGH
Planning and Regulatory Capability			x
Administrative and Technical Capability			x
Fiscal Capability		x	
Political Capability			x
OVERALL CAPABILITY			x

DARE COUNTY HAZARD MITIGATION GOALS AND STRATEGIES

PREVENTATIVE
Goals: 1. Improve stormwater drainage and land management preparation for flooding.
2. Assist property owners with safe and efficient clean up after storm events

Action	Hazard	Priority	Agency/Dept	Potential Funding Source	Projected Completion Date	Implementation Status
1a Identify Funding to improve stormwater drainage and land management preparation for flooding	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tide Flooding	Medium	Planning- SWC	General fund, grant funds	Annually – 2016 for SWC grant currently underway in Wanchese	Seek funding from mitigation sources at state/fed level Utilize academic partners to leverage combined assessment revenues.
1b Identify problem areas and prioritize project to improve drainage system throughout the county.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tide Flooding	High	Planning GIS	General fund	Annually	USE GIS mapping techniques to map and identify historical areas and new area which may be identified as significant events.
1c Prioritize and Fund Critical Drainage Projects	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Medium	Planning SWC	General fund, grant funds	Annually	Grants funds are secured when available to assist homeowners with drainage improvements
1d Enforce ordinances that prevent fill or structures without a drainage plan	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	High	Planning	General fund	Annually as part of daily enforcement	Routinely enforce the Dare County Flood Ordinance regulations for fill in the VE zone areas.
2a Implementing yearly contract for debris removal services after flooding/storms	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	High	Emer Mgmt	General fund – seek FEMA reimburse if services are used	Annual renewal	Continue yearly contract renewal with debris removal services. Compose media template for public outlining county debris plan and debris pick-up separation of items.

PROPERTY PROTECTION
Goals: 3. Increase the number of properties that meet and exceed BFE.

Action	Hazard	Priority	Agency/Dept	Potential Funding Source	Projected Completion Date	Implementation Status
3a. Increase the number of properties that meet and exceed the published base flood elevation.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding, Tsunami	High	Planning	General fund	Annually as part of daily enforcement	All new structures permitted have to meet 1-foot freeboard as adopted by Dare County.
3b Identify the Most Vulnerable Structures Within the County	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding, Tsunami	High	Planning GIS	General fund Grant funds	Annually as part of CRS program-RLS plan	Additional work to elevate 44 homes with federal grant funds underway, completion scheduled in 2016

NATURAL RESOURCE PROTECTION Goals: 4. Advocate the Use of Existing (2002) State and Federal Regulatory Programs for Protecting and Preserving Coastal Wetland Areas of Environmental Concern. 5. Continue to Support the U.S. Army Corps of Engineers Permit Program.						
Action	**Hazard**	**Priority**	**Agency/Dept**	**Potential Funding Source**	**Projected Completion Date**	**Implementation Status**
4a Implementation and Enforcement of CAMA Use Standards for Coastal Wetland AECs as Identified under 15NCAC7H, Section 0205 and 0208	Hurricanes, Nor'easters, Flooding, Tidal Flooding,	Medium	Planning	General fund	Annually	Continue to provide LPO assistance in unincorporated Dare County per CAMA regulations and LUP policies. Review CAMA major permit applications for consistency.
4b Continue to Administer the CAMA Local Enforcement Program and Maintain the Staff Necessary for this Work	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding,	Medium	Planning	General fund	Annually	Continued participation in LPO program for issuance of CAMA minor permits
5a Refer Applicants to U.S. Army Corps of Engineers Permit Program, Specifically Section 404	Hurricanes, Nor'easters, Flooding,	Medium	Planning	General fund	Annually	As needed for individual development projects and subdivision projects. Refer applicants to USACOE for 404 wetland permitting issues
5b Facilitate Implementation of Permit Program for Wetland Management	Hurricanes, Nor'easters, Flooding,	Medium	Planning	General fund	Annually	Incomplete. No local wetland permitting program established. Refer applicants to USACOE.
STRUCTURAL PROJECTS **Goal: 6. Improve traffic flow on NC 12 7. Protect transportation routes, including the Bonner Bridge 8. Establish secondary water supplies for fire protection 9. Acquire redundant power supply for critical facilities**						
Action	**Hazard**	**Priority**	**Agency/Dept**	**Potential Funding Source**	**Projected Completion Date**	**Implementation Status**
6a Protect transportation routes and improve traffic flow along NC 12.	Hurricanes, Tidal Flooding, Nor'easters, Flooding,	Medium	Emergency Mgmt, NCDOT	NCDOT	2016	Participate in RPO meetings to recommend projects for State Transportation Improvement Program.
6b Coordinate traffic lights to create efficient flow	Hurricanes, Nor'easters, Flooding,	Medium	Emergency Mgmt, NCDOT	NCDOT	2016	Work with NCDOT on the synchronization of traffic signals.
7a Continue to advocate for the replace the Bonner Bridge	Hurricanes, Nor-easters, Flooding, Erosion	High	Dare County Board of Commissioners	NCDOT	Until bridge replacement commences	NODOT working to replace, bridge lawsuits form environmental agencies have resulted in delays
8a Establish secondary water supplies/points for fire protection efforts	Hurricane,s Nor-easters, Flooding, Wildfires	Medium	Fire Marshal	Grant funds	2016	New action added in 2015, funding to be sought
9a Acquire generators or other forms of redundant power supply to ensure that critical facilities and infrastructure remain operational where normal power supply is not available.	All hazards	Medium	Fire Marshal	Grant funds	2016	New action added in 2015, funding to be sought

PUBLIC INFORMATION Goals: 10. Require Realtors to Disclose Flood Zones. 11. Enhance NFIP Information. 12. Develop Emergency Response Plan for Road/Bridge Loss. 13. Advocate for Beach Replacement. 14. Develop Educational Brochures on Additional Hazards that could Possibly Occur Within the County.						
Action	**Hazard**	**Priority**	**Agency/Dept**	**Potential Funding Source**	**Projected Completion Date**	**Implementation Status**
10a Work with real estate community on outreach activities on disclosure of flood hazards and other coastal hazards.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Medium	Planning	General fund	2015-2016	Real estate representatives serve as on Program for Public Information committee. Development of disclosure brochure slated for 2016. Targeted mailing sent to Hatteras Island real estate company about flood disclosures and map information services offered by staff.
10b Meet With Realtors to Coordinate Public Education Activities	Hurricanes, Nor'easters, Tidal Flooding, Flooding	Medium	Planning	General fund	2016	Real estate representatives included in PPI membership.
11b Put Flood Maps on the County's Website	Hurricanes, Nor'easters, Tidal Flooding, Flooding	High	GIS	General fund	2015	Completed, new County webpage include flood zone also.
11c Continue to Participate in CRS Activities	Hurricanes, Nor'easters, Tidal Flooding, Flooding	High	Planning	General fund	Annually	Actively involved in CRS program. Outreach efforts each year as established in PPI.
11d coordinate with NC Floodplain Mapping on dissemination of updated floodplain maps	Hurricanes, Nor'easters, Tidal Flooding, Flooding	High	NCDPS, Planning	General fund	2015-2016	Updated maps will be available for viewing on NCFRIs and County webpage.
11e Continue Storm Readiness	Hurricanes, Nor'easters, Tidal Flooding, Flooding	High	Emergency Management	General fund	Updated according to guidelines of NWS	Status updated in 2015
12a Develop Emergency Response Plan for Road/Bridge Loss	Hurricanes, Nor'easters, Tidal Flooding, Flooding	High	Emergency Mgmt –NCDOT	General fund	2016	County staff works closely with NCDOT officials and annually advocates to RPO meetings for bridge/road improvements
13a Advocate for Beach Replacement	Hurricanes, Nor'easters, Tidal Flooding, Flooding	High	Dare County Manager	Grant funds, beach nourishment fund	2016-2017	Study underway for renourishment of Buxton area.
14a Increase Awareness of Hazards Affecting Dare County through outreach activities	All Hazards	Medium	Emergency Mgmt	General Fund	2015-2016	New action added in 2015

- 2015 - Town of Nags Head: Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
Policy/Program Related Mitigation Activities A. Evaluate and revise local plans, policies, procedures, regulations and ordinances to further enhance the regions ability to mitigate identified hazards in the plan.										
Preventative Measures: Flood Mitigation through NFIP, State, Local Activities and Regulatory Efforts										
1. Continue participation in the National Flood Insurance Program. This includes updating town ordinances and flood maps as revisions and changes in FEMA and State requirements are made available.	Hurricanes, Nor'easters, Floods, Thunderstorms,	Annual	Planning	General Fund	X	X	X	X	X	High
2. Maintain the town's freeboard requirement and consider additional measures for flood damage reduction recognized by FEMA and the CRS program to reduce flood losses.	Hurricanes, Nor'easters, Floods Thunderstorms,	Anticipated 2016 in conjunction with revised flood maps.	Planning	General Fund		X				High
3. Support the continued education and training of the Town's Building Inspectors and planning staff in inspections and mitigation activities related to flood. This includes maintaining staff as certified floodplain managers.	Hurricanes, Nor'easters, Floods, Thunderstorms,	Annual	Planning	General Fund, Grants	X	X	X	X	X	Medium

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
4. Develop a program to identify businesses and material storage areas where significant amounts of toxic or hazardous products are stored which would be subject to flooding.	Hurricanes, Nor'easters, Floods Thunderstorms,	2016	Public Safety - Fire	General Fund		X				Medium
5. Petition FEMA through the Town's state and regional NFIP representatives to consider adopting realistic regulations regarding the determination of destroyed structures. Specifically, this would apply to structures which are located on the public beach that are not eligible for flood insurance until they collapse.	Hurricanes, Nor'easters, Floods Thunderstorms, , Erosion	2016		N/A		X				Low
6. Continue Town participation in the Community Rating System program and seek ways to improve the town's class six (6) rating.	Hurricanes, Nor'easters, Floods Thunderstorms, , Erosion, Winterstorms	2015/2016 – Investigate during five year recertification cycle	Planning/Planning Board/Board of Commissioners	General Fund	X	X				High
7. Train town staff on the 2013 CRS Manual.	Hurricanes, Nor'easters, Flooding, Thunderstorms,	2015	Planning	N/A	X					High
8. Following a severe storm or hurricane, evaluate reconstruction and repair efforts for compliance with the adopted zoning and flood ordinance, CAMA regulations, and all other applicable local, state and federal regulations	Hurricanes, Nor'easters, Floods Thunderstorms, , Tornadoes, Winterstorms, Erosion, Wildfire	Annually	Planning	N/A	X	X	X	X	X	Medium

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
9. Continue to maintain, enforce, and evaluate the effectiveness of the comprehensive stormwater management ordinance adopted in 2014.	Hurricanes, Nor'easters, Floods, Thunderstorms,	Annually	Planning/Public Works	N/A	X	X	X	X	X	High
Septic Health										
10. Evaluate methods to improve the effectiveness of and property owner participation in the Town's Septic Health Program. This may include additional measures to monitor septic system operations with routine inspections.	Hurricanes, Nor'easters, Floods Thunderstorms, , Tsunami	2017	Planning/Septic Health	General Fund/Grants			X			Medium
11. Explore seeking authority and adopting regulations which would allow qualified Town staff to inspect sewer treatment facilities and on-site septic systems after a storm. These regulations should also allow staff torequire the corrective actions necessary to ensure proper operation of these systems.	Hurricanes, Nor'easters, Floods, Thunderstorms, , Tsunami	2017	Planning/Septic Health	General Fund			X			Medium

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
Project Related Mitigation Activities B. Implement mitigation projects that are cost effective and will help reduce the effects of identified hazards in the plan. C. Maintain and/or improve existing transportation infrastructure to aid in evacuations. D. Pursue mitigation of repetitive flood loss properties.										
Beach Nourishment, Shoreline Management, and Repetitive Loss										
12. Continue to identify properties in repetitive loss areas and inform property owners in these areas of flood mitigation actions they can take to reduce flood losses.	Hurricanes, Nor'easters, Floods Thunderstorms, Erosion, Winterstorms	Annual	Planning	General Fund, Grants	X	X	X	X	X	Medium
13. Continue the town's program for coastal storm damage reduction to nourish beaches as a means to mitigate damage to oceanfront properties and infrastructure.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, Tsunami	2017/2018	Board of Commissioners/Town Manager/Public Works/Planning	Dare County Shoreline Fund/Town Municipal Service Districts			X	X		High
14. Continue to pursue funding sources and permitting for the Town's beach nourishment program from Dare County and other levels of government	Hurricanes, Nor'easters, Floods Thunderstorms, Coastal Erosion, , Tsunami	2015/2016	Board of Commissioners/Town Manager	General Fund	X	X	X			High

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
15. Actively lobby the State for a state policy and strategy on beach nourishment and beach re-nourishment through joint efforts with other local governments and organizations such as the North Carolina Beach and Inlet Waterways Association. This includes an annually funded state program to support local nourishment activities.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, , Tsunami	2018/2019	Board of Commissioners	General Fund				X	X	Medium
16. Develop and implement a shoreline management plan to assist with stabilization of the beach between nourishment cycles. This may include a town program to provide planting and sand fencing based on a set of criteria for evaluating shoreline and dune conditions.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion	2015/2016	Public Works/Planning	Dare County Shoreline Fund/General Fund	X	X				High
17. Develop a long-term strategy for beach nourishment including financing, permitting, and ongoing project implementation in coordination with Dare County and other Dare County municipalities.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Erosion	2018/2019	Board of Commissioners/Town Manager	Dare County Shoreline Fund/General Fund				X	X	Medium
18. Monitor and evaluate changing shoreline conditions annually as part of an overall shoreline management strategy.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion	Annually	Public Works/Consultant	Dare County Shoreline Fund/General Fund	X	X	X	X	X	High

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
19. Seek methods to remove structures located on the public beach which degrade the recreational and natural quality of the environment, create public health and safety hazards to beachgoers, and impede the ability of life safety personnel to move along the shoreline.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion	Annually	Board of Commissioners/Town Manager/Town Attorney	General Fund	X	X	X	X	X	High

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
Open Space Preservation and Natural Resource Protection										
20. Actively seek grants to acquire property for the purpose of mitigating damage, improving water quality, preserving open space, protecting natural resources, and co-located (dual use) Town facilities.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion,	Annually	Planning/Public Works	General Fund/Grants	X	X	X	X	X	Medium
Transportation and Drainage Infrastructure										
21. Maintain an emergency transportation route parallel to US 158. This may include Wrightsville Avenue, Memorial Avenue and even the Nags Head Woods Road as needed.	Hurricanes, Nor'easters, Floods, Thunderstorms, , Tsunami	Annually	Public Works/Public Safety	General Fund	X	X	X	X	X	Medium

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
22. Comprehensively review and improve the Town's drainage system through the budget and CIP process.	Hurricanes, Nor'easters, Floods, Thunderstorms,	2015/2016	Board of Commissioners/Public Works	General Fund	X	X				High
23. Implement stormwater improvements and address localized drainage issues. This may include the reevaluation of the Town's Stormwater Utility, as necessary.	Hurricanes, Nor'easters, Floods, Thunderstorms,	2015/2016/2017	Board of Commissioners/Town Manager/Public Works	General Fund/Stormwater Fund	X	X	X			Medium
24. Continue to develop and implement a strategically prioritized list of stormwater projects as part of the Town's Capital Improvement Program.	Hurricanes, Nor'easters, Floods, Thunderstorms,	Annually	Board of Commissioners/Town Manager/Public Works	General Fund/Stormwater Fund	X	X	X	X	X	High
25. Collect necessary survey data and asset information to evaluate and program drainage and transportation projects as well as maintenance activities.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion,	2015/2016	Public Works	General Fund/Stormwater Fund	X	X				High
26. Continue to identify and evaluate solutions to address areas of repetitive flooding.	Hurricanes, Nor'easters, Floods, Thunderstorms, ,	Annually	Public Works	General Fund/Stormwater Fund	X	X	X	X	X	High
27. Perform annual maintenance of the Town's drainage system including vegetation removal, sediment removal, culvert cleaning and the re-establishment of drainage grade lines to improve drainage flow.	Hurricanes, Nor'easters, Floods, Thunderstorms, ,	Annually	Public Works	General Fund/Stormwater Fund	X	X	X	X	X	High

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
28. Investigate innovative solutions to unconventional drainage problems. This could include the implementation of a groundwater lowering system along the western portion of Vista Colony Subdivision to lower surrounding surface and groundwater increasing available stormwater storage capacity in advance of storm events.	Hurricanes, Nor'easters, Floods, Thunderstorms,	Annually	Public Works	General Fund/Stormwater Fund	X	X	X	X	X	Medium
29. Incorporate drainage improvements into roadway, pathway, and related development projects in an effort to eliminate impediments, improve flow and enhance hydraulic capacity which can effectively result in an increased level of service and system efficiency. Examples include the continued development of the W. Side Multi-Use Path, Holy Trinity Catholic Church, Flicker St. and Moongate Subdivision located in the Village of Nags Head.	Hurricanes, Nor'easters, Floods, Thunderstorms,	Annually	Public Works	General Fund/ Water Fund	X	X	X	X	X	Medium
30. Develop contingency plans for Town streets and waterlines that may be lost as a result of erosion. This can include development of alternative routes or access, or upfront declaration of the potential for future improvements.	Hurricanes, Nor'easters, Floods, Thunderstorms,	Annually	Public Works	General Fund/Stormwater Fund	X	X	X	X	X	Medium

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
31. Maintain public safety communications with the Hospital, Colony Ridge, and other special needs populations to assist with evacuation procedures prior to an event.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, , Tsunami	Annually	Planning/ Hurricane Recovery	General Fund	X	X	X	X	X	High
32. Conduct a study to determine future impacts of recurring flooding associated with sea level rise on town infrastructure including streets, waterlines, electric power utilities, and wastewater systems.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, ,	2015-2017	Planning/Public Works/Board of Commissioners	General Fund/Grants	X	X	X			Medium

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
Fire Protection										
33. Continue to evaluate the need for and maintain fire breaks in wild land urban interface areas including residential communities adjacent to Nags Head Woods and the Cape Hatteras National Seashore as part of the ongoing evaluation of the Nags Head Urban Wild Fire Interface Plan.	Fire/Wildfire	2015-2017	Public Safety – Fire/Nature Conservancy/NPS	General Fund/Grants	X	X	X			High

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
34. Plan and participate in controlled burn activities as necessary to strategically reduce fuel loads in Nags Head Woods and other areas to mitigate the impact of wild land urban interface fires.	Fire/Wildfire	2015-2017	Public Safety – Fire/Nature Conservancy/NPS	General Fund/Grants	X	X	X			High
35. Continue the program to remove dead wood in critically fire prone areas.	Fire/Wildfire	Annually	Public Safety – Fire	General Fund	X	X	X	X	X	Medium
36. Evaluate the Nags Head Woods Fire Plan annually and coordinate information with Nature Conservancy Staff and seek grant funding for fuel reduction activities.	Fire/Wildfire	Annually	Public Safety – Fire/Nature Conservancy/NPS	General Fund/Grants	X	X	X	X	X	High
37. Continue to cooperate with the US Forest Service and Dare County for mutual aid fire protection.	Fire/Wildfire	Annually	Public Safety – Fire	General Fund	X	X	X	X	X	Medium
38. Continue to inventory, recommend, and implement improvements to fire hydrants, water distribution infrastructure, and other town infrastructure in support of fire planning efforts as part of the annual CIP process.	Fire/Wildfire	Annually	Public Safety – Fire/Public Works	General Fund/Water Fund	X	X	X	X	X	High
39. Update the Water Supply Shortage Plan and evaluate recommendations to implement water restrictions during periods of drought.	Drought/Fire/Wildfire	2017	Public Works	General Fund/Water Fund			X			Medium

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
40. Continue to cooperate with Dare County on the development of additional water supply well facilities.	Drought/Fire/Wildfire	Annually	Public Works	General Fund/Water Fund	X	X	X	X	X	Medium
41. Improve fire protection in Nags Head Woods with the installation of 'dry hydrants' and maintenance and improvements to Nags Head Woods Road.	Fire/Wildfire	2016/2017	Public Safety – Fire/Public Works	General Fund/Water Fund		x	X			Medium

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
Planning for Pre Event, Response, and Recovery Activities										
42. Continue to coordinate recovery and post storm response activities with Dare County, State, and Federal Government on issues of mutual concern.	All Hazards	Annually	Board of Commissioners/ Town Manager/Outside Agencies	N/A	X	X	X	X	X	Medium
43. Continue to maintain and improve emergency operations and communications infrastructure including the EOC, backup EOC, and mobile command center.	All Hazards	Annually	Public Safety/Town Manager	General Fund	X	X	X	X	X	Medium
44. Following a severe storm the Town shall establish an information center staffed with Town, County, State, and Federal employees who are available to assist property owners in the reentry and recovery process.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, , Tsunami	As Needed	Public Safety/Public Information Officer	General Fund/FEMA	X	X	X	X	X	High
45. Following a declared emergency storm event, only those areas where damage assessment is complete and that have been declared relatively secure will be open to the public.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, , Tsunami	As Needed	Public Safety/Public Information Officer/Planning	General Fund	X	X	X	X	X	High

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
46. Identify and implement methods to streamline the damage assessment process to provide information to Dare County, the state, and any other agencies assisting the town with recovery efforts. This includes methods to expedite the availability of damage and condemnation information to Town staff and the public.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, , Tsunami	2016/2017	Planning	General Fund		X	X			High
47. Pre-position debris removal and monitoring agreements on a yearly basis and seek pre-approved temporary disaster-debris management sites with NC DENR.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, , Tsunami	Annually	Town Manager/Public Works/Board of Commissioners	General Fund	X	X	X	X	X	High
48. Continue to exercise inter local agreements with Dare County and other municipalities for debris management and monitoring.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, , Tsunami	Annually	Town Manager/Public Works/Board of Commissioners	General Fund	X	X	X	X	X	High
49. Obtain pre-storm authorization from the NC Department of Transportation (DOT) to clear DOT maintained roads after storm events.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, , Tsunami	Annually	Town Manager	General Fund	X	X	X	X	X	High

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
50. Maintain mutual aid agreements and reevaluate as necessary to continue post-storm assistance with building inspections, damage assessment, utilities repair, public facilities maintenance, and additional public safety personnel. This includes continued participation in the Statewide Mutual Aid Compact.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, , Tsunami	Annually	Town Manager	General Fund	X	X	X	X	X	High
51. Maintain a well trained staff level damage assessment team and staff knowledgeable in public disaster assistance policies.	Hurricanes, Nor'easters, Floods, Thunderstorms, Erosion, , Tsunami	2015	Planning	General Fund	X					High
52. Follow the Incident Command Structure and maintain a designated Emergency Management Coordinator and Deputy Emergency Management Coordinator.	All Hazards	Annually	Public Safety/Town Manager	General Fund	X	X	X	X	X	High
53. Update emergency plans annually to include changes or modifications to critical facilities and include these in the Town's Emergency Operations Plan.	All Hazards	Annually	Public Safety/Town Manager	General Fund	X	X	X	X	X	High
54. Enter into an agreement prior to storm events to secure the helipad at the hospital for pre and post event needs.	All Hazards	2016	Public Safety/Town Manager	General Fund		X				High

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
55. Partner with the County, State, and local agencies to develop a special needs registry list.	All Hazards	2016	Public Safety/Town Manager	General Fund		X				High
56. Investigate the development of a protocol and secure a location for the offsite storage (i.e. internet based storage or facility outside Town and County jurisdiction), back-up, and recovery of important Town data.	All Hazards	2016	Town Manager/ Information Technology	General Fund		X				High
57. Explore the feasibility of developing a Local Emergency Preparedness Committee (LEPC).	All Hazards	2016	Public Safety	General Fund		X				Low
58. Development of a plan with procedures to address an active shooter/mass causality situation within Town facilities.	Terrorism Event Active Shooter/Mass Casualties	2015-2016- Includes research and development of a plan along with staff training.	Public Safety	General Fund	X	X				High
59. Research, evaluate, and execute an internal emergency alert system.	Terrorism Event Active Shooter/Mass Casualties	2016	Public Safety	General Fund	X	X				High

Public Information Activities

E. Implement a public outreach campaign to increase awareness about the hazards that can impact the region.
F. Provide public education opportunities and information regarding storm preparedness, hazard mitigation and planning initiatives.

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
60. Continue to improve methods of providing public information both pre and post storm. This includes an automated voice messaging system with storm damage and re-entry information, a Mayor's radio broadcast, email broadcasts, improved real-time website information with relevant local contact information, available information at traffic stops, and designation of a post-storm public information officer.	Hurricanes, Nor'easters, , Floods	2015/2016 – As part of 2015 CRS Recertification	Planning/Public Information Officer/Public Safety	General Fund	X	X				Medium
61. Communicate post-storm recovery and operations policies and procedures to residents, property owners, and special needs populations prior to hurricane season. This includes providing information through email, the Local Government Access Channel, Town Website, and social media.	Hurricanes, Nor'easters, , Floods	2015/2016 – As part of 2015 CRS Recertification	Planning/Public Information Officer/Public Safety	General Fund	X	X				Medium

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
62. Partner with Dare County's Joint Information Section and other neighboring municipalities to establish a process and protocol for informing visitors, residents, and special needs populations of potential hazard events prior, during, and after events. This includes storm-related information as well as evacuation and re-entry. The policy should explore alternative non-traditional methods of information dissemination.	All Hazards	2015/2016	Planning/Public Information Officer/Public Safety	General Fund	X	X				Medium
63. Continue the fire education program. This includes dissemination of information via newspaper articles, website, or social media on fire protection, prescribed burns, fuel reduction activities, and grants available from the State Division of Forestry for fire education.	Fire/Wildfire	Annually	Public Safety - Fire	General Fund, Grants	X	X	X	X	X	Medium
64. Continue to educate property owners to maintain fire safe landscaping and vegetation adjacent to structures.	Fire/Wildfire	Annually	Public Safety – Fire	General Fund	X	X	X	X	X	Medium
65. Proactively educate citizens on the negative implications of using a septic system that has suffered storm damage through development of educational materials on the proper care of a system impacted by floodwaters.	Hurricanes, Nor'easters, Floods, Thunderstorms,	2016	Planning/Septic Health	General Fund/Water Fund		X				High

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Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
66. Develop outreach materials to educate the public and increase awareness on hazards, how to develop and retrofit their properties against hazards, and individual tasks that can help them better prepare and respond to hazards. Staff should explore alternative options to traditional on-site meetings. This may include increased use of social media, the public access channel, and short videos and handouts.					X					High

Kill Devil Hills Hazard Mitigation Action Plan						
Identified Hazards: Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire, Earthquake, Land Slide, Tornado, Tsunami, Rip Currents, Drought, Bridge Collapse, Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Security Attack, Pandemic Event, Public Health Event						
Goals	**Actions**	**Hazard**	**Funding Sources**	**Responsibility**	**Target Completion Date**	**Priority**
Preventive Goals: 1. Reduce damages to existing and future development. 2. Assist in maintaining a stable tax base by providing for sound use of land which may be located in storm hazard areas. 3. Continue to monitor changes in building codes and materials and research construction techniques that can mitigate storm damage.						
Planning and Zoning – Continue to enforce the zoning ordinance and amend when necessary	Ordinances were enforced and amended.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Planning Dept., Board of Commissioners, Building Inspect.	Ongoing enforcement of current zoning regulations. Amend as necessary.	High
Floodplain Regulations – Provide technical assistance to customers/citizens and continue to enforce current flood hazard ordinance.	Customers were provided technical assistance and flood damage prevention ordinance was enforced. Difficult construction below BFE violations were corrected and others in process.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Planning Dept., Building Inspector, Board of Commissioners	Ongoing enforcement of current flood damage prevention ordinance. Amend ordinance as necessary. Prepare for new flood maps and regulations in 2015.	High
Open Space Preservation – Support efforts to preserve natural areas.	The Town took no action other than to maintain ownership of its natural areas.	Flooding, Hurricanes, Tropical Storms, Nor'easters	N/A	Planning Dept.	Ongoing effort to maintain current Town owned open space areas.	High
Stormwater Management – Continue to implement the stormwater management plan.	The Stormwater Management Plan Update August 8, 2011. Concepts were implemented through site plan review. Drainage projects implemented through Streets Division.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Planning Dept., Public Services	Ongoing enforcement of local and state stormwater regulations. Amend as necessary. Continue projects with available funding.	Medium (Environmentally sound and technically feasible.)
Drainage System Maintenance – Continue mowing drainage ditches and conduct normal maintenance and storm event driven maintenance.	Ditch maintenance was accomplished as scheduled throughout the year as well as prior to and after storm events.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Public Services, NCDOT	Ongoing regular maintenance cycles as outlined by the Public Services Department. Follow state regulations.	High

Goals	Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Building Code – Monitor changes to the State Building Code and modify local regulations as necessary to minimize damage.	Inspectors accomplished annual training and enforced revisions to building codes which became effective in 2012.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Planning Dept., Building Inspector	Ongoing monitoring of NCBC. Occasionally modify local ordinances to reflect NCBC changes. Inspectors completed continuing education.	High
Property Protection Goals: 1. Minimize losses associated with storm events to individual properties and provide a framework for storm event reconstruction						
Relocation – Expedite permitting for the relocation of repetitive loss situations.	No repetitive loss relocation opportunities were presented.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Planning Dept.	Ongoing as updated repetitive loss information is provided to the Town. Provided information on possible grant opportunities to the public.	Low
Acquisition – Encourage repetitive loss properties to consider acquisition as a possible solution.	The Town took no action other than outreach efforts.	Flooding, Hurricanes, Tropical Storms, Nor'easters	NC Division of Emergency Management, FEMA	Planning Director, Board of Commissioners	Ongoing outreach efforts as a result of repetitive loss mailings and CRS participation.	Low (Environmentally sound and technically feasible.)
Building Elevation – Continue enforcing the base flood elevation requirement of the Town's Flood Damage Prevention Ordinance.	The Town continued to enforce FDPO requiring documentation for new construction and additions to existing structures.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Asst. Planning Director, Building Inspector	Ongoing enforcement of the FDPO. Amend as necessary.	High
Insurance – Maintain outreach efforts and continue making flood insurance available to the Town's residents.	The Town continued its outreach efforts to educate citizens about flooding, flood insurance and the Biggert-Waters Insurance Reform Act of 2012 and Grimm Waters Act of 2014.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Planning Dept., Town Clerk	Ongoing efforts to inform residents and property owners through various outreach projects as part of CRS.	High
Dune and Beach Maintenance – Continue ongoing beach nourishment efforts.	The Town contracted an engineering consultant to provide engineering support and permitting services and offshore sand search for beach renourishment.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Planning Director, Board of Commissioners	Ongoing in an effort to start beach nourishment in the spring of 2016.	High
Natural Resource Protection Goals: 1. Preserve and restore natural areas while maintaining the function of the floodplain.						

Goals	Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Wetlands Protection – Continue to utilize the zoning ordinance and the Land Use Plan to protect wetlands, implement and enforce CAMA AEC regulations and refer applicants to US Amry Corps of Engineers for Section 404 wetlands.	The Town continued implementation of the zoning ordinance and Land Use Plan to protect wetland areas and CAMA buffer enforced applicable regulations and refered applicants to other agencies for specific needs.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	US Army Corps of Engineers, Planning Dept., NCDENR	Ongoing enforcement of zoning ordinance and CAMA buffer regulations.	High
Coastal Barrier Protection – Continue to support coastal barrier protection efforts by the State.	The Town continued to support the State's coastal barrier protection by educating public on these efforts.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	N/A	CAMA, Planning Dept.	Ongoing efforts to inform residents and property owners of coastal barrier protection efforts.	High
Erosion and Sediment Control – Continue to enforce local and state regulations.	The Town continued to participate and enforce Erosion and Sediment Control Ordinance through plan approvals, site inspections and reporting to the State.	Flooding, Coastal Erosion	General Fund	Planning Dept.	Ongoing enforcement of E&S ordinance. Staff completed annual recertification for local program.	High
Areas of Environmental Concern (AECs) – Support local CAMA officer with compliance efforts within the AECs.	The Town continued to participate, remain active, train and implement the CAMA Local Permit Officer Program.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	CAMA LPO	Ongoing enforcement of CAMA regulations. Staff completed annual CAMA LPO recertification.	HIgh
Surface Water Quality – Preserve surface water quality and enhance water quality through stormwater management and zoning.	The Stormwater Management Plan Update was implemented through site plan review (zoning). The update has a greater focus on water quality and includes strategies to preserve and enhance water quality.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Planning Dept., Public Services	Ongoing enforcement of local and state stormwater regulations. Amend as necessary.	Medium (environmentally sound and technically feasible)
Maritime Forest Environmental Zoning District – Continue to enforce the Maritime Forest Environmental Zoning District.	The Town continued to enforce the Maritime Forest Environmental District Ordinance (Zoning) to preserve the Town's maritime forest.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Wildfire	General Fund	Planning Dept.	Ongoing enforcement of MFED zoning regulations. Amend as necessary.	High

Goals	Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Emergency Services Goals: 1. Facilitate a safe and efficient evacuation and, where possible, reduce damage 2. Promote rebuilding and reconstruction in a prompt and orderly manner 3. Minimize prolonged business interruption, especially involving businesses providing critical supplies and services 4. Restore the community by minimizing difficulties in continuation of essential public and private services						
Flood Warning – Facilitate evacuation	The Town continued to coordinate and participate with the Dare County Control Group in event of evacuation.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	Dare County Control Group	Ongoing coordination with Dare County.	HIgh
Flood Response – Coordinate efforts to expedite reconstruction and rebuilding efforts in cooperation with Dare County Emergency Management staff.	The Town continued to coordinate and participate with the Dare County Emergency Management staff and Town staff.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms,	General Fund	Planning Dept.	Ongoing coordination with Dare County Emergency Management.	High
Flood Recovery – Coordinate efforts to expedite recovery.	The Town continued to coordinate efforts within its organization and with local, state and federal agencies.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms	General Fund	Planning Dept., Board of Commissioners	Ongoing coordination with local, state and federal agencies.	HIgh
Critical Facilities Protection – Take appropriate actions to prevent and/or minimize damages to critical facilities. Use generators or other forms of redundant power to ensure that critical facilities and infrastructure remain operational.	The Town continued to train for preparedness, response and recovery and to protect critical facilities by utilizing shutters on windows of Town buildings. Accomplished scheduled maintenance of Town drainage ditches. Continue to maintain existing redundant power supply equipment.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	General Fund	Police, Fire & Rescue, Public Works, NC Dominion Power	Ongoing general maintenance and preparedness of Town facilities.	High
Transportation - Work with NCDOT Strategic Office of Planning to enhance and construct infrastructure for evacuation.	Atteended Albemarle Rural Planning Organization's (RPO) meetings to provide input to NCDOT representatives on importance and necessity of enhancements of evacuation routes.	Hurricanes, Tropical Storms	General Fund	Planning Dept.	Ongoing attendance at quarterly meetings of the Rural Planning Organization.	High
Fire Protection - Implement Water Systems Master Plan.	The Town has continued to implement parts of the plan with each year of capital projects.	Fire, Wildfires	Water Fund	Public Services, Water Department	Ongoing based on annual Town capital improvements funding.	High

Goals	Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Health and Safety Maintenance – Develop ongoing protocols to assure the maintenance of critical public services.	Town Departments were exercised and trained for preparedness, response and recovery.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire, Pandemic Event, Public Health Event, Cyber Security Attack, Active Shooter/Mass Casualties, Terrorism Transportation Infrastructure Impacts	General Fund	Police, Fire & Rescue, Public Works, Dare County Emergency Management	Ongoing training and	Medium (environmentally sound and technically feasible)
Structural Projects Goals: 1. Implement flood control measures to protect people and property and assure continuation of essential public services.						
Reservoirs 1. Continue protection efforts concerning the Fresh Pond. 2. Maintain liaison with NC Division of Coastal Management concerning the development of the Kill Devil Hills Land Use Plan.	The Town continued to support Fresh Pond AEC although it is no longer used as a potable water source. The Town continued progress on update of its comprehensive Land Use Plan for review and approval by the Coastal Resources Commission.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Winter Storms	General Fund	Planning Dept., CAMA	Ongoing protection of AEC. Staff completed annual CAMA LPO recertification.	High
Stormwater Management – Continue to implement the stormwater management plan.	The Stormwater Management Plan Update August 8, 2011. Concepts were implemented through site plan review.	Flooding	General Fund	Public Services	Ongoing enforcement of stormwater regulations. Amend as necessary.	Medium (environmentally sound and technically feasible)
Beach Nourishment – Encourage beach nourishment as a storm protection measure and search for funding.	The Town contracted an engineering consultant to provide engineering support and permitting services and offshore sand search for beach renourishment.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	Town of Kill Devil Hills and Dare County	Board of Commissioners, Dare County Commissioners	Ongoing in an effort to start beach nourishment in the spring of 2016.	High
Public Information Goals: 1. Inform and advise property owners and visitors about potential damage from flooding. 2. Use the Town's website to disseminate hazard mitigation information Use the Town's website to disseminate hazard mitigation information.						
Map Information – Maintain updated flood map information for citizens and customers.	The Town continued to maintain updated flood maps and provided information to citizens through public outreach and customers.	Flooding, Hurricanes, Tropical Storms, Nor'easters	NC Division of Emergency Management	NC Division of Emergency Management, Planning Dept	Ongoing effort to educate citizens and customers about flood maps and inform them of upcoming changes.	High

Goals	Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Library – Compile and maintain current information in the Kill Devil Hills Floodplain Management Library.	The Town continued to maintain current information in the Floodplain Management Library. The Town began scanning old documents to maintain and enhance digital archives.	Flooding, Hurricanes, Tropical Storms, Nor'easters	General Fund	CRS Coordinator	Ongoing effort to keep library materials up to date for CRS participation.	Medium (cost-effective and technically feasible)
Technical Assistance – Continue to utilize technical assistance from state and federal agencies and private consultants to provide appropriate technical assistance to citizens and customers.	The Town continued to utilize outside resources to provide high level of service to its citizens.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	N/A	Building Inspector, Planning Dept.	Ongoing cooperation with outside resources to provide the most accurate information possible.	High
Outreach Projects 1. Initiate outreach projects to inform the public on Town and County initiatives that will reduce hazard related losses of property and life.	The Town continued annual outreach projects though joint mailings, public library and Town website.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire, Earthquake, Land Slide, Tornado, Tsunami, Rip Currents, Drought, Bridge Collapse, Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Security Attack, Pandemic Event, Public Health Event	General Fund	Planning Dept., Dare County Emergency Management	Ongoing effort to produce and implement as many outreach projects as possible in regards to all types of hazards.	Varies
2. Work with print, radio, and television media to effectuate outreach efforts in cooperation with Dare County and neighboring municipalities to educate the public on additional hazards identified in the risk assessment.	The Town provided printed information and continues to air a hurricane awareness video for television and provided web site updates for its citizenry.	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire, Earthquake, Land Slide, Tornado, Tsunami, Rip Currents, Drought, Bridge Collapse, Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Security Attack, Pandemic Event, Public Health Event	General Fund	Planning Dept., Dare County Emergency Management	Ongoing effort to produce and implement as many outreach projects as possible in regards to all types of hazards.	Varies

Goals	Actions	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
3. Develop updated floodplain map for public dissemination.	The Town continued to prepare for the release of updated flood maps by informing the public of the pending changes.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	General Fund	Planning Dept.	Ongoing effort to educate the public of upcoming changes to the regulatory flood maps.	Medium
4. Continue to participate in CRS	The Town completed its annual CRS recertification to promote floodplain awareness.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	General Fund	Planning Dept.	Ongoing effort o document CRS efforts for annual recertification.	High
5. Circulate brochure specifically on NFIP.	Completed as part of annual CRS recertification.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	General Fund	Planning Dept.	Ongoing effort o document CRS efforts for annual recertification.	Medium
6. Conduct contractor's meeting.	The Town hosted an annual contractors meeting as a refresher to local developers and industry professionals on floodplain regulations and required documentation.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	General Fund	Planning Dept.	Ongoing effort o document CRS efforts for annual recertification.	Medium

Table 7.2.11 Town of Southern Shores Mitigation Strategies

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
SOS1	Enforcement of the Zoning Ordinance as a hazard mitigation tool	All Hazards	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to enforce the adopted Zoning Ordinance. Zoning Permits are issued for new development, changes in use, and new uses in order to ensure compliance.
SOS2	Identify "at risk" X Zone properties for added emphasis on flood risks and notify the responsible agencies about discrepancies between floodplain maps (FIRM versus SLOSH).	Hurricane, Nor'easter, Severe Thunderstorm, Flood	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to identify at risk properties following storm events by utilizing GIS data and in the field observations.
SOS3	Continue enforcement of the Flood Damage Prevention Ordinance	Hurricane, Nor'easter, Severe Thunderstorm, Flood, Erosion	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to enforce the Flood Damage Prevention Ordinance. Building permits are not issued unless plans demonstrate compliance with the established requirements
SOS4	Continue the enforcement of the NC State Fire Prevention Code, referenced by the Town Fire Code	Wildfire	High	Dare County Fire Marshall	General Fund	The Dare County Fire Marshall continues to conduct inspections (contracted service) of non-residential properties to ensure compliance.
SOS5	Continue enforcing the Lot Disturbance provisions of the Zoning Ordinance	Hurricane, Nor'easter, Severe Thunderstorm, Flood, Erosion	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to enforce the Lot Disturbance provisions of the Zoning Ordinance. No grading, filling, or other alteration of the topography or elevation of any unimproved lot, or demolition and clearing of improved property, nor any manmade change to any improved real estate resulting in the discharge of stormwater onto adjacent property and requiring a building permit, is undertaken without prior issuance of a lot disturbance permit.
SOS6	Continue the testing of fire hydrants once a year and recording data	Wildfire	Medium	Southern Shores Volunteer Fire Department	General Fund	The Southern Shores Volunteer Fire Department continues to test fire hydrants once a year and records data. The last test was conducted in November, 2014.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
SOS7	Continue implementation of the Waterways and Beaches Ordinance	Hurricane, Nor'easter, Severe Thunderstorm, Flood, Erosion	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to implement the Waterways and Beaches Ordinance. The Town Community Resource Officer and contracted lifeguard service conduct patrols of the beach to ensure compliance. All development along Town waterways is approved following demonstration of compliance. The Town continues to send Notices of Violation for canal obstructions when warranted.
SOS8	Seek the maximum points available from the Community Rating System to keep flood insurance costs to the citizens as low as possible	Flood	Medium	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to seek the maximum points available from the Community Rating System. The Town's last cycle visit was in 2010 which gave the Town a rating of Class 7 which is recertified annually until the next cycle visit in 2015. Communities with a Class 7 rating receive a 15% discount on insurance policies issued for properties in special flood hazard areas (SFHA's).
SOS9	Conduct the Canal Inspection and Debris Removal program twice a year	Hurricane, Nor'easter, Severe Thunderstorm, Flood, Erosion	High	Planning/Code Enforcement Department	General Fund	The Southern Shores Civic Association Boat Club conducts inspections of the canals every three to four weeks. The amount of debris has been minimal following completion of the Town's canal dredging project
SOS10	Continue enforcement of the state building code, including wind load requirements	Hurricane, Nor'easter, Severe Thunderstorm, Winter Storms, Tornadoes	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to enforce the state building code, including wind load requirements. All building plans must demonstrate compliance prior to issuance of a building permit. The Building Inspector continues to conduct inspections during construction and no Certificate of Occupancy is issued unless all requirements are satisfied.
SOS11	Continue enforcement of the Beach and Dune Management Ordinance	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion	High	Planning/Code Enforcement Department	General Fund	The Town Community Resource Officer and contracted lifeguard service conduct patrols of the beach to ensure compliance

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
SOS12	Coordinate wildfire prevention efforts with tree preservation policies	Wildfire	Low	Planning/Code Enforcement Department, Southern Shores Volunteer Fire Department	General Fund	The Planning and Code Enforcement Department encourages all property owners to contact the Southern Shores Volunteer Fire Department prior to any open burning. The Department also coordinates with property owners and the fire department to make sure burns are not conducted on preserved trees.
SOS13	Continue enforcing Coastal Area Management Act (CAMA) regulations	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion	High	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to enforce the Coastal Area Management Act (CAMA) regulations. The Town's Local Permit Officers continue to review and issue Minor Permits in accordance with the Coastal Area Management Act (CAMA).
SOS14	Continue enforcing the state Erosion and Sedimentation Control regulations	Hurricanes, Nor'easters, Flood, Thunderstorm, Erosion	High	Planning/Code Enforcement Department	General Fund	When applicable, all new development must obtain a State-issued permit prior to issuance of a building permit.
SOS15	Continue to have a standing Reconstruction Task Force	All Hazards	High	Reconstruction Task Force	General Fund	A new Reconstruction Task Force was appointed at the November 4, 2014 Town Council meeting
SOS16	Communicate with citizens about plans and the problems of providing services after a storm event	Hurricane, Nor'easter, Severe Thunderstorm, Flood	Medium	Reconstruction Task Force	General Fund	The Town utilizes social media and a bi-weekly newsletter to disseminate information regarding storm events and their affects
SOS17	Continue to monitor plans for the Mid-Currituck Bridge to expedite evacuation	All Hazards	High	Town Council	General Fund	The Town Council continues to monitor the NC Turnpike Authority plans for the Mid-Currituck Bridge to expedite evacuation. However, due to a lack of funding, the future construction of the bridge is uncertain
SOS18	Encourage food stores and pharmacies within the town to have alternative power supplies during and after storm events	All Hazards	Low	Planning/Code Enforcement Department	General Fund	The Planning and Code Enforcement Department continues to encourage food stores and pharmacies within the Town to have alternative power supplies during and after storm events.

Action #	Description/Strategy	Hazard(s) Addressed	Relative Priority	Lead Agency / Department	Potential Funding Source	Implementation Status
SOS19	Continue to provide an Emergency Operations Center	All Hazards	High	Administration	General Fund	To ensure the protection of the citizens, the Town will continues operate its Emergency Operations Center during disasters. Coordinates with Dare County Emergency Operations Center for support.
SOS20	Keep emergency plans current and provide staff with continuing education opportunities	All Hazards	Low	Administration	General Fund	Town Administration updates its Emergency Management Plan annually and provides Town Staff with continuing education opportunities
SOS21	Educate citizens on expected impacts of hazards on daily lives	All Hazards	High	Planning/Code Enforcement Department	General Fund	A bi-weekly newsletter is distributed to citizens with information regarding the impacts of hazards on daily lives
SOS22	Continue current public information outreach efforts regarding flooding	Hurricane, Nor'easter, Severe Thunderstorm, Flood	High	Planning/Code Enforcement Department	General Fund	The Town mails an informational brochure to all property owners within a Special Flood Hazard Area annually to provide important floodplain information. The most recent mailing occurred in June 2014.
SOS23	Continue e-mail and website services	All Hazards	Medium	Administration	General Fund	The Town continues to use its website and email services to publish and share important information with its citizens.
SOS 24	Provide property owners and developers with information regarding the construction of FEMA "Safe Rooms" from the effects of tornadoes and severe storms.	Tornadoes, Severe Thunderstorms	Medium	Planning/Code Enforcement Department	General Fund	The Town continues to maintain a library of FEMA resources for storm preparation and other natural disasters.

CRS 510 Floodplain Management
2015 Progress Report for
Floodplain Management/Hazard Mitigation Plan

1. **Name of Plan: Dare County Multi-Jurisdictional Hazard Mitigation Plan**
   Date Adopted: July 7, 2010
   Location where copies are available for review: Town of Duck Administration Offices

Duck Hazard Mitigation Action Plan

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
Preventive Goals: 1. Continue enforcement of current hazard mitigation regulations 2. Locate a regional debris removal area 3. Improve stormwater drainage in vulnerable areas 4. Preserve, protect, and enhance the Atlantic Ocean and Currituck Sound shorelines and ensure future generations are able to enjoy its beauty and bounty and can continue to use the beach and water for active and passive recreation and leisure activities 5. Reduce loss of life, property, and resources due to wildland/urban interface fires							
1a	Continue to provide funding for enforcement positions	Hurricanes, Nor'easters	General Fund	Town Council	Ongoing	High	Ongoing/met
2a	Meet with Currituck County and Southern Shores to discuss possible locations for a debris removal area	Hurricanes, Nor'easters, Thunderstorms	General Fund	Town Manager	January 2005	High	Completed (Identification of the Newbern property)
3a	Identify areas vulnerable to stormwater problems	Hurricanes, Nor'easters, Thunderstorms	General Fund	Planning Board	Ongoing	High	NCDOT drainage study completed – January 2006; additional work continues to resolve localized roadway flooding
3b	Coordinate town roles and state roles in stormwater management problems	Hurricanes, Nor'easters, Thunderstorms	General Fund	Planning Board	Ongoing	High	Same as above

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
3c	Provide funding for stormwater improvements	Hurricanes, Nor'easters, Thunderstorms	General Fund	Town Council	Ongoing	Medium (environmentally sound and technically feasible)	Town/NCDOT have completed major stormwater project on NC 12 in South Duck. Engineering has been completed to rectify localized drainage projects on other parts of NC 12 and funding is being provided in the CIP annually. Drainage Project on NC12 at Waterfront Shops/Stan White has been funded in CIP for FY 2014.
4a	Adopt and apply development policies that balance protection of natural resources and fragile areas with residential and economic development	Hurricanes, Nor'easters, Thunderstorms, Wildfire, Flooding	N/A	Town Council	Ongoing	Medium (environmentally sound and technically feasible)	Ongoing – Adopted Town Code amendments including Tree and Vegetation Preservation, Land Disturbing Activities, Beach and Dune Management, Wind and Solar Energy, Ocean and Sound Overlay, Parking, Lot Coverage, etc. Currently working on ordinances related to Stormwater Management and low-impact development.
4b	Develop policies that minimize threats to life, property, and natural resources resulting from development located in or adjacent to hazard areas, such as those subject to erosion, high winds, storm surge, flooding, or sea level rise	Hurricanes, Nor'easters, Thunderstorms, Wildfire, Flooding	N/A	Town Council	Ongoing	Medium (environmentally sound and technically feasible)	Ongoing – Adoption of revised Flood Insurance Rate Maps and Flood Damage Prevention Ordinance, Local Participation in CAMA LPO program, completed enrollment in FEMA Community Rating System, Enforcement of NC State Building Code Revisions and Amendments including Wind-Borne Debris Provisions. The Town has also revised policies related to oceanfront development including additional setbacks for accessory structures, new dune walkway standards, and remedies for structures encroaching on the ocean beach.
4c	Develop location, density, and intensity criteria for new, existing development and redevelopment including public facilities and infrastructure so that they can better avoid or withstand natural hazards	Hurricanes, Nor'easters, Thunderstorms, Wildfire, Flooding	N/A	Town Council	Completed 2012	Medium (environmentally sound and technically feasible)	Ongoing – Town Code revisions including lot coverage regulations, limitations on residential dwelling size (ratio of number of bedrooms to lot area), increased setbacks for accessory structures, additional elevation requirements for V-Zone structures.

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
5a	Identify areas most at risk and investigate strategies to reduce risk from wildland/urban interface fires	Wildland/urban interface fires	N/A	Fire Department/ Town Staff	Ongoing	Medium (environmentally sound and technically feasible)	*New Action Item*
5b	Investigate how the Town of Duck can become a Firewise Community	Wildland/urban interface fires	N/A	Fire Department/ Town Council	Ongoing	Medium (environmentally sound and technically feasible)	*New Action Item*
5c	Collaborate with DVFD and the Town of Duck to educate the homeowners, developers and landscapers on designing fire safe communities.	Wildland/urban interface fires	N/A	Fire Department/ Town Council	Ongoing	Medium (environmentally sound and technically feasible)	*New Action Item*
Property Protection Goals: 6. Educate property owners on dune maintenance effectiveness 7. Develop policies and educate property owners on proper siting and coastal construction techniques 8. Encourage and promote through various methods the proper installation, use, and storage of propane							
6a	Develop dune maintenance education materials	Hurricanes, Nor'easters, Coastal Erosion	General Fund / CAMA grants	Consultant / NC Division of Coastal Management/Sea Grant	Ongoing	High	Ongoing – Town distributes information regarding proper sand fence installation techniques and native vegetation information; the Town also provides copies of the NC SeaGrant Publication "The Dune Book" upon request.
6b	Make education materials available on-line	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Duck Webmaster	Ongoing	High	Partially Complete – Town maintains links to FEMA and Division of Coastal Management websites regarding NFIP and CAMA. Additional information needs to be provided regarding coastal construction techniques, retrofitting, and anchoring of underground storage tanks.
7a	Provide information on good construction techniques for coastal communities	Hurricanes, Nor'easters	General Fund	Duck Webmaster/Town Staff	Ongoing	High	Ongoing – Provide FEMA/NC Department of Insurance publications/ resources as mentioned above.

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
7b	Develop good construction materials information	Hurricanes, Nor'easters	General Fund	Planning Board	Ongoing	High	New strategy implemented to provide existing FEMA publications to the general public via the internet and maintain an in-house library of these materials.
7c	Enroll in the FEMA Community Rating System and take advantage of the various mitigation strategies promoted by this program	Hurricanes, Nor'easters, Flooding	General Fund	Town Council/ Department of Community Development	Ongoing	High	Enrollment in the program has been completed. However, the Town continues to develop actions and strategies that will lower its CRS rating and therefore provide lower flood insurance premiums to property owners within the Town.
8a	Research the use and storage of propane	Hurricanes, Nor'easters, Flooding	General Fund	Fire Department / Planning Board	Ongoing	High	Not Complete – The Town needs to investigate the legal authority to regulate underground storage tanks since they are under the control of the NC Dept. of Agriculture.
8b	Draft a "propane" ordinance	Hurricanes, Nor'easters, Flooding	General Fund	Planning Board	Ongoing	High	Not Complete – The Town needs to investigate the legal authority to regulate underground storage tanks since they are under the control of the NC Dept. of Agriculture.

Natural Resource Protection Goals:

9. Mitigate ocean overwash and sound erosion
10. Develop and dedicate more open space
11. Support the continued management of oceanfront shoreline development to protect and preserve the natural and recreational resources along the oceanfront
12. Re-nourish and maintain the ocean beach

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
9a	Identify vulnerable areas and conditions	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Ongoing – The Town has been monitoring high oceanfront erosion areas by documenting storm damage and taking photos/video. The Town has used GIS information provided by Dare County and the North Carolina Division of Coastal Management to monitor movement of the oceanfront shoreline. Additionally, a beach erosion study has been developed for the Town by the USACOE and Coastal Planning and Engineering which documents erosion patterns and existing conditions. NCDOT in conjunction with the Towns of Duck and Southern Shores conducted a drainage study on NC 12 to determine areas vulnerable to flooding. The Town needs to develop a method to track soundside erosion.
9b	Develop public information about the uses of sand, grasses, and fences	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Completed – The Town distributes information regarding proper sand fence installation techniques and native vegetation information; the Town also provides copies of the NC Seagrant Publication, "The Dune Book", upon request.
9c	Disseminate the public information	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Ongoing – the Town maintains a database of oceanfront property owner contact information and routinely distributes information on dune planting and sand fencing, oceanfront building regulations, and efforts to re-nourish areas with eroded beaches.
10a	Identify available property for open space	Hurricanes, Nor'easters, Coastal Erosion, Wildfire	General Fund	Town Council	Ongoing	High	Ongoing – The Town has purchased an 11-acre park in the center of the Village Commercial area which is partially maintained as open space. The Town is 90 percent developed and there are few other areas available to purchase and maintain as open space. Town funds for this activity are limited. Future activities in this area will largely depend on the success of the Town in acquiring property with available grants.

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
10b	Acquire the property through donation and purchase or dedication of easements	Hurricanes, Nor'easters, Coastal Erosion, Wildfire	General Fund	Town Council	Ongoing	Medium (environmentally sound and technically feasible)	Ongoing. The Town is in the process of acquiring easements to construct an elevated soundside boardwalk. No other projects are being considered at this time.
10c	Develop and maintain the open space	Hurricanes, Nor'easters, Coastal Erosion, Wildfire	General Fund	Town Council	Ongoing	Medium (environmentally sound and technically feasible)	Ongoing. The Town drafted a Municipal Property Master Plan in 2004 in order to develop the Town Park property and this has now been completed. No other open space areas are currently being pursued for acquisition by the Town.
11a	Support programs and initiatives to annually assess shoreline changes (erosion and accretion)	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Ongoing – The Town has been monitoring high oceanfront erosion areas by documenting storm damage and taking photos/video. The Town has used GIS information provided by Dare County and the North Carolina Division of Coastal Management to monitor movement of the oceanfront shoreline. Additionally, a beach erosion study has been developed for the Town by the USACOE and Coastal Planning and Engineering which documents erosion patterns and existing conditions. The Town has enacted an additional tax to support beach management activities. It is anticipated that some of the revenue will be used in future years to collect detailed beach and dune profile information that will allow the town to track shoreline change.
11b	Develop policies to deal with encroaching development on the Town beaches.	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council/ Town Manager	September 2011	High	The Town has adopted an ordinance to limit the encroachment of structures on the beach. Additionally, new setbacks have been adopted for accessory structures such as pools and dune decks to provide additional protection to the dune system. The Town has also prohibited sandbags.

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
11c	Develop policies to preserve native dune plants and vegetation within the Town's Dune System	Hurricanes, Nor'easters, Coastal Erosion	N/A	Town Council	April 2009	High	An ordinance was adopted to prohibit destroying dune vegetation and altering dunes. The Town annually funds dune planting and sand fencing projects.
12a	Stay informed and involved relative to Federal, State, and/or regional studies and initiatives concerning beach re-nourishment and maintenance	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Ongoing. The Town participates in the annual program established by the Dare County Shoreline Commission to provide funds for beach maintenance. The Town is actively participating in a beach nourishment project in conjunction with Dare County and the Towns of Kill Devil Hills and Kitty Hawk.
12b	Work with and support efforts by CAMA concerning beach re-nourishment and maintenance	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Ongoing. The Town participates in the CAMA LPO program and issues permits for regulated beach activities. The Town has adopted a Beach and Dune Management ordinance to protect dunes and dune vegetation. The Town is currently pursuing a strategy to nourish the beach.
12c	Seek ways to ensure residents receive information and links to technical assistance from the Division of Coastal Management concerning beach re-nourishment and maintenance activities and options such as sand fencing	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Town Council	Ongoing	High	Ongoing. The Town provides information and issues CAMA permits to oceanfront property owners seeking to maintain their primary and frontal dunes. The Town website is used to provide this information as well.
Structural Project Goals: 13. Build the Mid-County Bridge 14. Address localized drainage problems on NC 12							

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
13a	Lobby the NC Board of Transportation and the NC Department of Transportation and NC Turnpike Authority (resolution and letter to staff members regarding environmental studies, attendance at meetings./public hearings	Hurricanes	NC DOT	Town Council	Ongoing	High	Ongoing. The Town Council has issued several resolutions to support the construction of the Mid-Currituck Bridge and to identify the Town's preferred design alternative for the project. The Town has sent letters to NCDOT and NC Turnpike Authority Staff providing comments on the project studies that have been underway for several years. The Town frequently discusses the project at regular Town Council meetings and is kept informed of the status of the project by Town staff and residents who serve on a local committee to support construction of the bridge.
14a	Lobby the NC Board of Transportation and the NC Department of Transportation	Hurricanes	NC DOT	Town Council	Ongoing	High	Ongoing. The Town has worked with NCDOT to develop solutions to localized drainage problems on NC 12. NCDOT has completed a project to raise NC 12 in the southern portion of Town to address a flooding issue.
14b	Identify capital projects to address drainage issues on NC 12	Hurricanes, Nor'easters, Flooding	General Fund	Town Council	Ongoing	High	Engineering has been completed to rectify localized drainage projects on other parts of NC 12 and funding is being provided in the CIP annually. Drainage Project on NC12 at Waterfront Shops/Stan White has been funded in CIP for FY 2014.
Public Information Goals: 15. Develop an emergency communications network 16. Develop effective public information regarding natural hazards and disseminate to citizens 17. Communicate hurricane information to tourists 18. Improve methods to communicate with property owners in areas most vulnerable to storm damage 19. Improve Ocean and Beach Safety through public education efforts and continued training of Ocean Rescue Personnel							
15a	Maintain a roster of business owners and homeowners associations	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council	Ongoing	High	This Town is actively maintaining this information.

Goals and Actions		Hazard	Funding Sources	Responsibility	Target Completion Date	Priority	Implementation Status
15b	Continue to research methods to disseminate information	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council	Ongoing	High	Major improvements have been made to communicate with stakeholders. Use of social media and internet based communication tools has drastically improved the town's ability to disseminate and receive information.
16a	Continue to identify who needs natural hazards information	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council	Ongoing	High	Ongoing
16b	Continue to develop/disseminate this information (dune protection, wind, erosion)	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council	Ongoing	High	Ongoing.
16c	Continue to research methods to get information to citizens	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council/Town Manager	Ongoing	High	Ongoing.
17a	Develop/disseminate hurricane information to provide to tourists	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council	Ongoing	High	Ongoing.
17b	Continue to disseminate the information through realtors and businesses	Hurricanes, Nor'easters, Tornadoes	General Fund	Town Council	Ongoing	High	Ongoing.
18a	Develop and maintain a database of contact information for oceanfront property owners where storm damage is likely to occur	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Department of Community Development	Ongoing	High	This information has been collected and is being actively maintained by the Town.
18b	Develop a method to post storm damage information on the Town website including property specific damage information	Hurricanes, Nor'easters, Coastal Erosion	General Fund	Department of Community Development	Ongoing	High	Property specific data has been posted to the Town's website via spreadsheet as it is collected by Damage Assessment teams. Photos of general damage have been posted to Facebook and other social media outlets to provide a summary of storm impacts.
19a	Develop public education materials to educate beachgoers on beach safety (rip currents, beach holes, beach fires, etc.)	Rip Currents	General fund	Town Manager/ PIO/ Ocean Rescue	Ongoing	High	New signs have been developed for beach safety and beach rules. Additional rip current signs have been posted on rip-currents provide by NC SeaGrant.

K: Kitty Hawk Hazard Mitigation Plan – Goals & Actions

Regional Goals (see references to applicable regional goals under Goals & Actions in Table):

1. *Evaluate and revise local plans, policies, procedures, regulations and ordinances to further enhance the regions ability to mitigate natural hazards.*
2. *Maintain and/or improve existing transportation infrastructure to aid in evacuations.*
3. *Implement a public outreach campaign to increase awareness about the hazards that can impact the region.*
4. *Pursue mitigation of repetitive flood loss properties.*
5. *Identify Implement mitigation projects that are cost effective and will help reduce the effects of natural hazards.*

Goals and Actions ***Regional Goals***	**Hazard**	**Funding Sources**	**Responsibility**	**Target Completion Date**	**Priority**
Preventive **Goals: 1. Pursue beach and dune renourishment as funding becomes available** **2. Resolve identified stormwater drainage issues flood-free roads and highways** **3. Revise storm preparedness, response, and recovery plan**					
Implement beach and dune renourishment projects ***#2 & 5 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion	Federal/State Grants/Programs, District Tax, Funds from Dare County	Town Council	Construction Scheduled to Begin in 2016	High
Implement stormwater drainage improvements per the studies/plan *#1, 2, 4, 5 Regional*	Flooding, Hurricanes and Tropical Storms, Nor'easters	General Fund State Transport. Funds	Town Manager, Public Works	Ongoing 75% complete.	High
Revise the storm preparedness, response, and recovery plan for Kitty Hawk ***# 1 & 3 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Town Staff, Town Council	Update each year	High
Property Protection Goals: 1. Reduce individual property owners' losses **2. Find cost-effective solutions** **3. Streamline damage assessment procedures**					
Educate homeowners on various mitigation techniques and resources available to them ***# 3 & 4 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion, Thunderstorms	General Fund	Planning	Ongoing Address on daily basis, monthly & bi-annually	High
Provide homeowners with the resources necessary to individually hazard-proof their own homes ***#3 & 4 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters	General Fund	Planning, Inspections	Ongoing Address on daily basis, monthly & bi-annually	High

Goals and Actions *Regional Goals*	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Encourage homeowners to conduct an inventory of their assets to assist with damage claims ***# 3 & 4 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion, Wildfire	General Fund	Planning Police Dept.	Ongoing Bi-annually	High
Encourage mitigation of Repetitive Loss Properties (137) ***# 4 Regional***	Flooding, Hurricanes, Tropical Storms, Nor'easters, Coastal Erosion	Federal/State Grants/Programs Homeowners	Planning Homeowners	Ongoing Address on daily basis, Monthly, bi-annually & annually	High
<u>Natural Resource Protection</u> **Goals:** **1. Educate citizens about the importance of open space and natural resource protection** **2. Promote dune and beach renourishment and support local actions** **3. Establish a hazard mitigation plan, a disaster preparedness plan, and a storm reconstruction/recovery plan** **4. Maintain the existing stormwater drainage system, including all waterways, ditches, and canals** **5. Closely monitor beach erosion**					
Educate citizens about dune vegetation ***#3 & 4 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Planning, Public Works	Ongoing Mainly in Spring & Summer Months	High
Establish town plans for mitigation and recovery through information on disaster planning, recovery and reconstruction ***# 1, 2, 5 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion	General Fund	Town Staff, Town Council	Ongoing Annually	High
Clean out culverts, ditches, and waterways to relieve standing water and facilitate the stormwater drainage ***# 2, 4, 5 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion	NCDOT General Fund	Public Works, NCDOT	Ongoing On an as need basis	High
Collect beach erosion data annually ***#1 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion	NC Division of Coastal Management	NC Division of Coastal Management	Ongoing Annually	High

Goals and Actions *Regional Goals*	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Emergency Services **Goal: Improve public safety during and after a storm event**					
Update and improve the protocols and procedures (local, county, and state) by which the citizens in Kitty Hawk are made aware of impending storm events and expected impacts ***# 1 & 3 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters	General Fund	Town Council, Dare County Emergency Management	Ongoing Annually & after storm events	High
Work with Dare County Control Group to prepare the provision of needed equipment and services to persons and businesses in need of assistance ***# 2 & 3 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	General Fund	Town Council, Dare County Emergency Management	Ongoing Annually & before storm events	High
Work with Dare County to improve the communication systems between all public safety departments within the towns, county, and state so that in the event of a disaster, all entities will be able to communicate with one another. ***#1 & 3 Regional***		Capital Reserve Fund	Town Council, Town Staff, Dare County Emergency Management, Dare County Sheriff's Dept.	Ongoing Annually & before storm events	High
Define procedures and practices to maintain critical facilities and services to the maximum extent possible during and after a storm event ***#1 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	General Fund	Town Staff, Town Council	Ongoing Annually	High

Goals and Actions *Regional Goals*	Hazard	Funding Sources	Responsibility	Target Completion Date	Priority
Implement beach and dune re-nourishment projects as funding becomes available ***# 2 & 5 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion	Federal/State Grants/Programs Funds from Dare County & District Tax	Town Council	Ongoing Annually Work scheduled to begin in 2016	High
Encourage NC Department of Transportation to elevate Kitty Hawk's highway to Kitty Hawk Landing ***# 2 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters	NCDOT	NCDOT Town Council	Ongoing Waiting for additional funding	High
Public Information **Goals: 1. Inform property owners about hazard mitigation** **2. Improve overall communication with other governmental agencies and the media**					
Maintain updated flood map information for citizens and customers ***# 1 & 2 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion	NC Division of Emergency Management	NC Division of Emergency Management, Planning	Ongoing Available on request	High
Initiate outreach projects to inform the public on Town and County initiatives that will reduce hazard related losses of property and life ***# 1 & 3 Regional***	Flooding, Hurricanes and Tropical Storms, Nor'easters, Coastal Erosion, Winter Storms, Wildfire	General Fund	Planning	Ongoing Address on daily basis, monthly & bi-annually & annually	High

RESOLUTION OF ADOPTION

DARE COUNTY

ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Dare County are subject to the effects of natural and man-made hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion. Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, Dare County's has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces Dare County's Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all Dare County citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and the guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the Dare County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Board of Commissioners of Dare County hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Dare County Emergency Management Department with the responsibility, authority, and the means to:

    a. Inform all concerned parties of this action.

    b. Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Dare County Emergency Management Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Dare County for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Albemarle Regional Hazard Mitigation Plan.

BY: _____ DATE:

Robert L. Woodard, Chairman

Dare County Board of Commissioners

ATTEST: _____

Gary Gross

Clerk to the Board

RESOLUTION OF ADOPTION
TOWN OF MANTEO
ALBEMARLE REGIONALHAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Manteo are subject to the effects of natural and manmade hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion. Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 ---Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS,
The Town of Manteo has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces Dare County's Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all Dare County citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and the guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the Town of Manteo Board of Commissioners to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Board of Commissioners of the Town of Manteo hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and
2. Vests the Dare County Emergency Management Department with the responsibility, authority, and the means to:
   a. Inform all concerned parties of this action.
   b. Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Dare County Emergency Management Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Dare County for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Albemarle Regional Hazard Mitigation Plan.

Adopted on June 3, 2015

Mayor;
Town of Manteo

Attest:

Clerk to the Council

TOWN OF MANTEO CORPORATE SEAL SEAL 1899 NORTH CAROLINA

Resolution No. 15-06-010
Hazard Mitigation Plan
BOC Meeting June 17, 2015

RESOLUTION OF ADOPTION
TOWN OF NAGS HEAD
ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the *Town of Nags Head* are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the *Town* are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion, Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation infrastructure impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

WHEREAS, the *Town* desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, The *Town of Nags Head* has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces The Town of Nags Head Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all *Nags Head* citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the *Town of Nags Head Board of Commissioners* to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County.

NOW, Therefore, Be It Resolved that the *Board of Commissioners of the Town of Nags Head* hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the *Planning and Development Department* with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the *Planning and Development Department* to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the *Board of Commissioners of Nags Head* for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

This the 17th day of June 2015.

Robert C. Edwards, Mayor
Town of Nags Head

Attested by:

Carolyn F. Morris, Town Clerk

THE TOWN OF 1961 NAGS HEAD N.C.

TOWN OF KILL DEVIL HILLS

Land Where Flight Began

RESOLUTION OF ADOPTION by the TOWN OF KILL DEVIL HILLS ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Kill Devil Hills are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the Town are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion, Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation infrastructure impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, The Town of Kill Devil Hills has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces The Town of Kill Devil Hills Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all Kill Devil Hills citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the Town of Kill Devil Hills Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County.

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of the Town of Kill Devil Hills hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Planning and Development Department with the responsibility, authority, and the means to:

   a. Inform all concerned parties of this action.

   b. Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Planning and Development Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of the Town of Kill Devil Hills.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

This the 24th day of June 2015.

SEAL

Sheila F. Davies

Sheila F. Davies, Mayor
Town of Kill Devil Hills

ATTEST

Mary E. Quidley
Town Clerk

Town of Southern Shores

5375 N. Virginia Dare Trail. Southern Shores. NC 27949
Phone 252-261-2394 / Fax 252-255-0876
www.southernshores-nc.gov

RESOLUTION 2015-06-01

TOWN OF SOUTHERN SHORES RESOLUTION ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within the Town of Southern Shores 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 Town of Southern Shores 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 July1, 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 Town of Southern Shores Town Council to fulfill this obligation in order that the Town will be eligible for Federal and State assistance in the event that a state of disaster is declared for a hazard event affecting the Town; 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 Town of Southern Shores actively participated in the planning process of the Albemarle Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Southern Shores hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Southern Shores; and

3. Vests the Town Planner/Code Enforcement Officer with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private Firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Planner and Code Enforcement Officer to assure that, in cooperation with the Town of Southern Shores, 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 2 day of June, 2015.

Mayor, Town of Southern Shores

TOWN OF SOUTHERN SHORES SEAL N. C.

ATTEST:

Town Clerk (SEAL)

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF DUCK, NORTH CAROLINA, ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

Resolution No. 15-05

WHEREAS, the citizens and property within the Town of Duck are subject to the effects of natural 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 Town of Duck 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 Duck Town Council to fulfill this obligation in order that the town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the town; 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 Town of Duck actively participated in the planning process of the Albemarle Regional Hazard Mitigation Plan and has fulfilled its part of the multijurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Duck Town Council hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the Town of Duck; and
3. Vests the Town Manager and assignees with the responsibility, authority, and the means to:
   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining

floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Manager to assure that, in cooperation with Dare 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 3rd day of June 2015.

Mayor, Town of Duck, NC

ATTEST:

Clerk

POST OFFICE BOX 549
101 VETERANS MEMORIAL DRIVE
KITTY HAWK, NC 27949

PHONE (252) 261-3552
FAX (252) 261-7900
TOWN WEB SITE: www.townofkittyhawk.org
EMAIL ADDRESS: info@kittyhawktown.net

RESOLUTION OF ADOPTION

TOWN OF KITTY HAWK

ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Kitty Hawk are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion, Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Rip Currents, as well as manmade effects from Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events, and Public Health Events; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the town of Kitty Hawk actively participated in the planning process of the Albemarle Regional Hazard Mitigation Plan fulfilling 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Kitty Hawk Town Council to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Kitty Hawk Town Council hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;

2. Vests the Town Manager with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Town Manager to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Kitty Hawk Town Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day the 7th of July 2015.

By: The Kitty Hawk Town Council

Certified by: Lynn U. Morris
Lynn U. Morris, Town Clerk

SEAL: The Town of 1981 Kitty Hawk

Date: July 7, 2015

Criteria for Prioritization of Hazard Mitigation Goals and Actions

Through an informal process at the CRS 510 Staff Committee meeting in December 2014, Town staff discussed the prioritization of the draft actions utilizing the criteria below:

- Cost/Benefit- Does the cost of implementation outweigh public safety, the potential community needs, or public benefit? How will the project be funded and when?
- Organizational Capacity- Do we have technical capability to implement the action? Do we have availability of time and staffing to implement?
- Public Safety- Does the action work to improve overall public safety and the Town's ability to mitigate against and respond to hazards?

ATTACHMENT 10

Nags Head CRS 510 Staff Planning Committee

December 19, 2014

Agenda

1. Call to Order
2. Introduction of Members
3. Regional Planning Process (Step 1)
   a. Dare County CRS 510 Committee
   b. Public Involvement and Outreach (Step 2)
   c. Hazards (Step 4)- Discussion of information from Wooten on regional hazard assessment
   d. Regional Survey
   e. Regional Goals
4. Purpose of CRS 510 Staff Committee (Step 1)
5. Review of Existing Plan (Step 3)
   a. Repetitive Loss
   b. Discussion of Agencies to Contact
   c. Goal and Action Plan Review (Steps 6, 7, & 8)
6. Next Steps
   a. Draft Plan Review
7. Committee comments or concerns
8. Adjournment

Albemarle Regional Hazard Mitigation Website
http://albemarlereghazardmitigationplan.wikispaces.com/

Town of Nags Head Hazard Mitigation Plan
http://www.nagsheadnc.gov/index.asp?Type=B_BASIC&SEC={1E99F989-C0E7-4632-80BF-14FF61C61787}

ATTACHMENT 10

Nags Head CRS 510 Staff Committee
December 19, 2014
Sign In Sheet

Name	Signature
Kelly Wyatt	
Kim Kenny	
Robert Thuma	
Allen Massey	
Andy Garman	
RALPH BARILE	
DAVID RYAN	
Kevin Brinkley	

NFIP/CRS

Changes to the 10-step Floodplain Management Planning Process Effective with the 2013 *CRS Coordinator's Manual*

— A Handout for the National Flood Insurance Program Community Rating System —

NOTE : This handout covers the MAJOR CHANGES TO THE CREDIT CRITERIA ONLY. For a full discussion of Activity 510's current credit criteria and points per step, please refer to the 2013 CRS Coordinator's Manual.

A floodplain management plan (FMP) must meet all 10 CRS steps in order to be credited in Activity 510. If a plan is approved by FEMA, it may miss one CRS step, but credit will be capped at 50 points. If a FEMA-approved plan misses two steps, it will not qualify for CRS credit.

Step 1: Organize to prepare the plan

If a community wants FMP credit for a multi-jurisdictional planning effort, the community requesting credit must have at least two representatives on the planning committee, from departments responsible for implementing the action items for that community.

In previous years, communities could earn credit in Step 1(a) for having a "professional planner" involved in the planning process. This has been discontinued. Credit is now earned if the office responsible for the community's land use and comprehensive planning is actively involved in the floodplain management planning process.

Full credit in Step 1(b) for having a planning committee of community departments and agencies is available now only if the committee has expertise in the six mitigation categories reviewed under Step 7. Partial credit is provided if some of the categories are not represented. See also the handout on planning committees.

Step 7 Categories

- Preventive measures (e.g., codes)
- Property protection (e.g., elevation)
- Natural resource protection
- Emergency services
- Structural flood control projects
- Public Information

Step 2: Involve the public

Credit for having a planning committee with representatives of the public or stakeholders is contingent on having the planning committee meeting open to the public and the meeting schedule publicly posted. See also the handout on planning committees.

Credit was added to recognize a variety of methods that encourage public input.

Step 3: Coordinate

In general, the credit criteria for this step did not change. Clarification was added to explain that the intent is for the planner(s) to contact agencies or organizations, ask for data or information related to hazards, ask what the organizations are doing that might affect flooding or properties in the flood prone areas, and offer these agencies and organizations an opportunity to be involved in the planning effort.

Step 4: Assess the hazard

Credit was added to recognize plans that include an assessment of less-frequent flood hazards, areas likely to be flooded, and flood problems that are likely to get worse in the future as a

result of changes in floodplain development and demographics, development in the watershed, and climate change or sea level rise.

Step 5: Assess the problem

Repetitive loss Category B and C communities must include repetitive loss areas in the problem assessment for credit under Step 5(c).

Credit was added for describing in the assessment the impact of the future flooding conditions described in Step 4(c) on people, property, and natural floodplain functions.

Step 6: Goals

The goals must address all of the flood-related problems identified in Step 5.

Step 7: Review possible activities

NOTE: This step is not the same as the "capabilities assessment" included in FEMA's planning process for hazard mitigation. This step calls for an examination of possible alternatives.

There is a new requirement that the discussion of activities must include the community's capability to fund and implement the activity. If the activity is currently being implemented, the plan must note whether it is achieving expectations and, if not, whether it should be modified. In addition, if the plan is an update of the previously credited plan, each activity of the previous plan must be discussed, along with the status of its implementation.

A review of preventive activities is required.

Credit criteria were added to recognize plans that discuss whether the community's floodplain management regulatory standards are sufficient for current and future conditions, as discussed under Steps 4(c) and 5(f).

Step 8: Draft an action plan

Credit criteria were added that require the plan to include at least one action item for each stated goal.

Step 9: Adopt the plan

There was no change to the credit criteria for this step in the 2013 *Coordinator's Manual.*

Step 10: Implement, evaluate, and revise

Credit for Step 10(b) is now based on how frequently the planning committee meets per year.

To earn credit for this step under the 2007 *Coordinator's Manual*, the planning committee had to be the same committee as that credited in Step 2(a). Beginning with the 2013 *Coordinator's Manual*, credit for Step 10(b) can be earned with EITHER the same planning committee as credited under Step 2(a), OR for a successor committee with similar membership that was created to replace the original committee and charged with monitoring and evaluating implementation of the plan.

CRS 510 Planning Committee

Outline of Process and Steps to be Taken by Local 510 Committee

Floodplain management planning (FMP) -- must follow a 10-step planning process . Hazard mitigation plans prepared according to this process can receive credit. (TABLE 510-1 from CRS manual illustrates the FEMA mitigation process compared to the CRS program)

STEP 1	Organize
STEP 2	Involve the public
STEP 3	Coordinate
STEP 4	Assess the hazard
STEP 5	Assess the problem
STEP 6	Set goals
STEP 7	Review possible activities
STEP 8	Draft an action plan
STEP 9	Adopt the plan
STEP 10	Implement, evaluate, revise

These steps will be followed during the development of the ARHMP based on input from the Dare 510 committee for Dare County and its respective municipalities. The information provided to WOOTEN from the ARHMP will be based on input at the 510 committee meetings from reviewing/updating our 2010 hazard mitigation plans. Each town will need to review their existing hazard mitigation plans to update information for 510 committee and ARHMP.

STEP 1 – ORGANIZE TO PREPARE THE PLAN –

Local planners met on August 21, first official meeting of full committee is September 4.

Committee must meet a sufficient number of times to involve the committee in the discussion of the following key steps:

STEP 4 Assess the hazard
STEP 5 Assess the problem
STEP 6 Set goals
STEP 7 Review possible activities
STEP 8 Draft an action plan

Committee must involve two representatives from each community; at least half must attend all meetings

STEP 2 – INVOLVE THE PUBLIC (September 4, 2014)

Committee members include stakeholders from each community.

Meetings will be open to the public and publicly posted – posted on Dare's website and advertised in local paper. (Dare County will advertise and post on our website for each meeting and for separate meetings to be held later in process)

Public meetings held within first 2 months of process – separate from committee meetings (we missed this opportunity)

Public meetings held on recommended plan – 2 weeks before submission to local governing boards – we will have to complete once ARHMP is finalized and ready for adoption (May-June 2015)

Additional points for other public outreach activities – website postings, etc.

STEP 3 – COORDIANTE (September 4, 2014)

Points for review of existing plans by 510 committee

Points for coordinating with other agencies and organizations (examples from CRS manual page 510-13)

STEP 4 – ASSESS THE HAZARD (second meeting TBD)

Discussion by 510 committee of information from WOOTEN

Must include repetitive loss information for each community – each town must be prepared to discuss this at next meeting.

Must all discuss all hazards discussed in each mitigation plan

STEP 5 ASSESS THE PROBLEM (second meeting TBD)

Discussion by 510 committee of hazards identified to summarize what is at risk. We will need an assessment from each town on types of affected buildings in each community. Identify community buildings that are insured for flood damage by town.

STEP 6 – GOALS (third meeting TBD)

Goals for all hazards identified by 510 committee

STEP 7 – REVIEW POSSIBLE ACTIVITIES (third meeting TBD)

Discussion by 510 committee of possible activities (pros and cons discussed) of each activity. This step serves as the basis for the selection of projects and activities in STEP 8. (Figure 510-4 from CRS manual lists examples)

STEP 8 – DRAFT AN ACTION PLAN ((fourth meeting TBD)

Identify actions to be taken in response to alternatives from STEP 7, must identify responsible agency, timeline for action, and how it will be funded. Actions must be prioritized.

STEP 9 – ADOPT THE PLAN

Adopt by local governing boards of ARHMP – each government involved in ARHMP will need to adopt regional plan (July 2015)

STEP 10 – IMPLEMENT, EVALUATE, AND REVISE

Must be an annual evaluation of plan for CRS credit each year

	Camden	Chowan	Currituck	Dare	[illegible]	Hertford	[illegible]	[illegible]
Hurricanes	x	x	x	x	x	x	x	x
Floods	x	x	x	x	x	x	x	x
Tornados	x	x	x	x	x	x	x	x
Winter Storms	x	x	x	x	x	x	x	x
Severe Thunderstorm	x	x	x	x	x	x	x	x
Wildfires	x	x	x	x	x	x	x	x
Erosion		x	x	x	x	x		x
Nor'easters		x	x	x	x			x
Drought/Heat Wave		x	x	x	x	x		x
Severe Winter Storms		x	x	x	x			x
Volcanos		x		x		x		x
Earthquakes		x	x	x	x	x		x
Storm Surge		x	x	x				
Landslides/Sinkholes		x	x	x	x	x		x
Dam/Levee Failure		x		x	x		x	x
Tsunamis		x	x	x	x	x		x
Rip Currents			x	x				
Terrorism				x			x	
Pandemic			x	x				
Transportation				x				
Haz Mat Incidents				x			x	
Nuclear Incidents							x	
Groundwater contamination				x			x	
Infectious disease			x					

2015 Albemarle Regional Hazard Mitigation Goals

1. Evaluate and revise local plans, policies, procedures, regulations and ordinances to further enhance the regions ability to mitigate natural hazards.

2. Maintain and/or improve existing transportation infrastructure to aid in evacuations.

3. Implement a public outreach campaign to increase awareness about the hazards that can impact the region.

4. Pursue mitigation of repetitive flood loss properties.

5. Identify Implement mitigation projects that are cost effective and will help reduce the effects of natural hazards.

Town of Nags Head – Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
Policy/Program Related Mitigation Activities										
A. Evaluate and revise local plans, policies, procedures, regulations and ordinances to further enhance the regions ability to mitigate natural hazards.										
Flood Mitigation through NFIP, State, Local Activities and Regulatory Efforts										
1. Continue to enforce the minimum requirements of the National Flood Insurance Program and update town policies and procedures applicable to future map revisions and changes in FEMA requirements	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Annual	Planning	General Fund	X	X	X	X	X	High
2. Maintain the town's freeboard requirement and consider additional measures for flood damage reduction recognized by FEMA and the CRS program to reduce flood losses	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tide Flooding	Anticipated 2016 in conjunction with revised flood maps.	Planning	General Fund		X				High
3. Support the continued education and training of the Town's Building Inspectors and planning staff in inspections and mitigation activities. This shall include maintaining staff as certified floodplain managers.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Annual	Planning	General Fund, Grants	X	X	X	X	X	Medium
4. Develop a program to identify businesses and material storage areas where significant amounts of toxic or hazardous products are stored which would be subject to flooding.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	2016	Public Safety - Fire	General Fund		X				Medium

ATTACHMENT 10

Town of Nags Head – Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
5. Continue to identify properties in repetitive loss areas and inform property owners in these areas of flood mitigation actions they can take to reduce flood losses.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tide Flooding	Annual	Planning	General Fund, Grants	X	X	X	X	X	Medium
6. Petition FEMA through the Town's state and regional NFIP representatives to consider adopting realistic regulations regarding the determination of destroyed structures. Specifically, this would apply to structures which are located on the public beach that are not eligible for flood insurance until they collapse.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tide Flooding, Coastal Erosion	2016		N/A		X				Low
7. Continue Town participation in the Community Rating System program and seek ways to improve the town's class six (6) rating.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	2015/2016 – Investigate during five year recertification cycle	Planning/Planning Board/Board of Commissioners	General Fund	X	X				High
8. Train town staff on the 2013 CRS Manual.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	2015	Planning	N/A	X					High
9. Following a severe storm or hurricane, evaluate reconstruction and repairs efforts for compliance with the adopted zoning ordinance, CAMA regulations, and all other applicable local, state and federal regulations	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Annually	Planning	N/A	X	X	X	X	X	Medium

ATTACHMENT 10

Town of Nags Head – Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
10. Continue to maintain, enforce and evaluate the effectiveness of the comprehensive stormwater management ordinance adopted in 2014.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Annually	Planning/Public Works	N/A	X	X	X	X	X	High
Septic Health										
11. Evaluate methods to improve the effectiveness and property owner participation in the Town's Septic Health Program. This may include additional measures to monitor septic system operations with routine inspections.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	2017	Planning/Septic Health	General Fund/Grants			X			Medium
12. Consider seeking authority and adopting regulations which would allow qualified Town staff to inspect sewer treatment facilities and on-site septic systems after a storm. These regulations should also allow staff to request the corrective actions necessary to ensure proper operation of these systems.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	2017	Planning/Septic Health	General Fund			X			Medium
13. The Town shall take a proactive approach to educating citizens on the negative implications of using a septic system that has suffered storm damage. The Town will develop educational materials informing homeowners on the proper care of a system impacted by floodwaters.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	2016	Planning/Septic Health	General Fund/Water Fund		X				High

ATTACHMENT 10

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
Project Related Mitigation Activities										
D. Implement mitigation projects that are cost effective and will help reduce the effects of natural hazards. E. Maintain and/or improve existing transportation infrastructure to aid in evacuations. F. Pursue mitigation of repetitive flood loss properties.										
Beach Nourishment and Shoreline Management										
14. Continue the town's program to nourish its beaches as a means to mitigate damage to oceanfront properties and infrastructure.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	2017/2018	Board of Commissioners/Town Manager/Public Works/Planning	Dare County Shoreline Fund/Town Municipal Service Districts			X	X		High
15. Continue to pursue funding sources for the Town's beach nourishment program from Dare County and other levels of government	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	2015/2016	Board of Commissioners/Town Manager	General Fund	X	X	X			High
16. Through joint efforts with other local governments and organizations such as the North Carolina Beach and Inlet Waterways Association, actively lobby the State for a state policy and strategy on beach nourishment and beach renourishment. This shall also include an annually funded state program to support local nourishment activities.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	2018/2019	Board of Commissioners	General Fund				X	X	Medium
17. Develop and implement a shoreline management plan to assist with stabilization of the beach between nourishment cycles. This may include a town program to provide planting and sand fencing based on a set of criteria for evaluating shoreline and dune conditions.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion	2015/2016	Public Works/Planning	Dare County Shoreline Fund/General Fund	X	X				High

ATTACHMENT 10

Town of Nags Head – Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
18. In coordination with Dare County and other Dare County municipalities, develop a long-term strategy for beach nourishment including financing, permitting, and ongoing project implementation.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion	2018/2019	Board of Commissioners/Town Manager	Dare County Shoreline Fund/General Fund				X	X	Medium
19. Monitor and evaluate changing shoreline conditions on an annual basis as part of an overall shoreline management strategy.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion	2015/2016	Public Works/Consultant	Dare County Shoreline Fund/General Fund	X	X				High
20. Seek methods to remove structures located on the public beach which degrade the recreational and natural quality of the environment, create public health and safety hazards to beachgoers, and impede the ability of life safety personnel to move along the shoreline.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion	Annually	Board of Commissioners/Town Manager/Town Attorney	General Fund	X	X	X	X	X	High
Open Space Preservation										
21. Actively seek grants to acquire property for the purpose of mitigating damage, improving water quality, and preserving open space.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding	Annually	Planning/Public Works	General Fund/Grants	X	X	X	X	X	Medium
Transportation and Drainage Infrastructure										
22. Maintain an emergency transportation route parallel to US 158. This may include Wrightsville Avenue, Memorial Avenue and even the Nags Head Woods Road as needed.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding, Tsunami	Annually	Public Works/Public Safety	General Fund	X	X	X	X	X	Medium

ATTACHMENT 10

Town of Nags Head – Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
23. Through the budget and CIP process, request funds to comprehensively review and improve the Town's drainage system.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	2015/2016	Board of Commissioners/Public Works	General Fund	X	X				High
24. Continue to evaluate revenue sources to implement stormwater improvements and address localized drainage issues. This may include the reevaluation of the Town's Stormwater Utility, as necessary.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	2016/2017	Board of Commissioners/Town Manager/Public Works	General Fund/Stormwater Fund		X	X			Medium
25. Continue to develop and implement a strategically prioritized list of stormwater projects as part of the Town's Capital Improvement Program.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Annually	Board of Commissioners/Town Manager/Public Works	General Fund/Stormwater Fund	X	X	X	X	X	High
26. Collect necessary survey data and asset information to evaluate and program drainage and transportation projects as well as maintenance activities.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding	2015/2016	Public Works	General Fund/Stormwater Fund	X	X				
27. Continue to identify and evaluate solutions to address areas of repetitive flooding.	Hurricanes, Nor'easters, Flooding, Thunderstorms, , Tidal Flooding	Annually	Public Works	General Fund/Stormwater Fund	X	X	X	X	X	High
28. Perform annual maintenance of the Town's drainage system including vegetation removal, sediment removal, culvert cleaning and the re-establishment of drainage grade lines to improve drainage flow.	Hurricanes, Nor'easters, Flooding, Thunderstorms, , Tidal Flooding	Annually	Public Works	General Fund/Stormwater Fund	X	X	X	X	X	High

ATTACHMENT 10

Town of Nags Head – Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
29. Explore and investigate innovative solutions to unconventional drainage problems. An example includes the implementation of a groundwater lowering system along the western portion of the Vista Colony Subdivision to lower surrounding surface and groundwater increasing available stormwater storage capacity in advance of storm events.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Annually	Public Works	General Fund/Stormwater Fund	X	X	X	X	X	Medium
30. Incorporate drainage improvements into roadway, pathway, and related development projects in an effort to eliminate impediments, improve flow and enhance hydraulic capacity which can effectively result in an increased level of service and system efficiency. Examples include the continued development of the W. Side Multi-Use Path, Holy Trinity Catholic Church, Flicker St. and Moongate Subdivision located in the Village of Nags Head.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Annually	Public Works	General Fund/Stormwater Fund	X	X	X	X	X	Medium
31. The Town shall develop contingency plans for Town streets and waterlines that may be lost as a result of erosion. This can include development of alternative routes or access, or upfront declaration of the potential for future improvements.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Tidal Flooding	Annually	Public Works	General Fund/Stormwater Fund	X	X	X	X	X	Medium

ATTACHMENT 10

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
32. Maintain public safety communications with Colony Ridge staff to assist with evacuation procedures prior to an event if necessary and the helipad has been preserved for use if needed during or after an event.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	2015	Planning/ Hurricane Recovery	General Fund	X					High
33. Conduct a study to determine future impacts of recurring flooding associated with sea level rise on town infrastructure including streets, waterlines, electric power utilities, and wastewater systems.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding,	2015-2017	Planning/Public Works/Board of Commissioners	General Fund/Grants	X	X	X			Medium
Fire Protection										
34. As part of the ongoing evaluation of the Nags Head Urban Wild Fire Interface Plan, continue to evaluate the need for and maintain fire breaks in wild land urban interface areas including residential communities adjacent to Nags Head Woods and the Cape Hatteras National Seashore.	Fire/Wildfire	2015-2017	Public Safety – Fire/Nature Conservancy/NPS	General Fund/Grants	X	X	X			High
35. To mitigate the impact of wild land urban interface fires, plan and participate in controlled burn activities as necessary to strategically reduce fuel loads in Nags Head Woods and other areas.	Fire/Wildfire	2015-2017	Public Safety – Fire/Nature Conservancy/NPS	General Fund/Grants	X	X	X			High
36. The Town shall continue the program to remove dead wood in critically fire prone areas.	Fire/Wildfire	Annually	Public Safety – Fire	General Fund	X	X	X	X	X	Medium

ATTACHMENT 10

Town of Nags Head – Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
37. Continue to educate property owners to maintain fire safe landscaping and vegetation adjacent to structures.	Fire/Wildfire	Annually	Public Safety – Fire	General Fund	X	X	X	X	X	Medium
38. The Town shall evaluate the Nags Head Woods Fire Plan on a regular basis and coordinate information with Nature Conservancy Staff. Strategies to seek grant funding for fuel reduction activities shall be pursued. Continue public education on prescribed burn and fuel reduction activities.	Fire/Wildfire	2015-2017	Public Safety – Fire/Nature Conservancy/NPS	General Fund/Grants	X	X	X			High
39. The Town shall continue cooperation with the US Forest Service and Dare County for mutual aid fire protection.	Fire/Wildfire	Annually	Public Safety – Fire	General Fund	X	X	X	X	X	Medium
40. As part of the annual CIP process, the Town shall continue to inventory and recommend improvements to fire hydrants, water distribution infrastructure, and other town infrastructure in support of fire planning efforts.	Fire/Wildfire	Annually	Public Safety – Fire/Public Works	General Fund/Water Fund	X	X	X	X	X	Medium
41. The Town shall update its Water Supply Shortage Plan and evaluate recommendations to implement water restrictions during periods of drought.	Drought/Fire/Wildfire	2017	Public Works	General Fund/Water Fund			X			Medium

ATTACHMENT 10

Town of Nags Head – Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
42. The Town shall continue to cooperate with Dare County on the development of additional water supply well facilities.	Drought/Fire/Wildfire	Annually	Public Works	General Fund/Water Fund	X	X	X	X	X	Medium
43. The Town shall improve fire protection in Nags Head Woods with the installation of 'dry hydrants' and maintenance and improvements to Nags Head Woods Road.	Fire/Wildfire	2016/2017	Public Safety – Fire/Public Works	General Fund/Water Fund		x	X			Medium
Planning for Recovery Activities										
44. On issues of mutual concern, the Town shall coordinate recovery and post storm response activities with Dare County, the State of North Carolina, and the Federal Government.	All Hazards	Annually	Board of Commmissioners/ Town Manager/Outside Agencies	N/A	X	X	X	X	X	Medium
45. The town shall continue to maintain and improve its emergency operations and communications infrastructure including its EOC, backup EOC, and mobile command center.	All Hazards	Annually	Public Safety/Town Manager	General Fund	X	X	X	X	X	Medium
46. Following a severe storm the Town shall establish an information center staffed with Town, State and Federal employees who are available to assist property owners in the reentry and recovery process.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	As Needed	Public Safety/Public Information Officer	General Fund/FEMA	X	X	X	X	X	High

ATTACHMENT 10

Town of Nags Head – Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
47. Following a declared emergency storm event, only those areas where damage assessment is complete and that have been declared relatively secure shall be open to the public.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	As Needed	Public Safety/Public Information Officer/Planning	General Fund	X	X	X	X	X	High
48. The Town shall identify and implement methods to streamline the damage assessment process to provide information to Dare County, the state, and any other agencies assisting the town with recovery efforts. This shall also include methods to expedite the availability of damage and condemnation information to Town staff and the public.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	2016/2017	Planning	General Fund		X	X			Medium
49. The Town shall continue to pre-position debris removal agreements on a yearly basis.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	Annually	Town Manager	General Fund	X	X	X	X	X	High
50. The Town shall obtain pre-storm authorization from the NC Department of Transportation (DOT) to clear DOT maintained roads after storm events.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	Annually	Town Manager	General Fund	X	X	X	X	X	High

ATTACHMENT 10

Town of Nags Head – Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
51. The Town shall maintain its mutual aid agreements and reevaluate as necessary to maintain post-storm assistance with building inspections, damage assessment, utilities repair and public facilities maintenance, and additional public safety personnel. The Town shall continue participate in the Statewide Mutual Aid Compact.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	Annually	Town Manager	General Fund	X	X	X	X	X	High
52. The Town shall maintain a well trained staff level damage assessment team.	Hurricanes, Nor'easters, Flooding, Thunderstorms, Coastal Erosion, Tidal Flooding, Tsunami	2015	Planning	General Fund	X					High
53. The Town shall follow the Incident Command Structure and maintain a designated Emergency Management Coordinator and Deputy Emergency Management Coordinator.	All Hazards	Annually	Public Safety/Town Manager	General Fund	X	X	X	X	X	High
54. Annually update emergency plans concerning critical facilities and include these in the Town's Emergency Operations Plan.	All Hazards	Annually	Public Safety/Town Manager	General Fund	X	X	X	X	X	High
Public Information Activities G. Implement a public outreach campaign to increase awareness about the hazards that can impact the region. H. Provide public education opportunities and information regarding storm preparedness, hazard mitigation and planning initiatives.										

ATTACHMENT 10

Town of Nags Head – Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
55. The Town shall continue to improve methods to provide public information after a storm. This shall include an automated voice messaging system with storm damage and re-entry information, a Mayor's radio broadcast, email broadcasts, improved real-time website information with relevant local contact information, available information at traffic stops, and designation of a post-storm public information officer.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	2015/2016 – As part of 2015 CRS Recertification	Planning/Public Information Officer/Public Safety	General Fund	X	X				Medium
56. The Town shall communicate post-storm recovery and operations policies and procedures to residents and property owners prior to hurricane season. The Town shall consider providing this information in the Town Newsletter and email broadcast, on the Local Government Access Channel, through the Town Website, and through social media.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	2015/2016 – As part of 2015 CRS Recertification	Planning/Public Information Officer/Public Safety	General Fund	X	X				Medium
57. In its Emergency Operations Plan, the Town shall detail the process for distributing information internally and externally to the public before and after storms.	Hurricanes, Nor'easters, Tidal Flooding, Flooding	2015/2016	Planning/Public Information Officer/Public Safety	General Fund	X	X				Medium

ATTACHMENT 10

Town of Nags Head – Hazard Mitigation Plan Goals and Implementation Activities

Goals / Actions	Hazard	Target Completion Date	Responsible Agency	Funding Source	15	16	17	18	19	Priority
					Deadline					
58. The Town shall continue its fire education program. This includes newsletter and newspaper articles on fire protection as well as grants from the State Division of Forestry for fire education.	Fire/Wildfire	Annually	Public Safety - Fire	General Fund, Grants	X	X	X	X	X	Medium

ATTACHMENT 10

ATTACHMENT 10

Agenda Item Summary Sheet

Item No:
Meeting Date: January 7, 2015

Item Title: Update on the Town's participation in the Regional Hazard Mitigation Planning Process.

Item Summary:

The Town of Nags Head is participating in the Albemarle Regional Hazard Mitigation Planning effort since its kickoff in May. This effort is serving as the town's five year update to its Hazard Mitigation Plan which is required to maintain eligibility for federal disaster assistance and hazard mitigation funding. Previously the Board received an update on past goals and actions as part of the annual CRS 510 progress report. Attached are the Town's revised goals and actions that will become part of the regional plan. It is important to note that the regional plan will supersede the town's current hazard mitigation plan. Planning staff met with other Town Departments to review and modify the updated draft goals/actions in Attachment A. The Board is being requested to review these goals and action items and provide any feedback to staff prior to submission to the regional project team. It is anticipated that the Board will receive a draft copy of the entire regional plan for review prior to submission to the North Carolina Department of Emergency Management in February. To meet state and federal requirements, the regional plan must be approved by June of 2015.

Number of Attachments: 2

Specific Action Requested:

Provide feedback to staff on the Town's draft goals and actions making any modifications, additions, or deletions needed.

Submitted By: Planning and Development Date: December 29, 2014

Finance Officer Comment:

Signature: Date:

Town Attorney Comment:

Signature: Date:

Town Manager Comment and/or Recommendation:

Signature: Date:

Town of Nags Head

Planning and Development Department

Post Office Box 99
Nags Head, North Carolina 27959
www.nagsheadnc.gov

Telephone 252-441-7016
FAX 252-441-4290

MEMORANDUM

TO: Board of Commissioners

FROM: Holly B. White, Principal Planner
Andy Garman, Director of Planning and Development

DATE: January 7, 2015

SUBJECT: Regional Hazard Mitigation Plan Update

The Town of Nags Head is participating in the Albemarle Regional Hazard Mitigation Planning effort since its kickoff in May. This effort is serving as the town's five year update to its Hazard Mitigation Plan which is required to maintain eligibility for federal disaster assistance and hazard mitigation funding. Previously the Board received an update on past goals and actions as part of the annual CRS 510 progress report. It is important to note that the regional plan will supersede the town's current hazard mitigation plan. Planning staff met with other Town Departments to review and modify the updated draft goals/actions in Attachment A. The Board is being requested to review these goals and action items and provide any feedback to staff prior to submission to the regional project team. It is anticipated that the Board will receive a draft copy of the entire regional plan for review prior to submission to the North Carolina Department of Emergency Management in February. To meet state and federal requirements, the regional plan must be approved by June of 2015.

Background & Process

The Albemarle Regional Planning effort kicked off in May of 2014 after the region received a state grant. FEMA and the North Carolina Division of Emergency Management (NCDEM) directed the formation of the jurisdictions participating in this planning effort. The plan encompasses eight counties and 17 municipalities including Dare, Currituck, Camden, Chowan, Gates, Hertford, Perquimans, and Pasquotank. Nationwide there has been a progression to move towards regional plans. The movement to regional plans stems partially from the high volume of plan reviews by FEMA and the State. FEMA and the State were reviewing approximately 400-500 plans in North Carolina alone.

Prior to 2004 the Town did not have a hazard mitigation plan. At that time, the Town's Land Use Plan was utilized for hazard mitigation planning purposes since it contained much of the same information. However, with the Federal adoption of the Disaster Mitigation Act of 2000, hazard mitigation planning became a requirement and by law was necessary to maintain eligibility for hazard mitigation and post disaster funding. Hazard mitigation plans are required

to be updated every five years. In 2004 the town developed its first plan as a stand-alone plan. In 2010 the Town partnered with Dare County and other Dare County municipalities to update its plan as part of a multi-jurisdictional plan. The current five year update is a regional plan and will supersede the multi-jurisdictional plan once adopted. In addition to hazard mitigation grant funding and post disaster assistance, having an adopted Hazard Mitigation Plan is a major component in gaining credit toward our Community Rating System (CRS) Program and associated discount on flood insurance for property owners.

Town Planning Staff has been participating in regional meetings since May. Through this process, a regional survey was conducted from May to September. Based on the results from the survey and assessment of regional hazards, regional goals were formed (Attachment B). The regional goals and survey results were presented at a public meeting in October. The consultant requested that the Town's goals/actions be formulated to be consistent with the larger regional goals. In addition to the regional meetings, Dare County formed a multi-jurisdictional committee, the Dare County CRS 510 Committee, of Dare County and associated municipalities to address local issues and to gain credit toward each municipality's CRS program and rating. Town Staff and Planning Board member Mark Cornwell have been participating in the Dare County CRS 510 Committee meetings since August.

Town Staff met on December 19th to review the regional planning process, regional goals, and modify the Town's draft goals and actions. The goals and actions in Attachment A have been vetted and unanimously recommended by Town Staff and are being presented to the Board for review.

Moving Forward

The final public regional plan meeting will be held at the Currituck County Cooperative Extension Center in Barco on January 15, 2015 at 6:00 pm. A draft regional plan will be available at that time for public comment. Staff will provide this to the Board once it is available. Following the meeting, there will be a two week public comment period. The consultant will deliver a final draft of the regional plan to the NCDEM for review the week of February 1, 2015. State review should take approximately two weeks. Once reviewed and approved by the State, the regional plan will be forwarded to FEMA for approval. FEMA review should take approximately 45 days. Once FEMA has reviewed the regional plan, the plan will be effective and official once the town has adopted the plan. This will need to be completed by June of 2015.

The Board is being requested to review these goals and action items and provide any feedback to staff prior to submission to the regional project team.

For more information on the Albemarle Regional Hazard Mitigation Planning process, visit http://albemarlereghazardmitigationplan.wikispaces.com/.

ATTACHMENT(S):

A. Town of Nags Head Draft Goals & Actions- Hazard Mitigation Plan
B. Regional Goals

ATTACHMENT 10

AGENDA
Town of Nags Head Planning Board
Nags Head Municipal Complex Board Room
Tuesday, January 20th, 2015; 2:30 p.m.

A. **Call To Order**

B. **Approval of Agenda**

C. **Election of Chair and Vice Chair for Calendar Year 2015** – An organizational meeting to elect a Chair and Vice-Chair of the Board for calendar year 2015.

D. **Establishment of Regular Meeting Dates for Calendar Year 2015**

E. **Public Comment/Audience Response**

F. **Approval of Minutes** – November 20, 2014

G. **Report on Board of Commissioners Actions**

1. Public Hearing to consider time limits on re-reviewing text amendment applications which have been denied by the governing body – Adopted as presented.

2. Public Hearing to consider amendments to the Town's Parking Ordinance - the Board discussed numerous modifications to the residential portion of the ordinance, revisions will be made by staff and presented to the Planning Board at their January, 2015 meeting.

3. Public Hearing to consider amendments to Fishing Piers within the CR, Commercial Residential Zoning District – Adopted as presented however Board of Commissioners requested staff draft similar language for Fishing Piers located within the R-2, Medium Density Residential District.

4. Public Hearing to consider a zoning ordinance text amendment as it relates to setbacks for pools and pool decks as accessory structures - Adopted as presented.

5. The Board authorized staff to make application for the PARTF Grant for the construction of Dowdy Park.

H. **Town Updates- as requested**

1. Dowdy Park Committee – Committtee members meet on Wednesday, January 14, 2015 to discuss conceptual designs and Board of Commissioners to hold a workshop with the public on Tuesday, January 27, 2015.

2. Update on Hazard Mitigation Plan – to be considered at the January 21, 2015 Board of Commissioners mid-month meeting.

3. The Board adopted the resolution adopting the NCDOT Dare County Comprehensive Transportation Plan as presented.

4. Other updates as requested.

ATTACHMENT 10

I. **Action Items**

1. Continuation of consideration of a text amendment application submitted by April Vaughan on behalf of Whalebone Surf Shop to permit multiple principal uses within one commercial building.

2. Consideration of stormwater ordinance limitations on lot fill and the relationship to the Town's one foot freeboard requirement.

3. Discussion/consideration of zoning ordinance text amendments related to "Fishing Piers" within the R-2, Medium Density Residential District.

4. Consideration of amendments/revisions to the Town's parking ordinance.

J. **Discussion Items**

1. Discussion of intent of regulations for nonconforming Cottage Courts specifically relating to minor additions such as attached/detached storage sheds and open deck expansions.

K. **Adjournment**

ATTACHMENT 10

Agenda Item Summary Sheet

Item No:
Meeting Date: January 21, 2015

Item Title: Update on the Town's participation in the Regional Hazard Mitigation Planning Process.

Item Summary:

The Town of Nags Head is participating in the Albemarle Regional Hazard Mitigation Planning effort since its kickoff in May. This effort is serving as the town's five year update to its Hazard Mitigation Plan which is required to maintain eligibility for federal disaster assistance and hazard mitigation funding. Previously the Board received an update on past goals and actions as part of the annual CRS 510 progress report. Attached are the Town's revised goals and actions that will become part of the regional plan. These revised goals and actions include revisions from the Board and Staff since the last BOC meeting on January 7th, 2014. The Board is being requested to approve the revised goals and actions so they can be submitted to the regional team for inclusion in the regional plan. It is anticipated that the Board will receive a draft copy of the entire regional plan for review prior to submission to the North Carolina Department of Emergency Management in February. To meet state and federal requirements, the regional plan must be approved by June of 2015.

Number of Attachments: 1

Specific Action Requested:

Approve , deny, or approve with modifications the revised goals and actions.

Submitted By: Planning and Development Date: January 16, 2015

Finance Officer Comment:

Signature: Date:

Town Attorney Comment:

Signature: Date:

Town Manager Comment and/or Recommendation:

Signature: Date:

ATTACHMENT 10

Town of Nags Head

Planning and Development Department

Post Office Box 99
Nags Head, North Carolina 27959
www.nagsheadnc.gov

Telephone 252-441-7016
FAX 252-441-4290

MEMORANDUM

TO: Board of Commissioners

FROM: Holly B. White, Principal Planner
Andy Garman, Director of Planning and Development

DATE: January 15, 2015

SUBJECT: Regional Hazard Mitigation Plan Update

The Town of Nags Head is participating in the Albemarle Regional Hazard Mitigation Planning effort since its kickoff in May. This effort is serving as the town's five year update to its Hazard Mitigation Plan which is required to maintain eligibility for federal disaster assistance and hazard mitigation funding. Previously the Board received an update on past goals and actions as part of the annual CRS 510 progress report. Attached are the Town's revised goals and actions that will become part of the regional plan. These revised goals and actions include feedback from the Board and Staff. It is important to note that the regional plan will supersede the town's current hazard mitigation plan. The Board is being requested to approve the revised goals and actions so they can be submitted to the regional team for inclusion in the regional plan. It is anticipated that the Board will receive a draft copy of the entire regional plan for review prior to submission to the North Carolina Department of Emergency Management in February. To meet state and federal requirements, the regional plan must be approved by June of 2015.

Background & Process

The Albemarle Regional Planning effort kicked off in May of 2014 after the region received a state grant. FEMA and the North Carolina Division of Emergency Management (NCDEM) directed the formation of the jurisdictions participating in this planning effort. The plan encompasses eight counties and 17 municipalities including Dare, Currituck, Camden, Chowan, Gates, Hertford, Perquimans, and Pasquotank. Nationwide there has been a progression to move towards regional plans. The movement to regional plans stems partially from the high volume of plan reviews by FEMA and the State. FEMA and the State were reviewing approximately 400-500 plans in North Carolina alone.

Prior to 2004 the Town did not have a hazard mitigation plan. At that time, the Town's Land Use Plan was utilized for hazard mitigation planning purposes since it contained much of the same information. However, with the Federal adoption of the Disaster Mitigation Act of 2000, hazard mitigation planning became a requirement and by law was necessary to maintain eligibility for hazard mitigation and post disaster funding. Hazard mitigation plans are required

to be updated every five years. In 2004 the town developed its first plan as a stand-alone plan. In 2010 the Town partnered with Dare County and other Dare County municipalities to update its plan as part of a multi-jurisdictional plan. The current five year update is a regional plan and will supersede the multi-jurisdictional plan once adopted. In addition to hazard mitigation grant funding and post disaster assistance, having an adopted Hazard Mitigation Plan is a major component in gaining credit toward our Community Rating System (CRS) Program and associated discount on flood insurance for property owners.

Town Planning Staff has been participating in regional meetings since May. Through this process, a regional survey was conducted from May to September. Based on the results from the survey and assessment of regional hazards, regional goals were formed (Attachment B). The regional goals and survey results were presented at a public meeting in October. The consultant requested that the Town's goals/actions be formulated to be consistent with the larger regional goals. In addition to the regional meetings, Dare County formed a multi-jurisdictional committee, the Dare County CRS 510 Committee, of Dare County and associated municipalities to address local issues and to gain credit toward each municipality's CRS program and rating. Town Staff and Planning Board member Mark Cornwell have been participating in the Dare County CRS 510 Committee meetings since August.

Town Staff met on December 19th to review the regional planning process, regional goals, and modify the Town's draft goals and actions. Staff presented the draft goals and actions at the Town BOC meeting on January 7th, 2015. The BOC was asked to review the goals and actions and provide staff with feedback. Staff has taken the comments provided by the BOC, and revised the goals and actions. The goals and actions in Attachment A reflect the changes made to the document since the last meeting as suggested by the BOC and staff.

Moving Forward

The final public regional plan meeting will be held at the Currituck County Cooperative Extension Center in Barco on January 15, 2015 at 6:00 pm. A draft regional plan will be available at that time for public comment. Staff will provide this to the Board once it is available. Following the meeting, there will be a two week public comment period. The consultant will deliver a final draft of the regional plan to the NCDEM for review the week of February 1, 2015. State review should take approximately two weeks. Once reviewed and approved by the State, the regional plan will be forwarded to FEMA for approval. FEMA review should take approximately 45 days. Once FEMA has reviewed the regional plan, the plan will be effective and official once the town has adopted the plan. This will need to be completed by June of 2015.

The Board is being requested to approve the revised goals and action items attached for submission into the regional plan.

For more information on the Albemarle Regional Hazard Mitigation Planning process, visit http://albemarlereghazardmitigationplan.wikispaces.com/.

ATTACHMENT(S):

A. Town of Nags Head Draft Goals & Actions- Hazard Mitigation Plan

ATTACHMENT 10

Agenda Item Summary Sheet

Item No:
Meeting Date: June 10, 2015

Item Title: Adoption of the Albemarle Regional Hazard Mitigation Plan

Item Summary:

The Town of Nags Head has participated in the Albemarle Regional Hazard Mitigation Planning effort since its kickoff in May 2014. This effort is serving as the town's five year update to its Hazard Mitigation Plan which is required to maintain eligibility for federal disaster assistance and hazard mitigation funding. FEMA found our draft plan compliant with the standards for multi-jurisdictional Hazard Mitigation Plans (see Attachment B and C). However, formal approval cannot be given by FEMA until community adoption. At this time, the Board is being asked to accept and approve the FEMA approved draft Albemarle Regional Hazard Mitigation Plan by resolution (Attachment A).

The complete FEMA approved Albemarle Regional Hazard Mitigation Plan can be viewed at http://albemarlereghazardmitigationplan.wikispaces.com/.

Number of Attachments: 3

Specific Action Requested:

Adopt the Albemarle Regional Hazard Mitigation Plan by resolution.

Submitted By: Planning and Development Date: June 10, 2015

Finance Officer Comment:

Signature: Date:

Town Attorney Comment:

Signature: Date:

Town Manager Comment and/or Recommendation:

Signature: Date:

Town of Nags Head

Planning and Development Department

Post Office Box 99
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www.nagsheadnc.gov

Telephone 252-441-7016
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MEMORANDUM

TO: Board of Commissioners

FROM: Holly B. White, Principal Planner
Andy Garman, Deputy Town Manager/Planning Director

DATE: June 10, 2015

SUBJECT: Albemarle Regional Hazard Mitigation Plan

The Town of Nags Head has participated in the Albemarle Regional Hazard Mitigation Planning process. This effort serves as the town's five year update to its Hazard Mitigation Plan. The plan is required to be updated in order to *maintain eligibility for federal disaster assistance and hazard mitigation funding*. At the Board's January mid-month meeting, Staff provided the board with the Town's updated goals and actions, which incorporated comments by the board from the January 7th meeting. On January 21st, the Board voted to approve the Regional Plan with the updated Town Goals and Actions.

FEMA found our draft plan compliant with the standards for multi-jurisdictional Hazard Mitigation Plans (see Attachment B and C). However, formal approval cannot be given by FEMA until community adoption. At this time, the Board is being asked to accept and approve the FEMA approved draft Albemarle Regional Hazard Mitigation Plan by resolution (Attachment A).

The complete FEMA approved Albemarle Regional Hazard Mitigation Plan can be viewed at http://albemarlereghazardmitigationplan.wikispaces.com/.

Background & Process

The Albemarle Regional Planning effort kicked off in May of 2014 after the region received a state grant. FEMA and the North Carolina Division of Emergency Management (NCDEM) directed the formation of the jurisdictions participating in this planning effort. The plan encompasses eight counties and 17 municipalities including Dare, Currituck, Camden, Chowan, Gates, Hertford, Perquimans, and Pasquotank. Nationwide there has been a progression to move towards regional plans. The movement to regional plans stems partially from the high volume of plan reviews by FEMA and the State. FEMA and the State were reviewing approximately 400-500 plans in North Carolina alone.

Prior to 2004 the Town did not have a hazard mitigation plan. At that time, the Town's Land Use Plan was utilized for hazard mitigation planning purposes since it contained much of the

same information. However, with the Federal adoption of the Disaster Mitigation Act of 2000, hazard mitigation planning became a requirement and by law was necessary to maintain eligibility for hazard mitigation and post disaster funding. Hazard mitigation plans are required to be updated every five years. In 2004 the town developed its first plan as a stand-alone plan. In 2010 the Town partnered with Dare County and other Dare County municipalities to update its plan as part of a multi-jurisdictional plan. The current five year update is a regional plan and will supersede the multi-jurisdictional plan once adopted. In addition to hazard mitigation grant funding and post disaster assistance, having an adopted Hazard Mitigation Plan is a major component in gaining credit toward our Community Rating System (CRS) Program and associated discount on flood insurance for property owners.

Town Planning Staff has been participating in regional meetings since May. Through this process, a regional survey was conducted from May to September. Based on the results from the survey and assessment of regional hazards, regional goals were formed. The regional goals and survey results were presented at a public meeting in October. The consultant requested that the Town's goals/actions be formulated to be consistent with the larger regional goals. In addition to the regional meetings, Dare County formed a multi-jurisdictional committee, the Dare County CRS 510 Committee, of Dare County and associated municipalities to address local issues and to gain credit toward each municipality's CRS program and rating. Town Staff and Planning Board member Mark Cornwell have been participating in the Dare County CRS 510 Committee meetings since August.

Town Staff met on December 19th to review the regional planning process, regional goals, and modify the Town's draft goals and actions. A final public regional plan meeting was held January 15th. Staff was notified by Dare County in May that FEMA had approved the plan.

The Board is being requested to accept and approve the FEMA approved Albemarle Regional Hazard Mitigation Plan by resolution.

The complete FEMA approved Albemarle Regional Hazard Mitigation Plan can be viewed at http://albemarlereghazardmitigationplan.wikispaces.com/.

ATTACHMENT(S):

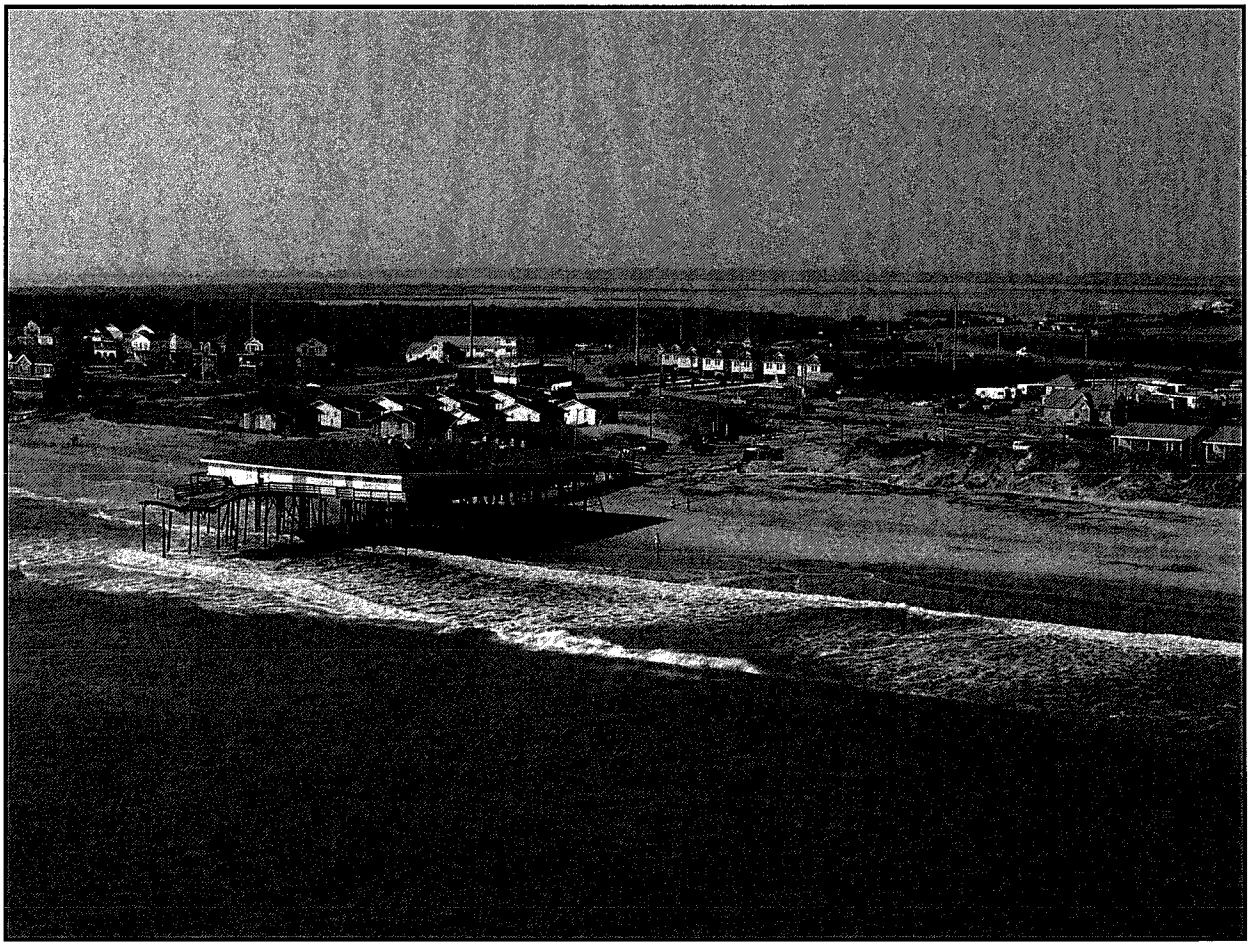
A. Adoption Resolution
B. Approval Letter from FEMA
C. Appendix A: Local Mitigation Plan Review Tool- demonstrates that the plan meets federal requirements

ATTACHMENT 10

The Town of Nags Head, North Carolina

Hazard Mitigation Plan

(Disaster Mitigation Act of 2000 and Senate Bill 300)



Originally Adopted: August 4, 2004
Revised and Adopted as part of the Dare County Joint Plan on May 21, 2010
Adopted by the Nags Head Board of Commissioners on November 3, 2010

Updates since 2010 - 2013 are in red while updates for 2013-2014 are in blue for Commissioners Review on December 3, 2014 for specified sections as attached

IV. COMMUNITY CAPABILITY ASSESSMENT

Because Nags Head has a long history of coastal storms, Town policies continually evolve to address mitigation. The Town has two main policy documents that govern hazard mitigation: the Town's 2000 Land and Water Use Plan and the 2001 Floodplain Management Plan, which was prepared as a component of the Community Rating System (CRS). The Town's zoning ordinance and the adoption of the 2002 International Building Code series and updates are additional regulatory mechanisms in place to mitigate hazard impacts. The Town participates in the National Flood Insurance Program and is rated as a Community Rating System "Class 6" community. The Town continues to investigate innovative programs, to seek funds for mitigation measures, to provide public educational opportunities, and to update building and zoning codes for high hazard areas that support the growth management policies of the Town. These goals are outlined under Section VI Mitigation Strategies and Policies.

Various Town departments continue to advance their pre- and post-storm mitigation capabilities. The Public Works Department annually pre-establishes debris removal agreements and maintains staff and equipment that can assist DOT and contractors with removal of debris and cleaning of roads and ditches. Police and Fire Departments are involved with local and regional emergency management planning, mutual aid agreements, and participate in numerous emergency preparedness activities. The Planning and Development Department has utilized mutual aid building inspectors for damage assessment and storm recovery and has pre-determined a response team for property damage assessment. Town GIS and information technology capabilities continually improve to help provide information before and after a storm both internally and to the public. Together, all Town departments are trained in, and part of the Incident Command System (ICS) structure and have specific assignments and duties for incident preparedness, response, and recovery activities that can be customized for any particular type or scale of event.

The Town remains financially, technically, and politically committed to mitigation activities and to continual improvement of preparedness and response strategies based on experience and known areas of vulnerability. Because of experiences including Hurricane Isabel and Hurricane Irene, Town of Nags Head staff is familiar with FEMA public assistance procedures and the relationship between reimbursement and disaster recovery. Town policies and operational procedures were reviewed and included the 2000 Land and Water Use Plan, the 2006 Land Use Plan, the 2006 Stormwater Management Plan, the CRS Floodplain Management Plan and the 2010 Land Use Plan. Public input from Hurricane Isabel was used to update the Town's storm recovery and mitigation procedures. Implementation of ICS structure and procedures framed the Town's response to Hurricane Irene. This Plan, therefore, remains a working document to provide guidance and information on our Hazard Mitigation policies and strategies.

Figure 1: Aerial View of Nags Head Ocean Front in 2011, prior to completion of beach nourishment.

A. Beach Nourishment

- The health, maintenance and stability of the ocean front dunes and the beach is essential and represents the Town's first line of defense against a storms or hurricanes. The Town's locally funded beach nourishment project placed 4.6 million cubic yards of sand on the beach between May 2011 and October 2011 expanding the beach by as much as 150-200 feet in some sections. The Town anticipated renourishing the beach within six years of initial construction. The Town is currently conducting planning efforts to complete the renourishment. This project will be completed by Spring of 2017.

B. Mitigation and FEMA

- Up to 80 percent of structures in the Town are vulnerable to a Category 3 hurricane. The Town's beach nourishment project should provide a greater degree of protection for vulnerable ocean front structures.
- The Town has actively worked to remove condemned structures from the ocean front that remain ocean-ward of the first line of stable vegetation. Refusal by certain property owners has resulted in law suits that are on-going.
- The State of North Carolina is currently involved in a floodplain mapping update. Until new maps are prepared and adopted, the Town will enforce Floodplain regulations in compliance with the September 20, 2006 FIRMs. The Town anticipates the release of draft maps in Spring of 2015.
- Nationwide repetitive loss areas account for 35 % of all flood insurance losses. Nags Head has several repetitive loss areas and has submitted mitigation applications for several repetitive loss properties that qualified under the program. Our experience so far has been that this program is both competitive and takes a long time. However, Town staff will continue to identify these properties as part of damage assessments and work with property owners to help them pursue assistance.

  In August 2013, the Town of Nags Head received a grant from the North Carolina Division of Emergency Management, Hazard Mitigation Grant Program to elevate one residential structure within the Town, 8301 S. Old Oregon Inlet Road to obtain FEMA compliance. This project is ongoing.
- Post storm coordination with FEMA is paramount for damage assessment and reimbursement. Nags Head should continue to develop its relationship with FEMA to improve this process.

C. Post Storm Mitigation

- Damage assessment is an essential component for hurricane and storm recovery. To assist property owners, the Town seeks ways to provide the most current, accurate and informative damage assessment information using on-the-ground assessment teams coordinated by the Planning and Development Department.

D. Recovery and Operations

- Cellular phone service is a useful form of communication after a hurricane and their continued and reliable operation is essential for recovery. The Town has granted leases to several cell phone providers to expand coverage and bandwidth. Additionally the Town has installed a Ham radio and has hand held radios for team ICS usage.

  In 2014, the process to prepare the Town of Nags Head Incident Command Center included the installation of both Amateur and 800 MHz radio systems.

- Intergovernmental cooperation is essential for a coordinated recovery. The Town participates in regional preparedness meetings with jurisdictions in not only Dare County but also in Virginia and North Carolina when appropriate. There are mutual aid agreements in place with adjacent jurisdictions and a re-location agreement with the City of Cary, in case Town operations need to be relocated.

- The Town needs to develop consistent debris removal procedures and locations for temporary debris storage until permanent debris disposal sites are identified and approved. Experience from Hurricane Irene showed the importance of having debris storage areas designated as back-up to the County landfill on a temporary basis.

- The Town maintains a staff of "essential personnel" and public safety employees. Their safety and protection during and after a storm is essential and is part of the ICS procedures and plan.

E. Transportation and Drainage

- As a long and narrow barrier island, US158 is the main north to south corridor. Alternate parallel routes would be established as necessary for emergency access and emergency response in the event US 158 is closed.

- The two bridges that provide access to the Outer Banks island system (at Nags Head and at Southern Shores) must be managed for effective evacuation of traffic and for the return of traffic appropriately. Depending on the event and the damage experienced, State Highway patrol is asked to control access and traffic flow across these bridges.

- NCDOT has scheduled widening of US64 through Dare and Tyrell County. This will provide additional lanes for evacuation of the primary transportation corridor linking Nags Head to the rest of North Carolina. Project will take place 2013-2015.

- The NCDOT is updating the Comprehensive Transportation Plan ("CTP") for Dare County. This plan includes several recommendations for roadway improvements, to increase safety and traffic flow along US158, the primary north-south transportation corridor, through access management, improved signal phasing, and bicycle and pedestrian facilities. While not a Dare County facility, the plan also references the addition of a Mid-Currituck bridge which would alleviate significant traffic and improve evacuation times on US 158 and NC 168.

- There are numerous areas within the town that typically flood during severe storm events and hurricanes. These areas have been identified in this report and noted in the ICS planning documents for future consideration.

- Localized areas of poor drainage within the Town have been identified and have been noted in this plan. Areas of the North Ridge, Old Nags Head Place, Dolphin Run, Seven Sisters, and Nags Head Acres Subdivisions as well as scattered areas throughout Town are also noted. The Town is currently working with NCDOT for engineered solutions to address improvements on existing ditches and conveyance systems.
- The Town replaced and extended NCDOT ocean outfalls handling stormwater as part of the beach nourishment project.
- In October 2013 the Town of Nags Head acquired a grant funded 5 ton military vehicle intended to help mitigate wild land fires and provide a stable rescue vehicle for flood events.

F. Damaged Homes

The prolonged existence of damaged homes on the ocean beach represents a safety risk. The Town has held fast to CAMA policies and sought to remove structures damaged by erosion. However, several property owners have refused to work with the Town and are planning to repair structures now that beach nourishment is completed, even though they are partially east of the static line in what is still considered a high erosion area by CAMA. In the fall of 2013, CAMA issued several exemption letters for repairs on these homes, and the property owners began pursuing building permits. To date permits have been issued to repair five of the six structures located on Sea Gull Drive in south Nags Head.

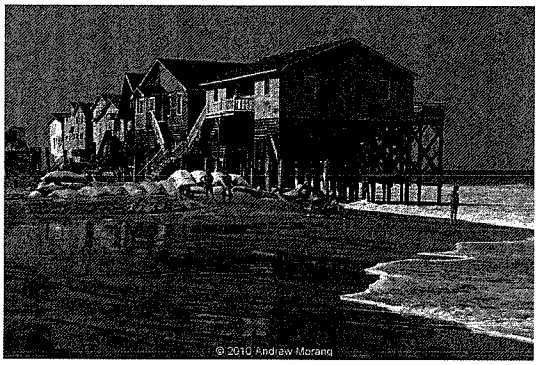


Figure 2: Seagull Drive 2010, Prior to beach nourishment

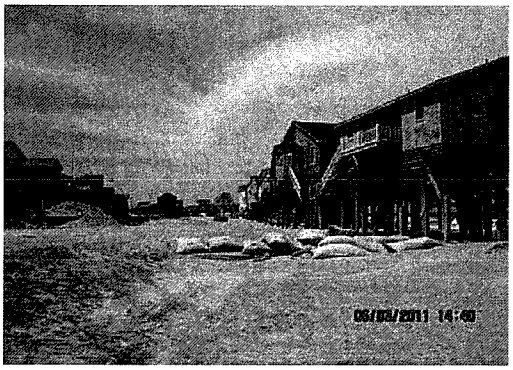


Figure 3: Seagull Drive, 2011 after beach nourishment

G. Zoning and Open Space

- The Town actively seeks to preserve natural areas and open space for the purposes of recreation, visual image, and stormwater retention and management.
- Local zoning regulations and the enforcement of CAMA regulations work together to protect "Areas of Environmental concern" which are also areas of vulnerability, near ocean and sound waters.
- Zoning regulations related dimensional lot requirements, setbacks, lot coverage and the use of fill are important to ensure that development on one lot does not adversely impact adjacent lots during storm events.

- In January 2014 the Town adopted revisions to its Stormwater Management Ordinance to proactively protect, maintain and enhance the public health, safety, environment and general welfare by establishing requirements and procedures to control the adverse effects of fill, land disturbance and increased post-development stormwater runoff for the purposes of both water quantity management for flood prevention and water quality protection.
- In November, 2014 the Town adopted language within the existing Flood Damage Prevention Ordinance to require a one foot (1') freeboard.

H. Sewer Treatment Systems.

- The Town has numerous package treatment plants, low-pressure sewage treatment systems, and septic systems. Many of these facilities are located in special flood hazard areas. Storm events can cause sewage treatment systems and on-site septic systems to fail or otherwise not operate correctly, impacting the environment. The Town's Septic health program assists property owners with education regarding, and maintenance of, healthy and functioning septic systems. The Town also works with the State to monitor water quality for any public health risk.

I. Critical Facilities.

- Colony Ridge Nursing Home and The Outer Banks Hospital are critical medical facilities. Colony Ridge presents evacuation concerns due to the large elderly population and the Town coordinates with staff of these facilities should evacuation be deemed necessary.
- Also at the Colony Ridge property is an inactive helipad, which the Town preserved in the redevelopment process and through updates of the SED-80 zoning District for emergency management purposes if ever needed. The Outer Banks Hospital has an active helipad.
- Nags Head Elementary School maintains an evacuation plan and emergency procedures. The Town of Nags Head has participated in emergency drills with the School.
- The Nags Head Municipal Complex includes the Town Hall offices, housing the Town's Administration, Police, and Planning and Development Departments. The Town Hall is the ICS base of operations during emergency events and has been up-fitted with additional radio capacity.
- Fire Station 21 and Fire Station 16 are critical facilities housing emergency response equipment and personnel. Fire Station 16 concluded the process of generator replacement, thereby increasing critical emergency facility capabilities and decreasing the possibility of utility service interruptions from equipment failure.
- Public Works provides a host of critical services including the provision of equipment for debris removal and hauling, maintenance of all Town vehicles and support equipment, fuel storage and dispensing station, sanitation, water distribution, and water supply services.

V. MITIGATION GOALS AND VALUES

The primary objective of the Town of Nags Head related to hazard mitigation is to reduce to the extent possible, damage to life and property from hurricanes, severe coastal storms, and the other hazards identified in this plan. To support this objective, the Town pursues the following goals and mitigation strategies:

1. Reduce damage to property through policies, ordinances, operational procedures, and infrastructure that reflect careful consideration of mitigation planning efforts.

2. Enhance the safety of, and service to, the public through pre- and post-storm communications, policies and procedures and the Incident Command System.

3. Develop and maintain infrastructure and critical facilities that have a low-vulnerability to hazard induced damage. Coordinate with staff of critical medical facilities to ensure safe evacuation as necessary.

4. Seek methods to protect existing structures from storm-related damage through hazard mitigation efforts and enforcement of Town floodplain, zoning and building regulations, as well as enforcement of all CAMA regulations in accordance with CAMA rules and the Local Permitting Officer Program.

5. Provide public education opportunities and information regarding storm preparedness, hazard mitigation and planning initiatives.

VI. MITIGATION STRATEGIES AND POLICIES

The 2004 Plan provides background on the development of mitigation strategies and policies originally developed. The following policies and strategies were updated from that original Plan using information provided from a review of the 2010 Hazard Mitigation Plan by Town Department Heads. Updates are developed based on the following criteria.

- Cost vs. Benefits
- Staffing capability
- Local, State, and Federal political climate
- Funding sources (internal and external)
- Effectiveness in satisfying mitigation goals
- Third party participation

A. Beach Nourishment

1. Background

Islands have a dynamic and ever-changing environment. Barrier islands have been shown to migrate, and are subject to a complex and numerous sets of natural forces, e.g., overwash processes, littoral drift, inlet formation, and dune and beach dynamics. They are further

modified by storms and hurricanes. Coastal erosion, as a result of normal offshore littoral patterns, the occurrence of hurricanes and storms, and the general sea level rise which has been occurring (Titus, 1985), make development along the shores of barrier islands particularly tenuous.

In other localities, problems have arisen by allowing the construction of immovable buildings along the ocean shore, necessitating the expenditure of public funds to protect these structures when natural forces threaten them. Several methods have been used to stabilize the ocean beach. Primary among them are: (1) sand moving programs, e.g., beach nourishment, sand pushing; (2) sand trapping structures, e.g., groins, jetties; and artificial reefs, and (3) shoreline protection works, e.g., bulkheads, seawalls, revetments.

Beach nourishment programs involve efforts to push or place sand onto the beach in an attempt to build back former dunes and upper beach. Beach nourishment projects are typically expensive and the results are temporary and often require continual nourishment. A single nor'easter may eliminate much of the sand deposited under a nourishment program. Beach nourishment programs, however, represent efforts to preserve oceanfront property without damaging neighboring property or destroying the public's use of the beach.

Groins and jetties are structures built perpendicular to the shoreline. Jetties are often very long and intended to keep sand from filling in inlets and shipping channels. Groins are smaller and attempt to trap sand flowing in the littoral current. Such structures are expensive, unsightly and cause extensive erosion problems down-current, as they rob these beach areas of the natural sand replenishment they would normally receive. So far the State of North Carolina has not supported the establishment of such structures along our Coast, however, there is currently discussion at the state level to introduce consideration of such structures at key areas along the Coast, including South Oregon Inlet.

Shoreline protection works, such as seawalls and revetments, are built parallel to the coastline and are designed to directly shield shoreline property from the ocean forces. The City of Galveston, Texas, for instance, has constructed a 17-foot high seawall, which protects its urban area. Such structures, however, reflect wave action, and intensify currents that steepen the profile of the beach and damage the property beyond the ends of the structure. In the long run these structures serve to destroy or seriously undermine the beach, require continual maintenance and investment, and are largely ineffective in protecting property from shoreline processes without perpetual nourishment of the beach seaward of the hardened shoreline. Moreover, these structures are extremely costly to build. The Coastal Resources Commission, recognizing the inappropriateness of shore-hardening devices such as wooden bulkheads, seawalls, rock or rubble revetments, jetties, groins and breakwaters, has prohibited their use on North Carolina ocean beaches and restricted their use in other areas such as the Sound. The Town of Nags Head defers to Coastal Area Management Agency regulations for such requests.

On the oceanfront, several actions can result in the destruction or removal of homes. Houses can be destroyed by storms or erosion or they can be relocated either on the same lot or off the lot. Tracking the fate of oceanfront houses can be problematic. If the house is moved either on the same lot or off the lot, the Town will issue a permit. If the house is condemned (for lack of septic or building code problems), the Town will also issue a permit for its removal. These properties can soon become a public nuisance and it is often difficult to require their removal. Town records reveal that there have been approximately 96 houses moved from the oceanfront or demolished from 1987 through 1996, 44 houses relocated on the same lot, and 56 properties listed as "washouts" on the Dare County tax listing. A "washout" represents a property where

the building no longer exists and in all likelihood was destroyed by a storm or erosion. Since the Veterans Day Storm, the Town has facilitated the relocation or demolition of 17 homes. Most of the building permit activity for destroyed homes or relocated structures has occurred in South Nags Head.

Since 1989, the US Army Corps of Engineers has been conducting studies to determine the feasibility of constructing a federal Hurricane and Storm Damage Prevention Berm on portions of the northern beaches of Dare County.

These studies have: (1) determined the value of land development along the oceanfront, (2) the cost of constructing such a project, (3) the supply of recoverable, compatible sand available, and (4) the benefit cost ratio between berm construction costs and the value of oceanfront and near ocean structures that would be protected by such a berm.

Three sections of the northern beaches have been identified as meeting the standards for federal appropriations. Virtually all of Nags Head is included within this identified project area. The costs for initial construction of the entire Dare County project are estimated at approximately 70 million dollars. Previous nourishment projects have been funded 65 percent by the federal government, with the remaining 35 percent coming from state and local sources. The federal beach nourishment study was completed in the fall of 2000. At the time this document was written originally, easements were acquired for the first phase of the project.

Since that time, the Town carried out a successful beach nourishment project. The nourishment project performed very well during Hurricane Sandy in 2012, with the Town sustaining minimal damage, while ocean front areas to the north and south of Nags Head sustaining significant damage.

The Town anticipated renourishing the beach within six years of initial construction. The Town is currently conducting planning efforts to complete the renourishment. This project will be completed by Spring of 2017.

2. Beach Nourishment Funding

The Town supports beach nourishment projects for the Town beaches subject to commensurate funding appropriations from federal, state and local sources. The Town will support and encourage the establishment of a statewide beach management strategy and policy along with a dedicated funding program designed for beach restoration and nourishment projects.

Implementing actions.

- The Town will actively lobby the State for a state policy and strategy on beach nourishment and beach renourishment. Timetable A: Board Of Commissioners, Planning, Administration: The Town received required permits in late 2010. The beach nourishment project was completed in October 2011.
- The Town will lobby the State to establish an annually state funded statewide nourishment program. Timetable A: Town Managers Office, Planning. In 2005, Dare County enacted an increase in the general sales tax devoted to beach nourishment. Although it was repealed in 2006 the Town currently receives interest payments from the fund. The Town uses the funds for Town wide sand fencing projects.
- The Town will seek funding from local and regional sources to assist with the local match for federally funded beach nourishment projects. Timetable A; Town Managers

office, Planning. In 2005, Dare County enacted an increase in the general sales tax devoted to beach nourishment that was repealed in 2006. In 2008, the Town established a beach nourishment fund. In 2009, the Town applied for a Water Resources grant that was not funded. Because of the lack of financial assistance from federal and state government, Nags Head raised taxes in 2011 to help pay for the $36 million nourishment project.

- The Town shall request authorization to extend any ocean outfall, which will be affected by any renourishment project. Timetable D: Public Works, Planning. The Town's CAMA permit for Beach Nourishment was modified to permit the extension of the outfalls to be affected by the widened beach. Three outfalls were extended as part of the project.

3. Beach Nourishment-General

The Town recognizes beach nourishment as our preferred alternative for addressing the impacts from barrier island migration and ocean erosion. However, the Town also supports a variety of methods to abate the impacts to ocean erosion; these include but are not limited to: acquisition of threatened structures, relocation of threatened structures, and the establishment of innovative technology or designs which may be considered experimental, which can be evaluated by the CRC to determine consistency with 15A NCAC 7M .0200 and the other general and specific use standards within the CAMA rules.

Implementing actions

- The Town will sponsor studies designed to determine the financial contribution the beach makes to the Outer Banks and the region. Timetable D: Administration, Planning. In 2006, the Town established a committee to address this. December-January 2007 the committee presented a recommendation to the Board of Commissioners. A Town referendum was held April 17, 2007 and failed to gain enough support for passage.
- Following a severe storm the Town shall consider purchasing land in damage prone areas. Timetable A: Planning, Administration. In 2013 the Town purchased an oceanfront piece of property in South nags Head to be used for public beach access.

B. Mitigation and FEMA

Mitigation represents a proactive approach to reducing the vulnerability of risk to properties in the Town. The Town will investigate innovative programs and seek funds for mitigation measures such as relocation of threatened structures and more stringent building codes for high hazard areas that support the growth management policies of the Town.

Implementing actions.

- The Town shall consider the applicability of requiring "V Zone" structural certification for structures in the 100-year (A) flood zone. Timetable D: Planning. New flood maps were adopted September 20, 2006: No additional action needed as the new flood maps addressed the Town's concerns.
- The Town will consider establishing a committee comprised of a cross section of interests to explore and make recommendations to the Board of Commissioners regarding amendments to our Flood Ordinance which address freeboard and other flood

mitigative measures recognized by FEMA and the CRS program to reduce flood loses. Timetable C: Board of Commissioners. 2006: The model flood ordinance was reviewed by staff; the Town's Planning Board and the Board of Commissioners and was modified to address higher regulatory standards and adopted on September 20, 2007. In November, 2014 the Town adopted language within the existing Flood Damage Prevention Ordinance to require a one foot (1') freeboard.

- The Town shall support the continued education and training of the Town's Building Inspectors and planning staff in inspections and mitigation activities. Timetable A: Planning. 2011: Inspectors attend periodic training workshops and have increased training as a result of BCEGS.
- The Town will actively work with FEMA and the State during the Statewide floodplain mapping project. Timetable A: Planning. The new flood maps were adopted September 20, 2006. The Town anticipates the release of draft maps in Spring of 2015 and will actively work to provide comments and data to FEMA in support of map implementation.
- The Town shall develop a program to identify businesses and material storage areas where significant amounts of toxic or hazardous products are stored which would be subject to flooding. Timetable C: Public Safety, Public Works. Through annual fire prevention inspections, Nags Head Fire staff evaluates and determines protection of toxic or hazardous products stored in areas prone to flooding.
- The Town shall develop regulations to require fuel tanks, including LP tanks to be adequately anchored to prevent flotation or submersion in the event of flooding. Timetable D: Public Safety, Planning. All new LP tank installations must met the current building code.
- The Town will continue to identify properties in repetitive loss areas and will continue to inform property owners in these areas of flood mitigation actions they can take to reduce flood losses. Timetable A: Planning. The Town informs repetitive loss property owners of yearly retrofitting workshops held in the fall or winter.
- The Town shall participate in the Community Rating System program by continuing the following CRS credit activities: Timetable A: Planning. The Town is actively training on the 2013 CRS manual in preparation for its 2015 five year cycle visit.

Table 9. CRS Credit Activities

Activity	Description of Activity
310	Elevation certificates
320	Map determinations
330	Outreach projects
340	Hazard disclosure
350	Flood protection library
360	Flood protection assistance
410	Additional flood data
420	Open space preservation
430	Higher regulatory standards
440	Flood data maintenance
450	Stormwater management
510	Repetitive loss projects

Activity	Description of Activity
530	Retrofitting
540	Drainage systems maintenance
610	Flood warning program
630	Dam safety

C. Post Storm Mitigation

The time period after a storm is a critical time to ensure that all Town regulations are adhered to and that the area is safe for visitors to return. This time period is also an opportunity to utilize current building codes and available regulations to mitigate future damage potential.

Implementing actions.

- Following a severe storm or hurricane, reconstruction will be evaluated for compliance with the adopted zoning ordinance, CAMA regulations, and all other applicable local, state and federal regulations. Timetable A: Planning. This is an ongoing endeavor.

D. Recovery and Operations

Intergovernmental cooperation and employee safety are essential components for a safe recovery. Effective communication of policies and procedures among Town Staff and to residents and property owners is crucial to strengthen the reentry and recovery process.

Implementing actions

- On issues of mutual concern, the Town shall coordinate recovery and post storm response activities with Dare County, the State of North Carolina, and the Federal Government. Timetable A: All Town Departments. The Town participates in preparedness meetings such as the VA/NC hurricane meeting and hurricane recovery exercises with adjacent jurisdictions (mutual aid).
- During a hurricane the Town maintains a staff of essential personnel and elected officials within Town Hall, using the Town Hall building as the Emergency Operations Center of "EOC." When available the Town shall consider acquiring or building a command facility. Essential components may include a mobile radio transmission tower, satellite internet capability and enhanced telephone service. Timetable A: All Departments. The Town has established the former Outer Banks Medical Center facility as a backup EOC. In 2006 the Town acquired a mobile command center. In 2012 the Town acquired and installed a HAM radio Tower for use during emergency events.
- Following a hurricane the Town shall establish an information center staffed with Town, State and Federal employees who are available to assist property owners in the reentry and recovery process. Timetable A: Mayor, Manager, Planning, Administrative Services. The Town has established areas and identified personnel to carry out the above as part of the ICS Plan. In addition, the Town's public information officer participates in a county wide Joint Information Section, an integral part of the ICS.
- Following a declared emergency storm event, only those areas where damage assessment is complete and that have been declared relatively secure shall be open to the public. Timetable A: Public Safety, Planning. Material, staffing and procedures have been identified to carry out this task.

- The Town leases space to mobile phone service providers on the Town's two water tanks. Cellular phone service provides an essential form of communication after a storm. The Town shall consider requiring cellular phone service providers to structurally design their tower mounted equipment to withstand greater wind loads than is required by the State building code. Timetable (when leases expire): Administration, Town Managers Office. The Town enforces the State Building Code. A new fire alarm control panel was also installed and fire alarm service completed in the Town's emergency command center.
- The Town shall identify and implement methods to streamline the damage assessment process. This may include collection of damage assessment data utilizing handheld GIS units. This shall also include methods to expedite the availability of damage and condemnation information to Town staff and the public. Timetable C: Planning. The Town's equipment used to collect digital information in the field proved unreliable in the field and will be discontinued. The Planning and Development Department's installation of Blue Prince Software, and trial usage of cell phone devices in the field will be used to determine a better digital collection approach. The Town will use a trained team to collect data and photos from the field.
- The Town shall continue to pre-position debris removal agreements on a yearly basis. Timetable A: Public Works, Administration. The Town has secured agreements with two debris haulers, a memorandum of Agreement with Dare County (for debris removal using their contractor) and one debris monitoring contractor.
- The Town shall obtain pre-storm authorization from the NC Department of Transportation (DOT) to clear DOT maintained roads after storm events. Timetable A: Public Works, Town Manager. This was accomplished in 2007 and again in 2012.
- The Town shall continue to work with other North Carolina communities to obtain post-storm mutual aid personnel assistance when necessary. This could include assistance with building inspections, damage assessment, utilities repair and public facilities maintenance, and additional public safety personnel. Timetable A: Administration, Planning, Public Safety, Public Works. The Town has mutual aid agreements with other Dare County agencies. The Town also participates in the Statewide Mutual Aid Compact. The Town will no longer enlist community volunteers for the damage assessment process after a storm, but has pre-identified Town personnel to work with the Planning and Development Department on damage assessment so that the process is more timely and utilizes only personnel authorized to use Town equipment and those covered under Town liability insurance.
- The Town shall designate a Staff level Director and Deputy Director of Emergency Management. Timetable B: Administration, Public Safety. The Town has designated the Fire Chief as the Emergency Management Coordinator under the ICS Structure. In 2009, the Town designated the Deputy Fire Chief as Deputy Emergency Management Coordinator. In 2010, the Deputy Fire Chief was hired to fill the retired Fire Chief's position. In August of 2013 the Town hired a Deputy Fire Chief who will fulfill the role of Deputy Director of Emergency Management.
- The Town shall continue to improve methods to provide public information after a storm. This shall include an automated voice messaging system with storm damage and re-entry information, a Mayor's radio broadcast, email broadcasts, improved real-time website information with relevant local contact information, available information at

traffic stops, and designation of a post-storm public information officer. Timetable A: Administration, Town Manager's Office, The Town is capable of providing the above services through the Town's PIO and Dare County Joint Information Center.

- The Town shall communicate post-storm recovery and operations policies and procedures to residents and property owners prior to hurricane season. The Town shall consider providing this information in the Town Newsletter, on the Local Government Access Channel, and the Town Website. Timetable B: Administration, Management Information Systems. Information is provided to residents and property owners as described above and through new media and traditional media outlets.
- The Town shall develop a Crisis Communications Plan which will detail the process for distributing information internally and externally to the public before and after storms. Timetable B: Administration. In 2006, the Town adopted an "Emergency Operations Plan" which details duties of Town staff before, during and after an emergency. That Plan was updated in August 2012 based on staff review of "lessons learned from hurricane Irene.

E. Transportation and Drainage

Implementing actions

- The Town will develop regulations requiring a greater street standard (dimensional and construction) where it can be reasonably demonstrated that nearby streets may be destroyed by a storm or other natural event and that the proposed street may be required to accept greater amounts of traffic. Timetable D: Planning, Public Works. Other coastal communities are being contacted to determine if this is a possible option, and if adopted, would it be enforceable.
- The Town shall consider the establishment of an emergency transportation route parallel to US 158 from the northern Town boundary at Eighth Street south to Health Center Drive. Timetable D: Planning, Public Works, Public Safety. Wrightsville, Memorial and even the Nags Head Woods Road could be used as needed for emergency access if something happens to US158.
- Prior to a flooding event, the Town's Street Department shall assemble the necessary traffic barricades and equipment to address flooding conditions noted in this plan. Timetable A: Public Works. This action is performed prior to a storm.
- The Town shall identify alternative means of ingress and egress to the Outer Banks Hospital site and Colony Ridge Nursing Home facility. Timetable B: Planning, Public Safety. This has been investigated and no feasible alternative exists. However, public safety will be in communications with Colony Ridge staff to assist with evacuation procedures prior to an event if necessary and the helipad has been preserved for use if needed during or after an event.
- Through the budget and CIP process, the Public Works Department shall request funds to comprehensively review and improve the Town's drainage system. Additionally, funds shall be requested to address specific, localized drainage issues. Examples include the North Ridge, Vista Colony and Nags Head Acres subdivisions. Timetable A: Public Works. The Town established a Stormwater Utility, funded by a $2 per month charge on all

water bills, in the spring of 2005. The first project funded was a major update to the Town's Stormwater Management Plan, and the creation of a Stormwater CIP. The list of stormwater management projects has been expanded greatly as a result of Tropical Storm Beryl and the wet season experienced from June through August of 2012. The Town is working to develop engineered solutions with NCDOT to prioritize projects as funds permit.

- The most northern outfall (known as the "Red Drum" outfall), was not included in the beach nourishment project and therefore was not extended. This outfall has proven to need repair and improvement in order to efficiently drain the NCDOT conveyance system. In 2012, Tropical Storm Beryl and heavy rain events have caused standing water in several areas of Town where the groundwater has breached and street conveyance systems backed up. NCDOT is currently in the design process for the extension of this outfall, which is critical to improving drainage conveyance in the northern part of Town.

F. Damaged Homes

The Town recognizes that damaged homes and structures on the oceanfront present nuisance and aesthetic concerns. The Town shall take appropriate measures to abate this nuisance. The Town will investigate changes in NFIP regulations to establish realistic policies and procedures for declaration of destroyed structures.

Implementing actions

- The Town will take a more proactive approach to enforcing removal of nuisance structures, with upfront communication of policies to property owners and the issuance of civil citations to abate the nuisance. This shall include the establishment of a new timetable for compliance of condemned structures, with the goal of full compliance within four months of initial condemnation. Timetable A: Planning. The Town continues to explore procedures to expedite removal of nuisances. In 2010, 10 nuisance structures were moved or had permits to be moved and in 2011, 7 structures were removed. However, several property owners have refused to work with the Town and are planning to repair structures now that beach nourishment is completed, even though they are partially east of the static line in what is still considered a high erosion area by CAMA. In the fall of 2013, CAMA issued several exemption letters for repairs on these homes, and the property owners began pursuing building permits. To date permits have been issued to repair five of the six structures located on Sea Gull Drive in south Nags Head.
- The Town will petition FEMA through our state and regional NFIP representatives to consider adopting realistic regulations regarding the determination of destroyed structures. Timetable C: Planning. On March 5, 2008 the Town adopted a resolution requesting Congress to readopt the Upton-Jones amendment.
- Relocation of threatened structures is a viable option for reducing storm damage and erosion and mitigating nuisance properties. The Town may seek funds and consider changes to the flood ordinance which will assist in the in the relocation or removal of these threatened structures. Timetable C: Planning. Town Staff is aware of grant

programs; however, the grants require a local match and the Town has not taken the position to support relocation with government financial assistance.

- The Town shall continue aggressive monitoring of entry into condemned homes to prevent safety hazards. Timetable A: Planning. Enforcement of Building Code and nuisance regulations is on-going.

G. Infrastructure

The proper placement or replacement of the Town's Infrastructure (roads, water lines etc.) after a storm is an essential mitigation tool to limit damage from future storm events.

Implementing actions

- It shall be a Town policy that damaged Town infrastructure be built back to established Town standards only if it can be demonstrated that there is a reasonable and they have a reasonable expectation to survive future hazard events. Timetable C: All Town Departments. Waterlines have been replaced only if they meet these criteria.
- The Town shall develop contingency plans for those Town streets that may be lost as a result of erosion. This can include development of alternative routes or access, or upfront declaration of the potential for future improvements. Timetable D: Public Works, Town Manager, Board of Commissioners.
    - The Town has followed the same procedure for waterlines, and water services that cannot be restored in their previous location.
    - The Town, with assistance from the Town Attorney, in 2006-2007 has identified alternative means of access to several properties along the ocean front where property owners agreed to work cooperatively.
    - The Town modified development regulations to assist with providing access to properties where a Town road has been damaged or lost. The Town took action to officially close Surfside Avenue in 2011 as a Town Road when it was lost due to erosion.
    - In 2012, the Town worked with the Nature Conservancy, and Clean Water Management Trust Fund to relocate a portion of Nags Head Woods Road damaged by Hurricane Irene in coordination with a soundside stabilization and natural restoration project.

H. Zoning

Another key element in the reconstruction process is the enforcement of existing zoning rules and land use regulations.

Implementing actions

- Storm damage reconstruction shall reflect pre-storm conditions to the extent possible. Redevelopment shall comply with the Land Use Classification Map and the zoning ordinance. Timetable A: Planning. Enforcement is ongoing.
- As the amount of available vacant oceanfront land diminishes, the Town can expect redevelopment of existing sites. It is the Town's position that the existing oceanfront

development regulations adequately address concerns such as building height and density, and that currently permitted uses adequately represent the desired uses for the oceanfront. Timetable A: Planning. This policy is presently in place.

I. Sewage treatment plants and septic systems

The Town relies primarily on on-site septic systems; however, within the Town there are several sewage treatment plants and numerous low-pressure septic systems. During recovery after a severe storm, monitoring the function of on-site septic systems and treatment plants is critical to ensure that environmental damage does not occur.

Implementing actions

- The Town shall consider seeking authority and adopting regulations which would allow qualified Town staff to inspect sewer treatment facilities and on-site septic systems after a storm. These regulations should also allow staff to request the corrective actions necessary to ensure proper operation of these systems. Timetable C: Board of Commissioners, Administration, Planning and Septic Health. Town staff is trained to inspect systems, but no authority to enter private property has been requested. In 2007 the Town adopted a regulation that prohibits "pump and haul" operations for residential uses where the septic system cannot be repaired.

- The Town shall take a proactive approach to educating citizens on the negative implications of using a septic system that has suffered storm damage. The Town will develop educational materials informing homeowners on the proper care of a system impacted by floodwaters. Timetable B: Septic Health, Public Works. This process is ongoing through the Septic Health Initiative.

J. Critical facilities

An essential component to storm preparedness and the recovery process is the protection of critical facilities and the individuals they serve.

Implementing actions

- The Town shall require Hurricane Evacuation plans from sensitive, vulnerable or critical facilities which are likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a flood or hurricane, including, but not limited to: hospitals, nursing homes, police stations and fire stations. Timetable A: Planning, Public Safety. Emergency plans concerning critical facilities are updated annually and added to the Emergency Operations Plan.
- The evacuation, operation, and recovery plans for the Outer Banks Hospital and the Colony Ridge Nursing Home shall be reviewed and approved by the Town's Public Safety Department. These plans shall address the evacuation of critically ill patients, securing the facility prior to and during the storm, and plans for startup after the storm. Timetable B: Planning, Public Safety. In 2012, Fire, Police, Emergency Management and EMS Staff met with representatives of The Outer Banks Hospital and Colony Ridge Nursing Home to determine methods to best serve the affected special needs

population. These interactive meetings identified several deficiencies. Steps have been taken to mitigate hazards and implement new procedures.

- The design of the proposed elementary school shall address flooding and hurricane resistant construction. Timetable (when plans submitted): Planning, Public Safety. The school is complete and construction meets or exceeds State Building Code requirements.
- It is strongly urged that evacuation drills and tornado drills be conducted at the proposed elementary school. Timetable (when school completed): Public Safety. This is a school function; however, our Police and Fire Department have participated with and support School preparation activities.

K. Natural Resource Protection

Open and natural spaces are important elements in Nags Head for their aesthetic value as well as to provide important natural flood mitigation functions such as stormwater retention. The Town will inventory open space, actively pursue grants and funding opportunities, and develop and implement a plan to acquire and preserve open space throughout the Town.

Implementing actions

- The town will identify important areas to be acquired as open space and shall request funds for acquisition of these areas through the budget, CIP, and grant process. Timetable A: Planning. The Town purchased the "Whalebone Park" site in the fall of 2008. It has been developed as a park that serves children between the ages of 2 and 12 and incorporates features which meet ADA guidelines. The park also allows for inclusive play for all children regardless of physical or sensory abilities. The Town is working with the Coastal Area Land Trust to look at additional properties for easement or conservation along the Roanoke Sound as part of a Boardwalk development effort.

  The Town has recently purchased the site of the former Dowdy's Amusement Park at the corner of US Hwy 158 and Bonnett Street. This site will be developed as a community park as funding becomes available.
- The Town will consider an incentive program rewarding those developers which set aside additional open space in perpetuity. Timetable E: Planning. No action taken as of this date but is being considered as part of stormwater and fill updates currently under development by the Planning Board.
- The Town shall continue to acquire land for open space and recreational purposes. Timetable A: Planning. The Town purchased the "Whalebone Park" site in the fall of 2008. It has been developed as a park that serves children between the ages of 2 and 12 and incorporates features which meet ADA guidelines. The park also allows for inclusive play for all children regardless of physical or sensory abilities. The Town is also working with the Coastal Area Land Trust to look at additional properties for easement or conservation along the Sound as part of a Boardwalk development effort. The Town also completed and adopted a Parks and Recreation Plan in 2011. In 2011-12, the Town Board of Commissioners initiated a process of identifying and researching the feasibility of purchasing additional properties. The Town will complete the work needed to dedicate appropriate Town owned property(ies) to the State of North Carolina as a

nature preserve. Timetable A: Administration, Planning. No action taken since last update.

L. Brush Fires/Fire Protection

The Town has several areas with greater property damage potential resulting from brush fires. Nags Head Woods is a 1,000 acre maritime forest which abuts several residential neighborhoods. The residential areas in South Nags Head west of SR 1243 from Gulfstream Street to the southern Town limits are susceptible to brush fires because of their proximity to the Cape Hatteras National Seashore. The Nags Head Public Safety Department has an ongoing program to mitigate the potential for damage in these areas.

Implementing actions

- The Town shall maintain fire breaks where appropriate. The Town shall coordinate with the National Park Service to maintain the fire break in South Nags Head. Timetable A: Public Safety. The addition of a staffed South Nags Head Station 21 on February 14, 2006 vastly improved the firefighting capabilities of the Town and specifically benefits the South Nags Head residential community. Providing prompt firefighting services in the wild land/urban interface reduce the hazard and damage potential of uncontrolled wildfire in this area. Ongoing fire prevention efforts include wild land fire prevention discussions with homeowners to assist in maintaining safe clearances from combustible vegetation. 2009, the National Park service and Dominion Power created a 30'-40' firebreak between homes located west of Old Oregon Inlet Road and NPS property. The firebreak lessens the opportunity for uncontrolled fires to affect residences. In March 2012, nearly 200 acres of sound front marsh vegetation was subject to a control burn fuel reduction program that removed extensive fuel loading and helped to decrease the possibility of an uncontrolled wildfire in the Nags Head Woods area. In May 2012, a buffer zone fuels reduction program was completed, effectively removing combustible materials from a firebreak located adjacent Well Field Road and back to Nags Head Woods Road. In February and April of 2013, the Town, NC Forestry and The Nature Conservancy worked together to prescribe burn 50+ acres of private sound front marsh area in Nags Head Woods. This was the first intentional fire in this area and homeowners were pleased with the tremendous fuel reduction afforded by the prescribed burn.

  In 2014, Nature Conservancy and Town of Nags Head Fire Staff worked together to complete prescribed burn activities on 10 acres in Nags Head Woods. These events served to reduce loose fuels in firebreak areas, create and improve existing separations from woods and residential areas, and increase proficiency and familiarity with wild land firefighting techniques.

- The Town shall continue the program to remove dead wood in critically fire prone areas. Timetable A: Public Safety. Homeowners may access the fire prevention staff to determine an optimal way to create fire safe landscaping.

- The Town shall review and require maintenance of access for emergency vehicles and fire apparatus. Timetable A: Public Safety. Annual fire inspections of commercial facilities identify areas of fire lane non-compliance and required corrections are mandated by code enforcement officials. Technical reviews of proposed commercial

developments incorporate NC fire code access lane requirements. A Nags Head Woods roadway deficiency created by severe storm erosion left fire crews unable to navigate large apparatus along the entire roadway for much of 2011 and a portion of 2012; this has been corrected. The Town of Nags Head provided the 2012 review of Nags Head Woods road to determine if adequate fire apparatus clearance is available, and all was determined to be sufficient to sustain fire equipment access.

- The Town shall evaluate the Nags Head Woods Fire Plan on a regular basis and coordinate information with Nature Conservancy Staff. Timetable A: Public Safety. An evaluation meeting and update of Nags Head Woods Fire Plan was conducted in the spring of 2011. Fire staff performed an annual drive through of Nags Head Woods and conducted the regular meeting with Nags Head Woods Steward Aaron McCall to discuss observed hazards and mitigation/prevention. It appears that State of NC grant funding is potentially available for fuel removal program funding and Fire/Conservancy staffs are meeting in October 2011 to discuss a plan of action and implementation. Currently, homeowners may access the fire prevention staff to determine an optimal way to create fire safe landscaping. A series of fire prevention fuels reduction meetings were conducted to inform/educate the public of the forthcoming Nags Head Woods Marsh controlled burn in March 2012. A series of public fuel reduction meetings were conducted in the fall of 2012 to answer homeowner questions about Nags Head Wood fire prevention and planning for prescribed burns to be conducted in the spring of 2013.

- The Town shall continue cooperation with the US Forest Service and Dare County for mutual aid fire protection. Timetable A: Town Manager's Office, Public Safety. Nags Head Fire Rescue provided mutual aid structural firefighting services to all those Dare County Fire Departments requesting assistance in 2011/2012, as well as utilizing incoming resources to assist in mitigating hazards exceeding the capabilities of Nags Head Fire Rescue. Nags Head continues to maintain excellent mutual aid working relationships with all Dare County fire departments.

- The Town shall continue to evaluate and update the Nags Head Urban Wild Fire Interface Plan as necessary. Timetable A: Public Safety. An evaluation was completed in 2012 and no changes were made to current plan.

- The Town shall continue to review the water system throughout the Town for fire protection capabilities and prioritize capital improvements as necessary. Timetable A: Public Safety, Town Manager's Office, Public Works. In 2009, Nags Head Fire staff worked with Nags Head Water staff to implement waterline improvements to benefit Northridge Subdivision, Old Nags Head Cove, West Side Court and Gray Eagle Street.

- The Town shall continue to inventory fire hydrants, water distribution infrastructure, and other town infrastructure in support of fire planning efforts. Timetable C: Public Safety, Planning. In 2008 the inventory was reviewed and updated. An additional 1,640 feet of 8-inch waterline under design for US 158 Bypass from Bonnett to Baltic streets was determined to be needed. Lack of funding has prevented the line from being built. A detailed Hydraulic Study was completed in 2010. Several projects to improve domestic flow, and fire protection, were recommended. These have been prioritized and will be constructed when funds are available. The 2013-2014 budget allowed for funding of five additional fire hydrants spaced equally along Wellfield Road. These additional hydrants will enhance fire protection and provide a firefighting water source for uncontrolled wildfires in Nags head Woods.

- The Town shall continue to evaluate and update the capital improvements plan for fire protection infrastructure. Timetable E: Public Safety The Town of Nags Head anticipates a "shared fire facility" partnership with the Town of Kill Devil Hills. This arrangement is based on NC ratings system recommendations that determined a strategically placed fire station would enhance response and lower insurance ratings in both towns. Nags Head and KDH fire administrations met in 2012 to review the future of a shared station and discussed their commitment to working together in this effort. In September 2011, the Town of Nags Head submitted an application for the 2011 FEMA "Assistance to Firefighters" grant program. The application requested funding for a new aerial apparatus to replace the Nags Head 1987 E-One ladder truck. FY 2012/2013 budget process realized funding for the acquisition of a modern aerial fire apparatus to replace the current aged apparatus. The new "quint" type fire apparatus is currently under construction and delivery is expected in the late summer of 2013.

  In October 2013, the Town of Nags Head accepted delivery of a Quint Aerial Fire apparatus to replace an aging lady truck. Designed to provide more versatility to firefighting operations, the Quint is equipped with a water tank, pump, aerial device and compliment of ground ladders.

- The Town shall continue its fire education program. This includes newsletter and newspaper articles on fire protection as well as grants from the State Division of Forestry for fire education. Timetable A: Public Safety. The Town shall improve fire protection in Nags Head Woods with the installation of 'dry hydrants' and maintenance and improvements to Nags Head Woods Road. Timetable B: Public Safety. The Nags Head Woods road is maintained by Nags Head Public Works and roadway material is added as needed to maintain an acceptable driving surface. In 2011/2012, fire safety related topics and newsletter articles were distributed, and the website updated with current fire prevention information. The "Change your Clock, Change your Battery" program resulted in the installation of numerous new smoke detectors placed in homes in Town. Fire Prevention e mails, tweets and other valuable life safety information were forwarded to the public from the United States Fire Administration, helping to advance injury prevention in Nags Head. Fire information is supplied face to face to the community via the annual October Youth Fire Prevention Night and National Fire Prevention week activities.

- With the installation of the new water tank, the Town shall install a new 12 inch water line from the Public Works facility to Barnes Street. This will increase fire flow to north end neighborhoods. Timetable C: Public Works, Public Safety, Planning. This was completed in 2006.

- The Town shall research available data on underground storage tanks and leaking underground storage tanks. Timetable C: Planning, Public Safety. Underground fuel tanks, when required by fire code, have been removed or brought into compliance with Fire Code and DEHNR standards.

M. Water Protection

Nags Head is a member of the Dare County Regional Water System, but no longer operates the Fresh Pond Water Treatment Plant. This has eliminated the threat from natural, or man-made, disasters to this former Public Water Supply source. The Town does operate over 75 miles of

distribution system waterlines, and two major pump stations. The town shall continue to identify improvements to make the water system safer.

Implementing actions

- The Town shall coordinate with Kill Devil Hills regarding fencing around their portion of the Fresh Pond. Timetable B: Public Works, Town Manager's Office. The Fresh pond water treatment plant has been permanently decommissioned.
- The Town shall continue to evaluate the implementation of water restrictions during periods of drought. Timetable A: Public Works, Town Manager's Office. The Town has a Water Shortage Supply Plan.
- The Town of Nags Head shall continue to monitor develop and the installation of on-site septic systems with the Fresh Pond Area of Environmental Concern. Timetable A: Planning. Process monitored through the development and permitting process.
- The Town shall continue to cooperate with Dare County on the development of additional water supply well facilities. Timetable A: Planning, Public Works. The Town continues to cooperate with Dare County as requested. Additional wells and 2 million gallons of treatment capacity added to Dare County Water Plant in Kill Devil Hills in 2005-2006.

VII. MONITORING, EVALUATING, AND REPORTING PROGRESS

The Town will review this Plan on an annual basis or after a declared disaster. The annual report will review progress, discuss actions that were not completed and provide a justification for this, and will discuss potential revisions as well as recommendations for new implementing actions. During this annual evaluation, it will be important to determine the feasibility and the need to implement items not yet addressed. The evaluation should utilize input from the mitigation planning committee, Town Staff, and citizens to determine if current conditions call for changes to the plan. Mechanisms for public input will be available through the Town website, Board meeting audience response, and Town Staff. Monitoring of implementation action items will be done by the responsible parties listed for each item. Monitoring will be conducted on an as needed basis in accordance with the timeline and target completion date specified. Progress reporting of all implementation actions shall be conducted by the responsible parties listed for each item during the annual report process. Criteria to be addressed during the annual review include:

- Have conditions changed since the last plan update which requires revisions to plan goals or strategies?
- Has the nature or magnitude of risks changed?
- Are there current financial or staffing constraints that inhibit implementation of certain strategies?
- Are there other legal, technical, or political factors limiting implementation of mitigation strategies?
- Have the strategies implemented to date been effective? What measures of effectiveness can be used to document this?

- Did third parties participate in the implementation of the plan in the way that was desired or expected?

VIII. REVISIONS AND UPDATES

Planning Staff as directed by the Town Manager will review the evaluation report and present the findings to the Board of Commissioners with recommendations for updates and revisions. At least one plan update will occur every five years in accordance with FEMA requirements. As updates occur; the date, reason and responsible party will be noted. The 2004 Plan was reviewed by the Planning Committee and found to be effective. No deficiencies were found with the 2004 mitigation strategies and actions and no new policies were added in this update, however, several new actions are being pursued as a result of current conditions and experience with recent storms.

Continued Public Involvement

Each plan update will be advertised and public input will be solicited in a similar manner to the initial plan. As mentioned above, mechanisms for continued public input will be available through the Town website, Board meeting audience response, and Town Staff. The Town is making efforts through the CRS program to present more educational opportunities for the public. Upcoming events for 2013-2013 include a CRS workshop on hazard mitigation through retrofits, the development of information materials on stormwater management techniques for local property owners currently under development in conjunction with Dare County and the Outer Banks Ecological Field Site of UNC Chapel Hill, and updates to the local stormwater ordinance with accompanying educational materials.

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National Oceanic and Atmospheric Administration. SLOSH (Sea, Lake and Overland Surges from Hurricanes) Output. http://www.nws.noaa.gov/mdl/marine/hursurge.htm

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http://dcm2.enr.state.nc.us/Hazards/erosion.htm

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Town of Nags Head 2000 Land and Water Use Plan. September 2000.

Town of Nags Head 2006 Draft Land Use Plan. February 2009.

Town of Nags Head Floodplain Management Plan. 2001.

Town of Nags Head Stormwater management Plan. 2006.

Property Protection Measures

Every year, flooding causes more property damage in the United States than any other type of natural disaster. While recent improvements in construction practices and regulations have made new homes less prone to flood damage, there are a significant number of existing homes that continue to be susceptible to repetitive flood losses. Repetitive flood losses can make owning property near a body of water less enjoyable and can even decrease property values. Southern Shores is fortunate in that we currently do not have any repetitive loss properties.

If your structure is non-compliant with the Base Flood Elevation plus the Town's two foot freeboard, consider elevating your structure if possible. Freeboard is a factor of safety above the flood level. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood and floodway conditions, such as wave action, bridge openings and the hydrological effect of urbanization of the floodplain. To determine compliance of a structure, copies of elevation certificates for most existing structures are also available at the Planning and Code Enforcement Department.

Brochures discussing flood proofing, retrofitting, and other mitigation measures are available at Southern Shores Town Hall or at any of the Dare County Public Libraries. For information on retrofitting your structure or to obtain a copy of the elevation certificate for your structure, contact the Planning and Code Enforcement Department at Town Hall at (252) 261-2394.

Protect Natural Floodplain Functions

The canals and swales within the Town of Southern Shores function as a flood drainage system as well as providing recreational uses. As a drainage system, it must be kept clear. Dumping in these areas is prohibited and considered a violation pursuant to Town Code Section 26-14(b). The trees along the banks must be maintained and clear of the canals. Report violations of either of these situations to the Town immediately at (252) 261-2394. Likewise, any development that takes place bordering the oceanfront, soundfront and canals is controlled by Town ordinances and CAMA regulations.

Wetlands play a critical role in reducing flood damage by storing stormwater when it surges and releasing it slowly over time. Wetlands are invaluable in keeping water clean by acting as filters for pollutants, silt, and sediment. Fish, birds, and wildlife depend upon wetlands for food, nesting grounds, migratory stops, and shelter. Wetlands are also valuable to our economy, as they support commercial fisheries and tourist-based wildlife watching.

The Town of Southern Shores' floodplain areas are a very valuable resource to the environmental, aesthetic, and economic well being of the Town. It is important that these natural areas thrive. These areas provide recreational uses, a habitat for wildlife, filter run off and other pollutants, and dissipate wave forces. The Town strives to balance responsible development and these fragile environments.

The use of elevated beach access walkways is encouraged in order to help minimize damage to existing dunes systems, sea oats, and other beach plants.

Important Flood Information Enclosed

Your Property is located in or near a Floodplain

Town of Southern Shores
5375 N. Virginia Dare Tr.
Southern Shores, NC 27949

Presorted
Standard
U.S. Postage
Paid
Richmond, VA
Permit No. 1630

COMMUNITY OUTREACH PROJECT

NATIONAL FLOOD INSURANCE PROGRAM

The Town of Southern Shores was incorporated in 1979. The area encompassed by the town was a real estate development of the Kitty Hawk Land Company. The town is four miles long, north to south, and approximately one mile wide and has an area of 4.2 square miles. Special Flood Hazard Areas (SFHA) are designated by the Federal Emergency Management Agency (FEMA) and delineated on the Flood Insurance Rate Maps (FIRM).

A property is considered in the SFHA if it is located in the AE or VE flood zones. If any part of the main structure touches the flood zone, the entire structure is considered in the flood zone. The Town of Southern Shores will provide information concerning FIRM map determination or any other information related to the National Flood Insurance Program (NFIP) and The Community Rating System (CRS) by contacting the Planning and Code Enforcement Department at Town Hall at (252) 261-2394. You can locate your property and find your flood zone by using the online FEMA Flood Map Service Center **https://msc.fema.gov/portal** and North Carolina Floodplain Mapping Program **www.ncfloodmaps.com** You can also visit the Dare County website **www.darenc.com** to conduct a GIS property search.

The Local Flood Hazard

The Town of Southern Shores is bordered by the Atlantic Ocean and the Currituck Sound. The greatest flood threats in Southern Shores come from hurricanes, winter storms (nor'easters) and seasonal high tides. Severe nor'easters normally occur during the winter and early spring months. Unlike a hurricane which may pass over a location in a portion of a day, a nor'easter may last for several days. Nor'easters exert force on the water surface with consistent high winds. These continuous winds build seas and intensify wave action, contributing to beach erosion. Strong nor'easters can even generate storm surges, similar to storm surges associated with hurricanes. The storm surges from nor'easters generally recede after one or two tides, but may last up to four or five high tides.

The chances of hurricanes and tropical storms are most dominant from June 1 through November 30. An approaching hurricane or tropical storm may cause a potential hazard with rising sea levels, wind driven waves, and strong currents. This makes our Town extremely susceptible to flooding. However, storm surge represents the hurricane's deadliest effect. The wave action associated with storm surge can be much more damaging than high sea levels.

The Flood Warning System

Information about impending dangerous conditions and evacuations are broadcast to the public via radio, television, local emergency agencies, and NOAA weather radio. Southern Shores participates in the Dare County storm warning system. The primary FM radio stations used to disseminate information are WRSF 105.7, WNHW 92.5, WVOD 99.1 and WCSL 104.1. Several local TV stations also broadcast crucial information such as WTKR 3, WITN 7, WAVY 10, WVEC 13 and WSKY 4. The Government Channel information is located at **https://www.darenc.com/GovChannel.** The Dare County website, **www.darenc.com** is another valuable resource. In the event of a storm, a link to that website will be posted on the Town's website at **www.southernshores-nc.gov**. Suggested evacuation routes are also available at the Dare County website or in the local phone book information pages.

Flood Safety

If a hurricane warning is issued, know where you are going and leave early and in daylight. Depending upon the severity of the storm, citizens may be asked to evacuate. Remember there are no emergency shelters in Dare County. Before leaving, lock and board up windows and doors. Turn off electricity at the main breaker terminal and gas at the outside source, only if you know how. Lightweight or easily damaged items should be moved to the highest location possible, secured and covered with plastic. Be sure to secure outdoor furniture, potted plants, and any other unsecured objects. These items could become projectiles in the event of high winds.

If you stay at home or evacuate, have an emergency kit packed with the following items: portable radio, flashlight, batteries, blankets, extra clothing, baby products, non-perishable food, manual can opener, medicines, toilet articles, and important papers/ valuables. Always stay away from doors and windows and remain inside during the brief calm throughout the passage of the storm. This is just the eye of the hurricane going by.

Flood Insurance

Properties located within the corporate limits of the Town that are subject to federally supported mortgages are required to be protected with flood insurance. Owners of properties free of encumbrances should also strongly consider having this valuable protection, it is important to know that a standard homeowner's policy does not cover flood losses. Property owners considering flood insurance should consult their local insurance agent or broker for details and qualification requirements, coverage, and cost. For more information visit **www.floodsmart.gov.** Properties in SFHA of the Town of Southern Shores presently qualify for a 15% reduction in their insurance rates because the Town currently has a Class 7 rating with the Community Rating System (CRS) Program.

Reduce Your Risk
Reduce Your Premium

A primary way to reduce or avoid future flood losses is to raise your building above the Base Flood Elevation (BFE). You could reduce your flood insurance premium by 85 percent or more — and save thousands of dollars over the life of your home or business. It is important to understand the long-term costs and benefits when considering your options for repairing, rebuilding, or relocating.

Insurance Considerations:

- How elevating your home or business can help reduce your rates
- Future premium increases for all homes and businesses
- Options for insuring your building and its contents
- Changes in rates for secondary homes
- Other circumstances that could increase your rates

Building Considerations:

- Meeting building code requirements and current best practices
- Revised Flood Insurance Rate Maps and advisory flood risk products
- Hazard mitigation grant programs
- Other grant programs and loans to help rebuild or acquire your home or business
- On-site visits can be scheduled with the Planning and Code Enforcement Department to identify property protection measures

Base Flood Elevation (BFE) — The elevation shown on the Flood Insurance Rate Map (FIRM) for high-risk flood zones ("AE" and "VE zones) indicates the water surface elevation resulting from a flood that has a 1 percent chance of equaling or exceeding that level in any given year.

Manage Your Future Risk

If your home or business was damaged or destroyed by a flood, you face major decisions about your property.
Do you repair? Do you rebuild? Do you relocate?
The decisions you make now can help provide a safer, stronger future for you and your family. If you decide to repair or rebuild, here are some points to consider:

- The risk you faced yesterday might not be the same risk you face today or in the future.
- By rebuilding higher, you can reduce — or perhaps avoid — future flood loss and reduce the impact on your finances.
- The financial consequences of not having flood insurance coverage could be devastating if another flood occurs.

Flood Preparation and Safety....THE RISK IS REAL

Be Prepared Before A Flood
Floods can happen anytime and anyplace and they can happen fast. The risk of flooding from a Hurricane is expected.

- If you don't have a flood insurance policy, contact your insurance agent today.
- Keep your flood insurance policy and agent's information on hand in the event you need to file a claim.
- Copy important documents—store originals in a secure place outside the home, such as a bank safe deposit box.
- Take photos of your possessions (furniture, antiques, etc). Store copies with your other important documents.

Have An Emergency Plan
Emergency plans are a critical component of flood preparation:

- Give your emergency contact information to your insurance agent, employer, and family.
- Put aside an emergency kit with a flashlight, a battery-powered or handcrank radio, additional batteries, candles, and waterproof matches.
- Keep a minimum 3-day supply of nonperishable food and bottled water on hand.
- Visit **www.Ready.gov** for more information.

Be Prepared During a Flood
If you are affected by a flood, here are things you can do to stay safe:

- Heed instructions from Local Officials and Dare County Emergency Management **www.darenc.com** Monitor potential flood hazards on NOAA Weather Radio All Hazards or on the Internet at **www.NOAAwatch.gov**
- Don't walk through a flooded area. Just 6 inches of moving water can knock you off your feet.
- Don't drive through a flooded area. A car can be carried away by just 2 feet of water.
- Keep away from downed power lines and avoid other electrical wires.
-

What To Do After A Flood
If you experience a flood, here are some steps to take once the waters have receded:

- Check for structural damage before entering your home. If you suspect damage to water, gas, electric, or sewage lines, contact authorities.
- Remove wet contents like carpeting, furniture, and bedding immediately but keep swatches for the adjuster. Mold can develop within 24 to 48 hours. Use dehumidifiers and air-conditioners to dry out the building.
- Photograph and list all damaged or lost items including their age and value where possible. Take photos of water in the house. Adjusters need evidence of the damage to prepare your estimate.
- Plan before you repair. Contact the Planning and Code Enforcement Department to get information on local building requirements.

FloodSmart.gov
The official site of the NFIP

Resources for More Information

Town of Southern Shores
5375 N. Virginia Dare Trail
Southern Shores, NC 27949
Phone 252-261-2394 / Fax 252-255-0876
info@southernshores-nc.gov
www.southernshores-nc.gov

- **Before you build, consult with the Planning and Code Enforcement Department to obtain local flood regulations, building code and permit requirements, Flood Insurance Rate Maps and CAMA Erosion Rate Maps for your home or building.**
- Federal Emergency Management Agency (FEMA) Homepage **www.fema.gov**
- To learn how to build safer and stronger and potentially decrease your flood insurance premiums: **www.fema.gov/building-science**
- To ask questions and get information about flood insurance, call the National Flood Insurance Program Help Center at **1-800-427-4661.**
- To see if you are eligible for Hazard Mitigation grants and loans, contact the Planning and Code Enforcement Dept.
- **www.ncfloodmaps.com** On this interactive site, property owners can locate and view their property in relation to identified flood zones in Southern Shores.
- **www.FloodSmart.gov** This site provides step by step guidelines for determining your flood risk, understanding the National Flood Insurance Program, and finding an insurance agent to assist you in determining the level of flood insurance needed for your property.
- To keep current as FEMA implements changes to the NFIP based on recent legislation, visit **www.fema.gov/flood-insurance-reform**
- Dare County Emergency Management— **www.darenc.com/EmgyMgmt**
- Dare County Emergency Management urges residents, visitors and property owners on the Outer Banks of North Carolina to become familiar with hurricane evacuation and re-entry procedures before the need arises. Watch the **You Tube** video **Hurricane Preparedness on the Outer Banks—Dare County**. This video gives an overview of evacuation and re-entry procedures.

HURRICANE ALERT!

Get Protected.....
You Can't Afford To Wait

- Consider mitigating your home: There are some simple steps you can take to reduce the impact of flood water on your home and your belongings. For more information about flood mitigation options, visit **www.FLASH.org.**
- Visit Flood Smart.gov or call 1-800-427-2419 to learn more about hurricane-related flood risks, safety precautions and flood insurance policy options.
- Contact your insurance agent to discuss purchasing flood insurance. If you are already covered by flood insurance review your flood policy with your agent to make sure you are adequately insured. Purchasing flood insurance may NOT be available when a threatening storm is approaching .

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Albemarle Regional Hazard Mitigation Plan Kick-off Meeting

May 9, 2014 – Currituck County Agricultural Center

J. Scott Chase, AICP, NCLID – Project Manager
Stephen Smith, CFM – Project Planner

Agenda

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- Welcome and Introductions
- Mitigation Overview
- Project Overview
- Data Collection
- Roles & Responsibilities
- Next Steps
- Open Discussion
- Wrap Up

What is Hazard Mitigation?

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Mitigate: to lessen in force or intensity; less harsh or hostile; to make less severe

Hazard Mitigation: FEMA defines Hazard Mitigation as any sustained action taken to reduce or eliminate the long term risk to human life and property from hazards

What is Hazard Mitigation?

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Local Gov't Responsibility: To protect the health, safety, and welfare of their citizens. Proactive mitigation policies and actions help reduce risk and create safer, more disaster-resilient communities.

Mitigation is an investment in your community's future safety and sustainability. Consider the critical importance of mitigation to:

- Protect public safety and prevent loss of life and injury.
- Reduce harm to existing and future development.
- Prevent damage to a community's unique economic, cultural, and environmental assets.

Regional Planning

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A **Regional Hazard Mitigation plan** integrates the plans of several counties and municipalities into a single plan. Jurisdictions work together in the planning process to develop a mitigation strategy based on their risk to similar hazards, saving time and resources and making the plan easier.

Regional Planning

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Benefits of a Regional Hazard Mitigation Plan

1. **Shared Resources -** Less money is needed by individual governments to update the plan. Local municipalities' planning departments share in the work, thus improving efficiency. Also, municipalities can share in the cost of the local match when applying for projects. For instance, instead of having to produce 25% match (PDM), local governments can share cost with neighboring partner.

Regional Planning

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Benefits Cont'd.

2. Regional plans receive priority for planning grant funds - NCEM recognizes that regional plans can be more cost beneficial. Those applicants will have a better chance of receiving a planning grant.

3. No local control is compromised or lost - As a participating municipality in a FEMA approved and adopted regional plan, all participants have the right to apply to NCEM for FEMA funding.

Disaster Mitigation Act of 2000

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The purpose of the Stafford Act, as amended by the Disaster Mitigation Act of 2000, is "to reduce the loss of life and property, human suffering, economic disruption, and disaster assistance costs resulting from natural disasters."

Section 322 of the Act specifically addresses mitigation planning and requires state and local governments to prepare multi-hazard mitigation plans as a precondition for receiving FEMA mitigation project grants.

Disaster Mitigation Act of 2000

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Eligibility for Federal Grant Funds

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

NC Senate Bill 300

- This amendment to the NC Emergency Management Act became law in June 2001. Local Hazard Mitigation Plans are required for Public Assistance (PA) for state declared disasters

Albemarle Region

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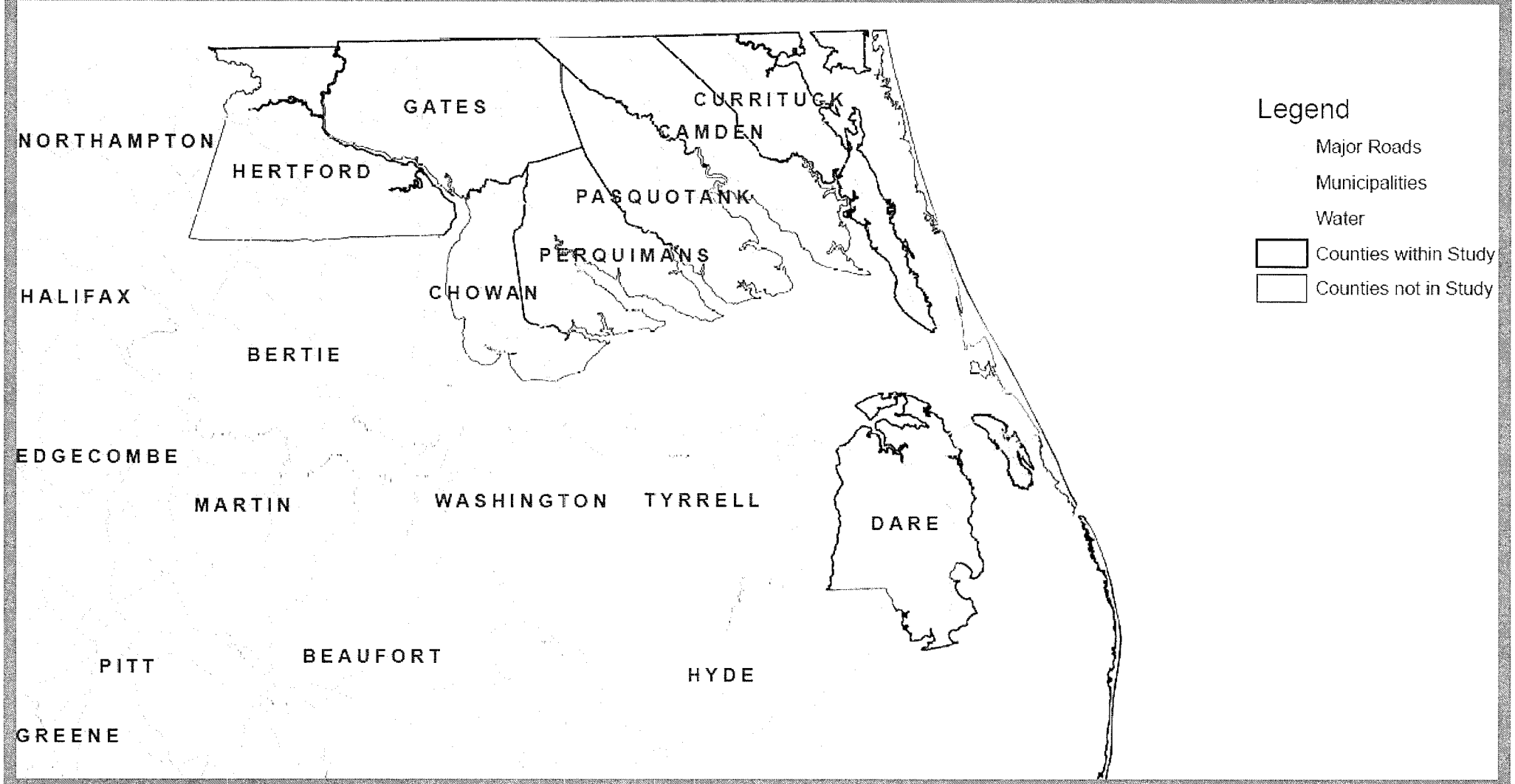

Jurisdictions

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Camden County	Chowan County	Currituck County	Dare County	Gates County	Hertford County	Pasquotank County	Perquimans County
	Town of Edenton		Town of Duck	Town of Gatesville	Town of Ahoskie	Elizabeth City	Town of Hertford
			Town of Kill Devil Hills		Town of Cofield		Town of Winfall
			Town of Kitty Hawk		Town of Como		
			Town of Manteo		Town of Harrellsville		
			Town of Nags Head		Town of Murfreesboro		
			Town of Southern Shores		Town of Winton		

Project Overview

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Purpose

To prepare a Regional Hazard Mitigation Plan for the Albemarle area in accordance with guidelines set forth by NCEM and FEMA, including but not limited to, NC Senate Bill 300, the Disaster Mitigation Act of 2000, NC Emergency Management Act, NCEM Local Hazard Mitigation Plan Update Checklist, FEMA Local Multi-Hazard Mitigation Planning Guidance and 44 CFR 201.6. The process will also follow the Community Rating System (CRS) 10–step planning process as required for communities participating in the CRS

Existing Plans

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Camden County – Expires 7/20/2017
Chowan County – Expires 11/29/2015

- Town of Edenton

Currituck County – Expires10/20/2015

Dare County – Expires 5/23/2015

- Towns of Duck, Kill Devil Hills, Kitty Hawk, Manteo, Nags Head and Southern Shores

Gates County – Expires 8/10/2016

- Town of Gatesville

Existing Plans

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Hertford County – Expires 7/19/2016

- Towns of Ahoskie, Cofield, Como, Harrellsville, Murfreesboro and Winton
- Pasquotank County

Pasquotank County – Expires 12/5/2016

- Elizabeth City

Perquimans County – Expires 12/6/2015

- Towns of Hertford and Winfall

Hazards Addressed

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- Hurricanes
- Floods
- Tornados
- Winter Storms
- Severe Thunderstorm
- Wildfires
- Erosion
- Nor'easters
- Drought/Heat Wave
- Severe Winter Storms
- Volcanos
- Earthquakes
- Storm Surge
- Landslides/Sinkholes
- Dam/Levee Failure
- Tsunamis
- Rip Currents
- Terrorism
- Pandemic
- Transportation
- Haz Mat Incidents
- Nuclear Incidents
- Groundwater contamination
- Infectious disease

Hazards Addressed

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	Camden	Chowan	Currituck	Dare	Gates	Hertford	Pasquotank	Perquimans		
Hurricanes	x	x	x	x		x	x	x		
Floods	x	x	x	x		x	x	x		
Tornados	x	x	x	x		x	x	x		
Winter Storms	x	x		x		x	x	x		
Severe Thunderstorm	x	x	x	x		x	x	x		
Wildfires	x	x	x	x		x	x	x		
Erosion		x	x	x		x		x		
Nor'easters		x	x	x				x		
Drought/Heat Wave		x	x	x		x		x		
Severe Winter Storms		x	x	x				x		
Volcanos		x		x		x		x		
Earthquakes		x	x	x		x		x		
Storm Surge		x		x						
Landslides/Sinkholes		x	x	x		x		x		
Dam/Levee Failure		x		x			x	x		
Tsunamis		x	x	x		x		x		
Rip Currents			x	x						
Terrorism				x			x			
Pandemic			x	x						
Transportation				x						
Haz Mat Incidents				x			x			
Nuclear Incidents							x			
Groundwater contamination				x			x			

Typical Maps Included

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- Community Profiles
- Community Assets
- Historical Hazard occurrences
- Hazard Boundaries
- Land Use/Zoning
- National Maps
- State Level Maps
- Local Maps

Existing Plan Maps

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- Community profiles
- Multi Hazards
- Flood Zones
- Storm Surge
- Land/Use and Zoning
- Wildfire*
- Critical Facilities
- Repetitive Loss
- Hurricane tracks
- Community specific hazards

Project Overview

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Key Objectives

- Review and update existing plans to incorporate into Regional Plan
- Leverage local data to improve Hazard Identification and Risk Analysis
- Create Regional and Jurisdiction specific mitigation strategies
- Create a plan that is beneficial and useful to entire Region
- Maximize CRS credits by using 10-step process

Planning Process

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Project Overview

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Project Task (Plan Sections)

Planning Process

- Project Kickoff
- Develop Outreach Strategy
- Facilitate Regional Planning Team meetings
- Conduct Outreach
- Document the Planning Process

Project Overview

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Project Task (Plan Sections)

Risk Assessment

- Data Collection/Analysis
- Hazard Identification
- Hazard Profiles & Mapping
- Inventory of Community Assets
- Vulnerability Assessment
- Findings and Conclusions

Project Overview

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Project Task (Plan Sections)

Capabilities Assessment

- Review Existing Capabilities
- Findings and Conclusions

Mitigation Strategy

- Update Goals and Objectives
- Analyze Actions and Projects
- Prepare Mitigation Action Plans
- Complete Action Prioritization

Project Overview

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Project Task (Plan Sections)

Plan Maintenance Procedures

- Plan Implementation
- Plan Review and Update
- Continued Public Involvement

ALBEMARLE REGIONAL HAZARD MITIGATION PLAN SCHEDULE

Project Tasks	May 2014	Jun 2014	Jul 2014	Aug 2014	Sep 2014	Oct 2014	Nov 2014	Dec 2014	Jan 2015	Feb 2015	Mar 2015	Apr 2015	May 2015	Jun 2015	July 2015
Task 1. Planning Process															
1.1 Project Initiation															
1.2 Develop Public Outreach Strategy															
1.3 Facilitate HMPC Meetings															
1.4 Conduct Public Outreach															
1.5 Document Planning Process															
Task 2. Hazard Analysis and Risk Assessment															
2.1 Data Collection and Analysis															
2.2 Hazard Identification															
2.3 Hazard Profiles and Mapping															
2.4 Inventory of Community Assets															
2.5 Vulnerability Assessment															
2.6 Summarize Finding sand Conclusions															
Task 3. Capability Assessment															
3.1 Review Existing Capabilities															
3.2 Summarize Findings and Conclusions															
Task 4. Mitigation Strategy															
4.1 Update Goals and Objectives															
4.2 Analyze Mitigation Actions and Projects															
4.3 Prepare Mitigation Action Plans															
4.4 Complete Mitigation Action Prioritization															
Task 5. Plan Maintenance Process															
5.1 Plan Implementation Procedures															
5.2 Plan Review and Update Procedures															
5.3 Continued Public Involvement Procedures															
Task 6. Plan Adoption and Approval															
6.1 Assist Jurisdictions with Plan Approval															
6.2 Assist Jurisdictions with Plan Adoption															

Project Overview

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CRS 10-Step Planning Process for 510 Credit

- Organize to Prepare the Plan (15)
- Involve the Public (120)
- Coordinate with other agencies (35)
- Assess the hazard (35)
- Assess the problem (52)
- Set goals (2)
- Review possible activities (35)
- Draft an action plan (60)
- Adopt the plan (2)
- Implement, evaluate and revise (26)

510 FLOODPLAIN MANAGEMENT PLANNING CHECKLIST

Community: _____

Enter name of plan here

511.a Floodplain Management Planning (FMP)

Credit Points: *Enter the section or page number of the plan where each credited item can be found.*

CRS Step	Section/Page	Item Score	Step Total
1. Organize to prepare the plan. (max:15)			
a. Involvment of Office Responsible for Community Planning (4)			
b. Planning committee of department staff (9)			
c. Process formally created by the community's governing board (2)			0
2. Involve the public. (max: 120)			
a. Planning process conducted through a planning committee (60)			
b. Public meetings held at the beginning of the planning process (15)			
c. Public meeting held on draft plan (15)			
d. Other public information activities to encourage input (Up to 30)			0
3. Coordinate with other agencies. (max: 35)			
a. Review of existing studies and plans [REQUIRED] (5)			
b. Coordinating with communities and other agencies (Up to 30)			0
4. Assess the hazard. (max: 35)			
a. Plan includes an assessment of the flood hazard [REQUIRED] with:			
(1) A map of known flood hazards (5)			
(2) A description of known flood hazard (5)			
(3) A discussion of past floods (5)			
b. Plan includes assessment of less frequent floods (10)			
c. Plan includes assessment of areas likely to flood (5)			
d. The plan describes other natural hazards [REQUIRED FOR DMA] (5)			0
5. Assess the problem. (max: 52)			
a. Summary of each hazard identified in the hazard assessment and their community impact [REQUIRED] (2)			
b. Description of the impact of the hazards on: (max: 25)			
(1) Life, safety, health, procedures for warning and evacuation (5)			

(2) Public health inlcuding health hazards to floodwaters/mold (5)			
(3) Critical facilities and infrastructure (5)			
(4) The community's economy and tax base (5)			
(5) Number and type of affected buildings (5)			
c. Review of all damaged buildings/flood insurance claims (5)			
d. Areas the provide natural floodplain functions (5)			
e. Development/redevelopment/Population Trends (7)			
f. Impact of future flooding conditions outline in Step 4, item c (5)			0
6. Set goals. [REQUIRED] (2)			0
7. Review possible activities. (max: 35)			
a. Preventive activities (5)			
b. Floodplain Management Regulatory/current & future conditions (5)			
c. Property protection activities (5)			
d. Natural resource protection activities (5)			
e. Emergency services activities (5)			
f. Structural projects (5)			
g. Public information activities (5)			0
8. Draft an action plan. (max: 60)			
a. Actions must be prioritized [REQUIRED]			
(1) Recommendations for activities from two of the six categories (10)			
(2) Recommendations for activities from three of the six categories (20)			
(3) Recommendations for activities from four of the six categories (30)			
(4) Recommendations for activities from five of the six categories (45)			
b. Post-disaster mitigation policies and procedures (10)			
c. Action items for mitigation of other hazards (5)			0
9. Adopt the plan. (2)			0
10. Implement, evaluate and revise. (max: 26)			
a. Procedures to monitor and recommend revisions [REQUIRED] (2)			
b. Same planning committee or successor committee that qualifies under Section 511.a.2 (a) does the evaluation (24)			0
Maximum Credit for 510 FMP = 382		**Plan Total:**	**0**

Project Overview

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Project Staffing

Gates County – Lead Agency/Grants Management
The Wooten Company – Project Management/Plan Development
Participating Jurisdictions – Serve as members of the Planning Team; facilitate good communication throughout the project; engage public stakeholders; Stay involved

Data Collection

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GIS Data Inventory

- Good Local data is key for Risk Assessment

Capabilities Assessment Survey

- What regulations/processes do jurisdictions have in place; what are their capabilities

Existing Mitigation Actions

- Review existing actions to see which still apply and determine any new actions

Data Collection

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Public Participation Survey

- Gives the public an opportunity to provide input and participate in the planning process
- A link to the survey can be posted on County/Town websites.

Public Outreach

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Public Outreach Strategy

- In-person public meetings (2)
- Public information website (including social media integration)
  - albemarlereghazardmitigationplan.wikispaces.com/
- Public participation survey
  - https://www.surveymonkey.com/s/JZS5YSY
- Planning Resources

Roles & Responsibilities

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Lead Agency

- Gates County - Mr. Billy Winn
- Grant Management/Project Management
- Central point of contact for the project
- Communication and coordination with participating jurisdictions, NCEM and FEMA

Roles & Responsibilities

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The Wooten Company

- Provide Technical Assistance including Planning guidance and insuring State and Federal Compliance
- Conduct Risk Assessments, Capability Assessments
- Summarize all results and report findings
- Facilitate meetings, workshops, public meetings
- Plan Preparation

Roles & Responsibilities

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Designated Community Leads

- Actively participate in the planning process by facilitating data collection and exchange, engaging stakeholders and the public, arrange and host planning team meetings, develop mitigation strategies, and provide plan review and feedback
- Guide plans through the adoption process at the local level

Roles & Responsibilities

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Participating Jurisdictions

- Actively participate in the planning process by facilitating data collection and exchange, engaging stakeholders and the public, attend planning team meetings, develop mitigation strategies, and provide plan review and feedback
- Guide plans through the adoption process at the local level

Next Steps

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Establishment of Planning Team

Establish main contact for each jurisdiction

Establish deadlines for Data Requests (June 6th)

2nd Planning Team meeting

Begin Public Outreach

Questions

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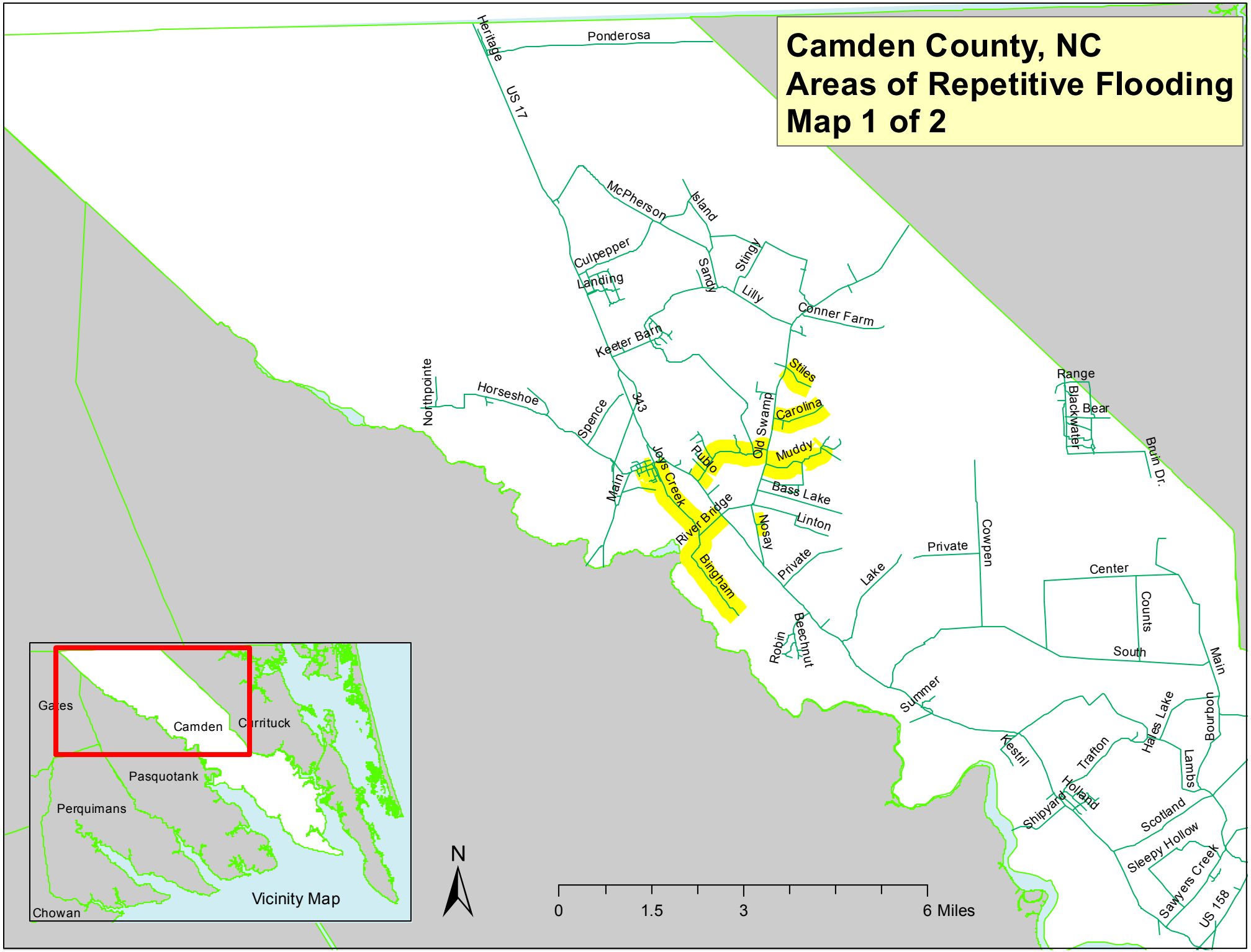
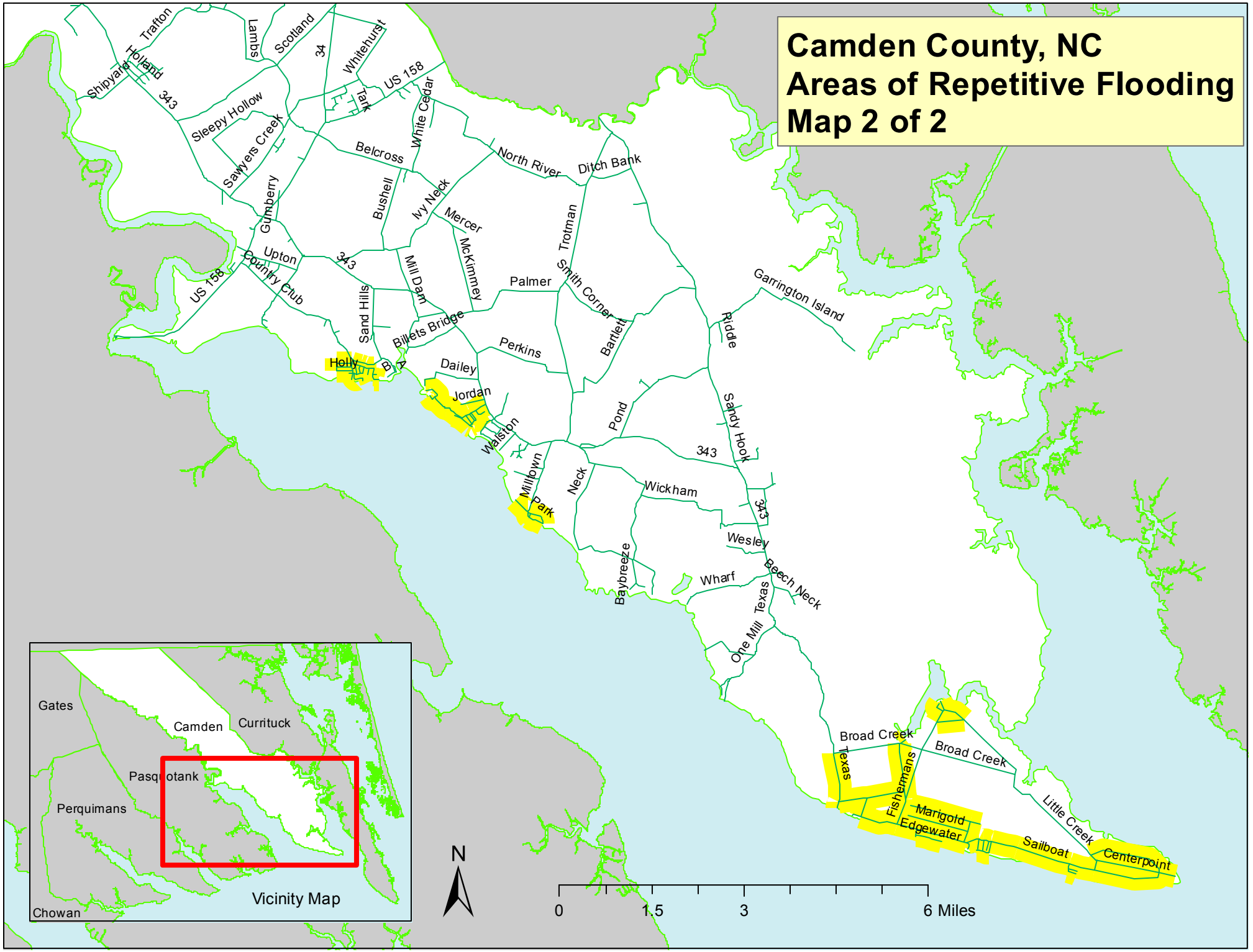
J. Scott Chase, AICP, NCLID
schase@thewootencompany.com

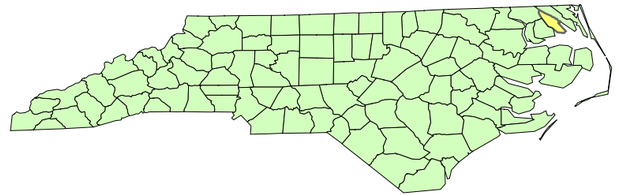
Stephen E. Smith, CFM
ssmith@thewootencompany.com

Appendix J – Camden County Supplemental Data


Camden County, NC
Areas of Repetitive Flooding
Map 1 of 2
Ponderosa
Heritage
US 17
McPherson
Island
Culpepper
Landing
Sandy
Stingy
Lilly
Conner Farm
Keeter Barn
Northpointe
Horseshoe
Spence
343
Stiles
Carolina
Muddy
Old Swamp
Pubo
Joys Creek
Main
River Bridge
Bingham
Bass Lake
Linton
Nosay
Private
Lake
Private
Cowpen
Range
Blackwater
Bear
Bruin Dr.
Center
Counts
South
Main
Robin
Beechnut
Summer
Kestril
Trafton
Holland
Shipyard
Hales Lake
Bourbon
Lambs
Scotland
Sleepy Hollow
Sawyers Creek
US 158
Gates
Camden
Currituck
Pasquotank
Perquimans
Chowan
Vicinity Map
N
0
1.5
3
6 Miles


Camden County, NC
Areas of Repetitive Flooding
Map 2 of 2
Trafton
Lambs
Scotland
34
Whitehurst
Holland
Shipyard
343
Tank
US 158
Sleepy Hollow
Sawyers Creek
White Cedar
Belcross
North River
Ditch Bank
Gumberry
Bushell
Ivy Neck
Mercer
McKimmey
Trotman
Upton
Country Club
343
Mill Dam
Smith Corner
Palmer
Garrington Island
US 158
Sand Hills
Billets Bridge
Riddle
Holly
Perkins
Bartlett
Dailey
Jordan
Walston
Pond
Sandy Hook
343
Millltown
Park
Neck
Wickham
343
Wesley
Beech Neck
Baybreeze
Wharf
Texas
One Mill
Broad Creek
Broad Creek
Texas
Fishermans
Marigold
Edgewater
Little Creek
Sailboat
Centerpoint
Gates
Camden
Currituck
Pasquotank
Perquimans
Chowan
Vicinity Map
N
0
1.5
3
6 Miles

Pasquotank County Areas of Repetitive Flooding



Gates County

Camden County

Currituck County

Pasquotank County

Perquimans County

Currituck Sound

Pasquotank River

Perquimans River

Little River

Albemarle Sound

0 1 2 4 Miles

Legend

Areas of Repetitive Flooding

Prepared By Julie Stamper
Pasquotank County GIS Coordinator
January 15, 2010

Appendix K – Adoption Documentation

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

FEMA

May 12, 2015

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

Reference: Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew:

This is to confirm that we have completed a Federal review of the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan for compliance with the federal hazard mitigation planning requirements contained in 44 CFR 201.6(b)-(d). We have determined that the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan is compliant with federal requirements, subject to formal community adoption.

In order for our office to issue formal approval of the plan, the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan participating jurisdictions must submit adoption documentation and document that the final public meeting occurred. Upon submittal of these items to our office, we will issue formal approval of the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan.

Please have the Albemarle Regional Hazard Mitigation Planning committee submit a final copy of their Plan, without draft notations, track changes, and include the corrected NFIP tables located in Section 6.

For further information, please do not hesitate to contact Victor Geer, of the Hazard Mitigation Assistance Branch, at (770) 220-5659 or Linda L. Byers of my staff, at (770) 220-5498.

Sincerely,

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

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

FEMA

June 12, 2015

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

Reference: Albemarle Regional Hazard Mitigation Plan

Mr. Crew:

We are pleased to inform you that the Albemarle Regional Hazard Mitigation Plan is in compliance with the Federal hazard mitigation planning requirements resulting from the Disaster Mitigation Act of 2000, as contained in 44 CFR 201.6. The plan is approved for a period of five (5) years, to June 11, 2020.

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

- Dare County, Unincorporated
- Town of Manteo
- Town of Southern Shores

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

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

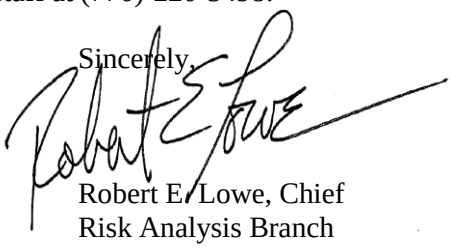
National Flood Insurance Program (NFIP) participation is required for some programs.

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

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

The State and the participants in the Albemarle Regional plan should be commended for their close coordination and communications with our office in the review and subsequent approval of the plan. If you or the participants in the Albemarle Regional plan have any questions or need any additional information, please do not hesitate to contact Victor Geer, of the Hazard Mitigation Assistance Branch, at (770) 220-5659, or Linda L. Byers of my staff at (770)-220-5498.

Sincerely,



Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

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

FEMA

June 22, 2015

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

Reference: Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew:

This is a follow-up to our previous correspondence of June 12, 2015, in which we approved the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolution for inclusion within this plan and subsequently have approved this community under the approved Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan:

- Town of Duck

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

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

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

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

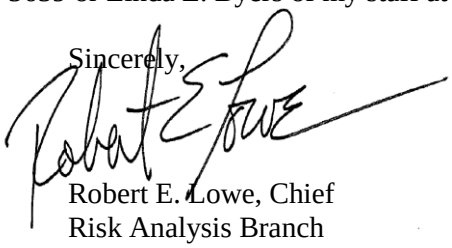
We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years.

We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development.

When the Plan is amended or revised, it must be resubmitted through the State as a "plan update" and is subject to a formal review and approval process by our office. If the Plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or the participants in the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan have any questions or need any additional information please do not hesitate to contact Victor Geer of the Hazard Mitigation Assistance Branch, at (770) 220-5659 or Linda L. Byers of my staff at (770) 220-5498.

Sincerely,



Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

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

FEMA

July 21, 2015

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

Reference: Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew:

This is a follow-up to our previous correspondence of June 12, 2015, in which we approved the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolution for inclusion within this plan and subsequently have approved this community under the approved Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan:

- Town of Kill Devil Hills

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

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

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

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

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

If you or the participants in the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan have any questions or need any additional information please do not hesitate to contact Victor Geer of the Hazard Mitigation Assistance Branch, at (770) 220-5659 or Linda L. Byers of my staff at (770) 220-5498.

Sincerely,

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

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

FEMA

July 31, 2015

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

Reference: Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew:

This is a follow-up to our previous correspondence of June 12, 2015, in which we approved the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolution for inclusion within this plan and subsequently have approved this community under the approved Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan:

- Town of Kitty Hawk

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

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

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

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

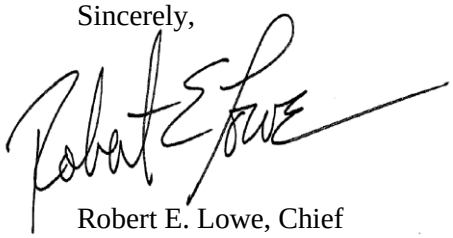
We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years.

We also encourage each community to conduct a plan update process within one (1) year of being included within a Presidential Disaster Declaration or of the adoption of major modifications to their local Comprehensive Land Use Plan or other plans that affect hazard mitigation or land use and development.

When the Plan is amended or revised, it must be resubmitted through the State as a "plan update" and is subject to a formal review and approval process by our office. If the Plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or the participants in the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan have any questions or need any additional information please do not hesitate to contact Victor Geer of the Hazard Mitigation Assistance Branch, at (770) 220-5659 or Linda L. Byers of my staff at (770) 220-5498.

Sincerely,



Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

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

FEMA

September 3, 2015

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

Reference: Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew

This is a follow-up to our previous correspondence of June 12, 2015, in which we approved the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolution for inclusion within this plan and subsequently have approved this community under the approved Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan:

- Town of Nags Head

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

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

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

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

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

required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or the participants in the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan have any questions or need any additional information please do not hesitate to contact Victor Geer of the Hazard Mitigation Assistance Branch, at (770) 220-5659 or Linda L. Byers of my staff at (770) 220-5498.

Sincerely,

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

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

FEMA

October 27. 2015

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

Reference: Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew

This is a follow-up to our previous correspondence of June 12, 2015, in which we approved the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following resolution for inclusion within this plan and subsequently have approved this community under the approved Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan:

- Currituck County Uninc.

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

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

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

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

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If you or the participants in the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan have any questions or need any additional information please do not hesitate to contact Victor Geer of the Hazard Mitigation Assistance Branch, at (770) 220-5659 or Linda L. Byers of my staff, at (770) 220-5498.

Sincerely,

Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

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

FEMA

November 24, 2015

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

Reference: Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew

This is a follow-up to our previous correspondence of June 12, 2015, in which we approved the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following adoption resolutions for inclusion within this plan and subsequently have approved these communities under the approved Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan:

- Perquimans County, Uninc.
- Town of Hertford
- Town of Winfall

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

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

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

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

We strongly encourage each community to perform an annual review and assessment of the effectiveness of their hazard mitigation plan; however, a formal plan update is required at least every five (5) years.

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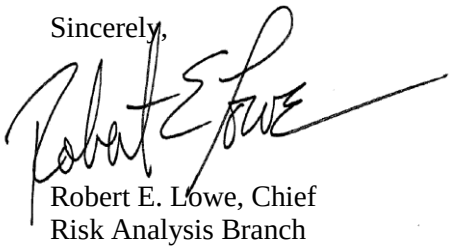
When the Plan is amended or revised, it must be resubmitted through the State as a "plan update" and is subject to a formal review and approval process by our office. If the Plan is not updated prior to the required five (5) year update, please ensure that the Draft update is submitted at least six (6) months prior to expiration of this plan approval.

If you or the participants in the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan have any questions or need any additional information please do not hesitate to contact Victor Geer of the Hazard Mitigation Assistance Branch, at (770) 220-5659 or Linda L. Byers of my staff at (770) 220-5498.

Sincerely,



Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

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

FEMA

November 25, 2015

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

Reference: Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew

This is a follow-up to our previous correspondence of June 12, 2015, in which we approved the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following adoption resolutions for inclusion within this plan and subsequently have approved these communities under the approved Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan:

- Chowan County, Uninc.
- Town of Edenton

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

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

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

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

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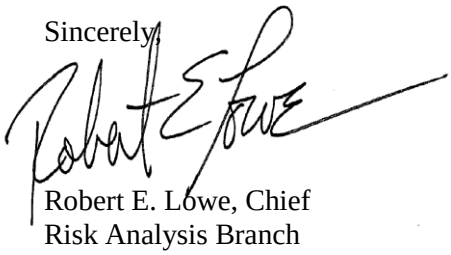
If you or the participants in the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan have any questions or need any additional information please do not hesitate to contact Victor Geer of the Hazard Mitigation Assistance Branch, at (770) 220-5659 or Linda L. Byers of my staff at (770) 220-5498.

Sincerely,



Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

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

FEMA

January 21, 2016

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

Reference: Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew

This is a follow-up to our previous correspondence of June 12, 2015, in which we approved the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following adoption resolutions for inclusion within this plan and subsequently have approved these communities under the approved Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan:

- Gates County, Uninc.
- Town of Gatesville
- Hertford County, Uninc.
- Town of Murfreesboro
- Town of Harrellsville
- Town of Ahoskie
- Town of Cofield
- Town of Como

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

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

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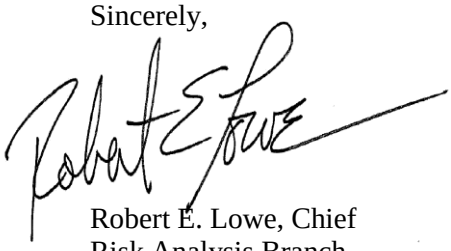
If you or the participants in the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan have any questions or need any additional information please do not hesitate to contact Shemeeka Hopkins of the Hazard Mitigation Assistance Branch, at (770) 220-8788 or Linda L. Byers of my staff at (770)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

Sincerely,



Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

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

FEMA

April 14, 2016

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

Reference: Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan

Dear Mr. Crew

This is a follow-up to our previous correspondence of June 12, 2015, in which we approved the Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan and all the participating communities that submitted their resolutions at the time of plan approval. We have recently received from your office the following adoption resolutions for inclusion within this plan and subsequently have approved these communities under the approved Albemarle Regional Multi-jurisdictional Hazard Mitigation Plan:

- Camden County, Unincorporated
- City of Elizabeth City
- Pasquotank County, Unincorporated
- Town of Winton

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

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

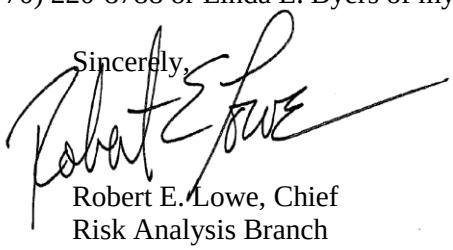
National Flood Insurance Program (NFIP) participation is required for some programs.

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

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

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

Sincerely,



Robert E. Lowe, Chief
Risk Analysis Branch
Mitigation Division

BOARD OF COMMISSIONERS
P. MICHAEL McLAIN
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SANDRA J. DUCKWALL
CLAYTON D. RIGGS
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CAMDENCOUNTY
new energy. new vision.

MICHAEL RENSHAW
County Manager

ANGELA WOOTEN
Clerk to the Board

JOHN S. MORRISON
County Attorney

RESOLUTION No. 2016-04-01

ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Camden 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, Camden 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, and 4 of Article 18 of Chapter 153 A; 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 Statures (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 Camden County to fulfill this obligation in order that Camden 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 Camden County hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Emergency Management Coordinator with the responsibility, authority, and the means to:
    a) Inform all concerned parties of this action.
    b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

3. Appoints the Emergency Management Coordinator to assure that the Hazard Mitigation Plan is review 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 4th day of April 2016.

P. Michael McLain, Chairman
Camden Board of Commissioners

ATTEST:

Angela Wooten, Clerk
Camden Board of Commissioners

[SEAL]

CHOWAN COUNTY, NORTH CAROLINA
P.O. Box 1030
Edenton, NC 27932
(252) 482-8431
(252) 482-4925 fax

RESOLUTION ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Chowan 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, Chowan 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 Chowan County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, 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 Chowan County Board of Commissioners hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the County Manager with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and p which undertake to study, survey, map, and identify fl flood-related erosion areas, and cooperate with neighb communities with respect to management of adjoinin and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

3. Appoints the County Manager to assure that the Hazard Mitig Plan is reviewed annually and in greater detail at least once every f

4. Agrees to take such other official action as may be reasonably necessary the strategies outlined within the 2015 Albemarle Regional Hazard M

Adopted this 17th day of August 2015.

Jeffery B Smith
Chairman, Chowan County Board of Commissio

ATTEST:

Susanne Stallings
Susanne Stallings, Clerk

(SEAL)

COUNTY OF CURRITUCK

RESOLUTION OF ADOPTION

ALBERMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Currituck County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding and high winds; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, the County established a local Community Rating System (CRS) Activity 510 Public Planning Committee to follow the 10-step CRS process to involve the public in developing floodplain management strategies.

WHEREAS, it is the intent of the Currituck County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Currituck County Board of Commissioners hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;

2. Vests the Floodplain Administrator with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Emergency Management and Planning Departments to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Currituck County Board of Commissioners for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day,October 19, 2015.

By:

Certified by: J Paul O'Neal SEAL : _____

Date: 19 October 2015

RESOLUTION OF ADOPTION

DARE COUNTY

ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Dare County are subject to the effects of natural and man-made hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion. Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, Dare County's has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces Dare County's Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all Dare County citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and the guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the Dare County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Board of Commissioners of Dare County hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Dare County Emergency Management Department with the responsibility, authority, and the means to:

    a. Inform all concerned parties of this action.

    b. Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Dare County Emergency Management Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Dare County for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Albemarle Regional Hazard Mitigation Plan.

BY: _____ DATE:

Robert L. Woodard, Chairman

Dare County Board of Commissioners

ATTEST: _____

Gary Gross

Clerk to the Board

RESOLUTION # 2016-02-02
ADOPTING THE
ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within the City of Elizabeth City 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 City of Elizabeth City 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, and 4 of Article 18 of Chapter 153 A; 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 Statures (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 City Council of Elizabeth City to fulfill this obligation in order that the City of Elizabeth City will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the City; 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 City Council of the City of Elizabeth City hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Emergency Management Coordinator with the responsibility, authority, and the means to:
    a) Inform all concerned parties of this action.
    b) Cooperate with Federal, State and local agencies and private firms, which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

3. Appoints the Emergency Management Coordinator 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 22nd day of February 2016.

Joseph W. Peel
Mayor

ATTEST:

Vivian D. White, CMC/NCCMC
City Clerk

(SEAL)

GATES COUNTY

RESOLUTION ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Gates 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, Gates 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 hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, it is the intent of the Board of Commissioners of Gates 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 Gates County hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Emergency Management Director with the responsibility, authority and the means to:

   (a) Inform all concerned parties of this action.

   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and, identify

floodplain 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 Emergency Management Director to assure that the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.

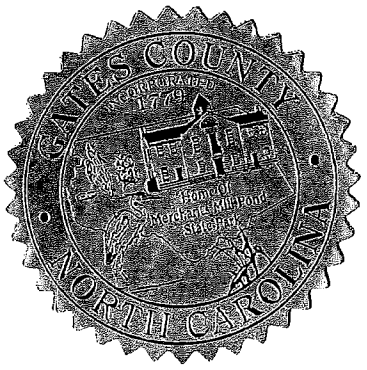
4. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2015 Albemarle Regional Hazard Mitigation Plan.

Adopted this 5th day of August, 2015.

Linda Hofler
Chairman, Gates County Board of Commissioners

ATTEST:

Melissa Lawrence
Attest: Melissa Lawrence
Clerk, Gates County Board of Commissioners



RESOLUTION OF ADOPTION

ALBEMARLE REGIONAL
HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Hertford County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to hurricanes, floods, tornadoes, winter storms, severe thunderstorms, wildfires, drought, and etc.; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, Hertford County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Hertford County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Hertford County Board of Commissioners hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan, and;

2. Vests Chris Smith, Emergency Management Director, with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.
(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints Chris Smith, Emergency Management Director, to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Hertford County Board of Commissioners for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this 3rd day of August, 2015.

By: Wm. F. Mitchell, Jr.
William F. Mitchell, Jr., Chairman
Hertford County Board of Commissioners

Certified by: Shelia W. Matthews SEAL : _____

Date: 8-3-15

COMMISSIONERS

Joseph S. Winslow, Jr., Chairman
Cecil Perry, Vice-Chairman
Jeff Dixon
Lloyd E. Griffin, III
Dr. William R. Sterritt
Frankie Meads
Bettie J. Parker

COUNTY MANAGER
Rodney Bunch

COUNTY ATTORNEY
R. Michael Cox

CLERK TO THE BOARD
Lynn Scott

COUNTY OF PASQUOTANK

RESOLUTION (2016-06) ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Pasquotank 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, Pasquotank 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, and 4 of Article 18 of Chapter 153 A; 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 Statures (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 Pasquotank County to fulfill this obligation in order that Pasquotank 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 Pasquotank County hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Emergency Management Coordinator with the responsibility, authority, and the means to:
    a) Inform all concerned parties of this action.
    b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related

erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

3. Appoints the Emergency Management Coordinator to assure that the Hazard Mitigation Plan is review 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 15th day of February 2016.

Joseph S. Winslow, Jr.
Chairman, Pasquotank Board of Commissioners

ATTEST:

Lynn Scott
Pasquotank Clerk

(SEAL)

MARY P. HUNNICUTT
CLERK TO BOARD
W. FRANK HEATH, III
COUNTY MANAGER

PERQUIMANS COUNTY
BOARD OF COMMISSIONERS

P.O. BOX 45
HERTFORD, NORTH CAROLINA 27944
TELEPHONE: 1-252-426-7550

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CHAIR
EDWARD R. MUZZULIN
VICE CHAIRMAN
T. KYLE JONES
FONDELLA A. LEIGH
WALLACE E. NELSON
MATTHEW PEELER
W. HACKNEY HIGH, JR.
COUNTY ATTORNEY

RESOLUTION OF ADOPTION
ALBEMARLE REGONAL
HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Perquimans County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, including various manmade and natural disasters; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County of Perquimans has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Perquimans County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Perquimans County Board of Commissioners hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;
2. Vests Emergency Management with the responsibility, authority, and the means to:
   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Emergency Management to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Perquimans County Board of Commissioners for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, August 3, 2015

By: Janice McKenzie Cole
Janice McKenzie Cole, Chair

Certified by: Mary P. Hunnicutt
Mary P. Hunnicutt, Clerk to the Board

Date: August 3, 2015

Town of Southern Shores

5375 N. Virginia Dare Trail. Southern Shores. NC 27949
Phone 252-261-2394 / Fax 252-255-0876
www.southernshores-nc.gov

RESOLUTION 2015-06-01

TOWN OF SOUTHERN SHORES RESOLUTION ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within the Town of Southern Shores 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 Town of Southern Shores 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 July1, 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 Town of Southern Shores Town Council to fulfill this obligation in order that the Town will be eligible for Federal and State assistance in the event that a state of disaster is declared for a hazard event affecting the Town; 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 Town of Southern Shores actively participated in the planning process of the Albemarle Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Southern Shores hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Southern Shores; and

3. Vests the Town Planner/Code Enforcement Officer with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private Firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Planner and Code Enforcement Officer to assure that, in cooperation with the Town of Southern Shores, 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 2 day of June, 2015.

Mayor, Town of Southern Shores

TOWN OF SOUTHERN SHORES SEAL N. C.

ATTEST:

Town Clerk (SEAL)

Resolution No.: 2015-2016-3

RESOLUTION OF ADOPTION
ALBEMARLE REGIONAL
HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Ahoskie are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to (Natural Hazards) Hurricanes, Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfires, Erosion, Drought/Heat Waves, Earthquakes, Landslides/Sinkholes, Tsunami, (Manmade Hazards) Transportation Infrastructure Impacts, Active Shooter/Mass Casualty, Cyber Attacks, Pandemic Events, Public Health Events; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Ahoskie has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Ahoskie Town Council to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Ahoskie Town Council hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;

2. Vests Ahoskie Town Manager with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.
(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Ahoskie Town Manager to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Ahoskie Town Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

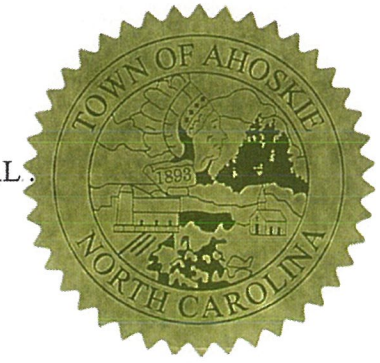
Adopted on this day, 13 July 2015

By: G. Brien Lassiter, Mayor
Linda L. Blackburn, Mayor ProTem
Elaine Myers, Council Member
C. David Stackhouse, Council Member
Charles A. Freeman, Council Member
Maurice Vann, Council Member

Certified by: Jolertha Chestnutt

Date: July 13, 2015

SEAL:



RESOLUTION OF ADOPTION

ALBEMARLE REGIONAL

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Cofield are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flood hazard events; and

WHEREAS, the Town of Cofield desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Cofield has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town Council of the Town of Cofield to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Town Council of the Town of Cofield hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;

2. Vests MAC Member - Hermea Pugh, Sr. and the Alternate MAC Member - Barbara J. Archer with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.
(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the MAC Member, Hermea Pugh, Sr. and the Alternate MAC Member, Barbara J. Archer to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Cofield Town Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, 23rd day of July, 2015.

By: Hermea Pugh Sr
Hermea Pugh, Sr.

Certified by: Barbara J. Archer SEAL: _____

Date: July 23, 2015

TOWN OF COMO
P. O. Box 117
Como, North Carolina 27818

RESOLUTION OF ADOPTION
ALBEMARLE REGIONAL
HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Como are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, and high winds; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214---Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act", and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop and All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Como has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Commissioners of the Town of Como to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be is resolved that the Board of Commissioners of the Town of Como hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;

2. Vests The Wooten Company with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of the action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with the neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints The Wooten Company to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of the Town of Como for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, 9/10/15

By: David L. Stefkovich Sr.
Mayor

Certified by: Susan W. Kennington SEAL: _____
Town Clerk

Date: 9/10/15

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF DUCK, NORTH CAROLINA, ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

Resolution No. 15-05

WHEREAS, the citizens and property within the Town of Duck are subject to the effects of natural 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 Town of Duck 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 Duck Town Council to fulfill this obligation in order that the town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the town; 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 Town of Duck actively participated in the planning process of the Albemarle Regional Hazard Mitigation Plan and has fulfilled its part of the multijurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Duck Town Council hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the Town of Duck; and
3. Vests the Town Manager and assignees with the responsibility, authority, and the means to:
   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining

floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Manager to assure that, in cooperation with Dare 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 3rd day of June 2015.

Mayor, Town of Duck, NC

ATTEST:

Clerk

RESOLUTION ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Edenton 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, Edenton 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 Town Council of Edenton to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town; and

WHEREAS, 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 Edenton Town Council hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Town Manager with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.

   (b) Cooperate with Federal, State and local agencies and private firms

which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

3. Appoints the Town Manager 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 14th day of July 2015.

Mayor, Edenton Town Council

ATTEST:

Anne-Marie Knighton, Clerk

(SEAL)

g over the years," Parrish, a farmer nton who endorsed holarship applica- commitment to is very admirable ecially important. 's world. Farming ith high stress and

The future of agriculture relies on talented young people like Smith to fill thousands of jobs in a variety of fields, such as plant science, engineering, communications, finance and more. Grow Ag Leaders encourages rural youth to

arships, administered by the National FFA Organization, are available to high school seniors and college students pursuing degrees in ag-related fields. To be considered, each applicant is required to receive endorsements from at least three local farmers. Thanks in part to North Carolina farmers, who participated in the successful six-state pilot launch in 2014, the program was expanded across the country. With support from the Monsanto

and follow us on Facebook, Twitter and Instagram.

America's Farmers Grow Ag Leaders is part of the America's Farmers initiative. Since 2010, the America's Farmers campaign and programs have advocated on behalf of farmers and their efforts to meet society's needs through agriculture. Today, consumers are more interested than ever in agriculture and how food is grown. Farmers and others

Learn more at ...org.

The America's Farmers initiative celebrates U.S. farmers and highlights the importance of agriculture through communications and community outreach programs. To learn more, visit America's Farmers at www.americasfarmers.com.

The Monsanto Fund, the philanthropic arm of the Monsanto Company, is a nonprofit organization dedicated to strengthening the farm communities where farmers and Monsanto Company employees live and work. Visit the Monsanto Fund at www.monsantofund.org.

Chappell earns SECU grant

from staff reports

State Employees Credit Union members via the SECU Foundation presented a $10,000 four-year college scholarship to Bryant Chappell, a senior at John A. Holmes High School. Bryant is the son of Christopher and Kari Chappell.

Funded solely by Credit Union members and given based on SECU's philosophy of "People Helping People," the scholarship recognizes the recipient's community involvement, leadership skills, character and integrity, as well as scholastic achievement. The scholarship is provided for tuition and university approved educational expenses over eight consecutive semesters.

Since its inception in 2000, the SECU Foundation "People Helping People" High School Scholarship program has provided nearly $40 million in scholarships for North Carolina high school seniors.

Hospital vols award grants

From staff reports

Vidant Chowan Hospital volunteers recently awarded ... grants ...

ANATION OF PROPOSED ACTIVITY IN A WETLAND AND
NVIRONMENT AND INTENT TO REQUEST RELEASE OF FUNDS

AGENCIES, GROUPS AND PERSONS:

PURPOSE OF NOTICE

PUBLIC COMMENTS

ENVIRONMENTAL CERTIFICATION

PUBLIC NOTICE
Albemarle Regional Hazard Mitigation Plan

The Edenton Town Council will conduct a public hearing on the final draft of the Albemarle Regional Hazard Mitigation Plan on Tuesday, July 14, 2015 at 6 pm. in the Edenton Council Chambers, 504 S. Broad Street, Edenton, NC. The Town of Edenton, along with the counties of Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans and participating local jurisdictions and other participating partners, have completed a Regional Hazard Mitigation Plan. The purpose of this Plan is to identify and assess our community's natural hazard risks and determine how to best minimize or manage those risks.

A copy of the draft plan is available for review on the Town's web page at www.townofedenton.com.

Anne Marie Knighton
Edenton Town Manager

PUBLIC NOTICE
Nomination Period for Chowan County Board of Social Services

The Chowan County Social Services Board will make an appointment to the Chowan County Board of Social Services to fill a vacant seat of a three (3) year term. The term begins on July 1, 2015. The Chowan County Social Services Board will consider nominations and make the appointment to the vacant seat prior to July 21, 2015.

The nomination period is scheduled from June 22, 2015 to July 10, 2015. Nominations must be received no later than 5:00 pm on July 10, 2015. You may obtain a Nomination Form from the local department of social services office (DSS). The form can also be mailed emailed or faxed to any potential nominee upon request. The form must be fully completed by the nominee and signed.

Phone request: (252) 482-1448

GATESVILLE

RESOLUTION ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Gatesville 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, Gatesville 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 hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, it is the intent of the Town Council of Gatesville 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 Town Council of Gatesville hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Emergency Management Director with the responsibility, authority and the means to:

   (a) Inform all concerned parties of this action.

   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and, identify

floodplain 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 Emergency Management Director 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 5th day of August, 2015.

Elton L. Winslow

Elton Winslow
Mayor, Town of Gatesville

ATTEST:

TOWN OF HARRELLSVILLE

RESOLUTION OF ADOPTION
ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Harrellsville are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the Town are particularly vulnerable to flooding and high winds; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 – Senate Bill 300 effective July 1, 2001), states in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Harrellsville has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town of Harrellsville Council to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Harrellsville hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests Chris Smith with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints Chris Smith to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Harrellsville for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Albemarle Regional Hazard Mitigation Plan.

Adopted this 3 day of August 2015

TOWN SEAL

Robert W. Dantz
Mayor, Town of Harrellsville

ATTEST:

Dina H Wht
Town Clerk

HORACE C. REID, JR.
MAYOR

BRANDON S. SHOAF
TOWN MANAGER

CINDY E. SHARBER
TOWN CLERK

BENJAMIN M. GALLOP
TOWN ATTORNEY

COMMISSIONERS:

MAYOR PRO TEM
LILLIAN ANN HOLMAN

J. SIDNEY ELEY

CARLTON A. DAVENPORT

WILLIAM E. LANE

TOWN OF HERTFORD
RESOLUTION OF SUPORT FOR REGIONAL HAZARD MITIGATION PLAN
Resolution 08-10-2015-02

WHEREAS, the citizens and property within the Town of Hertford are subject to the effects of natural hazards that pose threats to lives and cause damage to property; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Hertford has performed a review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town Council to fulfill this obligation in order that the County and Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting both;

NOW, therefore, be it resolved that the Hertford Town Council hereby adopts the Albemarle Regional Hazard Mitigation Plan.

THIS THE 10TH DAY OF AUGUST 2015.

Horace C. Reid, Jr., Mayor

TOWN OF HERTFORD ORIGINAL CHARTER 1758 NORTH CAROLINA

ATTEST:

Cindy E. Sharber, Clerk

TOWN OF KILL DEVIL HILLS

Land Where Flight Began

RESOLUTION OF ADOPTION by the
TOWN OF KILL DEVIL HILLS
ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Kill Devil Hills are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the Town are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion, Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation infrastructure impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, The Town of Kill Devil Hills has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces The Town of Kill Devil Hills Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all Kill Devil Hills citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the Town of Kill Devil Hills Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County.

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of the Town of Kill Devil Hills hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Planning and Development Department with the responsibility, authority, and the means to:

   a. Inform all concerned parties of this action.

   b. Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Planning and Development Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of the Town of Kill Devil Hills.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

This the 24th day of June 2015.

SEAL

Sheila F. Davies

Sheila F. Davies, Mayor
Town of Kill Devil Hills

ATTEST:

Mary E. Quidley
Town Clerk

POST OFFICE BOX 549
101 VETERANS MEMORIAL DRIVE
KITTY HAWK, NC 27949

PHONE (252) 261-3552
FAX (252) 261-7900
TOWN WEB SITE: www.townofkittyhawk.org
EMAIL ADDRESS: info@kittyhawktown.net

RESOLUTION OF ADOPTION

TOWN OF KITTY HAWK

ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Kitty Hawk are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion, Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Rip Currents, as well as manmade effects from Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events, and Public Health Events; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the town of Kitty Hawk actively participated in the planning process of the Albemarle Regional Hazard Mitigation Plan fulfilling 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Kitty Hawk Town Council to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Kitty Hawk Town Council hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;

2. Vests the Town Manager with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Town Manager to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Kitty Hawk Town Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day the 7th of July 2015.

By: The Kitty Hawk Town Council

Certified by: Lynn U. Morris
Lynn U. Morris, Town Clerk

SEAL: The Town of Kitty Hawk 1981

Date: July 7, 2015

2015-09

RESOLUTION OF ADOPTION
TOWN OF MANTEO
ALBEMARLE REGIONALHAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Manteo are subject to the effects of natural and manmade hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion. Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 ---Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS,
The Town of Manteo has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces Dare County's Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all Dare County citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and the guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the Town of Manteo Board of Commissioners to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Board of Commissioners of the Town of Manteo hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and
2. Vests the Dare County Emergency Management Department with the responsibility, authority, and the means to:
   a. Inform all concerned parties of this action.
   b. Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Dare County Emergency Management Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Dare County for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Albemarle Regional Hazard Mitigation Plan.

Adopted on June 3, 2015

Mayor;

Town of Manteo

Attest:

Clerk to the Council

TOWN OF MANTEO CORPORATE SEAL SEAL 1899 NORTH CAROLINA

RESOLUTION OF ADOPTION

Albemarle Regional

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Town of Murfreesboro are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, tornados and hurricanes; and

WHEREAS, the Town of Murfreesboro desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Murfreesboro has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town Council of the Town of Murfreesboro to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Town Council of the Town of Murfreesboro hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan] and;

2. Vests Christopher Smith, Hertford County Emergency Management Director with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.
(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints Christopher Smith, Hertford County Emergency Management Director, Darrell Rowe, Director of Public Safety, First Alternative and Carolyn Brown, Town Clerk, Second Alternative.to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town Council of Town of Murfreesboro for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, July 17, 2015

By: *John Hinton Mayor* John A. Hinton

Certified by: Carolyn Brown SEAL :

Date: July 17, 2015

Resolution No. 15-06-010
Hazard Mitigation Plan
BOC Meeting June 17, 2015

RESOLUTION OF ADOPTION
TOWN OF NAGS HEAD
ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the *Town of Nags Head* are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the *Town* are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion, Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation infrastructure impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

WHEREAS, the *Town* desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, The *Town of Nags Head* has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces The Town of Nags Head Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all *Nags Head* citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the *Town of Nags Head Board of Commissioners* to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County.

NOW, Therefore, Be It Resolved that the *Board of Commissioners of the Town of Nags Head* hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the *Planning and Development Department* with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the *Planning and Development Department* to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the *Board of Commissioners of Nags Head* for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

This the 17th day of June 2015.

Robert C. Edwards

Robert C. Edwards, Mayor
Town of Nags Head

Attested by:

Carolyn F. Morris

Carolyn F. Morris, Town Clerk

THE TOWN OF 1961 NAGS HEAD N.C.

PUBLIC COMMENT

There being no one present who wished to speak, Mayor Edwards closed Public Comment.

CONSENT AGENDA

The Consent Agenda consisted of the following items:

- Consideration of Budget Adjustment #11 to FY 14/15 Budget Ordinance
- Consideration of fifth amendment to Verizon cell tower lease

MOTION: Comr. Ratzenberger made a motion to approve the Consent Agenda as presented. The motion was seconded by Comr. Cahoon which passed unanimously.

Budget Adjustment #11, as adopted, is attached to and made a part of these minutes as shown in Addendum "A".

Information from the agenda summary sheet concerning the fifth amendment to the Verizon cell tower lease, as approved, read in part as follows:

"Attached is the fifth amendment to the Verizon cell tower lease for equipment mounted to the monopole tower at 5401 S. Croatan Highway. This amendment is necessary to authorize the replacement and addition of new equipment to the tower to support upgrades to Verizon service within the Town. Attached is a history of Verizon equipment and the associated lease payment since 2012. The lease includes a 3 percent increase in the payment each year. Additionally, several amendments have resulted in changes to the payment since that time. The current lease payment is $3,374. With the proposed modifications, Verizon is prepared to pay an additional $200 per month for the lease bringing the total monthly payment to $3,574.

'Staff would request that the Board of Commissioners consider the request and authorize the Town Manager to execute the lease agreement."

REPORTS AND RECOMMENDATIONS FROM THE PLANNING BOARD AND P&D DIRECTOR

Consideration of resolution to adopt the Dare County Albemarle Regional Hazard Mitigation Plan

Planner Holly White summarized her memo which read in part as follows:

"The Town of Nags Head has participated in the Albemarle Regional Hazard Mitigation Planning process. This effort serves as the town's five year update to its Hazard Mitigation Plan. The plan is required to be updated in order to *maintain eligibility for federal disaster assistance and hazard mitigation funding*. At the Board's January mid-month meeting, Staff provided the board with the Town's updated goals and actions, which incorporated comments by the board from the January 7th meeting. On January 21st, the Board voted to approve the Regional Plan with the updated Town Goals and Actions.

'FEMA found our draft plan compliant with the standards for multi-jurisdictional Hazard Mitigation Plans (see Attachments B and C). However, formal approval cannot be given by FEMA until community

adoption. At this time, the Board is being asked to accept and approve the FEMA approved draft Albemarle Regional Hazard Mitigation Plan by resolution (Attachment A).

'The complete FEMA approved Albemarle Regional Hazard Mitigation Plan can be viewed at http://albemarlereghazardmitigationplan.wikispaces.com/.

'Background & Process

The Albemarle Regional Planning effort kicked off in May of 2014 after the region received a state grant. FEMA and the North Carolina Division of Emergency Management (NCDEM) directed the formation of the jurisdictions participating in this planning effort. The plan encompasses eight counties and 17 municipalities including Dare, Currituck, Camden, Chowan, Gates, Hertford, Perquimans, and Pasquotank. Nationwide there has been a progression to move towards regional plans. The movement to regional plans stems partially from the high volume of plan reviews by FEMA and the State. FEMA and the State were reviewing approximately 400-500 plans in North Carolina alone.

'Prior to 2004 the Town did not have a hazard mitigation plan. At that time, the Town's Land Use Plan was utilized for hazard mitigation planning purposes since it contained much of the same information. However, with the Federal adoption of the Disaster Mitigation Act of 2000, hazard mitigation planning became a requirement and by law was necessary to maintain eligibility for hazard mitigation and post disaster funding. Hazard mitigation plans are required to be updated every five years. In 2004 the town developed its first plan as a stand-alone plan. In 2010 the Town partnered with Dare County and other Dare County municipalities to update its plan as part of a multi-jurisdictional plan. The current five year update is a regional plan and will supersede the multi-jurisdictional plan once adopted. In addition to hazard mitigation grant funding and post disaster assistance, having an adopted Hazard Mitigation Plan is a major component in gaining credit toward our Community Rating System (CRS) Program and associated discount on flood insurance for property owners.

'Town Planning Staff has been participating in regional meetings since May. Through this process, a regional survey was conducted from May to September. Based on the results from the survey and assessment of regional hazards, regional goals were formed. The regional goals and survey results were presented at a public meeting in October. The consultant requested that the Town's goals/actions be formulated to be consistent with the larger regional goals. In addition to the regional meetings, Dare County formed a multi-jurisdictional committee, the Dare County CRS 510 Committee, of Dare County and associated municipalities to address local issues and to gain credit toward each municipality's CRS program and rating. Town Staff and Planning Board member Mark Cornwell have been participating in the Dare County CRS 510 Committee meetings since August.

'Town Staff met on December 19th to review the regional planning process, regional goals, and modify the Town's draft goals and actions. A final public regional plan meeting was held January 15th. Staff was notified by Dare County in May that FEMA had approved the plan.

'The Board is being requested to accept and approve the FEMA approved Albemarle Regional Hazard Mitigation Plan by resolution.

'The complete FEMA approved Albemarle Regional Hazard Mitigation Plan can be viewed at http://albemarlereghazardmitigationplan.wikispaces.com/."

MOTION: Comr. Ratzenberger made a motion to adopt the resolution approving the Dare County Albemarle Regional Hazard Mitigation Plan as presented. The motion was seconded by Comr. Cahoon which passed unanimously.

The resolution, as adopted, read in part as follows:

"WHEREAS, the citizens and property within the *Town of Nags Head* are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the *Town* are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion, Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation infrastructure impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

'WHEREAS, the *Town* desires to seek ways to mitigate the impact of identified hazard risks; and

'WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

'WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

'WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

'WHEREAS, The *Town of Nags Head* has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces The Town of Nags Head Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all *Nags Head* citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

'WHEREAS, it is the intent of the *Town of Nags Head Board of Commissioners* to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County.

'NOW, Therefore, Be It Resolved that the *Board of Commissioners of the Town of Nags Head* hereby:

'1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

'2. Vests the *Planning and Development Department* with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.
(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

'3. Appoints the *Planning and Development Department* to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the *Board of Commissioners of Nags Head* for consideration.

'4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan."

Consideration of Scope of Services w/ Code Wright Planners for Comprehensive Plan/Ordinance Revision Project

Planner Holly White summarized her memo which read in part as follows:

"At the May 6th BOC meeting, the Board authorized staff to begin refinement of a scope of services for development of a Comprehensive Plan and update of the Town's codes with Code Wright Planners. Staff has worked over the past month to refine a scope of services and draft project timeline for the Comprehensive Plan and Code Update project.

'Below is a summary of the project scope, including a task list and detailed timeline. The project will take approximately 25 months to complete (see graphic below). There are 6 overall tasks to be completed as part of both portions of the project. It is anticipated that the Comprehensive Plan project will take approximately 8 months to complete with an anticipated adoption of April 1, 2016. The Code update portion of the project is expected to take 22 months to complete with an anticipated adoption of July 2017. In order to complete this project as quickly as possible, several task overlaps will be necessary. There is a 1 month overlap between Tasks 2 and 3 and an 8 month overlap between Tasks 3 and 4. The first 4 months of the project are dedicated to research, interviews, and analysis for both the comprehensive plan and code update."

RESOLUTION OF ADOPTION

Albemarle Regional Hazard Mitigation Plan

WHEREAS, the citizens and property within the Town of Winfall are subject to the effects of natural hazards that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas of the Town are particularly vulnerable to ,flooding, high winds; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214—Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local government must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Winfall has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to the guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Winfall Town Council to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Winfall Town Council hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Mayor/Town Administrator with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Mayor/Town Administrator to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Winfall Town Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan Update.

Adopted on 8/10/15

Frederick L. Yates, Mayor

Attest:

Brenda G. Dillard, Town Clerk

SEAL

RESOLUTION OF ADOPTION

ALBEMARLE REGIONAL

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the **Town of Winton** are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to **hurricanes, high winds, flooding, erosion, tornados, earthquakes, terrorism, hazardous spills, winter storms, drought, thunder storms.** and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Winton has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the **Board of Commissioners of the Town of Winton** to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the **Board of Commissioners of the Town of Winton** hereby:

1. Adopts the **Albemarle Regional Hazard Mitigation** Plan and;

2. Vests **Carl Pierce** with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the **Town of Winton Public Works Director** to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the **Town of Winton Board of Commissioners** for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, July 6, 2015

By: _____
Mayor

Certified by: Catherine D. Parker SEAL : _____

Date: July 6, 2015

BOARD OF COMMISSIONERS
P. MICHAEL McLAIN
Chairman

GARRY W. MEIGGS
Vice Chairman

SANDRA J. DUCKWALL
CLAYTON D. RIGGS
TOM WHITE

CAMDENCOUNTY
new energy. new vision.

MICHAEL RENSHAW
County Manager

ANGELA WOOTEN
Clerk to the Board

JOHN S. MORRISON
County Attorney

RESOLUTION No. 2016-04-01

ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Camden 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, Camden 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, and 4 of Article 18 of Chapter 153 A; 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 Statures (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 Camden County to fulfill this obligation in order that Camden 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 Camden County hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Emergency Management Coordinator with the responsibility, authority, and the means to:
    a) Inform all concerned parties of this action.
    b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

3. Appoints the Emergency Management Coordinator to assure that the Hazard Mitigation Plan is review 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 4th day of April 2016.

P. Michael McLain, Chairman
Camden Board of Commissioners

ATTEST:

Angela Wooten, Clerk
Camden Board of Commissioners

[SEAL]

CHOWAN COUNTY, NORTH CAROLINA
P.O. Box 1030
Edenton, NC 27932
(252) 482-8431
(252) 482-4925 fax

RESOLUTION ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Chowan 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, Chowan 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 Chowan County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County; and

WHEREAS, 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 Chowan County Board of Commissioners hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the County Manager with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and p which undertake to study, survey, map, and identify fl flood-related erosion areas, and cooperate with neighb communities with respect to management of adjoinin and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

3. Appoints the County Manager to assure that the Hazard Mitig Plan is reviewed annually and in greater detail at least once every f

4. Agrees to take such other official action as may be reasonably necessary the strategies outlined within the 2015 Albemarle Regional Hazard M

Adopted this 17th day of August 2015.

Jeffery B Smith
Chairman, Chowan County Board of Commissio

ATTEST:

Susanne Stallings
Susanne Stallings, Clerk

(SEAL)

COUNTY OF CURRITUCK

RESOLUTION OF ADOPTION

ALBERMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Currituck County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding and high winds; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, the County established a local Community Rating System (CRS) Activity 510 Public Planning Committee to follow the 10-step CRS process to involve the public in developing floodplain management strategies.

WHEREAS, it is the intent of the Currituck County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Currituck County Board of Commissioners hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;

2. Vests the Floodplain Administrator with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Emergency Management and Planning Departments to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Currituck County Board of Commissioners for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day,October 19, 2015.

By:

Certified by: J Paul O'Neal SEAL : _____

Date: 19 October 2015

RESOLUTION OF ADOPTION

DARE COUNTY

ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Dare County are subject to the effects of natural and man-made hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion. Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, Dare County's has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces Dare County's Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all Dare County citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and the guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the Dare County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Board of Commissioners of Dare County hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Dare County Emergency Management Department with the responsibility, authority, and the means to:

    a. Inform all concerned parties of this action.

    b. Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Dare County Emergency Management Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Dare County for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Albemarle Regional Hazard Mitigation Plan.

BY: _____ DATE:

Robert L. Woodard, Chairman

Dare County Board of Commissioners

ATTEST: _____

Gary Gross

Clerk to the Board

RESOLUTION # 2016-02-02
ADOPTING THE
ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within the City of Elizabeth City 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 City of Elizabeth City 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, and 4 of Article 18 of Chapter 153 A; 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 Statures (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 City Council of Elizabeth City to fulfill this obligation in order that the City of Elizabeth City will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the City; 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 City Council of the City of Elizabeth City hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Emergency Management Coordinator with the responsibility, authority, and the means to:
    a) Inform all concerned parties of this action.
    b) Cooperate with Federal, State and local agencies and private firms, which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

3. Appoints the Emergency Management Coordinator 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 22nd day of February 2016.

Joseph W. Peel
Mayor

ATTEST:

Vivian D. White, CMC/NCCMC
City Clerk

(SEAL)

GATES COUNTY

RESOLUTION ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Gates 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, Gates 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 hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, it is the intent of the Board of Commissioners of Gates 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 Gates County hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Emergency Management Director with the responsibility, authority and the means to:

   (a) Inform all concerned parties of this action.

   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and, identify

floodplain 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 Emergency Management Director to assure that the Hazard Mitigation Plan is reviewed annually and in greater detail at least once every five years.

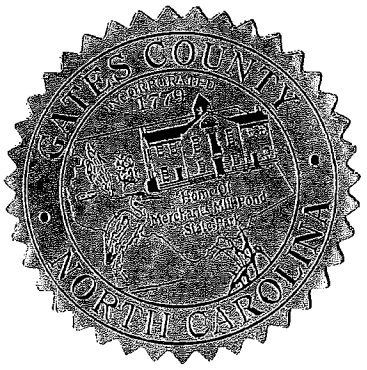
4. Agrees to take such other official action as may be reasonably necessary to carry out the strategies outlined within the 2015 Albemarle Regional Hazard Mitigation Plan.

Adopted this 5th day of August, 2015.

Linda Hofler
Chairman, Gates County Board of Commissioners

ATTEST:

Melissa Lawrence
Attest: Melissa Lawrence
Clerk, Gates County Board of Commissioners



RESOLUTION OF ADOPTION

ALBEMARLE REGIONAL
HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Hertford County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to hurricanes, floods, tornadoes, winter storms, severe thunderstorms, wildfires, drought, and etc.; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, Hertford County has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Hertford County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Hertford County Board of Commissioners hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan, and;

2. Vests Chris Smith, Emergency Management Director, with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.
(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints Chris Smith, Emergency Management Director, to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Hertford County Board of Commissioners for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this 3rd day of August, 2015.

By: Wm. F. Mitchell, Jr.
William F. Mitchell, Jr., Chairman
Hertford County Board of Commissioners

Certified by: Shelia W. Matthews SEAL : _____

Date: 8-3-15

COMMISSIONERS

Joseph S. Winslow, Jr., Chairman
Cecil Perry, Vice-Chairman
Jeff Dixon
Lloyd E. Griffin, III
Dr. William R. Sterritt
Frankie Meads
Bettie J. Parker

COUNTY MANAGER
Rodney Bunch

COUNTY ATTORNEY
R. Michael Cox

CLERK TO THE BOARD
Lynn Scott

COUNTY OF PASQUOTANK

RESOLUTION (2016-06) ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Pasquotank 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, Pasquotank 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, and 4 of Article 18 of Chapter 153 A; 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 Statures (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 Pasquotank County to fulfill this obligation in order that Pasquotank 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 Pasquotank County hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Emergency Management Coordinator with the responsibility, authority, and the means to:
    a) Inform all concerned parties of this action.
    b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related

erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

3. Appoints the Emergency Management Coordinator to assure that the Hazard Mitigation Plan is review 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 15th day of February 2016.

Joseph S. Winslow, Jr.
Chairman, Pasquotank Board of Commissioners

ATTEST:

Lynn Scott
Pasquotank Clerk

(SEAL)

MARY P. HUNNICUTT
CLERK TO BOARD
W. FRANK HEATH, III
COUNTY MANAGER

PERQUIMANS COUNTY
BOARD OF COMMISSIONERS

P.O. BOX 45
HERTFORD, NORTH CAROLINA 27944
TELEPHONE: 1-252-426-7550

JANICE MCKENZIE COLE
CHAIR
EDWARD R. MUZZULIN
VICE CHAIRMAN
T. KYLE JONES
FONDELLA A. LEIGH
WALLACE E. NELSON
MATTHEW PEELER
W. HACKNEY HIGH, JR.
COUNTY ATTORNEY

RESOLUTION OF ADOPTION
ALBEMARLE REGONAL
HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Perquimans County are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, including various manmade and natural disasters; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the County of Perquimans has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Perquimans County Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Perquimans County Board of Commissioners hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;
2. Vests Emergency Management with the responsibility, authority, and the means to:
   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Emergency Management to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Perquimans County Board of Commissioners for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, August 3, 2015

By: Janice McKenzie Cole
Janice McKenzie Cole, Chair

Certified by: Mary P. Hunnicutt
Mary P. Hunnicutt, Clerk to the Board

Date: August 3, 2015

Town of Southern Shores

5375 N. Virginia Dare Trail. Southern Shores. NC 27949
Phone 252-261-2394 / Fax 252-255-0876
www.southernshores-nc.gov

RESOLUTION 2015-06-01

TOWN OF SOUTHERN SHORES RESOLUTION ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within the Town of Southern Shores 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 Town of Southern Shores 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 July1, 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 Town of Southern Shores Town Council to fulfill this obligation in order that the Town will be eligible for Federal and State assistance in the event that a state of disaster is declared for a hazard event affecting the Town; 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 Town of Southern Shores actively participated in the planning process of the Albemarle Regional Hazard Mitigation Plan and has fulfilled all their part of the multi-jurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Southern Shores hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Separately adopts the sections of the plan that are specific to the Town of Southern Shores; and

3. Vests the Town Planner/Code Enforcement Officer with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private Firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Planner and Code Enforcement Officer to assure that, in cooperation with the Town of Southern Shores, 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 2 day of June, 2015.

Mayor, Town of Southern Shores

TOWN OF SOUTHERN SHORES SEAL N. C.

ATTEST:

Town Clerk (SEAL)

Resolution No.: 2015-2016-3

RESOLUTION OF ADOPTION
ALBEMARLE REGIONAL
HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Ahoskie are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to (Natural Hazards) Hurricanes, Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfires, Erosion, Drought/Heat Waves, Earthquakes, Landslides/Sinkholes, Tsunami, (Manmade Hazards) Transportation Infrastructure Impacts, Active Shooter/Mass Casualty, Cyber Attacks, Pandemic Events, Public Health Events; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Ahoskie has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Ahoskie Town Council to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Ahoskie Town Council hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;

2. Vests Ahoskie Town Manager with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.
(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Ahoskie Town Manager to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Ahoskie Town Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

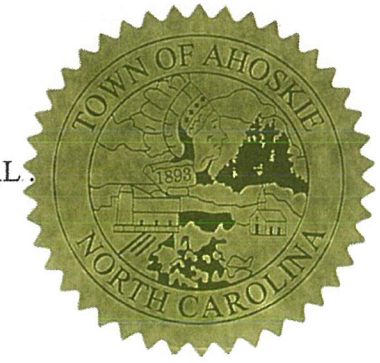
Adopted on this day, 13 July 2015

By: G. Brien Lassiter, Mayor
Linda L. Blackburn, Mayor ProTem
Elaine Myers, Council Member
C. David Stackhouse, Council Member
Charles A. Freeman, Council Member
Maurice Vann, Council Member

Certified by: Jolertha Chestnutt

Date: July 13, 2015

SEAL:



RESOLUTION OF ADOPTION

ALBEMARLE REGIONAL

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Cofield are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flood hazard events; and

WHEREAS, the Town of Cofield desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Cofield has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town Council of the Town of Cofield to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Town Council of the Town of Cofield hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;

2. Vests MAC Member - Hermea Pugh, Sr. and the Alternate MAC Member - Barbara J. Archer with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.
(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the MAC Member, Hermea Pugh, Sr. and the Alternate MAC Member, Barbara J. Archer to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Cofield Town Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, 23rd day of July, 2015.

By: Hermea Pugh Sr
Hermea Pugh, Sr.

Certified by: Barbara J. Archer SEAL: _____

Date: July 23, 2015

TOWN OF COMO
P. O. Box 117
Como, North Carolina 27818

RESOLUTION OF ADOPTION
ALBEMARLE REGIONAL
HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Como are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, and high winds; and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214---Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act", and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop and All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Como has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Board of Commissioners of the Town of Como to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be is resolved that the Board of Commissioners of the Town of Como hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;

2. Vests The Wooten Company with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of the action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with the neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints The Wooten Company to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of the Town of Como for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, 9/10/15

By: David L. Stefkovich Sr.
Mayor

Certified by: Susan W. Kennington SEAL: _____
Town Clerk

Date: 9/10/15

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF DUCK, NORTH CAROLINA, ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

Resolution No. 15-05

WHEREAS, the citizens and property within the Town of Duck are subject to the effects of natural 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 Town of Duck 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 Duck Town Council to fulfill this obligation in order that the town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the town; 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 Town of Duck actively participated in the planning process of the Albemarle Regional Hazard Mitigation Plan and has fulfilled its part of the multijurisdictional planning elements required by FEMA;

NOW, THEREFORE, be it resolved that the Duck Town Council hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and
2. Separately adopts the sections of the plan that are specific to the Town of Duck; and
3. Vests the Town Manager and assignees with the responsibility, authority, and the means to:
   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining

floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

4. Appoints the Town Manager to assure that, in cooperation with Dare 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 3rd day of June 2015.

Mayor, Town of Duck, NC

ATTEST:

Clerk

RESOLUTION ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Edenton 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, Edenton 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 Town Council of Edenton to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town; and

WHEREAS, 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 Edenton Town Council hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Town Manager with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.

   (b) Cooperate with Federal, State and local agencies and private firms

which undertake to study, survey, map, and identify floodplain or flood-related erosion areas, and cooperate with neighboring communities with respect to management of adjoining floodplain and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

3. Appoints the Town Manager 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 14th day of July 2015.

Mayor, Edenton Town Council

ATTEST:

Anne-Marie Knighton, Clerk

(SEAL)

g over the years," Parrish, a farmer nton who endorsed holarship applica- commitment to is very admirable ecially important. 's world. Farming ith high stress and

The future of agriculture relies on talented young people like Smith to fill thousands of jobs in a variety of fields, such as plant science, engineering, communications, finance and more. Grow Ag Leaders encourages rural youth to

arships, administered by the National FFA Organization, are available to high school seniors and college students pursuing degrees in ag-related fields. To be considered, each applicant is required to receive endorsements from at least three local farmers. Thanks in part to North Carolina farmers, who participated in the successful six-state pilot launch in 2014, the program was expanded across the country. With support from the Monsanto

and follow us on Facebook, Twitter and Instagram.

America's Farmers Grow Ag Leaders is part of the America's Farmers initiative. Since 2010, the America's Farmers campaign and programs have advocated on behalf of farmers and their efforts to meet society's needs through agriculture. Today, consumers are more interested than ever in agriculture and how food is grown. Farmers and others

Learn more at ...org.

The America's Farmers initiative celebrates U.S. farmers and highlights the importance of agriculture through communications and community outreach programs. To learn more, visit America's Farmers at www.americasfarmers.com.

The Monsanto Fund, the philanthropic arm of the Monsanto Company, is a nonprofit organization dedicated to strengthening the farm communities where farmers and Monsanto Company employees live and work. Visit the Monsanto Fund at www.monsantofund.org.

Chappell earns SECU grant

from staff reports

State Employees Credit Union members via the SECU Foundation presented a $10,000 four-year college scholarship to Bryant Chappell, a senior at John A. Holmes High School. Bryant is the son of Christopher and Kari Chappell.

Funded solely by Credit Union members and given based on SECU's philosophy of "People Helping People," the scholarship recognizes the recipient's community involvement, leadership skills, character and integrity, as well as scholastic achievement. The scholarship is provided for tuition and university approved educational expenses over eight consecutive semesters.

Since its inception in 2000, the SECU Foundation "People Helping People" High School Scholarship program has provided nearly $40 million in scholarships for North Carolina high school seniors.

Hospital vols award grants

From staff reports

Vidant Chowan Hospital volunteers recently awarded ... grants ...

ANATION OF PROPOSED ACTIVITY IN A WETLAND AND
NVIRONMENT AND INTENT TO REQUEST RELEASE OF FUNDS

AGENCIES, GROUPS AND PERSONS:

PURPOSE OF NOTICE

PUBLIC COMMENTS

ENVIRONMENTAL CERTIFICATION

PUBLIC NOTICE
Albemarle Regional Hazard Mitigation Plan

The Edenton Town Council will conduct a public hearing on the final draft of the Albemarle Regional Hazard Mitigation Plan on Tuesday, July 14, 2015 at 6 pm. in the Edenton Council Chambers, 504 S. Broad Street, Edenton, NC. The Town of Edenton, along with the counties of Camden, Chowan, Currituck, Dare, Gates, Hertford, Pasquotank and Perquimans and participating local jurisdictions and other participating partners, have completed a Regional Hazard Mitigation Plan. The purpose of this Plan is to identify and assess our community's natural hazard risks and determine how to best minimize or manage those risks.

A copy of the draft plan is available for review on the Town's web page at www.townofedenton.com.

Anne Marie Knighton
Edenton Town Manager

PUBLIC NOTICE
Nomination Period for Chowan County Board of Social Services

The Chowan County Social Services Board will make an appointment to the Chowan County Board of Social Services to fill a vacant seat of a three (3) year term. The term begins on July 1, 2015. The Chowan County Social Services Board will consider nominations and make the appointment to the vacant seat prior to July 21, 2015.

The nomination period is scheduled from June 22, 2015 to July 10, 2015. Nominations must be received no later than 5:00 pm on July 10, 2015. You may obtain a Nomination Form from the local department of social services office (DSS). The form can also be mailed emailed or faxed to any potential nominee upon request. The form must be fully completed by the nominee and signed.

Phone request: (252) 482-1448

GATESVILLE

RESOLUTION ADOPTING THE ALBEMARLE REGIONAL HAZARD MITIGATION PLAN UPDATE

WHEREAS, the citizens and property within Gatesville 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, Gatesville 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 hazard mitigation plan approved pursuant to the Stafford Act;" and

WHEREAS, it is the intent of the Town Council of Gatesville 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 Town Council of Gatesville hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Emergency Management Director with the responsibility, authority and the means to:

   (a) Inform all concerned parties of this action.

   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and, identify

floodplain 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 Emergency Management Director 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 Albemarle Regional Hazard Mitigation Plan.

Adopted this 5th day of August, 2015.

Elton L. Winslow

Elton Winslow
Mayor, Town of Gatesville

ATTEST:

TOWN OF HARRELLSVILLE

RESOLUTION OF ADOPTION
ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Harrellsville are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the Town are particularly vulnerable to flooding and high winds; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 – Senate Bill 300 effective July 1, 2001), states in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Harrellsville has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town of Harrellsville Council to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, THEREFORE, be it resolved that the Town Council of the Town of Harrellsville hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests Chris Smith with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints Chris Smith to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town of Harrellsville for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Albemarle Regional Hazard Mitigation Plan.

Adopted this 3 day of August 2015

TOWN SEAL

Robert W. Dantz
Mayor, Town of Harrellsville

ATTEST:

Dina H Wht
Town Clerk

HORACE C. REID, JR.
MAYOR

BRANDON S. SHOAF
TOWN MANAGER

CINDY E. SHARBER
TOWN CLERK

BENJAMIN M. GALLOP
TOWN ATTORNEY

COMMISSIONERS:

MAYOR PRO TEM
LILLIAN ANN HOLMAN

J. SIDNEY ELEY

CARLTON A. DAVENPORT

WILLIAM E. LANE

TOWN OF HERTFORD
RESOLUTION OF SUPORT FOR REGIONAL HAZARD MITIGATION PLAN
Resolution 08-10-2015-02

WHEREAS, the citizens and property within the Town of Hertford are subject to the effects of natural hazards that pose threats to lives and cause damage to property; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Hertford has performed a review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town Council to fulfill this obligation in order that the County and Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting both;

NOW, therefore, be it resolved that the Hertford Town Council hereby adopts the Albemarle Regional Hazard Mitigation Plan.

THIS THE 10TH DAY OF AUGUST 2015.

Horace C. Reid, Jr., Mayor

TOWN OF HERTFORD ORIGINAL CHARTER 1758 NORTH CAROLINA

ATTEST:

Cindy E. Sharber, Clerk

TOWN OF KILL DEVIL HILLS

Land Where Flight Began

RESOLUTION OF ADOPTION by the
TOWN OF KILL DEVIL HILLS
ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Kill Devil Hills are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the Town are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion, Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation infrastructure impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, The Town of Kill Devil Hills has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces The Town of Kill Devil Hills Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all Kill Devil Hills citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the Town of Kill Devil Hills Board of Commissioners to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County.

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of the Town of Kill Devil Hills hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Planning and Development Department with the responsibility, authority, and the means to:

   a. Inform all concerned parties of this action.

   b. Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Planning and Development Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of the Town of Kill Devil Hills.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

This the 24th day of June 2015.

SEAL

Sheila F. Davies

Sheila F. Davies, Mayor
Town of Kill Devil Hills

ATTEST:

Mary E. Quidley
Town Clerk

POST OFFICE BOX 549
101 VETERANS MEMORIAL DRIVE
KITTY HAWK, NC 27949

PHONE (252) 261-3552
FAX (252) 261-7900
TOWN WEB SITE: www.townofkittyhawk.org
EMAIL ADDRESS: info@kittyhawktown.net

RESOLUTION OF ADOPTION

TOWN OF KITTY HAWK

ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Kitty Hawk are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion, Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Rip Currents, as well as manmade effects from Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events, and Public Health Events; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the town of Kitty Hawk actively participated in the planning process of the Albemarle Regional Hazard Mitigation Plan fulfilling 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Kitty Hawk Town Council to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Kitty Hawk Town Council hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan and;

2. Vests the Town Manager with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Town Manager to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Kitty Hawk Town Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day the 7th of July 2015.

By: The Kitty Hawk Town Council

Certified by: Lynn U. Morris
Lynn U. Morris, Town Clerk

SEAL: The Town of Kitty Hawk 1981

Date: July 7, 2015

2015-09

RESOLUTION OF ADOPTION
TOWN OF MANTEO
ALBEMARLE REGIONALHAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the Town of Manteo are subject to the effects of natural and manmade hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion. Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation Infrastructure Impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 ---Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS,
The Town of Manteo has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces Dare County's Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all Dare County citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and the guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the Town of Manteo Board of Commissioners to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Board of Commissioners of the Town of Manteo hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and
2. Vests the Dare County Emergency Management Department with the responsibility, authority, and the means to:
   a. Inform all concerned parties of this action.
   b. Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.
3. Appoints the Dare County Emergency Management Department to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Board of Commissioners of Dare County for consideration.
4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Albemarle Regional Hazard Mitigation Plan.

Adopted on June 3, 2015

Mayor;

Town of Manteo

Attest:

Clerk to the Council

TOWN OF MANTEO CORPORATE SEAL SEAL 1899 NORTH CAROLINA

RESOLUTION OF ADOPTION

Albemarle Regional

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within Town of Murfreesboro are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to flooding, high winds, tornados and hurricanes; and

WHEREAS, the Town of Murfreesboro desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Murfreesboro has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Town Council of the Town of Murfreesboro to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the Town Council of the Town of Murfreesboro hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan] and;

2. Vests Christopher Smith, Hertford County Emergency Management Director with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.
(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints Christopher Smith, Hertford County Emergency Management Director, Darrell Rowe, Director of Public Safety, First Alternative and Carolyn Brown, Town Clerk, Second Alternative.to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Town Council of Town of Murfreesboro for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, July 17, 2015

By: *John Hinton Mayor* John A. Hinton

Certified by: Carolyn Brown SEAL :

Date: July 17, 2015

Resolution No. 15-06-010
Hazard Mitigation Plan
BOC Meeting June 17, 2015

RESOLUTION OF ADOPTION
TOWN OF NAGS HEAD
ALBEMARLE REGIONAL HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the *Town of Nags Head* are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the *Town* are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion, Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation infrastructure impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

WHEREAS, the *Town* desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, The *Town of Nags Head* has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces The Town of Nags Head Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all *Nags Head* citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

WHEREAS, it is the intent of the *Town of Nags Head Board of Commissioners* to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County.

NOW, Therefore, Be It Resolved that the *Board of Commissioners of the Town of Nags Head* hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the *Planning and Development Department* with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the *Planning and Development Department* to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the *Board of Commissioners of Nags Head* for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

This the 17th day of June 2015.

Robert C. Edwards

Robert C. Edwards, Mayor
Town of Nags Head

Attested by:

Carolyn F. Morris

Carolyn F. Morris, Town Clerk

THE TOWN OF 1961 NAGS HEAD N.C.

PUBLIC COMMENT

There being no one present who wished to speak, Mayor Edwards closed Public Comment.

CONSENT AGENDA

The Consent Agenda consisted of the following items:

- Consideration of Budget Adjustment #11 to FY 14/15 Budget Ordinance
- Consideration of fifth amendment to Verizon cell tower lease

MOTION: Comr. Ratzenberger made a motion to approve the Consent Agenda as presented. The motion was seconded by Comr. Cahoon which passed unanimously.

Budget Adjustment #11, as adopted, is attached to and made a part of these minutes as shown in Addendum "A".

Information from the agenda summary sheet concerning the fifth amendment to the Verizon cell tower lease, as approved, read in part as follows:

"Attached is the fifth amendment to the Verizon cell tower lease for equipment mounted to the monopole tower at 5401 S. Croatan Highway. This amendment is necessary to authorize the replacement and addition of new equipment to the tower to support upgrades to Verizon service within the Town. Attached is a history of Verizon equipment and the associated lease payment since 2012. The lease includes a 3 percent increase in the payment each year. Additionally, several amendments have resulted in changes to the payment since that time. The current lease payment is $3,374. With the proposed modifications, Verizon is prepared to pay an additional $200 per month for the lease bringing the total monthly payment to $3,574.

'Staff would request that the Board of Commissioners consider the request and authorize the Town Manager to execute the lease agreement."

REPORTS AND RECOMMENDATIONS FROM THE PLANNING BOARD AND P&D DIRECTOR

Consideration of resolution to adopt the Dare County Albemarle Regional Hazard Mitigation Plan

Planner Holly White summarized her memo which read in part as follows:

"The Town of Nags Head has participated in the Albemarle Regional Hazard Mitigation Planning process. This effort serves as the town's five year update to its Hazard Mitigation Plan. The plan is required to be updated in order to *maintain eligibility for federal disaster assistance and hazard mitigation funding*. At the Board's January mid-month meeting, Staff provided the board with the Town's updated goals and actions, which incorporated comments by the board from the January 7th meeting. On January 21st, the Board voted to approve the Regional Plan with the updated Town Goals and Actions.

'FEMA found our draft plan compliant with the standards for multi-jurisdictional Hazard Mitigation Plans (see Attachments B and C). However, formal approval cannot be given by FEMA until community

adoption. At this time, the Board is being asked to accept and approve the FEMA approved draft Albemarle Regional Hazard Mitigation Plan by resolution (Attachment A).

'The complete FEMA approved Albemarle Regional Hazard Mitigation Plan can be viewed at http://albemarlereghazardmitigationplan.wikispaces.com/.

'Background & Process

The Albemarle Regional Planning effort kicked off in May of 2014 after the region received a state grant. FEMA and the North Carolina Division of Emergency Management (NCDEM) directed the formation of the jurisdictions participating in this planning effort. The plan encompasses eight counties and 17 municipalities including Dare, Currituck, Camden, Chowan, Gates, Hertford, Perquimans, and Pasquotank. Nationwide there has been a progression to move towards regional plans. The movement to regional plans stems partially from the high volume of plan reviews by FEMA and the State. FEMA and the State were reviewing approximately 400-500 plans in North Carolina alone.

'Prior to 2004 the Town did not have a hazard mitigation plan. At that time, the Town's Land Use Plan was utilized for hazard mitigation planning purposes since it contained much of the same information. However, with the Federal adoption of the Disaster Mitigation Act of 2000, hazard mitigation planning became a requirement and by law was necessary to maintain eligibility for hazard mitigation and post disaster funding. Hazard mitigation plans are required to be updated every five years. In 2004 the town developed its first plan as a stand-alone plan. In 2010 the Town partnered with Dare County and other Dare County municipalities to update its plan as part of a multi-jurisdictional plan. The current five year update is a regional plan and will supersede the multi-jurisdictional plan once adopted. In addition to hazard mitigation grant funding and post disaster assistance, having an adopted Hazard Mitigation Plan is a major component in gaining credit toward our Community Rating System (CRS) Program and associated discount on flood insurance for property owners.

'Town Planning Staff has been participating in regional meetings since May. Through this process, a regional survey was conducted from May to September. Based on the results from the survey and assessment of regional hazards, regional goals were formed. The regional goals and survey results were presented at a public meeting in October. The consultant requested that the Town's goals/actions be formulated to be consistent with the larger regional goals. In addition to the regional meetings, Dare County formed a multi-jurisdictional committee, the Dare County CRS 510 Committee, of Dare County and associated municipalities to address local issues and to gain credit toward each municipality's CRS program and rating. Town Staff and Planning Board member Mark Cornwell have been participating in the Dare County CRS 510 Committee meetings since August.

'Town Staff met on December 19th to review the regional planning process, regional goals, and modify the Town's draft goals and actions. A final public regional plan meeting was held January 15th. Staff was notified by Dare County in May that FEMA had approved the plan.

'The Board is being requested to accept and approve the FEMA approved Albemarle Regional Hazard Mitigation Plan by resolution.

'The complete FEMA approved Albemarle Regional Hazard Mitigation Plan can be viewed at http://albemarlereghazardmitigationplan.wikispaces.com/."

MOTION: Comr. Ratzenberger made a motion to adopt the resolution approving the Dare County Albemarle Regional Hazard Mitigation Plan as presented. The motion was seconded by Comr. Cahoon which passed unanimously.

The resolution, as adopted, read in part as follows:

"WHEREAS, the citizens and property within the *Town of Nags Head* are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the *Town* are particularly vulnerable to the natural impacts from Hurricanes/Tropical Storms, Nor'easters, Floods, Tornadoes, Winter Storms, Severe Thunderstorms, Wildfire, Erosion, Drought/Heat Wave, Earthquakes, Landslides/Sinkholes, Tsunami, Dam/Levee Failure, and Rip Currents, as well as manmade effects from Transportation infrastructure impacts, Terrorism, Active Shooter/Mass Casualties, Cyber Attacks, Pandemic Events and Public Health Events; and

'WHEREAS, the *Town* desires to seek ways to mitigate the impact of identified hazard risks; and

'WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

'WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

'WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

'WHEREAS, The *Town of Nags Head* has joined eight regional partner counties and 17 municipalities to develop and implement the Albemarle Regional Hazard Mitigation Plan which replaces The Town of Nags Head Hazard Mitigation Plan and improves regional integration by implementing common mitigation strategies for similar hazards while effectively incorporating hazard mitigation principles, practices, actions and strategies that will protect all *Nags Head* citizens and built environment from natural and manmade threats and hazards fulfilling 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management; and

'WHEREAS, it is the intent of the *Town of Nags Head Board of Commissioners* to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County.

'NOW, Therefore, Be It Resolved that the *Board of Commissioners of the Town of Nags Head* hereby:

'1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

'2. Vests the *Planning and Development Department* with the responsibility, authority, and the means to:

(a) Inform all concerned parties of this action.
(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

'3. Appoints the *Planning and Development Department* to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the *Board of Commissioners of Nags Head* for consideration.

'4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan."

Consideration of Scope of Services w/ Code Wright Planners for Comprehensive Plan/Ordinance Revision Project

Planner Holly White summarized her memo which read in part as follows:

"At the May 6th BOC meeting, the Board authorized staff to begin refinement of a scope of services for development of a Comprehensive Plan and update of the Town's codes with Code Wright Planners. Staff has worked over the past month to refine a scope of services and draft project timeline for the Comprehensive Plan and Code Update project.

'Below is a summary of the project scope, including a task list and detailed timeline. The project will take approximately 25 months to complete (see graphic below). There are 6 overall tasks to be completed as part of both portions of the project. It is anticipated that the Comprehensive Plan project will take approximately 8 months to complete with an anticipated adoption of April 1, 2016. The Code update portion of the project is expected to take 22 months to complete with an anticipated adoption of July 2017. In order to complete this project as quickly as possible, several task overlaps will be necessary. There is a 1 month overlap between Tasks 2 and 3 and an 8 month overlap between Tasks 3 and 4. The first 4 months of the project are dedicated to research, interviews, and analysis for both the comprehensive plan and code update."

RESOLUTION OF ADOPTION

Albemarle Regional Hazard Mitigation Plan

WHEREAS, the citizens and property within the Town of Winfall are subject to the effects of natural hazards that pose threats to lives and cause damages to property, and with the knowledge and experience that certain areas of the Town are particularly vulnerable to ,flooding, high winds; and

WHEREAS, the Town desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214—Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local government must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Winfall has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to the guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the Winfall Town Council to fulfill this obligation in order that the Town will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the Town;

NOW, therefore, be it resolved that the Winfall Town Council hereby:

1. Adopts the Albemarle Regional Hazard Mitigation Plan; and

2. Vests the Mayor/Town Administrator with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.

(b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map, and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the Mayor/Town Administrator to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the Winfall Town Council for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan Update.

Adopted on 8/10/15

Frederick L. Yates, Mayor

Attest:

Brenda G. Dillard, Town Clerk

SEAL

RESOLUTION OF ADOPTION

ALBEMARLE REGIONAL

HAZARD MITIGATION PLAN

WHEREAS, the citizens and property within the **Town of Winton** are subject to the effects of natural hazards that pose threats to lives and cause damage to property, and with the knowledge and experience that certain areas of the county are particularly vulnerable to **hurricanes, high winds, flooding, erosion, tornados, earthquakes, terrorism, hazardous spills, winter storms, drought, thunder storms.** and

WHEREAS, the County desires to seek ways to mitigate the impact of identified hazard risks; and

WHEREAS, the Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

WHEREAS, the Legislature of the State of North Carolina has in Section 1 Part 166A of the North Carolina General Statutes (adopted in Session Law 2001-214 --- Senate Bill 300 effective July 1, 2001), states therein in Item (a) (2) "For a state of disaster proclaimed pursuant to G.S. 166A-6(a) after August 1, 2002, the eligible entity shall have a hazard mitigation plan approved pursuant to the Stafford Act"; and

WHEREAS, Section 322 of the Federal Disaster Mitigation Act of 2000 states that local governments must develop an All-Hazards Mitigation Plan in order to be eligible to receive future Hazard Mitigation Grant Program Funds and other disaster-related assistance funding and that said Plan must be updated and adopted within a five year cycle; and

WHEREAS, the Town of Winton has performed a comprehensive review and evaluation of each section of the previously approved Hazard Mitigation Plan and has updated the said plan as required under regulations at 44 CFR Part 201 and according to guidance issued by the Federal Emergency Management Agency and the North Carolina Division of Emergency Management.

WHEREAS, it is the intent of the **Board of Commissioners of the Town of Winton** to fulfill this obligation in order that the County will be eligible for federal and state assistance in the event that a state of disaster is declared for a hazard event affecting the County;

NOW, therefore, be it resolved that the **Board of Commissioners of the Town of Winton** hereby:

1. Adopts the **Albemarle Regional Hazard Mitigation** Plan and;

2. Vests **Carl Pierce** with the responsibility, authority, and the means to:

   (a) Inform all concerned parties of this action.
   (b) Cooperate with Federal, State and local agencies and private firms which undertake to study, survey, map and identify floodplain areas, and cooperate with neighboring communities with respect to management of adjoining floodplain areas in order to prevent exacerbation of existing hazard impacts.

3. Appoints the **Town of Winton Public Works Director** to assure that the Hazard Mitigation Plan is reviewed annually and every five years as specified in the Plan to assure that the Plan is in compliance with all State and Federal regulations and that any needed revisions or amendments to the Plan are developed and presented to the **Town of Winton Board of Commissioners** for consideration.

4. Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

Adopted on this day, July 6, 2015

By: _____
Mayor

Certified by: Catherine D. Parker SEAL : _____

Date: July 6, 2015